

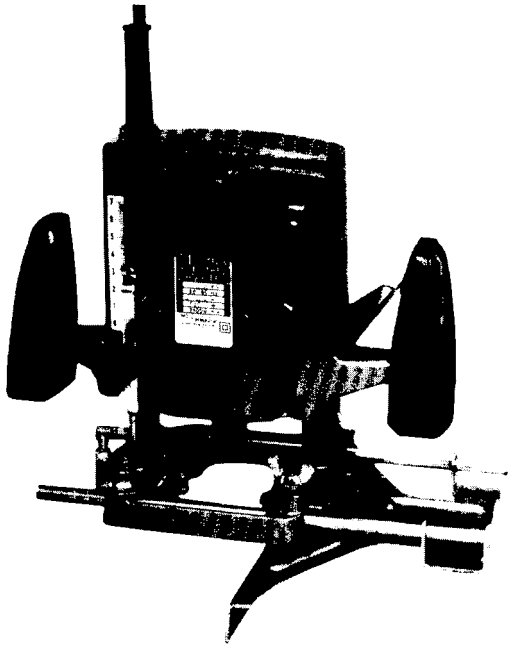


HITACHI

ROUTER

MODEL TR-8

INSTRUCTION MANUAL



Note

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



DOUBLE INSULATION

We sincerely thank you for selecting a HITACHI ELECTRIC POWER TOOL. To operate this electric power tool safely and efficiently, please read this INSTRUCTION MANUAL carefully to get a good understanding of the precautions in operation, capacity of the electric power tool, use and the like.

IMPORTANT INFORMATION : SAFETY RULES FOR POWER TOOLS

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 INSTRUCTIONS

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.**
 - Don't expose power tools to rain.
 - Don't use power tools in damp or wet locations.
 - Keep work area well lit.
 - Don't use tool in presence of flammable liquids or gases.
 - Power tools produce sparks during operation. They also spark when switching ON/OFF. Never use power tools in dangerous sites containing lacquer, paint, benzine, thinner, gasoline, gases, adhesive agents, and other materials which are combustible or explosive.
3. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example; pipes, radiators, ranges, refrigerator enclosures.
4. **KEEP CHILDREN AWAY.** Do not let visitors contact 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 dry, and high or locked-up place—out of reach of children.
6. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
7. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose 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.
 - All persons in the area where power tools are being operated should also wear safety eye protectors and face or dust masks.
10. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect

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 tool.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
Inspect tool 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 TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
16. **AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
17. **OUTDOOR USE EXTENSION CORDS.** When tool 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 tool when you are tired.
19. **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, 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 authorized service center.
Do not use tool if switch does not turn it on and off.
20. **AVOID USING A POWER TOOL FOR APPLICATIONS OTHER THAN THOSE SPECIFIED.**
Never use a power tool for applications other than those specified in the instruction manual.
21. **ENSURE SAFE OPERATION THROUGH CORRECT HANDLING.**
Secure safe operation through correct handling by observing the instructions described herein.

Do not employ accessories other than those specified herein; otherwise, a hazardous condition may be created.

Never allow a power tool to be used by persons not familiar with correct handling (such as children) or by those who cannot handle the tool correctly.

