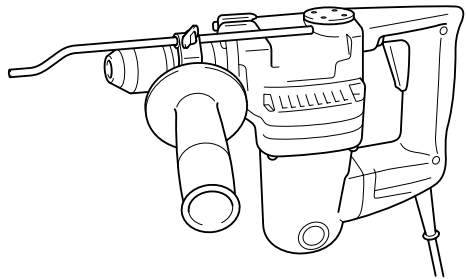




Rotary Hammer

20 mm (13/16")
MODEL HR2010



003092



INSTRUCTION MANUAL

⚠ WARNING:

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

SPECIFICATIONS

Model		HR2010
Capacities	Concrete	20 mm (3/4")
	Steel	13 mm (1/2")
	Wood	24 mm (15/16")
No load speed (RPM)		0 - 900/min.
Blows per minute		0 - 4,000
Overall length		302 mm (11-7/8")
Net weight		3.2 kg (7.1 lbs)

- Manufacturer reserves the right to change specifications without notice.
- Specifications may differ from country to country.

GENERAL SAFETY RULES

USA002-2

(For All Tools)

WARNING:

Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

Work Area

1. **Keep your work area clean and well lit.** Cluttered benches 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 bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

Electrical Safety

4. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified elec-**

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- trician to install a polarized outlet. Do not change the plug in any way.** Double insulation □ eliminates the need for the three wire grounded power cord and grounded power supply system.
- 5. Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is 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 to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
 - 8. When operating a power tool outside, use an outdoor extension cord marked “W-A” or “W”.** These cords are rated for outdoor use and reduce 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 tool while 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. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- 11. Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
- 12. Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

- 13. Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
- 14. Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions. Ordinary eye or sun glasses are NOT eye protection.

Tool Use and Care

- 15. Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- 16. Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
- 17. Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- 18. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- 19. Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- 20. Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
- 21. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- 22. Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for

one tool, may become hazardous when used on another tool.

SERVICE

23. Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

USE PROPER EXTENSION CORD: Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Table 1: Minimum gage for cord

Ampere Rating		Volts	Total length of cord in feet			
		120 V	25 ft.	50 ft.	100 ft.	150 ft.
More Than	Not More Than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

SPECIFIC SAFETY RULES

USB010-2

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

- 1. Hold 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. Wear ear protectors when using the tool for extended periods.** Prolonged exposure to high intensity noise can cause hearing loss.
- 3. Wear a hard hat (safety helmet), safety glasses and/or face shield.** Ordinary eye or sun glasses are NOT safety glasses. It is also highly recommended that you wear a dust mask and thickly padded gloves.
- 4. Be sure the bit is secured in place before operation.**
- 5. Under normal operation, the tool is designed to produce vibration.** The screws can come loose easily, causing a

-
- breakdown or accident. Check tightness of screws carefully before operation.
 - 6. In cold weather or when the tool has not been used for a long time, let the tool warm up for a while by operating it under no load. This will loosen up the lubrication. Without proper warm-up, hammering operation is difficult.
 - 7. Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.
 - 8. Hold the tool firmly with both hands.
 - 9. Keep hands away from moving parts.
 - 10. Do not leave the tool running. Operate the tool only when hand-held.
 - 11. Do not point the tool at any one in the area when operating. The bit could fly out and injure someone seriously.
 - 12. Do not touch the bit or parts close to the bit immediately after operation; they may be extremely hot and could burn your skin.
 - 13. Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.
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SAVE THESE INSTRUCTIONS

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

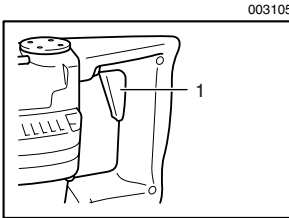
SYMBOLS

USD202-2

The followings show the symbols used for tool.

- | | | | |
|--|---------------------|---|---|
| V | volts | n_0 | no load speed |
| A | amperes |  | Class II Construction |
| Hz | hertz | .../min..... | revolutions or reciprocation per minute |
|  | alternating current |  | number of blow |

FUNCTIONAL DESCRIPTION



1. Switch trigger

⚠ CAUTION:

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

Switch action

⚠ 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. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.

