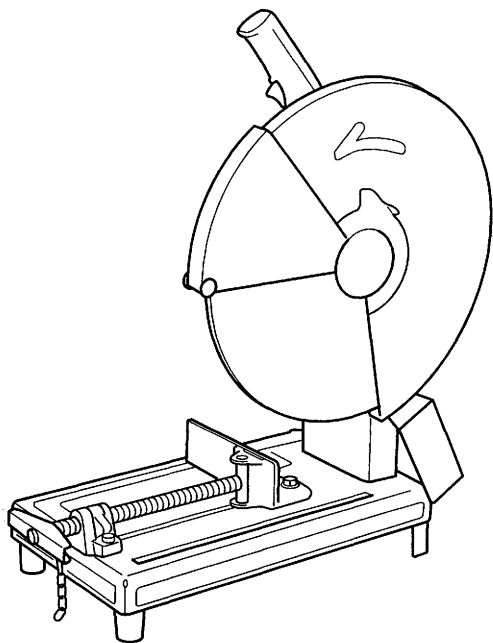


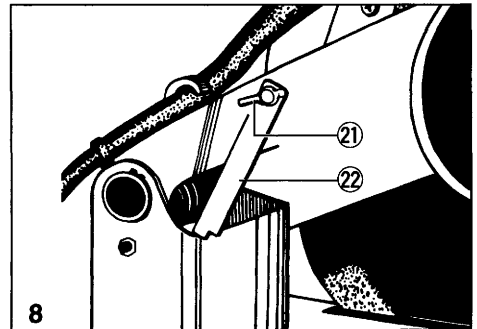
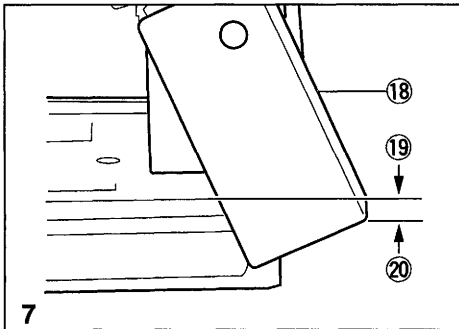
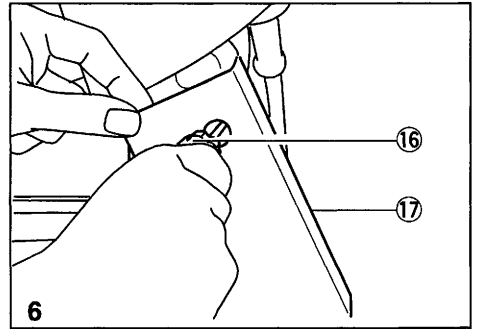
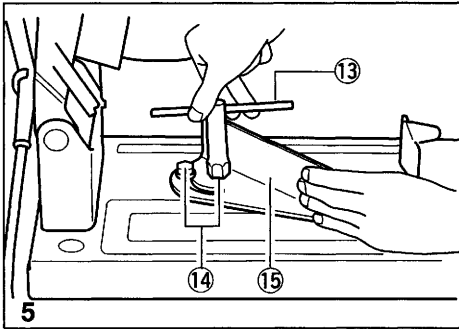
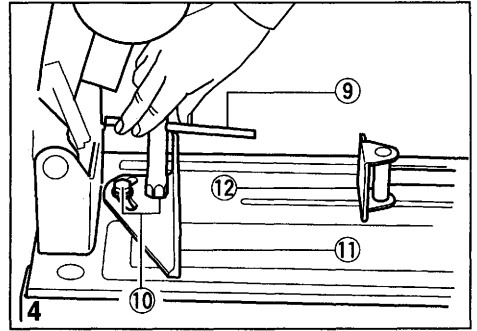
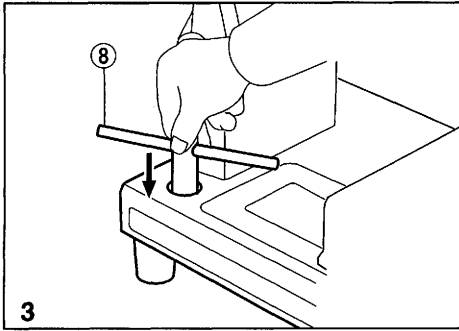
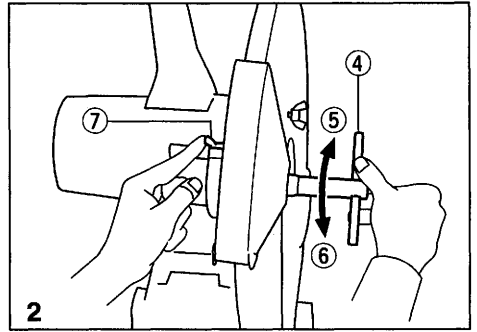
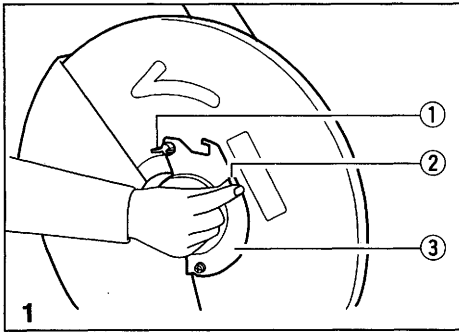
