

STIHL[®]

STIHL HSA 45

Instruction Manual



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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 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.

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:
 - 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.

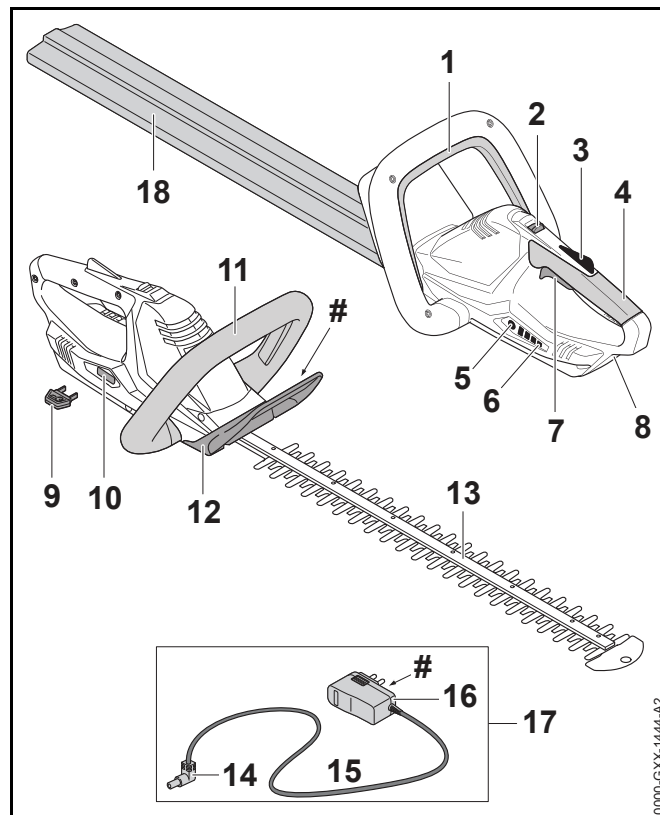
2.3 Symbols in Text

-  This symbol refers to a chapter in this instruction manual.

3 Overview

3.1 Hedge Trimmer and Charging Cable

The rechargeable battery is built into the hedge trimmer.



1 Switch Lever

Operated together with the trigger to switch the hedge trimmer on and off.

2 Release Slide

Operated together with the trigger lockout to unlock the trigger.

3 Trigger Lockout

Locks trigger in position.

4 Control Handle

For operating, holding and controlling the hedge trimmer.

5 Button

Activates the LEDs on the hedge trimmer.

6 LEDs

Indicate hedge trimmer's state of charge and malfunctions.

7 Trigger

Operated together with the switch lever to switch the hedge trimmer on and off.

8 Charging Socket

Accommodates the charger plug.

9 Activation Key

Activates the hedge trimmer.

10 Key Socket

Accommodates the activation key.

11 Loop Handle

For holding, controlling and carrying the hedge trimmer.

12 Hand Guard

Helps protect hand on loop handle from contact with the cutting blades.

13 Cutting Blades

Perform the cutting action.

14 Charger Plug

Connects charging cable to charger socket.

15 Connecting Cable

Connects charger plug to appliance plug.

16 Appliance Plug

Connects charging cable to wall outlet.

17 Charging Cable

Serves to charge the hedge trimmer.

18 Blade guard (scabbard)

Helps protect user from contact with the cutting blades.

Rating label with serial number**3.2 Symbols**

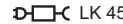
Meanings of symbols that may be on the hedge trimmer and charging cable:



This symbol indicates in what direction the release slide has to be pushed.



Guaranteed sound power level according to directive 2000/14/EC in dB(A) in order to make sound emissions of products comparable.



This symbol shows that an LK 45 charging cable must be used.



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



Operate the electric appliance in a dry place, indoors only.



Do not dispose of the product with your household waste.

4 Safety Precautions**4.1 Warning Signs**

Meanings of warning signs and labels on the hedge trimmer and charging cable:



Observe safety notices and take the necessary precautions.



Read, understand and save the instruction manual.



Wear safety glasses.



Do not touch moving cutting blades.



Always remove the activation key during work breaks, transport, charging, storage, maintenance or repairs.



Protect the hedge trimmer from rain and damp – do not immerse it in fluids.



Protect hedge trimmer from heat and fire.



Observe hedge trimmer's specified temperature range.

4.2 Intended Use

The STIHL HSA 45 hedge trimmer is designed for cutting hedges, shrubs, bushes and scrub.

The hedge trimmer must not be used in the rain.

A built-in battery supplies the hedge trimmer with power.

The STIHL LK 45 charging cable recharges the STIHL HSA 45 hedge trimmer.

⚠ WARNING

- Charging cables or power supply units not explicitly approved for the hedge trimmer by STIHL may cause a fire or explosion. This can result in serious or fatal injuries and damage to property.
 - ▶ Always recharge STIHL HSA 45 hedge trimmers with a STIHL LK 45 charging cable.
- Using the hedge trimmer or the charging cable for purposes for which they were not designed may result in serious or fatal injuries and damage to property.
 - ▶ Use the hedge trimmer and charging cable as described in this instruction manual.

4.3 The Operator

⚠ WARNING

- Users without adequate training or instruction cannot recognize or assess the risks involved in using the hedge trimmer and charging cable. The operator or other persons may sustain serious or fatal injuries.



