

## STIHL FS-MM

Instruction Manual





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# STIHL®

FS-MM

Dear Customer,

Thank you for choosing a quality engineered STIHL product.

It has been built using modern production techniques and comprehensive quality assurance. Every effort has been made to ensure your satisfaction and trouble-free use of the product.

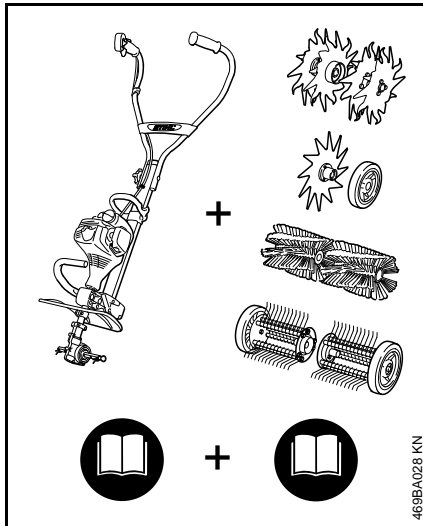
Please contact your dealer or our sales company if you have any queries concerning this product.

Your



Dr. Nikolas Stihl

## MultiSystem



In the STIHL MultiSystem, various MultiEngines and MultiTools are combined to form a machine. In this Instruction Manual, the functional unit of MultiEngine **and** MultiTool is referred to as a machine.

Accordingly, the instruction manuals for the MultiEngine and the MultiTool constitute the entire Instruction Manual for the machine.

Always read **both** manuals carefully before using your machine for the first time and keep them safe for future reference.

## Guide to Using this Manual

### Pictograms

All the pictograms attached to the machine are shown and explained in this manual.

### Symbols in text



#### WARNING

Warning where there is a risk of an accident or personal injury or serious damage to property.



#### NOTICE

Caution where there is a risk of damaging the machine or its individual components.

### Engineering improvements

STIHL's philosophy is to continually improve all of its products. For this reason we may modify the design, engineering and appearance of our products periodically.

Therefore, some changes, modifications and improvements may not be covered in this manual.

## Safety Precautions and Working Techniques



Some special safety precautions must be observed to reduce the risk of personal injury when operating this power tool because of the very high speed and sharpness of its cutting attachment.



Always read and and make sure you understand both instruction manuals (MultiEngine and MultiTool) before using your power tool for the first time and keep them in a safe place for future reference. Non-observance of the safety precautions may result in serious or even fatal injury.

Lend or rent your power tool only to persons who are familiar with this model and its operation – do not lend or rent your power tool without the MultiEngine and MultiTool instruction manuals.

Use your MultiTool only for mowing grass.

Do not use your power tool for any other purpose because of the **increased risk of accidents**.

Only use attachments and accessories that are explicitly approved for this power tool model by STIHL or are technically identical. If you have any questions in this respect, consult a servicing dealer.

Only use cutting attachments and accessories that are explicitly approved for this power tool model by STIHL or are technically identical. If you have any questions in this respect, consult a servicing dealer.

Use only high quality tools and accessories in order to avoid the risk of accidents and damage to the machine.

STIHL recommends the use of original STIHL tools, cutting attachments and accessories. They are specifically designed to match the product and meet your performance requirements.

The deflector on this power tool cannot protect the operator from all objects thrown by the cutting attachment (stones, glass, wire, etc.). Such objects may ricochet and then hit the operator.

Never attempt to modify your power tool in any way since this may increase the risk of personal injury. STIHL excludes all liability for personal injury and damage to property caused while using unauthorized attachments.

Do not use a pressure washer to clean the unit. The solid jet of water may damage parts of the unit.

### Clothing and Equipment

Wear proper protective clothing and equipment.



Clothing must be sturdy but allow complete freedom of movement. Wear snug-fitting clothing, an overall and jacket combination, do not wear a work coat.

Avoid clothing that could get caught on branches or brush or moving parts of the machine. Do not wear a scarf, necktie or jewelry. Tie up and confine long hair (e.g. with a hair net, cap, hard hat, etc.).



Wear steel-toed safety boots with non-slip soles.



### **WARNING**



To reduce the risk of eye injuries, wear close-fitting safety glasses in accordance with European Standard EN 166. Make sure the safety glasses are a snug fit.

Wear a face shield and make sure it is a good fit. A face shield alone does not provide adequate eye protection.