22. **CONFIRM THAT NO ITEMS SUCH AS AN ELECTRIC CABLE OR CONDUIT ARE BURIED INSIDE.** In places where live wiring may be hidden behind a wall, floor, ceiling, etc. do not hold or contact any metal parts of the tool. In such cases, metal parts could become electrically live and present a serious shock hazard.
23. **KEEP THE RIGHT PARTS IN THE RIGHT POSITIONS.**
Do not remove covers and screws which have been factory-mounted. They perform important respective roles. Keep them in the right positions.
24. **SHOULD THE PLASTIC HOUSING OR HANDLE OF A POWER TOOL BE CRACKED OR DEFORMED, DO NOT USE IT.**
Since cracked or deformed parts may lead to an operator receiving an electric shock, do not use such a power tool. Immediately have it repaired.
25. **SECURELY MOUNT ACCESSORIES AND BLADES TO THE TOOL MAIN BODY.** Extra care must be taken when using tools on elevated location (such as a roof ladder, scaffold, or the like) to prevent injury to someone on a lower level in the event the tool and/or accessory should drop.
26. **ALWAYS KEEP THE MOTOR AIR VENT FULLY OPENED.**
A constantly open motor air vent is necessary to allow air to come in and out for cooling the motor. Do not allow it to become clogged up, even if dust is blown through it.
27. **OPERATE POWER TOOLS AT THE RATED VOLTAGE.**
Operate power tools at voltages specified on their nameplates.
28. **NEVER TOUCH THE MOVING PARTS.**
Never touch the moving parts such as blades, bits, cutters and others.
29. **STOP OPERATION IMMEDIATELY IF ANY ABNORMALITY IS DETECTED.**
Should a power tool be detected as out of order or should other abnormalities be observed during operation, stop using the tool immediately.
30. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.**
Don't leave tool until it comes to a complete stop.
31. **CAREFULLY HANDLE POWER TOOLS.**
Should a power tool be dropped or struck against hard materials inadvertently, it may be deformed, cracked, or damaged.
32. **DO NOT WIPE PLASTIC PARTS WITH SOLVENT.**
Solvents such as gasoline, thinner, benzine, carbon tetrachloride, and

alcohol may damage and crack plastic parts. Do not wipe them with such solvents. Wipe plastic parts with a soft cloth lightly dampened with soapy water.

33. **WHEN REPLACING A COMPONENT PART, ADOPT THE SAME TYPE.**
When replacing a component part with a new one, adopt the same type of new part. Also, never attempt to repair a power tool yourself.

34. **SAVE THESE INSTRUCTIONS**

SERVICE AND REPAIRS

All quality tools will eventually require servicing or replacement of parts due to wear from normal use. These operations should **ONLY** be performed by an **AUTHORIZED HITACHI POWER TOOL REPAIR SHOP.**

REPLACEMENT PARTS

When servicing use only identical replacement parts.

DOUBLE INSULATION SYSTEM ENHANCES SAFE OPERATION

To enhance safe operation of this electric power tool, HITACHI has adopted a double insulation system. The term "double insulation" used here denotes an insulation system with two insulations physically separated and arranged between the electrically conductive material connected to the power supply and the outer frame subject to contact by the operator. Thus, the power tool is termed double insulated and both the "回" mark and "Double insulation", or either one is indicated on the name plate. While no external grounding is required with this system, normal safety precautions as outlined in this manual must still be followed.



DOUBLE INSULATION

To maintain the effectiveness of the double insulation system, follow the precautions described below:

1. Always contact your dealer or an authorized HITACHI service agent when assembling, disassembling or replacing parts other than accessories or carbon brushes. Improper assembly and/or replacement with wrong parts may result in eliminating the double insulation-feature.
2. Clean the exterior of the tool with a soft cloth moistened with soapy water, and dry thoroughly. Chloric solvent, gasoline, and thinner will cause plastic components to dissolve.

PRECAUTIONS ON USING ROUTER

1. Don't touch the bit with bare hands immediately after working.
2. Confirm that no nails or any other foreign matters are on the material to be processed.
3. Do not carelessly put your finger on the switch.