- ▶ Read, understand and save the instruction manual.

- ▶ If you pass the hedge trimmer and charging cable on to another user: Always give them the instruction manual.
- ▶ Make sure the user meets the following requirements:
 - The user must be in good physical condition and mental health to operate and work with the hedge trimmer and the charging cable. If the user's physical, sensory or mental ability is

restricted, he or she may work only under the supervision of or as instructed by a responsible person.

- The user must be legally recognized as an adult.
 - The user has received instruction from a STIHL servicing dealer or other experienced user before working with the hedge trimmer for the first time.
 - The user must not be under the influence of alcohol, medication or drugs.
- ▶ If you have any queries: Contact your STIHL servicing dealer.

4.4 Clothing and Equipment

⚠ WARNING

- Long hair can be sucked into the hedge trimmer during operation. This can result in serious injuries.
 - ▶ Tie up and confine long hair so that it cannot be sucked into the hedge trimmer.
- Objects can be thrown through the air at high speed during operation. This can result in personal injury.
 - ▶ Wear safety glasses. Suitable glasses that have been tested and labeled in accordance with EN 166 or national standards are available from retailers.
- ▶ Wear a long-sleeved, snug-fitting upper garment and long trousers.



- Dust can be whipped up during operation: Whipped up dust can damage the respiratory passages and cause allergic reactions.
 - ▶ Wear a respirator.
- Inappropriate clothing can snag on wood, brush or the hedge trimmer. Not wearing personal protective equipment may result in serious injury.
 - ▶ Wear snug-fitting clothing.
 - ▶ Do not wear a scarf or jewelry.
- The user can come into contact with the cutting blades during operation. This can result in serious injuries.
 - ▶ Wear footwear made of durable material.
 - ▶ Wear long trousers made of durable material.
- The user can come into contact with the cutting blades during cleaning and maintenance work. This can result in personal injury.
 - ▶ Wear work gloves made of durable material.
- Wearing unsuitable footwear may cause you to slip or stumble. This can result in personal injury.
 - ▶ Wear sturdy footwear with non-slip soles.

4.5 Work Area and Surroundings

4.5.1 Hedge Trimmer

⚠ WARNING

- Bystanders, children and animals are not aware of the dangers of the hedge trimmer or flying debris. Innocent bystanders, children and animals may be seriously injured.
 - ▶ Keep bystanders, children and animals away from the work area.
- The hedge trimmer is not waterproof. Working in the rain or a damp location may result in an electric shock. This can result in injuries to the user and may damage the hedge trimmer.



- ▶ Do not work in the rain or a damp location.

- The hedge trimmer's electric motor may produce sparks. Sparks may cause a fire or an explosion in an easily combustible or explosive environment. This can result in serious or fatal injuries and damage to property.
 - ▶ Do not work in an easily combustible or explosive environment.

4.5.2 Charging Cable

⚠ WARNING

- Children are not aware of and cannot assess the dangers of a charging cable or electric current. Children may sustain serious or fatal injuries.
 - ▶ **Keep children away from the work area.**
- The charging cable is not protected against all ambient conditions. If the charging cable is exposed to certain ambient conditions, it may catch fire or explode. This can result in serious injuries and damage to property.
 - ▶ Protect the charging cable from rain and dampness.
 - ▶ Operate the charging cable in a dry place, indoors only.
 - ▶ Do not operate the charging cable in an easily combustible or explosive environment.
 - ▶ Use and store the charging cable at a temperature between 0°C and +40 °C.
- Persons may trip over the connecting cable. This can result in injuries and may damage the charging cable.
 - ▶ Lay the connecting cable flat on the floor.

4.6 Safe Condition

4.6.1 Hedge Trimmer

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

- The hedge trimmer is undamaged.

- Hedge trimmer is clean and dry.
- The controls function properly and have not been modified.
- Cutting blades are properly mounted.
- Only original STIHL accessories designed for this hedge trimmer are fitted.
- Accessories are properly mounted.

⚠ WARNING

- If the product does not comply with safety requirements, components will no longer function properly or safety devices may be rendered inoperative. This can result in serious or fatal injuries.
 - ▶ Work only with an undamaged hedge trimmer.
 - ▶ Never recharge a damaged hedge trimmer.
 - ▶ If the hedge trimmer is dirty or wet: Clean the hedge trimmer and allow it to dry.
 - ▶ Never attempt to modify the hedge trimmer.
 - ▶ If the controls do not function properly: Do not use your hedge trimmer.
 - ▶ Only fit original STIHL accessories designed for this hedge trimmer model.
 - ▶ Mount accessories as described in this instruction manual or the instruction manual supplied with the accessory.
 - ▶ Never insert objects in the hedge trimmer's openings.
 - ▶ Never bridge the contacts in the activation key socket with metallic objects (short circuit).
 - ▶ Do not open the hedge trimmer.

4.6.2 Cutting Blades

The cutting blades are in a safe condition if the following points are observed:

- Cutting blades are undamaged.
- Cutting blades are not deformed.

- Cutting blades move freely.
- Cutting blades are properly sharpened.
- Cutting blades have no burrs.

⚠ WARNING

- If they are in an unsafe condition, parts of the cutting blades may come off and be thrown at high speed. This can result in serious injuries.
 - ▶ Work only with undamaged cutting blades.
 - ▶ Make sure the cutting blades are properly sharpened and deburred.
 - ▶ If you have any queries: Contact your STIHL servicing dealer.

