

TECHNICAL INFORMATION

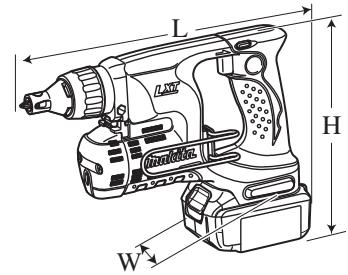


PRODUCT

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Models No. ▶ BFS440, BFS450

Description ▶ Cordless Screwdriver



(The image above is BFS450.)

Dimensions: mm (")	
Length (L)	258 (10-1/8)*1
Width (W)	80 (3-1/8)
Height (H)	193 (7-5/8)

*1. It differs by country.

CONCEPT AND MAIN APPLICATIONS

Models BFS440 and BFS450 have been developed as a single-shot type Cordless Screwdriver, featuring more convenience with one-touch locator and LED job light.

These products are available in the following variations.

BFS440

Model No.	Battery		Charger	Plastic carrying case	Housing color	Offered to
	type	quantity				
BFS440RFE	BL1430 (Li-ion 3.0Ah)	2	DC18RA	Yes	Makita-blue	All countries except North America
BFS440Z	No	/	No	No		

BFS450

BFS450RFE	BL1830 (Li-ion 3.0Ah)	2	DC18RA	Yes	Makita-blue	All countries except North America
BFS450Z	No	/	No	No		

All models also include the accessories listed in "Standard equipment".

► Specification

Specification		Model	BFS440	BFS450
Battery	Voltage: V		14.4	18
	Capacity: Ah		1.5 or 3.0*2	
	Cell		Li-ion	
Max output: W			235	325
No load speed: min.-1 = rpm			4,000	
Driver bit: mm (")	Shank		6.35 (1/4) Hex	
Capacities: mm (") [drywall]	Diameter		4 (5/32)	
Reverse switch			Yes	
LED job light			Yes	
Net weight*3: kg (lbs)			1.7 (3.8)	1.9 (4.2)

*2. 1.5Ah: Battery BL1415 or BL1815; 3.0Ah: Battery BL1430 or BL1830

*3. BFS440: includes battery BL1430; BFS450: includes battery BL1830

► Standard equipment

Phillips bit 2-25 2 Magnetic connect bit 6.35-60 (Magnetic connect bit 6.35-76) 1
Belt clip 1

Note: The standard equipment for the tool shown above may differ by country.

► Optional accessories

Phillips bit 1-25	Magnetic connect bit 6.35-60	Fast charger DC18RA
Phillips bit 2-25	Magnetic connect bit 6.35-76	Charger DC24SA (for North America only)
Phillips bit 3-25	Batteries BL1430, BL1415 (for BFS440)	Charger DC24SC (for all countries except North America)
	Batteries BL1830, BL1815 (for BFS450)	

► Repair

CAUTION: Remove the bit and the battery from the machine for safety before repair/ maintenance in accordance with the instruction manual!

