

**STIHL RM 650 T, RM 650 V, RM 650 VE, RM 650 VS
RM 655 RS, RM 655 V, RM 655 VS, RM 655 YS**

STIHL



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
TR	Kullanım kılavuzu

RM 650.0 T

RM 650.0 V

RM 650.0 VS

RM 650.1 VE

RM 655.0 V

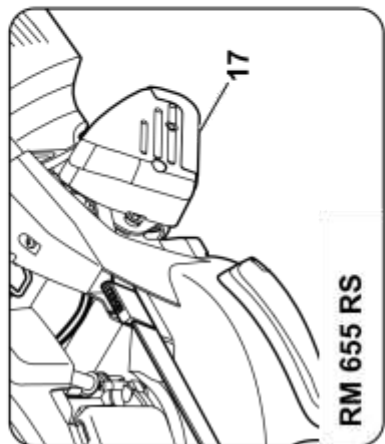
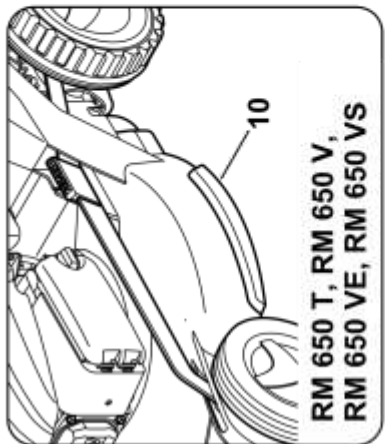
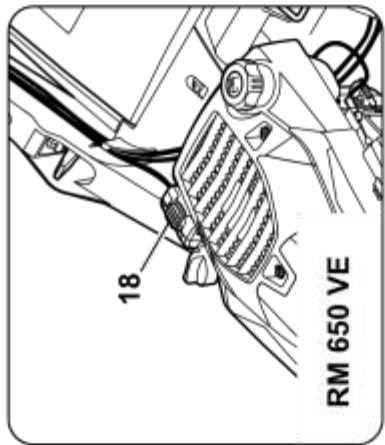
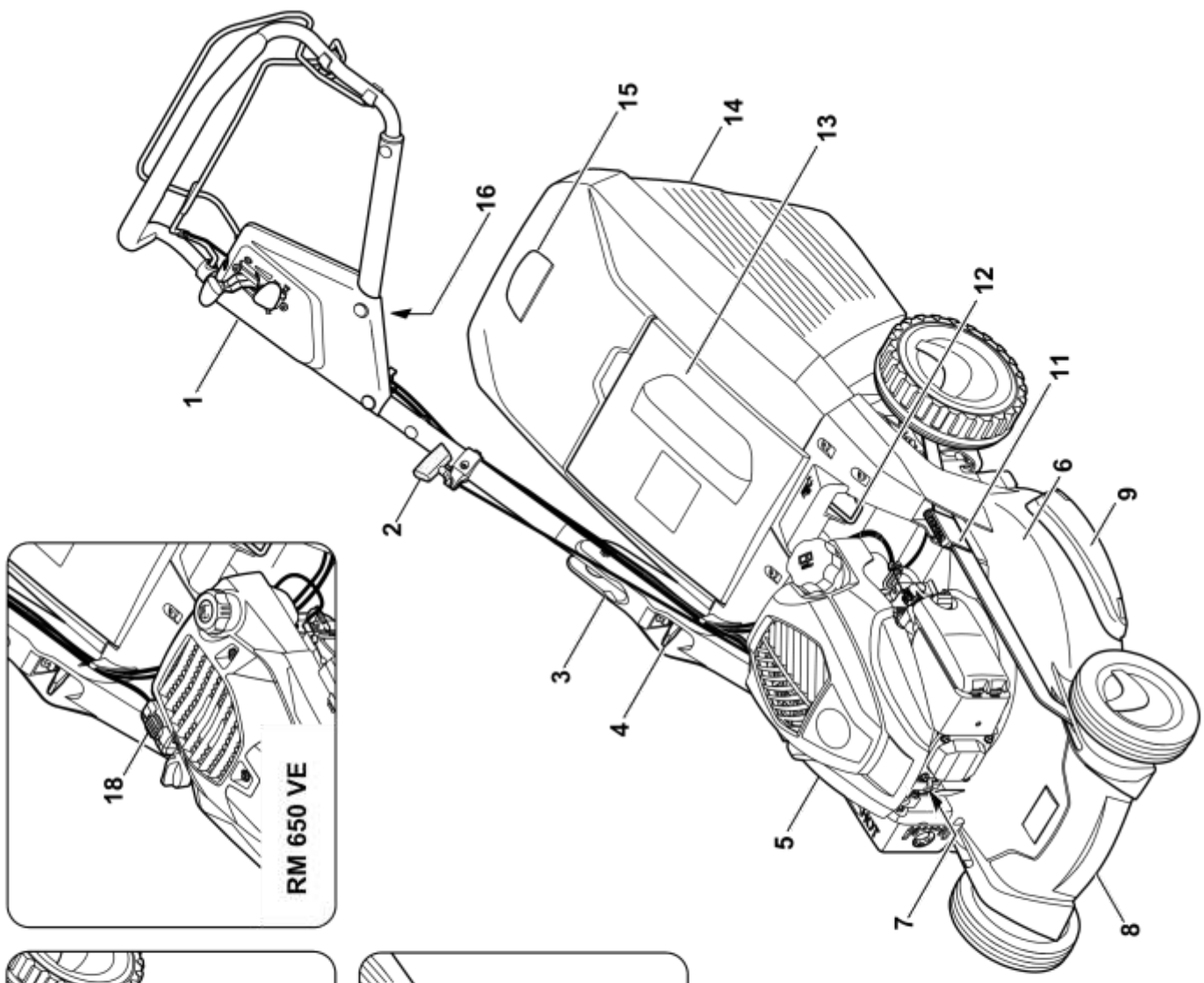
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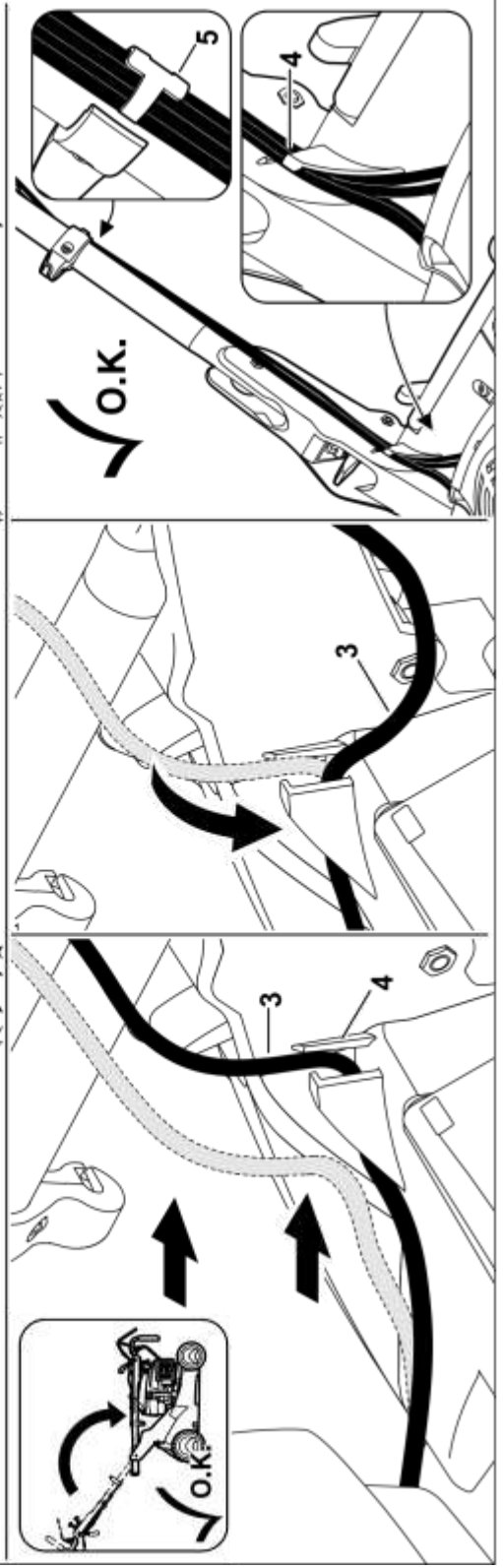
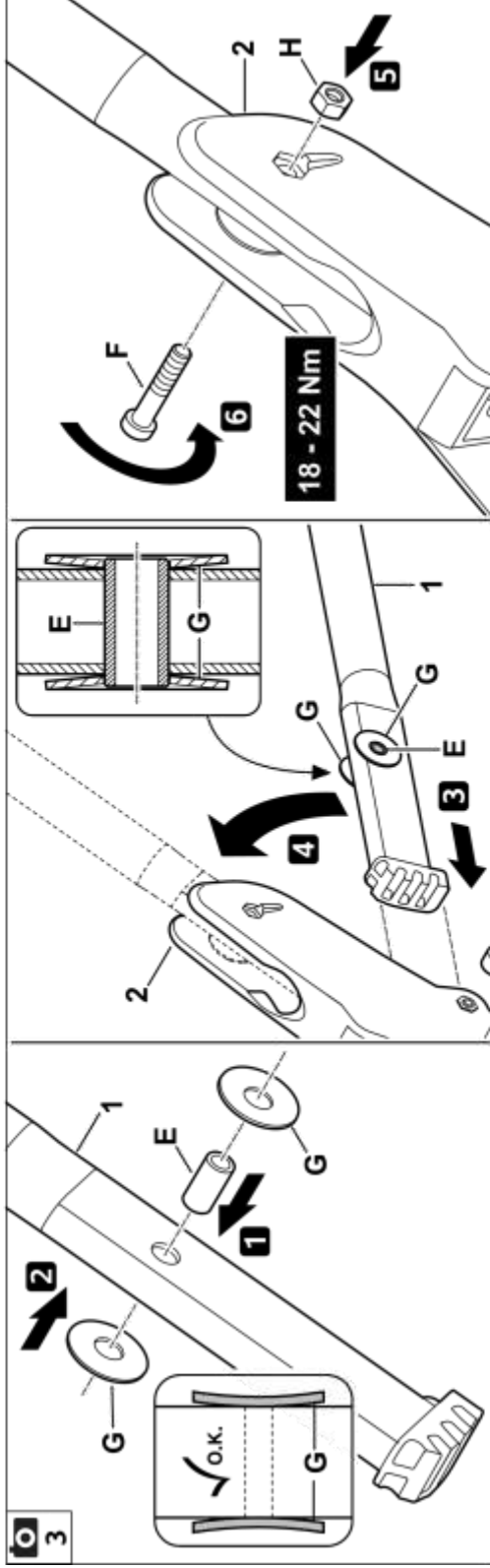
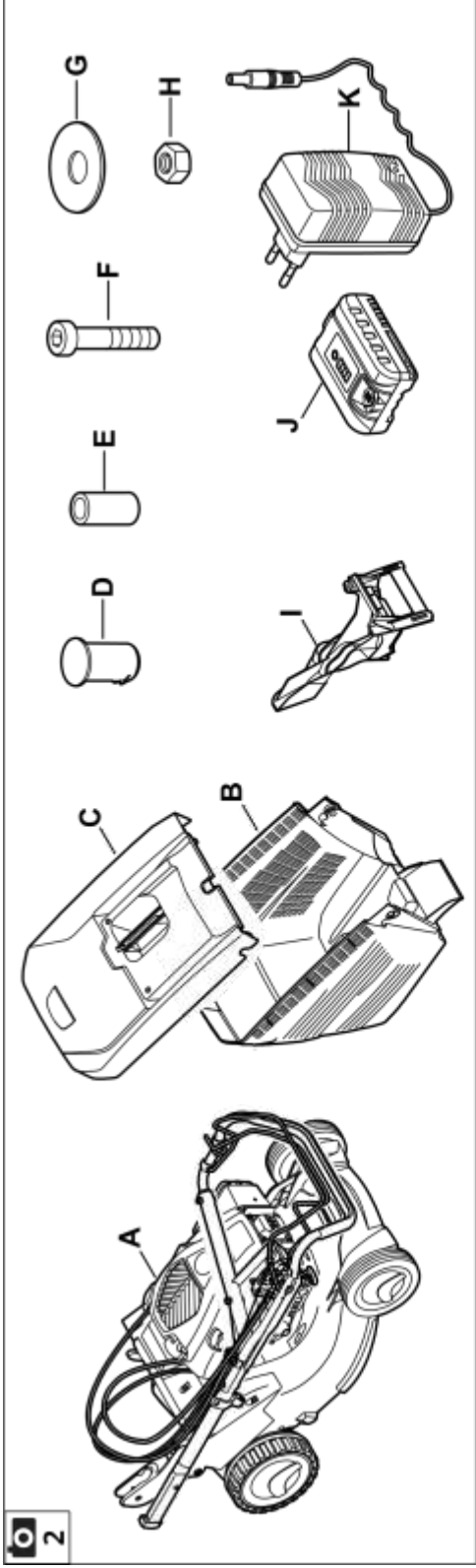
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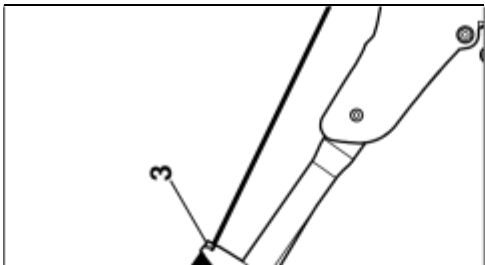
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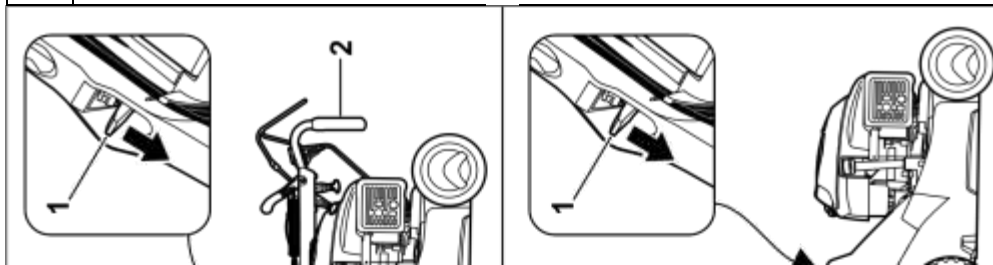
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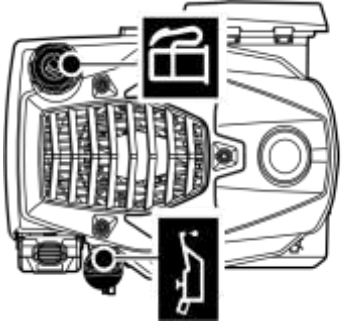




