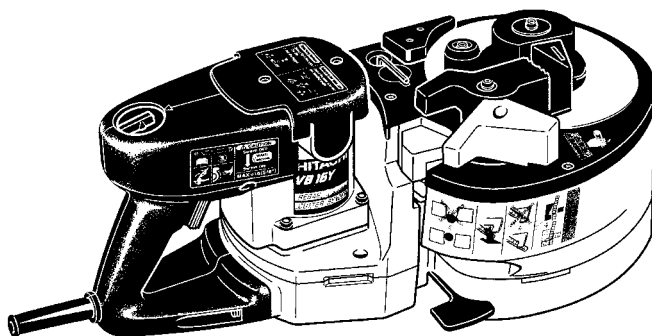


HITACHI

Portable Rebar Cutter/Bender Model VB 16Y

Handling instructions



NOTE:

Before using this Electric Power Tool, carefully read through these HANDLING INSTRUCTIONS to ensure efficient, safe operation. It is recommended that these INSTRUCTIONS be kept readily available as an important reference when using this power tool.



Hitachi Koki

GENERAL OPERATIONAL PRECAUTIONS

WARNING! When using electric tools, 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 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 and infirm persons 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 and infirm persons.
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 saw to cut 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 footwears are recommended when working outdoors. Wear protecting hair covering to contain long hair.
9. Use eye 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 receptacle. Keep the cord away from heat, oil and sharp edges.
12. Secure work. Use clamps or a vise to hold the work. It is safer than using your hand and it frees both hands to operate 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 cords periodically and if damaged, have it repaired by authorized service center. 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 handling instructions. Have defective switches replaced by an authorized service center. 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 handling instructions, 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.

PRECAUTIONS ON USING PORTABLE REBAR CUTTER/BENDER

WARNING!

1. Be sure to use the unit with the rated voltage specified on the nameplate. Use of the unit at a voltage exceeding the specification on the nameplate can result in a dangerously high rotation speed and injury.
2. Avoid any work exceeding the maximum capacities of the unit described in the specifications. Never cut and/or bend any hard materials such as PC (Precast concrete) steel, etc. Materials of this type are likely to scatter into pieces and cause injuries.
3. If the unit malfunctions during operation or you hear any abnormal noise, immediately turn off the switch and stop operation. Contact the store where you bought the unit or an Authorised Hitachi Service Center, and ask for checkup and/or repair. Use of the unit without checkup and repair can result in injury.
4. Make absolutely sure that the cutter cover is closed when you don't carry out the cutting work. If the cover is kept open, the cutter can jam on foreign objects and cause serious accidents. (Fig. 1)

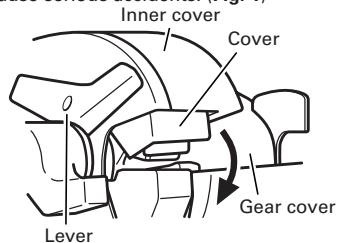


Fig. 1

5. While turning switches, never put your hand close to the cutter, reaction stopper, or bending roller. Bringing your hand close to these components can result in serious injury.

6. If you accidentally drop the unit or knock it against something, thoroughly examine the unit and ensure that there are no damages, cracks, or deformations on the cutter and unit.
7. If you use the machine continuously, the inner cover and gear cover can become hot. After such continuous use, do not touch the inner cover and gear cover. (Fig. 1)

8. Do not immerse unit in water as this may cause malfunction or electric shock.
- CAUTION:

○ Install the cutter and accessories securely according to the handling instructions. If you fail to install them properly, they may come off and cause an injury.

○ Be sure to unplug the power cord from the receptacle when the cutter is checked, cleaned, and replaced. Failure to do so can result in a serious injury.