[1] NECESSARY REPAIRING TOOLS

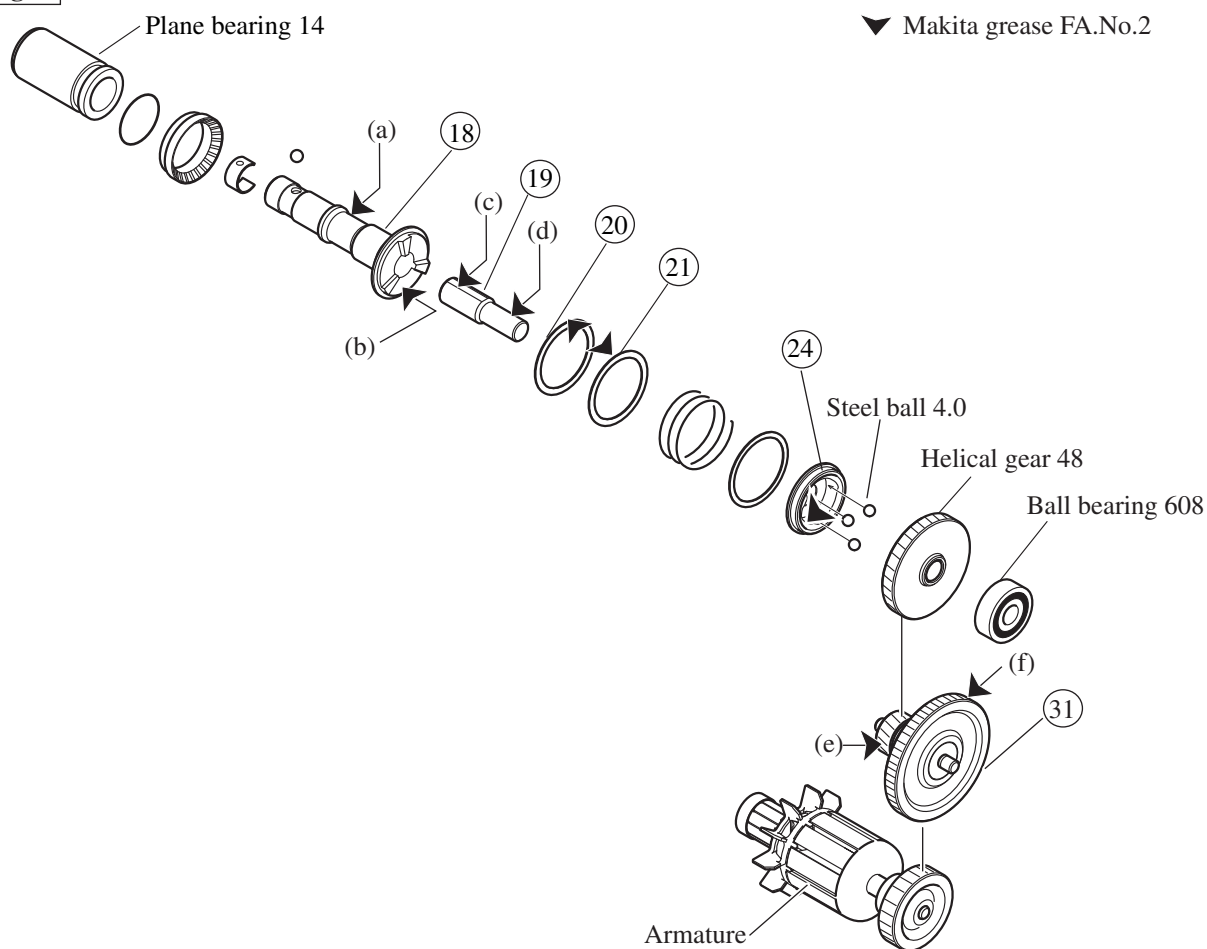
Code No.	Description	Use for
1R269	Bearing extractor	Removing Ball bearing 608

[2] LUBRICATION

Apply Makita grease FA.No.2 to the following portions designated with the black triangle to protect parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Amount
⑱	Spindle	(a) The drum portion that contacts Plane bearing 14	a little
		(b) The Cam portion that contacts ⑳Clutch cam C	
⑲	Shoulder pin 8-10	(c) The portion that contacts ⑱Spindle	
		(d) The Drum portion that contacts ⑳Clutch cam C	
⑳ ㉑	Flat washer 25	Whole portion	
㉔	Clutch cam C	Each depressed portion for Steel ball 4	4g
㉓	Gear complete 18-44	(e) Teeth of the small gear that engages Helical gear 48	4g
		(f) Teeth of the large Gear that engages Armature's gear	a little

Fig. 1



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3] -3. Locater Section

DISASSEMBLING

Pull Lock ring strongly. Locater complete and Lock ring can be removed together.

When removing Locater base complete together with Locater complete and Lock ring, etc.:

- ① Loosen 4x18 Tapping screws (2 pcs.) and remove Front cover.
- ② Loosen M4x25 Pan head screw and pull Locater base complete. (Fig. 2)

Locater section can be removed as illustrated in Fig. 3.

