

# **STIHL**

## **STIHL SGA 85**

Gebrauchsanleitung  
Instruction Manual  
Manual de instrucciones  
Skötselánvisning

Käyttöohje  
Betjeningsvejledning  
Bruksanvisning  
Návod k použití  
Használati utasítás  
Instruções de serviço  
Инструкция по эксплуатации  
Instrukcja użytkowania  
Ръководство за употреба  
Instrucțiuni de utilizare



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# STIHL

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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 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 Documents

The local safety regulations apply.

- ▶ In addition to this User Manual, read, understand and keep the following documents:
  - Instructions and packaging supplied with the plant protection product you are using
  - Safety notices and precautions for STIHL AP battery

- User manual for STIHL AL 101, 300, 500 chargers
- Instruction Manual and packaging of the accessory used
- Safety information for STIHL batteries and products with built-in battery: [www.stihl.com/safety-data-sheets](http://www.stihl.com/safety-data-sheets)

## 2.2 Warning Notices in Text

### DANGER

This notice refers to risks which result in serious or fatal injury.

- ▶ Serious or fatal injuries can be avoided by taking the precautions mentioned.

### WARNING

This notice refers to risks which **can** result in serious or fatal injury.

- ▶ Serious or fatal injuries can be avoided by taking the precautions mentioned.

### NOTICE

This notice refers to risks which can result in damage to property.

- ▶ Damage to property can be avoided by taking the precautions mentioned.

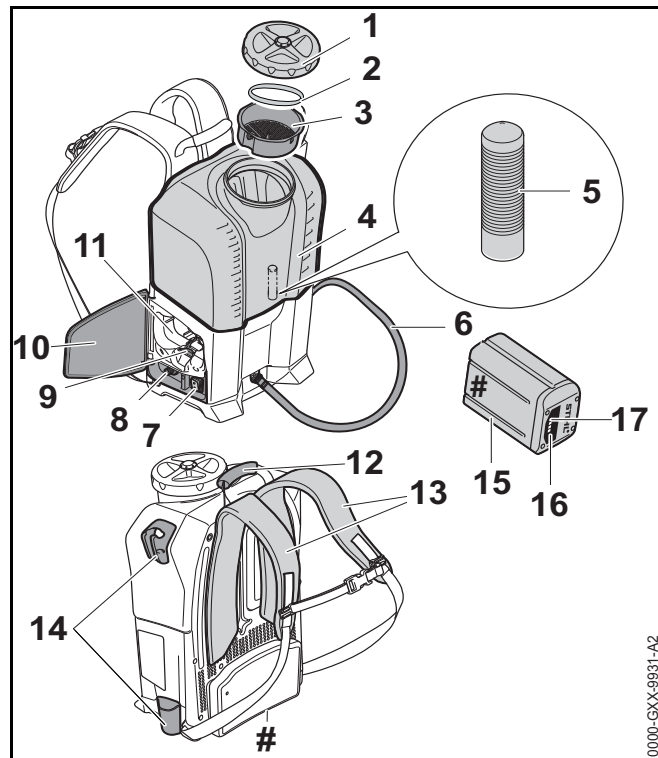
## 2.3 Symbols in Text



This symbol refers to a chapter in this instruction manual.

## 3 Overview

### 3.1 Sprayer



#### 1 Cap

The cover closes the suction container.

#### 2 Gasket

Seals the container.

#### 3 Filter

The filter screens coarse particles from the plant protection product.

#### 4 Container

The container is filled with plant protection product.

**5 Filters**

The filter screens fine particles from the plant protection product.

**6 Hose**

The hose directs the plant protection product to the spray gun.

**7 Rocker switch**

The rocker switch is used to switch the sprayer on and off.

**8 Rotary control**

The rotary control is used to set the working pressure and the amount of the plant protection product.

**9 Locking lever**

The locking lever holds the battery in the battery compartment.

**10 Flap**

The flap covers the battery compartment.

**11 Battery compartment**

The battery compartment holds the battery.

**12 Carrying handle**

The carrying handle is used to carry the sprayer.

**13 Carrying strap**

Distributes weight of sprayer over shoulders and back.

**14 Holders**

The supports are used to store the spray gun.

**15 Battery**

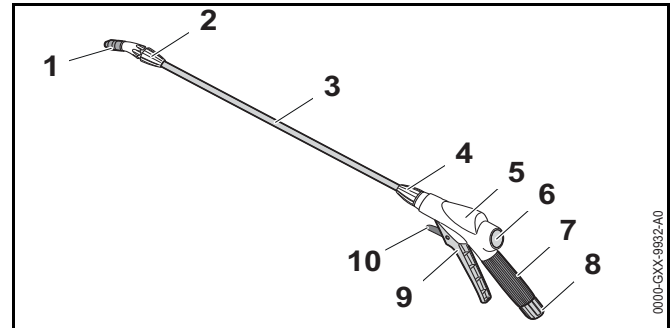
The battery supplies the sprayer with energy.

**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.

**# Rating plate with machine number****3.2 Spraying Attachment****1 Nozzle**

Produces the spray.

**2 Union Nut**

Secures the nozzle to the spray wand.

**3 Spray Wand**

Connects the spray gun to the nozzle.

**4 Union Nut**

Secures the spray wand to the spray gun.

**5 Spray Gun**

Connects to the spray wand and hose.

**6 Pressure Gauge**

Shows sprayer's operating pressure.

**7 Control Handle**

For holding and controlling the sprayer.

**8 Union Nut**

Secures the hose to the spray gun.

**9 Trigger**

Opens and closes the valve in the spray gun. Starts and stops the spray.

**10 Retaining Latch**

Unlocks the trigger.

### 3.3 Icons

Meanings of symbols that may be on the sprayer and on the battery:



Retaining latch unlocks the trigger in this position.



Retaining latch locks the trigger in this position.



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



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



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 your household waste.

## 4 Safety Precautions

### 4.1 Warning Symbols

Meanings of warning signs on the sprayer:



Observe safety notices and take the necessary precautions.



Read, understand and keep the User Manual.



Wear safety glasses and a respirator.



Wear safety boots.



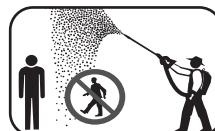
Wear protective suit.



Wear protective gloves.



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



Maintain safety distance and do not spray in direction of bystanders.



Protect battery from heat and fire.



Do not immerse battery in fluids.



Observe the permitted battery temperature range.

