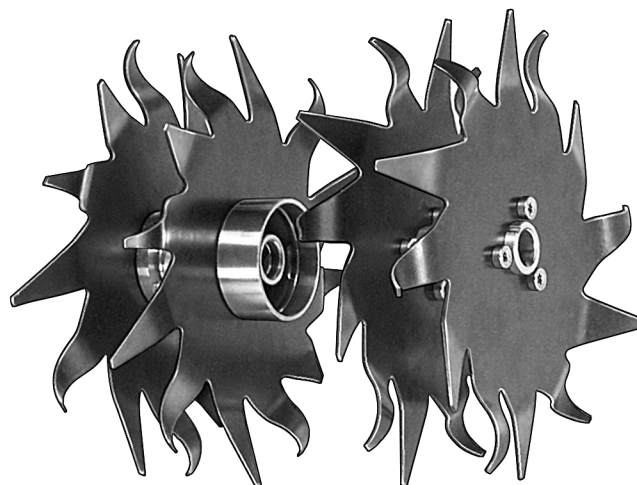
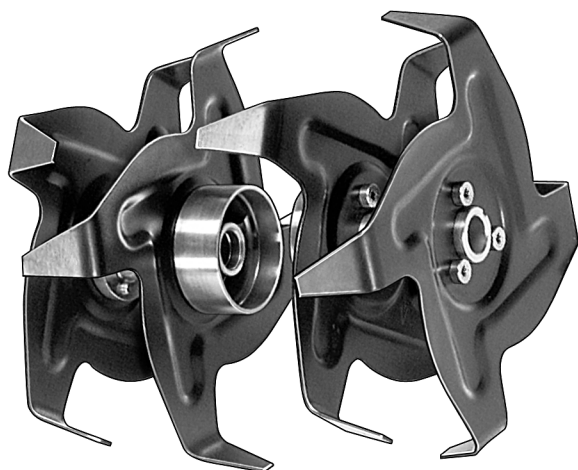


STIHL BF-MM, BK-MM

Instruction Manual



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Dear Customer,

Thank you for choosing a quality engineered STIHL product.

This machine has been built using modern production techniques and comprehensive quality assurance. Every effort has been made to ensure your satisfaction and troublefree use of the machine.

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



Hans Peter Stihl

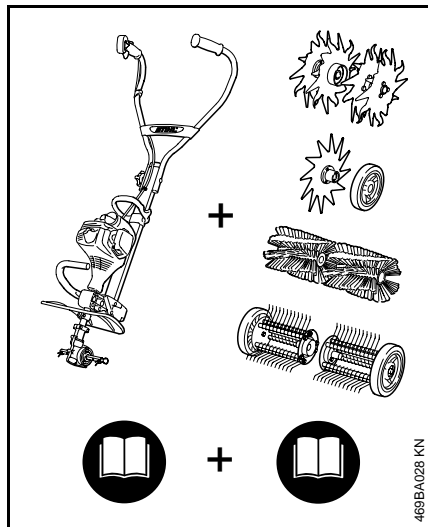


STIHL®

BF-MM, BK-MM

MultiSystem

Guide to Using this Manual



In the STIHL MultiSystem the MultiEngine can be combined with a number of different MultiTools to produce a power tool. In this instruction manual the functional unit formed by the MultiEngine **and** MultiTool is referred to as the power tool.

The MultiEngine and MultiTool come with separate instruction manuals.

Always **read** and make sure you understand **both** instruction manuals before starting and using your machine. Keep the manuals in a safe place for later reference.

Pictograms

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

The operating and handling instructions are supported by illustrations.

Symbols in text

The individual steps or procedures described in the manual may be marked in different ways:

- A bullet marks a step or procedure without direct reference to an illustration.





A description of a step or procedure that refers directly to an illustration may contain item numbers that appear in the illustration.

Example:

Loosen the screw **(1)**

Lever **(2)** ...

In addition to the operating instructions, this manual may contain paragraphs that require your special attention. Such paragraphs are marked with the symbols described below:

-  **Warning** where there is a risk of an accident or personal injury or serious damage to property.
-  **Caution** where there is a risk of damaging the machine or its individual components.
-  **Note or hint** which is not essential for using the machine, but may improve the operator's understanding of the situation and result in better use of the machine.
-  **Note or hint** on correct procedure in order to avoid damage to the environment.