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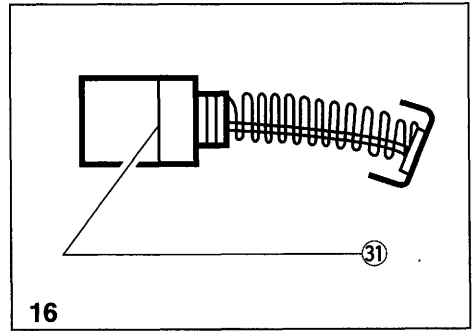
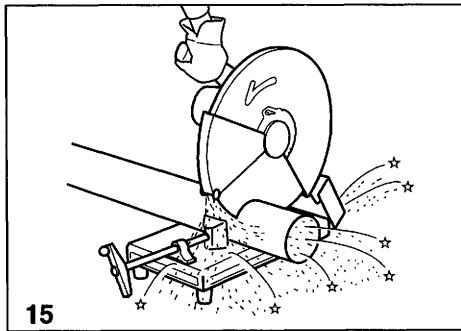
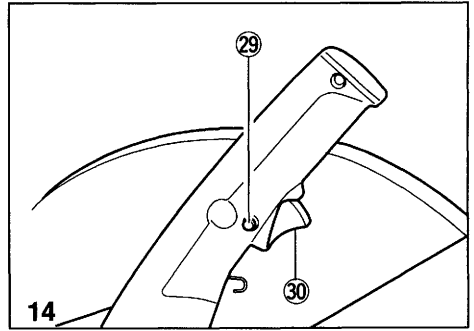
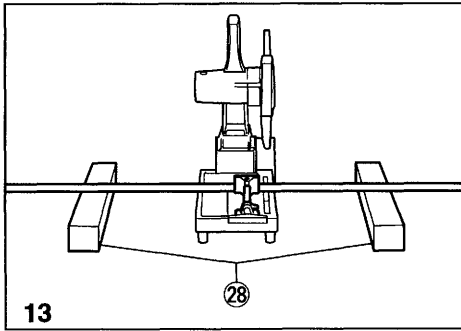
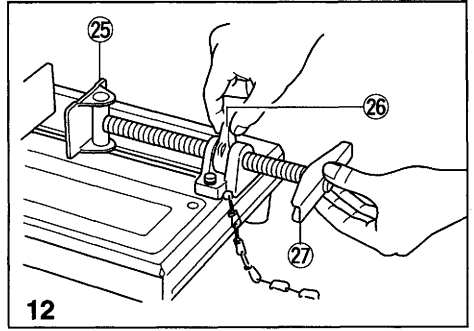
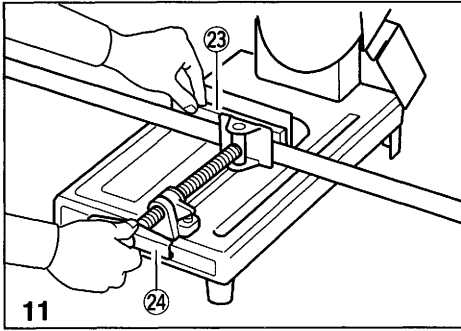
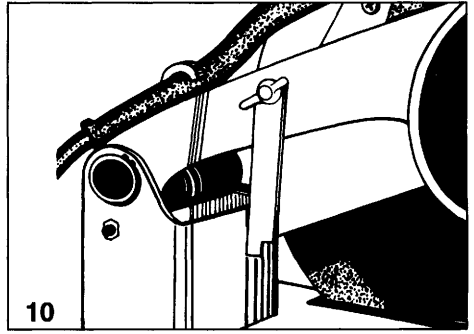
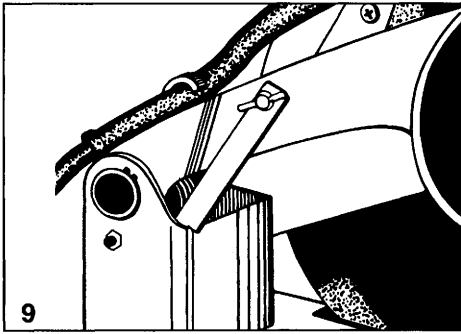
Portable Cut-Off