## 4.2 Intended Use

The STIHL SG 85 sprayer is designed for spreading liquid products for protection against fungal and parasitic infestation, and for weed control in plantations, orchards, vegetable growing, agriculture and forestry.

The sprayer can be used in the rain.

A STIHL AP battery supplies the sprayer with power.

The STIHL SG 85 sprayer is not designed for the following applications:

- Spraying plant protection products not approved for use in sprayers.
- Spraying other liquids which are not plant protection products.

## **⚠** WARNING

- Batteries not approved by STIHL for the sprayer can cause fires and explosions. Persons may be seriously or fatally injured and property may be damaged.
  - ▶ Use the sprayer with a STIHL AP battery.
- Using the sprayer or battery other than for its intended use can result in serious injuries or death and damage to property.
  - ▶ Use the sprayer as described in this instruction manual.
  - ▶ Use the battery 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 sprayer and battery. The user or other persons may sustain serious or fatal injuries.



- ▶ Read, understand and save the instruction manual.
- ▶ If you pass the sprayer or battery on to another person: Always give them the instruction manual.
- ▶ Make sure the user meets the following requirements:
  - The user must be rested.
  - The user must be in good physical condition and mental health to operate and work with the sprayer and battery. 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 is able to recognize and assess the risks involved in using the sprayer and battery.
  - The user must be of legal age or is being trained in a trade under supervision in accordance with national rules and regulations.
  - The user has received instruction from a STIHL servicing dealer or other experienced user before working with the sprayer for the first time.
  - The user must not be under the influence of alcohol, medication or drugs.
  - The user has been trained in the safe use and handling of plant protection products and the necessary first aid measures.
- ▶ If you have any queries: Contact a STIHL servicing dealer for assistance.

## 4.4 Clothing and Equipment

### ⚠️ WARNING

- Unsuitable clothing can snag on wood, brush or the sprayer. 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.

### ⚠️ DANGER

- The user can come into contact with plant protection products while operating or cleaning the sprayer. This can result in serious or fatal injuries.
  - ▶ Observe recommendations on clothing and equipment in the user instructions and on the packaging of the plant protection product.
  - ▶ Avoid contact with plant protection products.
  - ▶ If your clothing becomes contaminated with any plant protection product: Change your clothing.
  - ▶ If you work above shoulder height: Wear impermeable head protection resistant to plant protection products.



- ▶ Wear close-fitting safety glasses. Suitable safety glasses that have been tested and labeled in accordance with EN 166 or national standards are available from retailers.

- ▶ Wear a respirator.



- ▶ If the user instructions or packaging of the plant protection product specify the use of a protective coverall: Wear a coverall impermeable to liquids and resistant to plant protection products.



- ▶ Wear impermeable gloves resistant to plant protection products.



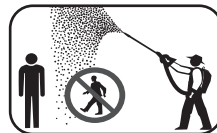
- ▶ Wear impermeable safety boots with a non-slip sole which are resistant to plant protection products.

## 4.5 Work Area and Surroundings

### 4.5.1 Sprayer

### ⚠️ WARNING

- Bystanders, children and animals cannot recognize or assess the dangers of the sprayer. This may result in serious injury to bystanders, children and animals and damage to property.



- ▶ Keep bystanders, children and animals away from the working area.
- ▶ Keep bystanders, children and animals away from the work area until the plant protection product has dried completely.

- ▶ Do not leave the sprayer unattended.
- ▶ Make sure that children cannot play with the sprayer.
- Electrical components of the sprayer 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 Sprayer

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

- The sprayer is not damaged.
- The hose, the union nut and the spraying unit are undamaged.
- The hose, the union nut and the spraying device are fitted correctly and dense.
- There is plant protection product leaking from the sprayer.
- The cover of the container is locked.
- The sprayer is clean.
- Spraying unit functions properly and has not been modified.
- Original STIHL accessories for this sprayer 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 sprayer.
  - ▶ Always attach the hose and the spray attachment as described in this Instruction Manual.
  - ▶ If plant protection product leaks from the sprayer: Do not use the sprayer and contact a STIHL dealer for assistance.
  - ▶ Close cover of container.
  - ▶ If the sprayer is dirty: Clean the sprayer.
  - ▶ Do not modify the sprayer.
  - ▶ If the spraying unit does not function properly: Do not work with the sprayer.

- ▶ Fit original STIHL accessories designed for this sprayer model.
- ▶ Attach accessories as described in this User Manual or in the User Manual for the accessories.
- ▶ Never insert objects in the sprayer's openings.
- ▶ 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. The user can lose control of the sprayer, stumble or fall and be seriously injured.
  - ▶ Keep calm and plan your work.
  - ▶ If light and visibility are poor: Do not work with the sprayer.
  - ▶ Operate the sprayer 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 sprayer is leaking, plant protection product can escape from the sprayer.
  - ▶ Do not bend forward and keep your back straight.
- If the behavior of the sprayer 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 dealer.
- Water can freeze on the ground and in sprayer components at temperatures below 0°C. The user may slip, fall and be seriously injured. Damage to property may occur.
  - ▶ Do not use your sprayer at temperatures below 0°C.
- In an emergency, the user may panic and not put the harness down. This may result in serious injury to the user.
  - ▶ Practice removing and putting down the harness.
- The hose can get caught in wood, brush or other objects. People may be injured and the hose may be damaged.
  - ▶ Use hose in such a way that it is not damaged, kinked, crushed or chafed.
- If the sprayer is standing on a sloping, rough or unpaved surface, it may move and turn over. Damage to property may occur.
  - ▶ Stand the sprayer on a level, paved surface.
  - ▶ Secure the sprayer so that it cannot move.
- Easily combustible and explosive liquids that are sucked in can cause fires and explosions. Persons may be seriously or fatally injured and property may be damaged.
  - ▶ Do not spread easily combustible or explosive liquids.
- Sucking in viscous, sticky, caustic, acidic and hot liquids can be a health hazard and damage parts of the sprayer. Persons may be seriously or fatally injured and property may be damaged.
  - ▶ Do not spread viscous, sticky, caustic or acidic liquids.
  - ▶ Do not spread hot liquids more than 50°C.
- The sprayer is neither germ-free nor food-safe. If liquid foodstuffs are used, they are contaminated.
  - ▶ Do not spread liquid foodstuffs.
- If the sieve is not inserted and the filter is not installed, particles may be sucked in. The sprayer and the spraying unit can be blocked or damaged.
  - ▶ Insert sieve and install filter.
- The pump can run dry and damage the sprayer if the sprayer is switched on but cannot pick up any plant protection product or fresh water.
  - ▶ Make sure sufficient plant protection product or fresh water is available.

