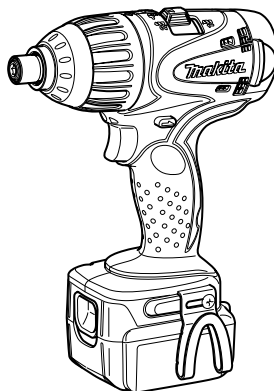




Cordless 4 Mode Impact Driver

MODEL BTP130
MODEL BTP140



007155

I N S T R U C T I O N M A N U A L

⚠ WARNING:

For your personal safety, READ and UNDERSTAND before using.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

SPECIFICATIONS

Model		BTP130	BTP140	
Impact driver mode	Max. fastening torque		135 N•m	145 N•m
	Capacities	Machine screw	4 mm - 8 mm	
		Standard bolt	5 mm - 14 mm	
		High tensile bolt	5 mm - 12 mm	
	No load speed (min ⁻¹)		0 - 2,400	0 - 2,300
Impacts per minute		0 - 3,200		
Hammer drill mode	No load speed (min ⁻¹)		0 - 2,400	0 - 2,300
	Blows per minute		0 - 28,800	0 - 27,600
	Capacities	Concrete	8 mm	
Drill mode	No load speed (min ⁻¹)	High (2)	0 - 2,400	0 - 2,300
		Low (1)	0 - 700	
	Capacities	Steel	10 mm	
		Wood	21 mm	
Screw driver mode	No load speed (min ⁻¹)		0 - 2,400	0 - 2,300
	Capacities	Machine screw	M4	
Overall length		186 mm		
Net weight		1.7 kg	1.8 kg	
Rated voltage		D.C.14.4 V	D.C.18 V	

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Note: Specifications may differ from country to country.

END001-1

Symbols

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



.....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.

Intended use

The tool is intended for impact screw driving in wood and for impact drilling in brick, concrete and stone as well as for drilling and screw driving without impact in wood, metal, ceramic and plastic, .

For Model BTP130

For European countries only

Noise and Vibration

The typical A-weighted noise levels are
 sound pressure level: 89 dB (A)
 sound power level: 100 dB (A)

Uncertainty: 3 dB

– Wear ear protection. –

The typical weighted root mean square acceleration value is 9 m/s².

These values have been obtained according to EN60745.

For Model BTP140

For European countries only

Noise and Vibration

The typical A-weighted noise levels are
 sound pressure level: 89 dB (A)
 sound power level: 100 dB (A)

Uncertainty: 3 dB

– Wear ear protection. –

The typical weighted root mean square acceleration value is 8 m/s².

These values have been obtained according to EN60745.

EC-DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product is in compliance with the following standards of standardized documents;

EN60745, EN55014 in accordance with Council Directives, 89/336/EEC, 98/37/EC.

Yasuhiko Kanzaki **CE2005**



Director

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Responsible manufacturer:

Makita Corporation Anjo Aichi Japan

GENERAL SAFETY RULES

GEA002-3

WARNING:

Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term “power tool” in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS.

Work area safety

1. **Keep work area clean and well lit.** Cluttered and 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.

Personal safety

9. **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.
10. **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
11. **Avoid accidental starting. Ensure the switch is in the off-position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.

12. **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.
13. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
14. **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.
15. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust-related hazards.

Power tool use and care

16. **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.
17. **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.
18. **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.
19. **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.
20. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
21. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
22. **Use the power tool, accessories and tool bits etc. in accordance with these instructions and in the manner intended for the particular type of power tool, 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.

Battery tool use and care

23. **Ensure the switch is in the off position before inserting battery pack.** Inserting the battery pack into power tools that have the switch on invites accidents.

24. **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.
25. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
26. **When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
27. **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.

Service

28. **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.
29. **Follow instruction for lubricating and changing accessories.**
30. **Keep handles dry, clean and free from oil and grease.**

GEB026-1

SPECIFIC SAFETY RULES

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to 4 mode impact driver safety rules. If you use this power tool unsafely or incorrectly, you can suffer serious personal injury.

1. **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
2. **Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.**
3. **Hold the tool firmly.**
4. **Keep hands away from rotating parts.**
5. **Do not leave the tool running. Operate the tool only when hand-held.**
6. **Do not touch the bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.**
7. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**

-
8. Wear ear protectors with impact drills. Exposure to noise can cause hearing loss.