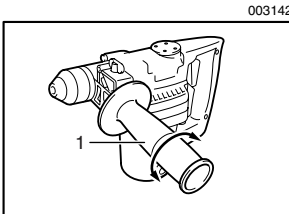
Torque limiter

The torque limiter will actuate when a certain torque level is reached. The motor will disengage from the output shaft. When this happens, the bit will stop turning.

⚠ CAUTION:

- As soon as the torque limiter actuates, switch off the tool immediately. This will help prevent premature wear of the tool.
- Hole saws, core bits, diamond core bits, etc. cannot be used with this tool. They tend to pinch or catch easily in the hole. This will cause the torque limiter to actuate too frequently.

ASSEMBLY



1. Side grip

⚠ CAUTION:

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

Side grip (auxiliary handle)

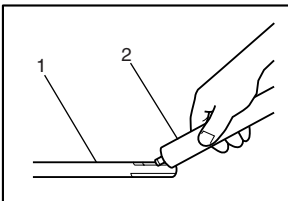
The side grip swings around to either side, allowing easy handling of the tool in any position. Loosen the side grip by turning it counterclockwise, swing it to the desired position and then tighten it by turning clockwise.

Bit grease (optional accessory)

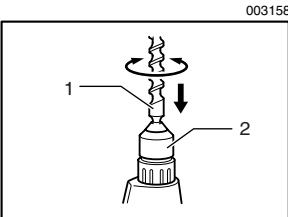
Coat the bit shank head beforehand with a small amount of bit grease (about 0.5 - 1 g; 0.02 - 0.04 oz.). This chuck lubrication assures smooth action and longer service life.

Installing or removing the bit

Clean the bit shank and apply bit grease before installing the bit.



1. Bit shank
2. Bit grease



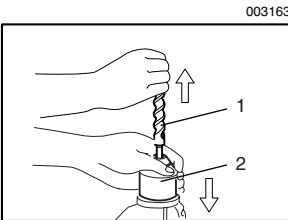
1. Bit
2. Chuck cover

Insert the bit into the tool. Turn the bit and push it in until it engages.

If the bit cannot be pushed in, remove the bit. Pull the chuck cover down a couple of times. Then insert the bit again. Turn the bit and push it in until it engages.

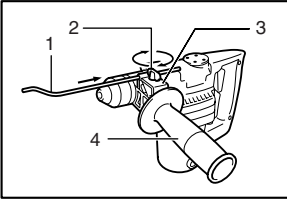
After installing, always make sure that the bit is securely held in place by trying to pull it out.

To remove the bit, pull the chuck cover down all the way and pull the bit out.



1. Bit
2. Chuck cover

003180



1. Depth gauge
2. Clamp screw
3. Grip base
4. Side grip

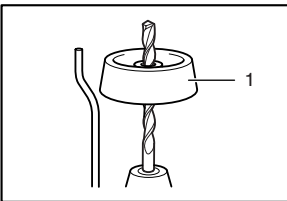
Depth gauge

The depth gauge is convenient for drilling holes of uniform depth. Insert the depth gauge into the hole in the grip base. Adjust the depth gauge to the desired depth and then tighten the clamp screw to secure the depth gauge.

NOTE:

- The depth gauge cannot be used at the position where the depth gauge strikes against the tool body.

003186



1. Dust cup

Dust cup (optional accessory)

Use the dust cup to prevent dust from falling over the tool and on yourself when performing overhead drilling operations. Attach the dust cup to the bit as shown in the figure. The size of bits which the dust cup can be attached to is as follows.

	Bit diameter
Dust cup 5	6 mm (1/4") - 14.5 mm (9/16")
Dust cup 9	12 mm (15/32") - 16 mm (5/8")

OPERATION

Hammer drilling operation

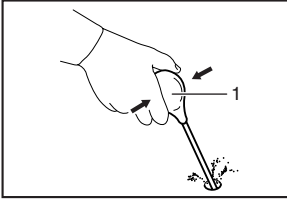
Position the bit at the desired location for the hole, then pull the switch trigger. Do not force the tool. Light pressure gives best results. Keep the tool in position and prevent it from slipping away from the hole.