## DANGER

- Plant protection products may contain substances that harm individuals, animals, plants and the environment. The user or other persons may be poisoned or sustain serious or fatal injuries.
  - ▶ Observe the user instructions and the packaging of the plant protection product.
  - ▶ Always keep the directions for use or the label of the plant protection product near at hand. In an emergency, inform the doctor about the product and follow the instructions in the directions for use or on the label of the plant protection product.
  - ▶ Observe the legal requirements for handling plant protection products.
  - ▶ Never spray liquid plant protection products undiluted.
  - ▶ Mix plant protection products outdoors or in well-ventilated locations.
  - ▶ Only mix sufficient solution for the job in hand so that nothing is left over.
  - ▶ Do not mix different plant protection products unless such a mixture is approved by the manufacturer.
  - ▶ Always rinse the hoses with fresh water before changing to a different plant protection product.
  - ▶ Before starting work, perform a trial run with fresh water and check the sprayer and hoses for leaks.

- ▶ Operate the sprayer in a well ventilated location.



- ▶ Do not spray in the direction of bystanders.

- ▶ In windy conditions: Do not work with the sprayer.
- ▶ Do not eat, drink or smoke while working with and handling plant protection products.
- ▶ Never blow out nozzles, hoses or other components with your mouth.
- ▶ Wash your hands, face and clothing after work.
- If electrical equipment, electrical connections, sockets and live power cords come into contact with plant protection products, electric shock may result. Persons may be seriously or fatally injured and property may be damaged.
  - ▶ Do not direct the spray jet at electrical systems, electrical connections, sockets and live cables.

## 4.8 Transporting


### 4.8.1 Transport

#### **⚠ WARNING**

- The sprayer can turn over or move while being transported. Persons may be injured or property damaged.
  - ▶ Switch off the sprayer.



- ▶ Remove the battery.

- ▶ Press the switch lever of the spray gun to release the pressure.
- ▶ Move retaining latch to the  position.
- ▶ Empty the container.

- ▶ Secure the sprayer with lashing straps, belts or a net to prevent it turning over and moving.

#### **⚠ DANGER**

- Plant protection products may contain substances that harm individuals, animals, plants and the environment. The user or other persons may be poisoned or sustain serious or fatal injuries.
  - ▶ Observe the user instructions and the packaging of the plant protection product.
  - ▶ Transport plant protection products in approved containers.

### 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 Storing

#### **⚠ WARNING**

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

- ▶ Switch off the sprayer.



- ▶ Remove the battery.

- ▶ Store the sprayer out of the reach of children.

- Dampness can corrode the electrical contacts on the sprayer and metal components. The sprayer may be damaged.

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

- Water can freeze in sprayer components at temperatures below 0°C. The sprayer may be damaged.

- ▶ Drain the sprayer, hose and spraying attachment.

- ▶ If the sprayer cannot be stored in a place sheltered from frost: Protect the sprayer with a glycol-based antifreeze.

#### **⚠ DANGER**

- Plant protection products may contain substances that harm individuals, animals, plants and the environment. The user or other persons may be poisoned or sustain serious or fatal injuries.

- ▶ Observe the user instructions and the packaging of the plant protection product.

- ▶ Store plant protection products out of the reach of children.

- ▶ Store plant protection products in approved containers.

- ▶ Do not store plant protection products with foods, drinks or animal feed.

- ▶ Store plant protection products in a dry and frost-free location.

### 4.9.2 Battery

#### **⚠ WARNING**

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

- ▶ Store the battery out of the reach of children.

- The battery is not protected against all ambient conditions. The battery may be damaged if it is exposed to certain ambient conditions.

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

- ▶ Store the battery in an enclosed location.

- ▶ Store the battery separately from the sprayer.

- ▶ Store the battery in non-conductive packaging.

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

## 4.10 Cleaning, Maintenance and Repair

#### **⚠ WARNING**

- The sprayer may start unintentionally if the battery is left in place during cleaning, maintenance or repair operations. This may result in serious injury to people and damage to property.

- ▶ Switch off the sprayer.

- ▶ Remove the battery.



- Harsh detergents, cleaning with a water jet or sharp objects can damage the sprayer and the battery. If the sprayer or the battery are 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 sprayer as described in this instruction manual.
- The sprayer can be damaged if it is not rinsed out with fresh water after finishing work.
  - ▶ Rinse out the sprayer with fresh water after finishing work.
- If the sprayer or the battery are not serviced or repaired correctly, components may no longer function properly or safety devices may be rendered inoperative. This may result in serious or fatal injury to people.
  - ▶ Do not attempt to service or repair the sprayer and the battery.
  - ▶ If the sprayer and the battery require servicing or repairs: Contact your STIHL servicing dealer for assistance.

## 5 Preparing Sprayer for Operation

### 5.1 Preparing Sprayer for Operation

Perform the following steps before starting work:

- ▶ Make sure the following components are in a safe condition:
  - Sprayer,  4.6.1
  - Battery,  4.6.2.
- ▶ Check the battery,  11.2
- ▶ Clean the sprayer,  16.1.
- ▶ Adjust sprayer for user,  8
- ▶ Mount the spray gun,  7.1.1.
- ▶ Fill the tank,  12.2
- ▶ Check the sprayer,  11.1.
- ▶ If you cannot carry out the above steps: Do not use the sprayer and contact your STIHL dealer for assistance.

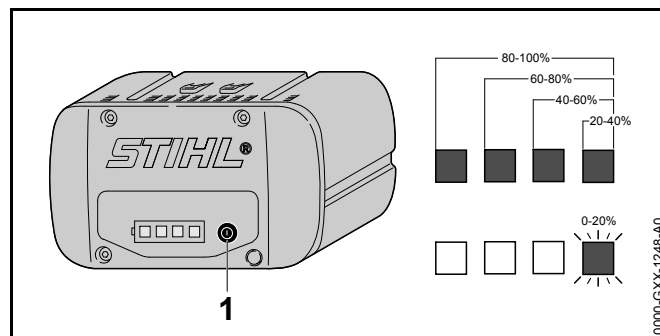
## 6 Charging the Battery, LEDs

### 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](http://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 the battery

The LEDs can indicate the state of charge of the battery or any faults. The LEDs can be steady green, steady red or flashing.

If the LEDs are steady or flashing green, this indicates the state of charge of the battery.



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

## 6.4 Beeps

The beeps can confirm contact between the sprayer and battery or indicate malfunctions.