SPECIFICATIONS

Voltage	230 V ~	240 V ~
Power Input	570 W	590 W
Capacities	(1) Material: Rebar, equivalent grades: 250N, 300E, 500L, 500N, 500E	
Number of piece(s) that can be processed at one time	Cutting ø10 mm 2 pieces ø12 mm 1 piece ø16 mm 1 piece	Bending ø10 mm 3 pieces ø12 mm 2 pieces ø16 mm 1 piece
Weight	17.0 kg (excluding cord)	

STANDARD ACCESSORIES

- (1) Allen key (For M5 hexagon socket bolt) 1 (attached to unit)
- (2) One set of cutters 1 (attached to unit)
- (3) Carrying case 1

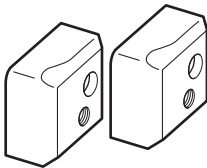
* This is used when the bending diameter of a rebar is changed to (bent diameter: R 19).

APPLICATIONS

- Cutting of rebar
- Bending of rebar

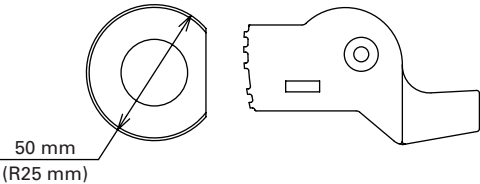
OPTIONAL ACCESSORIES (sold separately)

1. Cutter



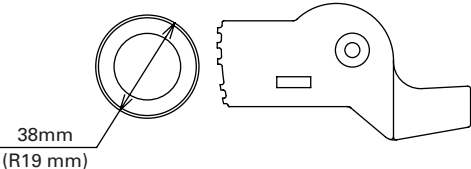
* One set containing two pieces

2. Center Roller (D 50) Set



* This is used when the bending diameter of a rebar is changed to (bent diameter: R 25).

3. Center Roller (D 38) Set



PRIOR TO OPERATION

- WARNING!

Before use, check the following items. Concerning items 1-7, always be sure to check them before plugging the power cord into the receptacle.

1. Power source

Ensure that the power source to be utilized conforms to the power requirements specified on the product nameplate.

Also, avoid using DC power or engine generators. Not only will the tool get damaged but an accident can result.

2. Power switch

Ensure that the power switch is in the OFF position. If the plug is connected to a receptacle while the power switch is in the ON position, the power tool will start operating immediately, which could cause a serious accident.

3. Extension cord

When the work area is removed from the power source, use an extension cord of sufficient thickness and rated capacity. The extension cord should be kept as short as practicable.
- CAUTION:

Damaged cord must be replaced or repaired.

- 4. Preparation and confirmation of working environment**
 Check and confirm if the workplace is in proper conditions as mentioned in the general operational precautions item 2.
- 5.** For safety sake, use the provided Allen key to make absolutely sure that the hexagon socket bolt is securely clamped. Use of the unit with the bolt in a loosely clamped condition can result in damage to the unit and cutter as well as accidents.

- 6. Confirm that the cutter is in sharp condition.**
 Make certain that the cutter is in a sharp condition. Continued use of a worn out and deformed cutter with dull edges results in damage to the unit and cutter as well as accidents.
- 7. Check plug receptacle.**
 If a receptacle jounces or a plug comes out easily when a power cord is plugged in, the receptacle needs to be repaired. Consult the nearest electric service station for repair. Continued use of the defective receptacle can result in overheating and accidents.

PICTGRAPH ILLUSTRATION AND EXPLANATION

Read handling instructions before use.

Do not use this electric power tools in wet weather conditions.

If the switch is turned off and then immediately turned on again, the motor may not start. Wait for at least one full second before attempting to turn the motor on again after it has been switched off.

Begin operation only after ensuring that there are no people within the turning range of the material to be bent.

Never bring your hand close to the cutter during operation.

Avoid any work exceeding the maximum capacities. (Rebar diameter Ø16 mm)

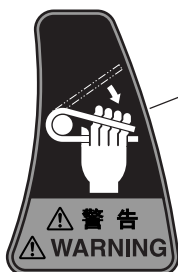
(Returning Halfway)

① Select RETURN with the dial.

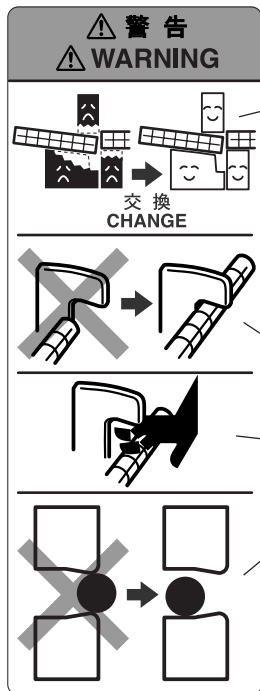
① Pull the trigger.