NAME OF PARTS

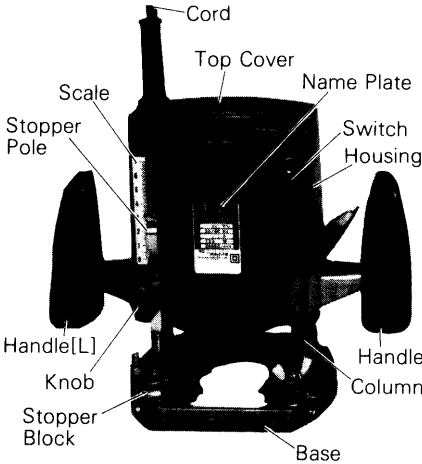


Fig. 1

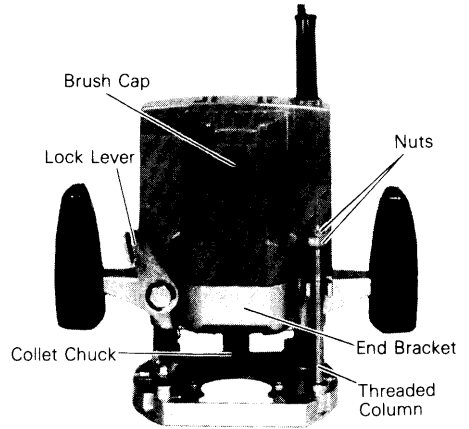


Fig. 2

SPECIFICATIONS

Motor:	Single-Phase, Series Commutator Motor
Power Source:	Single-Phase 115V AC 60Hz
Collet Chuck Capacity:	1/4"
Main Body Stroke:	2"
Current:	6.9A
No-load Speed:	24000 rpm
Weight:	6.6 lbs

ACCESSORIES

Caution: Recommended accessories for this Electric Power Tool are mentioned in this manual. The use of any other attachment or accessory might be hazardous.

STANDARD ACCESSORIES

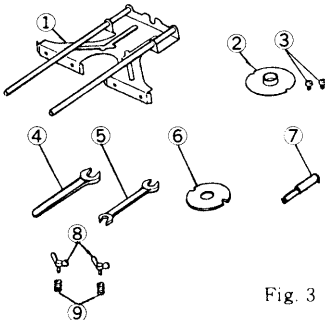


Fig. 3

1. Parallel Guide Ass'y (Code No. 971851)1
2. Template Guide (Code No. 956790)1
3. Screws (for mounting the template guide)
(Code No. 949234Z)2
4. Wrench (Code No. 879055).....1
5. Wrench (Code No. 971859).....1
6. Template Guide Adaptor (Code No. 956910Z).....1
7. Straight bit (for USA)(Code No. 971878).....1
8. Wing Bolt M6×15 (for mounting the parallel guide
ass'y) (Code No. 956924).....2
9. Lock Spring (for mounting the parallel guide ass'y)
(Code No. 947859).....2

Caution: Recommended accessories for this Electric Power Tool are mentioned in this manual. The use of any other attachment or accessory might be hazardous.

PREPARATION PRIOR TO OPERATION

Before using the Electric Power Tool, complete the following preparations.

1. Extension cord

Use an extension cord when the work site is removed from the power supply. In this case, an extension cord of sufficient thickness shall be used. Actually, use the shortest possible extension cord. **Caution:** Damaged cord must be replaced or repaired.

2. Confirming condition of the environment

Confirm that the work site is placed under appropriate conditions conforming to prescribed precautions.

BEFORE USE

Caution: Confirm the following points prior to connecting the plug to the power receptacle.

1. Confirm the applied power source

Be sure to operate the Electric Power Tool in the voltage specified on the name plate.

2. Confirm that the power switch is turned OFF

If the plug is connected to the power receptacle while the power switch is turned ON, the machine starts operating unexpectedly, inviting serious accidents. Prior to using the Electric Power Tool be sure to confirm that the power switch is turned OFF. Depress the ON [I] side of the switch for power ON and the OFF [O] side to switch power OFF.

3. Confirm that the bit is firmly secured.

For bit mounting procedures, refer to the section on Mounting and Dismounting Bits, below.

Since an operational hazard is liable to result when the bit is not firmly secured to the collet chuck, ascertain that the collet chuck is fully tightened prior to operating the router.

4. Confirm the power receptacle

If the power receptacle only loosely accepts the plug, the receptacle must be repaired. Contact the nearest electric store for repair service.

If such a faulty receptacle is used, it may cause overheating, resulting in a serious hazard.

MOUNTING AND DISMOUNTING BITS

Caution: Be sure to switch power OFF and disconnect the attachment plug from the power receptacle to avoid serious trouble.

