HiKOKI

CUT-OFF MACHINE

MODELS 405mm(16") CC 16SB

HANDLING INSTRUCTIONS



NOTE:
For your own safety read Handling Instructions before operating tool.
It is recommended that this INSTRUCTIONS be kept readily available as an important reference when using this Cut-off Machine.

We sincerely thank you for selecting a HiKOKI CUT-OFF MACHINE.

To operate this machine safely and efficiently, please read this HANDLING INSTRUCTIONS carefully to get a good understanding of the precautions in operation, the capacity of the machine uses and the like.

GENERAL OPERATIONAL PRECAUTIONS

1. Keep work area clean. Cluttered areas and benches invite accidents.
2. Avoid dangerous environment. Don't expose power tools to rain. Don't use power tool in damp or wet locations. And keep work area well lit.
3. Keep children away. All visitors should be kept safe distance from work area.
4. Store idle tools. When not in use, tools should de stored in dry, high or locked-up place-out of reach of children.
5. Don't force tool. It will do the job better and safer at the rate for which it was designed.
6. Use right tool. Don't force tool or attachment to do the job of a heavy duty tool.
7. Wear proper apparel. No loose clothing or jewelry to get caught in moving parts. Rubber gloves and footwear are recommended when working outdoors.
8. Use safety glasses with most tools. Also face or dust mask if cutting operation is dusty.
9. Don't abuse cord. Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
10. Secure work. Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
11. Don't overreach. Keep proper footing and balance at all times.
12. Maintain tools with care. Keep tools sharp at all times, and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
13. Disconnect tools before servicing; when changing accessories such as cut-off blade.
14. Remove adjusting keys and wrenches. From habit of checking to see that cut-off blade clamping wrench is removed from tool before turning it, and sub cover is replaced.
15. Reduce the risk of unintentional starting. Make sure switch is in off position before plugging in.
16. Do not use power tools for applications other than those specified in the Handling Instructions.
17. Never use power tools near inflammable or explosive materials.
18. To ensure the designed operational integrity of power tools. Do not remove installed covers or screws.

19. Do not touch movable parts or accessories unless the power source has been disconnected.
20. Use your tool at lower input than specified on the nameplate: otherwise, the finish may be spoiled and working efficiency reduced due to motor overload.
21. Never operate these power tools without Wheel Guards.
22. Use only grinding wheels with a "Safe Speed" at least as high as the "No-Load RPM" indicated on the power tool nameplate.
23. Consult an authorized Service Agent in the event of power tool failure.
24. Use only original HiKOKI replacement parts.
25. This tool should only be disassembled for replacement of carbon brushes.

PRECAUTIONS ON USING A CUT-OFF MACHINE

REGARDING THIS HiKOKI CUT-OFF MACHINE PAY PARTICULAR ATTENTION TO THE FOLLOWING.

1. Always apply a trial run.
2. Handle the cut-off wheel with care.
3. Start cutting only after motor revolution full speed.
4. Promptly cut OFF the switch when abnormality observed.
5. Use the normal cut-off wheel on its normal working surface.
6. Guard against cut-off sparks.
7. Properly replace the wheel.
8. A revolving cut-off wheel should never be touched.
9. Pay attention to cut-off wheel preservation.
10. Handle cut-off wheel clamping parts with care.
11. Keep hands out of the line of cut-off wheel.
12. Do not perform any operation freehand.
13. Never reach around or behind cut-off wheel.
14. Shut off power and wait for cut-off wheel to stop before servicing and adjusting tool.