A beep sounds when the sprayer is switched on.

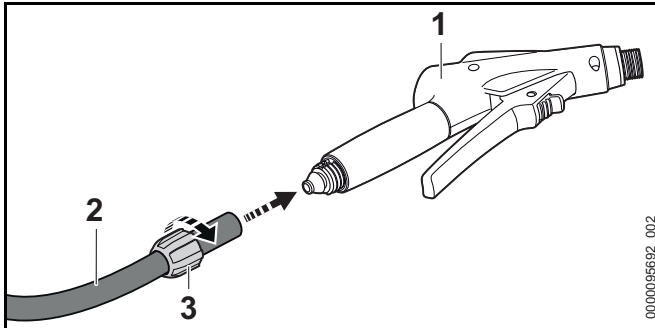
A short beep also sounds when the sprayer switches off automatically after a work break of about 15 minutes.

- ▶ If beeps sound in quick succession for 15 seconds: Troubleshooting,  18.1.  
There is a malfunction in the battery.
- ▶ If 4 long beeps sound one after another: Troubleshooting,  18.1.  
Battery has low charge.

## 7 Assembling the Sprayer

### 7.1 Attaching and removing the spray gun

#### 7.1.1 Attaching the spray gun



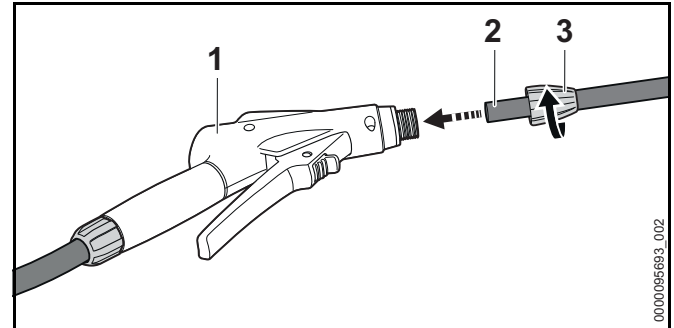
- ▶ Push the union nut (3) over the hose (2).
- ▶ Put the hose (2) onto the connector on the gun (1).
- ▶ Screw on manually and tighten firmly union nut (3).

#### 7.1.2 Removing the Spray Gun

- ▶ Unscrew the union nut.
- ▶ Pull the hose off the spray gun's connector.

### 7.2 Attaching and removing the spray lance

#### 7.2.1 Attaching the spray lance



- ▶ Push the union nut (3) over the spray lance (2).
- ▶ Push spray lance (2) into spray gun (1).
- ▶ Screw on manually and tighten firmly union nut (3).

#### 7.2.2 Removing the Spray Wand

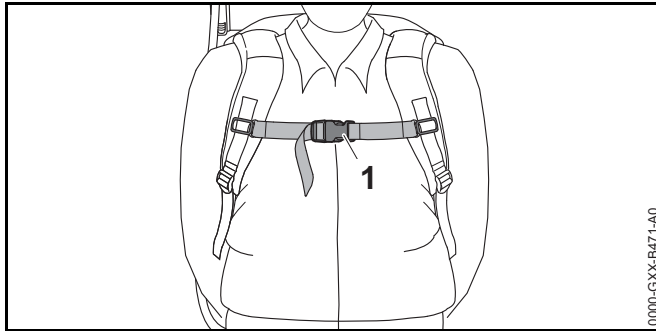
- ▶ Unscrew the union nut.
- ▶ Pull the wand out of the spray gun.

## 8 Adjusting Sprayer for User

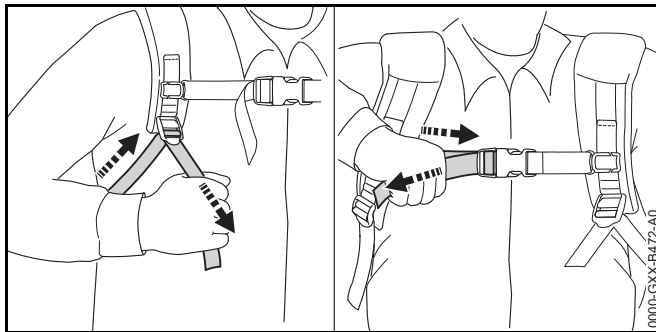
### 8.1 Fitting and Removing Harness

#### 8.1.1 Fitting and Adjusting the Carrying System

- ▶ Put the carrying system on your back.



- ▶ Close buckle (1) on the chest strap.



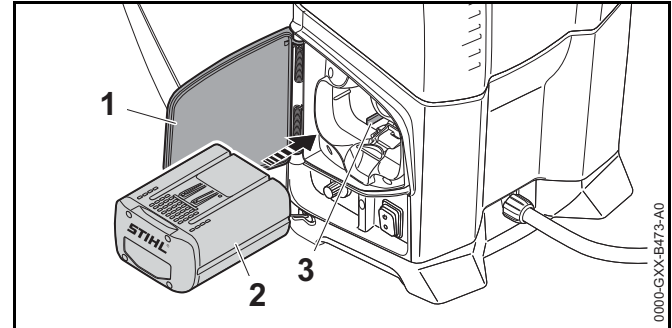
- ▶ Tighten the straps until back padding fits snugly against your back.

### 8.1.2 Removing the Carrying System

- ▶ Loosen the straps.
- ▶ Open the buckle on the chest strap.
- ▶ Take the carrying system off your back.

## 9 Removing and Fitting the Battery

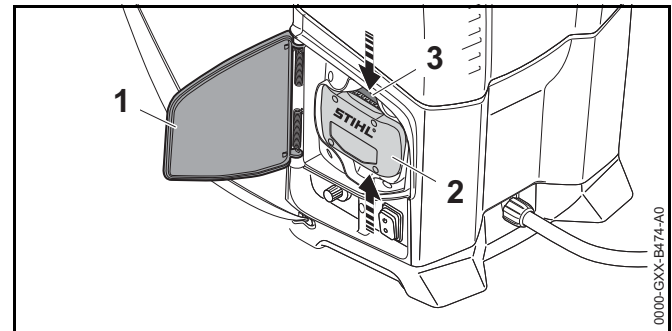
### 9.1 Inserting the battery



- ▶ Stand the sprayer on a level surface.
- ▶ Open flap (1) as far as it will go and hold it there.
- ▶ Insert the battery (2) up to the limit stop into the battery compartment (3).  
The battery (2) engages with a click and is now locked.
- ▶ Close the lid (1).