SAVE THESE INSTRUCTIONS.

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

ENC007-2

IMPORTANT SAFETY INSTRUCTIONS

FOR BATTERY CARTRIDGE

1. Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
2. Do not disassemble battery cartridge.
3. If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.
4. If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.
5. Do not short the battery cartridge:
 - (1) Do not touch the terminals with any conductive material.
 - (2) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
 - (3) Do not expose battery cartridge to water or rain.
A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
6. Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50°C (122°F).
7. Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.
8. Be careful not to drop or strike battery.

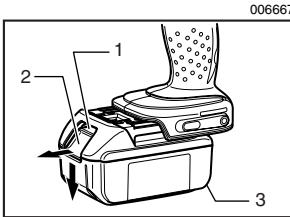
SAVE THESE INSTRUCTIONS.

Tips for maintaining maximum battery life

1. Charge the battery cartridge before completely discharged.
Always stop tool operation and charge the battery cartridge when you notice less tool power.

2. Never recharge a fully charged battery cartridge.
Overcharging shortens the battery service life.
3. Charge the battery cartridge with room temperature at 10°C - 40°C (50°F - 104°F). Let a hot battery cartridge cool down before charging it.

FUNCTIONAL DESCRIPTION



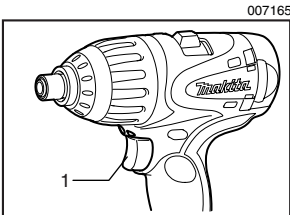
1. Red part
2. Button
3. Battery cartridge

⚠ CAUTION:

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

Installing or removing battery cartridge

- Always switch off the tool before insertion or removal of the battery cartridge.
- To remove the battery cartridge, withdraw it from the tool while sliding the button on the front of the cartridge.
- To insert the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Always insert it all the way until it locks in place with a little click. If you can see the red part on the upper side of the button, it is not locked completely. Insert it fully until the red part cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.
- Do not use force when inserting the battery cartridge. If the cartridge does not slide in easily, it is not being inserted correctly.



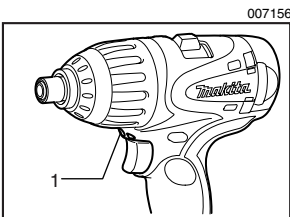
1. Switch trigger

Switch action

⚠ CAUTION:

- Before inserting the battery cartridge into 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. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.



1. Lamp

Lighting up the front lamp

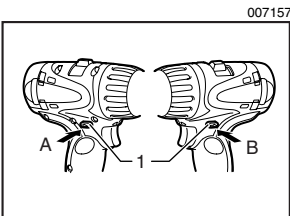
⚠ CAUTION:

- Do not look in the light or see the source of light directly.

Pull the switch trigger to light up the lamp. The lamp keeps on lighting while the switch trigger is being pulled. The light automatically goes out 10 - 15 seconds after the switch trigger is released.

NOTE:

- Use a dry cloth to wipe the dirt off the lens of lamp. Be careful not to scratch the lens of lamp, or it may lower the illumination.



1. Reversing switch lever

Reversing switch action

This tool has a reversing switch to change the direction of rotation. Depress the reversing switch lever from the A side for clockwise rotation or from the B side for counterclockwise rotation.

When the reversing switch lever is in the neutral position, the switch trigger cannot be pulled.

⚠ CAUTION:

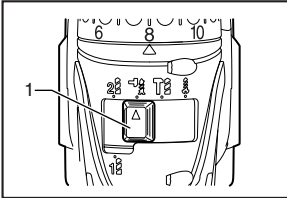
- Always check the direction of rotation before operation.
- Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.
- When not operating the tool, always set the reversing switch lever to the neutral position.

Selecting the action mode

This tool employs an action mode changing lever. Select one of the four modes suitable for your work needs by using this lever.

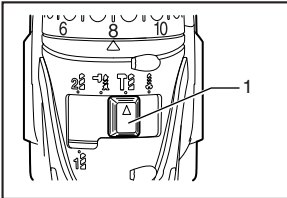
For rotation with impact, turn the lever so that the arrow on the lever points toward the **1** mark on the tool body.