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:

- 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. Always use the side grip (auxiliary handle) and firmly hold the tool by both side grip and switch handle during operations. Failure to do so may result in the loss of control of the tool and potentially severe injury.

002449

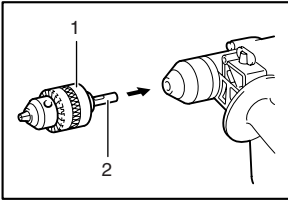


1. Blow-out bulb

Blow-out bulb (optional accessory)

After drilling the hole, use the blow-out bulb to clean the dust out of the hole.

003223



1. Drill chuck
2. Chuck adapter

Drilling in wood or metal

Use the optional drill chuck assembly. When installing it, refer to "Installing or removing the bit" described on the previous page.

You can drill up to 13 mm (1/2") diameter in metal and up to 24 mm (15/16") diameter in wood.

⚠ CAUTION:

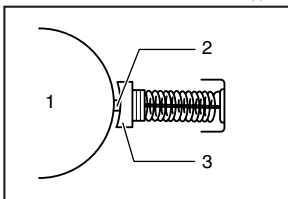
- Pressing excessively on the tool will not speed up the drilling. In fact, this excessive pressure will only serve to damage the tip of your bit, decrease the tool performance and shorten the service life of the tool.
- There is a tremendous twisting force exerted on the tool/bit at the time of hole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

001146

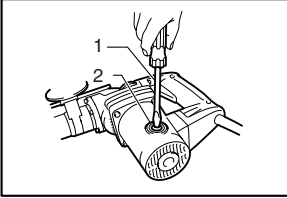


1. Commutator
2. Insulating tip
3. Carbon brush

Replacing carbon brushes

When the resin insulating tip inside the carbon brush is exposed to contact the commutator, it will automatically shut off the motor. When this occurs, both carbon brushes should be replaced. 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.

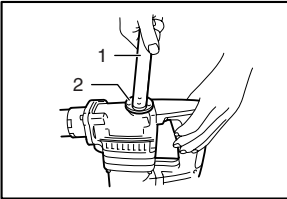
003229



1. Screwdriver
2. Brush holder cap

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.

003234



1. Lock nut wrench
2. Crank cap

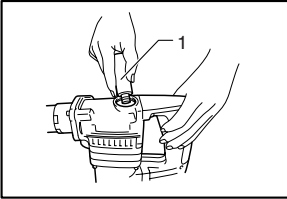
Lubrication

This tool requires no hourly or daily lubrication because it has a grease-packed lubrication system. Lubricate the tool every time the carbon brushes are replaced.

Run the tool for several minutes to warm it up. Switch off and unplug the tool.

Remove the crank cap using a Makita lock nut wrench 28 (optional accessory). Rest the tool on the table with the bit end pointing upwards. This will allow the old grease to collect inside the crank housing.

003245



1. Hammer grease

Wipe out the old grease inside and replace with a fresh grease (30 g; 1 oz). Use only Makita genuine hammer grease (optional accessory). Filling with more than the specified amount of grease (approx. 30 g; 1 oz) can cause faulty hammering action or tool failure. Fill only with the specified amount of grease.

Reinstall the crank cap and tighten with the lock nut wrench.

⚠ CAUTION:

- Do not tighten the crank cap excessively. It is made of resin and is subject to breakage.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized or Factory 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.

- SDS-Plus Carbide-tipped bits
- Drill chuck assembly
- Drill chuck S13
- Chuck adapter
- Chuck key S13
- Hammer grease
- Bit grease
- Grip 36
- Depth gauge
- Blow-out bulb
- Dust cup
- Dust extractor attachment
- Safety goggles
- Lock nut wrench 28
- Plastic carrying case