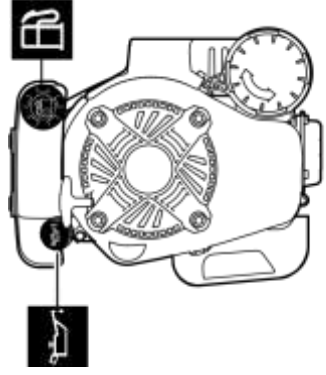




RM 650 T, RM 650 V
RM 650 VS, RM 655 RS, RM 655 V
RM 655 VS



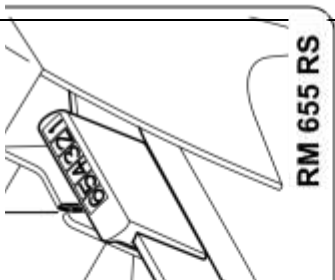
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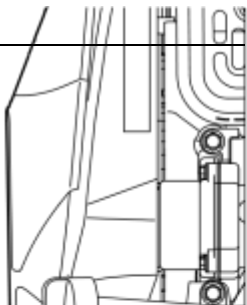
RM 655 YS

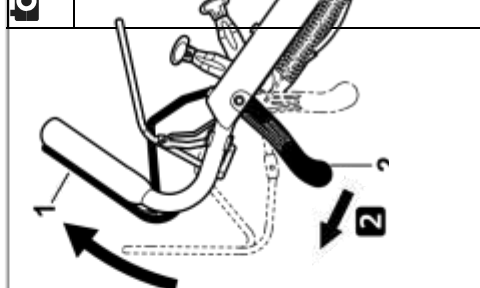
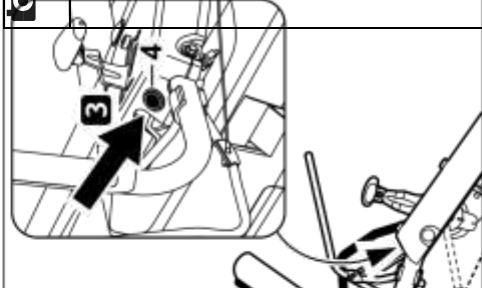
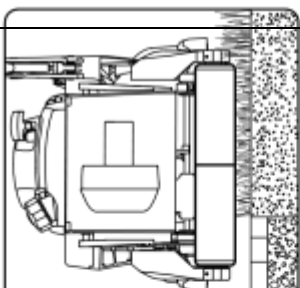
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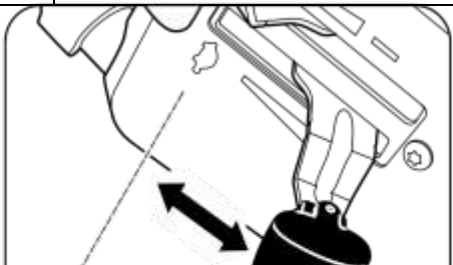




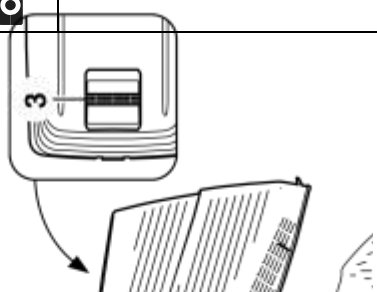
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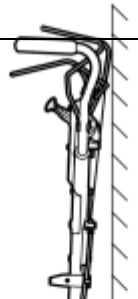