Fig. 2

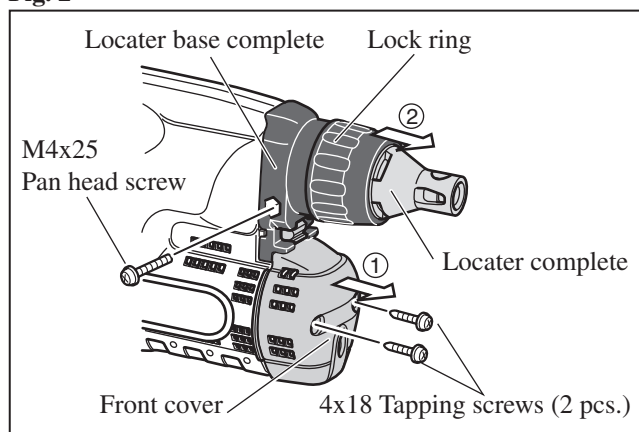
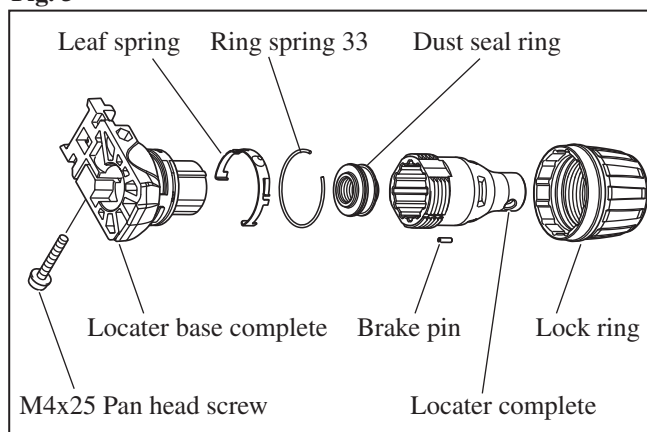


Fig. 3



ASSEMBLING

Do the disassembling step in reverse.

[3] DISASSEMBLY/ASSEMBLY

[3] -4. Helical Gear 48, Clutch Section

DISASSEMBLING

1) Pull Lock ring strongly. Locater complete and Lock ring can be removed together.

2) Loosen 4x18 Tapping screws (9 pcs.) and remove Housing R. (Fig. 4)

3) Separate an assembly of Helical gear 48 and Clutch cam, etc. (Fig. 5) from Housing L and remove Ball bearing 608 with 1R269.

4) Remove Leaf spring by hooking and turning it with Long nose pliers. (Fig. 6) Do not lose Steel ball 3.5 on Spindle. The assembly (Re: Fig. 5) can be removed by hand as illustrated in Fig. 7.

Fig. 4

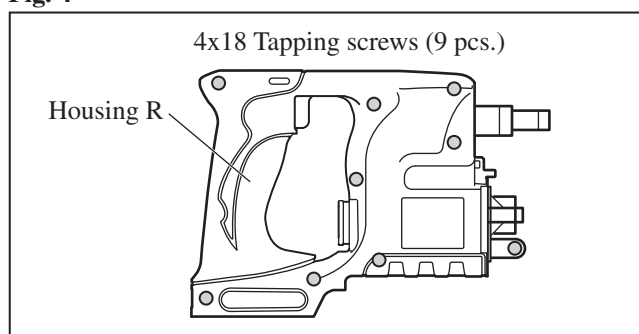


Fig. 5

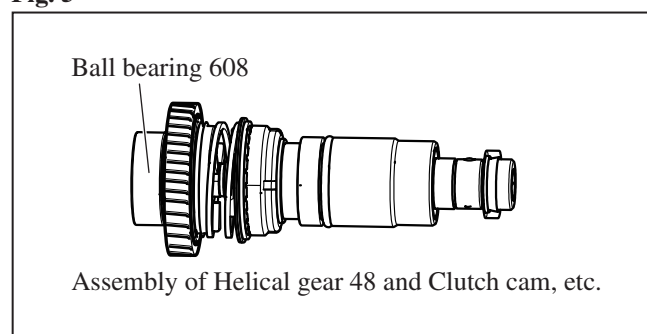


Fig. 6

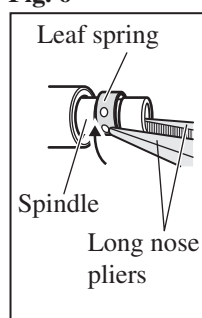
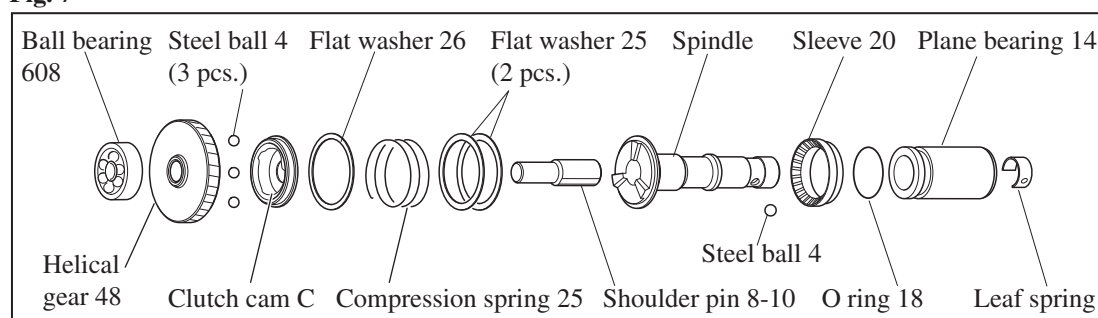


Fig. 7



Repair

[3] DISASSEMBLY/ASSEMBLY

[3] -4. Helical Gear 48, Clutch Section (cont.)

