

STIHL

STIHL KMA 135 R

Instruction Manual



Contents

1	Introduction	2
2	Guide to Using this Manual	2
2.1	Applicable Documentation	2
2.2	Symbols used with warnings in the text	3
2.3	Symbols in Text	3
3	Overview	3
3.1	KombiEngine and Battery	3
3.2	Icons	4
4	Safety Precautions	4
4.1	Warning Symbols	4
4.2	Intended Use	5
4.3	Requirements concerning the user	5
4.4	Clothing and Equipment	6
4.5	Work Area and Surroundings	6
4.6	Safe Condition	7
4.7	Working	8
4.8	Transporting	8
4.9	Storing	9
4.10	Cleaning, Maintenance and Repair	10
5	Preparing KombiMotor for Operation	10
5.1	Preparing the KombiEngine for Operation	10
6	Charging the Battery, LEDs	10
6.1	Charging the Battery	10
6.2	Displaying State of Charge	11
6.3	LEDs on Battery	11
7	Assembling the KombiMotor	11
7.1	Mounting the Loop Handle	11
7.2	Mounting the Loop Handle with Barrier Bar	11
8	Adjusting KombiMotor for User	12
8.1	Fitting and Adjusting the Shoulder Strap	12
8.2	Adjusting and Setting the Loop Handle	12
9	Removing and Fitting the Battery	12
9.1	Inserting the Battery	12
9.2	Removing the Battery	13
10	Switching the KombiMotor On/Off	13
10.1	Switching on the KombiEngine	13
10.2	Switching the KombiEngine Off	13
11	Checking KombiEngine and Battery	13
11.1	Checking the controls	13
11.2	Testing the Battery	14
12	Operating the KombiMotor	14
12.1	Holding and Controlling the KombiMotor	14
12.2	Setting the performance level	14
12.3	Operation	14
13	After Finishing Work	15
13.1	When Work is Finished	15
14	Transporting	15
14.1	Transporting the KombiEngine	15
14.2	Transporting the battery	15
15	Storing	15
15.1	Storing the KombiEngine	15
15.2	Storing the Battery	15
16	Cleaning	15
16.1	Cleaning the KombiEngine	15
16.2	Cleaning the Air Filter	16
16.3	Cleaning the Battery	16
17	Maintenance and Repairs	16
17.1	Maintenance intervals	16
17.2	Repairing the KombiEngine	16
17.3	Servicing and Repairing the Battery	16
18	Troubleshooting	17
18.1	Troubleshooting the KombiEngine and Battery	17
19	Specifications	19
19.1	KombiEngine STIHL KMA 135 R	19
19.2	STIHL AP battery	19
19.3	Sound Values and Vibration Values	19

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19.4 REACH	19
20 Combinations with KombiTools	20
20.1 KombiTool mounting options	20
20.2 STIHL FS-KM: Combinations of Cutting Attachments, Deflectors and Carrying Systems	21
21 Combinations of Carrying Systems	22
21.1 Combinations of Carrying Systems	22
22 Spare Parts and Accessories	22
22.1 Spare parts and accessories	22
23 Disposal	22
23.1 Disposing of the KombiEngine and battery	22
24 EC Declaration of Conformity	22
24.1 STIHL KMA 135 R KombiEngine	22
25 UKCA Declaration of Conformity	23
25.1 KombiEngine STIHL KMA 135 R	23
26 General Power Tool Safety Warnings	24
26.1 Introduction	24
26.2 Work area safety	24
26.3 Electrical safety	24
26.4 Personal safety	24
26.5 Power tool use and care	25
26.6 Service	25
26.7 Battery tool use and care	25
26.8 Service	26

1 Introduction

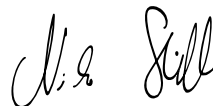
Dear Customer,

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 dealers guarantee competent advice and instruction as well as comprehensive service support.

STIHL expressly commit themselves to a sustainable and responsible handling of natural resources. This user manual is intended to help you use your STIHL product safely and in an environmentally friendly manner over a long service life.

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



Dr. Nikolas Stihl

IMPORTANT! READ BEFORE USING AND KEEP IN A SAFE PLACE FOR REFERENCE.

2 Guide to Using this Manual

2.1 Applicable Documentation

Local safety regulations apply.

- ▶ Read, understand and save the following documents in addition to this instruction manual:
 - Instruction manual of STIHL KombiTool being used.
 - Instruction manual and packaging of the cutting attachment you are using

- Instruction manual of the carrying system you are using
- User instructions for STIHL AR battery
- User instructions for AP belt bag with connecting cable
- Safety notes and precautions for STIHL AP battery
- Instruction manual for STIHL AL 101, 300, 500 chargers
- Safety information for STIHL batteries and products with built-in batteries: www.stihl.com/safety-data-sheets

2.2 Symbols used with warnings in the text

WARNING

This symbol indicates dangers that can cause serious injuries or death.

- ▶ The measures indicated can avoid serious injuries or death.

NOTICE

This symbol indicates dangers that can cause damage to property.

- ▶ The measures indicated can avoid damage to property.

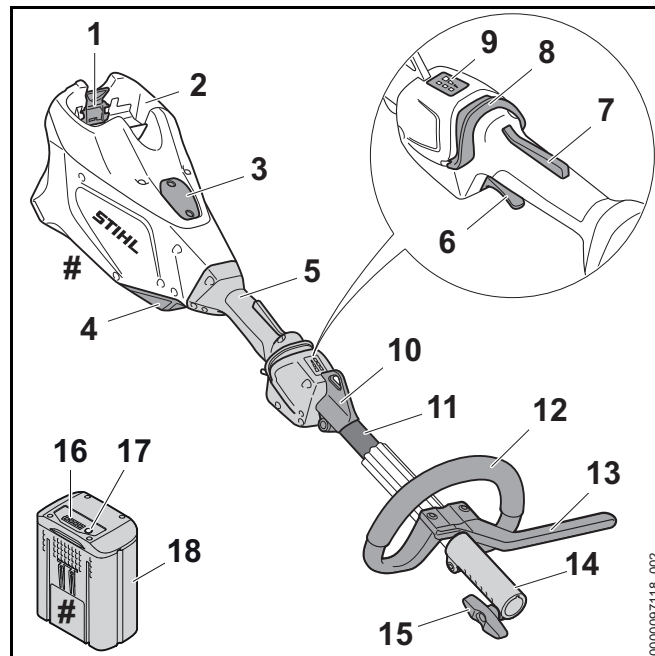
2.3 Symbols in Text



This symbol refers to a chapter in this instruction manual.