1. Mounting bits

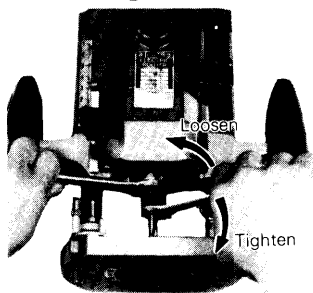


Fig. 4

(1) After deeply inserting the bit into the collet chuck hole, firmly tighten the collet chuck with the accessory wrenches. (Fig. 4)

Cautions: Be sure that the diameter of bit shank is the same size as the collet chuck capacity. Always tighten the collet chuck after inserting the bit; otherwise it will become scarred.

2. Dismounting bits

To dismount the bit from the collet chuck, follow the mounting procedures in reverse, starting with loosening the collet chuck with the accessory wrenches.

HOW TO USE

1. Adjusting the cutting depth

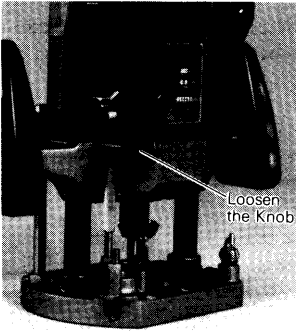


Fig. 5

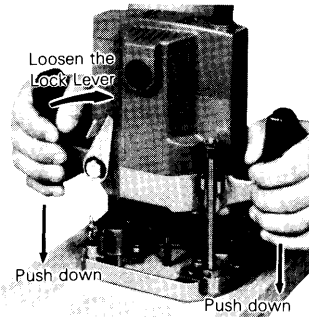


Fig. 6

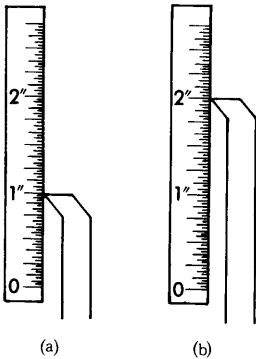


Fig. 7

(1) When adjusting the cutting depth, use the stopper pole and the scale.

① Upon loosening the knob, place the stopper pole against the stopper block or the cut depth setting screw.

② After loosening the lock lever, push down the handles until the bit tip slightly contacts the surface of the workpiece, and then clamp the lock lever. This state is termed "cut 0 (zero)." (Fig. 6)

③ Then read the stopper pole arrow position on the scale. Raise the stopper pole arrow position along the scale graduation until it attains the desired cutting depth, and then clamp the knob.

(Example) When a cutting depth of 1" is desired in the instance in Fig. 7(a), adjust the position as show in Fig.7(b).

(2) After loosening the lock lever, push down the handles until the stopper pole contacts the stopper block or the cut-depth setting screw; now the router is adjusted to the desired cutting depth.

(3) Nuts.....

It is possible to decrease the clearance between the bit tip and the workpiece by loosening and moving downward the two nuts on the threaded column.

This step provides convenience when moving the router to align the bit with the cutting place.

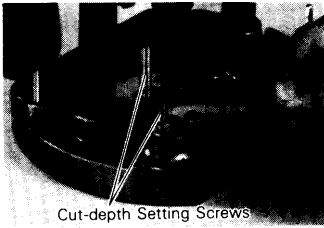


Fig. 8

(4) The cut-depth setting screws.....

Three different cutting depths can be concurrently set by adjusting the two cut-depth setting screws on the stopper block. Note that the nuts must be fully tightened with the wrench to prevent loosened cut-depth setting screws.

When adjusting the cutting depth without using the scale, force the stopper pole upward to prevent it from getting in the way.

2. Guiding Router

Since there are several ways of guiding the router, select the most convenient method according to your work requirements.

(1) **Parallel Guide Ass'y:** Use the parallel guide ass'y for chamfering along the workpiece side or for grooving.

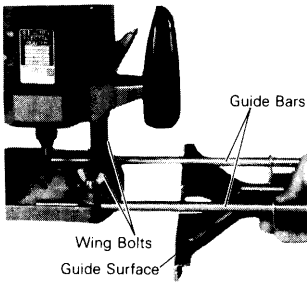


Fig. 9

To properly mount the parallel guide ass'y on the router, first put the lock spring (standard accessory) onto the wing bolt M6×15 (standard accessory) and insert the bolt in the screw hole on the base top of the unit, then insert the guide bars of the parallel guide ass'y into the holes on the router base, tighten the wing bolts after adjusting the distance from the bit to the guide surface, and then firmly secure the parallel guide ass'y to the base. (Fig. 9)

Feed the router in a manner that the guide surface of the parallel guide ass'y moves along the workpiece side, as shown in Fig. 19.