ASSEMBLING

Taking the steps described in **Fig. 8 to 11.**

Fig. 8

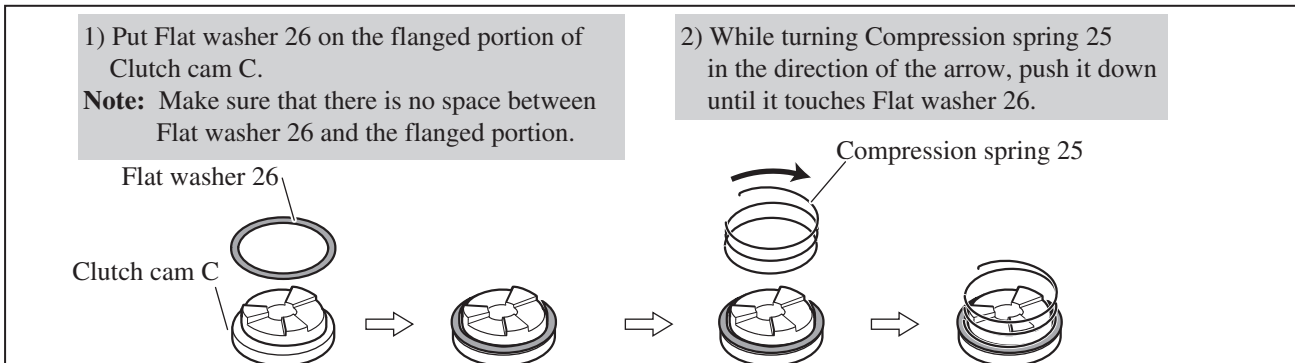


Fig. 9

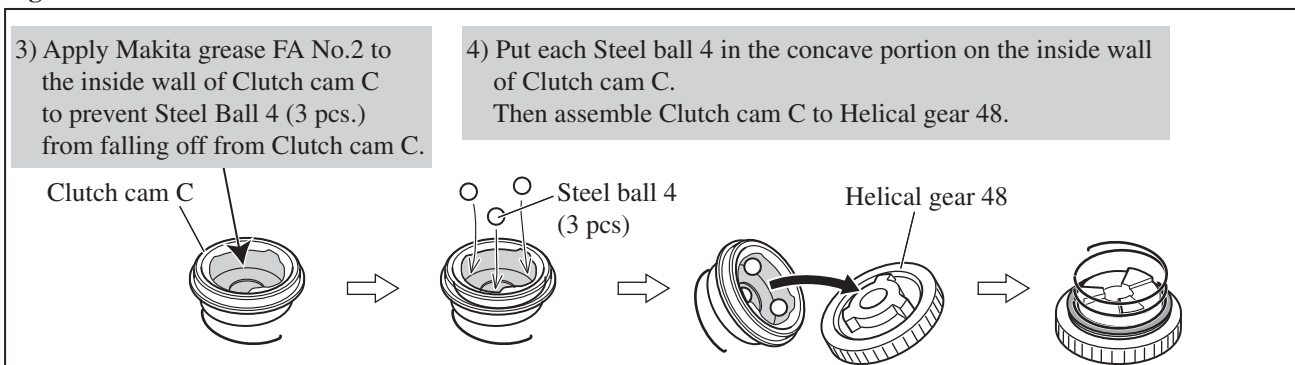


Fig. 10

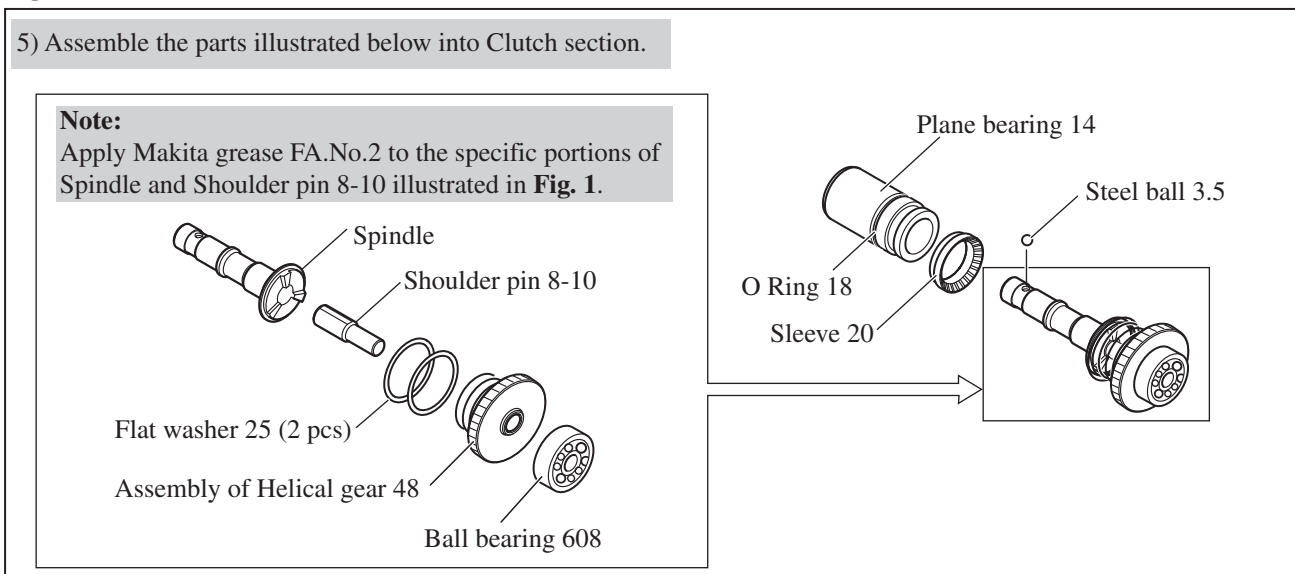