007158



1. Action mode changing lever

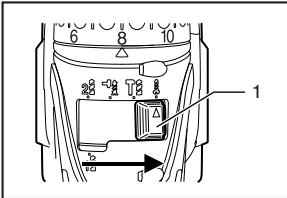
007159



1. Action mode changing lever

For rotation with hammering, turn the lever so that the arrow points toward the **T** mark on the tool body.

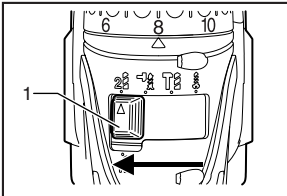
007160



1. Action mode changing lever

For rotation with clutch, turn the lever so that the arrow points toward the **I** mark on the tool body.

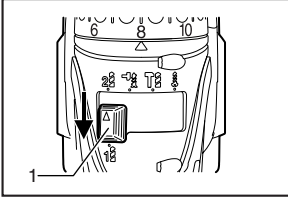
007161



1. Action mode changing lever

For rotation only, turn the lever so that the arrow on the lever points toward the **1** mark or the **2** mark on the tool body.

007162



1. Action mode changing lever

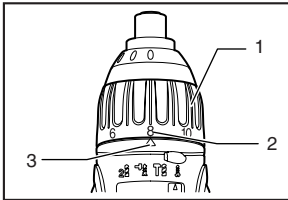
Sliding to the **2** mark is high rotation and the **1** mark is low rotation.

Before operation, always make sure that the lever is correctly set to your desired mode mark and use the tool at an appropriate speed for your work.

⚠ CAUTION:

- When using the action mode change lever, use only when the tool stops. But when the lever does not easily move, pull the switch trigger slightly to rotate the spindle and then move the lever.
- 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.

007163



1. Adjusting ring
2. Graduation
3. Pointer

Adjusting the fastening torque

(Only for screwdriving operation mode “1”)

The fastening torque can be adjusted in 16 steps by turning the adjusting ring so that its graduations are aligned with the pointer on the tool body. The fastening torque is minimum when the number 1 is aligned with the pointer, and maximum when the number 16 is aligned with the pointer.

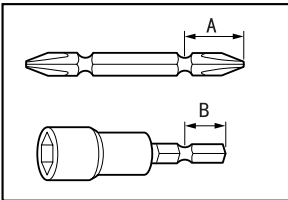
The clutch will slip at various torque levels when set at the number 1 to 16. Before actual operation, drive a trial screw into your material or a piece of duplicate material to determine which torque level is required for a particular application.

NOTE:

- In modes other than screwdriving mode, the adjusting ring can be placed at any position because it does not work.

ASSEMBLY

004521



Installing or removing driver bit or socket bit

Use only the driver bit or socket bit shown in the figure. Do not use any other driver bit or socket bit.

For European and North & South American countries, Australia and New Zealand

006348

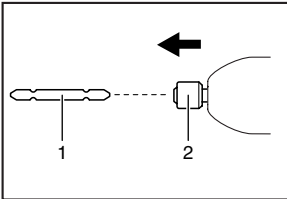
A=12mm	Use only these type of bit. Follow the procedure (1). (Note) Bit-piece is not necessary.
B=9mm	

For other countries

006349

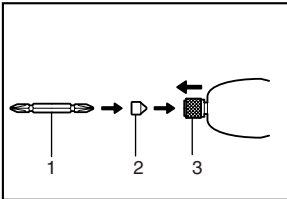
A=17mm B=14mm	To install these types of bits, follow the procedure (1). (Note) Makita bits are these types.
A=12mm B=9mm	To install these types of bits, follow the procedure (2). (Note) Bit-piece is necessary for installing the bit.

001267



1. Bit
2. Sleeve

004347



1. Bit
2. Bit-piece
3. Sleeve

1. To install the bit, pull the sleeve in the direction of the arrow and insert the bit into the sleeve as far as it will go. Then release the sleeve to secure the bit.

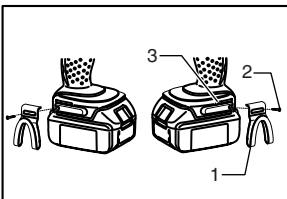
2. To install the bit, pull the sleeve in the direction of the arrow and insert the bit-piece and bit into the sleeve as far as it will go. The bit-piece should be inserted into the sleeve with its pointed end facing in. Then release the sleeve to secure the bit.