(Selecting the rebar size)

Select the rebar size and the bending angle.



- If you bend the rebar with a large angle while placing your hand onto it, there is a fear of getting your hand caught in by the fold-back reaction of the rebar. Never place your hand onto the position where the rebar may fold back.



- The cutter blade can get worn out by repeated rebar cutting. Continued use of a worn-out cutter can result in the damage and the broken pieces flying around. Replace it with a new cutter after approximately 8,000 times of cutting as a rough guide.
- The machine is so designed that the upper cutter and the grip rubber can support a rebar. If the grip rubber gets worn out, there is a fear that it cannot sufficiently hold the rebar and gets broken down with its parts flying around, etc. If the grip rubber cannot hold the rebar much longer, replace it with a new grip rubber.
- During cutting work, securely hook the rebar to the reaction stopper B. Furthermore, secure enough length of a rebar to be hooked to the reaction stopper B.
- Avoid bringing your hand near to the reaction stopper B during operation; otherwise, you may get your finger caught in or may run the hazard of other injuries.
- Set the rebar in the center or the recess of the cutter during cutting work. Any cutting work with the rebar set on corners or ends of the cutter can result in the pieces of broken rebar flying around or the damage to the cutter and the machine.

HOW TO USE (CUTTING)

WARNING!

- Note that the unit is not a hand held tool. Be absolutely sure to use the unit only after placing it on stable spots such as floor, ground, etc.
- Never bring your hand close to the cutter during operation.
- Never bring your hand close to the reaction stoppers A and B during operation.
- Do not cut any materials other than the rebars. If you attempt to do so, the material can splinter into pieces and scatter.
- Do not cut any rebar exceeding the maximum capacities of the unit described in the specifications.
- The rebar you are cutting may have a hard spot in it. Quality may vary within each rebar. Do not attempt to cut NON-GRADE rebar.

- The bending roller moves even during cutting operation. Never bring your hand close to the bending roller.
- The cutter blade can get worn out by repeated cutting of the rebar. Continued use of a worn-out cutter can result in the damage and the broken pieces flying around. Replace it with a new cutter after approximately 8,000 times of cutting as a rough guide.
- The machine is so designed that the upper cutter and the grip rubber can support a rebar. If the grip rubber gets worn out, there is a fear that it cannot sufficiently hold the rebar and gets broken down with its parts flying around, etc. If the grip rubber cannot hold the rebar much longer, replace it with a new grip rubber. (For replacing the grip rubber and repairing, ask the store where you purchased it or the Hitachi Koki Power Tool Center.)

- During cutting work, securely hook the rebar to the reaction stopper B. Furthermore, secure enough length of the rebar to be hooked to the reaction stopper B.
- Set the rebar in the center or the recess of the cutter during cutting work. Any cutting work with the rebar set on corners or ends of the cutter can result in the pieces of broken rebar flying around or the damage to the cutter and the machine.

1. Cutting (Fig. 2)

- (1) Turn the lever in the direction of the arrow mark and open the cover.
- (2) Set the setting dial at the “cut” position. (Turn the setting dial all the way clockwise.) (Fig. 2)
- (3) Set the unit in the position shown in Fig. 2.
- (4) Set the rebar to be cut on the lower cutter.
- (5) When the rebar is set, make sure that either the reaction stopper A or B is hitched to the rebar.
- (6) Pull the switch trigger and cut the rebar.