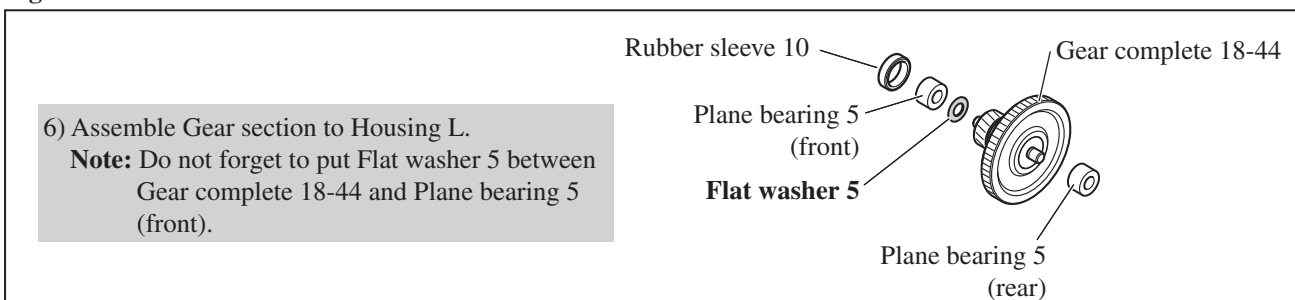


Fig. 11



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3] -5. Motor Section

DISASSEMBLING

- 1) Remove Housing R (Fig. 4)
- 2) Disassemble Armature from the machine as illustrated in Figs. 12 and 13.