To remove the bit, pull the sleeve in the direction of the arrow and pull the bit out firmly.

NOTE:

- If the bit is not inserted deep enough into the sleeve, the sleeve will not return to its original position and the bit will not be secured. In this case, try re-inserting the bit according to the instructions above.

006251



1. Hook
2. Screw
3. Groove

Hook (Accessory)

⚠ CAUTION:

- When installing the hook, tighten the screw firmly. Failure to do so may cause the breakage of the tool or personal injury.

The hook is convenient for temporarily hanging the tool. This can be installed on either side of the tool.


To install the hook, insert it into a groove in the tool housing on either side and then secure it with a screw. To remove, loosen the screw and then take it out.

OPERATION

CAUTION:

- Always insert the battery cartridge all the way until it locks in place. If you can see the red part on the upper side of the button, it is not locked completely. Insert it fully until the red part cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.

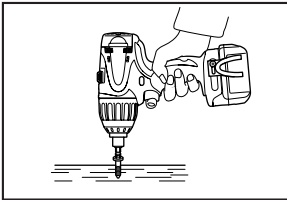
Impact driver operation

When driving wood screws or bolts, set the action mode changing lever to the  mark. The adjusting ring can be placed at any position.

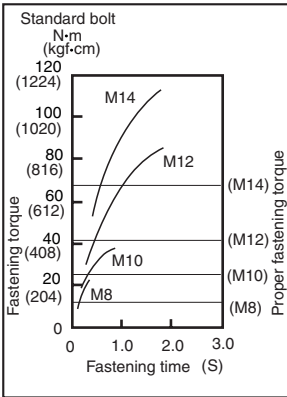
Screwdriving

Hold the tool firmly and place the point of the driver bit in the screw head. Apply forward pressure to the tool to the extent that the bit will not slip off the screw and turn the tool on to start operation.

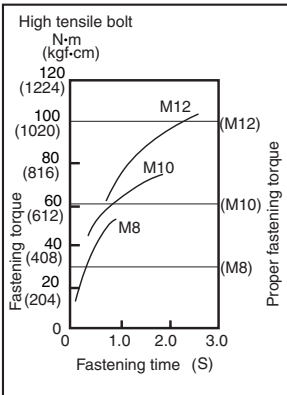
007411



007318



007320



Tightening bolts

The proper fastening torque may differ depending upon the kind or size of the screw/bolt, the material of the workpiece to be fastened, etc. The relation between fastening torque and fastening time is shown in the figures.

NOTE:

- Use the proper bit for the head of the screw/bolt that you wish to use.
- When fastening screw M8 or smaller, carefully adjust pressure on the switch trigger so that the screw is not damaged.
- Hold the tool pointed straight at the screw.
- If you tighten the screw for a time longer than shown in the figures, the screw or the point of the driver bit may be overstressed, stripped, damaged, etc. Before starting your job, always perform a test operation to determine the proper fastening time for your screw.



CAUTION:

- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

The fastening torque is affected by a wide variety of factors including the following. After fastening, always check the torque with a torque wrench.

1. When the battery cartridge is discharged almost completely, voltage will drop and the fastening torque will be reduced.
2. Driver bit or socket bit
Failure to use the correct size driver bit or socket bit will cause a reduction in the fastening torque.
3. Bolt
 - Even though the torque coefficient and the class of bolt are the same, the proper fastening torque will differ according to the diameter of bolt.
 - Even though the diameters of bolts are the same, the proper fastening torque will differ according to the torque coefficient, the class of bolt and the bolt length.
4. The manner of holding the tool or the material of driving position to be fastened will affect the torque.
5. Operating the tool at low speed will cause a reduction in the fastening torque.

Hammer drilling operation



CAUTION:

- There is a tremendous and sudden twisting force exerted on the tool/bit at the time of hole break-through, when the hole becomes clogged with chips and particles, or when striking reinforcing rods embedded in the concrete.

To drill in the concrete or tiles, first, turn the action mode changing lever so that the arrow on the lever points to the **T** mark on the tool body. The adjusting ring can be aligned in any torque levels for this operation.

Be sure to use a tungsten-carbide tipped bit.