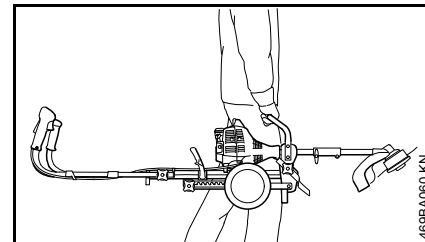
Wear hearing protection, e.g. earplugs or ear muffs.



Wear heavy-duty work gloves made of durable material (e.g. leather).

STIHL offers a comprehensive range of personal protective clothing and equipment.

### Transporting the Power Tool



Always shut off the engine.

Carry the power tool by the carrying handle or loop handle with the attachment facing forwards.

Do not touch hot parts of the machine since **burn injury** will result.

Transporting by vehicle: Allow engine tool cool down, properly secure your power tool to prevent turnover, fuel spillage and damage.

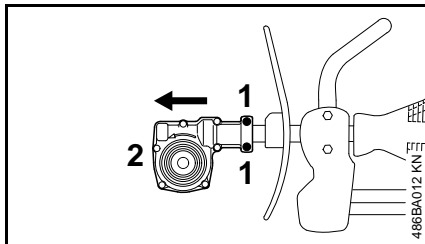
### Before Starting

Check that your power tool is properly assembled and in good condition – refer to appropriate chapters in the MultiEngine and MultiTool instruction manuals.

- Use only an approved combination of cutting attachment and deflector. All parts must be assembled properly and securely.
- Check cutting attachment for correct and secure assembly and good condition.

- Check protective devices (e.g. deflector for cutting attachment) for damage or wear. Always replace damaged parts. Do not operate your machine with a damaged deflector and/or worn cutting attachment (lettering and arrows no longer legible).
- Never attempt to modify the controls or safety devices – work only with a properly mounted deflector.
- Keep the handles dry and clean – free from oil and dirt – for safe control of the power tool.
- Swing the bike handle to the normal operating position and tighten it down firmly with the rotary knob. See chapter on "Adjusting the Bike Handle" in the MultiEngine instruction manual.

**To reduce the risk of accidents**, do not operate your power tool if it is damaged or not properly assembled.



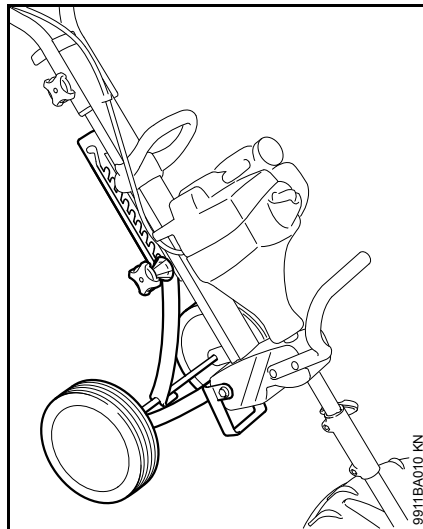
To use MultiTools for mowing grass, trimming and thinning out, remove the gearbox. To do this:

- Loosen the screws (1).
- Pull off the gearbox°(2).

Use for:

- FS-MM brushcutter

### Set of wheels



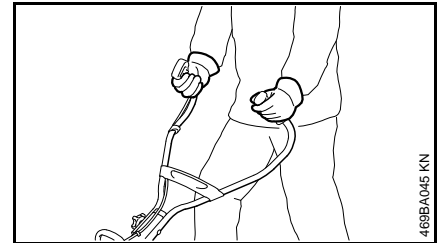
Use the MultiTool on the MultiEngine only in combination with a set of wheels (special accessory).

Use only genuine STIHL wheels. The use of other wheels may result in damage to the machine or personal injury.

The wheels can be locked in different positions – see notes on "Wheels" in the MultiEngine instruction manual.

### Holding and Controlling the Power Tool

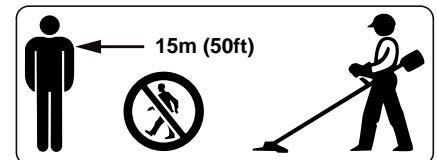
Make sure you always have good balance and secure footing.



Always hold the power tool firmly with both hands on the handles.  
Right handle on control handle, left hand on left handle.

### During Operation

In the event of impending danger or in an emergency, switch off the engine immediately by moving the slide control / stop switch/button to **0** or **STOP**.