3 Overview

3.1 KombiEngine and Battery



1 Locking lever

The locking lever holds the battery in the battery compartment.

2 Battery compartment

The battery compartment holds the battery.

3 Cover¹

The cover is the placeholder for a Smart Connector 2 A.

¹ The cover is part of the motor housing. The cover should only be removed to install a Smart Connector 2 A, and it should be safely stored for later re-installation. Always use the KombiEngine with the cover or Smart Connector 2 A installed.

4 Air filter

The air filter filters the air entering the engine.

5 Control handle

For operating, holding and controlling the KombiEngine.

6 Trigger

Switches the KombiEngine on and off.

7 Trigger lockout

The trigger lockout unlocks the trigger.

8 Release slide

Switches the KombiEngine on and selects the power level.

9 LEDs

The LEDs indicate the selected power level.

10 Carrying ring

For attaching the carrying system to the brushcutter.

11 Shaft

The shaft connects all components.

12 Loop handle

For holding and controlling the KombiEngine.

13 Barrier bar

Maintains distance between operator's leg and a metal cutting attachment.

14 Coupling sleeve

Connects the KombiEngine to the KombiTool.

15 Wing screw

Secures the KombiEngine to the shaft.

16 LEDs

The LEDs indicate the state of charge of the battery and any faults.

17 Button

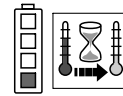
The button activates the LEDs on the battery.

18 Battery

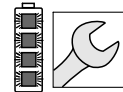
Supplies power to the KombiEngine.

Rating plate with machine number**3.2 Icons**

Meaning of icons that may be on the KombiEngine and the battery:



1 LED emits red light. The battery is too warm or too cold.



4 LEDs flashing red. There is a fault in the battery.



Push the release slide forward to switch the KombiEngine on and set the power levels.



This icon marks the release slide.



Guaranteed sound power level in accordance with Directive 2000/14/EC in dB(A) for the purpose of comparing the sound emissions of products.



The information next to the symbol indicates the energy content of the battery according to the cell manufacturer's specification. The energy content available in operation is lower.



Do not dispose of the product with domestic waste.

4 Safety Precautions**4.1 Warning Symbols**

Meanings of warning icons on the KombiEngine or battery:



Observe safety notices and take the necessary precautions.



Read, understand and keep the User Manual.



Remove the battery during work stoppages, transport, storage, maintenance or repair.



Maintain a safety distance.



Protect battery from heat and fire.



Do not immerse battery in fluids.



Observe the permitted battery temperature range.

4.2 Intended Use

The STIHL KMA 135 R KombiEngine is designed to power a number of different STIHL KombiTools.

The KombiEngine may be used in the rain.

The KombiEngine is powered by a STIHL AP battery or a STIHL AR battery.

⚠ WARNING

- Batteries not explicitly approved for the STIHL KombiEngine may cause a fire or explosion. Persons may be seriously or fatally injured and property may be damaged.
 - ▶ Operate the KombiEngine with a STIHL AP battery or a STIHL AR battery.
- Using the KombiEngine or the battery for other than the intended purposes may result in serious or fatal injuries and damage to property.
 - ▶ Use the KombiEngine as described in this User Manual.
 - ▶ Use the battery as described in this User Manual or the User Manual for the STIHL AR battery.

4.3 Requirements concerning the user

⚠ WARNING

- Users who have had no instruction cannot recognize or assess the risks involved in using the KombiEngine or battery. The user or other persons may sustain serious or fatal injuries.



- ▶ Read, understand and keep the User Manual.

- ▶ If the KombiEngine or battery is passed on to another person: Always give them the User Manual.
- ▶ Make sure that the user meets the following conditions:
 - The user is rested.
 - The user has good hearing and visual faculties and the necessary physical and mental fitness to operate and work with the KombiEngine or batteries. If the user is able to operate the equipment but has physical, sensory or mental restrictions, the user may

only work with the equipment under the supervision of or after receiving instruction from a responsible person.

- The user is able to recognize and assess the risks involved in using the KombiEngine and batteries.
 - The user is an adult, or is being trained in an occupation under supervision according to national regulations.
 - The user has received instruction from a STIHL dealer or other experienced user before working with the KombiEngine for the first time.
 - The user is not under the influence of alcohol, medicines or drugs.
- ▶ If you have any doubts, be sure to consult a STIHL dealer.

4.4 Clothing and Equipment

WARNING

- Long hair can be pulled into the KombiMotor during operation. This can result in serious injuries.
 - ▶ Tie up long hair so that it is above shoulder level.
- Falling objects can cause head injuries.
 - ▶ If there is a danger of falling objects during operation: Wear a safety hard hat.
- Dust can be whipped up during operation: Whipped up dust can damage the respiratory passages and cause allergic reactions.
 - ▶ If dust is generated: Wear a dust respirator mask.
- Unsuitable clothing can snag on wood, brush or the KombiMotor. Not wearing suitable clothing may result in serious injury.
 - ▶ Wear snug-fitting clothing.
 - ▶ Do not wear a scarf or jewelry.
- Wearing unsuitable footwear may cause you to slip or stumble. This can result in personal injury.
 - ▶ Wear sturdy enclosed footwear with non-slip soles.

4.5 Work Area and Surroundings

4.5.1 KombiEngine

WARNING

- Bystanders, children and animals cannot recognize or assess the dangers of the KombiEngine. Bystanders, children and animals may be seriously injured.
 - ▶ Keep bystanders, children and animals away from the working area.
 - ▶ Do not leave the KombiEngine unattended.
 - ▶ Make sure that children cannot play with the KombiEngine.
- Electrical components of the KombiEngine can produce sparks. Sparks may cause fires and explosions in highly flammable or explosive environments. Persons may be seriously or fatally injured and property may be damaged.
 - ▶ Do not work in a highly flammable or explosive environment.

4.5.2 Battery

WARNING

- Bystanding people, children and animals cannot recognise or evaluate the dangers posed by the battery. This may result in serious injury to bystanding people, children and animals.
 - ▶ Keep bystanding people, children and animals out of the way.
 - ▶ Do not leave the battery unattended.
 - ▶ Make sure that children cannot play with the battery.
- The battery is not protected against all ambient conditions. If exposed to certain ambient conditions, the battery may catch fire or explode. This may result in serious injury to people and damage to property.
 - ▶ Protect the battery from heat and fire.
 - ▶ Do not throw the battery into a fire.