4.6.3 Charging Cable

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

- Charging cable is undamaged.
- Charging cable is clean and dry.

⚠ WARNING

- If the product does not comply with safety requirements, components will no longer function properly or safety devices may be rendered inoperative. This can result in serious or fatal injuries.
 - ▶ Do not use a damaged charging cable.
 - ▶ If the charging cable is dirty or wet: Clean the charging cable and allow it to dry.
 - ▶ Do not modify the charging cable.
 - ▶ **Never bridge the charging cable's contacts with metallic objects (short circuit).**
 - ▶ Do not open the charging cable.

4.7 Built-in Battery

⚠ WARNING

- The built-in battery is not protected against all ambient conditions. If the built-in battery is exposed to certain ambient conditions, it may catch fire or explode. This can result in serious or fatal injuries and damage to property.



- ▶ Protect hedge trimmer from heat and fire.
- ▶ Do not throw the hedge trimmer into a fire.



- ▶ Use and store your hedge trimmer at temperatures between 0°C and +50°C.

- ▶ Keep hedge trimmer away from metallic objects.
- ▶ Protect the hedge trimmer from rain and damp – do not immerse it in fluids.
- ▶ Do not expose hedge trimmer to high pressure.
- ▶ Do not expose hedge trimmer to microwaves.
- ▶ Protect hedge trimmer from chemicals and salts.
- ▶ Do not transport a damaged hedge trimmer.
- Fluid may escape from a damaged battery. The fluid can cause irritation if it contacts the skin or eyes.
 - ▶ Avoid contact with the fluid.
 - ▶ In case of contact with the skin: Wash affected areas with plenty of water and soap.
 - ▶ In case of contact with the eyes: Rinse eyes with plenty of water for at least 15 minutes and seek medical advice.

- A damaged or defective battery may smell unusual, emit smoke or burn. This can result in serious or fatal injuries and damage to property.
 - ▶ If the hedge trimmer smells unusual or emits smoke: Do not use the hedge trimmer and keep it away from combustible substances.
 - ▶ If the hedge trimmer catches fire: Extinguish the hedge trimmer with a fire extinguisher or water.

4.8 Operation

⚠ WARNING

- The user cannot concentrate on the work in certain situations. The user may trip, fall and be seriously injured.
 - ▶ Work calmly and carefully.
 - ▶ If light and visibility are poor: Do not use your hedge trimmer.
 - ▶ Operate the hedge trimmer alone.
 - ▶ Watch out for obstacles.
 - ▶ Stand on the ground while working and keep a good balance. If it is necessary to work at heights: Use a lift bucket or a safe platform.
- Working above shoulder height can cause you to tire quickly. This can result in serious injuries.
 - ▶ Work above shoulder height only for short periods.
 - ▶ Take regular breaks.
- If the moving cutting blades make contact with a hard object they can be brought to a sudden stop. The reactive forces that occur can cause the user to lose control of the hedge trimmer and be seriously injured.
 - ▶ Hold the hedge trimmer firmly with both hands.
 - ▶ Before starting work, check hedge for hard objects and remove any such objects.
- The moving cutting blades can cut the user. This can result in serious injuries.



- ▶ Do not touch moving cutting blades.
 - ▶ If the cutting blades are blocked by an object: Switch off the hedge trimmer and remove the activation key. Then remove the object causing the blockage.
- If the behavior of the hedge trimmer changes during operation or feels unusual, it may no longer be in a safe condition. This can result in serious injuries and damage to property.
 - ▶ Stop work, remove the activation key and contact your STIHL servicing dealer.
 - Hedge trimmer vibrations may occur during operation.
 - ▶ Wear gloves.
 - ▶ Take regular breaks.
 - ▶ If signs of circulation problems occur: Seek medical advice.
 - Note that the cutting blades continue to run for about 1 second after you release the trigger. The moving cutting blades can cut the user. This can result in serious injuries.
 - ▶ Hold the hedge trimmer firmly by the control handle and loop handle and wait until the cutting blades come to a complete standstill.

⚠ DANGER

- Working near live electric cables can result in accidental contact with the cutting blades. This can result in serious or fatal injuries.
 - ▶ Do not perform cutting work near electric cables.

4.9 Charging

⚠ WARNING

Contact with live components may occur for the following reasons:

- Connecting cable is damaged.
- Plug is damaged.
- Wall outlet is not properly installed.

- Contact with live components can result in an electric shock. This may result in serious or fatal injuries.
 - ▶ Check that the connecting cable and plug are not damaged.
 - ▶ Insert the plug in a properly installed wall outlet.
- Overvoltage can occur in the charging cable if the line voltage or frequency are incorrect during charging. The charging cable may be damaged.
 - ▶ Make sure the line voltage and frequency agree with the data on the charging cable's rating label.
- A damaged or defective charging cable may produce an unusual smell or emit smoke during the charging process. This may result in personal injuries and damage to property.
 - ▶ Disconnect the plug from the wall outlet.
- The charging cable can overheat and cause a fire if heat dissipation is inadequate. This can result in serious or fatal injuries and damage to property.
 - ▶ Do not cover the charging cable.
- If several charging cables are connected to one wall outlet, electric cables may be overloaded during the charging process. The cables can overheat and cause a fire. This can result in serious or fatal injuries and damage to property.
 - ▶ Connect the charging cable to a single wall outlet.
 - ▶ Do not connect the charging cable to multiple sockets.