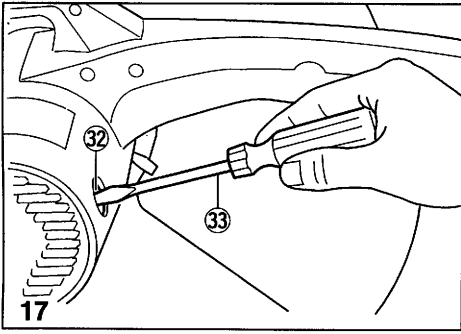
405 mm MODEL 2416S

INSTRUCTION MANUAL









Explanation of general view

- | | | |
|-----------------|-----------------|--------------------|
| ① Wing bolt | ⑫ Vise plate | ⑳ Block |
| ② Knob | ⑬ Socket wrench | ㉑ Handle |
| ③ Center cap | ⑭ Hex bolt | ㉒ Vise plate |
| ④ Socket wrench | ⑮ Guide plate | ㉓ Vise nut |
| ⑤ Tighten | ⑯ Screwdriver | ㉔ Handle |
| ⑥ Loosen | ⑰ Spark chute | ㉕ Blocks |
| ⑦ Shaft lock | ⑱ Spark chute | ㉖ Lock button |
| ⑧ Socket wrench | ㉒ Base top | ㉗ Switch trigger |
| ⑨ Socket wrench | ㉓ Point A | ㉘ Limit mark |
| ⑩ Hex bolts | ㉔ Wing bolt | ㉙ Brush holder cap |
| ⑪ Guide plate | ㉕ Stopper plate | ㉚ Screwdriver |

SPECIFICATIONS

Model	2416S
Blade diameter	405 mm
Hole diameter	25.4 mm
Max cutting capacities dia.	115 mm
No load speed (RPM)	2,300
Dimensions (L x W x H)	610 mm x 265 mm x 535 mm
Net weight	20 kg

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

Power supply

The machine 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.

These symbols mean:

- 📖 Read instruction manual.

SAFETY INSTRUCTIONS

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

For safe operation:

1. Keep work area clean

Cluttered areas and benches invite injuries.

2. Consider work area environment

Don't expose power machines to rain. Don't use power machines in damp or wet locations. Keep work area well lit. Don't use power machines in presence of flammable liquids or gases.

3. Guard against electric shock

Prevent body contact with grounded surfaces (e.g. pipes, radiators, ranges, refrigerators).