- ▶ Use and store the battery at temperatures between - 10 °C and + 50 °C.



- ▶ Do not immerse the battery in liquids.

- ▶ Keep the battery away from metallic objects.
- ▶ Do not expose the battery to high pressure.
- ▶ Do not expose the battery to microwaves.
- ▶ Protect the battery from chemicals and salts.

4.6 Safe Condition

4.6.1 KombiEngine

The KombiEngine is in a safe condition if the following points are observed:

- The KombiEngine is not damaged.
- The KombiEngine is clean.
- The controls function properly and have not been modified.
- An approved KombiTool listed in this User Manual is mounted.
- The KombiTool is correctly mounted.
- Original STIHL accessories designed for this KombiEngine model are fitted.
- The accessories are correctly attached.

⚠ WARNING

- If not in safe condition, components may no longer operate correctly and safety devices may be disabled. This may result in serious or fatal injury to people.
 - ▶ Work only with an undamaged KombiEngine.
 - ▶ If the KombiEngine is dirty: Clean the KombiEngine.

- ▶ Do not modify the KombiEngine. Exception: Mounting an approved KombiTool listed in this User Manual.
- ▶ If the controls do not function properly: Do not work with the KombiEngine.
- ▶ Fit original STIHL accessories designed for this KombiEngine model.
- ▶ Mount the KombiTool as described in the User Manual supplied with the KombiTool.
- ▶ Attach accessories as described in this User Manual or in the User Manual for the accessories.
- ▶ Never insert objects in the openings of the KombiEngine.
- ▶ Replace worn or damaged labels.
- ▶ If you have any doubts, be sure to consult a STIHL dealer.

4.6.2 Battery

The battery is in safe condition when the following conditions are met:

- The battery is not damaged.
- The battery is clean and dry.
- The battery is working and has not been modified.

⚠ WARNING

- The battery cannot function safely if it is not in safe condition. There is a risk of serious injury to persons.
 - ▶ Use an undamaged and functioning battery.
 - ▶ Do not charge a damaged or defective battery.
 - ▶ If the battery is dirty or wet: clean the battery and allow it to dry.
 - ▶ Do not modify the battery.
 - ▶ Do not insert objects into the apertures in the battery.
 - ▶ Never connect the battery terminals to metallic objects and cause a short circuit.
 - ▶ Do not open the battery.

- ▶ Replace worn or damaged warning signs.
- Fluid may leak from a damaged battery. If the fluid contacts the skin or eyes, this may cause irritation.
 - ▶ Avoid contact with the fluid.
 - ▶ In the event of contact with the skin: wash the affected areas with plenty of soap and water.
 - ▶ In the event of contact with the eyes: rinse the eyes with plenty of water for at least 15 minutes and seek medical attention.
- A damaged or defective battery may emit an unusual odour, smoke or catch fire. This may result in serious or fatal injury to people and damage to property.
 - ▶ If the battery emits an unusual odour or smoke: do not use the battery and keep it away from flammable materials.
 - ▶ If the battery catches fire: try to extinguish the battery using a fire extinguisher or water.

4.7 Working

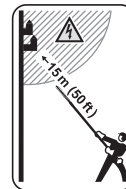
⚠ WARNING

- In certain situations, the user may no longer be able to concentrate on their work. This may result in the user stumbling, falling and suffering serious injury.
 - ▶ Keep calm and plan your work.
 - ▶ If light and visibility are poor: Do not work with the KombiEngine.
 - ▶ Use the KombiEngine without assistance.
 - ▶ Watch out for obstacles.
 - ▶ Work standing on the ground and keep your balance. If you have to work at a height: Use a mobile elevating work platform or secure scaffolding.
 - ▶ If you start feeling fatigue: Take a break.

- If the behavior of the KombiEngine changes during operation or feels unusual, it may no longer be in a safe condition. This may result in serious injury to people and damage to property.
 - ▶ Stop working, remove the battery and consult a STIHL servicing dealer.
- Vibrations may occur while using the KombiEngine.
 - ▶ Wear gloves.
 - ▶ Take breaks.
 - ▶ If signs of a circulatory disturbance occur: Consult a doctor.
- In an emergency, the user may start to panic and forget to take off the carrying system. This may result in serious injury to the user.
 - ▶ Practice taking off the carrying system.

⚠ DANGER

- If working near live wires, the KombiEngine may come into contact with live wires and damage them. This may result in serious or fatal injury to the user.



- ▶ Maintain a clearance of 15 meters from live cables.

4.8 Transporting

4.8.1 KombiEngine

⚠ WARNING

- The KombiEngine may turn over or shift during transport. Persons may be injured or property damaged.



- ▶ Remove the battery.

- ▶ If a KombiTool is mounted: Transport the KombiEngine as described in the User Manual supplied with the KombiTool.
- ▶ Secure the KombiEngine with lashing. Secure the KombiEngine with lashing straps or a net to prevent it turning over and moving. straps or a net to prevent it turning over and moving.

4.8.2 Battery

⚠ WARNING

- The battery is not protected against all ambient conditions. The battery may be damaged if it is exposed to certain ambient conditions and damage to property may occur.
 - ▶ Never transport a damaged battery.
 - ▶ Store the battery in non-conductive packaging.
- The battery may turn over or shift during transport. This may result in personal injuries and damage to property.
 - ▶ Pack the battery in packaging in such a way that it cannot move.
 - ▶ Secure the packaging so that it cannot move.

4.9 Storing

4.9.1 KombiEngine

⚠ WARNING

- Children are not aware of and cannot assess the dangers of the KombiEngine and may be seriously injured.



- ▶ Remove the battery.

- ▶ Store the KombiEngine out of the reach of children.
- Dampness may corrode the electrical contacts on the KombiEngine and metal components. The KombiEngine may be damaged.



- ▶ Remove the battery.

- ▶ Store the KombiEngine in a clean and dry condition.

4.9.2 Battery

⚠ WARNING

- Children are not aware of and cannot assess the dangers of the battery and may be seriously injured.
 - ▶ Store the battery out of the reach of children.
- The battery is not protected against all ambient conditions. If the battery is exposed to certain ambient conditions, the battery may be damaged.
 - ▶ Store the battery in a clean and dry condition.
 - ▶ Store the battery indoors.
 - ▶ Store the battery separately from the KombiEngine and charger.
 - ▶ Store the battery in electrically non-conductive packaging.
 - ▶ Store the battery at temperatures between - 10 °C and + 50 °C.

