



# MODEL D 13

## 1. COMPARISONS WITH COMPETITOR'S MODELS:

Maker		HITACHI	MAKITA	SKIL
Type		D13	6013BR	408
Steel	mm (inch)	13 (1/2")	13 (1/2")	13 (1/2")
Wood	mm (inch)	40 (1-5/8")	35 (1-3/8")	25 (1")
Voltage	V	115	115	120
Current	A	6.2	6.0	6.0
No load speed	rpm	550	550	500
Weight	Kg (Lbs.)	3.2 (7.0)	2.9 (6.4)	3.0 (6.6)
Voltage	V	115	115	120
No Load speed	rpm	610	590	580
Rated Current	A	6.2	6.0	6.0
Rated Speed	rpm	425	360	450
Rated Torque	Kgm (FtLb)	0.69 (5.0)	0.81 (5.9)	0.56 (4.1)
Rated Output	W	300	300	260
Max. Output	W	585	525	635
Max. Torque	Kgm	5.5	5.5	7.0

## 2. ASSEMBLY/DISASSEMBLY GUIDE:

The circled numbers in the descriptions below correspond to the part numbers listed in the Parts Price List.

### 2-1. Handle Disassembly:

- A. Loosen the screws (38) (48) retaining Handle (A), and remove Handle (A) from the Housing (28).

- B. Remove the Stator Ass'y lead wire from the Switch (42) and Pillar Terminals (44).
- C. Loosen the two screws (51) retaining the Cord Clip (54), and remove the Cord (57) together with the Cord Armor (56).
- D. Loosen the Screws (38) retaining Handle (B), and remove Handle (B) from the Housing (28).

## 2-2. Armature Ass'y Disassembly:

- A. Take off the Carbon Brush Cap (30), and remove the Carbon Brush (31) from the Housing (28).
- B. Loosen the two Screws (7) (21) retaining the Gear Cover (9), and remove the Gear Cover from the Housing (28). Then, remove the Inner Cover Ass'y (15) together with the Armature Ass'y (18) from the Gear Cover. As shown in Fig. 7-1, support the Inner Cover Ass'y with a tubular jig and push downward on the tip of the Armature Ass'y pinion gear.

## 2-3. Stator Ass'y Disassembly:

- A. Remove the Fan Guide (19) from the Housing, and loosen the two Screws (22).
- B. Pull the Stator Ass'y lead wire into the Housing (28).
- C. Lightly tap the end of the Housing with a wooden or plastic hammer to remove the Stator.

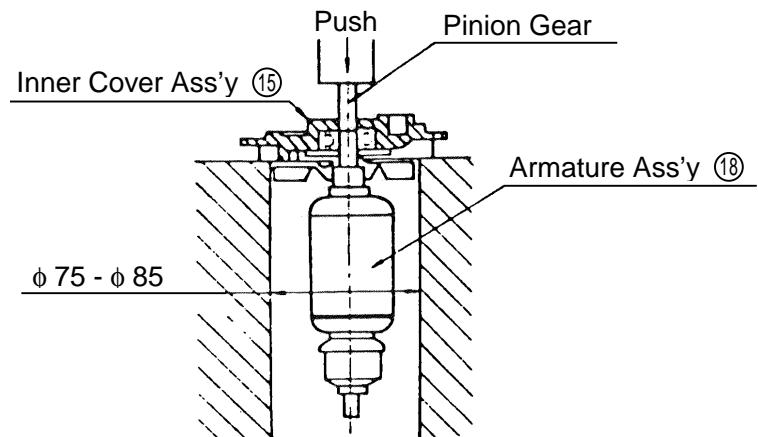


Fig. 7-1

## 2-4. Drill Chuck Disassembly

The Drill Chuck (2) is fastened to the Spindle (3) by a #6 Jacobs Taper. As illustrated in Fig. 7-2, insert the Chuck Puller (J-20, 22 fitting...for 10G,13G and 16G) between the Drill Chuck and Gear Cover, and tap it lightly with a hammer to remove the Drill Chuck.

