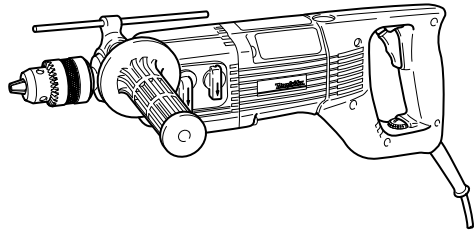


INSTRUCTION MANUAL




Diamond Core Hammer Drill

8406C



007601

 DOUBLE INSULATION

IMPORTANT: Read Before Using.

ENGLISH (Original instructions)

SPECIFICATIONS

Model		8406C	
Capacities	Concrete	Diamond core bit	152 mm
		Tungsten-carbide tipped bit	20 mm
	Steel	13 mm	
	Wood	30 mm	
No load speed (min ⁻¹)	High	1,800 - 4,000	
	Low	900 - 2,000	
Blows per minute	High	28,800 - 64,000	
	Low	14,400 - 32,000	
Overall length		455 mm	
Net weight		4.4 kg	
Safety class		II	

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Specifications may differ from country to country.
- Weight according to EPTA-Procedure 01/2003.

END201-5

ENG905-1

Symbols

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.



- Read instruction manual.



- DOUBLE INSULATION



- Only for EU countries
Do not dispose of electric equipment together with household waste material! In observance of European Directive 2002/96/EC on waste electric and electronic equipment and its implementation in accordance with national law, electric equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

ENE040-1

Intended use

The tool is intended for drilling in brick and concrete with diamond core bit. It is also suitable for impact drilling in brick, concrete and stone as well as for drilling without impact in wood, metal, ceramic and plastic.

ENF002-1

Power supply

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated in accordance with European Standard and can, therefore, also be used from sockets without earth wire.

Noise

The typical A-weighted noise level determined according to EN60745:

Sound pressure level (L_{pA}) : 101 dB(A)
Sound power level (L_{WA}) : 112 dB(A)
Uncertainty (K) : 3 dB(A)

Wear ear protection

ENG900-1

Vibration

The vibration total value (tri-axial vector sum) determined according to EN60745:

Work mode: impact drilling into concrete
Vibration emission ($a_{h, ID}$) : 11.0 m/s²
Uncertainty (K) : 1.5 m/s²

Work mode : drilling into concrete
Vibration emission ($a_{h, DD}$) : 6.5 m/s²
Uncertainty (K) : 1.5 m/s²

Work mode: drilling into metal
Vibration emission ($a_{h, D}$) : 3.5 m/s²
Uncertainty (K) : 1.5 m/s²

ENG901-1

- The declared vibration emission value has been measured in accordance with the standard test method and may be used for comparing one tool with another.
- The declared vibration emission value may also be used in a preliminary assessment of exposure.

⚠ WARNING:

- The vibration emission during actual use of the power tool can differ from the declared emission value depending on the ways in which the tool is used.
- Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

ENH101-14

For European countries only

EC Declaration of Conformity

We Makita Corporation as the responsible manufacturer declare that the following Makita machine(s):

Designation of Machine:
Diamond Core Hammer Drill
Model No./ Type: 8406C
are of series production and

Conforms to the following European Directives:
2006/42/EC

And are manufactured in accordance with the following standards or standardised documents:

EN60745

The technical documentation is kept by our authorised representative in Europe who is:

Makita International Europe Ltd.
Michigan Drive, Tongwell,
Milton Keynes, MK15 8JD, England

30.1.2009



000230

Tomoyasu Kato
Director
Makita Corporation
3-11-8, Sumiyoshi-cho,
Anjo, Aichi, JAPAN

GEA005-3

General Power Tool Safety Warnings

⚠ WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

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

Work area safety

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

4. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
5. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
8. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
9. **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.
10. **Use of power supply via a RCD with a rated residual current of 30mA or less is always recommended.**

Personal safety

11. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

12. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
13. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
14. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
15. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
16. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
17. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

18. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
19. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
20. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
21. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
22. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
23. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
24. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Service

25. **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.
26. **Follow instruction for lubricating and changing accessories.**
27. **Keep handles dry, clean and free from oil and grease.**

GEB003-5

HAMMER DRILL SAFETY WARNINGS

1. **Wear ear protectors when impact drilling.** Exposure to noise can cause hearing loss.
2. **Use auxiliary handle(s), if supplied with the tool.** Loss of control can cause personal injury.
3. **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
4. **Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.**
5. **Hold the tool firmly with both hands.**
6. **Keep hands away from rotating parts.**
7. **Do not leave the tool running. Operate the tool only when hand-held.**
8. **Do not touch the bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.**
9. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**

SAVE THESE INSTRUCTIONS.