4.10 Cleaning, Maintenance and Repair

⚠ WARNING

- The KombiEngine may start up unintentionally if the battery is left in place during cleaning, maintenance or repair operations. There is a risk of serious injury to people and damage to property.



- ▶ Remove the battery.

- Using harsh detergents, and cleaning with a water jet or sharp objects can damage the KombiEngine or battery. If the KombiEngine or battery is not cleaned correctly, components may no longer function properly or safety devices may be rendered inoperative. They may cause serious injury to persons.
 - ▶ Clean the KombiEngine and battery as described in this User Manual.
- If the KombiEngine or battery are not serviced or repaired correctly, components may no longer function properly or safety devices may be rendered inoperative. There is a risk of serious or fatal injury.
 - ▶ Do not attempt to service or repair the KombiEngine and battery.
 - ▶ If the KombiEngine or the battery require servicing or repairs: Contact your STIHL dealer for assistance.

5 Preparing KombiMotor for Operation

5.1 Preparing the KombiEngine for Operation

The following steps must be performed before commencing work:

- ▶ Ensure that the following components are in safe condition:
 - KombiEngine, 4.6.1.
 - Mount the KombiTool as described in the User Manual supplied with the KombiTool.
 - Battery, 4.6.2.
- ▶ Check the battery, 11.2.
- ▶ Fully charge battery as described in the User Manual for chargers STIHL AL 101, 300, 500.
- ▶ Clean the KombiEngine, 16.1.
- ▶ Mount the loop handle, 7.1.
- ▶ If an FS KombiEngine or RG KombiEngine is used: Mount the barrier bar, 7.2.
- ▶ Mount the KombiTool as described in the User Manual supplied with the KombiTool.
- ▶ Fit and adjust the carrying system, 8.1.
- ▶ Adjust the loop handle, 8.2.
- ▶ Check the controls, 11.1.
- ▶ If you cannot carry out these steps: Do not use your KombiEngine and contact your STIHL dealer for assistance.

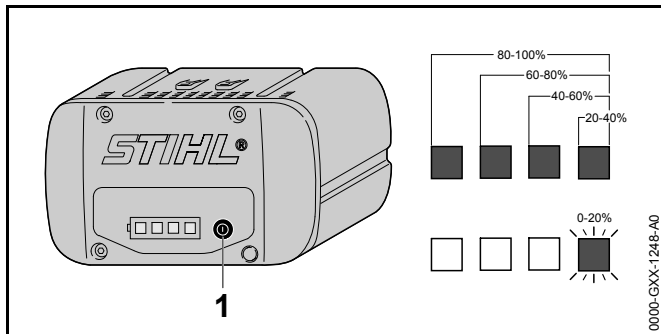
6 Charging the Battery, LEDs

6.1 Charging the Battery

The charging time depends on several factors, e.g. temperature of the battery or the ambient temperature. The actual charging time may differ from the specified charging time. For specified charging times see www.stihl.com/charging-times.

- ▶ Recharge the battery fully as described in the instruction manual for the STIHL AL 101, 300, 500 chargers.

6.2 Displaying State of Charge



- ▶ Press the button (1).
The LEDs (5) glow green for about 5 seconds and indicate the state of charge.
- ▶ If the LED on the right flashes green: Charge the battery.

6.3 LEDs on Battery

The LEDs can show the state of charge or malfunctions. The LEDs can glow or flash green or red.

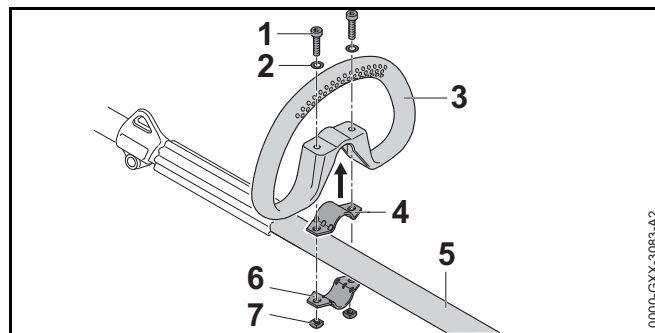
The state of charge is indicated when the LEDs glow or flash green.

- ▶ If the LEDs glow or flash red: Troubleshooting, 18.1. Malfunction in trimmer or battery.

7 Assembling the KombiMotor

7.1 Mounting the Loop Handle

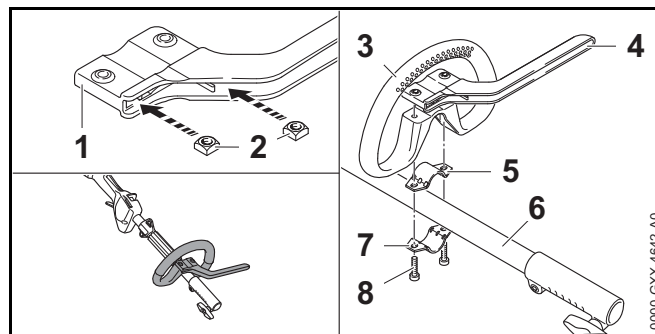
- ▶ Switch off the KombiEngine and remove the battery.



- ▶ Fit the clamp (4) in the loop handle (3).
- ▶ Place the loop handle (3) with clamp (4) on the shaft (5).
- ▶ Fit the washers (2) on the screws (1).
- ▶ Press the clamp (6) against the shaft (5).
- ▶ Insert the screws (1) through holes in the loop handle (3) and clamps (4 and 6).
- ▶ Fit and tighten down the nuts (7) firmly.
The loop handle must not be removed again.

7.2 Mounting the Loop Handle with Barrier Bar

- ▶ Switch off the KombiEngine and remove the battery.

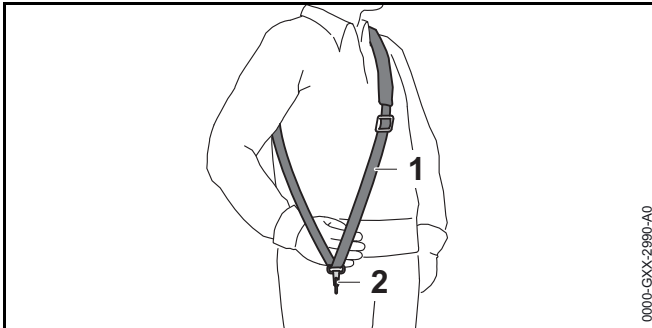


- ▶ Insert the nuts (2) in the barrier bar (1) so that the holes line up.
- ▶ Fit the clamp (5) in the loop handle (3).
- ▶ Place the loop handle (3) with clamp (5) and barrier bar (4) on the shaft (6).