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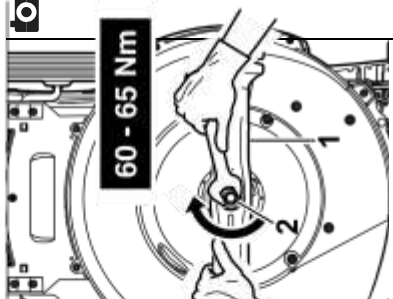
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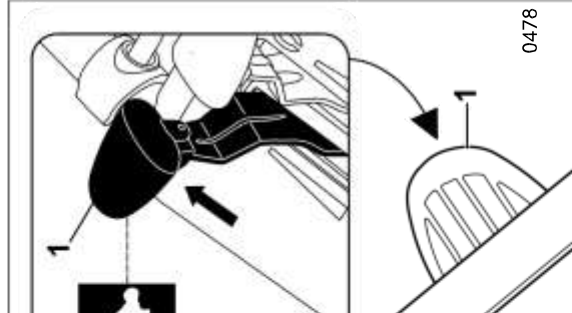
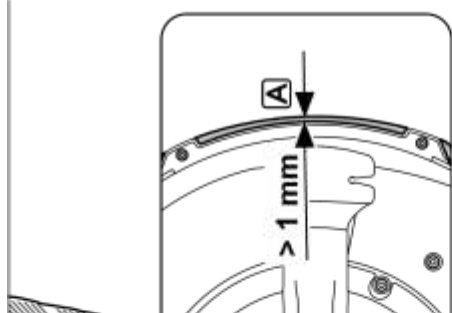
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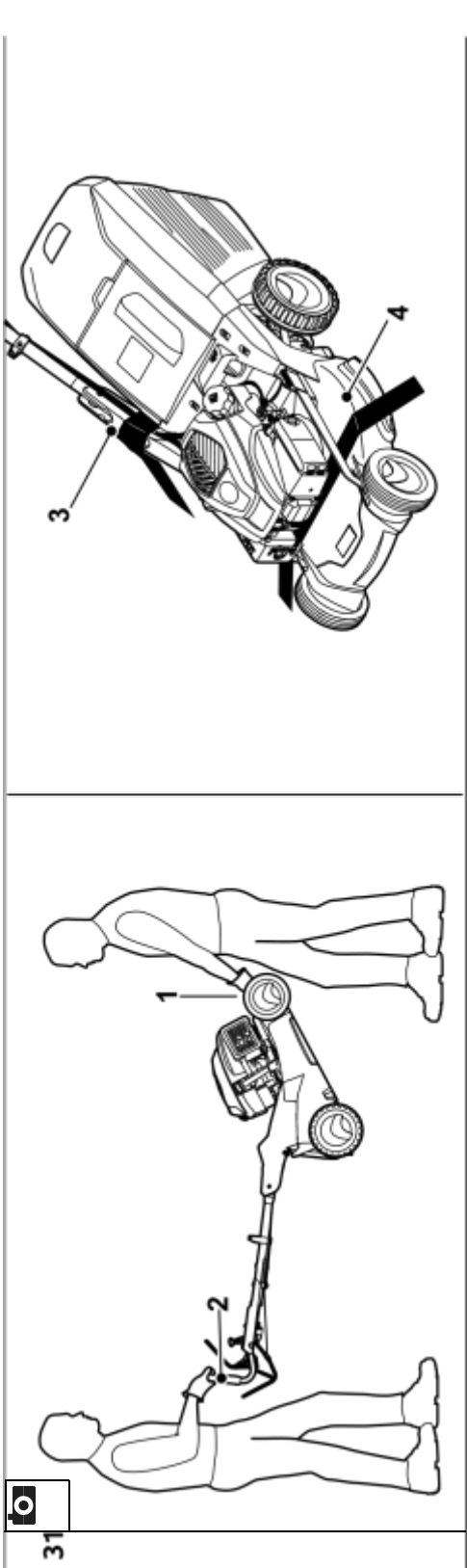


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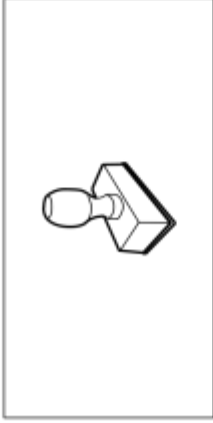
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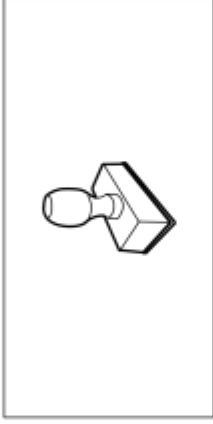


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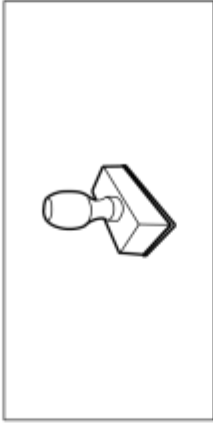
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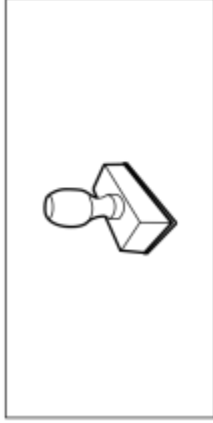
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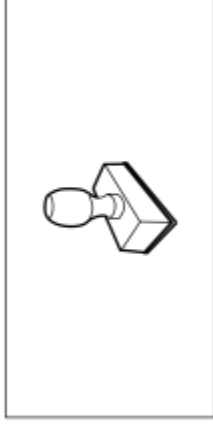
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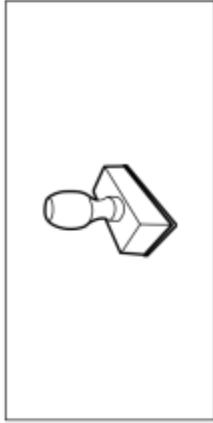
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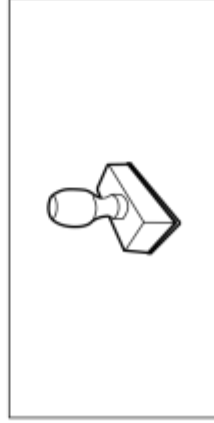
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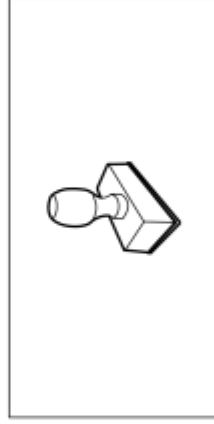
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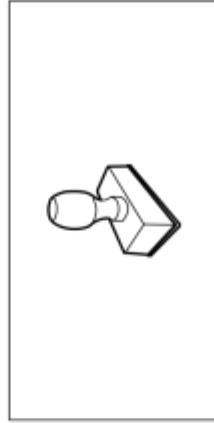
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Dear Customer,

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.

STIHL also stands for premium service quality. Our specialist dealers guarantee competent advice and instruction as well as comprehensive service support.

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



Dr. Nikolas Stihl

**IMPORTANT: READ BEFORE USE AND
KEEP IN A SAFE PLACE.**

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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: (⇒ 5.)

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. Lawn mower with blade brake clutch, BBC

Models **RM 650 VS**, **RM 655 VS**, **RM 655 YS**, **RM 655 RS** are equipped with a **blade brake clutch (BBC)**.

As with all modern lawn mowers, the blade comes to a stop within a short time as soon as the handlebar is released. However, thanks to the BBC system, the engine continues to run. This function allows the user to use the mower's self-propulsion after the blade has stopped. Moreover, the grass catcher box can be emptied, for example, without having to start the engine again.



Risk of injury!

Never reach into the working area of the blade when the engine is running.

Stop the engine, allow the blade to come to a complete standstill and detach the spark plug socket before touching the blade.



In order to prevent injuries or damage to the machine, ensure that you are familiar with operation of the BBC system prior to initial use.

Note the section "Blade brake clutch (BBC)". (⇒ 11.)

4. Machine overview



- 1 Upper handlebar with controls (⇒ 9.2)
- 2 Recoil starter rope
- 3 Handlebar bracket
- 4 Handlebar detent lever
- 5 Engine
- 6 Housing
- 7 Spark plug socket
- 8 Carrying handle
- 9 Replaceable skirting protector (RM 655 RS, RM 655 V, RM 655 VS, RM 655 YS)

- 10 Integrated skirting protector (RM 650 T, RM 650 V, RM 650 VS, RM 650 VE)
- 11 Cutting height indicator
- 12 Cutting height adjustment detent lever
- 13 Discharge flap
- 14 Grass catcher box
- 15 Level indicator
- 16 Rating plate with machine number
- 17 Lawn roller (RM 655 RS)
- 18 Battery (RM 650 VE)

5. For your safety

5.1 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 should 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.

Caution – risk of accident!

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

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

- For trimming bushes, hedges and shrubs.
- For cutting creepers.
- For tending lawn roofs and balcony boxes.
- For shredding or chopping tree or hedge cuttings.
- For clearing paths (vacuuming, blowing).
- For levelling earth mounds, e.g. mole hills.
- For transporting clippings, except in the grass catcher box 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. 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.

5.2 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.

5.3 Battery and charger

Read the engine instruction manual and keep it in a safe place. This instruction manual describes how to safely use the battery and charger.

Only use genuine batteries and genuine chargers.

Protect the battery and charger against rain and moisture and do not drop.

Do not use a damaged or deformed battery or a damaged charger. In particular check the power cable of the charger. Never use a charger with a damaged power cable.

Never dismantle or attempt to repair a battery or charger. A defective battery or charger must be replaced.

Only connect the charger to a power supply that is protected by means of a residual current-operated protective device with a maximum release current of 30 mA. Your electrician can provide further information.

Keep the unused battery away from metal objects (e.g. nails, coins, jewellery). Never short circuit battery connections, do not use metal containers to transport batteries.

Fluid may escape from the battery due to improper use – avoid contact! In the case of inadvertent contact, rinse with water.

Seek medical attention if the fluid contacts the eyes. Escaping battery fluid can cause skin irritation and burns.

For further safety instructions, see <http://www.stihl.com/safety-data-sheets>

5.4 Clothing and equipment



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



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.



Wear suitable safety glasses when sharpening the mowing blade.

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.



Noise is produced when working. Noise can damage the hearing.

Wear hearing protection.

5.5 Transporting the machine

Always wear protective gloves (⇒ 5.4) in order to prevent injuries due to sharp-edged and hot components.

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Do not transport the machine with the engine running. Switch off the engine, let the blades come to a standstill and remove the spark plug socket prior to transport.

Only transport the machine once the engine has cooled down and with an empty fuel tank.

Use suitable loading aids (loading ramps, lifters).

Secure the machine and any machine components being transported (e.g. grass catcher box) on the load floor using fastening material of adequate size (belts, ropes, etc.).

Avoid contact with the mowing blade when lifting and carrying the machine.

Observe the information in the section "Transport". It describes how to lift and lash the machine. (⇒ 15.)

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

Do not leave the battery inside a vehicle and protect unused batteries against direct sunlight.

Lithium-ion batteries must be treated with special care during transport. In particular, short-circuit protection must be ensured. Transport the battery either in the original packaging or in a suitable non-metal transport container.

5.6 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.

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.

Check secure seating of the spark plug socket on the spark plug before using the machine.