### 9.2 Removing the Battery

- ▶ Stand the sprayer on a flat surface.
- ▶ Open the lid (1) as far as stop and hold it there.

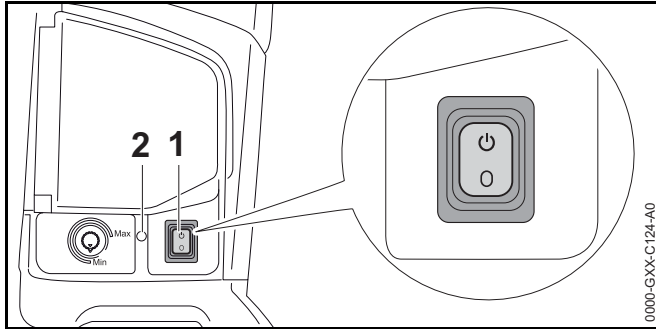



- ▶ Depress both locking levers (3).  
The battery (2) is unlocked and can be removed.




## 10 Switching On

### 10.1 Switching on the sprayer

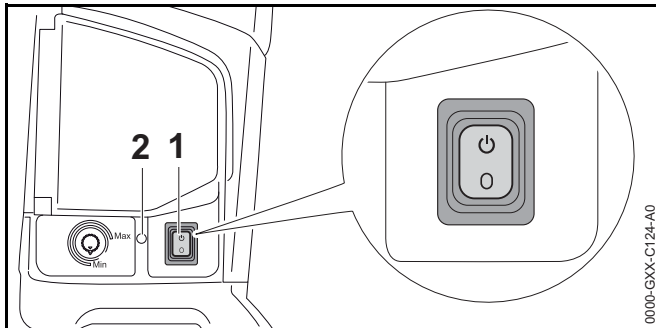


- ▶ Move the rocker switch (1) to position . LED (2) glow green and a short beep sounds. The sprayer is operational.

If the switched-on sprayer is not used for more than 15 minutes, the sprayer switches off automatically. LED (2) no longer illuminates and a short beep sounds.

- ▶ Move the rocker switch (1) to position 0 and then again to position . The sprayer is operational again.

### 10.2 Switching Off





- ▶ Move the rocker switch (1) to position 0. The LED (2) goes off.

## 11 Checking the Sprayer

### 11.1 Checking the spray attachment

#### Retaining latch and trigger

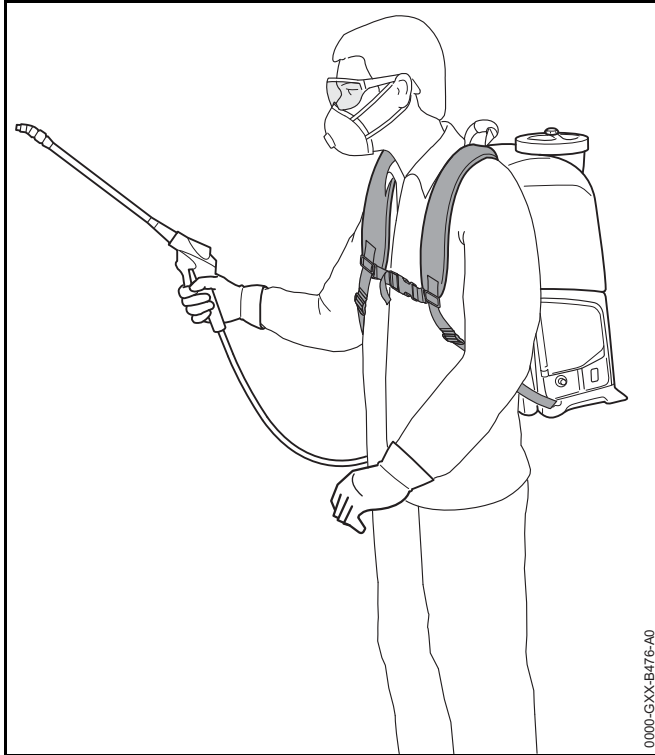
- ▶ Switch off the sprayer and remove the battery.
- ▶ Move retaining latch to the  position.
- ▶ Try to pull the trigger.
- ▶ If the trigger can be pulled: Do not use your sprayer and contact your STIHL servicing dealer for assistance. The retaining latch is faulty.
- ▶ Move retaining latch to the  position.
- ▶ Press and release the trigger.
- ▶ If the trigger is stiff or does not spring back to its idle position: Do not use the sprayer and contact your STIHL dealer for assistance. The trigger 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.

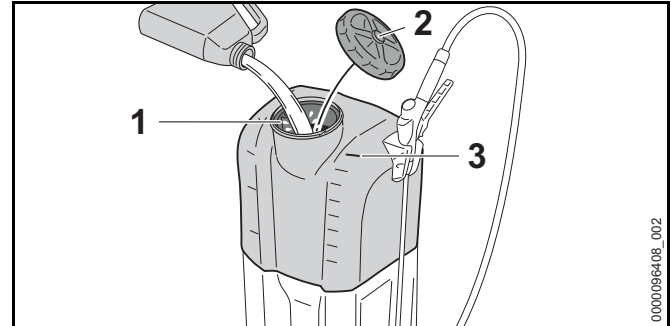
## 12 Using the Sprayer

### 12.1 Holding and Controlling the Sprayer



- ▶ Carry the sprayer on your back.
- ▶ Do not bend over forwards, keep your back straight.
- ▶ Hold the sprayer with one hand on the control handle - wrap your thumb around the handle.

### 12.2 Filling the tank



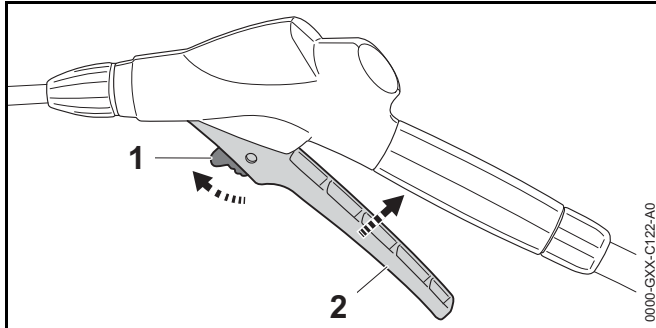
- ▶ Switch off the sprayer and remove the battery.
- ▶ Place the sprayer on the ground so that it cannot tip over.
- ▶ Turn the cap (2) counterclockwise until it can be removed.
- ▶ Remove the cover (2).  
The sieve (1) remains inserted in the opening.
- ▶ Check the sealing ring in the cover for damage.
- ▶ If the sealing ring is damaged: Do not use the sprayer and contact a STIHL dealer for assistance.
- ▶ Fill with plant protection product up to the uppermost boundary line (3) at the most.
- ▶ Fit the cover (2) on the container.
- ▶ Manually rotate the cap (2) clockwise and tighten it manually.  
The container is locked.