The cutting attachment may catch and fling objects a great distance and cause injury - therefore, do not allow any other persons within a radius of 15 meters of your own position. **To reduce the risk of damage to property**, also maintain this distance from other objects (vehicles, windows). Even maintaining a distance of 15 meters or more cannot exclude the potential danger.



**To reduce the risk of injury**, avoid contact with the cutting attachment.

The correct engine idle speed is important to ensure that the cutting attachment stops rotating when you let go of the throttle trigger. Check and correct the idle speed setting regularly. If the attachment still rotates when the engine is idling, have your dealer check your machine and make proper adjustments or repairs – see MultiEngine instruction manual.



**To reduce the risk of injury** from thrown objects, never operate the power tool without the proper deflector for the type of cutting attachment being used.



The gearbox becomes hot during operation. **To reduce the risk of burn injury**, do not touch the gearbox housing.

**Take special care in slippery conditions** (ice, wet ground, snow), on slopes or uneven ground.

Watch out for obstacles: Roots and tree stumps which **could cause you to trip or stumble**.



Inspect the work area: Stones, pieces of metal or other solid objects may be thrown more than 15 meters and **cause personal injury** or damage the cutting attachment and property (e.g. parked vehicles, windows).



Special care must be taken when working in difficult, over-grown terrain.

Make sure you always have good balance and secure footing.

Take special care when working on slopes because of the risk of slipping.

Never operate your power tool with one hand.

Be particularly alert and cautious when wearing hearing protection because your ability to hear warnings (shouts, alarms, etc.) is restricted.

**To reduce the risk of accidents**, take a break in good time to avoid tiredness or exhaustion.

Work calmly and carefully – in daylight conditions and only when visibility is good. Stay alert so as not to endanger others.

If your power tool is subjected to unusually high loads for which it was not designed (e.g. heavy impact or a fall), always check that it is in good condition before continuing work – see also "Before Starting". Make sure the safety devices are working properly. Do not continue operating your power tool if it is damaged. In case of doubt, consult your servicing dealer.

Check the cutting attachment at regular short intervals during operation or immediately if there is a noticeable change in cutting behavior:

- Turn off the engine. Hold the unit firmly and wait for the cutting attachment to come to a standstill.
- Check condition and tightness, look for cracks.
- Replace damaged or dull cutting attachments immediately, even if they have only superficial cracks.

Clean grass and plant residue off the cutting attachment mounting at regular intervals – remove any build up of material from the cutting attachment and deflector.

**To reduce the risk of injury**, shut off the engine before changing the cutting attachment.

Do not continue using or attempt to repair damaged or cracked cutting attachments by welding, straightening or modifying the shape (out of balance).

This may cause parts of the cutting attachment to come off and hit the operator or bystanders at high speed and **result in serious or fatal injuries**.

### When using mowing heads

Equip the deflector with the additional components specified in the instruction manual.

Use only the deflector with properly mounted line limiting blade to ensure the mowing lines are automatically trimmed to the approved length.

To reduce the risk of injury, always turn off the engine before adjusting the nylon line of manually adjustable mowing heads

Using the unit with over-long nylon cutting lines reduces the motor's operating speed. The clutch then slips continuously and this causes overheating and damage to important components (e.g. clutch, polymer housing components) – **and this can increase the risk of injury** from the cutting attachment rotating while the engine is idling.

### After Finishing Work

After finishing work or before leaving the unit unattended: Shut off the engine.

After finishing work, clean dirt, soil and plant residue off the cutting attachment – **wear gloves to reduce the risk of injury.**

Do not use grease solvents for cleaning.

### Maintenance and Repairs

Service the machine regularly. Do not attempt any maintenance or repair work not described in the KombiTool and KombiEngine instruction manuals. Have all other work performed by a servicing dealer.

STIHL recommends that you have servicing and repair work carried out exclusively by an authorized STIHL servicing dealer. STIHL dealers are regularly given the opportunity to attend training courses and are supplied with the necessary technical information.

Only use high-quality replacement parts in order to avoid the risk of accidents and damage to the machine. If you have any questions in this respect, consult a servicing dealer.

STIHL recommends the use of genuine STIHL replacement parts. They are specifically designed to match your model and meet your performance requirements.

To reduce the risk of injury, **always shut off the engine** before carrying out any maintenance or repairs or cleaning the machine.