4.10 Transporting

⚠ WARNING

- The hedge trimmer may turn over or shift during transport. This may result in personal injuries and damage to property.



- ▶ Remove the activation key.

- ▶ Fit the blade scabbard so that it completely covers the cutting blades.
- ▶ Pack the hedge trimmer in packaging or a transport box in such a way that it cannot move.
- ▶ Secure the packaging or transport box so that the packaging or transport box cannot move.

4.11 Storing

4.11.1 Hedge Trimmer

⚠ WARNING

- Children are not aware of and cannot assess the dangers of a hedge trimmer and can be seriously injured.



- ▶ Remove the activation key.

- ▶ Fit the blade scabbard so that it completely covers the cutting blades.
- ▶ Store the hedge trimmer out of the reach of children.

- Dampness can corrode the electrical contacts in the activation key socket and metal components. This can damage the hedge trimmer.



- ▶ Remove the activation key.

- ▶ Store the hedge trimmer in a clean and dry condition.

- The hedge trimmer is not protected against all ambient conditions. The hedge trimmer may be damaged if it is exposed to certain ambient conditions.
 - ▶ Store the hedge trimmer in a clean and dry condition.
 - ▶ Store the hedge trimmer in a confined space.
 - ▶ Store the activation key separately from the hedge trimmer.

4.11.2 Charging Cable

⚠ WARNING

- Children are not aware of and cannot assess the dangers of a charging cable. Children may sustain serious or fatal injuries.
 - ▶ Keep the charging cable out of the reach of children.
- The charging cable is not protected against all ambient conditions. The charging cable may be damaged if it is exposed to certain ambient conditions.
 - ▶ If the charging cable is hot: Allow the charging cable to cool down.
 - ▶ Store the charging cable in a clean and dry condition.
 - ▶ Store the charging cable in a confined space.
 - ▶ Store the charging cable within temperature range of 0°C to +40°C.

4.12 Cleaning, Maintenance and Repairs

⚠ WARNING

- The hedge trimmer may start unintentionally if the activation key remains inserted during cleaning, maintenance or repair operations. This can result in serious injuries and damage to property.



- ▶ Remove the activation key.



- Aggressive cleaning agents, high pressure cleaners or pointed objects can damage the hedge trimmer, cutting blades and charging cable. If the hedge trimmer, cutting blades or charging cable are not cleaned correctly, components may no longer function properly or safety devices may be rendered inoperative. This can result in serious injuries.
 - ▶ Clean the hedge trimmer, cutting blades and charging cable as described in this instruction manual.
- If the hedge trimmer, cutting blades or charging cable are not serviced or repaired correctly, components may no longer function properly or safety devices may be rendered inoperative. This can result in serious or fatal injuries.
 - ▶ Do not attempt to service or repair the hedge trimmer or charging cable.
 - ▶ If the hedge trimmer or the charging cable require servicing or repairs: Contact your STIHL servicing dealer.
 - ▶ Maintain the cutting blades as described in this instruction manual.
- The user can be cut while cleaning or servicing the sharp cutting blades. This can result in personal injury.
 - ▶ Wear work gloves made of durable material.

5 Preparing Hedge Trimmer for Operation

5.1 Preparing Hedge Trimmer for Operation

Perform the following steps before starting work:

- ▶ Make sure the following components are in a safe condition:
 - Hedge trimmer, 4.6.1.
 - Cutting blades, 4.6.2.
 - Charging cable, 4.6.3.
- ▶ Check the built-in battery, 9.2.
- ▶ Fully charge the hedge trimmer, 6.1.

- ▶ Clean the hedge trimmer,  14.1.
- ▶ Check the controls,  9.1.
 - ▶ If 3 LEDs flash red while you are checking the controls: Remove the activation key and contact your STIHL servicing dealer. Malfunction in hedge trimmer.
- ▶ If you cannot carry out this work: Do not use your hedge trimmer and contact your STIHL servicing dealer.

6 Charging the Hedge Trimmer, LEDs

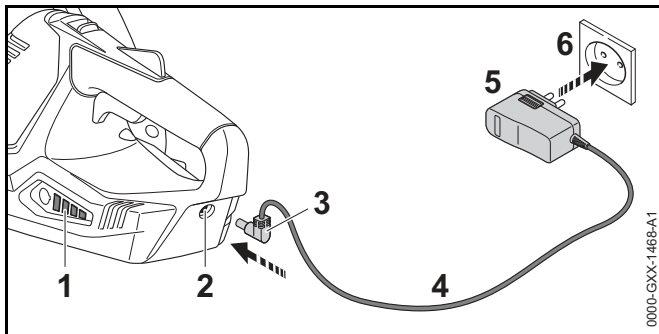
6.1 Charging the Hedge Trimmer

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

The charging process starts automatically when the plug is inserted in a wall outlet and the charging cable is connected to the hedge trimmer. The charging process stops automatically when the hedge trimmer is fully charged.

