



MODEL FM 8

1. PRECAUTIONS IN SALES PROMOTION:

In the interest of promoting the safest and most efficient use of the Model FM8 Router by all of our customers, it is very important that at the time of sale the salesman carefully ensures that the buyer seriously recognizes the importance of the contents of the Handling Instructions, and fully understands the meaning of the precautions listed on the Caution Plate attached to each tool.

1-1. Handling Instructions:

Although every effort is made in each step of design, manufacture, and inspection to provide protection against safety hazards, the dangers inherent in the use of any electric tool cannot be completely eliminated. Accordingly, general precautions and suggestions for the use of electric power tools, and specific precautions and suggestions for the use of the Router are listed in the Handling Instructions to enhance the safe, efficient use of the tool by the customer. Salesmen must be thoroughly familiar with the contents of the Handling Instructions to be able to offer appropriate guidance to the customer during sales promotion.

1-2. Caution Plate:

Each Model FM8 unit is provided with a Caution Plate (illustrated below) which lists basic safety precautions in its use. Carefully ensure that the customer fully understands and follows these precautions before using the tool.

(1) For U.K., Italy, Holland, etc.:

CAUTION

- Read thoroughly **HANDLING INSTRUCTIONS** before use.
- Ensure that power supply is disconnected before replacing bit or carrying out any maintenance.
- Use protective glasses while operating.

(2) For F.R. Germany, Switzerland and Austria:

ACHTUNG

- Bedienungsanleitung vor Inbetriebnahme lesen.
- Vor jedem Aufspannen und Entfernen der Fräse und bei Instandsetzung die Netzanschlusßleitung vom Netz trennen.
- Tragen Sie beim Arbeiten eine Schutzbrille.

(3) For France:

ATTENTION

- **TRES IMPORTANT: lire avec attention la notice d'utilisation.**
- Avant de changer de couteau, veiller à ce que la machine soit débranchée. ● Utiliser des lunettes de protection au cours des travaux.

2. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY:

As general precautions and suggestions in the use and maintenance of the Router are contained in the Handling Instructions, this section is restricted to matters which require special attention in disassembly, reassembly and inspection. Prior to attempting disassembly/reassembly or exchanging of the router bit, ensure without fail that the plug is removed from the power source outlet.

During disassembly and reassembly, and at all other times as well, sufficient care must be exercised in handling to avoid damage to the columns of the base. Also, be very careful not to lose the D7.94 Steel Ball which is installed between the knob and the column.

The circled numbers in the descriptions below correspond to the item numbers in the Parts List and exploded assembly diagram.

2-1. Disassembly:

(1) Disassembly of Housing (B) ②: (See Fig. 4)
Remove the six D4 x 20 Tapping Screws ⑪.
Housing (B) can then be separated from Housing (A).

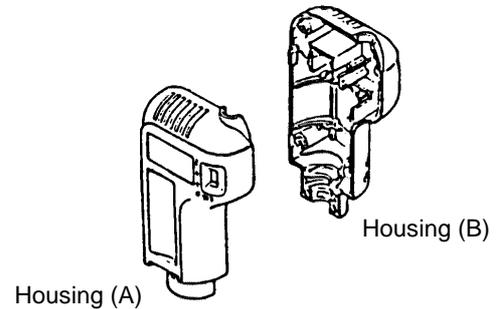


Fig. 4

(2) Disassembly of the Armature ⑬ and Stator ⑫:
At all times, be very careful not to damage the Armature. Remove the Brush Holders ④ and Carbon Brushes ③. The Armature ⑬ can then be withdrawn from the Stator ⑫, together with the Ball Bearings ⑱ ⑲, Rubber Ring ⑳ and Spindle ㉔.