- ▶ Press the clamp (7) against the shaft (6).
- ▶ Insert screws (8) and tighten.

8 Adjusting KombiMotor for User

8.1 Fitting and Adjusting the Shoulder Strap



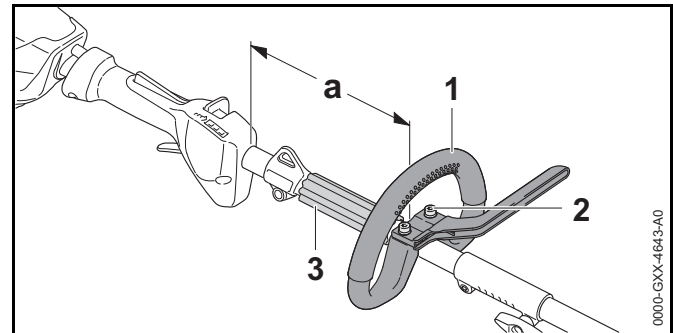
- ▶ Put on the shoulder strap (1).
- ▶ Adjust the shoulder strap (1) so that the carabiner (2) is about a hand's width below your right hip.

Other approved carrying systems are listed in this User Manual, 21.

8.2 Adjusting and Setting the Loop Handle

The loop handle can be set to different positions to suit the height and reach of the user.

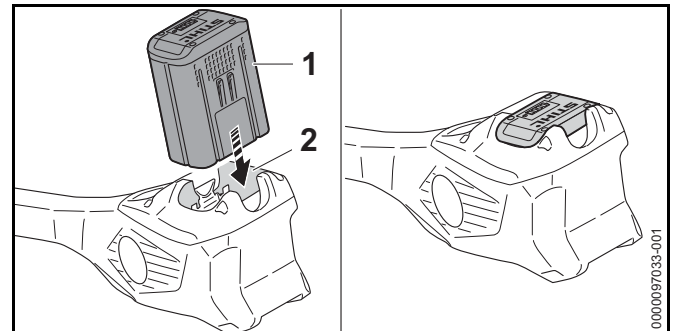
- ▶ Switch off the KombiEngine and remove the battery.



- ▶ Undo the screws (2).
- ▶ Move the loop handle (1) to the required position and check that the following conditions are met:
 - The bump guard (3) fits between the loop handle (1) and carrying ring.
 - a = no more than 25 cm.
- ▶ Tighten down the screws (2) so that the loop handle (1) cannot be rotated on the shaft.

9 Removing and Fitting the Battery

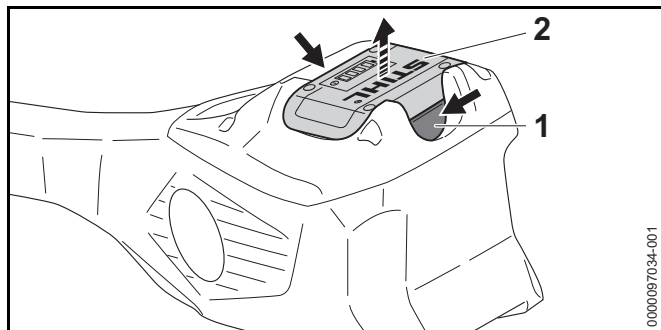
9.1 Inserting the Battery



- ▶ Insert the battery (1) up to the limit stop into the battery compartment (2). The battery (1) engages with a click and is now locked.

9.2 Removing the Battery

- ▶ Set the KombiEngine on a level surface.

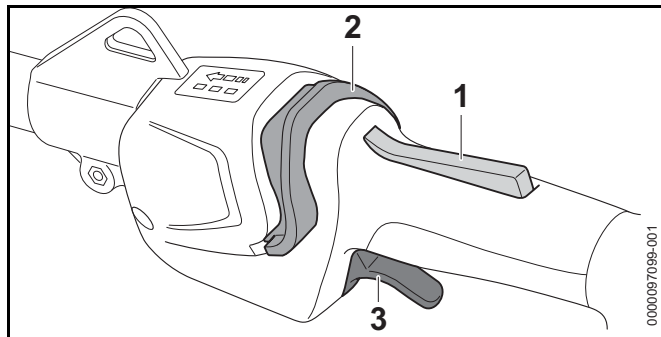


- ▶ Press both locking levers (1).
The battery (2) is released and can be removed.

10 Switching the KombiMotor On/Off

10.1 Switching on the KombiEngine

- ▶ Hold the KombiEngine with your right hand by the control handle – wrap your thumb around the control handle.
- ▶ Hold the KombiEngine with your left hand by the loop handle – wrap your thumb around the loop handle.



- ▶ Press the trigger lockout (1) with your hand and keep it pressed.

- ▶ Push the release slide (2) in the direction of the loop handle with your thumb and hold it there.
The LEDs emit light to indicate the power level used last.
- ▶ Press the trigger (3) with your index finger and keep depressed.
The KombiEngine accelerates and the KombiTool runs.

The more you depress the trigger (3), the faster the KombiTool runs.

The KombiEngine can also be switched on by first pressing the release slide (2) and pressing the trigger lockout (1) within 5 seconds (as long as the LEDs are flashing). The trigger (3) is now unlocked and the KombiEngine is ready for use.

The LEDs continue flashing for 5 seconds after the trigger (3) and trigger lockout (1) are released after switch-on. As long as the LEDs flash, the KombiEngine can be switched on again without having to operate the release slide (2) once more.

10.2 Switching the KombiEngine Off

- ▶ Release the trigger and trigger lockout.
- ▶ Wait until the KombiTool comes to a standstill.
- ▶ If the KombiTool continues to run: Remove the battery and contact your STIHL dealer for assistance.
The KombiEngine is defective.

11 Checking KombiEngine and Battery

11.1 Checking the controls

Trigger lockout and trigger

- ▶ Remove the battery.
- ▶ Try pressing the trigger without pressing the trigger lockout.
- ▶ If the trigger can be pulled: Do not use your KombiEngine and contact your STIHL servicing dealer for assistance.
The trigger lockout is faulty.
- ▶ Press and hold the trigger lockout.