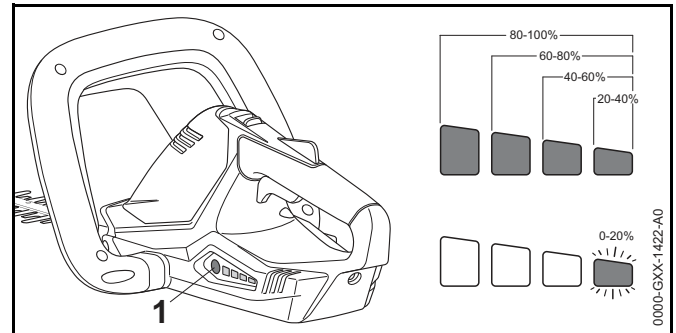
The hedge trimmer and charging cable heat up during the charging process.

- ▶ Remove the activation key.



- ▶ Insert the plug (5) in a convenient wall outlet (6).
- ▶ Lay the connecting cable (4).
- ▶ Insert the charger plug (3) in the charge socket (2). The LEDs (1) glow green and show the state of charge.
- ▶ If the LEDs (1) stop glowing: Disconnect the charger plug (3) from the charge socket (2). The hedge trimmer is fully charged.
- ▶ Disconnect the plug (5) from the wall outlet (6).

6.2 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 hedge trimmer.

6.3 LEDs

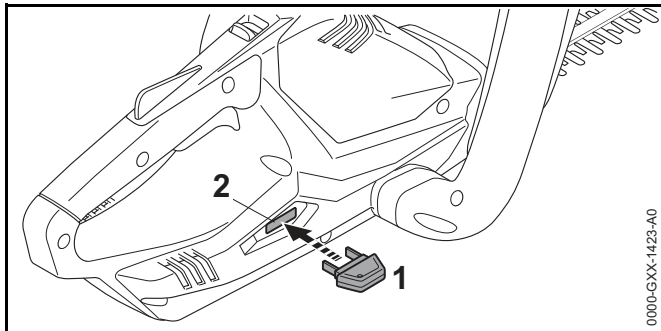
The LEDs can indicate the state of charge or malfunctions in the hedge trimmer. The LEDs can glow or flash green or red.

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

- ▶ If the LEDs glow or flash red: Troubleshooting,  17. Malfunction in hedge trimmer.

7 Inserting and Removing Activation Key

7.1 Inserting the Activation Key



- ▶ Insert the activation key (1) in the socket (2).

7.2 Removing the activation key

- ▶ Stand the hedge trimmer on a level surface.
- ▶ Remove the activation key.
- ▶ Keep the activation key out of the reach of children.

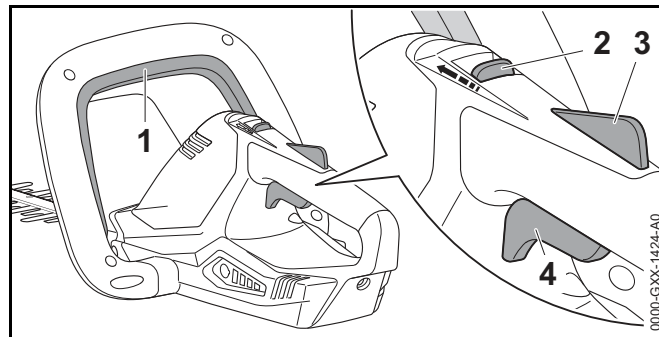
8 Switching the Hedge Trimmer On/Off

8.1 Switching On

WARNING

The motor accelerates and the cutting blades run regardless of the sequence in which the switch lever and trigger are depressed. If you depress the trigger first and then the switch lever, you may lose control of the hedge trimmer. This can result in serious injuries.

- ▶ Depress the switch lever first and then the trigger.



- ▶ Depress the switch lever (1) and hold it in that position.
- ▶ Push the release slide (2) in the direction of the switch lever (1) with your thumb and hold it there.
- ▶ Depress the trigger lockout (3) with your hand and hold it there.
You can let go of the release slide (2).
- ▶ Pull the trigger (4) with your index finger and hold it there.
The motor accelerates and the cutting blades run.

8.2 Switching Off

- ▶ Release the switch lever, trigger and lockout lever.
- ▶ Wait until the cutting blades come to a complete standstill after about 1 second.
- ▶ If the cutting blades continue to run after about 1 second:
Remove the activation key and contact your STIHL servicing dealer.
Your hedge trimmer has a malfunction.

9 Checking the Hedge Trimmer

9.1 Checking the Controls

Release slide, trigger lockout and trigger

- ▶ Remove the activation key.
- ▶ Attempt to pull the trigger lever without depressing the release slide and the trigger lockout.

- ▶ If the trigger can be pulled: Do not use your hedge trimmer and contact your STIHL servicing dealer. Release slide or trigger lockout is faulty.
- ▶ Push the release slide (1) in the direction of the switch lever with your thumb and hold it there.
- ▶ Depress the trigger lockout lever and hold it in that position.
- ▶ Pull the trigger.
- ▶ Let go of the trigger, trigger lockout and release slide.
- ▶ If the trigger, trigger lockout or release slide is stiff or does not spring back to the idle position: Do not use your hedge trimmer and contact your STIHL servicing dealer. The trigger, trigger lockout or release slide has a malfunction.

Switch Lever

- ▶ Remove the activation key.
- ▶ Depress the switch lever and release it again.
- ▶ If the switch lever is stiff or does not spring back to its idle position: Do not use your hedge trimmer and contact your STIHL servicing dealer. The switch lever has a malfunction.