### 12.3 Emptying the Container

- ▶ Switch off the sprayer and remove the battery.
- ▶ Unscrew lid.
- ▶ Remove lid with sieve.
- ▶ Empty container in a well-ventilated place so that no residual quantity remains in the container.

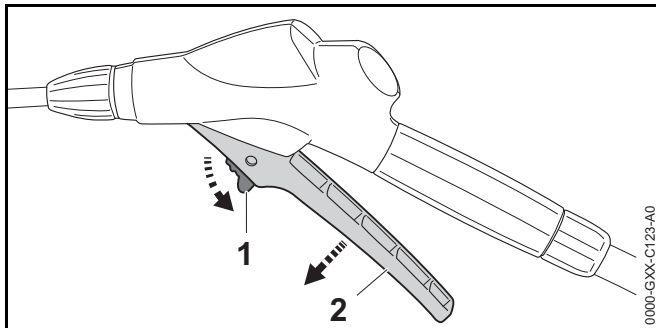
## 12.4 Squeezing and locking the spray gun trigger

### Pressing the spray gun trigger



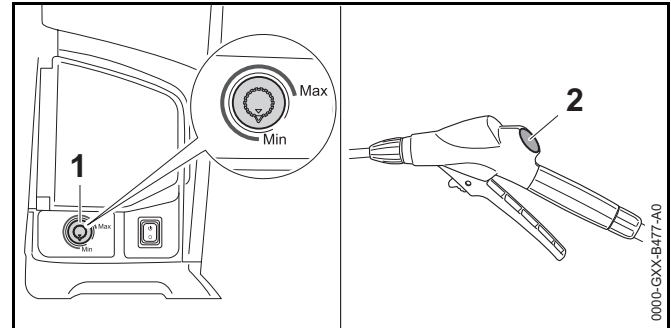
- ▶ Slide the retaining latch (1) to the  $\odot$  position.
- ▶ Pull the trigger (2) and hold it there.  
Plant protection product flows out of the nozzle.

### Locking the spray gun trigger



- ▶ Release the trigger (2).  
Plant protection product no longer flows out of the nozzle.  
The sprayer is still switched on.
- ▶ Slide the retaining latch (1) to the  $\odot$  position.

## 12.5 Adjusting Operating Pressure and Flow Rate of Plant Protection Product



To increase operating pressure and flow rate of plant protection product

- ▶ Turn rotary control (1) in direction of "Max".

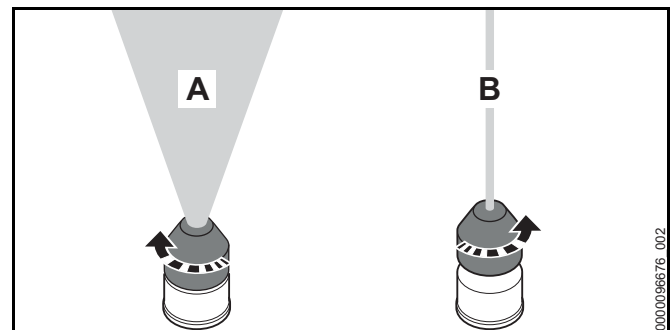
To reduce operating pressure and flow rate of plant protection product

- ▶ Turn rotary control (1) in direction of "Min".

Operating pressure is indicated on the spray gun's gauge (2).

## 12.6 Adjusting the Nozzle

The flow rates are specified in the technical data, 19.2.



Setting the full cone beam (A)

- ▶ Turn the nozzle counterclockwise as far as stop.

## Setting the spot jet (B)

- ▶ Turn the nozzle clockwise one full turn.


## 13 After Finishing Work

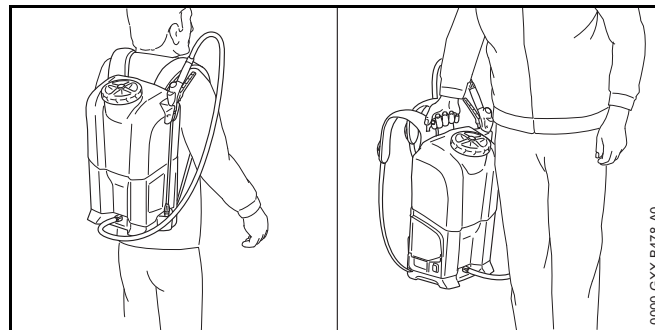
### 13.1 After Finishing Work

- ▶ Switch off the sprayer and remove the battery.
- ▶ Pull the trigger.  
Pressure is relieved.
- ▶ Drain the tank in a well ventilated location.
- ▶ Rinse the tank with clean water.
- ▶ Fill the tank with clean water.
- ▶ Fit the battery and switch on the sprayer.
- ▶ Pull the trigger.  
Continue spraying until the water has been completely flushed out of the hose, spray gun and wand.
- ▶ Switch off the sprayer and remove the battery.
- ▶ Pull the trigger.  
Pressure is relieved.
- ▶ Remove and clean the nozzle and spray wand.
- ▶ Remove the spray gun and allow remaining water to drain away.
- ▶ Clean the sprayer.
- ▶ Clean the filter.
- ▶ Clean the nozzle.
- ▶ Allow sprayer to dry.

## 14 Transporting

### 14.1 Transporting the Sprayer

- ▶ Switch off the sprayer, push the retaining latch to position  and remove the battery.
- ▶ Empty the container.

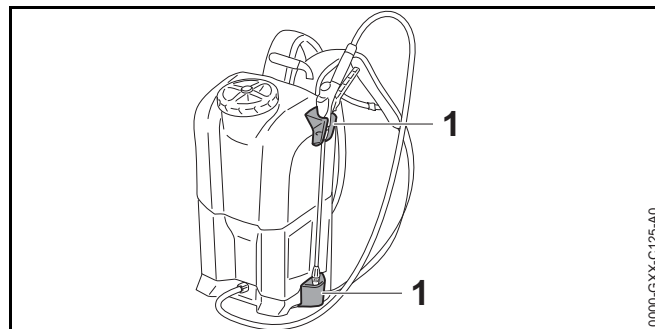


- ▶ Carry the sprayer by the transport handle or on your back.
- ▶ Transporting the machine in a vehicle: Secure the sprayer standing to prevent turnover and movement.