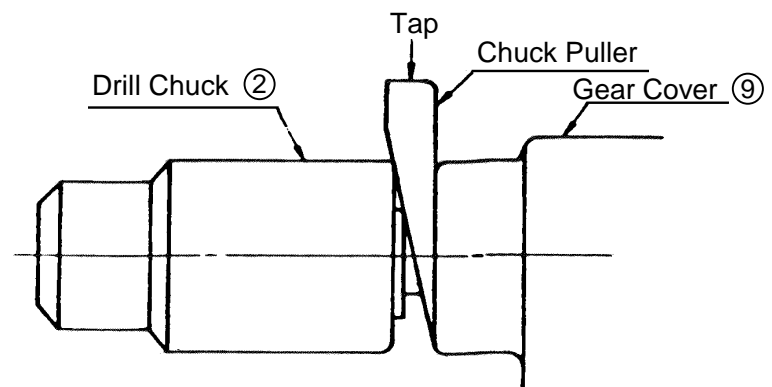


Fig. 7-2

## 2-5. Gear Disassembly

### A. The Second Pinion

Ass'y ⑫ and Washer ⑬ can be removed from the Gear Cover ⑨ by lightly tapping the end of the Gear Cover with a wooden hammer.

### B. Remove the D35 C-shaped Stop Ring ④ retaining the Bearing ⑤. Then, as illustrated in Fig. 7-3, support the Gear Cover with a tubular jig, and push down on the end of the Spindle ③ to remove the Final Gear ⑩.

The Bearing ⑤ can be removed from the Spindle by removing the D15 C-shaped Stop Ring ⑥.

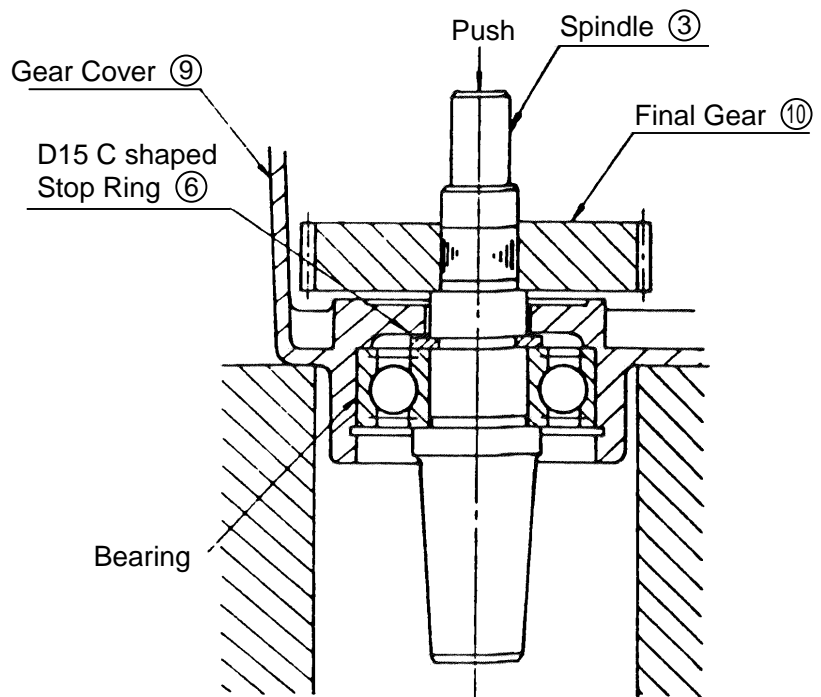


Fig. 7-3

## 2-6. Assembly:

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

### A. Brush Terminal Ass'y:

The Brush Terminal Ass'y must be assembled before the Stator Ass'y is reinserted into the Housing. As shown in the right-hand side of Fig. 7-4, the lead wire from the Brush Terminal Ass'y passes between the Stator Ass'y and the Housing.