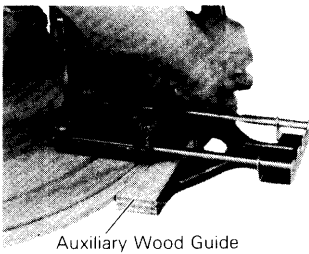


Fig. 10(a)

An auxiliary wood guide can be provided by using the holes on the guide surface. (Fig. 10(a) and 10(b))

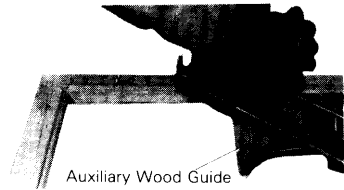


Fig. 10(b)

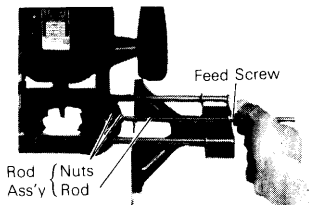


Fig. 11

Fine adjustment of the distance between the bit and the guide surface can be effected by using the feed screw ass'y. The feed screw ass'y is the optional accessory.

After mounting the feed screw on the parallel guide ass'y use the two nuts to secure the rod to the base. (Fig. 11)

Also, depressing the button on the feed screw disengages the screw and facilitates fast moving of the parallel guide ass'y.

(2) **Template Guide:** Use the template guide for producing a large quantity of identically shaped products by employing the template.

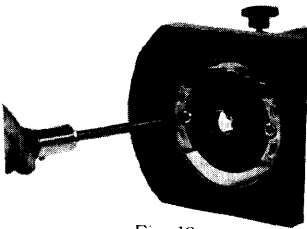


Fig. 12

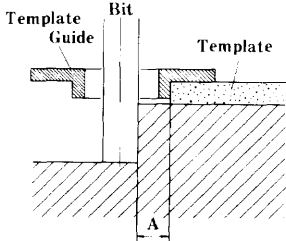


Fig. 13

Secure the template guide to the router base with two accessory screws. Note that the projection side of the template guide must face the bottom surface of the base at this time. (Fig. 12)

A template is a profiling mold made of plywood or thin lumber. When making a template, pay particular attention to the matters described below.

When the router has been used along the template interior plane, the dimension of the finished product will be less than the template by the dimension "A" between the outside of the template guide and the bit end is deducted in this instance.

The reverse is true when along the template exterior plane. (Fig. 13)

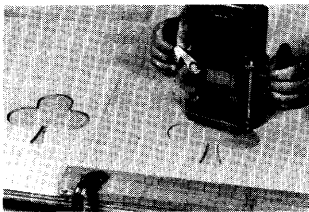


Fig. 14

Secure the template to the workpiece. Feed the router in the manner that the template guide moves along the template.

(3) **Router Base:** This method is highly convenient for working on a workpiece whose dimensions are too large to use the parallel guide ass'y.

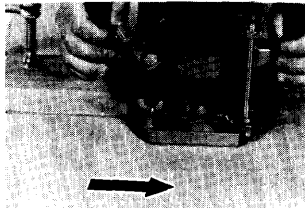


Fig. 15

Upon securing a straight piece of board (to be used as a guide) on the workpiece, feed the router in a manner that the flat side of the router base moves along the board guide.

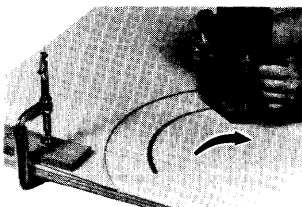


Fig. 16

It is possible to process a workpiece by guiding the curved side of the router base along a template having a large curve.