Fig. 12

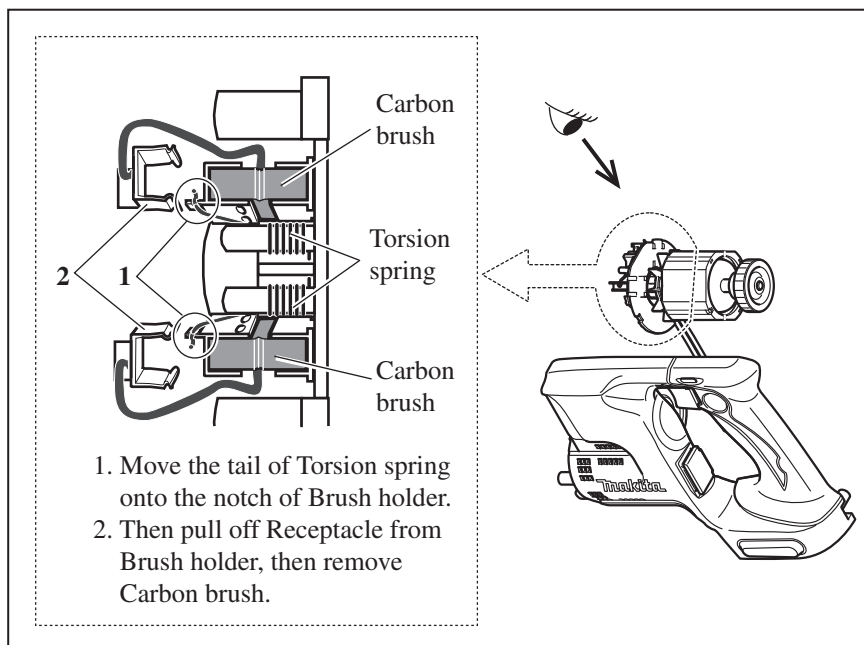
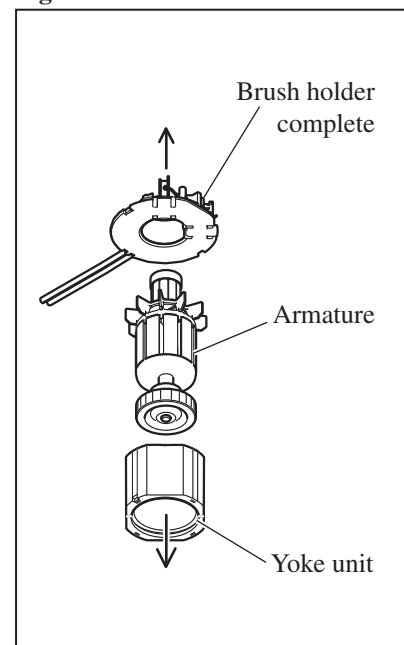


Fig. 13



ASSEMBLING

- 1) Insert Armature into Yoke unit as described in Figs. 14 and 15.
- 2) Assemble Brush holder complete to the commutator end of Armature. (Fig. 12)

Fig. 14

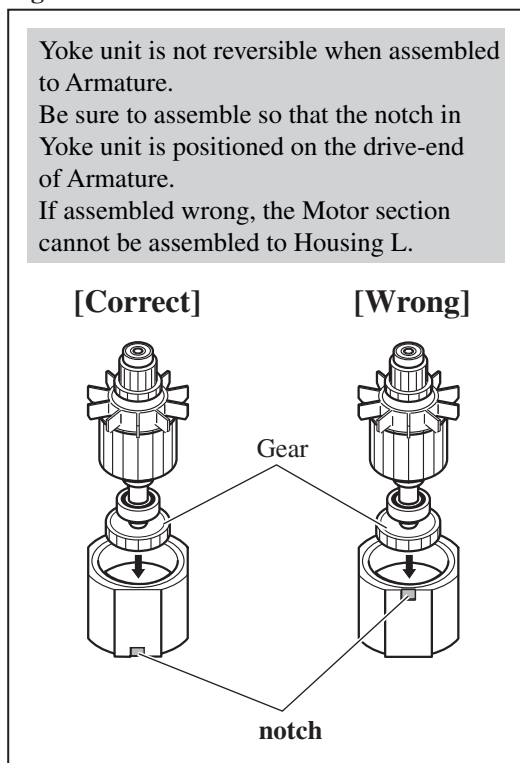
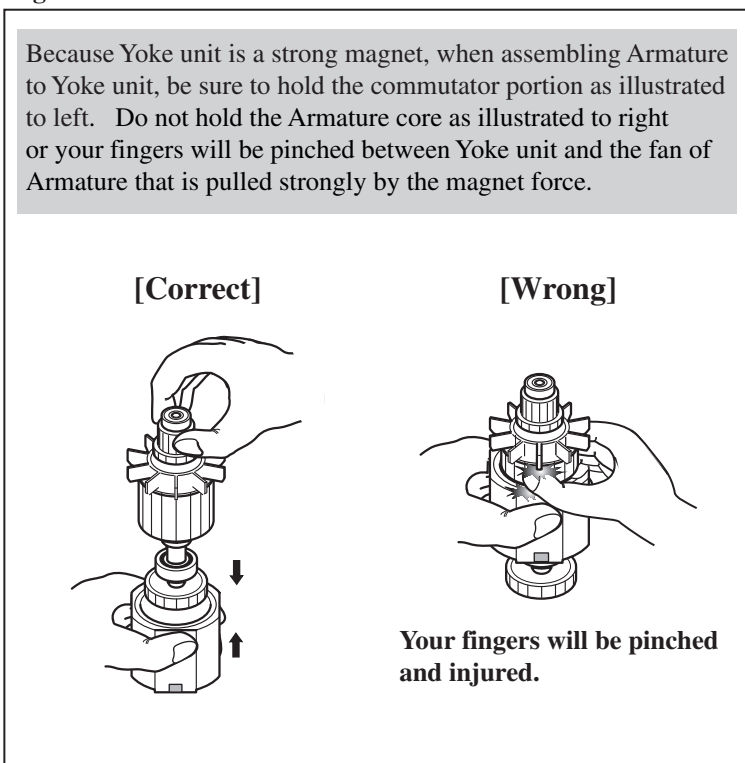