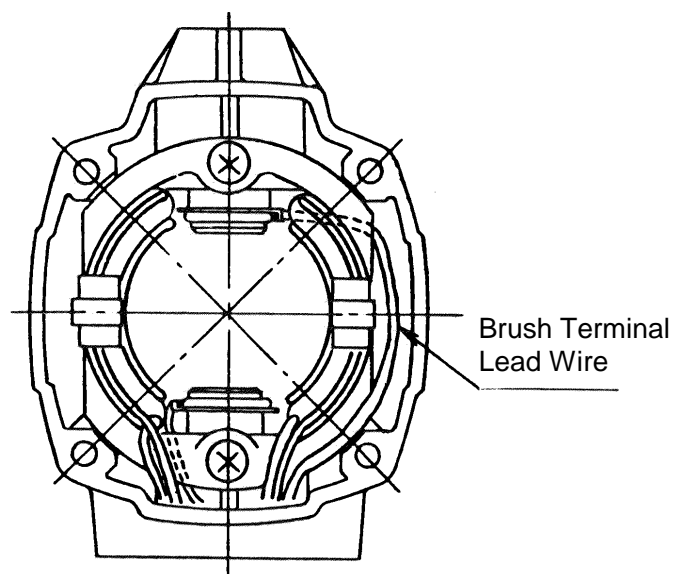


Fig. 7-4

B. Use of lubricant

Application points	Lubricant
Inside gear cover	Hitachi Motor Grease No. 29
Armature pinion gear	Hitachi Motor Grease No. 29 (Apply thoroughly to the bottom of gear tooth)
Metal (assembled with the inner cover ass'y ⑮)	Hitachi Motor Grease No. 29 (to be filled in)

C. Tightening torque of various screws

Parts names	Tightening torque
D5 self-tapping screw	25 - 35 Kgf-cm (21.7 - 30.4 Lbs. -in.)
D4 self-tapping screw	15 - 25 Kgf-cm (13.0 - 21.7 Lbs. -in.)
M2.6 machine screw (pillar terminal)	2.5 - 4.5 Kgf-cm (2.2 - 3.9 Lbs. -in.)

D. Checks After Assembly:

On completion of repair (in disassembled state), measure the insulation resistance and conduct dielectric strength test (compression test).