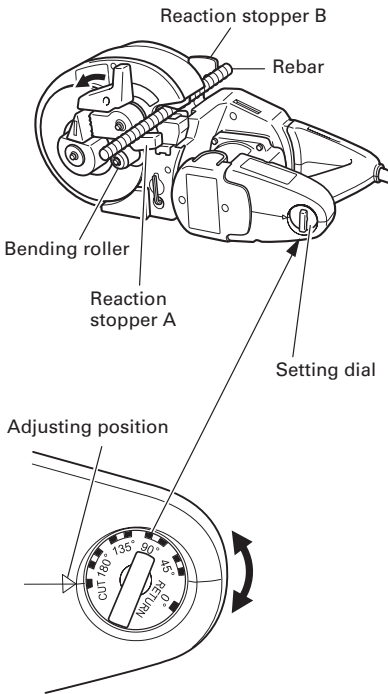


Fig. 2

CAUTION:

- For the sake of safe operation, this unit is designed so that the switch cannot be inadvertently switched on. When switching the tool on, press the lock button and then pull the switch trigger (Fig. 3). If the switch trigger is pulled without pressing the lock button first, the switch may be damaged. Please use care when switching the tool on.
- Even after the cutting has been completed, continue pulling the switch trigger until the motor starts to run in the reverse direction and the cutter starts to return. If the switch trigger is released too early, the cutter will not return and the trigger will have to be pulled again.

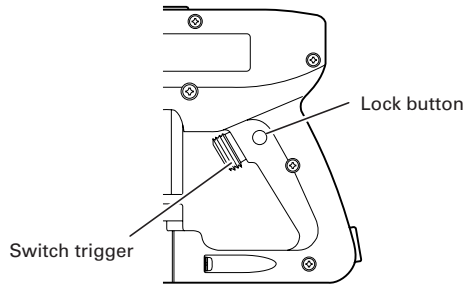


Fig. 3

- If the switch is turned off and then immediately turned on again, the motor may not start. Wait for at least one full second before attempting to turn the motor on again after it has been switched off.
- A slip clutch is built in the machine to protect the mechanism.

If you process the material with the diameter or quality beyond the capacity, the slip clutch can sometimes function. In such a case, stop processing immediately and check the material.

When the slip clutch works, a big slip noise occurs, but it's not a malfunction.

2. Removing the rebar during cutting operation (Fig. 4)

If the switch trigger is released in the middle of cutting, the cutter can come to a stop at a halfway position, jamming the rebar in the unit.

When this occurs, you can either pull the switch trigger again and cut off the rebar, or you can free the rebar by bringing the upper cutter back up to the home position by carrying out the following procedure. (Fig. 4)

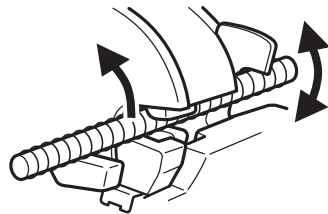


Fig. 4

○ Removing (Fig. 5)

Set the setting dial to the “RETURN” position as shown in Fig. 5 and pull the switch trigger again.

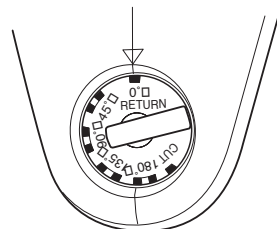


Fig. 5

SERVICE LIFE AND REPLACEMENT OF THE CUTTER

1. Service life of cutter (Fig. 6)

Repeated cutting of the rebar can result in the “wear and tear”, “deformation”, “nicked edges”, etc. Using the cutter under such circumstances will not only damage the machine but also there will be a fear of the broken cutter fragments flying around. Replace it with a new cutter after cutting about 8,000 pieces of rebar (a rough guide).

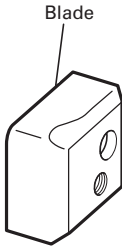


Fig. 6

2. Before removing the cutter

WARNING!

To prevent accidents, always be sure to turn the switch OFF and unplug the power cord from the receptacle.

- (1) Pull the switch lightly and let the upper cutter move slowly. When the hexagon socket bolt that fixes the upper cutter comes out of the cam cover, turn the switch OFF and stop the motor.

- (2) Unplug the power cord from the receptacle.

3. Removal

- If you remove the hexagon socket bolt using the provided Allen key, you can remove the cutter. (Pushing the cutter guard up in the direction of the arrow shown in Fig. 7, facilitates removal of the upper cutter.)