The machine must only be used in good operating condition. Before each use, check whether:

- The machine is properly assembled.
- The cutting tool and the entire cutting unit (mowing blade, fastening elements, mowing deck housing) are in good condition. In particular check for secure fastening, damage (notches or cracks) and wear. (⇒ 14.3), (⇒ 14.12)
- The mulch insert is in good condition.
- The tank cap is properly attached.
- The tank and fuel-carrying parts as well as the tank cap are in good condition.
- The safety devices (e.g. motorstop lever, discharge flap, housing, handlebar, protective grille) are in good condition and working properly.
- The blade brake clutch is working properly. (⇒ 13.1)
- The grass catcher box is undamaged and correctly installed; a damaged grass catcher box must not be used.
- The battery (**RM 650 VE**) is not damaged or deformed.
- The oil closure screw is properly attached.

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

5.7 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 or blade stop lever to the handlebar (e.g. by tying it).



Caution – risk of injury!

Never put hands or feet on or underneath rotating parts.
Never touch the rotating blade.
Always keep away from the discharge opening.

Always observe the safety distance provided by the handlebar. 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).

Only work during the day or with good artificial light.

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

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.

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" (⇒ 13.). 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 cutting tool when starting the machine.

The machine must not be tilted during start-up.

The self-propulsion lever must not be actuated when starting the engine.

RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS: The mowing blade must not be engaged when starting the engine.

Do not start the engine if the discharge chute is not covered by the discharge flap or the grass catcher box.

Working on slopes:

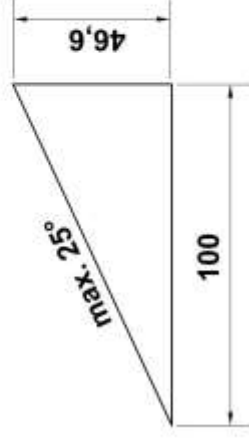
Always work across and back on slopes, never up and down.

If the user loses control when mowing 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:

Risk of injury!

Never place your hands or feet above, underneath or on rotating parts.



Do not try to examine the blade while the lawn mower is operating. Never open the discharge flap and/or remove the grass catcher box when the mowing blade is running. Rotating blades can cause injury.

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.

Only guide the machine using the handlebar – never use the levers to move the lawn mower. (⇒ 12.1)

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

Risk of stumbling!

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.

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.



STOP

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

Switch off the engine, allow the work tool to come to a complete standstill, detach the spark plug socket and additionally remove the battery (with **RM 650 VE**).

- before leaving the machine unattended,
- before re-filling the tank. Allow the engine to cool down before filling the tank.

Fire hazard!

- before remedying blockages, including those in the discharge chute,
- before lifting or carrying the machine,
- before transporting the machine,
- before carrying out any work on the mowing blade.

- before checking or cleaning the machine or before carrying out any other work (e.g. folding down the handlebar, installing and removing the mulching key) on it,

- after hitting a foreign object or if the lawn mower begins to vibrate excessively. In these cases check the machine, in particular the cutting unit (blade, blade shaft, blade fastening) for damage and carry out the necessary repairs before restarting and working with the machine.

Risk of injury!

Strong vibration is normally an indication of a fault.

In particular, the lawn mower must not be operated with a damaged or bent crankshaft or mowing blade. If you do not have the appropriate expertise, have the necessary repairs carried out by a specialist dealer (STIHL recommends STIHL specialist dealers).

Stop the engine and disengage the mowing blade:

- When pushing the machine to and from the area to be worked.
- Before pushing the machine onto an area not covered with grass.
- Before opening the discharge flap or removing the grass catcher box.
- When the machine has to be tilted for transportation.
- Before adjusting the cutting height.

5.8 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 may result in fires or electric shocks.

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

RM 650 VE: Additionally remove the battery.

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!**



Risk of injury due to the mowing blade!

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

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. (⇒ 14.2)

Empty the fuel tank (e.g. by running it empty) before placing the machine in the cleaning position.

Remove accumulated clipping deposits using a stick. Clean the underside of the mower 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.

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.

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).

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.

Only perform work on the cutting unit when wearing protective gloves (⇒ 5.4) and exercising extreme care.

Ensure that all nuts, pins and screws (in particular the blade fastening screw) are securely tightened so that the machine is in a safe operating condition.

Replace damaged exhaust silencers and guard plates.

Check the complete machine and the grass catcher box 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.

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.

5.9 Storage for prolonged periods without operation

Allow the engine to cool before storing the machine in an enclosed space.

Ensure that the machine is protected from unauthorised use (e.g. by children).

Store the machine with empty fuel tank and the fuel reserve in a lockable and well-ventilated room.

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 the tank has to be emptied (e.g. to store the machine before the winter break), this should only be done out of doors (e.g. by running the tank empty).

Thoroughly clean the machine before storage (e.g. winter break).

Store the machine on a suitable surface and only standing on its wheels – secure it against rolling away.

Only store the machine with the spark plug socket disconnected.

RM 650 VE: Before storing the machine, remove the battery and store it separately from the machine as well as protected from unauthorised use (e.g. by children).

Store the machine in good operational condition.

Allow the machine to cool down completely before covering it.

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

5.10 Disposal

Waste products such as used engine oil or fuel, used lubricants, filters, batteries and similar wearing parts can be harmful to people, animals and the environment, and must consequently be disposed of properly.

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

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

The battery must be disposed of separately from the machine. Ensure that batteries are disposed of safely and in an environmentally friendly manner.

Risk of injury due to the mowing blade!

Always store an old lawn mower in a safe place prior to scrapping. Ensure that the machine and particularly the mowing blade are kept out of the reach of children.

6. 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.



Caution!

Keep your hands and feet away from the blades.

Detach the spark plug socket before performing work on the cutting tool or maintenance and cleaning work.

RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:



Caution – risk of injury!

Never reach into the working area of the blade when the engine is running.



Start combustion engine, engage mower blade



Disengage mower blade



Engage self-propulsion



Throttle setting

Choke position

(only RM 655 YS) – Press throttle lever forward to the stop



Start position –

maximum speed



Stop position – stop

the engine, pull the throttle lever back to the stop



RM 650 T, RM 650 V, RM 655 V:



Start the engine



Stop the engine



Engage self-propulsion

RM 650 VE:



START: Fit the battery, start the engine.

STOP: Stop the engine.

Engaging self-propulsion

RM 650 V, RM 650 VE, RM 650 VS,
RM 655 V, RM 655 VS, RM 655 YS:



Setting the driving speed



Fast – Push driving
speed lever forward



Slow – Pull driving
speed lever back

8. Preparing the machine for operation

8.1 General



Risk of injury!

Observe the safety instructions in the section "For your safety" (⇒ 5.).

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

7. Standard equipment



2

Item	Designation	Qty.
A	Basic unit	1
B	Lower part of grass catcher box	1
C	Upper part of grass catcher box	1
D	Pin	2
E	Sleeve	1
F	Bolt	1
G	Washer	2
H	Nut	1
I	Mulch insert – installed in discharge chute (RM 650 T, RM 650 V, RM 650 VE, RM 650 VS, RM 655 V, RM 655 VS, RM 655 YS)	1
J	Battery (RM 650 VE)	1
K	Charger (RM 650 VE)	1
–	Instruction Manual	1
–	Engine Instruction Manual	1

8.2 Assembling the handlebar



3

- 1** Insert sleeve (E) in the bore on handlebar (1).
- 2** Fit two washers (G) with the convex side facing inwards onto the sleeve.
- 3** Hold sleeve (E) and washers (G) and insert together with handlebar (1) into handlebar console (2) from below.
- 4** Fold handlebar (1) upwards until the bores in the handlebar console and sleeve (E) are aligned.
- 5** Place nut (H) in the handlebar console recess and hold.
- 6** Insert bolt (F) from the outside inwards through the bores in handlebar console (2) and the sleeve. Tighten bolt (F).
Tightening torque: **18 - 22 Nm**
- Fold down the handlebar into the transport position. (⇒ 9.3)

Attaching cables:



Avoid damage to the machine!
Never kink cables or damage cable covers.

- Insert all cables (3) into the guide on handlebar console (4). To do this, slightly bend the cables – **without kinking them** – and insert into guide (4) as shown.

RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:

Place the BBC cable (Ø = 7 mm) in guide (4) first.

- Insert all cables (3) into cable guide (5).
- Fold up the handlebar into the working position. (⇒ 9.3)
- RM 655 YS:**
Adjust the self-propulsion cable. (⇒ 14.11)

8.3 Attaching and detaching the recoil starter rope



4

RM 650 VE: The engine does not have a recoil starter rope.

Attaching:

- Detach the spark plug socket from the engine.
- RM 650 T, RM 650 V, RM 655 V:**
Press motorstop lever (1) to the handlebar and hold.
- Slowly pull out recoil starter rope (2) and attach it to rope guide (3).
- Slowly release recoil starter rope (2) and motorstop lever (1).
- Connect the spark plug socket.

Detaching:

- Detach the spark plug socket from the engine.
- RM 650 T, RM 650 V, RM 655 V:**
Press motorstop lever (1) to the handlebar and hold.

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- Slowly pull out recoil starter rope (2) and detach it from rope guide (3).
- Slowly return recoil starter rope (2) and release motorstop lever (1).
- Connect the spark plug socket.

8.4 Installing the grass catcher box



- Fit upper part of grass catcher box (C) onto lower part of grass catcher box (B).
- Push pin (D) through bores provided from inside.
- Allow the upper part of the grass catcher box to engage in the lower part of the grass catcher box using slight pressure.
- Attach the grass catcher box. (⇒ 9.7)

8.5 Removing and inserting the mulch insert



RM 650 T, RM 650 V, RM 650 VE, RM 650 VS, RM 655 V, RM 655 VS, RM 655 YS:

The lawn mower is equipped with a mulch insert as standard. The mulch insert is installed in the discharge chute on delivery.

⚠ Avoid damage to the machine!

Always keep the removed mulch insert in a safe place and never use for another purpose (e.g. as a wedge).
Only use the mulch insert in conjunction with the standard blade.