- ▶ Squeeze and release the trigger.
- ▶ If the trigger or trigger lockout is stiff or does not spring back to the idle position: Do not use your KombiEngine and contact your STIHL dealer for assistance. The trigger or the trigger lockout is defective.

Switching on the KombiEngine

- ▶ Insert battery.
- ▶ Press and hold the trigger lockout.
- ▶ Push the release slide in the direction of the loop handle with your thumb.
- ▶ Press and hold the trigger. The KombiTool runs.
- ▶ If 3 LEDs on the battery flash red: Remove the battery and contact your STIHL dealer for assistance. There is a malfunction in the KombiEngine.
- ▶ Release the trigger. The KombiTool stops running.
- ▶ If the KombiTool continues to run: Remove the battery and contact your STIHL dealer for assistance. The KombiEngine is defective.

11.2 Testing the Battery

- ▶ Press button on battery. The LEDs glow or flash.
- ▶ If the LEDs do not glow or flash: Do not use the battery and contact your STIHL servicing dealer. There is a malfunction in the battery.

12 Operating the KombiMotor

12.1 Holding and Controlling the KombiMotor

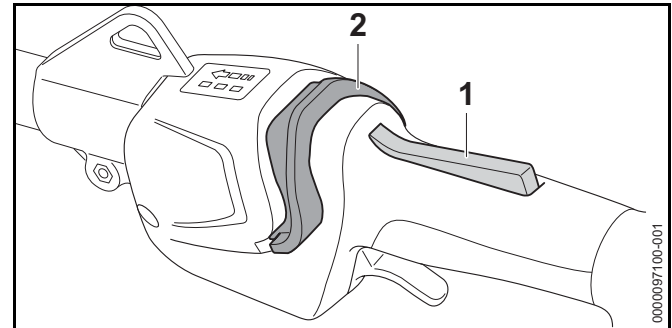
The correct way of holding and controlling the KombiMotor depends on the KombiTool you are using.

- ▶ Hold and control the KombiMotor as described in the instruction manual supplied with the KombiTool.

12.2 Setting the performance level

Depending on the application, 3 power levels can be set. The LEDs indicate the selected power level. The higher the power level, the faster the KombiTool can run.

The selected power level affects the battery's runtime. The lower the power level, the longer the runtime.



- ▶ Press and hold the trigger lockout (1).
- ▶ Push the release slide (2) in the direction of the loop handle with your thumb and hold it there. The LEDs emit light to indicate the power level selected.
- ▶ Push the release slide (2) forwards, hold it briefly in that position and allow it to spring back. This selects the next power level. After the third performance level, it starts again with the first performance level.
- ▶ Push the release slide (2) forwards and allow it to spring back as many times as necessary to select the required power level.

Every KombiTool can be operated at each power level.

12.3 Operation

The method of operating the KombiMotor depends on the KombiTool you are using.

- ▶ Operate the KombiMotor as described in the instruction manual supplied with the KombiTool.

13 After Finishing Work

13.1 When Work is Finished

- ▶ Switch off the KombiEngine and remove the battery.
- ▶ If the KombiEngine is wet: Allow the KombiEngine to dry.
- ▶ If the battery is wet: Allow the battery to dry.
- ▶ Clean the KombiEngine.
- ▶ Clean battery.

14 Transporting

14.1 Transporting the KombiEngine

- ▶ Switch off the KombiEngine and remove the battery.

Carrying the KombiEngine

- ▶ Carry the KombiEngine properly balanced by the shaft with the KombiTool behind you.

Transporting the KombiEngine in the car

- ▶ Secure the KombiEngine so that it cannot turn over or move.

14.2 Transporting the battery

- ▶ Switch off the KombiEngine and remove the battery.
- ▶ Check that the battery is in a safe condition.
- ▶ Pack the battery so that the following points apply:
 - The packaging is electrically non-conductive.
 - The battery cannot move inside the packaging.
- ▶ Secure the packaging so that it cannot move.

The battery is subject to the Carriage of Dangerous Goods regulations. The battery is classified as UN 3480 (lithium ion batteries) and has been tested pursuant to UN Manual Tests and Criteria Part III, Subsection 38.3.

The transport regulations can be found in www.stihl.com/safety-data-sheets.

15 Storing

15.1 Storing the KombiEngine

- ▶ Switch off the KombiEngine and remove the battery.
- ▶ Remove the KombiTool as described in the User Manual supplied with the KombiTool.
- ▶ Ensure that the following conditions are met when storing the KombiEngine:
 - The KombiEngine is out of the reach of children.
 - The KombiEngine is clean and dry.

15.2 Storing the Battery

STIHL recommends keeping the battery in a charging state between 40% and 60 % (2 green LEDs lit).

- ▶ The battery should be stored in such a way that the following conditions are fulfilled:
 - The battery is out of the reach of children.
 - The battery is clean and dry.
 - The battery is in an enclosed room.
 - The battery is stored separately from the KombiEngine and charger.
 - The battery is in electrically non-conductive packaging.
 - The battery is stored at temperatures between - 10 °C and + 50 °C.

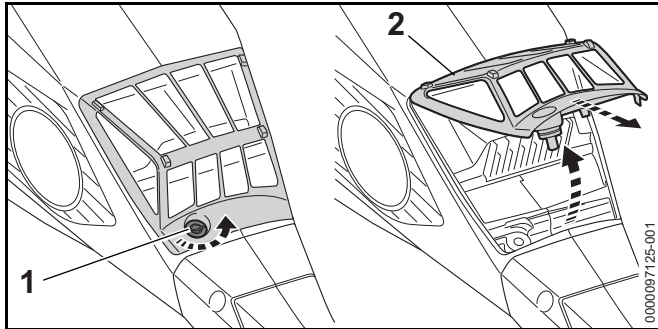
16 Cleaning

16.1 Cleaning the KombiEngine

- ▶ Switch off the KombiEngine and remove the battery.
- ▶ Clean the KombiEngine with a damp cloth.
- ▶ Remove foreign objects from the battery compartment and clean battery compartment with a damp cloth.
- ▶ Clean electrical contacts in the battery compartment with a paintbrush or soft brush.

16.2 Cleaning the Air Filter

- ▶ Switch off the KombiEngine and remove the battery.



- ▶ Clean the area around the air filter (2) with a damp cloth or a soft brush.
- ▶ Turn the screw (1) counterclockwise until the air filter (2) can be removed.
- ▶ Swing the air filter (2) upwards and pull it off.
- ▶ Pass the air filter (2) under running water to rinse off coarse dirt from the outside.
- ▶ If the air filter (2) is damaged: Install a new air filter (2).
- ▶ Allow the air filter (2) to dry in the air.
- ▶ Install the air filter (2) in the housing and fold it down. The air filter (2) must sit flush in the housing at all sides.
- ▶ Insert and tighten down the screw (1) firmly.