Safety Precautions

* Equipment and features

This instruction manual may refer to several models with different features. Components that are not installed on all models and related applications are marked with an asterisk (*). Such components may be available as special accessories from your STIHL dealer.

Engineering improvements

STIHL's philosophy is to continually improve all of its products. As a result, engineering changes and improvements are made from time to time. If the operating characteristics or the appearance of your machine differ from those described in this manual, please contact your STIHL dealer for assistance.

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



Because a cultivator is a high-speed power tool with rotating blades, **special safety precautions** must be observed in addition to those that generally apply when working with a hoe.



It is important that you read and understand **both** instruction manuals (MultiEngine **and** MultiTool) before using the unit for the first time.

Keep the manuals in a safe place for future reference.

Non-observance of the safety precautions in the instruction manuals may cause serious or even fatal injury.

Always observe local safety regulations, standards and ordinances.

If you have never used this power tool model before: Have your STIHL dealer show you how to operate your power tool or attend a special course of training in power tool operation.

Do not lend or rent your power tool combination without the instruction manuals. Be sure that anyone using your power tool understands the information contained in both manuals (MultiEngine **and** MultiTool).

Minors should never be allowed to use a power tool. Children, bystanders and animals should not be allowed in the area where a power tool is in use.

The power tool user is responsible for avoiding injury to third parties or damage to their property.

To operate the power tool you must be in good physical condition and mental health and not under the influence of any substance (drugs, alcohol) which might impair vision, dexterity or judgment.

Use the power tool only for deep tilling previously cultivated, packed or loose soil, furrowing, weeding and working mulches into loosened soil. It must not be used for any other purpose because of the increased risk of accidents.

Only rotor blades supplied by STIHL or expressly approved by STIHL for use with your specific model are authorized.

Other rotor blades must not be used because of the increased risk of accidents.

Never attempt to **modify** your power tool in any way since this can be extremely dangerous and result in serious or fatal injury. STIHL cannot accept any liability for personal injury or damage to property caused by modifications to the power tool or using attachments not approved by STIHL.

Clothing and Equipment

Wear proper protective clothing and equipment.



Clothing must be sturdy and snug-fitting, but allow complete freedom of movement. Overalls or a coverall are recommended.

Avoid loose-fitting jackets, work coats, scarves, neckties, jewellery or anything that could become caught on wood or brush.



Secure long hair (cap, hard hat, etc.).



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



Wear a face shield or face screen and **safety glasses** for protection from thrown objects.

Warning: A face shield or face screen alone does not provide adequate eye protection.

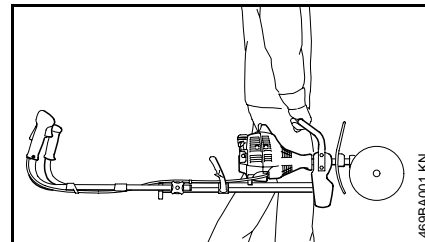
Wear hearing protection, e.g. ear plugs or ear muffs.



Wear **heavy-duty, non-slip gloves**, preferably made of leather.

STIHL has a full line of safety clothing and equipment.

Transporting the Machine



Always turn off the engine.

Carry the unit suspended from the shoulder strap or properly balanced by the drive tube.

- Rotor blades in front of you.
- Hot muffler away from your body.
- Retract the spur, if fitted.

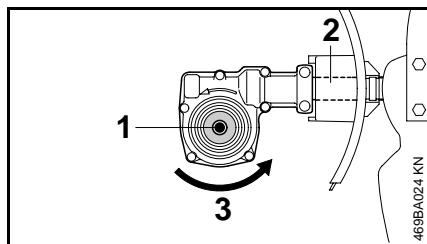
When the machine is not in use (work break), shut it off so that it does not endanger others.

See also notes on "Transporting the Power Tool" in the MultiEngine instruction manual.

Before Starting

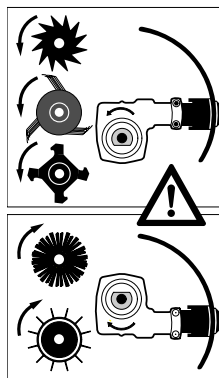
Check that your power tool is properly assembled and in good condition – refer to appropriate chapters in the instruction manuals:

To reduce risk of injury from the MultiTool rotating in the wrong direction, check that position of gearbox is correct and adjust if necessary. See chapter on "Mounting the MultiTool".



Correct Position of Gearbox:

The gearbox output shaft (1) must be below the drive tube (2) so that the MultiTool rotates in the direction of the arrow (3).