Switch on the hedge trimmer

- ▶ Insert the activation key.
- ▶ Depress the switch lever and release it again.
- ▶ If the cutting blades have run or are running: Do not use your hedge trimmer and contact your STIHL servicing dealer. The trigger has a malfunction.
- ▶ Push the release slide (1) in the direction of the switch lever with your thumb and hold it there.
- ▶ Depress the trigger lockout lever and hold it in that position.
- ▶ Pull the trigger and hold it there.
- ▶ If the cutting blades run: Do not use your hedge trimmer and contact your STIHL servicing dealer. The switch lever has a malfunction.
- ▶ Depress the switch lever and hold it in that position. The cutting blades run.

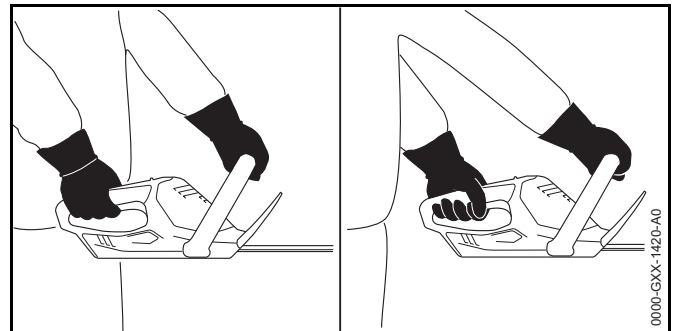
- ▶ If 3 LEDs flash red: Remove the activation key and contact your STIHL servicing dealer. There is a malfunction in the hedge trimmer.
- ▶ Release the switch lever. The cutting blades stop running after about 1 second.
- ▶ If the cutting blades continue to run after 1 second: Remove the activation key and contact your STIHL servicing dealer. Your hedge trimmer has a malfunction.

9.2 Checking the Built-In Battery

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

10 Operating the Hedge Trimmer

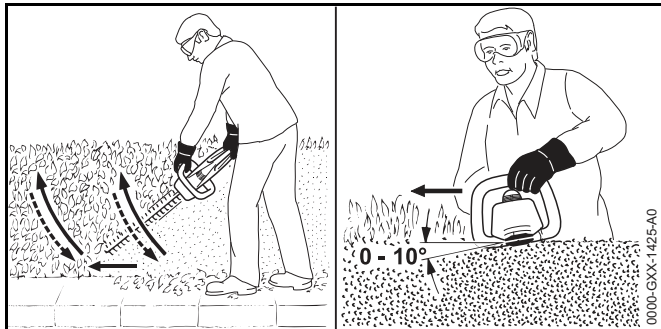
10.1 Holding and Controlling the Hedge Trimmer



- ▶ Hold the hedge trimmer with one hand on the control handle – wrap your thumb around the control handle.
- ▶ Hold the hedge trimmer with the other hand on the loop handle – wrap your thumb around the loop handle.

10.2 Cutting

- ▶ Use lopping shears or a chainsaw to cut out thick branches first.



- ▶ Swing the hedge trimmer from the bottom upwards in an arc while making the cut.
- ▶ Lower the nose of the hedge trimmer without cutting.
- ▶ Walk slowly and steadily forwards.
- ▶ Swing the hedge trimmer from the bottom upwards in an arc while making the cut.
- ▶ Cut the other side of the hedge in the same way.
- ▶ Hold the cutting blades at an angle of 0° to 10° to the top of the hedge.
- ▶ Swing the hedge trimmer horizontally and in an arc while making the cut.
- ▶ If cutting performance deteriorates: Sharpen the cutting blades.

11 After Finishing Work

11.1 After Finishing Work

- ▶ Switch off the hedge trimmer and remove the activation key.
- ▶ Clean the hedge trimmer.
- ▶ Clean the cutting blades.
- ▶ Fit the blade scabbard so that it completely covers the cutting blades.

12 Transporting

12.1 Transporting the Hedge Trimmer

- ▶ Switch off the hedge trimmer and remove the activation key.
- ▶ Fit the blade scabbard so that it completely covers the cutting blades.
- ▶ Carry the hedge trimmer by the loop handle with the cutting blades behind you.
- ▶ Transporting the hedge trimmer in a vehicle: Secure the hedge trimmer to prevent it turning over or shifting.
- ▶ If the hedge trimmer has to be packed: Observe the following points when packing the hedge trimmer:
 - Packaging or transport box must be non-conductive.
 - Make sure the hedge trimmer cannot shift inside the packaging or transport box.
 - Secure the packaging or transport box so that the packaging or transport box cannot move.

Owing to the built-in battery the hedge trimmer is subject to the requirements for transporting dangerous goods. The hedge trimmer is classified as UN 3481 (lithium-ion batteries in equipment) and has been tested in accordance with UN Manual of Tests and Criteria, Part III, sub-section 38.3.

For transport regulations see www.stihl.com/safety-data-sheets

13 Storing

13.1 Storing the Hedge Trimmer

STIHL recommends that you store the hedge trimmer with a charge between 40% and 60% (2 LEDs glow green).

- ▶ Switch off the hedge trimmer and remove the activation key.
- ▶ Fit the blade scabbard so that it completely covers the cutting blades.