Fig. 15



► **Repair**

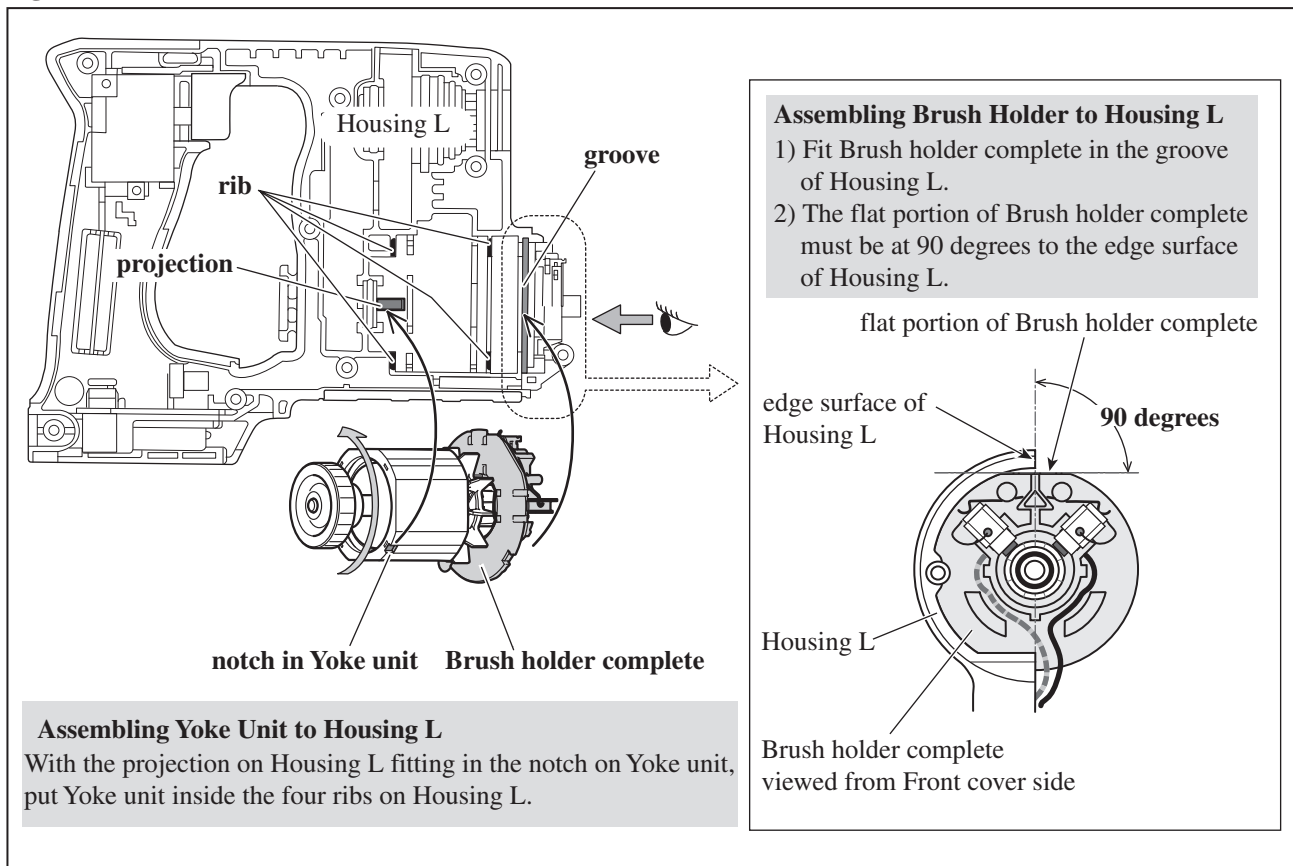
[3] DISASSEMBLY/ASSEMBLY

[3] -5. Motor Section (cont.)