WARNING:

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or

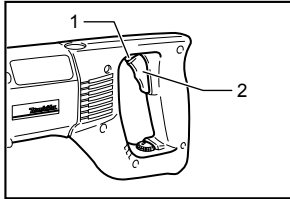
failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

FUNCTIONAL DESCRIPTION

⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

Switch action



007625

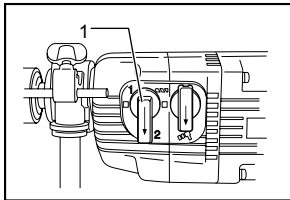
1. Lock button
2. Switch trigger

⚠CAUTION:

- Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

To start the tool, simply pull the switch trigger. Release the switch trigger to stop. For continuous operation, pull the switch trigger and then push in the lock button. To stop the tool from the locked position, pull the switch trigger fully, then release it.

Speed change



007606

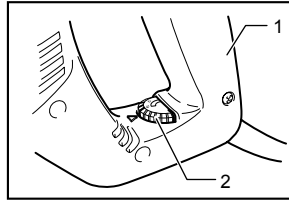
1. Speed change lever

To change the speed, turn the speed change lever to the "2" position for high speed or "1" position for low speed. Be sure that the speed change lever is set to the correct position before operation. Use the right speed for your job.

⚠CAUTION:

- Always set the speed change lever fully to the correct position. If you operate the tool with the speed change lever positioned halfway between the "1" position and "2" position, the tool may be damaged.

Speed adjusting dial

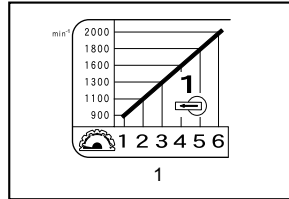


007607

1. Handle
2. Speed adjusting dial

The tool speed can be infinitely adjusted from 900 and 4,000 min^{-1} with the speed adjusting dial and speed change lever. Faster speeds are obtained by setting the dial to a higher number. Number of blows per minute varies according to the tool speed. The following charts indicate resultant tool speeds in various lever and dial positions.

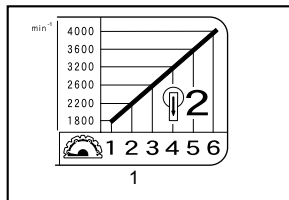
When the speed change lever is set to the "1" position.



007614

1. Numbers on dial



When the speed change lever is set to the "2" position.



007608



1. Numbers on dial

Refer to the table for selecting the tool speed most suitable for your workpiece and bit.

Speed change lever			1 						2 						
Speed adjusting dial			1	2	3	4	5	6	1	2	3	4	5	6	
Workpiece	Type of bit	Bit diameter													
Concrete or brick	Diamond core bit	32 mm													
		65 mm													
		120 mm													
	Tungsten-carbide tipped bit	8 mm													
		14 mm													
20 mm															
Steel	Drill bit for steel	6.5 mm													
		13 mm													
Aluminium	Drill bit for steel	6.5 mm													
		13 mm													
Wood	Drill bit for wood	18 mm													
		30 mm													

007626

when using a Nimbus diamond core bit, refer to the following table.

Speed change lever			1 						2 						
Speed adjusting dial			1	2	3	4	5	6	1	2	3	4	5	6	
Workpiece	Type of bit	Bit diameter													
Brick	Nimbus diamond core bit	20 mm													
		30 mm													
		65 mm													
		90 mm													
		152 mm													

007627

NOTE:

When drilling into concrete or bricks, also refer to the table below.

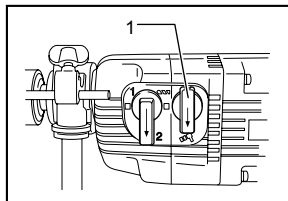
Mateial	Hard ———> Soft
min ⁻¹	Low ———> High

007628

CAUTION:

- If the tool is operated continuously at low speeds for a long time, the motor will get overloaded and heated up.
- The speed adjusting dial can be turned only as far as 6 and back to 1. Do not force it past 6 or 1, or the speed adjusting function may no longer work.