Position the gearbox for metal attachments so that the gearbox output shaft is below the drive tube.

See also notes on "Before Starting" in the MultiEngine instruction manual.

- The blades must be correctly and securely mounted and in good condition (clean, move freely, not warped).
- Never attempt to modify the controls or safety devices.
- Keep the handles dry and clean for safe control.

- Set the handlebar to the normal operating position and tighten it down firmly with the rotary knob. See chapter on "Adjusting the Handlebar" in the MultiEngine instruction manual.

See also chapter on "Before Starting" in the MultiEngine instruction manual.

Starting the Engine

Place the unit on firm ground in an open area. Make sure you have good balance and secure footing. Retract the spur, if fitted. Hold the unit securely. To reduce the risk of damage, be sure that the blades are clear of the ground and all other obstructions.

Your power tool is a one-person unit. To reduce the risk of injury, do not allow other persons within a radius of 5 meters of your own position – even when starting.



Risk of injury from contact with rotating blades. The blades begin to rotate as soon as the engine is started in the "Start" position. Always stand to one side of the machine when starting – never in front of the blades.

The correct **engine idle speed** is important to ensure that the blades stop rotating when you let go of the throttle trigger.

See also notes on "Starting the Engine" in the MultiEngine instruction manual.

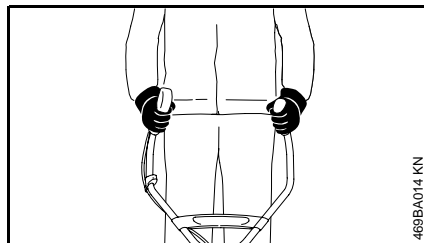
Always check your power tool for proper condition and operation before starting. Inspect the deflector for damage or wear.

Replace any damaged parts. Do not operate the machine with a damaged deflector. Replace damaged blades immediately even if they have only minor hairline cracks.

Holding and Controlling the Machine

Always hold the unit **firmly with both hands** on the handles.

For safe control wrap your fingers and thumbs tightly around the control handle and left handle.



Hold the control handle with your right hand and left handle with your left hand.

During Operation

The blades continue to rotate for a short period after the throttle trigger is released – flywheel effect.

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

Make sure you have good balance and secure footing at all times, taking special care in **slippery conditions**:

- damp, snow, ice
- on slopes, uneven ground etc.

Operate the power tool only at a normal walking pace.

Be extremely cautious when pulling the power tool towards you **because of the risk of injury** from contact with the rotating attachment.

Watch out for hidden obstacles such as tree stumps and roots to avoid stumbling.

Do not operate using the starting throttle lock as you do not have control of the engine speed.

To reduce the risk of injury from contact with the blades, never operate your unit without the specified deflector.



To reduce the risk of injury from contact with the blades, **do not allow bystanders within 5 m** of your own position.

Before starting work, inspect the area for stones, glass, pieces of metal, trash or other solid objects. Such objects may damage the blades.

Be extremely cautious when changing direction with the power tool – especially on slopes.

Never work on steep slopes because of the risk of injury through loss of control of the power tool.



To reduce the risk of injury, keep your hands and feet well away from the blades. Never touch a rotating blade.

Always stand behind the deflector or to one side of the machine during work – never in front of the blades.

The correct **engine idle speed** is important to ensure that the attachments stop rotating when you let go of the throttle trigger.

Check and correct the idle speed setting at regular intervals – see MultiEngine instruction manual. If the blades still rotate, have your STIHL dealer check your power tool and make proper adjustments or repairs.



Warning!

To avoid the risk of electrocution, never use the cultivator in areas where electrical lines are laid on the surface or buried just below the surface.

Striking and damaging such lines with the blades could cause serious or even fatal injury.

To reduce the risk of injury, take particular care when working close to fences, walls, stones, roots, trees and areas of dense growth.

Clean grass, weeds, soil (clumps), etc. off the rotor blades and deflector at regular intervals – always shut off the engine and make sure the blades have stopped before cleaning. Wear gloves to reduce the risk of injury.

Check the blades at regular short intervals, particularly if there is any noticeable change in behavior:

- Shut off the engine, hold the unit firmly.
- Check condition and tightness – look for cracks.
- Replace damaged blades immediately – even if they have only minor hairline cracks,

Do not continue using damaged or cracked rotor blades or attempt to repair them – e.g. by welding or straightening (out-of-balance).