Removing the mulch insert:

- Open the discharge flap and hold it open.
- Lift detent catch (1) and pull mulch insert (I) diagonally upwards out of the discharge chute.
- Close the discharge flap and attach the grass catcher box if necessary.

Inserting the mulch insert:

- Open the discharge flap and hold it open. Detach the grass catcher box if necessary. (⇒ 9.7)
- Insert mulch insert (I) in the discharge chute diagonally from above as shown, turn to the horizontal position, press down and engage audibly with both retaining lugs (2) in the housing.
- Close the discharge flap.

unleaded petrol.
Please consult the engine instruction manual for details on the fuel quality (octane rating).

9. Controls

9.1 General



Risk of injury!

Observe the safety instructions in the section "For your safety" (⇒ 5).

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

9.2 Controls on the handlebar



- 1 Motorstop lever**
(RM 650 T, RM 650 V, RM 650 VE, RM 655 V)
- 1 Blade stop lever**
(RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)
- 2 Self-propulsion lever**
- 3 Throttle lever**
(RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)
- 4 Driving speed lever**
(RM 650 V, RM 650 VS, RM 650 VE, RM 655 V, RM 655 VS, RM 655 YS)
- 5 Blade clutch lever**
(RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)
- 6 Start button**
(RM 650 VE)

8.6 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,



9.3 Adjusting the handlebar



Danger of pinching!

When actuating the detent lever, always hold the upper handlebar with one hand at its highest point. Never place your fingers between the handlebar and console (above and below the detent lever).

Transport position (for cleaning, for space-saving transport and for storage of the machine):

- Detach the recoil starter rope from the rope guide. (⇒ 8.3)
- Hold the upper handlebar (2) with one hand at its highest point and lift (relieve load) slightly.
- Press the detent lever (1) downwards and hold.
- Fold down handlebar (2) forwards.

Working position:

- Fold the handlebar (2) up rearwards and ensure that the handlebar is fully engaged.
- Attach the recoil starter rope at the rope guide. (⇒ 8.3)

Height adjustment:

The handlebar can be adjusted to 3 positions:

- Hold the upper handlebar (2) with one hand at its highest point and lift (relieve load) slightly.
- Press the detent lever (1) downwards and hold.
- Move the handlebar (2) into the required position.

- Release the detent lever (1) and ensure that the handlebar is again fully engaged.

9.4 Central cutting height adjustment



RM 650 T, RM 650 V, RM 650 VE, RM 650 VS, RM 655 V, RM 655 VS, RM 655 YS:

Seven cutting heights can be set.

Level 1: 25 mm

Level 7: 85 mm

RM 655 RS:

Six cutting heights can be set.

Level 1: 20 mm

Level 6: 80 mm

- Pull detent lever (1) upwards and hold in order to release the detent mechanism. Set the required cutting height by moving the machine upwards or downwards.
- The cutting height can be read on the cutting height indicator (2).
- Release detent lever (1) again and allow the height adjustment to engage.

9.5 Battery and charger (RM 650 VE)



The lawn mower **RM 650 VE** is equipped with an electric starter. A lithium-ion battery is used as the starter battery. Instructions on how to use the battery and charger can be found in the supplied engine instruction manual.

i The battery must only be charged using the supplied charger; the battery is not recharged during operation of the lawn mower. Press button (1) on the battery to check the charge state.

Initial operation:

- Open protective cap (2) on the battery.
- Connect charger (K) to the mains power supply and charge battery (J) completely.

Removing and inserting the battery:

- Press release (3) and remove battery (J) from the engine by pulling it sideways and upwards and re-insert in the opposite direction.

9.6 Level indicator



The flow of air generated by the blade raises level indicator (1). The flow of air stops when the grass catcher box is full. If the flow of air is too low, level indicator (1) returns to its resting state. This is a prompt to empty the grass catcher box.

The functionality of the level indicator is restricted if the flow of air is impaired. External influences such as wet, dense or high grass, low cutting levels, contamination or the like can impair the flow of air and the functionality of the level indicator.

A Grass catcher box is being filled

B Grass catcher box is filled

- Empty the filled grass catcher box (⇒ 13.10).

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9.7 Attaching and detaching the grass catcher box



- Remove the mulch insert before attaching the grass catcher box. (⇒ 8.5)

Attaching:

- Open the discharge flap (1) and hold it open.
- Attach grass catcher box (2) to the locating lugs (3).
- Close discharge flap (1) again.

Detaching:

- Open the discharge flap (1) and hold it open.
- Lift grass catcher box (2), detach from the locating lugs (3) and remove.
- Close discharge flap (1) again manually.

10. 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.

10.1 Safety devices

The lawn mower is equipped with safety devices, which prevent inadvertent contact with the mowing blade and with ejected clippings.

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

10.2 Motorstop lever



Models **RM 650 T, RM 650 V, RM 650 VE, RM 655 V** are

equipped with a motorstop device.

The engine stops when motorstop lever (1) is released during running operation.

The engine and blade come to a standstill within 3 seconds.



Risk of injury!

if the run-on time of the blade exceeds this delay, stop using the machine and take it to your specialist dealer.

Measuring the run-on time

Following engine start-up, the blade rotates and a wind noise is audible. The run-on time corresponds to the duration of the wind noise after the engine stops. This can be measured using a stopwatch.

11. Blade brake clutch (BBC)



Models **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS** are equipped with a **blade brake clutch (BBC)**.



Risk of injury!

Operation of the blade brake clutch must be checked before each use. (⇒ 13.1)

For safety reasons, the lever must never be disabled, e.g. by tying it to the handlebar.

Two-hand operation:

The mowing blade can only be engaged as follows with the engine running:

- Press blade stop lever (1) with one hand and, while keeping it pressed, pull blade clutch lever (5) upwards with the other hand and allow it to engage. (⇒ 13.6)

Integrated blade run-down brake:

When the blade stop lever is released (or after releasing the handlebar), the mowing blade is disengaged and braked to a standstill within a maximum of 3 seconds, while the engine continues to run. (⇒ 13.7)

12. Notes on working with the machine

A perfect, thick lawn is achieved by

- Mowing at low driving speeds.
- Mowing regularly and keeping the grass short.
- Not cutting the lawn too short in hot, dry conditions as it will be burnt by the sun and become unsightly.
- Using a sharp mowing blade – mowing blade should therefore be sharpened regularly (specialist dealer).
- Changing the cutting direction regularly.

12.1 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 lawn mower must only be operated by one person. Other persons must keep out of the danger area. (⇒ 5.)

12.2 Lawn mower with lawn roller



The model **RM 655 RS** is equipped with a two-part drive roller on the rear axle.

This permits accurate mowing along lawn edges or around plants. The grass is also rolled in the direction of travel, creating a characteristic striped lawn pattern.

12.3 Applications

The lawn mower is equipped with a multi-blade and can be used as a **mulching mower** or **rear discharge mower** as well as a **grass collector**.

- To use the machine as a mulching mower, install the mulch insert. (⇒ 8.5)
- For use as a rear discharge mower or grass collector (with grass catcher box), remove the mulch insert from the machine. (⇒ 8.5)

12.4 How should mulching be performed?

Mulching is only possible with the models **RM 650 T**, **RM 650 V**, **RM 650 VE**, **RM 650 VS**, **RM 655 V**, **RM 655 VS**, **RM 655 YS**.

A cutting height between **4** and **7** should be selected for mulching, as this is the most suitable height for shredding the grass.

If the cutting height is too low, the mower housing may become clogged, resulting in blockage of the mowing blade

It is important to select the correct operating speed and cutting height for mulching to allow the mowing blade to achieve optimal grass shredding and a good cutting pattern.

In high grass, it is advisable to work in several stages and in the higher cutting height settings.

Mulching should not be performed when the grass is too high or wet.

13. Operating the machine

13.1 Checking the blade brake clutch

Operation of the blade brake clutch must be checked **three times** before starting work.

- Engage the mowing blade with the engine running. (⇒ 13.6)
A running mowing blade generates a clearly audible wind noise.
- Disengage the mowing blade (release the handlebar). (⇒ 13.7)
The blade brake clutch disengages the mowing blade from the engine drive and brakes it. This procedure is accompanied by stopping of the wind noise and lasts a maximum of 3 seconds. No wind noise must be audible when the blade is stopped. The blade brake time can be measured using a stopwatch.

Risk of injury!



Should the blade brake clutch not work as described (e.g. longer blade brake time than 3 seconds or continuing audible wind noise when the mowing blade is disengaged), the machine must not be operated.

In this case, switch off the engine, detach the spark plug socket and have the necessary repairs performed by a qualified technician. STIHL recommends STIHL specialist dealers.

13.2 Starting the engine

(**RM 650 T**, **RM 650 V**, **RM 655 V**)



Avoid damage to the machine!

Do not start the engine in tall grass. Select a higher cutting height setting if the engine is difficult to start.



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

- Check the oil and fuel levels. (⇒ 8.6)
- **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) again so that it is rolled up again.
- Repeat the procedure until the engine starts.

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13.3 Starting the engine (RM 650 VE)



Avoid damage to the machine!

Do not start the engine in tall grass. Select a higher cutting height setting if the engine is difficult to start.



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

- Check the oil and fuel levels. (⇒ 8.6)
- Checking the battery:
Check the charge state of the battery and recharge if necessary. (⇒ 9.5)
- **1** Insert battery (3).
- **2** Press motorstop lever (1) to the handlebar and hold.
- **3** Press start button (4) for max. 3 to 5 seconds and then release again. If the engine does not start, wait for 10 seconds before trying again. Avoid repeat starting when the engine is running.

13.4 Stopping the engine (RM 650 T, RM 650 V, RM 650 VE, RM 655 V)



- To stop the engine, release motorstop lever (1).
Engine and mowing blade come to a stop after a short run-down time.
- **RM 650 VE:** If the machine is unsupervised, remove the battery and store it separately from the machine as well as protected from unauthorised use (e.g. by children).