Selecting the action mode




1. Action mode change lever

007615

This tool has an action mode changing lever.

For rotation with hammering, turn the lever to the position of  symbol.

For rotation only, turn the lever to the position of  symbol.

CAUTION:

- Always set the lever correctly to your desired mode mark. If you operate the tool with the lever positioned halfway between the mode marks, the tool may be damaged.

Torque limiter

CAUTION:

- Do not continue to operate the tool for more than two seconds while the torque limiter is actuating.
- Do not let the torque limiter actuate too frequently.

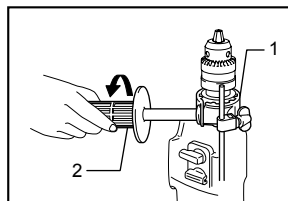
This tool is equipped with torque limiters. They will actuate when a certain torque level is reached. When this happens, the chuck will stop turning.

ASSEMBLY

CAUTION:

- Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

Installing side grip (auxiliary handle)



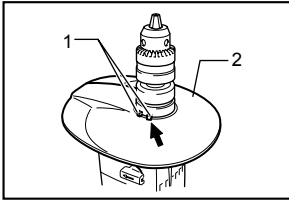
1. Grip base
2. Side grip

007602

Always use the side grip to ensure operating safety. Install the side grip so that the teeth on the grip fit in between the protrusions on the tool barrel.

Then tighten the grip by turning clockwise at the desired position. It may be swung 360° so as to be secured at any position.

Installing cover (Accessory)



1. Teeth
2. Cover

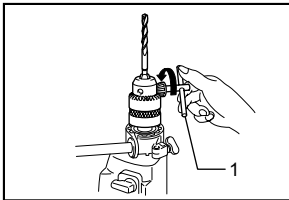
007603

⚠CAUTION:

- When using a wet type of diamond core bit, always install a cover (optional accessory) on the tool to thoroughly protect the tool from water.

First, unplug the tool. Remove the grip base from the tool. Install the cover on the tool so that the teeth on the cover fit into the grooves on the tool. Then, install the grip base on the tool and secure by tightening the side grip firmly.

Installing or removing diamond core bit or drill bit



1. Chuck key

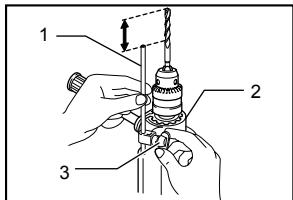
007604

To install the bit, place it in the chuck as far as it will go. Tighten the chuck by hand. Place the chuck key in each of the three holes and tighten clockwise. Be sure to tighten all three chuck holes evenly.

To remove the bit, turn the chuck key counterclockwise in just one hole, then loosen the chuck by hand.

After using the chuck key, be sure to return to the original position.

Depth gauge



1. Depth gauge
2. Grip base
3. Clamp screw

007605


The depth gauge is convenient for drilling holes of uniform depth. Insert the depth gauge into the hole in the grip base and adjust the depth gauge to the desired

depth. Then tighten the clamp screw to secure the depth gauge.

OPERATION

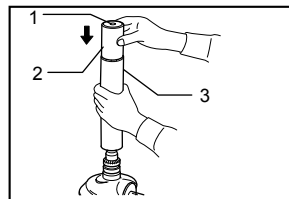
Diamond core drilling operation

⚠CAUTION:

- When performing diamond core drilling operations, always set the change lever to the  position to use "rotation only" action. If performing diamond core drilling operations using "rotation with hammering" action, the diamond core bit may be damaged.
- The drilling efficiency and service life of the diamond core bit varies greatly depending on the kind or condition of the material to be drilled. In general, hard material may dull the bit soon and soft materials such as "green" concrete or concrete blocks may shorten the service life of the bit.
- If the drilling action of the diamond core bit begins to diminish, dress the bit using an old discarded coarse-grit bench grinder wheel or concrete block. Tightly secure the bench grinder wheel or concrete block and drill in it. Continued use of dull bits may cause the diamond chips to break or fall off.
- When using a wet type of diamond core bit, always install a cover (optional accessory) on the tool to thoroughly protect the tool from water. Refer to the previously covered "Installing cover".
- After using a wet type of diamond core bit, wash it in water and store with the sponge and guide ring in a dry location.