## 15 Storing

### 15.1 Storing the Sprayer

- ▶ Switch off the sprayer and remove the battery.
- ▶ Check the following points when storing the sprayer:
  - Sprayer is out of the reach of children.
  - Sprayer has been rinsed with clean water.
  - Sprayer is clean and dry.
  - Sprayer is at a temperature above 0°C.
  - Sprayer is protected from sunlight.



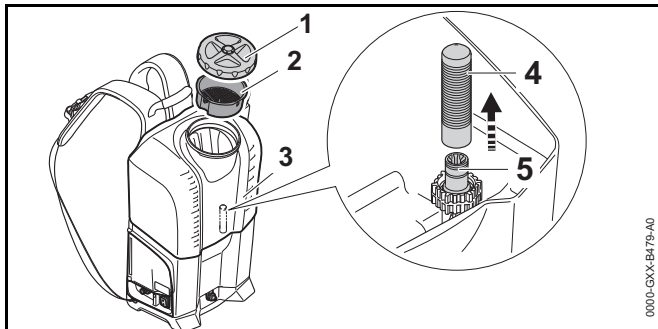
- ▶ Store the spraying attachment in the holders (1) on the sprayer.

## 16 Cleaning

### 16.1 Cleaning the Sprayer

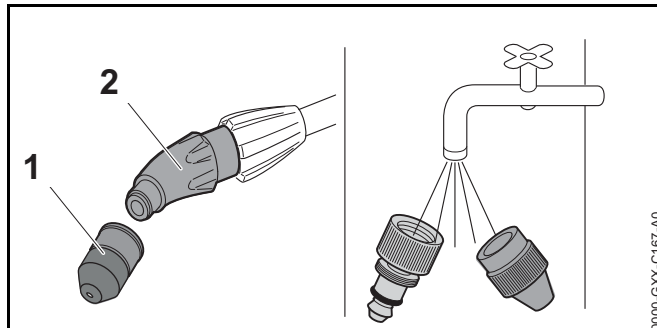
- ▶ Switch off the sprayer and remove the battery.
- ▶ Clean the sprayer and the carrying straps with a damp cloth.
- ▶ Clean vents with a paintbrush.
- ▶ Remove foreign objects from the battery compartment and clean the battery compartment with a damp cloth.
- ▶ Clean the electrical contacts in the battery compartment with a paintbrush or soft brush.
- ▶ If the bottom plate is dirty: Clean bottom plate with a damp cloth or a soft brush.

### 16.2 Cleaning the Filter



- ▶ Switch off the sprayer and remove the battery.
- ▶ Remove cap (1) with strainer (2).
- ▶ Take the filter (4) out of the tank (3).
- ▶ Rinse the filter (4) under running water.
- ▶ Fit the filter (4) on the connector (5) and push it down as far as it will stop.

### 16.3 Cleaning the Nozzle



- ▶ Unscrew the nozzle (1) from the connector (2).
- ▶ Disassemble the nozzle (1).
- ▶ Rinse the nozzle (1) under running water and dry it with a cloth.
- ▶ Screw the nozzle (1) onto the connector (2) and tighten it down firmly by hand.

### 16.4 Cleaning the Battery

- ▶ Clean the battery with a damp cloth.

## 17 Maintenance and Repairs

### 17.1 Servicing and Repairing the Sprayer

The sprayer cannot be serviced or repaired by the user.

- ▶ If your sprayer requires servicing, has a malfunction or is damaged: Contact a STIHL servicing dealer for assistance.

### 17.2 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.

## 18 Troubleshooting

### 18.1 Troubleshooting the Sprayer or the Battery

Fault	LEDs on battery and beeps on the sprayer	Cause	Remedy
The pump does not start when switched on.	1 LED flashes green and 4 long consecutive beeps sound.	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 flash red.	There is a fault in the sprayer.	▶ Remove the battery. ▶ Clean electrical contacts in the battery compartment. ▶ Insert battery. ▶ Switch on the sprayer. ▶ If 3 LEDs continue to flash red: Do not use the sprayer and contact your STIHL dealer for assistance.
	3 LEDs emit red light.	The sprayer is too warm.	▶ Remove the battery. ▶ Allow sprayer to cool down.
	4 LEDs flash red and short beeps sound in quick succession for 15 seconds.	There is a fault in the battery.	▶ Remove battery and reinsert it. ▶ Switch on the sprayer. ▶ If 4 LEDs continue to flash red and short beeps sound in quick succession: Do not use the battery and contact your STIHL dealer for assistance.
		No electrical contact between sprayer and battery.	▶ Remove the battery. ▶ Clean electrical contacts in the battery compartment. ▶ Insert battery.
		Sprayer or battery are damp.	▶ Allow sprayer or battery to dry.
The pump cuts out during operation.	3 LEDs emit red light.	The sprayer is too warm.	▶ Remove the battery. ▶ Allow sprayer to cool down.

Fault	LEDs on battery and beeps on the sprayer	Cause	Remedy
		There is an electrical fault.	<ul style="list-style-type: none"> <li>▶ Remove battery and reinsert it.</li> <li>▶ Switch on the sprayer.</li> </ul>
The sprayer 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.
Sprayer does not pick up plant protection product.		The filter or the spraying unit are clogged.	▶ Clean filter and spray attachment.
The spraying unit vibrates and the pressure gauge oscillates.		The pulsation damper on the pump is not working properly.	<ul style="list-style-type: none"> <li>▶ Switch off the sprayer and remove the battery.</li> <li>▶ Empty container.</li> <li>▶ Insert the battery and switch the sprayer on.</li> <li>▶ Press trigger of spray gun for 30 seconds.</li> <li>▶ Fill container again.</li> </ul>
The spray jet has changed shape.		The nozzle is blocked.	▶ Clean the nozzle.
		The nozzle is worn.	▶ Fit a new nozzle.
The plant protection product emerges from the sprayer in the area of the hose clamp.		The hose clamp has come loose.	▶ Tighten the screw of the hose clamp firmly.
Cover cannot be opened.		The pressure in the container is too high.	<ul style="list-style-type: none"> <li>▶ Switch off the sprayer and remove the battery.</li> <li>▶ Press the switch lever of the spray gun to release the pressure.</li> </ul>

## 19 Specifications

### 19.1 STIHL SGA 85 Sprayer

- Approved battery: STIHL AP 100 and AP 200
- Maximum working pressure: 6 bar
- Maximum filling quantity: 17 l
- Weight without battery and empty container: 6.2 kg
- Weight with battery and filled container: max. 25 kg
- Residual volume of spray medium (measured with spot jet at 1.5 bar) : 250 ml
- Mesh size of the filter: 0.25 mm x 6.3 mm
- Mesh size of the sieve: 1.4 mm x 1.4 mm

Consult [www.stihl.com/battery-life](http://www.stihl.com/battery-life) for the respective running time.

