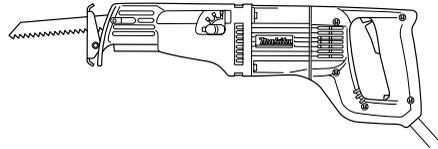




Recipro Saw

MODEL JR3020



002479



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		JR3020
Length of stroke		30 mm
Strokes per minute (min ⁻¹)		0 - 2,500
Max. cutting capacities	Pipe	90 mm
	Wood	90 mm
Overall length		463 mm
Net weight		3.8 kg
Safety class		□ /II

- 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.

SYMBOLS

END201-2

The following show the symbols used for the tool. 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.

Intended use

The tool is intended for sawing wood, plastic, metal and building materials with a strong impact. It is suitable for straight and curved cutting.

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.

For European countries only

Noise and Vibration

The typical A-weighted noise levels are
 sound pressure level: 90 dB (A)
 sound power level: 103 dB (A)

– Wear ear protection. –

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

EC-DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product is in compliance with the following standards of standardized documents, HD400, EN50144, EN55014, EN61000 in accordance with Council Directives, 73/23/EEC, 89/336/EEC, 98/37/EC.

Yasuhiko Kanzaki **CE 2003**

Director

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SAFETY INSTRUCTIONS

ENA001-2

WARNING:

When using electric tools, basic safety precautions, including the following, should always be followed to reduce the risk of fire, electric shock and personal injury. Read all these instructions before operating this product and save these instructions.

For safe operations:

- 1. Keep work area clean.**
Cluttered areas and benches invite injuries.
- 2. Consider work area environment.**
Do not expose power tools to rain. Do not use power tools in damp or wet locations. Keep work area well lit. Do not use power tools where there is risk to cause fire or explosion.
- 3. Guard against electric shock.**
Avoid body contact with earthed or grounded surfaces (e.g. pipes, radiators, ranges, refrigerators).
- 4. Keep children away.**
Do not let visitors touch the tool or extension cord. All visitors should be kept away from work area.
- 5. Store idle tools.**
When not in use, tools should be stored in a dry, high or locked up place, out of reach of children.
- 6. Do not force the tool.**
It will do the job better and safer at the rate for which it was intended.
- 7. Use the right tool.**
Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended; for example, do not use circular saws to cut tree limbs or logs.
- 8. Dress properly.**
Do not wear loose clothing or jewellery, they can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protecting hair covering to contain long hair.
- 9. Use safety glasses and hearing protection.**
Also use face or dust mask if the cutting operation is dusty.
- 10. Connect dust extraction equipment.**
If devices are provided for the connection of dust extraction and collection facilities ensure these are connected and properly used.
- 11. Do not abuse the cord.**
Never carry the tool by the cord or yank it to disconnect it from the socket. Keep the cord away from heat, oil and sharp edges.
- 12. Secure work.**
Use clamps or a vice to hold the work. It is safer than using your hand and it frees both hands to operate the tool.
- 13. Do not overreach.**
Keep proper footing and balance at all times.
- 14. Maintain tools with care.**
Keep cutting tools sharp and clean for better and safer performance. Follow instructions for lubrication and changing accessories. Inspect tool cord periodically and if damaged have it repaired by an authorized service facility. Inspect extension cords periodically and replace, if damaged. Keep handles dry, clean and free from oil and grease.
- 15. Disconnect tools.**
When not in use, before servicing and when changing accessories such as blades, bits and cutters.
- 16. Remove adjusting keys and wrenches.**
Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
- 17. Avoid unintentional starting.**
Do not carry a plugged-in tool with a finger on the switch. Ensure switch is off when plugging in.
- 18. Use outdoor extension leads.**
When tool is used outdoors, use only extension cords intended for outdoor use.
- 19. Stay alert.**
Watch what you are doing. Use common sense. Do not operate tool when you are tired.
- 20. Check damaged parts.**
Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorized service facility. Do not use the tool if the switch does not turn it on and off.
- 21. Warning.**
The use of any accessory or attachment, other than those recommended in this instruction manual or the catalog, may present a risk of personal injury.
- 22. Have your tool repaired by a qualified person.**
This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

ADDITIONAL SAFETY RULES FOR TOOL

ENB012-1

1. **Hold tool 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. **Avoid cutting nails. Inspect workpiece for any nails and remove them before operation.**
3. **Do not cut oversize workpiece.**
4. **Check for the proper clearance beyond the workpiece before cutting so that the blade will not strike the floor, workbench, etc.**
5. **Hold the tool firmly.**
6. **Make sure the blade is not contacting the workpiece before the switch is turned on.**
7. **Keep hands away from moving parts.**
8. **Do not leave the tool running. Operate the tool only when hand-held.**
9. **Always switch off and wait for the blade to come to a complete stop before removing the blade from the workpiece.**
10. **Do not touch the blade or the workpiece immediately after operation; they may be extremely hot and could burn your skin.**

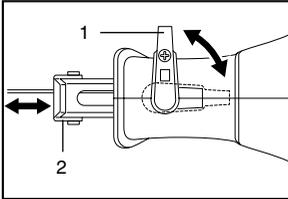
SAVE THESE INSTRUCTIONS

FUNCTIONAL DESCRIPTION

⚠ CAUTION:

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

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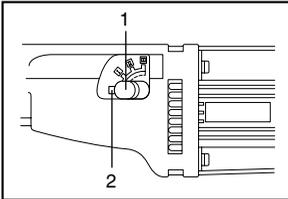
- 1. Lever
- 2. Shoe

Adjusting the shoe

When the blade loses its cutting efficiency in one place along its cutting edge, reposition the shoe to utilize a sharp, unused portion of its cutting edge. This will help to lengthen the life of the blade.