- ▶ Observe the following points when storing the hedge trimmer:
 - Hedge trimmer is out of the reach of children.
 - Hedge trimmer is clean and dry.
 - Hedge trimmer is in an enclosed space.
 - Hedge trimmer is stored separately from the charging cable.
 - Hedge trimmer is in a temperature range between 0°C and +50°C.

13.2 Storing the Charging Cable

- ▶ Disconnect the plug from the wall outlet.
- ▶ Observe the following points when storing the charging cable:
 - Charging cable is out of the reach of children.
 - Charging cable is clean and dry.
 - Charging cable is in an enclosed space.
 - Charging cable is stored separately from the hedge trimmer.
 - Charging cable is in a temperature range between 0°C and +40 °C.

14 Cleaning

14.1 Cleaning the Hedge Trimmer

- ▶ Switch off the hedge trimmer and remove the activation key.
- ▶ Clean the hedge trimmer with a damp cloth or STIHL resin solvent.

14.2 Cleaning the Cutting Blades

- ▶ Switch off the hedge trimmer and remove the activation key.
- ▶ Spray both sides of blades with STIHL resin solvent.
- ▶ Insert the activation key.

- ▶ Run the hedge trimmer for 5 seconds. The cutting blades run. STIHL resin solvent is distributed evenly.

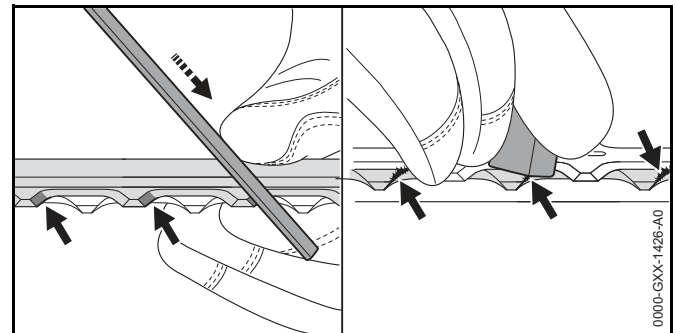
14.3 Cleaning the charging cable


- ▶ Disconnect the plug from the wall outlet.
- ▶ Disconnect the charger plug from the charge socket.
- ▶ Clean the charging cable with a damp cloth.

15 Maintenance

15.1 Sharpening the Cutting Blades

STIHL recommends you have the cutting blades resharpened by a STIHL servicing dealer.



- ▶ Use a STIHL flat crosscut file to sharpen each cutting edge on the upper blade. The file only sharpens on the forward stroke. Maintain the prescribed sharpening angle,  18.2.
- ▶ Turn the hedge trimmer over.
- ▶ Sharpen the remaining cutting edges.
- ▶ Deburr each cutting edge from below.
- ▶ Turn the hedge trimmer over.
- ▶ Deburr the remaining cutting edges.
- ▶ Use a damp cloth to remove the filing dust.
- ▶ Spray both sides of blades with STIHL resin solvent.

- ▶ Run the hedge trimmer for 5 seconds, .
The cutting blades run. STIHL resin solvent is distributed evenly.
- ▶ If you have any queries: Contact your STIHL servicing dealer.

16 Repairing

16.1 Repairing Hedge Trimmer and Charging Cable

The hedge trimmer, cutting blades or charging cable cannot be repaired by the user.

- ▶ If the hedge trimmer or cutting blades are damaged: Do not use your hedge trimmer and contact your STIHL servicing dealer.
- ▶ If the charging cable is defective or damaged: Replace the charging cable.

17 Troubleshooting

17.1 Troubleshooting Hedge Trimmer and Charging Cable

Condition	LEDs on hedge trimmer	Cause	Remedy
Hedge trimmer does not start when switched on.	1 LED flashes green	Hedge trimmer has low charge.	▶ Charge the hedge trimmer.
	3 LEDs glow red	Hedge trimmer is too hot.	▶ Remove the activation key. ▶ Allow the hedge trimmer to cool down.
	3 LEDs flash red.	There is a electrical malfunction.	▶ Remove the activation key. ▶ Do not use your hedge trimmer and contact your STIHL servicing dealer.
		Cutting blades do not move freely.	▶ Spray both sides of blades with STIHL resin solvent. ▶ If 3 LEDs continue to flash red: Do not use your hedge trimmer and contact your STIHL servicing dealer.
		The hedge trimmer is damp.	▶ Allow the hedge trimmer to dry.
Hedge trimmer cuts out during operation.	3 LEDs glow red	Hedge trimmer is too hot.	▶ Remove the activation key. ▶ Allow the hedge trimmer to cool down.
		There is a electrical malfunction.	▶ Switch off the hedge trimmer, wait 5 seconds and then switch it on again.
		Cutting blades do not move freely.	▶ Spray both sides of blades with STIHL resin solvent.
Hedge trimmer runtime is too short.		The hedge trimmer is not fully charged.	▶ Fully charge the hedge trimmer.
		Normal hedge trimmer life has been exceeded.	▶ Replace the hedge trimmer.
Hedge trimmer is not being charged.	3 LEDs glow red	Hedge trimmer is too hot.	▶ Remove the activation key. ▶ Allow the hedge trimmer to cool down.
		Malfunction in hedge trimmer or charging cable.	▶ Remove the activation key. ▶ Contact your STIHL servicing dealer.