To reduce the risk of unintentional engine start and injury, always shut off the engine and remove the spark plug boot before checking or changing attachments

After finishing work, clean dirt, soil, plant residue, etc. off the power tool – always shut off the engine and make sure the blades have stopped before cleaning. Wear gloves to reduce the risk of injury.

Do not use a grease solvent for cleaning.

See also notes on "During Operation" in the MultiEngine instruction manual.

When the machine is not in use, put it down so that it does not endanger others.

General Precautions

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

When working, make sure that the rotor blades do not touch any foreign materials such as rocks, nails etc. Such objects may damage the tines.

Keep within calling distance of others in case help is needed.

Maintenance and Repairs

Do not attempt any maintenance or repair work not described in the BF-MM, BK-MM MultiTool and MultiEngine instruction manuals. Have all other worked performed by your STIHL servicing dealer.

Only use original STIHL replacement parts for repairs to the machine. The use of replacement parts from other manufacturers may result in damage to the machine and increase the risk of injury.

Never attempt to modify your power tool in any way as this could result in serious injury.

- Shut off the engine:
 - Before performing any maintenance or repair work.
 - Before cleaning the blades.
 - Before mounting or removing the blades.
 - Before rectifying blockages or other problems.

Working with the unit

Thoroughly clean the blades and coat them with a corrosion inhibitor.

Store the machine as described in the MultiEngine instruction manual – see chapter on "Storing the Machine".



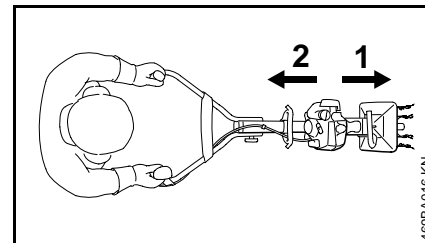
General

- Move bike handle into working position

Rotor blades

MultiTools with rotor blades are available in two versions:

Pick tines
Bolo tines



- The MultiEngine with rotor blades can be operated forwards (1) or backwards (2).

Which direction of movement and which type of rotor is the most advantageous depends on the application and service conditions. Rough guide:

On firm ground

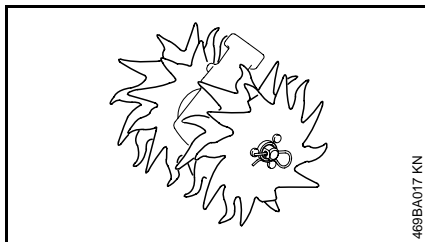
- Use the pick tines
- Work alternately forwards **and** backwards

On loose soil

- Use the bolo tines
- Work uniformly forwards **or** backwards

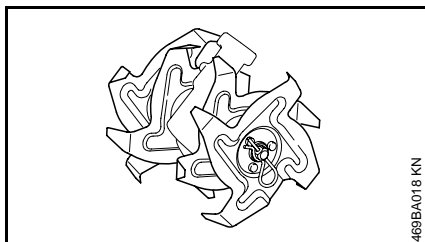
The rotor blades may only be operated in one position. Arrows on the rotors indicate the required direction of rotation, refer to "Mounting the MultiTool".

Pick tines



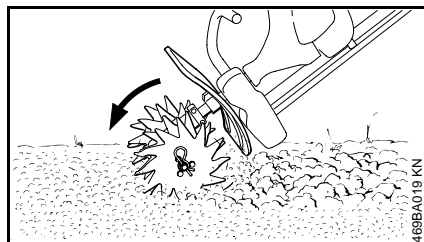
Pick tines are particularly suitable for working and loosening up hard, encrusted or compacted soil.

Bolo tines



The bolo tines are particularly suitable for working through soil which is well cultivated and not compacted.

Typical applications

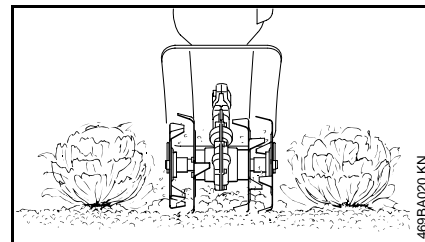


● Breaking up a hard crust

Preparatory work is required to break up hard compacted soil (e.g. last year's vegetable garden or flower beds). Weeds and other plant remnants must be removed from the surface, together with hard objects, such as stones, bottles, pieces of wood, etc.