(4) **Bits with pilot:** It is convenient for trimming plywood, processing a decorative edge.

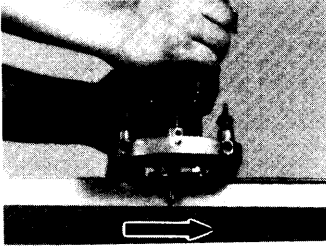


Fig. 17

The bit with pilot has the rounded shaft with no cutting edges on the lower portion of itself.

Feed the router by sliding the pilot along the side of the workpiece. (Fig. 17)

3. Cutting

(1) Turn ON the switch when the bit is separated from the workpiece. (Figs. 18 and 19)

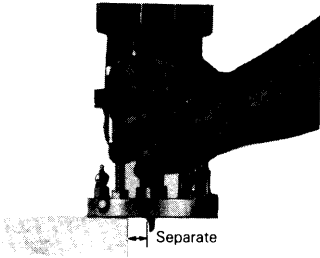


Fig. 18

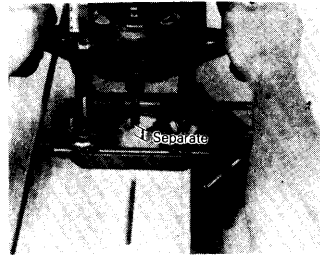


Fig. 19

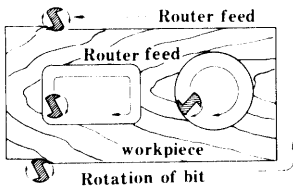


Fig. 20

(2) The bit rotates clockwise (in arrow direction of the housing).

To obtain effective cut results, use the router in conformity with the router feed direction shown in Fig. 20

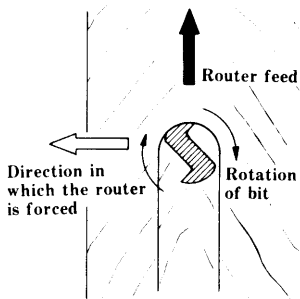


Fig. 21

(3) When the router is fed in the direction shown in Fig. 21, a certain force acts on the router that causes it to move in the ← direction. When operating, be sure to guide the router so that it is not moved in the ← direction.

MAINTENANCE AND INSPECTION

Caution: Be sure to switch power OFF and disconnect the plug during maintenance and inspection.

1. Inspecting the carbon brushes

The motor employs carbon brushes as expendable components.

If the brushes are worn, motor trouble may result. When brushes are worn down to the limit line, replace them with new brushes.

Also, keep the carbon brushes clean, so that they can be smoothly slide into the brush holders.

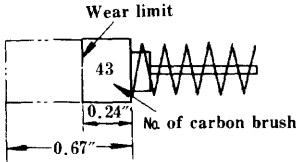


Fig. 22

When replacing carbon brushes with new brushes, be sure to use those for Hitachi Electric Router Type TR-8 corresponding to the illustrated number (43).

To replace a carbon brush, use a minushead screwdriver to disassemble the brush cap (Fig. 2) then remove the carbon brush together with the spring.

2. Inspecting tightness of various screws

Periodically inspect each screw tightness of individual components. If any screws are loosened, securely retighten them. Loosened screws, if unheeded, may cause a hazardous situation.

3. Adjusting the lock lever position

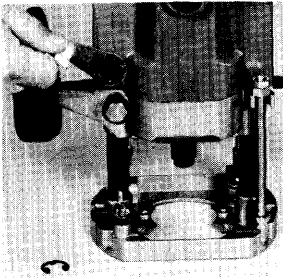


Fig. 23

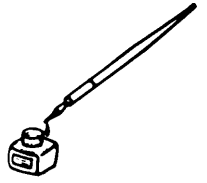
The lock lever part is provided with a brass lock piece to protect the column. When the lock piece is excessively worn, the lock position of the lock lever tends to drop. Should router operation and handling become difficult as a result, remove the E-type retaining ring and adjust the setting position of the dodecagonal hole on the lock lever and the hexagonal axis of the lock screw. (Fig. 23)