(3) Disassembly of the Spindle ㉔: (See Figs. 5 and 6)
At all times, be very careful not to damage the Armature. First, remove the Collet ㉗ from the Spindle ㉔. Then, being very careful not to damage the fan, suspend the Armature ⑬ inside an appropriate tubular jig. (inner diameter of 55 mm) by supporting it with a steel plate with a thickness of 6 - 9 mm (see Fig. 5). Next, as illustrated in Fig. 6, fit a steel rod (external diameter of 6 - 7.9 mm) into the Spindle ㉔, and press down on the end of the steel rod with a hand press to separate the 6002VVCM Ball Bearing ㉕, C-Type Retaining Ring ㉘ and Spindle ㉔ from the Armature ⑬.

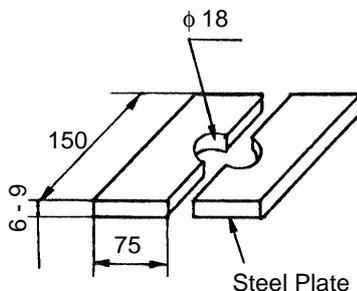


Fig. 5

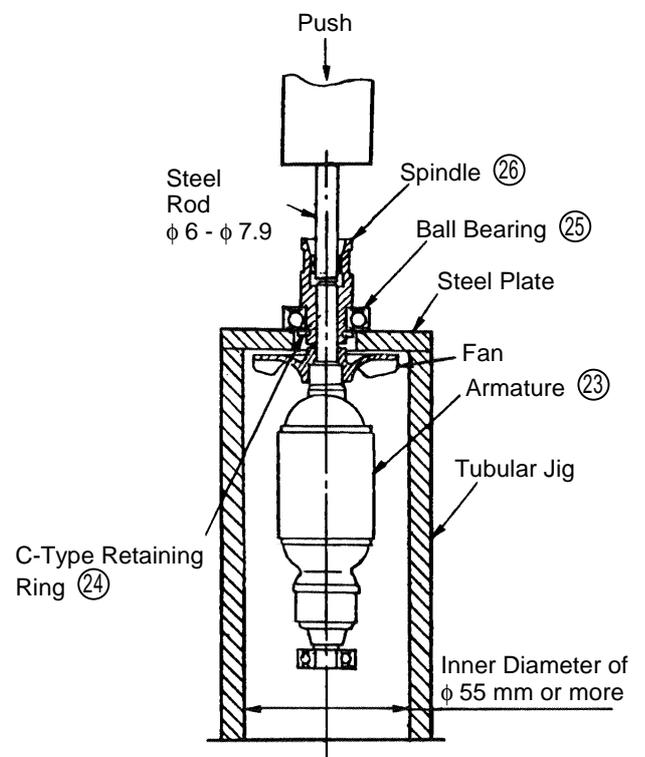


Fig. 6

Carefully inspect the removed 6002VVCM Ball Bearing ⑲ and C-Type Retaining Ring ⑳, and replace them with new parts if any damage is noted.

(4) Disassembly of the Holder ㉚:
First, remove the Knobs ㉙, and take out the D7.94 Steel Ball ㉛. Then, remove the M8 x 100 Bolt ㉜, the M8 Lock Nut ㉝, and the two M8 Nuts ㉞ to separate the Holder ㉚ from the Base ㉟.

2-2. Reassembly:

Reassembly can be accomplished by following the disassembly procedures in reverse. However, special attention should be given to the following items.

(1) Reassembly of the Spindle ㉔:

Press-fit the Spindle ㉔ onto the Armature ⑬ so that the dimension from the tip of the Spindle to the opposite end of the Armature is 159.3 ± 0.2 mm, as illustrated in Fig. 7. Also, be very careful to

ensure that the Spindle is properly fitted onto the Armature shaft, and not press-fitted at an angle.

- (2) Reassembly of the Armature (23) and Stator (22):
Mount the Rubber Ring (19) onto the outer circumference of the 608VVC2PS2-L Ball Bearing (18) on the Armature (23), and insert them into the Stator (22). Then put the assembled Stator (22), Armature (23) and Rubber Ring (19) into Housing (A), and confirm that the Armature (23) rotates smoothly.