1. Drilling with wet type of diamond core bit

First, unplug the tool. Soak the sponge in water. Place the tool with the bit end pointing upwards. Carefully fill the bit about half full of water. Insert the sponge into the bit gently with the side with the rivet facing upwards as far as it will go.



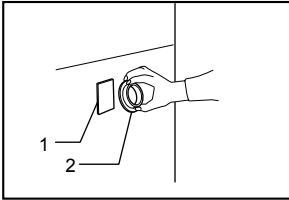
1. Rivet
2. Sponge
3. Diamond core bit

007618

⚠CAUTION:

- When filling the bit with water, be especially careful not to let the tool get wet.

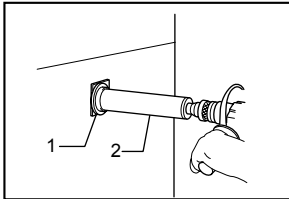
Remove water and dirt from the guide ring and from the drilling location. Attach the adhesive sheet to the drilling location and place the guide ring on it.



1. Adhesive sheet
2. Guide ring

007617

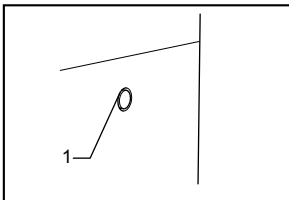
Place the bit in the guide ring and turn the tool on.



1. Guide ring
2. Diamond core bit

007620

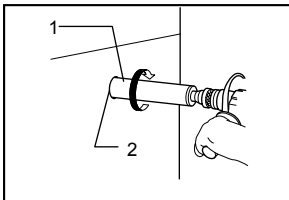
After drilling a pilot groove, turn the tool off and then remove the guide ring and adhesive sheet.



1. Pilot groove

007619

Place the bit into the pilot groove and turn the tool on. Pivot the tool gently in the hole to be drilled while tilting it at an angle of 2° - 3°. Gradually decrease the angle of tilt as the hole becomes deeper. Immediately before hole breakthrough, the tool should be held straight in relation to the hole. After completing the hole, turn the tool off. Wait until the bit has come to a complete stop before withdrawing the tool.



1. Diamond core bit
2. Pilot groove

007616

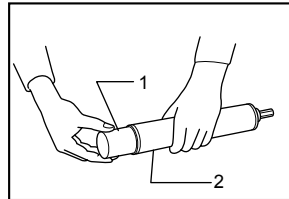
CAUTION:

- Make sure that water is running constantly from the hole during operation. If the water flow becomes inadequate, withdraw the tool slightly and press it

again. Water should run freely. But if the problem persists, unplug the tool and replenish the bit with water immediately.

- When resuming operation, do not turn the tool on until the bit end reaches the deepest portion of the hole.

Remove core material from the bit through the front opening.

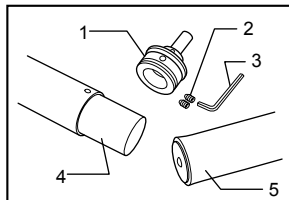


1. Core material
2. Diamond core bit

007621

CAUTION:

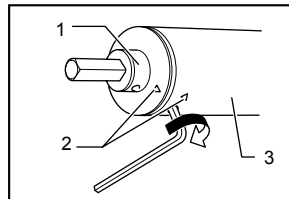
- When removing the core material from the bit, do not gouge it out or hit the bit with a screwdriver, etc. If you have difficulty removing the core material through the front opening, use the hex wrench to loosen the screws and remove the holder. Then remove the sponge and core material through the rear opening.



1. Holder
2. Screw
3. Hex wrench
4. Core material
5. Sponge

007623

To install the holder, align the marking on the holder with that on the bit and tighten the screws securely with the hex wrench.



1. Holder
2. Marking
3. Diamond core bit

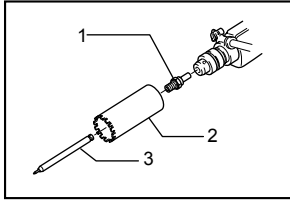
007622

CAUTION:

- Be careful not to damage the diamond core bit or the O ring on the holder.

2. Drilling with dry type of diamond core bit

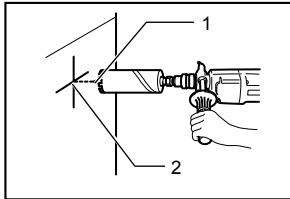
First, unplug the tool. Assemble the bit shank, core bit and center bit. Install the bit assembly in the drill chuck.