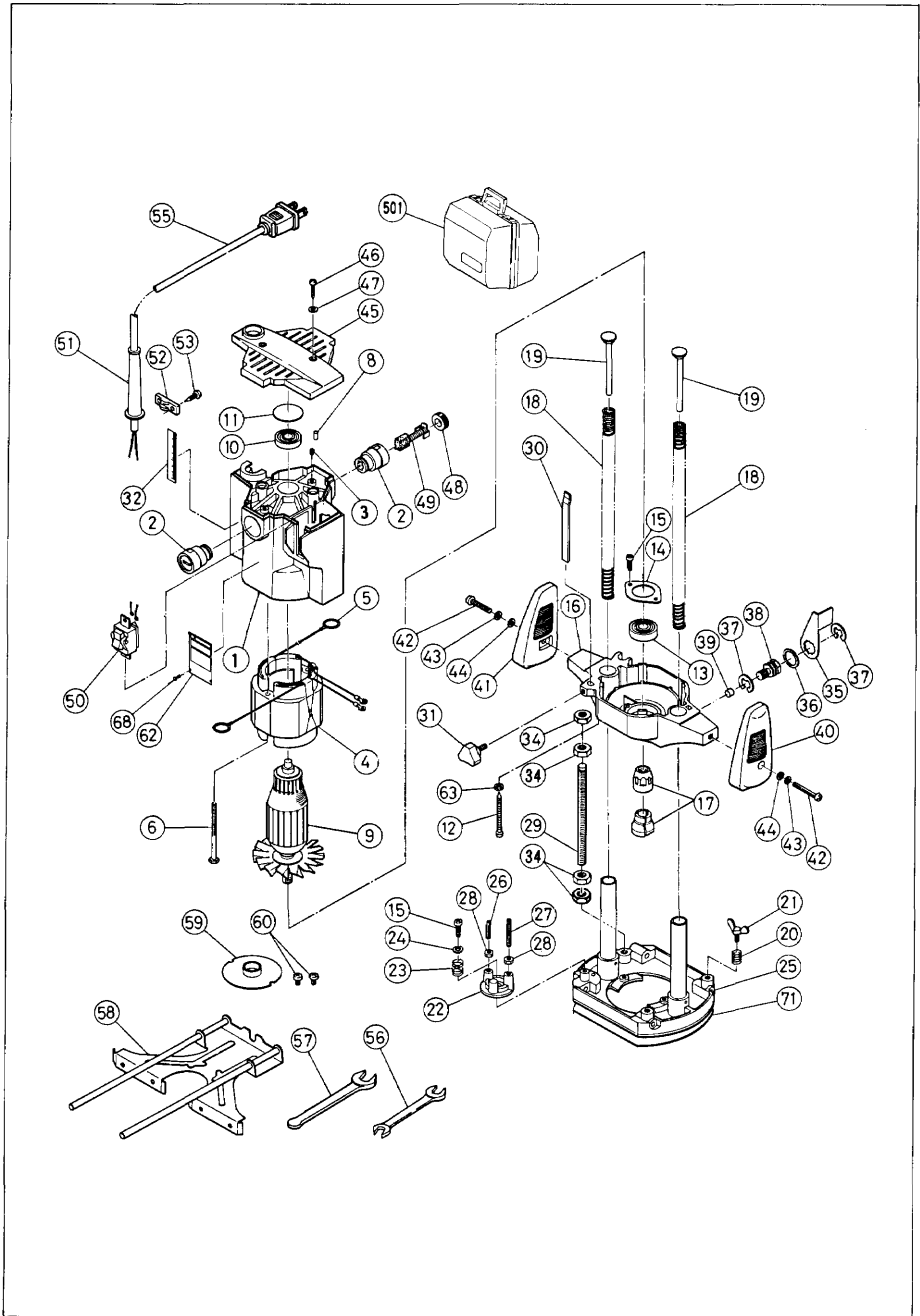
4. Oiling

To ensure smooth vertical movement of the router occasionally apply a few drops of machine oil to the sliding portions of the columns and the end bracket. (Figs. 1 and 2)

Note:

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





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