18 Specifications

18.1 STIHL HSA 45 Hedge Trimmer

- Weight with cutting blades: 2.4 kg
- Battery technology: Lithium-ion
- Voltage: 18 V
- Capacity in Ah: see rating label
- Energy content in Wh: see rating label
- Permissible temperature range for operation and storage: 0°C up to +50°C

If the hedge trimmer is used at temperatures higher than +30°C, the battery runtime may be shortened and the trimmer's performance reduced.

18.2 Cutting Blades

- Tooth spacing: 24.1 mm
- Cutting length: 500 mm
- Sharpening angle: 33°

18.3 STIHL LK 45 Charging Cable

- Voltage: 100-240 V, 50-60 Hz
- Power rating: 14.6 W
- Charge current: 0.65 A
- Permissible temperature range for operation and storage: 0°C up to 40 °C

For charging times see www.stihl.com/charging-times.

18.4 Noise and Vibration Data

STIHL recommends that you wear hearing protection.

- Sound pressure level L_p measured according to EN 60745-2-15: 54 dB(A) K-value for noise pressure level is 3 dB(A).
- Sound power level L_w measured according to EN 60745-2-15: 77 dB(A) K-value for sound power level is 3 dB(A).
- Vibration level a_{hv} measured according to EN 60745-2-15
 - Control handle: 1.5 m/s² K-value for vibration level is 1.5 m/s².
 - Loop handle: 1.4 m/s² K-value for vibration level is 1.5 m/s².

The vibration values quoted above have been measured according to a standardized test procedure and may be used to compare electric power tools. Depending on the type of usage, the vibrations that actually occur may differ from the values quoted. The vibration values quoted may be used for an initial assessment of the user's exposure to vibrations. The actual exposure to vibrations has to be estimated. This process may also take into account times during which the electric power tool is switched off and times during which it is switched on but running off load.

18.5 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.

19 Spare Parts and Accessories

19.1 Spare Parts and Accessories

STIHL® These symbols identify original STIHL replacement parts and original STIHL accessories.

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

Original STIHL replacement parts and original STIHL accessories are available from STIHL servicing dealers.

20 Disposal

20.1 Disposing of Hedge Trimmer and Charging Cable

The hedge trimmer contains a built-in rechargeable battery which must be disposed of separately.

- ▶ Have hedge trimmer disposed of by a STIHL servicing dealer.
The STIHL dealer removes the built-in battery from the blower for separate disposal.
- ▶ Dispose of the charging cable, accessories and packaging in accordance with local regulations and environmental requirements.

21 EC Declaration of Conformity

21.1 STIHL HSA 45 Hedge Trimmer

ANDREAS STIHL AG & Co. KG

Badstrasse 115

D-71336 Waiblingen

Germany

declare in exclusive responsibility that the product

- Category: Cordless hedge trimmer
- Make: STIHL
- Model: STIHL HSA 45
- Serial identification: 4511

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 compliance with the following standards in the versions valid on the date of production: EN 55014--1, EN 55014--2, EN 60745--1 and EN 60745--2--15.

Applied conformity assessment procedure in accordance with Directive 2000/14/EC, Annex V.

Notified body: Intertek House, Cleeve Road, Leatherhead, Surrey KT22 7SB, UK

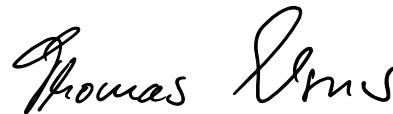
- Measured sound power level: 78 dB(A)
- Guaranteed sound power level: 81 dB(A)

Technical documents are kept at ANDREAS STIHL AG & Co. KG Produktzulassung (Product Licensing).

The year of manufacture and serial number are applied to the hedge trimmer.

Done at Waiblingen, 01.07.2016

ANDREAS STIHL AG & Co. KG



Thomas Elsner, Director Product Management and Services

21.2 STIHL LK 45 Charging Cable

This charging cable is manufactured and put on the market in accordance with the following directives: 2014/35/EU, 2014/30/EU and 2011/65/EU.

The complete EC Declaration of Conformity is available from ANDREAS STIHL AG & Co. KG, Badstrasse 115, 71336 Waiblingen, Germany.

22 General Power Tool Safety Warnings

22.1 Introduction

This chapter reproduces the pre-formulated, general safety precautions specified in the IEC 60745 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 "2) Electric Precautions" do not apply to STIHL cordless electric power tools.

WARNING

Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.**

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

22.2 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.

22.3 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, hanging up, 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 extension 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.

22.4 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 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 power 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, clothing and gloves 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.

22.5 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, 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 grip surfaces dry, clean and free from oil and grease.** Slippery handles and grip surfaces do not allow proper operation and control of the power tool in unforeseen situations.

22.6 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 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 (265 °F) 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.

22.7 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 batteries.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

22.8 Hedge Trimmer Safety Warnings

- **Keep all parts of the body away from the cutting blades. Do not remove cut material or hold material to be cut when blades are moving. Make sure the switch is off when clearing jammed material.** A moment of inattention while operating the hedge trimmer may result in serious personal injury.
- **Carry the hedge trimmer by the handle with the cutting blades stopped. When transporting or storing the hedge trimmer always fit the blade scabbard.** Proper handling of the hedge trimmer will reduce possible personal injury from the cutting blades.
- **Always hold your electric power tool by the insulated handles because the cutting blades may contact hidden electrical wires.** Any blade contact with a live wire may energize metallic parts of the power tool and result in an electric shock.

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