1. Bit shank
2. Core bit
3. Center bit

007609

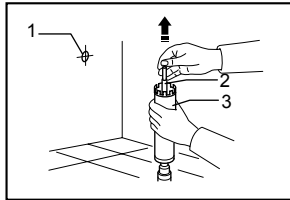
Align the center bit with the center of the hole to be drilled. Turn the tool on and drill in the concrete until the diamond portion of the core bit has drilled to a depth of 3 - 5 mm. This forms a pilot groove for you to follow when you continue drilling.



1. Center bit
2. Center of hole

007610

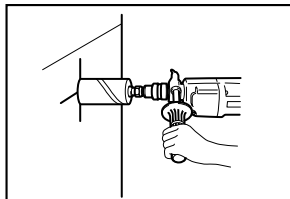
Remove the center bit from the core bit and place the core bit back into the pilot groove. Drill the hole while holding the tool squarely against the concrete. Do not apply excessive pressure to the tool when drilling.



1. Pilot groove
2. Center bit
3. Core bit

007624

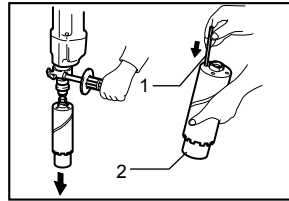
Reduce your pressure on the tool if the core bit contacts reinforcing bars or foreign matter in the concrete and when the core bit begins to break through the concrete.



007611

To remove the core material from the core bit, point the core bit downwards. If the core material does not fall out of the core bit smoothly, insert a small rod into a hole in

the rear side of the core bit to push the core material out.



1. Small rod
2. Core material

007612

⚠CAUTION:


- When drilling in "green" concrete or when drilling downwards, dust may not be extracted through the hole smoothly. In this case, use a dust collector to collect the dust easily.

Hammer drilling operation (with a tungsten-carbide tipped bit)

When drilling in concrete, granite, tile, etc. with a tungsten-carbide tipped bit, first use "rotation only" action to start a hole, then use "rotation with hammering" action to continue drilling.

Do not apply more pressure when the hole becomes clogged with chips or particles. Instead, run the tool at an idle, then remove from the hole. By repeating this several times, the hole will be cleaned out.

Drilling operation (with a conventional drill bit)

When drilling in wood, metal or plastic materials, move the action mode changing lever to the position of  symbol to use "rotation only" action.

Drilling in wood

When drilling in wood, the best results are obtained with wood drills equipped with a guide screw. The guide screw makes drilling easier by pulling the bit into the workpiece.

Drilling in metal

To prevent the bit from slipping when starting a hole, make an indentation with a center-punch and hammer at the point to be drilled. Place the point of the bit in the indentation and start drilling.

Use a cutting lubricant when drilling metals. The exceptions are iron and brass which should be drilled dry.

⚠CAUTION:

- Pressing excessively on the tool will not speed up the drilling. In fact, this excessive pressure will only serve to damage the tip of your bit, decrease the tool performance and shorten the service life of the tool.
- There is a tremendous force exerted on the tool/bit at the time of hole break through. Hold the tool firmly and exert care when the bit begins to break

through the workpiece.

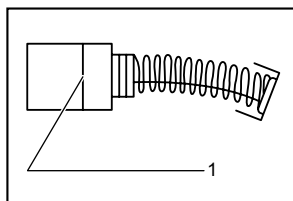
- Always secure small workpieces in a vise or similar hold-down device.

MAINTENANCE

⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.
- Never use gasoline, benzene, thinner, alcohol or the like. Discoloration, deformation or cracks may result.

Replacing carbon brushes

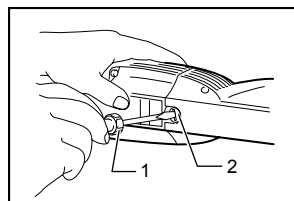


1. Limit mark

001145

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.



1. Screwdriver
2. Brush holder cap

007613

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.

ACCESSORIES

⚠CAUTION:

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of

injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Tungsten-carbide tipped hammer bit
- Diamond core bit (Dry type)
- Center bit
- Center bit shank
- Diamond core bit (wet type)
- Guide ring
- Sheet
- Sponge
- Water protection collar
- Blow-out bulb
- Safety goggles
- Chuck key
- Side grip

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