To reposition the shoe, loosen the lever counterclockwise and slide the shoe forward or back to the desired position. Then tighten the lever to firmly secure the shoe.

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- 1. Lever
- 2. Stopper

Selecting the cutting action

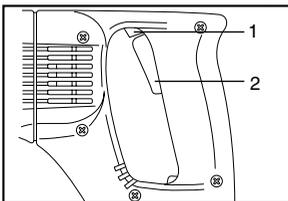
This tool can be operated with an orbital or a straight line cutting action. The orbital cutting action thrusts the blade forward on the cutting stroke and greatly increases cutting speed.

To change the cutting action, press the stopper and turn the lever to the desired cutting action position. Then, release the stopper to lock the lever. Refer to the table to select the appropriate cutting action.

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Position	Cutting action	Applications
0	Straight line cutting action	For cutting mild steel, stainless steel and plastics. For clean cuts in wood and plywood.
I	Small orbit cutting action	For cutting mild steel, aluminum and hard wood.
II	Medium orbit cutting action	For cutting wood and plywood. For fast cutting in aluminum and mild steel.
III	Large orbit cutting action	For fast cutting in wood and plywood.

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- 1. Lock button/Lock-off button
- 2. Switch trigger

Switch action

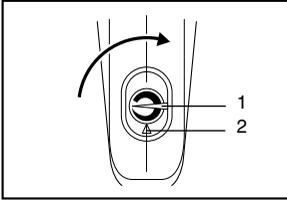
⚠ CAUTION:

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

For tools with the lock button

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.

002495



1. Speed change knob
2. Pointer

Tool speed can be adjusted by turning the speed change knob. When the portion with ☺ mark is positioned adjacent to the pointer, faster speed can be obtained by turning the knob clockwise. When the portion with ☹ mark is positioned adjacent to the pointer, full speed can be obtained.

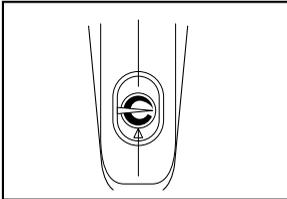
Continuous operation can be performed only when the knob is set to the full speed position. To perform continuous operation, pull the switch trigger fully and then push the lock button up. To stop the tool from the locked position, pull the switch trigger fully, then release it.

For tools with the lock-off button

To prevent the switch trigger from being accidentally pulled, a lock-off button is provided. To start the tool, push the lock-off button up and pull the switch trigger.

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

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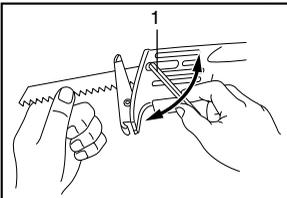


ASSEMBLY

⚠ CAUTION:

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

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1. Hex wrench

Installing or removing saw blade

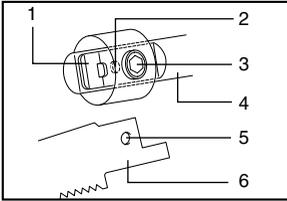
⚠ CAUTION:

- Always clean out all chips or foreign matter adhering to the blade, blade clamp and/or slider. Failure to do so may cause insufficient tightening of the blade, resulting in a serious injury.

To install the blade, loosen the screw on the blade clamp with the hex wrench. Insert the blade between the leaf spring and the slider so that the pin on the slider fits into the hole in the blade shank. If the pin cannot easily fit into the hole, remove the hex wrench from the screw and then try again.

After the pin fits properly into the hole, tighten the screw clockwise securely while making sure that the blade cannot be extracted even though you try to pull it out.

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1. Leaf spring
2. Pin
3. Screw
4. Slider
5. Hole
6. Blade

OPERATION

CAUTION:

- If you tighten the screw without the pin on the slider fitting properly in the hole in the blade shank, the pin or the blade shank will be damaged. This may cause the blade to be extracted unexpectedly during operation.

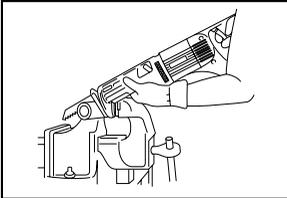
To remove the blade, follow the installation procedure in reverse.

CAUTION:

- Always press the shoe firmly against the workpiece during operation. If the shoe is held away from the workpiece during operation, strong vibration and/or twisting will be produced, causing the blade to snap dangerously.
- Always wear gloves to protect your hands from hot flying chips when cutting metal.
- Be sure to always wear suitable eye protection which conforms with current national standards.
- Always use a suitable coolant (cutting oil) when cutting metal. Failure to do so will cause premature blade wear.

Press the shoe firmly against the workpiece. Do not allow the tool to bounce. Bring the blade into light contact with the workpiece. First, make a pilot groove using a slower speed. Then use a faster speed to continue cutting.

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MAINTENANCE

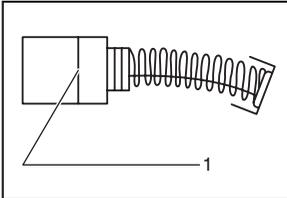
⚠ CAUTION:

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

Replacing carbon brushes

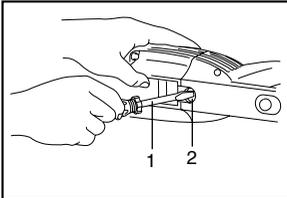
Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

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1. Limit mark

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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.

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.

- Recipro saw blades
- Hex wrench 4
- Plastic carrying case

Makita Corporation Anjo, Aichi, Japan