ASSEMBLING

3) Assemble the Motor section to Housing L as illustrated in **Fig. 16**.

Fig. 16

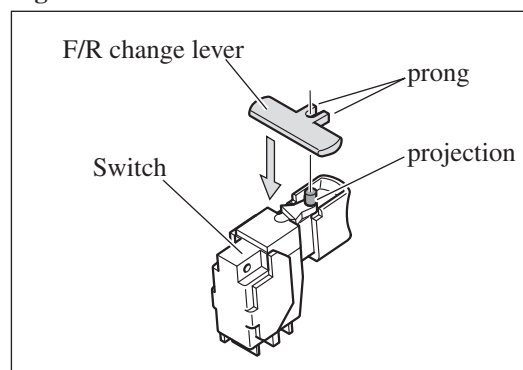


[3] -6. Switch

ASSEMBLING

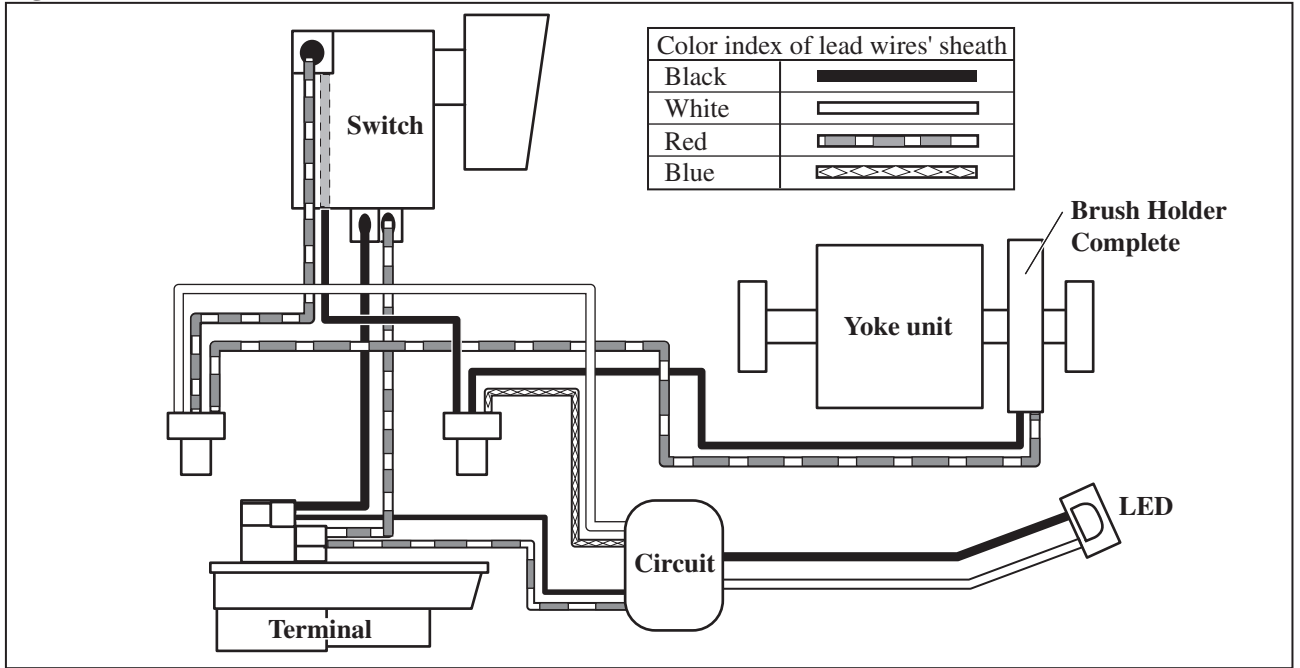
Put the projection on Switch between the prongs of F/R change lever, then assemble the Switch to Housing L. (**Fig. 17**)

Fig. 17



► **Circuit diagram**

Fig. D-1



► **Wiring diagram**

Fig. D-2