13.5 Starting the engine (RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)



- Check the oil and fuel levels. (⇒ 8.6)

- **RM 650 VS, RM 655 RS,
RM 655 VS:**

1 Set throttle lever (1) to the I position.

- **RM 655 YS:**

1 When the engine is cold, set throttle lever (1) to the **Choke** position.

When the engine is warm or during hot weather, set throttle lever (1) to the **I** position.

- **2** Slowly pull recoil starter rope (2) to the point of compression resistance and then pull vigorously to arm's length. Slowly release the cable so that it can gradually be rolled up by the starter.
- Repeat the starting procedure until the engine starts.
- **RM 655 YS:**
Set throttle lever (1) to the **I** position.

13.6 Engaging the mowing blade (RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)



Avoid damage to the machine!

Do not engage the mowing blade in tall grass and only engage it at the maximum engine speed.

Always engage it quickly in order to prevent unnecessary wear to the blade clutch.

- **1** Pull blade stop lever (1) to the handlebar and hold. This releases blade clutch lever (2).

- **2** To engage the mowing blade, pull blade clutch lever (2) **quickly** straight back towards the handlebar as far as it will go. There, the lever is locked in the engaged position and can be released.

13.7 Disengaging the mowing blade (RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)



- To disengage the mowing blade, release blade stop lever (1).
Blade clutch lever (2) is released and returns automatically to its initial position. The mowing blade is disengaged and braked, the engine continues to run.

13.8 Stopping the engine (RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)



- **Always** disengage the mowing blade before stopping the engine. (⇒ 13.7)
- To stop the engine, move the throttle lever (1) to the **0** position.

13.9 Self-propulsion

The lawn mower is equipped with rear-wheel drive.

RM 650 T:

Brisk forward speed

3,5 km/h

RM 655 RS:

Brisk forward speed

13.3 Starting the engine (RM 650 VE)



Avoid damage to the machine!

Do not start the engine in tall grass. Select a higher cutting height setting if the engine is difficult to start.



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

- Check the oil and fuel levels. (⇒ 8.6)
- Checking the battery:
Check the charge state of the battery and recharge if necessary. (⇒ 9.5)
- **1** Insert battery (3).
- **2** Press motorstop lever (1) to the handlebar and hold.
- **3** Press start button (4) for max. 3 to 5 seconds and then release again. If the engine does not start, wait for 10 seconds before trying again. Avoid repeat starting when the engine is running.

13.4 Stopping the engine (RM 650 T, RM 650 V, RM 650 VE, RM 655 V)



- To stop the engine, release motorstop lever (1).
Engine and mowing blade come to a stop after a short run-down time.
- **RM 650 VE:** If the machine is unsupervised, remove the battery and store it separately from the machine as well as protected from unauthorised use (e.g. by children).

13.7 Disengaging the mowing blade (RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)



- To disengage the mowing blade, release blade stop lever (1).
Blade clutch lever (2) is released and returns automatically to its initial position. The mowing blade is disengaged and braked, the engine continues to run.

13.8 Stopping the engine (RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)



- **Always** disengage the mowing blade before stopping the engine. (⇒ 13.7)
- To stop the engine, move the throttle lever (1) to the **0** position.

13.9 Self-propulsion

The lawn mower is equipped with rear-wheel drive.

RM 650 T:

Brisk forward speed

3,5 km/h

RM 655 RS:

Brisk forward speed

4,2 km/h

**RM 650 V, RM 650 VE, RM 650 VS,
RM 655 V, RM 655 VS, RM 655 VS:**

Continuously variable forward drive speed when using the driving speed lever

**RM 650 V, RM 650 VE, RM 650 VS,
RM 655 V, RM 655 VS:**

2,6 km/h – 4,6 km/h

RM 655 VS:

0,5 km/h – 6,3 km/h

Switching on self-propulsion:

- Start the engine. (⇒ 13.2), (⇒ 13.5)
- Pull self-propulsion lever (1) to the handlebar and hold.
Self-propulsion is switched on and the lawn mower moves forward.



Avoid damage to the machine!

Always actuate the self-propulsion lever fully (to the stop) in order to prevent resultant damage to the gearbox.

Setting the drive speed:



**RM 650 V, RM 650 VE,
RM 650 VS, RM 655 V,
RM 655 VS: Avoid damage to the Vario gearbox!**

Only actuate driving speed lever (2) when the engine is running.



- Increasing the driving speed:
Press driving speed lever (2) forwards when driving.



- Reducing the driving speed:
Pull driving speed lever (2) rearwards when driving.

Switching off self-propulsion:

- Release self-propulsion lever (1). Self-propulsion is switched off and the lawn mower comes to a standstill. The engine continues to run.

13.10 Emptying the grass catcher box



Risk of injury!

Before detaching the grass catcher box, stop the engine or disengage the mowing blade and allow to come to a standstill.



A completely filled grass catcher box can weigh up to **20 kg**.

- Detach the grass catcher box. (⇒ 9.7)
- Open the grass catcher box at tab (1). Fold up the upper part of grass catcher box (2) and hold. Fold the grass catcher box rearwards and empty the clippings. The grass catcher box can be held securely and emptied easily using handles (3, 4) on the upper and lower part of the grass catcher box.

- Close the grass catcher box.

- Attach the grass catcher box. (⇒ 9.7)

14. Maintenance

14.1 General



Risk of injury!

Observe the safety instructions in the section "For your safety" (⇒ 5.).

Annual service by the specialist dealer:

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

14.2 Cleaning the machine



Maintenance interval:

After each use

Care of the machine will protect it against damage and extend its service life.



Risk of injury!

Stop the engine, detach the spark plug socket, remove the battery (on **RM 650 VE**) and allow the machine to cool.

Empty the fuel tank (run empty) before placing the machine in the cleaning position.

The machine is only safely in the cleaning position when the discharge flap is open.

Cleaning position:

- **RM 650 T, RM 650 V, RM 650 VS,
RM 655 RS, RM 655 V, RM 655 VS,
RM 655 VS:**

Detach the recoil starter rope from the rope guide. (⇒ 8.3)

- If necessary, remove the mulch insert (⇒ 8.5) or detach the grass catcher box. (⇒ 9.7)

- Stand to the right of the machine to tilt it upwards.

- Set the upper handlebar to the lowest position (as far as the stop, the detent lever does not engage in this position). (⇒ 9.3)

- Open discharge flap (2) with your right hand and hold it open.

- Hold the console with your left hand as shown and hold the discharge flap open. At the same time, press detent lever (3) with your thumb and hold.
- Hold the machine with your right hand by the front carrying handle and tilt it slowly backward until the handlebar touches the ground as shown.
- Release discharge flap (2) and detent lever (3) and check that the machine is standing securely.

Notes on cleaning:

- Clean off dirt using little water, with a brush or with a cloth. Never spray water onto engine components, seals or bearing points. If necessary, use a special cleaner (e.g. STIHL special cleaner).
- First, remove accumulated clipping deposits using a stick.
- Always clean the mowing blade – under no circumstances should you hit the mowing blade (e.g. with a hammer) to loosen dirt.
- Clean the engine cooling ribs.
- Clean the grass catcher box and mulch insert using running water and a brush well away from the machine.

14.3 Checking blade wear

Maintenance interval: Before each use



! Risk of injury!

Blades are subjected to differing degrees of wear depending on the location and duration of use. If you use the machine on sandy ground or use it frequently under dry conditions, the blade will be subjected to greater loads and will wear more quickly than the average. A worn blade may break off and cause serious injuries. The instructions for blade maintenance must therefore always be observed.

- Tilt the mower upwards into the cleaning position. (⇒ 14.2)
- Clean mowing blade (1).
- Use a slide calliper to measure blade thickness **A** at 5 points at least. In particular, minimum thickness must also be ensured in the area of the blade wings.
- Check the minimum width **B** at the narrowest point behind the blade wings using a slide calliper.

Blade thickness **A**: > 2,0 mm

Minimum width **B**: > 55 mm

The blade must be replaced.

- if it is damaged (notches, cracks).
- if the measured values are achieved at one or more points or are outside the permissible limits.

If an accessory blade is installed on the lawn mower, different wear limits apply (see accessory instruction manual).

14.4 Removing and installing the blade



Removing the blade:

- Tilt the mower upwards into the cleaning position. (⇒ 14.2)
- Hold blade (1) and unscrew blade fastening screw (2).
- Remove blade (1), blade fastening screw (2) and retaining washer (3).

Installing the blade:

! Risk of injury!

The blade (1) must only be installed as shown. The tabs (4) must face downwards and the curved wings must point upwards.

Observe the specified tightening torque for the blade fastening screw, as the secure attachment of the cutting tool depends on this. Additionally secure blade fastening screw (2) with **Loctite 243**.

Replace spring washer (3) each time the blade is installed and blade fastening screw (2) each time the blade is replaced.

- Clean the blade contact surface and blade bushing or blade holder.
- Position blade (1) on the blade bushing or blade holder (5) with the curved wings pointing upwards (towards the machine).
- Fit a new retaining washer (3) as shown, screw in and tighten blade fastening screw (2).
Tightening torque:
60 - 65 Nm

14.5 Sharpening the mowing blade

STIHL recommends having the mowing blade sharpened by a technician.

Operation of the machine is impaired in the case of an incorrectly sharpened blade (incorrect sharpening angle, imbalance, etc.).

Sharpening instructions:

- Remove the mowing blade. (⇒ 14.4).
- Cool the mowing blade when sharpening, e.g. with water. The blade must not be allowed to display blue colouring, as this would reduce its cutting quality.
- Sharpen the blade evenly to prevent vibrations due to imbalance.
- Observe the sharpening angle of 30°.
- After sharpening, remove any sharpening burr at the cutting edge using fine sandpaper if necessary.
- Observe the wear limits. (⇒ 14.3)

14.6 Engine

Maintenance interval:

See engine instruction manual.

General information:

Observe the operating and maintenance instructions contained 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.

14.7 Battery and charger maintenance

Maintenance interval:

See engine instruction manual.