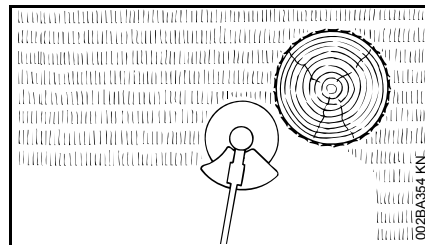
### Symbols on Deflectors

An arrow on the deflector shows the correct direction of rotation of the cutting attachments.



Use deflector in combination with mowing heads only. Do not use metal cutting attachments.

### Mowing head with mowing line



For soft "cut" – for cleaner cutting too of rugged areas around trees, fence posts, etc. – little damage to bark.

The mowing head is supplied with an information sheet. Only equip the mowing head with a mowing line according to the details in the information sheet.

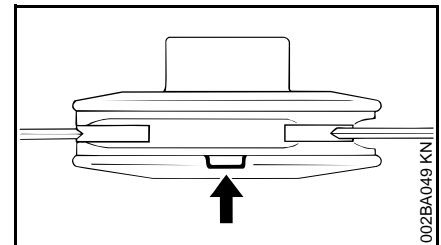
### ! WARNING

Do not replace the mowing line with metallic wires or ropes – **Risk of injury!**

### STIHL Polycut Mowing Head with Polymer Blades

For mowing unobstructed edges of meadows (without posts, fences, trees or similar obstacles).

### Check the wear limit marks!



If one of the wear limit marks on the PolyCut mowing head is worn through (arrow): Do not continue using the mowing head. Install a new one. There is otherwise a **risk of injury** from thrown parts of the head.

It is important to follow the maintenance instructions for the PolyCut mowing head.

The PolyCut can also be equipped with mowing line in place of the polymer blades.



The mowing head comes with instruction leaflets. Equip the mowing head with polymers blades or nylon line as described in the instruction leaflets.



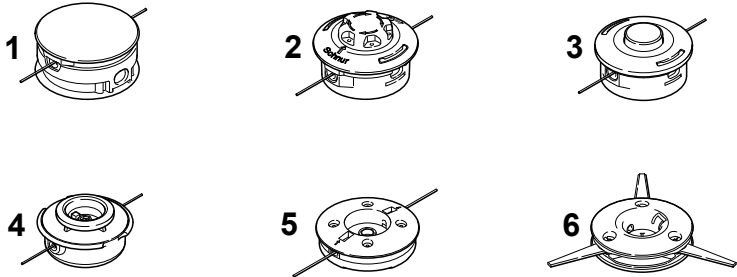
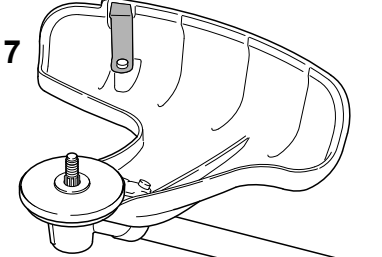
Never use wire in place of the nylon mowing line – **risk of injury**.

## Approved MultiEngines

Only use MultiEngines supplied by STIHL or expressly approved by STIHL for use with the MultiTool.

This MultiTool may only be used in combination with the STIHL MM 56 MultiEngine.

## Approved Combinations of Cutting Attachment and Deflector

Cutting Attachment	Deflector
	

000L-GXX-0425-A0

### Approved Combinations

- 5 STIHL DuroCut 20-2
- 6 STIHL PolyCut 20-3

Select correct combination from the table according to the cutting attachment you intend to use.

### **WARNING**

For safety reasons no other combinations are permitted – **risk of accidents.**

Only mowing heads (1, 2, 3, 4, 5, 6) may be used on the FS-MM MultiTool.

### Cutting Attachments

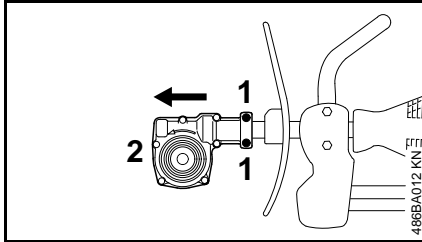
#### Mowing heads

- 1 STIHL SuperCut 20-2
- 2 STIHL AutoCut C 25-2
- 3 STIHL AutoCut 25-2
- 4 STIHL TrimCut 31-2

## Fitting, removing the MultiTool

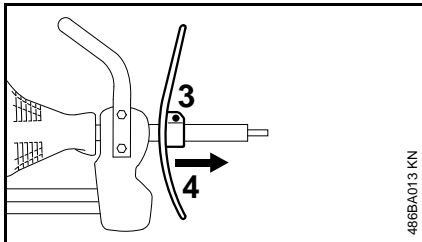
### Mounting the MultiTool

#### Remove the gearbox



- Loosen the clamp screws (1) and pull the gearbox (2) off the drive tube.