16.3 Cleaning the Battery

- ▶ Clean the battery with a damp cloth.

After every 50 hours of operation

- ▶ Clean the air filter.

Annually

- ▶ Have the KombiEngine checked by a STIHL dealer.

17.2 Repairing the KombiEngine

The KombiEngine cannot be repaired by the user.

- ▶ If the KombiEngine is defective or damaged: Do not use the KombiEngine and contact your STIHL dealer.

17.3 Servicing and Repairing the Battery

The battery requires no servicing and cannot be repaired.

- ▶ If the battery has a malfunction or is damaged: Replace the battery.

17 Maintenance and Repairs

17.1 Maintenance intervals

Maintenance intervals depend on the ambient conditions and the operating conditions. STIHL recommends the following maintenance intervals:

18 Troubleshooting

18.1 Troubleshooting the KombiEngine and Battery

Fault	LEDs on the battery	Cause	Remedy
The KombiEngine does not start up when switched on.	1 LED flashing green.	State of charge of the battery is too low.	▶ Charge battery as described in the User Manual for chargers STIHL AL 101, 300, 500.
	1 LED emits red light.	The battery is too warm or too cold.	▶ Remove the battery. ▶ Allow the battery to cool down or warm up.
	3 LEDs flashing red.	There is a malfunction in the KombiEngine.	▶ Remove the battery. ▶ Clean electrical contacts in the battery compartment. ▶ Insert battery. ▶ Switch on the KombiEngine. ▶ If 3 LEDs continue to flash red: Do not use your KombiEngine and contact your STIHL dealer for assistance.
	3 LEDs emit red light.	The KombiEngine is too hot.	▶ Remove the battery. ▶ Allow the KombiEngine to cool down.
	4 LEDs flashing red.	There is a fault in the battery.	▶ Remove battery and reinsert it. ▶ Switch on the KombiEngine. ▶ If 4 LEDs continue to flash red: Do not use the battery and contact your STIHL dealer for assistance.
		No electrical contact between KombiEngine and battery.	▶ Remove the battery. ▶ Clean electrical contacts in the battery compartment. ▶ Insert battery.
		The KombiEngine or battery is damp.	▶ Allow the KombiEngine or battery to dry.
		Trigger depressed before operating the release slide.	▶ Switch on the KombiEngine as described in this User Manual.
The KombiEngine cuts out during operation.	3 LEDs emit red light.	The KombiEngine is too hot.	▶ Remove the battery. ▶ Allow the KombiEngine to cool down.

Fault	LEDs on the battery	Cause	Remedy
		There is an electrical fault.	<ul style="list-style-type: none"> ▶ Remove battery and reinsert it. ▶ Switch on the KombiEngine.
The KombiEngine runtime is too short		The battery is not fully charged.	▶ Fully charge battery as described in the User Manual for chargers STIHL AL 101, 300, 500.
		The battery service life has been exceeded.	▶ Replace battery.
The power levels cannot be set.		The trigger is depressed and the KombiEngine switched on.	<ul style="list-style-type: none"> ▶ Release the trigger and hold only the trigger lockout depressed. ▶ Select the power level as described in this User Manual.

19 Specifications

19.1 KombiEngine STIHL KMA 135 R

- Permitted batteries:
 - STIHL AP
 - STIHL AR
- Weight without KombiTool: 3.4 kg

The running time is shown at www.stihl.com/battery-life.

19.2 STIHL AP battery

- Battery Technology: Lithium-ion
- Voltage: 36 V
- Capacity in Ah: see rating label
- Energy content in Wh: see rating label
- Weight in kg: see rating label
- Permissible temperature range for operation and storage: -10°C to +50°C

19.3 Sound Values and Vibration Values

STIHL recommends wearing ear defenders.

The exact noise and vibration specifications depend on the KombiTool being used and are described in the User Manual of the KombiTool.

- Sound pressure level L_{pA} ISO 10517, ISO 11201, ISO 22868: 74.2 dB(A) to 90.5 dB(A). The K value for the sound pressure level is 2 dB(A).
- Sound power level L_{wA} to ISO 3744, ISO 10517, ISO 22868: 86 dB(A) to 101.5 dB(A). K-value (uncertainty) for sound power level is 2 dB(A).
- Vibration value a_{hV} to EN 50636-2-91, EN 50636-2-92, EN 50636-2-100, ISO 20643, ISO 22867
 - Control handle: 1.9 m/s² to 3.7 m/s². The K-value for the vibration level is 2.0 m/s².
 - Loop handle: 1.6 m/s² to 5.0 m/s². The K-value for the vibration level is 2 m/s².

The vibration levels indicated were measured according to a standardized test method and can be used as a basis for comparing electric power tools. The vibration levels actually occurring may vary from the values indicated, depending on the type of application. The vibration levels indicated can be used for an initial estimate of the vibration stress. The actual vibration stress has to be estimated. The times when the power tool is switched off and the times when it is switched on but running under no load can be taken into account in the estimate.

For information on compliance with Employers' Vibration Directive 2002/44/EC see www.stihl.com/vib.

19.4 REACH




REACH is an EC regulation and stands for the Registration, Evaluation, Authorisation and Restriction of Chemical substances.

For information on compliance with the REACH regulation see www.stihl.com/reach.