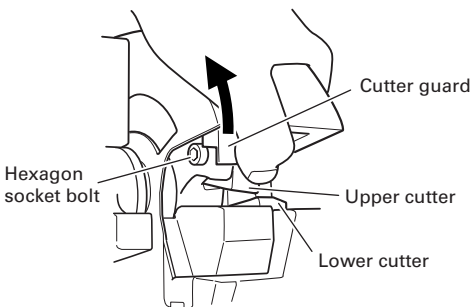


Fig. 7

- Removal of the lower cutter can be easily made if the lower cutter is wrenched with a Phillips head screwdriver as shown in the following diagram. (Fig. 8)

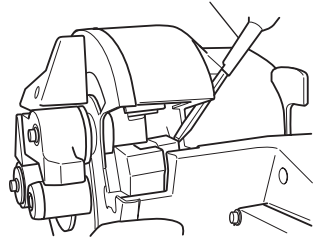


Fig. 8

4. Mounting

- (1) Get rid of dust around the cutter installing section and clean it up.
- (2) Align the hole of a new cutter and the position of a pin, and insert it into the installing section.
- (3) Also replace the hexagon socket bolt (packed along with the cutter) with a new one simultaneously, completely tighten it using the attached Allen key, and then fix the cutter.

HOW TO USE (BENDING)

WARNING!

- Note that the unit is not a hand-held tool. Be absolutely sure to use the unit only after placing it on a stable spots such as floor, ground, etc.
- Never bring your hand close to the bending roller during operation.
- Never bend any materials other than the rebars. If you attempt to do so, the material can splinter into pieces and scatter.
- Do not bend any rebar exceeding the maximum capacities of the unit described in the specifications. Never bend any hard materials such as PC (Precast concrete) steel. Materials of this type are likely to scatter into pieces and cause injuries.
- The rebar you are bending may have a hard spot in it. Quality may vary within each rebar. Do not attempt to bend NON-GRADE Rebar.
- Never place your hand onto the bending side of the rebar. If you do so, your hand may be caught in the mechanical parts.
- Bend less than every 3 pieces of rebar with a 10 mm diameter, less than every 2 pieces with a 12 mm diameter, and every 1 piece with a 16 mm diameter.
- Remember that the cutter moves even during the bending operation, thereby, close the cutter cover without fail.
- Begin operation only after marking sure that there are no people within the turning range of the material to be bent.
- Reserve an extra length of at least 200 mm on the bending length of the rebar to be bent. (Fig. 9)
If the extra length is not long enough, the rebar can come off during bending operation, or it can break into fragments and scatter dangerously.

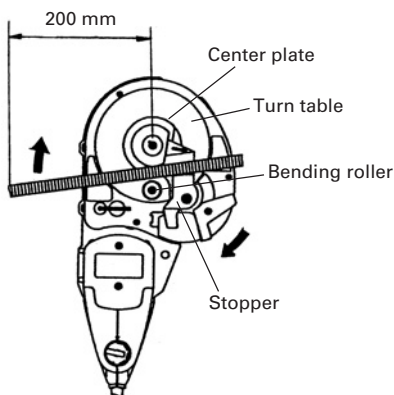


Fig. 9

- Place the rebar on the center plate and set it so that it is horizontal with the turntable surface. If the side that is to be bent is set inclined upward, the rebar can come loose from the bending roller while bending causing it to fly off. (Fig. 10)

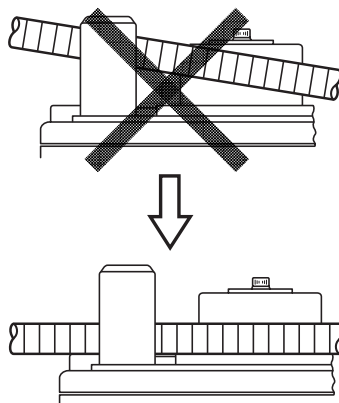


Fig. 10

- When bending multiple rebars at one time, some may come off the bending roller and guide, etc., and therefore exercise caution and set them horizontally.
- If you bend the rebar with a large angle while placing your hand onto it, there is a fear of getting your hand caught in by the fold-back reaction of the rebar. Never place your hand onto the position where the rebar may fold back.
- Do not bend more than 50 rebars in one session as this will overload the motor, and may cause it to burn out.