NAMES OF COMPONENT PARTS

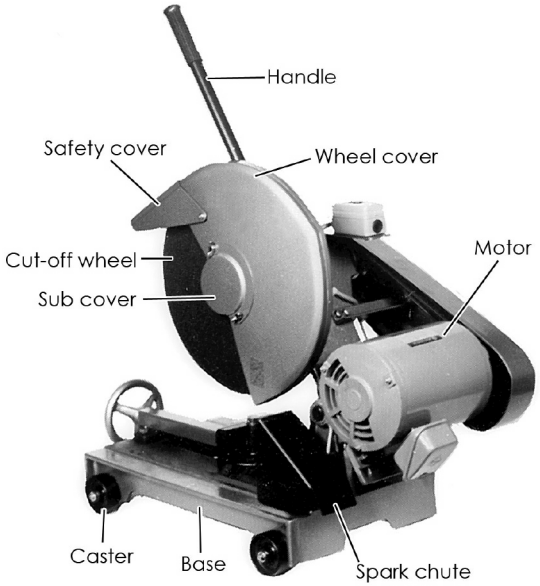


Fig. 1

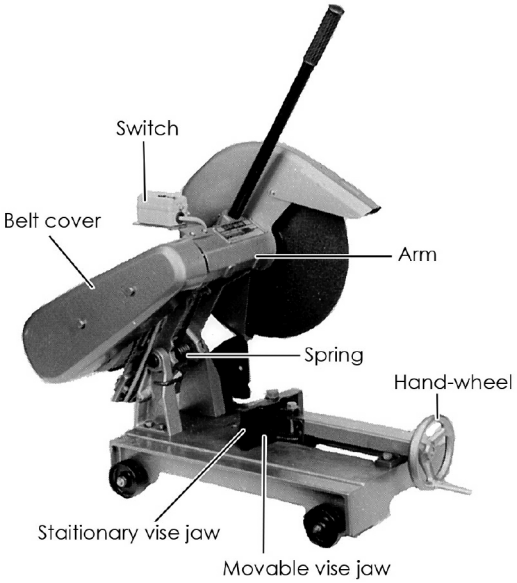


Fig. 2

SPECIFICATIONS

Item \ Motor Outpat		2.2KW					3.7KW				
Motor	Type	Three phase induction motor									
	Power source	Three phase alternating current 50/60Hz									
	Voltage (V)		200	220	230	240	380	400	415	440	
	Full-load current (50/60Hz)	2.2KW	9.0/8.6	/	/	/	4.9/-	4.9/4.4	5.0/-	-/4.3	
		3.7KW	16.0/14.8	/	/	/	8.1/-	8.0/7.4	8.0/-	-/7.0	
Cut-off wheel	Type	Reinforced resinoid cut-off wheel									
	Dimensions	Outer diameter 405 × thickness 2.8 × arbor hole diameter 25.4 mm									
	Maximum working peripheral speed	3800 m/min									
	No-load speed	2290/2730/min (50/60Hz)					2430/2900/min (50/60Hz)				
	No-load peripheral speed	2910/3470 m/min (50/60Hz)									
Distance from wheel lower side to base top		170 mm									
Dimensions of base top		583 × 370 mm									
Maximum opening of vise		230 mm									
Height of machine		965 mm									
Weight		88kg					96kg				
V-belt size		Type 3V-375 2					Type 3V-375 2				

ACCESSORIES

Standard accessories	Cut-off wheel 1
	Spanner 1
Special accessories (available on separate order)	modification set for 3.7KW 5HP motor

APPLICATION

Cutting off the following materials:

- ○ Round bars
- ○ Pipes
- ○ Various types of shaped steel
- ○ Aluminum alloy (use a chip saw)

PRIOR TO OPERATION

Exercise care in the following procedures before connecting the cord to power source.

1. Installation

This is a portable tool with wheels. Install it on a level site and prevent it from sliding by securing each wheel with a wedge or a similar peg.

2. Connecting the power cord to the machine body

Open the push-button switch and connect the power cord to the connection terminal (see Fig. 3).

Use a cab-tyre cord with 2mm² or more core wire for the power cord.

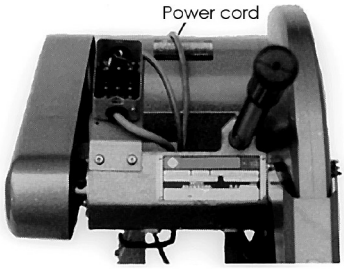


Fig. 3

3. Clamping the power cord

Use the nylon clip provided for the machine body to clamp the power cord. (see Fig. 10)

4. Grounding the Equipment.

Prior to shipping, the equipment is subjected to a rigid factory inspection to prevent electric shocks during operation. Further, the equipment is provided with a means of grounding as a safety precaution.

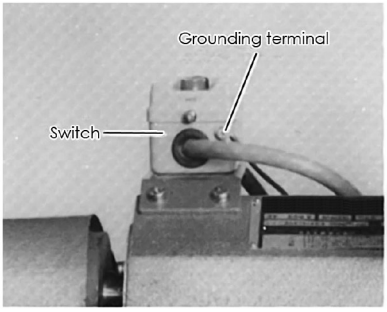


Fig. 4-a

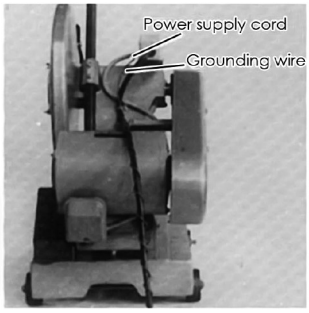


Fig. 4-b

Wind the grounding wire round the power supply cord not to contact with rotating portion. (Fig. 4-b).