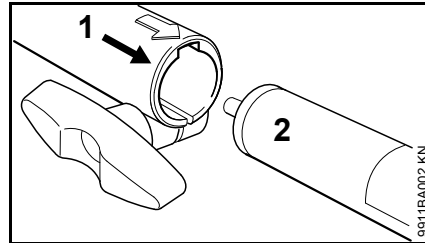
#### Remove the deflector



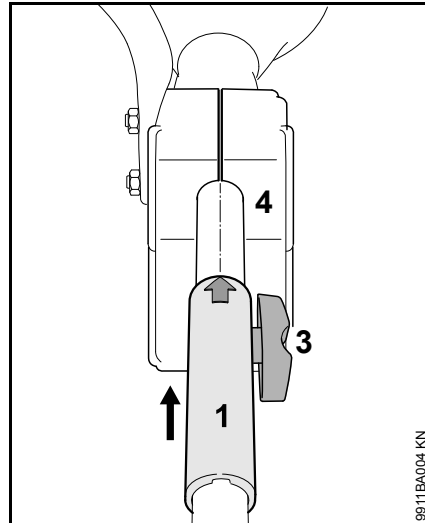
- Loosen the screw (3) and pull the deflector (4) off the drive tube.

### **!** WARNING

Keep the deflector in a safe place and always refit it before using other MultiTools – **there is otherwise a risk of accidents.**



- Push the coupling sleeve (1) onto the drive tube (2) as far as stop.

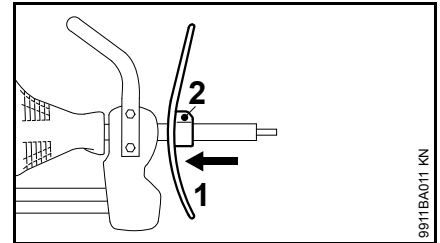


The coupling sleeve (1) is properly positioned when the arrow is in line with the gap in the flange (4).

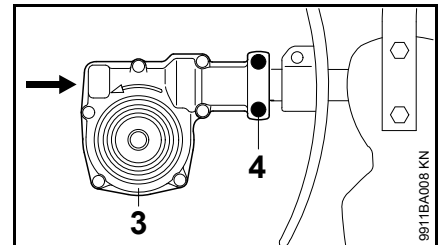
- Tighten down the wing screw (3) **firmly**.

### Removing the MultiTool

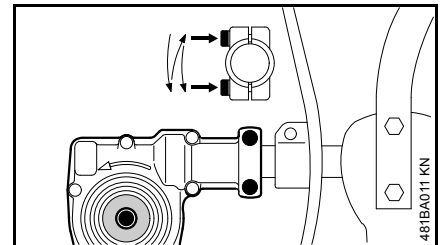
- Loosen the wing screw and pull off the FS-MM.



- Push the deflector (1) onto the drive tube (2) as far as stop.
- Tighten down the screw (2).



- Push the gearbox (3) into position and tighten down the clamp screws (4).

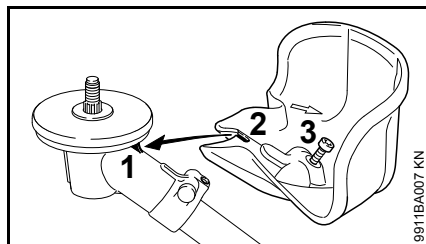


- Tighten the two clamp screws on the gearbox in the following sequence:
  - Tighten the first screw moderately.
  - Tighten the second screw moderately.

- Tighten down first screw firmly.
- Tighten down second screw firmly.