1. Setting bending angles by setting dial

The bar can be bent according to the angles indicated on the setting dial, as shown in Fig. 11.

Dial indication	45°	90°	135°	180°
Condition of rebar				

Fig. 11

In bending the rebar of 10 mm, 12 mm, and 16 mm diameters, a difference takes place in the bending angle even in the same dial position depending upon the difference of rebar's thickness. Slightly change a position of the setting dial depending upon the rebar's diameter even with the same bending angle as illustrated in the top diagram on the left column. (Fig. 12)

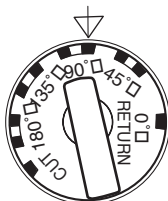


Fig. 12

Size of rebar	Colors of indicated marks
ø10 mm	White
ø12 mm	Red
ø16 mm	Yellow

NOTE:

Even at the same dial setting position, the bending angle can sometimes differ if the diameter or hardness of the rebar is different. Use the angle marks merely as a rough guideline.

2. Ordinary bending

- (1) Set the unit in the position with the turntable up as shown in Fig. 13.

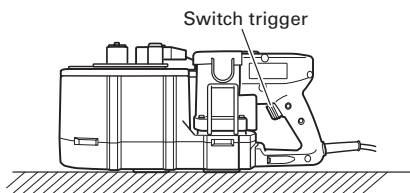


Fig. 13

- (2) Make sure that the cover is closed.
- (3) Set the setting dial at the desired angle.
- (4) Place the rebar on the stopper of the center plate and set it correctly as shown in **Fig. 9**.
- (5) Pull the switch trigger and bent the rebar.
- (6) Continue pulling the switch trigger until the motor makes reverse rotation and the bending roller starts to return. (Once the bending roller starts to return, it will automatically return all the way to the home position even if the switch trigger is released.)

3. Bending by eye measurement

By pulling the switching trigger little by little, you can bend the rebar to your desired angle by eye measurement in addition to the dial setting.

- (1) Set the setting dial to a larger angle than you desire.
- (2) Pull the switch trigger lightly and bend the rebar slowly.
- (3) When the rebar is bent to the desired angle, stop pulling the switch. If the bar is still small of the desired angle, pull the switch again.
- (4) Remove the rebar after bending has been finished. Then, pull the switch once more and return the bending roller to the home position. (Continue pulling the switch until the bending roller begins reverse rotation.)

4. Removing rebar during bending operation

When bending out at a low speed in "bending by eye measurement", the rebar can sometimes get caught in the bending roller due to its own flexure.

If this occurs, you can return the bending roller to the home position by pulling the switch again after setting the setting dial to the "return" position. This is the same method used to remove the rebar when it gets caught during cutting operation. (**Fig. 14**)

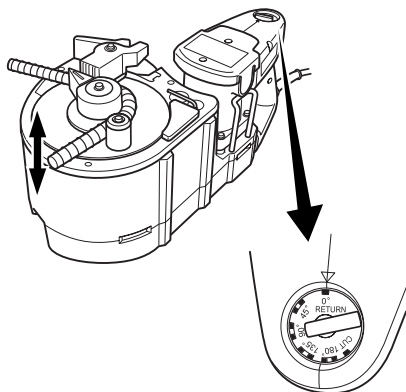


Fig. 14

5. Using hole to fix unit in place

A hole is provided at the center of the unit to fix and stabilize it. This hole comes in quite handy when used in the following manner. (**Fig. 15**)

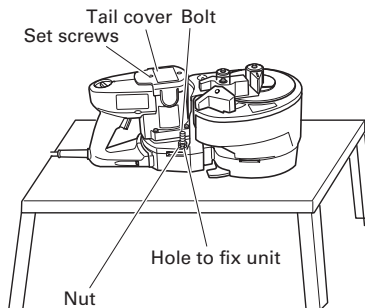


Fig. 15

- For bending operation when the unit is fixed to a work bench.
This hole will prove very convenient when the unit is bolted to a suitable work bench. (Bolt size M10, less than W3/8.)

MAINTENANCE AND INSPECTION

WARNING!

To prevent accidents, always be sure to turn the switch OFF and unplug the power cord from the receptacle.