Hold the unit firmly with both hands and always work through the soil to the required depth over a small area only. Move the unit alternately forwards and backwards.

In the final steps, guide the machine so that you do not leave any footprints. Then level the entire prepared area with a rake.



● Loosening cultivated soil

Cultivated soil should only be loosened superficially around the plants, otherwise the roots of shallow plants may be damaged.

To prevent possible damage to the machine or trees, it should be guided in such a way that the roots of trees are avoided.

● Furrowing

Slowly pull the machine, moving backwards. If necessary, repeat the procedure several times to produce deep furrows.

Approved MultiEngines

● Working in soil additives

Humus soil, compost, leaves or other organic substances and fertilizers can be worked into the soil with this unit.

Before doing so, however, all remaining roots, large plant parts and hard objects (stones, etc.) must first be removed. Spread the additives uniformly over the ground.

Alternately move the unit backwards and forwards when cultivating the soil.

Finally, level the ground with a rake.

Cleaning the rotor blades

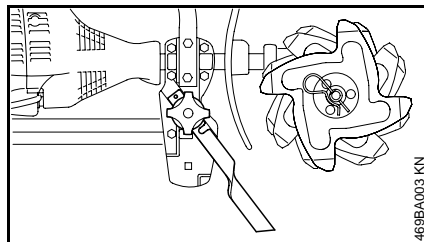
Plant residues, such as roots, may become firmly lodged between the blades or wrap themselves around the rotor while working.

To clean the rotor blades:

- Put on gloves
- Pull the spring clip out of the shaft
- Draw the rotor blades off the shaft
- Remove the roots, plants and soil scraps

Refer to "Mounting the MultiTool" for mounting instructions.

Cultivator spur ¹⁾



- Mount the cultivator spur with screw and knob on the right-hand side of the flange
- Set the cultivator spur to the required depth and screw it tight

💡 The cultivator spur allows the power tool to be guided comfortably and without fatiguing. It brakes the forward movement and reduces the effort required to hold the power tool.

On hard ground, the spur breaks up the ridge between the rotor blades.

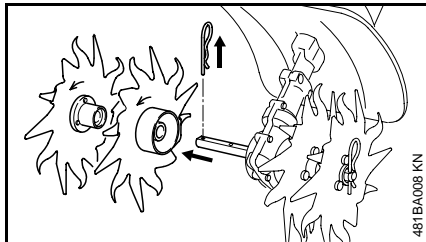
1) Special accessory

Only MultiEngines which have been supplied by STIHL or specially approved for use with this MultiTool may be used.

This MultiTool may only be used in combination with STIHL MM 55.

Mounting the MultiTool

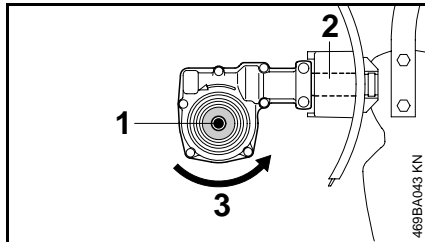
Removing Existing MultiTools



- Wear gloves to reduce the risk of injury from contact with sharp MultiTools and/or hot surface of gearbox.
- Remove the hitch pin and pull the MultiTools (if fitted) off the shaft.
- Clean the gearbox if necessary.

See also "Mounting the MultiTool" in the instruction manual of the other MultiTool

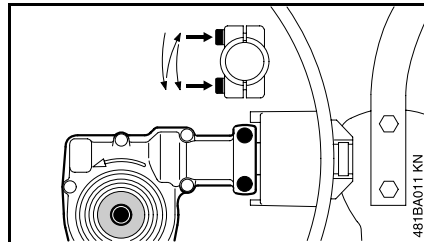
Checking Position of Gearbox



To reduce risk of injury from MultiTool rotating in the wrong direction, check that position of gearbox is correct and adjust if necessary.

The gearbox output shaft (1) must be below the drive tube (2) so that the MultiTool rotates in the direction of the arrow (3).

Adjusting Position of Gearbox

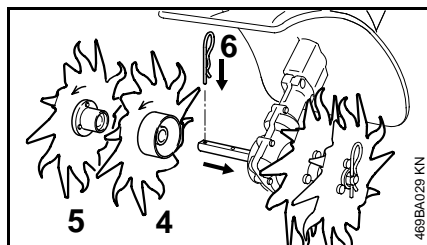


- Loosen clamp screws on gearbox.
- Turn gearbox through 180°.
- Line up the gearbox in the correct position.
- Tighten down the two clamp screws on the gearbox in the following sequence:
 - Tighten first screw moderately.
 - Tighten second screw moderately.
 - Tighten down first screw firmly.
 - Tighten down second screw firmly.