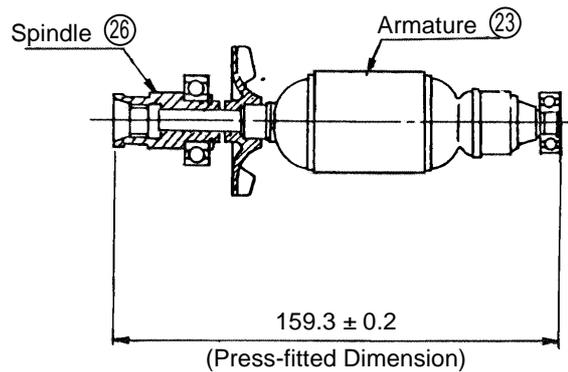


Fig. 7

- (3) Reassembly of Housing (B):
When reassembling Housing (B) to Housing (A), be very careful not to loosen and pinch any of the lead wires between the two parts.

- (4) Reassembly of the Base (37), Holder (32) and Related Parts:
[CAUTION] Before mounting the Holder (32) on the columns, apply grease (Hitachi Motor Grease No. 29 is recommended) to the outer surfaces of the columns.

Place the two Springs (35) onto the columns of the Base (37), and mount the Holder (32) on the columns so that it is properly aligned with the Base (37) as illustrated in Fig. 8. Then, assemble the M8 Lock Nut (39) and M8 Nuts (36) onto the M8 x 100 Bolt (38), position the M8 x 100 Bolt (38) as indicated in Fig. 8, and screw it into the Base (37) until the appropriate dimension from the bottom of the Base (37) to the upper surface of the Holder (32) is attained, as illustrated in Fig. 8. Finally, insert the D7.94 Steel Ball (41) into the threaded hole of the Holder (32) as indicated in Fig. 8, and mount the Knobs (31).

After the Knobs (31) have been mounted, confirm that the Holder (32) can be moved up and down smoothly when the Knob (Steel Ball side) is loosely fastened, and that the Holder is firmly fixed in position when the Knob (Steel Ball side) is firmly tightened.

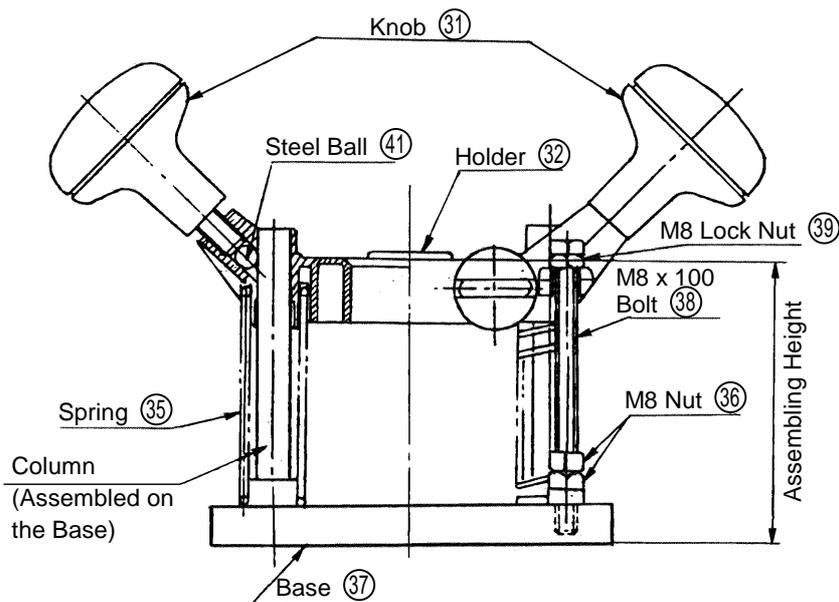


Fig. 8

2-3. Tightening Torques:

D4 Tapping Screws (10) (11) 15 - 25 kgf-cm.