5. Pull out the handle

The handle is pressed against the motor for shipping purpose. Therefore, pull out the handle to the position where offers the best operating comfore and the secure it in position with two cross-head screws.

6. Removing anticorrosive coating

Ascertain that anticorrosive coating on the base surfaces is thoroughly removed by a cloth well-moistened with gasoline.

CONFIRMATION BEFORE USE

CAUTION Before plugging the power cord in a receptable, ascertain the following points:

1. Ascertain cut-off wheel condition

Ascertain that all cut-off wheels are in perfect condition, and do not display scars and cracks.

2. Ascertain clamping of the cut-off wheel

Althouhg they have been fully clamped at the factory prior to delivery, reclamp the clamping nuts securely for safety. (See the item on Replacing the cut-off Wheel).

CAUTION When the clamping nuts are loosened, the cut-off wheel may be damaged when the wheel axle starts revolving, creating a hazardous condition.

3. Ascertain clamping of the protective cover

Possible accidents such as a cracked cut-off wheel is prevented by this protective cover (guard cover).

Although it has been fully clamped at the factory prior to delivery, securely reclamp the mounting screws for safety.

CAUTION Confirm that the protective cover (wheel cover) is securely mounted.

4. Confirming belt tension

Ascertain that belt tension is appropriate.

CAUTION Excessive tension will damage the motor and insutficient tension will cause the belt to slip; in both instances, the machine will be unable to fully demonstrate its performance.

5. Ascertain the working power supply

Always use the machine under the power supply specified on the instruction plate.

6. Ascertain that the switch is cut OFF

Should the crod be carelessly or inadvertently plugged in a receptacle when the switch is ON, unexpected and serious troudle may occur.

Then plug the cord into a receptacle and ascertain the following:

1. Check the Rotative Direction

The rotating direction can bé determined by referring to the arrow direction on the safety-cover.

2. Inspect facial deflection of the Cut-off wheel

Rotate the Cut-off wheel to inspect any facial deflection.
A heavy deflection will cause the Cut-off wheel to shift.

3. Applying a trial run

Continued grinding without noticing a cracked or split cut-off wheel may prove to be very hazardous.

Before starting operation, temporarily step away from the front position and make a trial run to confirm that no abnormalities are involved.

Trial run periods:

When replacing a the cut-off wheel …… Over 3 minutes.
When starting routine work …… Over 1 minute.

MOUNTING AND DISMOUNTING

CAUTION Always turn OFF the switch before starting the dismounting procedure

1. Dismounting the Cut-off Wheel (Fig. 5)

(1) As shown in Fig. 5, the spindle has a rotation stop hole. Stop the spindle by inserting a screwdriver (or a 10mm rod) through the hole.

(2) Remove the subcover and use the provided 19×24mm spanner to loosen the M16 bolt.

(3) Remove the M16 bolt, 16mm spring washer, washer, and wheel washer; then dismount the wheel.

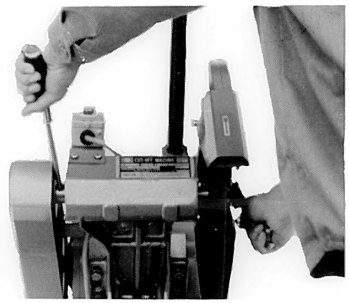


Fig. 5

2. Mounting the Cut-off Wheel

(1) Thoroughly remove dust from the wheel washer, washer, 16mm spring washer, and M16 bolt, then mount the wheel by following the dismounting procedure in reverse order. Always install the washers.

(2) After clamping the 16mm clamping bolt is completed, always mount the subcover.

CUTTING PROCEDURES

1. Grip the cutting material steady with a vise. Should gripping be insufficient, it will lead to the cutting material jumping off, and even to a hazard of cracking the cut-off wheel.
2. Rotate the cut-off wheel, gently press down the handle, and bring the cut-off wheel close to the cutting material.
3. When the cut-off wheel contacts the cutting material, gently press down the handle further and start cutting.
4. When cutting (or designated slotting) is completed, raise the handle and restore it to its original position.
5. At the termination of each cutting process, turn OFF the switch to stop rotation and proceed with the subsequent cutting job.

CAUTION It is hazardous to try to remove or mount cutting material while the cut-off wheel is revolving.