Starting / Stopping the Engine

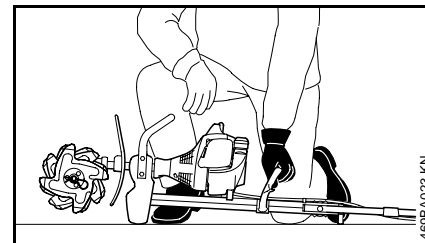
Mounting the MultiTool

- Arrange the blades in the order they will be fitted on the shaft, noting the following points:
- 💡 Left-hand and right-hand blades are different. The direction of rotation is marked with arrows on the gearbox and blades. Make sure the arrows point in the same direction.



- Rotate the inner right-hand blade (4) on the shaft until it can be pushed into position – check the direction of rotation again (arrows).
- 💡 The hub of the inner blade is larger than that of the outer blade.
- Rotate the outer right-hand blade (5) on the shaft until it can be pushed into position – check the direction of rotation again (arrows).


- Insert and engage hitch pin (6) in the hole in the shaft – fold the hitch pin flat against the blade.
- Use the same procedure to mount the blades on the left-hand side.



Starting



- Secure the handlebar in the normal operating position.
- Retract the wheels, if fitted
- Retract the spur, if fitted
- Place the unit on a patch of clear ground. It must rest securely on the engine flange and the support on the frame. Check that the blades are not touching the ground or any other obstacles.
- Make sure you have good balance and secure footing – as shown in the illustration. To reduce the risk of injury from contact with the rotating blades, always stand to the side of the power tool, never in front of or near the blades.
- With your left hand on the loop handle, press the unit firmly against the ground.

Minimize Wear and Avoid Damage

 Do not stand or kneel on the handlebar or frame.

The starting procedure is now as described in the MultiEngine instruction manual.

To shut down the engine

- Push the slide control in direction of the arrow () to **STOP** – .

Observing the instructions in this manual and the MultiEngine manual helps reduce the risk of unnecessary wear and damage to the power tool.

The power tool must be operated, maintained and stored with the due care and attention described in these instruction manuals.

The user is responsible for all damage caused by non-observance of the safety precautions, operating and maintenance instructions. This includes in particular:

- Alterations or modifications to the product not approved by STIHL.
- Using attachments or tools not approved by STIHL.
- Using the product for purposes for which it was not designed.
- Using the product for sports or competitive events.
- Consequential damage caused by continuing to use the product with defective components.

Maintenance Work

All maintenance operations must be performed on a regular basis.

If these maintenance operations cannot be performed by the owner, they should be performed by an authorized STIHL servicing dealer.

If these operations are not carried out as specified, the user assumes responsibility for any damage that may occur. Among other things, this includes:

- Corrosion and other consequential damage resulting from improper storage.
- Damage and consequential damage resulting from the use of parts other than original STIHL replacement parts.
- Damage resulting from maintenance or repair work not performed by authorized STIHL servicing dealers.