14.8 Wheels and gearbox

The wheel bearings are maintenance-free.

The gearbox is maintenance-free.

14.9 Lawn roller maintenance (RM 655 RS)



The drive chain must be regularly lubricated, the ball bearings and rollers are maintenance-free.

Maintenance interval:

Once annually or as required

- For servicing purposes, remove screw (1, Torx 25) and remove cover (2).
- Lubricate the drive chain using a commercially available grease.

14.10 Blade brake clutch (RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS)

Maintenance interval:

Once a year

The blade brake clutch (BBC) is subject to natural wear.

It may only be maintained by trained personnel. STIHL recommends STIHL specialist dealers.

14.11 Adjusting the self-propulsion cable (RM 655 YS)



Maintenance interval:

Prior to initial use or as required

Adjustment of the cable is necessary

- before the machine is operated for the first time
- if the maximum speed is not achieved
- if self-propulsion is permanently engaged. This means that the lawn mower automatically begins to move when the recoil starter rope is pulled, despite the self-propulsion lever not being actuated.

Adjusting the cable

- Pull driving speed lever (1) all the way back.
- Loosen nuts (2, 3) to release the tension on cable (4).
- Start the engine. (⇒ 13.5)
- Pull the self-propulsion lever to the handlebar and hold. (⇒ 13.9)
- Tension cable (4) using nut (3) until self-propulsion is activated. Then release the self-propulsion lever, stop the engine and tighten nut (2).



- **Check:**

When the self-propulsion lever is not actuated, the cable is tensioned slightly and the machine can be pulled backwards – the wheels are not blocked.

14.12 Checking skirting protector wear



Maintenance interval:

Once a year

- Tilt the lawn mower upwards into the cleaning position. (⇒ 14.2)
- Measure the thickness of the left and right skirting protector.

RM 650 T, RM 650 V, RM 650 VE,

RM 650 VS:

A > 8 mm

The housing must be replaced by a specialist dealer if the thickness is less than the specification at any point. STIHL recommends STIHL specialist dealers.

RM 655 RS, RM 655 V, RM 655 VS,

RM 655 YS:

A > 1 mm

The skirting protectors must be replaced if they are worn down to the limit value on the underside of the machine or if they no longer fully cover the housing.

14.13 Storage and periods of inoperation (winter break)

Store the machine in a dry, locked, dust-free place. Make sure that it is out of the reach of children.

Any faults must be remedied prior to storage. The machine must always be in a safe operating condition.

15. Transport

15.1 Transport



Risk of injury!

Observe the section "For your safety" before transporting. (⇒ 5.)



Always wear suitable safety clothing when transporting (safety shoes, thick gloves). Always detach the spark plug socket before lifting or transporting. For safety reasons, STIHL recommends lifting or carrying the machine only with the aid of a second person. Before lifting, note the weight indicated in the section "Technical specifications".

Carrying the machine:

- Only hold the machine at carrying handle (1) and at handlebar (2). Always ensure sufficient distance between the mowing blade and your body, particularly your feet and legs.

Securing the machine (lashing):

- Secure the machine on the load floor using suitable fastening material and transport upright on its 4 wheels only.
- Fasten ropes or straps to handlebar console (3) and to housing (4).

Empty the fuel tank and carburettor prior to storage (e.g. by running empty).

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

- Clean all external parts of the machine with care.
- Thoroughly lubricate/grease all moving parts.
- Unscrew the spark plug (see engine instruction manual) 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 (pull the recoil starter rope).

Fire hazard!

Keep the spark plug socket away from the spark plug hole due to the danger of ignition.



- Screw the spark plug back in (see engine instruction manual).
- Perform an oil change (see engine instruction manual).

RM 650 VE:

- Remove the battery and store separately from the machine out of reach of unauthorised persons in a dry, dust-free and frost-free room.
- Charge the battery completely before the start of the season. (⇒ 9.5)

16. Environmental protection



Lawn clippings 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. (⇒ 5.10)

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



Waste products such as batteries must always be disposed of properly. Observe local regulations. Do not dispose of the battery with domestic waste, but hand it in to a specialist dealer or at a hazardous waste collection point.

- Remove the battery (⇒ 9.5) and dispose of separately from the lawn mower.

17. Minimising wear and preventing damage

Important information on maintenance and care of the product group

petrol lawn mowers (STIHL RM)

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:

- Mowing blades
- Grass catcher box
- V-belt
- Drive chain (RM 655 RS)
- Skirting protectors (RM 655 RS, RM 655 V, RM 655 VS, RM 655 YS)
- Battery (RM 650 VE)

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.

18. Standard spare parts

Mowing blade for RM 650 T, RM 650 V, RM 650 VE, RM 650 VS:
6364 702 0100

Mowing blade for RM 655 V, RM 655 VS, RM 655 YS:
6374 702 0100

Mowing blade for RM 655 RS:
6374 702 0110

Blade fastening screw for RM 650 T, RM 650 V, RM 650 VE, RM 655 V:
9008 319 9075

Blade fastening screw for RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:
9008 348 2440

Retaining washer:
0000 702 6600



The blade fastening screw and retaining washer must be renewed when replacing or installing the blade. Spare parts are available from a STIHL specialist dealer.

19. Declaration of conformity

19.1 EU declaration of conformity – STIHL RM 650.0 T/ V/ VS, RM 650.1 VE, RM 655.0 V/VS, RM 655.1 RS/ VS lawn mower

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

declares under our sole responsibility that

- design: lawn mower
- manufacturer's brand: STIHL
- type: RM 650.0 T, RM 650.0 V, RM 650.1 VE, RM 650.0 VS, RM 655.1 RS, RM 655.0 V, RM 655.1 VS, RM 655.0 YS
- cutting width, RM 650.0 T, RM 650.0 V, RM 650.1 VE, RM 650.0 VS: 48 cm
- cutting width, RM 655.1 RS, RM 655.0 V, RM 655.1 VS, RM 655.0 YS: 53 cm
- serial number:
RM 650.0 T, RM 650.0 V, RM 650.1 VE, RM 650.0 VS: 6364
RM 655.1 RS, RM 655.0 V, RM 655.1 VS, RM 655.0 YS: 6374

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 ISO 5395-1, EN ISO 5395-2 and EN 14982.

Approved body involved:
TUV Rheinland LGA Products GmbH
Tillystrasse 2, 90431 Nuremberg,
Germany

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

RM 650.0 T, RM 650.0 V, RM 650.0 VS

- Measured sound power level: 95.3 dB(A)
- Guaranteed sound power level: 96 dB(A)

RM 650.1 VE

- Measured sound power level: 95.3 dB(A)

- Guaranteed sound power level: 96 dB(A)

RM 655.0 V

- Measured sound power level: 97.5 dB(A)

- Guaranteed sound power level: 98 dB(A)

RM 655.1 RS, RM 655.1 VS

- Measured sound power level: 97.2 dB(A)

- Guaranteed sound power level: 98 dB(A)

RM 655.0 YS

- Measured sound power level: 97.4 dB(A)

- Guaranteed sound power level: 98 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, 02.06.2021

STIHL Tirol GmbH

p.p.



Matthias Fleischer, Head of Research and Development Division

p.p.



Sven Zimmermann, Head of Quality Department

19.2 UKCA-Declaration of Conformity

STIHL RM 650.0 T, RM 650.0 V,
RM 655.0 V, RM 655.1 RS, RM 655.1 VS
Lawn Mower

S TIHL Tirol GmbH

Hans Peter Stihl-Strasse 5

Cutt 6336 Langkampfen

Austria

declares under our sole responsibility that

- design: lawn mower
- manufacturer's brand: STIHL
- type: RM 650.0 T, RM 650.0 V,
RM 655.0 V, RM 655.1 RS, RM 655.1
VS
- cutting width: RM 650.0 T, RM 650.0 V:
48 cm

- cutting width: RM 655.1 RS,
RM 655.0 V, RM 655.1 VS: 53 cm
- serial number:

RM 650.0 T, RM 650.0 V: 6364

RM 655.1 RS, RM 650.0 V, RM 655.1

VS: 6374

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 ISO 5395-1, EN ISO 5395-2 and EN ISO 14982.

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 11.

Approved Body involved:

TUV Rheinland UK LTD

1011 Stratford Road

Solihull, B90 4BN

RM 650.0 T, RM 650.0 V

- Measured sound power level:

95.3 dB(A)

- Guaranteed sound power level:

96 dB(A)

RM 655.0 V

- Measured sound power level:

97.5 dB(A)

- Guaranteed sound power level:

98 dB(A)

RM 655.1 RS, RM 655.1 VS

- Measured sound power level:

97.2 dB(A)

- Guaranteed sound power level:

98 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

p.p.