## Mounting the Deflector

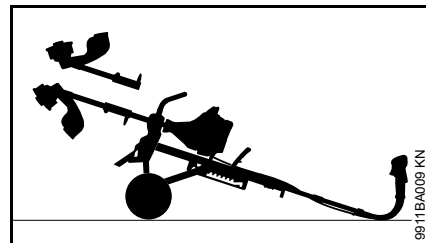
**Mount the wheel guard.**



- Attach the wheel guard to the gearbox, while doing so, insert the nose (1) into the recess (2) on the wheel guard.
- Turn-in and tighten the screw (3).

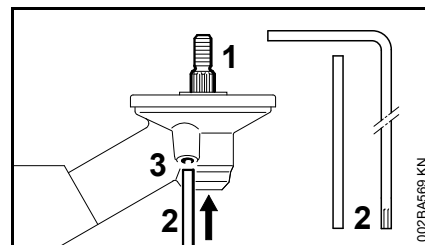
## Mounting the Cutting Attachment

**Placing Power Tool on the Ground**



- Shut off the engine.
- Turn the power tool so that the cutting attachment mounting face is pointing up.

**Blocking the shaft**

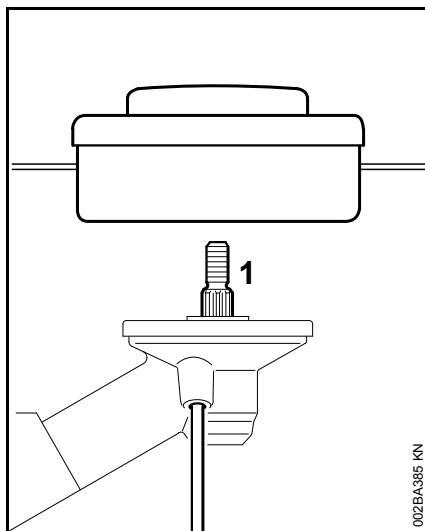


To mount and remove the cutting attachments, the shaft (1) must be blocked with the locking pin (2) or Allen wrench (2). The parts are included in the scope of delivery and are available as special accessories.

- Push the locking pin (2) or Allen wrench (2) as far as it will go into the hole (3) in the gear – press gently
- Turn the shaft, nut or cutting attachment until the locking pin engages and the shaft is blocked

### Fitting Mowing Head with Screw Mounting

Keep the instruction leaflet for the mowing head in a safe place.



- Screw the mowing head counterclockwise on to the shaft (1) as far as stop.
- Block the shaft.
- Tighten down the mowing head firmly.



#### NOTICE

Remove the tool used to block the shaft.

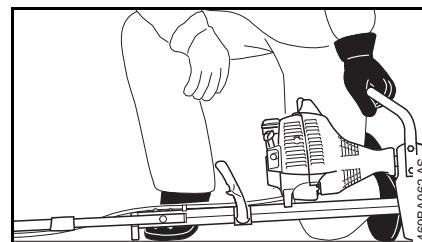
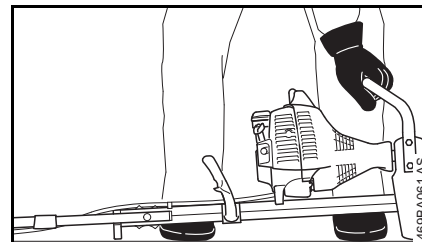
### Removing the Mowing Head

- Block the shaft.
- Unscrew the mowing head clockwise.

## Starting / Stopping the Engine

### Starting the Engine

Always follow the starting procedure described in the MultiEngine instruction manual.



- Secure the handlebar in the normal operating position.
- Retract the wheels, if fitted – see chapter on "Wheels" in MultiEngine instruction manual.
- Retract the spur, if fitted.

- Check that the MultiTool is not touching the ground or any other obstacles. The unit must rest on the engine flange and the support on the frame.
- Make sure you have good balance and secure footing – as shown in the illustration.

### WARNING

To reduce the risk of injury from contact with the rotating attachment, always stand to the side of the power tool, never in front of the attachment.

- With your left hand on the loop handle, press the unit **firmly** against the ground – do not touch the throttle trigger or lockout lever.

### NOTICE

Do not stand or kneel on the handlebar or frame.

### WARNING

The attachment may begin to move as soon as the engine starts. For this reason, blip the throttle after starting – the engine returns to idling speed.

Now follow the starting procedure described in the MultiEngine instruction manual.

### Stopping the Engine

- See MultiEngine instruction manual.