HOW TO OPERATE

1. Cutting at Angles (Figs. 6 and 7)

The machine permits cutting at angles of 45° or 60°.

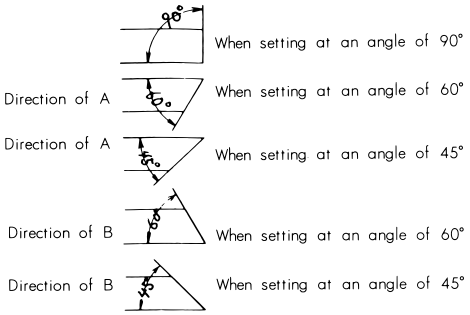


Fig. 6

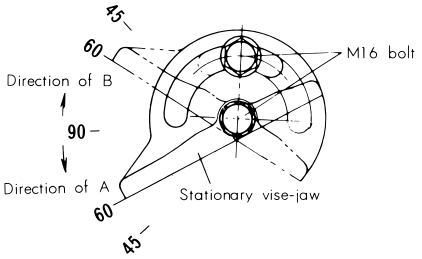


Fig. 7

Loosen the two bolts on the stationary vise-jaw, the set the working surface on the vise-jaw at any angle of 90, 60, or 45 as shown in Fig. 7.

Upon completion of setting, securely tighten the two bolts.

2. Moving the Stationary Vise-jaw (Fig. 8)

The vise opening is set at the maximum of 180mm when shipped from the factory. In case an opening of more than 180mm is required, after unscrewing the two bolts, move the vise-jaw to the position shown by the dotted line.

In this case, the maximum vise opening will become 230mm.

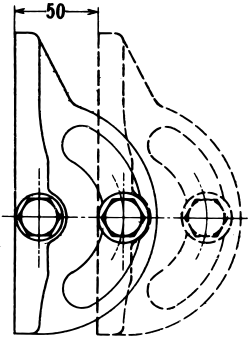


Fig. 8

MAINTENANCE AND INSPECTION

CAUTION Prior to inspecting the Cut-off Machine be sure to disconnect the power plug.

1. When continually using a cut-off wheel which has already become dull, an unnecessary load is imparted to the motor.

Consequently, redress or replace a dull cut-off wheel to ensure grinding officiency.

2. The Cut-off Machine promptly starts rotating and cutting when the switch is turned ON. Although this design is convenient, it will create hazards if handled erroneously.

Always disconnect the power cord from the line receptacle after use. After completing each cutting jod, store the machine in a dry location beyond the reach of children.

3. Periodically inspect every part of this Cut-off Machine as to whether or not loosening has occurred. Retighten any loosened parts.

When using the Cut-off Machine without retightening loose parts, a hazard may result.

4. Changing Belts

(1) Remove two M8 bolt screws used to secure the belt cover shown in Fig. 9.

(2) By loosening four M10 nuts shown in Fig. 9 on the belt side shown in Fig. 10, push the motor to the front, removing the belt. When attaching the belt, follow reverse procedures tothe above.

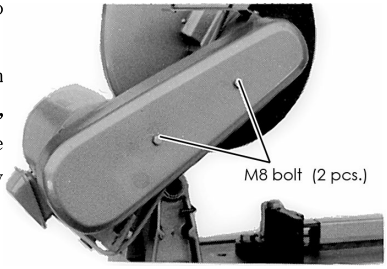


Fig. 9

5. Stretching the belt (Fig. 10)

Stretch the belt to form a straight tension.

When stretching is completed, clamp the belt with 10mm nuts (4 pcs.).

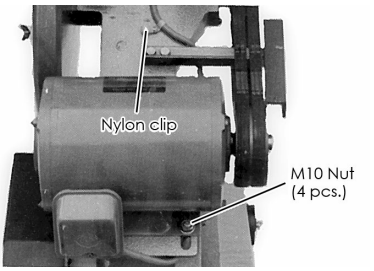


Fig. 10

6. Oiling

Apply oil to the slideway of the leg and shaft approximately once a month to ensure smooth shaft rotation. (Fig. 11)

(Machine oil is switable.)

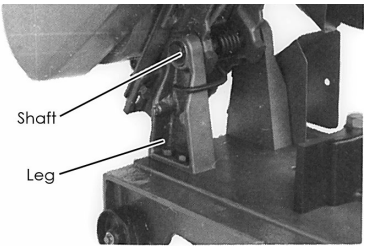


Fig. 11

7. Cleaning

Occasionally use a cloth to wipe off chips and dust from the machine body.

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