### 19.2 Flow rate

Pressure 2 bar

- Full cone jet: 0.45 l/min
- Spot jet: 1.18 l/min

Pressure 3 bar

- Full cone jet: 0.55 l/min
- Spot jet: 1.43 l/min

Pressure 4 bar

- Full cone jet: 0.64 l/min
- Spot jet: 1.65 l/min

Pressure 6 bar

- Full cone jet: 0.77 l/min

### 19.3 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

### 19.4 Sound Values and Vibration Values

The K-value for sound pressure levels is 2 dB(A). K-value for sound power level is 2 dB(A).

- Sound pressure level  $L_p$  measured according to ISO 11203: 66 dB(A)
- Sound power level  $L_w$  measured according to ISO 3744: 77 dB(A)
- Vibration measurement  $a_{hv, eq}$  measured according to ISO 20643, spray lance: 0.9 m/s<sup>2</sup>

For further details on compliance with Vibration Directive 2002/44/EC visit [www.stihl.com/vib](http://www.stihl.com/vib).

### 19.5 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](http://www.stihl.com/reach).



## 20 Spare Parts and Accessories

### 20.1 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.

## 21 Disposal

### 21.1 Disposing of Sprayer and Battery

Information on disposal is available from STIHL servicing dealers.

- ▶ Dispose of the sprayer, battery, plant protection product, accessories and packaging in accordance with local regulations and environmental requirements.

## 22 EC Declaration of Conformity

### 22.1 STIHL SGA 85 Sprayer

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

declares under our sole responsibility that

- Type of construction: Cordless sprayer
- manufacturer's brand: STIHL
- Type: SGA 85
- serial number: 4854

complies with the relevant provisions of Directives 2011/65/EU, 2014/30/EU, 2006/42/EC and 2009/127/EC and has been designed and manufactured in accordance with the versions of the following standards valid at the date of production: EN 55014-1, EN 55014-2 and EN 62841-1, taking into account standards EN 60335-1, EN 60335-2-41, EN ISO 19932-1, EN ISO 19932-2 and EN ISO 12100.

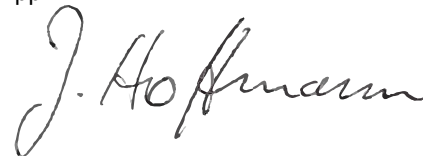
The technical documents are stored at ANDREAS STIHL AG & Co. KG Produktzulassung.

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

Done at Waiblingen, 03.02.2020

ANDREAS STIHL AG & Co. KG

pp



Dr. Jürgen Hoffmann, Head of Product Data, Regulations and Licensing

## 23 General Power Tool Safety Warnings

### 23.1 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 the safety precautions, instructions, illustrations and specifications accompanying this electric power tool.** Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury. **Save all safety 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.

## 23.2 Work area safety

- a) **Keep your work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **Do not work with the electric power tool in potentially explosive environments in which there are inflammable liquids, gases or dusts.** Electric power tools create sparks, which can ignite dusts or fumes.
- c) **Keep children and other people away while you are operating the electric power tool.** Distractions can cause you to lose control of the electric power tool.

## 23.3 Electrical safety

- a) **Electric power tool plugs must match the outlet. The plug must not be modified in any way. Do not use any adapter plugs with earthed (grounded) electric power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid touching earthed surfaces such as pipes, radiators, ovens and refrigerators with any part of your body.** There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Keep electric power tools away from rain or moisture.** Water entering an electric power tool will increase the risk of electric shock.

- d) **Do not use the connecting cable for any other purpose. Never carry or pull the electric power tool by the connecting cable or remove the plug by pulling on the cable. Keep the connecting cable away from heat, oil, sharp edges or moving parts.** Damaged or entangled connecting cables increase the risk of electric shock.
- e) **When operating an electric 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 an electric power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** The use of an RCD reduces the risk of electric shock.

## 23.4 Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating an electric power tool. Do not use the electric power tool if you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating the electric power tool 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 fit for the respective type of electric power tool and the respective job will reduce personal injuries.
- c) **Prevent unintentional starting. Check that the electric power tool is switched off before you connect it to the mains, pick it up or carry it.** Accidents can happen if you carry the electric power tool with your finger on the ON / OFF switch or with the electric power tool switched on.
- d) **Remove any setting tools or wrenches before turning the electric power tool on.** A tool or spanner left attached to a rotating part of an electric power tools can lead to injury.
- e) **Avoid placing your body in an unnatural position. Keep proper footing and balance at all times.** This enables better control of the electric power tool in unexpected situations.

- f) **Wear suitable clothing. Do not wear loose clothing or jewelry. Keep your hair and clothes away from moving parts.** Loose clothes, jewelry or long hair may be caught in moving parts.
- g) **If dust extraction and collection devices can be mounted, they should be connected and used correctly.** Use of dust collection can reduce dust-related hazards.
- h) **Do not be lulled into a false sense of security and do not disregard the safety rules even if you are thoroughly familiar with the electric power tool.** Carelessness can result in serious injuries within fractions of a second.

### 23.5 Electric power tool use and care

- a) **Do not force the electric power tool. Use the correct electric power tool for your application.** The correct electric power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use an electrical power tool if its switch is defective.** Any electric power tool that cannot be switched on or off via the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source and/or take a removable battery pack out of the electric power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the electric power tool accidentally.
- d) **Unused electric power tools must be stored out of the reach of children. Do not let anyone use the electric power tool who is not familiar with it or has not read the instructions and advice.** Electric power tools are dangerous in the hands of untrained users.
- e) **Maintain electric power tools and accessories with care. Check for misalignment or jamming of moving parts, breakage of parts and any other condition that may affect the functionality of the electric power tool. If damaged, have the electric power tool repaired before use.** Many accidents are caused by poorly maintained electrical power tools.

- f) **Keep cutting tools clean and sharp.** Carefully maintained cutting tools with sharp cutting edges are less likely to jam and are easier to control.
- g) **Use the electric 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 electric power tool for operations different from those intended may 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 electric power tool in unforeseen situations.

### 23.6 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.

### 23.7 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.