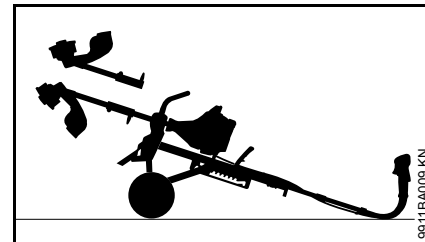
## Storing the Machine

If the machine is to remain out of use for approx. 3 months or more

- Remove, clean and inspect the cutting attachment
- Store machine in a safe and dry place. Protect against unauthorized use (e. g., by children)

## Maintaining the Mowing Head

### Placing Power Tool on the Ground



- Shut off the engine.
- Turn the power tool so that the cutting attachment mounting face is pointing up.

### Replacing Nylon Line

Always check the mowing head for signs of wear before replacing the nylon line.

### WARNING

If there are signs of serious wear, replace the complete mowing head.

The nylon mowing line is referred to as "nylon line" or "line" in the following.

The mowing head is supplied with illustrated instructions for replacing the nylon line. Keep the instructions for the mowing head in a safe place.

- If necessary, remove the mowing head.

## Adjusting Nylon Line

### STIHL SuperCut

Fresh line is advanced automatically if the remaining line is **at least 6 cm (2 1/2 in)** long. The blade on the deflector trims overlong lines to the correct length.

### STIHL AutoCut

- With the engine running, hold the rotating mowing head above the grass surface.
- Tap it on the ground once – fresh line is advanced and the blade on the deflector trims it to the right length.

Fresh line is advanced every time the mowing head is tapped on the ground. For this reason observe the mowing head's cutting performance during operation. If the mowing head is tapped on the ground too often, the line limiting blade will unnecessarily cut off unused lengths of nylon line.

Line feed operates only if both lines are still at least **2.5 cm (1 in)** long.

### STIHL TrimCut



#### **WARNING**

**To reduce the risk of injury**, always shut off the engine before adjusting the nylon line by hand.

- Pull the spool up – rotate it about 1/6 turn counterclockwise until it engages – and allow it to spring back.
- Pull ends of the lines outward.

Repeat the above procedure as necessary until both lines reach the limiter blade on the deflector.

Rotating the spool from one stop to the next advances about **4 cm (1 1/2 in)** of fresh line.

## Replacing Nylon Line

### STIHL PolyCut

Precut lengths of nylon line can be fitted to the PolyCut in place of the cutting blades.

### STIHL DuroCut, STIHL PolyCut



#### **WARNING**

**To reduce the risk of injury**, always shut off the engine before refilling the mowing head.

- Fit precut lengths of nylon line in the mowing head as described in the instructions supplied.

## Replacing Cutting Blades

### STIHL PolyCut

Always check the mowing head for signs of wear before installing new cutting blades.



#### **WARNING**

If there are signs of serious wear, replace the complete mowing head.

The thermoplastic cutting blades are referred to as "blades" in the following.

The mowing head is supplied with illustrated instructions for replacing the blades. Keep the instructions for the mowing head in a safe place.



#### **WARNING**

**To reduce the risk of injury**, always shut off the engine before installing the blades.

- Remove the mowing head.
- Replace blades as shown in the illustrated instructions.
- Mount the mowing head on the machine.

## Maintenance and Care

The following information applies in normal operating conditions. The specified intervals must be shortened accordingly when working for longer than normal or under difficult cutting conditions (extensive dust, etc.).