## 2.7. Lead Wire Arrangement Within the Handle, and Circuit Diagram:

### A. Single Pole Switch

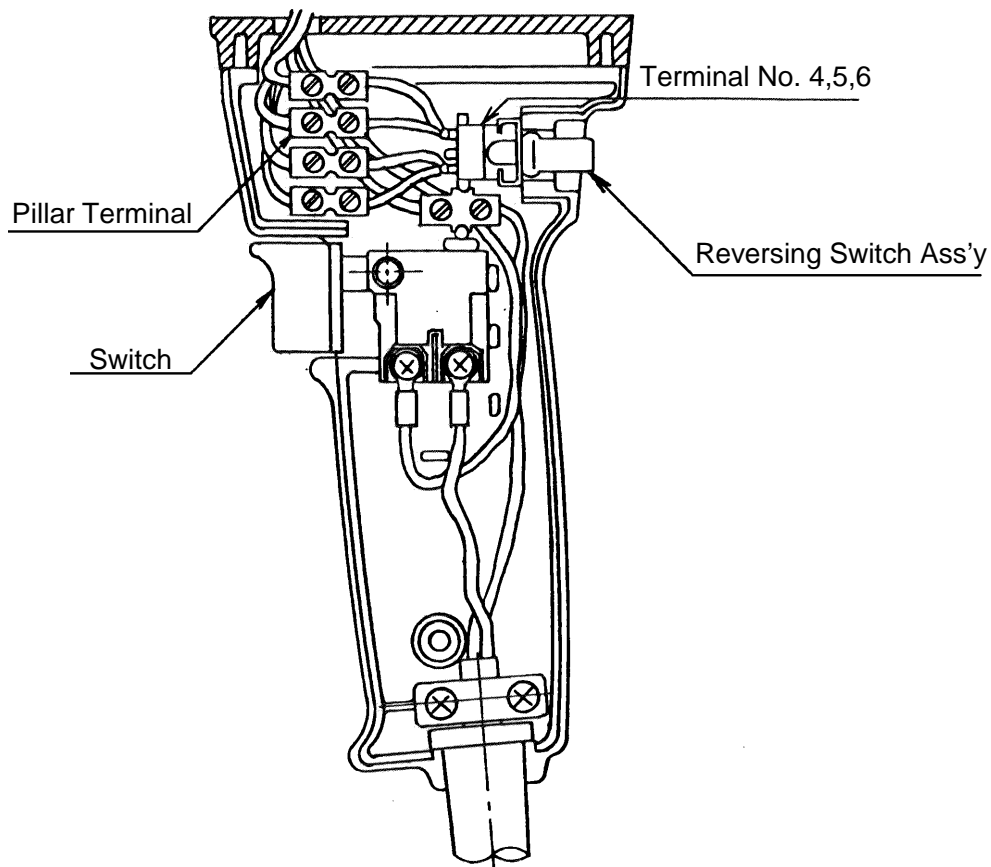


Fig. 7-5