- 4. Keep children away**
Do not let visitors contact machine or extension cord. All visitors should be kept away from work area.
- 5. Store idle machines**
When not in use, machines should be stored in dry, high, or locked-up place, out of the reach of children.
- 6. Don't force machine**
It will do the job better and safer at the rate for which it was intended.
- 7. Use right machine**
Don't force small machines or attachments to do the job of a heavy duty machine. Don't use machines for purposes not intended; for example, don't use circular saw for cutting tree limbs or logs.
- 8. Dress properly**
Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
- 9. Use safety glasses**
Also use face or dust mask if cutting operation is dusty.
- 10. Don't abuse cord**
Never carry machine by cord or yank it to disconnect it from receptacle. Keep cord from heat, oil and sharp edges.
- 11. Secure work**
Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate machine.
- 12. Don't overreach**
Keep proper footing and balance at all times.
- 13. Maintain machines with care**
Keep machines sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect machine cords periodically and, if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean and free from oil and grease.
- 14. Disconnect machines**
When not in use, before servicing, and when changing accessories such as blades, bits and cutters.
- 15. Remove adjusting keys and wrenches**
Form the habit of checking to see that keys and adjusting wrenches are removed from machine before turning it on.
- 16. Avoid unintentional starting**
Don't carry plugged-in machine with finger on switch. Be sure switch is off when plugging in.
- 17. Outdoor use extension cords**
When machine is used outdoors, use only extension cords intended for use outdoors and so marked.
- 18. Stay alert**
Watch what you are doing. Use common sense. Do not operate machine when you are tired.
- 19. Check damaged parts**
Before further use of the machine, 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, binding 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 elsewhere in this instruction manual. Have defective switches replaced by an authorized service center. Do not use machine if switch does not turn it on and off.

20. Warning

The use of any other accessory or attachment other than recommended in this operating instruction or the catalog may present a risk of personal injury.

21. Have your machine repaired by an expert

This electric appliance is in accordance with the relevant safety rules. Repairing of electric appliances may be carried out only by experts otherwise it may cause considerable danger for the user.

ADDITIONAL SAFETY RULES

1. Wear hearing protection during extended periods of operation.
2. Use only wheels having a maximum operating speed at least as high as "No Load RPM" marked on the tool's nameplate. Use only fiberglass-reinforced cut-off wheels.
3. Check the wheel carefully for cracks or damage before operation. Replace cracked or damaged wheel immediately.
4. Secure the wheel carefully.
5. Use only flanges specified for this tool.
6. Be careful not to damage the spindle, flanges (especially the installing surface) or bolt, or the wheel itself might break.
7. Keep guards in place and in working order.
8. Hold the handle firmly.
9. Keep hands away from rotating parts.
10. Make sure the wheel is not contacting the workpiece before the switch is turned on.
11. Before using the tool on an actual workpiece, let it simply run for several minutes first. Watch for flutter or excessive vibration that might be caused by poor installation or a poorly balanced wheel.
12. Watch out for flying sparks when operating. They can cause injury or ignite combustible materials.
13. Remove material or debris from the area that might be ignited by sparks. Be sure that others are not in the path of the sparks. Keep a proper, charged fire extinguisher closely available.
14. Use the cutting edge of the wheel only. Never use side surface.
15. Do not attempt to keep the trigger in the ON position.
16. If the wheel stops during the operation, makes a odd noise or begins to vibrate, switch off the tool immediately.
17. Always switch off and wait for the wheel to come to a complete stop before removing, securing workpiece, working vise, changing work position, angle or the wheel itself.
18. Do not touch the workpiece immediately after operation; it is extremely hot and could burn your skin.
19. Store wheel in a dry location only.

SAVE THESE INSTRUCTIONS.

OPERATING INSTRUCTIONS

Securing cut-off

The cut-off may be bolted (2 bolts) down to a level location using the bolt holes in the base. Do not secure the bolts to tightly.

Removing or installing cut-off wheel

CAUTION:

Always be sure that the tool is switched off and unplugged before removing or installing the wheel.

To remove the wheel, loosen the wing bolt and raise the center cap. **(Fig. 1)**

Press the shaft lock so that the wheel cannot revolve and use the socket wrench to loosen the hex bolt by turning it counterclockwise. Then remove the hex bolt, outer flange and wheel.

To install the wheel, follow the removal procedure in reverse. **BE SURE TO TIGHTEN THE HEX BOLT SECURELY. (Fig. 2)**

CAUTION:

- When installing the wheel, make sure that the Makita mark on the wheel faces you on the outside.
- Use only the Makita socket wrench to remove or install the wheel.

Storing socket wrench

The socket wrench can be conveniently stored by fitting it into the hole in the base. **(Fig. 3)**

Changing interval between vise and guide plate (Fig. 4)

The spacing or interval between the vise and the guide plate can be adjusted according to the width of workpiece. To change the interval between the vise and the guide plate, loosen the hex bolts with the socket wrench and move the guide plate. Then tighten the hex bolts securely.