Sven Zimmermann, Head of Quality Division

20. Technical specifications

**RM 650.0 T, RM 650.0 V, RM 650 VE,
RM 650.0 VS:**

Measurement in accordance with EN ISO 5395-2:

Sound pressure level at workplace L_{pA} 81 dB(A)
 Uncertainty K_{pA} 2 dB(A)

Hand-arm vibrations
 Specified vibration characteristic in accordance with EN 12096:
 Measured value a_{hw} 3,80 m/sec²
 Uncertainty K_{hw} 1,90 m/sec²

Measurement in accordance with EN ISO 5395-2, EN 20643

RM 650.0 V:
 Engine type designation Kohler HD775
 Displacement 173 ccm
 Starter Rope start
 Cutter bar drive Permanent
 Self-propulsion, rear wheels Vario gearbox
 Weight 46 kg
 Fuel tank 1,4 l

Sound emissions
 Measurement in accordance with 2000/14/EC/S.I. 2001/1701:
 Guaranteed sound power level L_{wAd} 96 dB(A)
 Uncertainty K_{wA} 1,1 dB(A)

Measurement in accordance with EN ISO 5395-2:

Sound pressure level at workplace L_{pA} 81 dB(A)
 Uncertainty K_{pA} 2 dB(A)

Hand-arm vibrations
 Specified vibration characteristic in accordance with EN 12096:
 Measured value a_{hw} 3,80 m/sec²
 Uncertainty K_{hw} 1,90 m/sec²

Measurement in accordance with EN ISO 5395-2, EN 20643

RM 650.1 VE:
 Engine type designation EVC 300 E
 Displacement 166 ccm
 Lithium-ion battery and charger See engine instruction manual
 Starter Electric start
 Cutter bar drive Permanent
 Self-propulsion, rear wheels Vario gearbox
 Weight 44 kg
 Fuel tank 0,9 l

Sound emissions
 Measurement in accordance with 2000/14/EC/S.I. 2001/1701:
 Guaranteed sound power level L_{wAd} 96 dB(A)
 Uncertainty K_{wA} 1,1 dB(A)

Measurement in accordance with EN ISO 5395-2:

Sound pressure level at workplace L_{pA} 82 dB(A)
 Uncertainty K_{pA} 2 dB(A)

Hand-arm vibrations
 Specified vibration characteristic in accordance with EN 12096:
 Measured value a_{hw} 3,00 m/sec²
 Uncertainty K_{hw} 1,50 m/sec²

Measurement in accordance with EN ISO 5395-2, EN 20643

RM 650.0 VS:
 Engine type designation Kohler HD775
 Displacement 173 ccm

DE

EN

FR

NL

IT

ES

PT

NO

SV

FI

DA

PL

SL

SK

TR

Serial number	6364
Cutting width	48 cm
Cutting tool	Cutter bars
Cutter bar speed	2800 rpm
Cutting height	25 - 85 mm
Tightening torque for blade fastening screw	60 - 65 Nm
Wheel diameter (front)	200 mm
Wheel diameter (rear)	230 mm
Grass catcher box capacity	70 l
Length	167 cm
Width	52 cm
Height	112 cm
Engine	
Design	4-stroke combustion engine
Nominal output at nominal speed	2,6 - 2800 kW - rpm
RM 650.0 T:	
Engine type designation	Kohler HD775
Displacement	173 ccm
tarter	Rope start
er bar drive	Permanent
Self-propulsion, rear wheels	Single-speed gearbox
Weight	45 kg
Fuel tank	1,4 l
Sound emissions	
Measurement in accordance with 2000/14/EC/S.I. 2001/1701:	
Guaranteed sound power level L_{WA}	96 dB(A)
Uncertainty K_{WA}	1,1 dB(A)

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Starter Rope start
Cutter bar drive BBC
Self-propulsion, rear wheels Vario gearbox
Weight 50 kg
Fuel tank 1,4
Sound emissions
 Measurement in accordance with 2000/14/EC/S.I. 2001/1701:
Guaranteed sound power level L_{WAd} 96 dB(A)
Uncertainty K_{WA} 1,1 dB(A)
 Measurement in accordance with EN ISO 5395-2:
Sound pressure level at workplace L_{pA} 81 dB(A)
Uncertainty K_{pA} 2 dB(A)
Hand-arm vibrations
 Specified vibration characteristic in accordance with EN 12096:
Measured value a_{hw} 3,80 m/sec²
Uncertainty K_{hw} 1,90 m/sec²
 Measurement in accordance with EN ISO 5395-2, EN 20643

Roller diameter (rear) 90 mm
Grass catcher box capacity 70 l
Length 171 cm
Width 59 cm
Height 112 cm
RM 655.1 RS:
Cutter bar drive BBC
Roller drive Single-speed gearbox
Weight 56 kg
Engine
Design 4-stroke combustion engine
Manufacturer, type Kohler HD775
Displacement 173 ccm
Starter Rope start
Nominal output at nominal speed 2,6 - 2800 kW - rpm
Fuel tank 1,4 l
Sound emissions
 Measurement in accordance with 2000/14/EC / S.I. 2001/1701:
Guaranteed sound power level L_{WAd} 98 dB(A)
Uncertainty K_{WA} 1,2 dB(A)
 Measurement in accordance with EN ISO 5395-2:
Sound pressure level at workplace L_{pA} 84 dB(A)
Uncertainty K_{pA} 2 dB(A)
Hand-arm vibrations
 Specified vibration characteristic in accordance with EN 12096:
Measured value a_{hw} 2,80 m/sec²
Uncertainty K_{hw} 1,40 m/sec²
 Measurement in accordance with EN ISO 5395-2, EN 20643

RM 655.0 V:
Cutter bar drive Permanent
Self-propulsion, rear wheels Vario gearbox
Weight 46 kg
Engine
Design 4-stroke combustion engine
Manufacturer, type Kohler HD775
Displacement 173 ccm
Starter Rope start
Nominal output at nominal speed 2,6 - 2800 kW - rpm
Fuel tank 1,4 l
Sound emissions
 Measurement in accordance with 2000/14/EC / S.I. 2001/1701:
Guaranteed sound power level L_{WAd} 98 dB(A)
Uncertainty K_{WA} 0,9 dB(A)
 Measurement in accordance with EN ISO 5395-2:
Sound pressure level at workplace L_{pA} 84 dB(A)
Uncertainty K_{pA} 2 dB(A)
Hand-arm vibrations
 Specified vibration characteristic in accordance with EN 12096:
Measured value a_{hw} 3,80 m/sec²
Uncertainty K_{hw} 1,90 m/sec²
 Measurement in accordance with EN ISO 5395-2, EN 20643
RM 655.1 VS:
Cutter bar drive BBC
Self-propulsion, rear wheels Vario gearbox
Weight 50 kg
Engine

DE
 EN
 FR
 NL
 IT
 ES
 PT
 NO
 SV
 FI
 DA
 PL
 SL
 SK
 TR

C Regulation for the
evaluation, authorisation and
chemicals.

compliance with the
Directive (EC) No. 1907/2006 is
www.stihl.com/reach.

Reshooting

contact a specialist
STIHL recommends STIHL
dealers.

instruction manual.

ing

•: **RM 650 V, RM 650 VE,**
motorstop lever not

RM 655 RS, RM 655 VS,
Throttle lever is in Stop

Battery discharged or

•k; fuel line blocked. Cutoff
or old fuel in tank.

ocket detached from spark
lead not properly fastened

irty or damaged; incorrect
•).
housing blocked.

- **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:** Throttle cable disengaged or defective (e.g. kinked).

Remedy:

- **RM 650 T, RM 650 V, RM 655 V:** Press motorstop lever to handlebar and hold. (⇒ 10.2)
- **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:** Set throttle lever to Choke or Start position. (⇒ 13.5)
- **RM 650 VE:** Charge or replace battery. (⇒ 9.5)
- Top up fuel; clean fuel line. ✘
- 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. ✘
- Clean lawn mower housing. First disconnect spark plug socket and, for model RM 650 VE, also remove battery. (⇒ 9.5)
- **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:** Attach or replace throttle cable. ✘

Fault:


Starting problems or deteriorating engine power

Possible cause:

- Lawn mower housing blocked.
- Mowing at an excessively low cutting height or fast speed
- Water in fuel tank and carburettor; carburettor blocked
- Contaminated fuel tank
- Dirty air filter

- Dirty spark plug

Remedy:

- Clean law mower housing. First disconnect spark plug socket and, for model **RM 650 VE** , also remove the battery. (⇒ 9.5)
- Adapt cutting height and reduce mowing speed
- Empty fuel tank, clean fuel line and carburettor ✘
- Clean fuel tank ✘
- Clean/replace air filter . ✘
- Clean spark plug ✘

Fault:

Engine overheating.

Possible cause:

- Oil level in engine too low.
- Cooling ribs dirty.

Remedy:

- Change engine oil. (⇒ 8.6)
- Clean cooling ribs. (⇒ 14.2)

Fault:

No drive when self-propulsion lever is actuated.

Possible cause:

- **RM 655 YS:** Self-propulsion cable incorrectly adjusted.
- Self-propulsion cable defective (e.g. kinked).
- V-belt worn.
- Gearbox defective.

Remedy:

- **RM 655 YS:** Check cable adjustment. (⇒ 14.11)
- Replace cable. ✘
- Replace V-belt. ✘
- Replace gearbox. ✘

Fault:

Speed control not functioning

Possible cause:

- Driving speed lever moved in wrong direction.
- Cable disengaged or defective (e.g. kinked).

Remedy:

- Move driving speed lever in the correct direction. (⇒ 13.9)
- Attach or replace cable. ✘

Fault:

Mowing channel blocked

Possible cause:

- Mowing blade is worn.
- Mowing grass which is too long or too wet.

- **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:** Engine speed is too low.

Remedy:

- Replace mowing blade. (⇒ 14.4)
- Adapt cutting height and mowing speed to mowing conditions. (⇒ 12.), (⇒ 9.4)
- **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:** Set the throttle lever to the Start position. (⇒ 13.5)

Fault:

Poor cut, lawn turning yellow

Possible cause:

- Blade is blunt or worn.
- Mowing speed is too high in relation to cutting height
- **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:** Engine speed is too low.

Remedy:

- Sharpen or replace blade (⇒ 14.3), (⇒ 14.4). ✘

- Reduce mowing speed and/or select correct cutting height (do not work at lowest cutting height). (⇒ 9.4), (⇒ 13.9)
- **RM 650 VS, RM 655 RS, RM 655 VS, RM 655 YS:** Set throttle lever to Start position. (⇒ 13.5)

Fault:

Excessive vibration during operation

Possible cause:

- Blade fastening screw loose.
- Blade imbalance due to incorrect sharpening or fracture.
- Cutting unit defective.
- Engine mounting loose.

Remedy:

- Tighten blade fastening screw. (⇒ 14.4)
- Re-sharpen (balance) or replace blade. (⇒ 14.5), ✘
- Check blade, blade shaft and blade fastening and repair if necessary. ✘
- Tighten engine mounting bolts. ✘

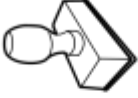
22. Service schedule

22.1 Handover confirmation

Model: _____

Serial number:

Date:





Next service

Date:

22.2 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

 Next service date