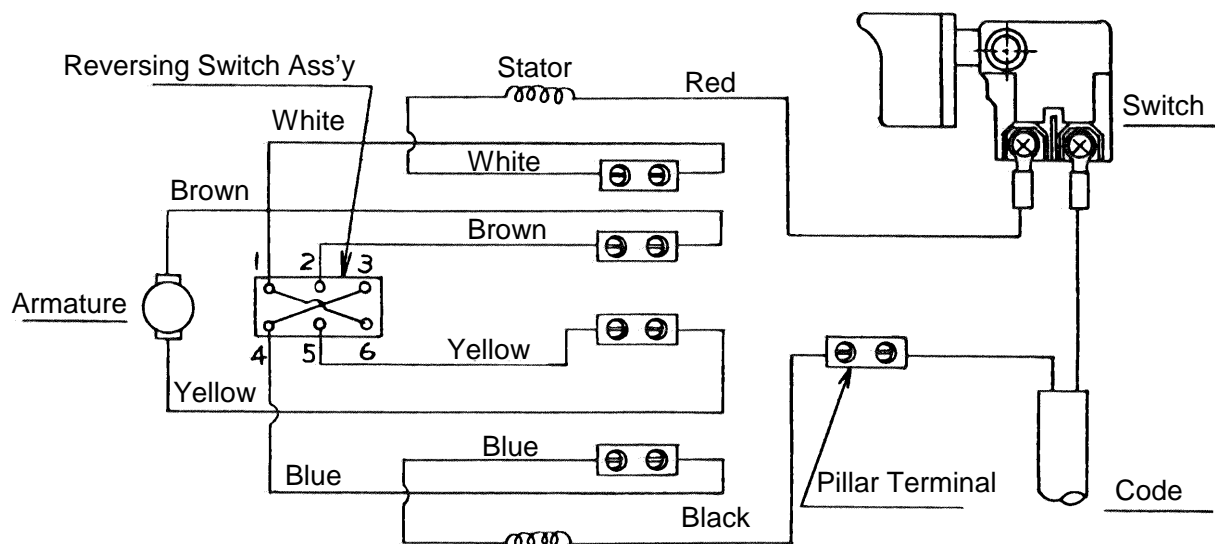


Fig. 7-6

B. Double Pole Switch

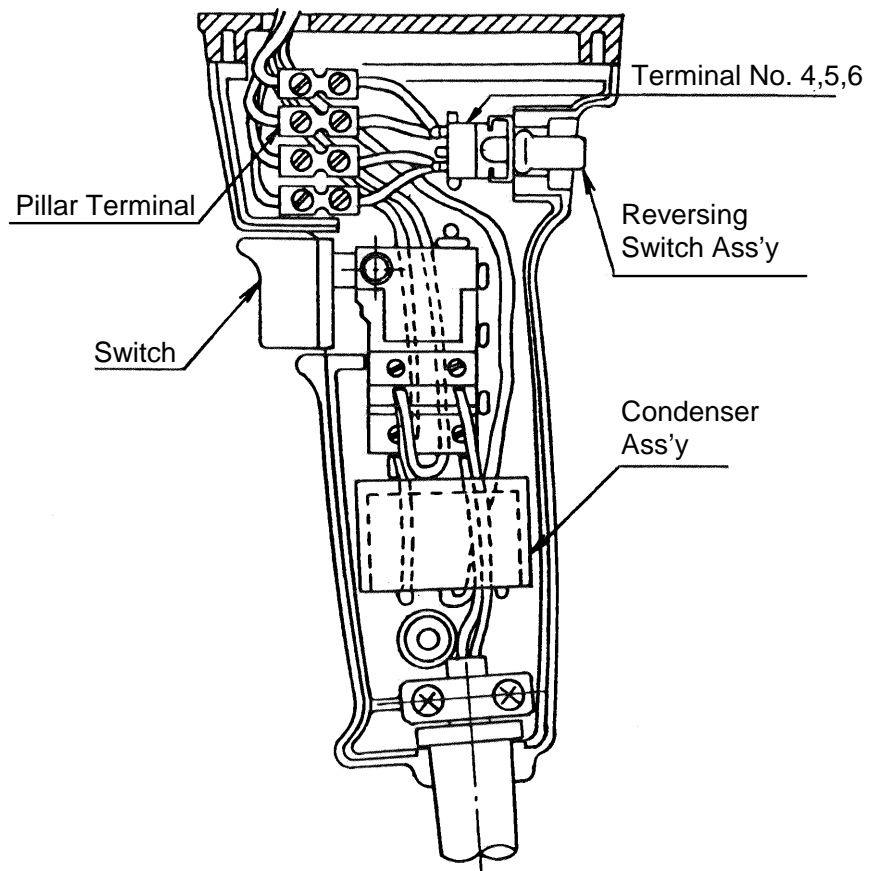


Fig. 7-7

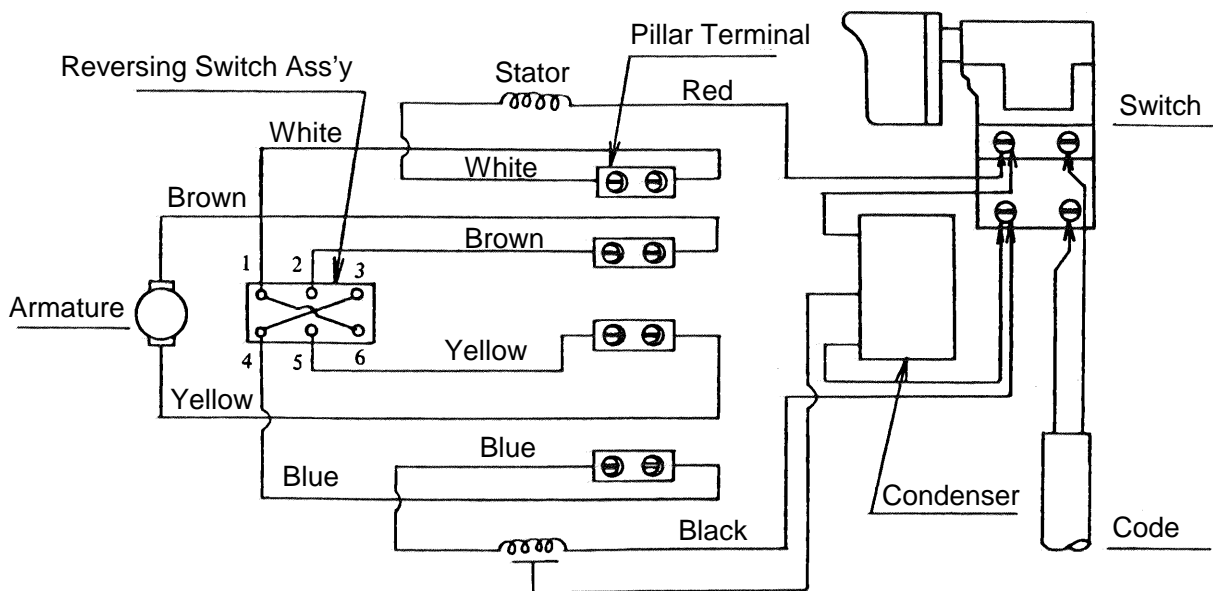


Fig. 7-8