2-4. Wiring Diagrams:

On models equipped with a Noise Suppressor ⑤ (see Fig. 9), carefully confirm appropriate terminal numbers on the Single Pole Switch ⑯ when connecting wiring. On the No. 1 terminal side, connect the Internal Wire ⑳ (grey-colored, with terminal) from the Stator ㉒, and the Internal Wire (with terminal) from the Noise Suppressor ⑤. On the No.3 terminal side, connect the Internal Wire (with terminal) from the Cord ⑧. Ensure that the Internal Wires are properly attached, and that the terminal screws are firmly tightened. Then connect the other Internal Wires of the Stator ㉒, Noise Suppressor ⑤, and Cord ⑧ with the Connector ⑦ (or Pillar Terminal ⑥).

On models not equipped with a Noise Suppressor, connect the internal wires as illustrated in Fig. 10.

< With a Noise Suppressor >

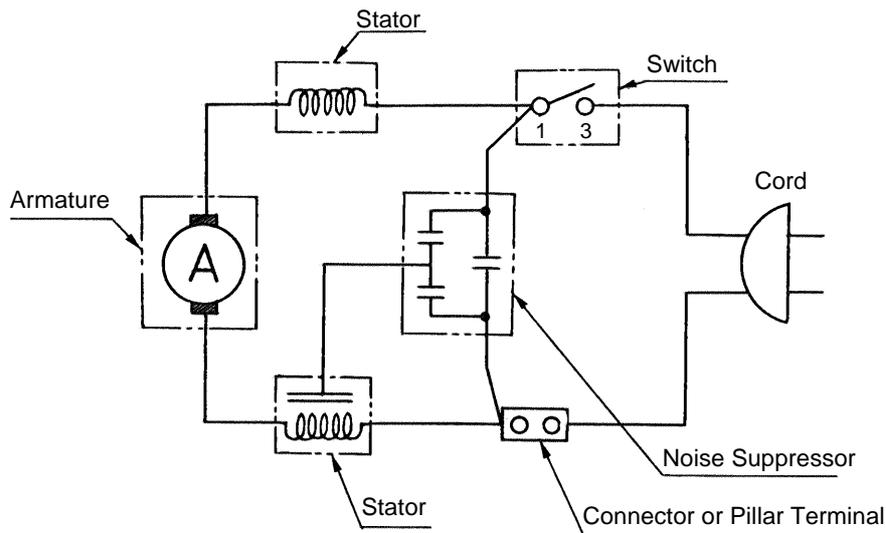


Fig. 9

< Without a Noise Suppressor >

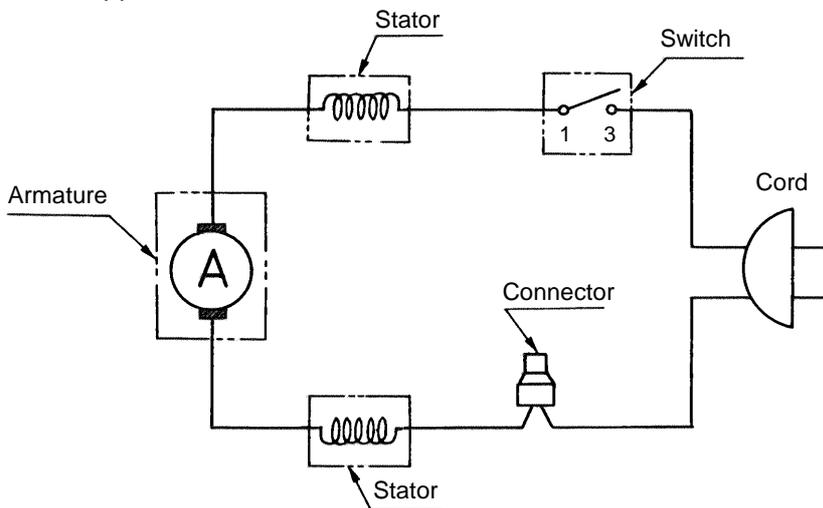


Fig.10

2-5. Insulation Tests:

On completion of disassembly and repair, measure the insulation resistance and conduct dielectric strength test.

Insulation Resistance:	7MΩ or more with DC 500V Megohm Tester	
Dielectric Strength:	AC4000V/1 minute, with no abnormalities	220V - 240V (and 110V for U.K. products)
	AC2500V/1 minute, with no abnormalities	110V - 127V (except U.K. products)