1. Inspecting the mounting screws

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.

2. Maintenance of the motor

The motor unit winding is the very "heart" of the power tool. Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

3. Inspecting the carbon brushes

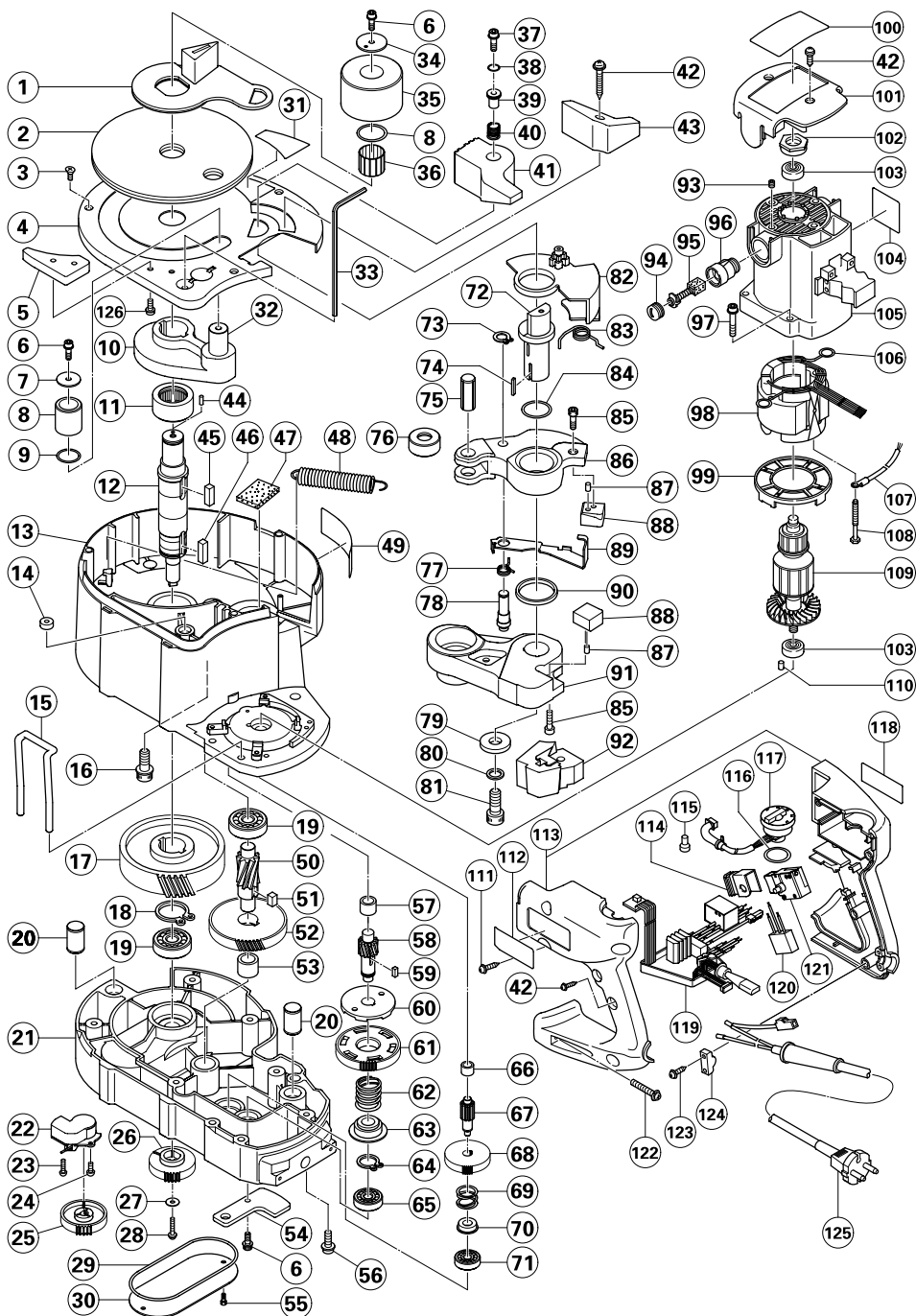
For your continued safety and electrical shock protection, carbon brush inspection and replacement on this tool should ONLY be performed by a Hitachi Authorized Service Center.