### All accessible screws, nuts and bolts

- Tighten if necessary

### Cutting attachments

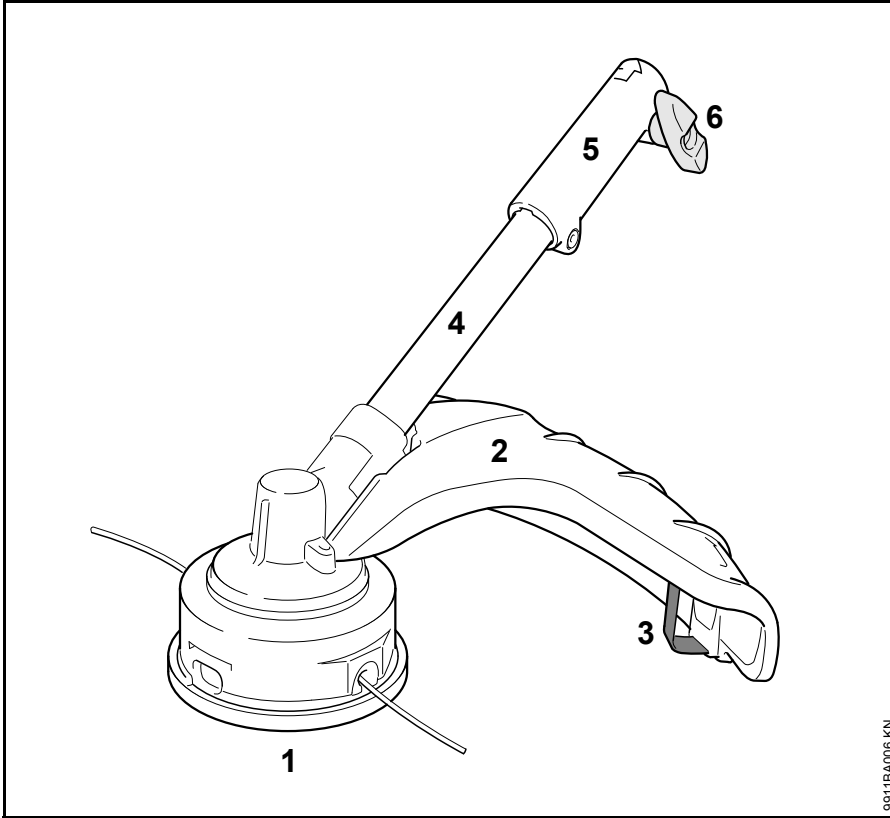
- Visual inspection, check they are secure before starting work and whenever the tank is refilled
- Replace if damaged

### Safety information label

- Replace illegible safety information labels



## Main Parts



- 1 Mowing Head
- 2 Deflector (for mowing heads only)
- 3 Line Limiting Blade
- 4 Drive Tube
- 5 Coupling Sleeve
- 6 Wing Screw

9911BA006 KN

## Specifications

### Engine speed

Max. output shaft speed at cutting attachment with MultiEngine:

MM 56: 7,000 rpm

### Weight

without cutting attachment,  
with deflector: 0.9 kg

### Noise and Vibration Data

Noise and vibration data measurements on power tools with the FS-MM MultiTool include idling and rated maximum speed in a ratio of 1:6.

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

#### Sound pressure level $L_{peq}$ to EN 14910

MM 56: 93 dB(A)

#### Sound pressure level $L_{peq}$ to DIN EN 14910

MM 56: 102 dB(A)

#### Vibration level $a_{hv,eq}$ to EN 14910

	Handle, left	Handle, right
MM 56:	4.0 m/s <sup>2</sup>	4.3 m/s <sup>2</sup>

The K-factor in accordance with Directive 2006/42/EC is 2.0 dB(A) for the sound pressure level and sound power level; the K-factor in accordance with Directive 2006/42/EC is 2.0 m/s<sup>2</sup> for the vibration level.

### 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 (EC) No. 1907/2006 see [www.stihl.com/reach](http://www.stihl.com/reach).


## Maintenance and Repairs

Users of this machine may only carry out the maintenance and service work described in this user manual. All other repairs must be carried out by a servicing dealer.

STIHL recommends that you have servicing and repair work carried out exclusively by an authorized STIHL servicing dealer. STIHL dealers are regularly given the opportunity to attend training courses and are supplied with the necessary technical information.

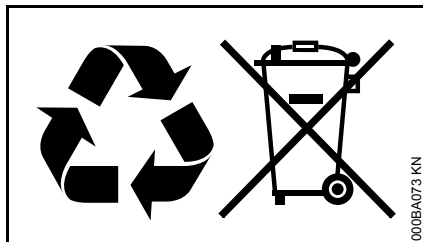
When repairing the machine, only use replacement parts which have been approved by STIHL for this power tool or are technically identical. Only use high-quality replacement parts in order to avoid the risk of accidents and damage to the machine.

STIHL recommends the use of original STIHL replacement parts.

Original STIHL parts can be identified by the STIHL part number, the **STIHL** logo and the STIHL parts symbol  (the symbol may appear alone on small parts).

## Disposal

Observe all country-specific waste disposal rules and regulations.



STIHL products must not be thrown in the garbage can. Take the product, accessories and packaging to an approved disposal site for environment-friendly recycling.

Contact your STIHL servicing dealer for the latest information on waste disposal.

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