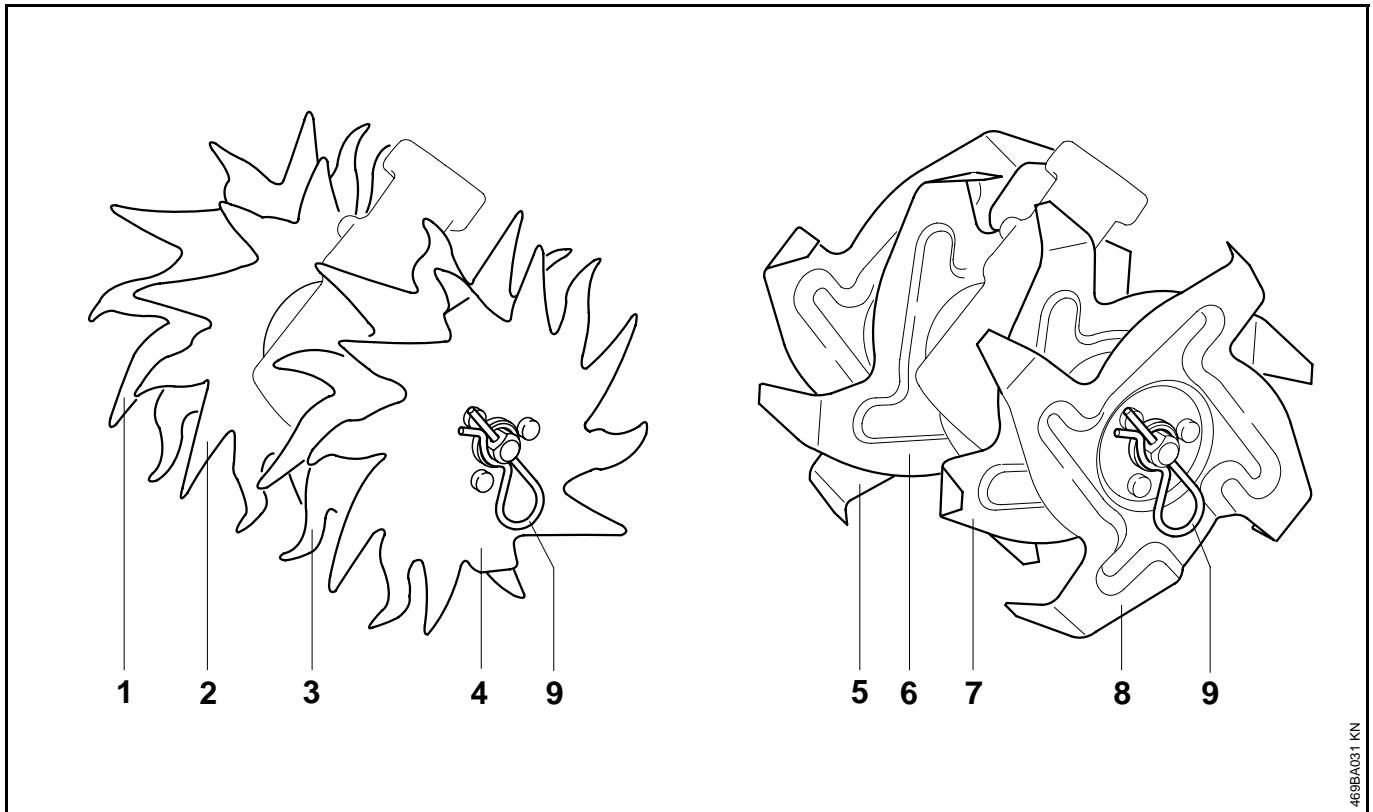
Parts Subject to Wear and Tear

Some parts of the power tool are subject to normal wear and tear even during regular operation in accordance with instructions and, depending on the type and duration of use, have to be replaced in good time.

Among other parts, this includes:

- Rotor blades
- Rotor blade mounting hardware
- Deflector

Main Parts



Pick tines

- 1 Outer right-hand blade
- 2 Inner right-hand blade
- 3 Inner left-hand blade
- 4 Outer left-hand blade
- 9 Hitch pin

Bolo tines

- 5 Outer right-hand blade
- 6 Inner right-hand blade
- 7 Inner left-hand blade
- 8 Outer left-hand blade
- 9 Hitch pin

Specifications

Working tool

Four rotor blades

Diameter: 230 mm

Working width: 220 mm

Weight

Four rotor blades with hub

Pick tines 2.0 kg

Bolo tines 2.0 kg

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 all maintenance and repair work be carried out by an authorized STIHL dealer. STIHL dealers regularly 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 equivalent. Only use high-quality replacement parts in order to avoid the risk of accidents or damage to the machine.

STIHL recommends the use of genuine 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.

Certificate of Conformity

Andreas Stihl AG & Co. KG
Badstr. 115
71336 Waiblingen

certify that the new machine described below

Category:	MultiTool
Make:	STIHL
Model:	BF-MM, BK-MM
Series identification:	4106

conforms to the specifications of Directive 98/37/EC.

The product has been developed and manufactured in compliance with the following standards:
EN ISO 12100, EN 709 (in conjunction with the specified MultiEngine: MM 55)

Done at Waiblingen,
January 3, 2005

Andreas Stihl AG & Co. KG



Steinhauser
Director
Group Product Management /
Engineering Services

Quality Certification



All STIHL products comply with the highest quality standards.

An independent organization has certified that all products manufactured by STIHL meet the strict requirements of the ISO 9001 standard for quality management systems in terms of product development, materials purchasing, production, assembly, documentation and customer service.

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englisch / English