Position the bit at the desired location for the hole, then pull the switch trigger. Do not force the tool. Light pressure gives best results. Keep the tool in position and prevent it from slipping away from the hole.

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

⚠ CAUTION:

- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

Screwdriving operation

⚠ CAUTION:

- Adjust the adjusting ring to the proper torque level for your work.

When driving small wood screws or machine screws, set the action mode changing lever to the **1** mark. Adjust the adjusting ring to the proper torque level for your work.

Place the point of the driver bit in the screw head and apply pressure to the tool. Start the tool slowly and then increase the speed gradually. Release the switch trigger as soon as the clutch cuts in.

⚠ CAUTION:

- Make sure that the driver bit is inserted straight in the screw head, or the screw and/or bit may be damaged.
- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

NOTE:

- When driving wood screws, predrill pilot holes to make driving easier and to prevent splitting of the workpiece. See the chart.

006421

Nominal diameter of wood screw (mm)	Recommended size of pilot hole (mm)
3.1	2.0 - 2.2
3.5	2.2 - 2.5
3.8	2.5 - 2.8
4.5	2.9 - 3.2
4.8	3.1 - 3.4
5.1	3.3 - 3.6
5.5	3.7 - 3.9
5.8	4.0 - 4.2
6.1	4.2 - 4.4

Drilling operation

First, set the action mode changing lever so that the pointer points to the **1** mark or the **2** mark. The **1** mark is for low speed rotation and the **2** mark is for high. The adjusting ring can be aligned in any torque levels for this operation. Then proceed as follows.

Before operation, always make sure that the lever is correctly set to your desired mode mark and use the tool at an appropriate speed for your work.

Then proceed as follows.

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.
- A stuck bit can be removed simply by setting the reversing switch to reverse rotation in order to back out. However, the tool may back out abruptly if you do not hold it firmly.
- Always secure small workpieces in a vise or similar hold-down device.
- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

MAINTENANCE

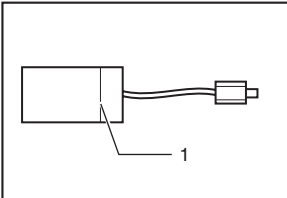
⚠ CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.

Replacing carbon brushes

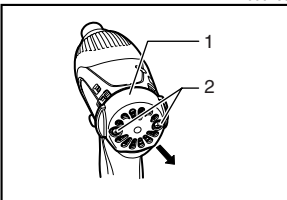
Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

006258



1. Limit mark

006259

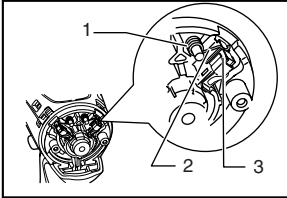


1. Rear cover

2. Screws

Use a screwdriver to remove two screws then remove the rear cover.

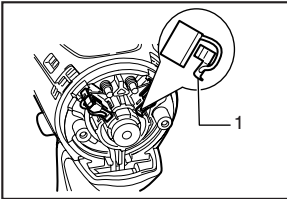
006260



1. Spring
2. Arm
3. Recessed part

Raise the arm part of the spring and then place it in the recessed part of the housing with a slotted bit screwdriver of slender shaft or the like.

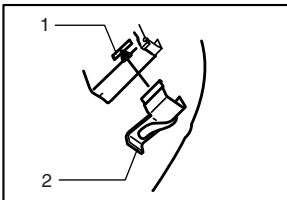
006261



1. Carbon brush cap

Use pliers to remove the carbon brush cap of the carbon brushes. Take out the worn carbon brushes, insert the new ones and replace the carbon brush cap in reverse.

006304



1. Hole
2. Carbon brush cap

Make sure that the carbon brush cap have fit into the holes in brush holders securely.

Reinstall the rear cover and tighten two screws securely.

After replacing brushes, insert the battery cartridge into the tool and break in brushes by running tool with no load for about 1 minute. Then check the tool while running and electric brake operation when releasing the switch trigger. If electric brake is not working well, ask your local Makita service center for repair.

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.

- Screw bits
- Hook
- Plastic carrying case
- Various type of Makita genuine batteries and chargers
- Stopper (for impact driving)
- Bit piece
- Hybrid drill chuck

Memo

Makita Corporation Anjo, Aichi, Japan