4. Replacing supply cord

If the supply cord of Tool is damaged, the Tool must be returned to Hitachi Authorized Service Center for the cord to be replaced.

NOTE:

Due to HITACHI's continuing program of research and development, the specifications herein are subject to change without prior notice.



Item No.	Code No.	Q'ty	Remarks
1	319-692	1	
2	319-691	1	
3	320-264	3	M4 × 12
4	319-690	1	
5	320-427	1	
6	313-082	3	M5 × 16
7	319-696	1	
8	319-695	1	
9	944-486	2	1AP-20
10	319-678	1	
11	320-420	1	
12	319-679	1	
13	319-675	1	"19, 47, 57, 66"
14	307-607	1	
15	316-225	1	
16	319-676	2	M8 × 25
17	319-681	1	
18	962-553	1	
19	630-2VV	2	6302VVCMP2L
20	— — — —	2	
21	319-660	1	"19, 20, 53, 65, 71"
22	316-213	1	"23, 25"
23	316-214	1	D3 × 12
24	949-215	2	M4 × 8
25	316-212	1	
26	316-212	1	
27	962-569	1	
28	987-203	1	M4 × 12
29	319-685	1	
30	319-686	1	
31	— — — —	1	
32	319-680	1	
33	311-699	1	4MM
34	319-694	1	
35	319-714	1	"6, 37, 41"
36	319-693	1	
37	313-077	1	M5 × 25
38	875-638	1	S-12
39	320-425	1	
40	320-426	1	
41	— — — —	1	
42	301-653	7	D4 × 20
43	319-697	1	
44	949-749	1	D3 × 8
45	967-124	2	7 × 7 × 22
46	948-081	2	7 × 7 × 25
47	316-186	1	
48	319-677	1	
49	— — — —	1	
50	319-682	1	
51	998-468	1	7 × 7 × 12
52	319-683	1	
53	930-076	1	
54	319-661	1	
55	316-228	2	M4 × 10
56	880-474	7	M6 × 16
57	954-789	1	
58	319-707	1	"59-64"
59	930-511	1	4 × 4 × 10
60	319-708	1	
61	319-709	1	
62	319-710	1	
63	319-711	1	
64	939-543	1	

Item No.	Code No.	Q'ty	Remarks
65	600-0VV	1	6000VVCMP2L
66	316-185	1	
67	319-684	1	"68-70"
68	— — — —	1	
69	— — — —	1	
70	— — — —	1	
71	608-VVM	1	608VVC2PS2L
72	319-668	1	
73	939-540	1	
74	971-750	2	3 × 3 × 20
75	319-664	1	
76	319-663	1	
77	319-666	1	
78	319-667	1	
79	319-673	1	
80	320-424	1	M12
81	319-674	1	M12 × 20
82	319-688	1	
83	319-687	1	
84	872-470	1	S-26
85	878-181	2	M5 × 15
86	319-662	1	
87	980-258	2	
88	319-706	2	
89	319-665	1	
90	319-669	1	
91	319-671	1	
92	319-689	1	
93	938-477	2	M5 × 8
94	935-829	2	
95	999-043	2	
96	971-001	2	
97	313-585	4	M5 × 30
98	340-500F	1	"106"
99	980-931	1	
100	— — — —	1	
101	316-227	1	
102	310-111	1	
103	318-362	2	
104	— — — —	1	
105	310-146	1	"93, 96"
106	930-703	1	
107	990-861	1	
108	953-121	2	D5 × 50
109	360-552F	1	
110	931-701	1	
111	302-089	2	D5 × 20
112	— — — —	1	
113	319-705	1	
114	995-362	1	
115	959-140	7	50091
116	878-609	1	S-24
117	319-718	1	
118	— — — —	1	
119	319-719	1	
120	994-273	1	
121	319-716	1	
122	316-229	2	M5 × 20
123	984-750	2	D4 × 16
124	937-631	1	
125 1	320-428	1	
125 2	320-429	1	"GBR"
125 3	320-430	1	"SUI"
126	998-471	2	M5 × 12