The following interval settings are possible:

0 – 170 mm

60 – 230 mm

Setting for desired cutting angle (Fig. 5)

To change the cutting angle, loosen the hex bolts with the socket wrench and move the guide plate to the desired angle. After adjusting the desired cutting angle, tighten the hex bolts securely.

NOTE:

When the guide plate is set at the 60 – 230 mm position, it cannot be angled to allow 45° cuts.

Positioning spark chute

Use a screwdriver to loosen the screw securing the spark chute. **(Fig. 6)**

Raise the spark chute slightly so that the point (A) will be slightly below the base top. Then tighten the screw securing the spark chute. **(Fig.7)**

CAUTION:

Be sure to adjust the spark chute as mentioned above before operation. Failure to do so will cause more sparks to fly around causing greater potential for injury or ignition of any combustible materials nearby.

Adjusting stopper plate

The stopper plate prevents the wheel from contacting the bench or floor surface while cutting.

After a new wheel is installed, adjust the stopper plate as shown in the **Fig. 8** and tighten the wing bolt securely.

After the wheel wears down to below 355 mm in diameter, set the stopper plate as shown in the **Fig. 9** and tighten the wing bolt securely.

After the wheel wears down to below 305 mm in diameter, set the stopper plate as shown in the **Fig. 10** and tighten the wing bolt securely.

CAUTION:

Be sure that the wheel does not contact the bench or floor surface before operation.

Securing workpiece

Move guide to desired angle and position, then secure carefully with bolts. Keep work flush against side of guide and the grip with vise using handle.

When securing thin workpiece or when the cut-off wheel has worn down considerably, use a block or non-flammable material as shown in the figure so that you can cut the workpiece using the mid point on the periphery of the wheel (**Fig. 11**)

For Australia, New Zealand

By turning the vise handle counterclockwise and then flipping the vise nut to the left, the vise is released from the shaft threads and can be moved rapidly in and out. To grip workpieces, push the vise handle until the vise plate contacts the workpiece. Flip the vise nut to the right and then turn the vise handle clockwise to securely retain the workpiece. (**Fig. 12**)

CAUTION:

Always set the vise nut to the right fully when securing the workpiece. Failure to do so may result in insufficient securing of the workpiece. This could cause the workpiece to be ejected or cause a dangerous breakage of the wheel.

Long workpieces should be supported by blocks of some kind of non-flammable material on either side so that it will be level with the base top. (**Fig. 13**)

Switch action (Fig. 14)

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

CAUTION:

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

Operation (Fig. 15)



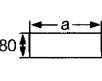
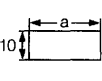

Hold the handle firmly. Switch on the tool and wait until the wheel attains full speed before lowering gently into the cut. When the wheel contacts the workpiece, gradually bear down on the handle to perform the cut. When the cut is completed, switch off the tool and **WAIT UNTIL THE WHEEL HAS COME TO A COMPLETE STOP** before returning the wheel to the fully elevated position.

CAUTION:

Proper handle pressure during cutting and maximum cutting efficiency can be determined by the amount of sparking that is visible while cutting. Your pressure on the handle should be adjusted to produce the maximum amount of sparking. Do not force the cut by applying excessive pressure on the handle. Reduced cutting efficiency, as well as, possible damage to the tool, cut-off wheel or workpiece may result.

Cutting capacity

Max. cutting capacity differs depending upon the cutting angle and workpiece configuration.

Applicable wheel dimensions		405 mm outer dia. x less than 4.5 mm thickness x 25.4 mm hole dia.				
Workpiece configuration (Cross section)						
Max. cutting capacity	90° cutoff	115 mm	120 mm	230 mm	185 mm	150 mm
	45° cutoff	115 mm	110 mm	110 mm	110 mm	110 mm

MAINTENANCE**CAUTION:**

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

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 holder. Both carbon brushes should be replaced at the same time. Use only Makita carbon brushes. **(Fig. 16)**

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. **(Fig. 17)**

To maintain product safety and reliability, repairs, maintenance or adjustment should be carried out by Makita Authorized Service Center.

Makita Corporation

Anjo, Aichi Japan

Made in Japan

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