20 Combinations with KombiTools

20.1 KombiTool mounting options

The following KombiTools may be mounted:

- STIHL BG-KM: Blower
- STIHL BG-KM: Cultivator
- STIHL FCB-KM: Edger
- STIHL FCS-KM: Edger
- STIHL FH-KM 145°: Scrub cutter
- STIHL FS-KM: Brushcutter
 - Use the STIHL FS-KM KombiTool with mounted barrier bar only,  7.2.
 - Use the STIHL FS-KM KombiTool in the specified combinations only,  20.2.
- STIHL HL-KM 0°: Long reach hedge trimmer
- STIHL HL-KM 145°: Long reach hedge trimmer
- STIHL HT-KM: Pole pruner
- STIHL KB-KM: Bristle brush
- STIHL KW-KM: Sweeper drum assembly
- STIHL RG-KM: Weeder
 - Use the STIHL RG-KM KombiTool with mounted barrier bar only,  7.2.
- STIHL SP-KM: Harvester

20.2 STIHL FS-KM: Combinations of Cutting Attachments, Deflectors and Carrying Systems

A combination of KombiEngine and STIHL FS-KM may be used with the following cutting attachments:

Cutting attachment	Deflector	Barrier bar at the KombiEngine	Carrying system
<ul style="list-style-type: none"> – PolyCut 28-2 <p>Mowing head with 2.4 mm diameter “round, silent” mowing line:</p> <ul style="list-style-type: none"> – AutoCut 25-2 mowing head – AutoCut C 26-2 mowing head – DuroCut 20-2 mowing head – FixCut 31-2 mowing head – SuperCut mowing head 20-2 <p>Mowing head with 2.7 mm diameter “round, silent” mowing line:</p> <ul style="list-style-type: none"> – AutoCut 36-2 mowing head – Mowing head TrimCut C 32-2 	<ul style="list-style-type: none"> – Guard for mowing heads – Universal deflector with skirt and line limiting blade 	<ul style="list-style-type: none"> – required 	<ul style="list-style-type: none"> – Shoulder strap – Full harness – STIHL AR battery together with the support cushion – Battery belt with attached “AP belt bag with connecting cable” together with the shoulder strap – Battery belt with strap and attached “AP belt bag with connecting cable” together with the support cushion – Carrying system with built-in “AP belt bag with connecting cable” together with the support cushion
<ul style="list-style-type: none"> – Grass cutting blade 230-2 – Grass cutting blade 230-4 – Grass cutting blade 230-8 – Grass cutting blade 250-32 – Grass cutting blade 260-2 	<ul style="list-style-type: none"> – Universal deflector without skirt 		
<ul style="list-style-type: none"> – Brush knife 250-3 			

21 Combinations of Carrying Systems

21.1 Combinations of Carrying Systems

The KombiEngine may only be used in combination with a carrying system. Approved carrying systems are listed in this User Manual:



STIHL AR battery with the support cushion



Battery belt with attached "AP belt bag with connecting cable" together with the shoulder strap




Battery belt with strap and attached "AP belt bag with connecting cable" together with the support cushion



Carrying system with built-in "AP belt bag with connecting cable" together with the support cushion

22 Spare Parts and Accessories

22.1 Spare parts and accessories

STIHL  These symbols indicate original STIHL spare parts and original STIHL accessories.

STIHL recommends the use of original STIHL spare parts and accessories.

Despite ongoing market observation, STIHL is unable to judge the reliability, safety and suitability of other manufacturers' spare parts and accessories; accordingly, STIHL cannot warrant for the use of those parts.

Original STIHL spare parts and original STIHL accessories are available from STIHL dealers.

23 Disposal

23.1 Disposing of the KombiEngine and battery

Contact the local authorities or your STIHL dealer for information on disposal.

Improper disposal can be harmful to health and pollute the environment.

- ▶ Take STIHL products including packaging to a suitable collection point for recycling in accordance with local regulations.
- ▶ Do not dispose with domestic waste.

24 EC Declaration of Conformity

24.1 STIHL KMA 135 R KombiEngine

ANDREAS STIHL AG & Co. KG
Badstraße 115
D-71336 Waiblingen
Germany

declare under our sole responsibility that

- Category: Cordless KombiEngine
- Manufacturer's brand: STIHL
- Model: KMA 135 R

– serial number: FA02

conforms to the relevant provisions of Directives 2011/65/EU, 2006/42/EC, 2014/30/EU and 2000/14/EC and has been developed and manufactured in conjunction with the KombiTools listed in this User Manual to comply with the following standards in the versions valid on the date of production: EN 55014-1, EN 55014-2, EN 62233, EN 60335-1, EN 60745-1, EN 62841-1 and EN ISO 12100 taking into account the standards EN 60335-2-72, EN 50636-2-91, ISO 11806-1, EN 50636-2-92, EN 50636-2-100, ISO 11680-1, EN 62841-4-1 and EN 62841-4-2.

The KombiEngine described here may be operated only in conjunction with one of the KombiTools listed in this User Manual.


The technical documents are stored at ANDREAS STIHL AG & Co. KG Produktzulassung.

The year of manufacture, country of manufacture and serial number are shown on the KombiEngine.

Done at Waiblingen, 15.07.2021

ANDREAS STIHL AG & Co. KG

pp



Dr. Jürgen Hoffmann, Director Product Certification & Regulatory Affairs

25 UKCA Declaration of Conformity

25.1 KombiEngine STIHL KMA 135 R



ANDREAS STIHL AG & Co. KG
Badstraße 115
D-71336 Waiblingen
Germany

declare under our sole responsibility that

- Category: Cordless KombiEngine
- Manufacturer's brand: STIHL
- Model: KMA 135 R
- Serial identification number: FA02

conforms to the relevant provisions of UK regulations The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, Supply of Machinery (Safety) Regulations 2008, Electromagnetic Compatibility Regulations 2016 and Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001 and has been developed and manufactured in conjunction with the KombiTools listed in this instruction manual to comply with the following standards in the versions valid on the date of production: EN 55014-1, EN 55014-2, EN 62233, EN 60335-1, EN 62841-1 und EN ISO 12100 taking into account standards EN 60335-2-72, EN 50636-2-91, ISO 11806-1, EN 50636-2-92, EN 50636-2-100, ISO 11680-1, EN 62841-4-1 and EN 62841-4-2.

The KombiEngine described here may be operated only in conjunction with one of the KombiTools listed in this User Manual.

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Done at Waiblingen, 15.07.2021

ANDREAS STIHL AG & Co. KG

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Dr. Jürgen Hoffmann, Director Product Certification & Regulatory Affairs

26 General Power Tool Safety Warnings

26.1 Introduction

This chapter reproduces the pre-formulated, general safety precautions specified in the IEC 62841 standard for hand-held motor-operated electric tools.

STIHL is obliged to publish these texts.

The safety precautions and warnings on avoiding an electric shock given under "Electrical Safety" do not apply to STIHL cordless products.

WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.**

The term "electric power tool" in the safety warnings refers to mains-operated (corded) power tools or battery-operated (cordless) power tools.

26.2 Work area safety

- a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.

- c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

26.3 Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

26.4 Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.

- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- h) **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

26.5 Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

- e) **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

26.6 Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- b) **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

26.7 Battery tool use and care

- a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

- c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
- d) **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.
- e) **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- f) **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
- g) **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

26.8 Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- b) **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

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