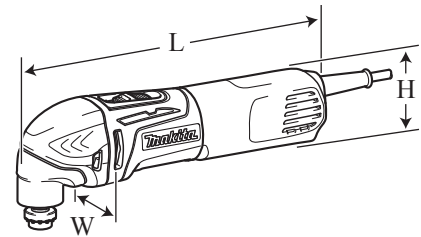


Model No. ▶ TM3000C

Description ▶ Multi tool



CONCEPT AND MAIN APPLICATIONS

Model TM3000C has been developed to compete with the Competitor F's Models F1-AC/ F2-AC.

Two DC Multi Tools powered by Li-ion battery have also been developed with model numbers BTM40 (14.4V) and BTM50 (18V).

Dimensions: mm (")	
Length (L)	275 (10-7/8)
Width (W)	64 (2-1/2)
Height (H)	92 (3-5/8)

► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	3.1	50/ 60	320	115	260
120	3.0	50/ 60	---	115	260
220	1.5	50/ 60	320	115	260
230	1.5	50/ 60	320	115	260
240	1.4	50/ 60	320	115	260

Oscillations per minute: opm=min ⁻¹	6,000 - 20,000	
Oscillating multi tool accessories	Makita oscillating multi tool accessories equivalent to the Competitor B's B-system	
Electronic control	Variable speed control by dial	Yes
	Soft start	Yes
	Constant speed control	Yes
	Anti-restart function	No
Protection against electric shock	Double insulation	
Power supply cord: m (ft)	All countries except North American countries: 5.0 (16.4), North American countries: 2.5 (8.2)	
Weight according to EPTA-Procedure 01/2003: kg (lbs)	1.4 (3.2)*1/ 1.5 (3.3)*2	

*1: without Sanding pad, Vacuum attachment

*2: with Sanding pad, Vacuum attachment

► Standard equipment

- Oscillating multi tool accessories [equivalent to the Competitor B's B-system] 1
- Adapter A 1 (for some countries only)
- Adapter C 1 (for some countries only)
- Tool box (for storing oscillating multi tool accessories) 1 (for some countries only)
- Hex wrench (with Wrench holder) 1
- Dust attachment set 1 (for some countries only)
- Plastic carrying case or Tool bag 1 (for some countries only)

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

► Optional accessories

- Oscillating multi tool accessories [equivalent to the Competitor B's B-system]
- Tool box (for storing oscillating multi tool accessories)
- Dust attachment set
- Triangular abrasive papers (Hook & loop type)
- Adapter A
- Adapter C

▶ Repair

CAUTION: Repair the machine in accordance with “Instruction manual” or “Safety instructions”.

[1] NECESSARY REPAIRING TOOLS

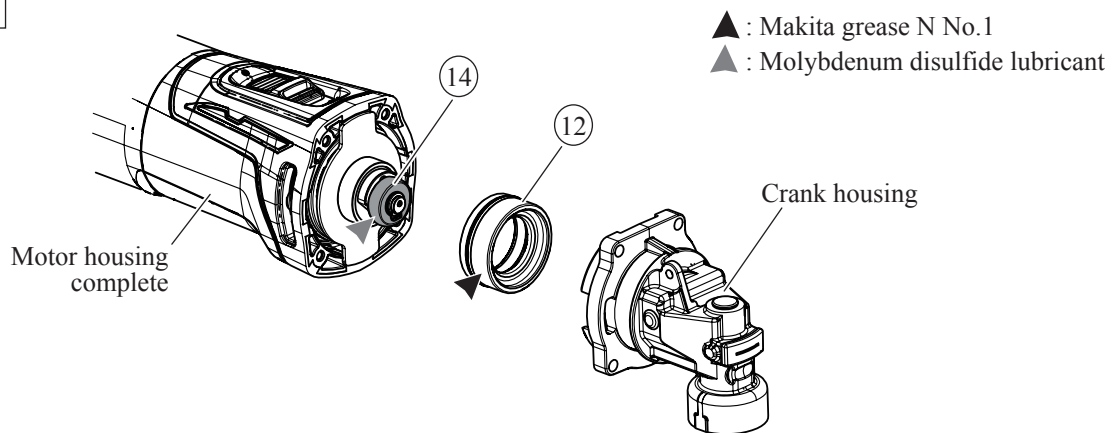
Code No.	Description	Use for
1R269	Bearing extractor	Removing Ball bearing 629DDW and Sphere bearing 706
1R291	Retaining ring S & R pliers	Removing/installing Retaining ring S-7

[2] LUBRICATION

Apply grease and lubricant to the portions designated with the black and gray triangles to protect parts and product from unusual abrasion.

Item No.	Description	Grease	Portion to lubricate	Amount
⑫	Bearing box	Makita grease N No.1	Outer surface	a little
⑭	Sphere bearing 706	Molybdenum disulfide lubricant	Outer race	a little

Fig. 1



[3] DISASSEMBLY/ASSEMBLY

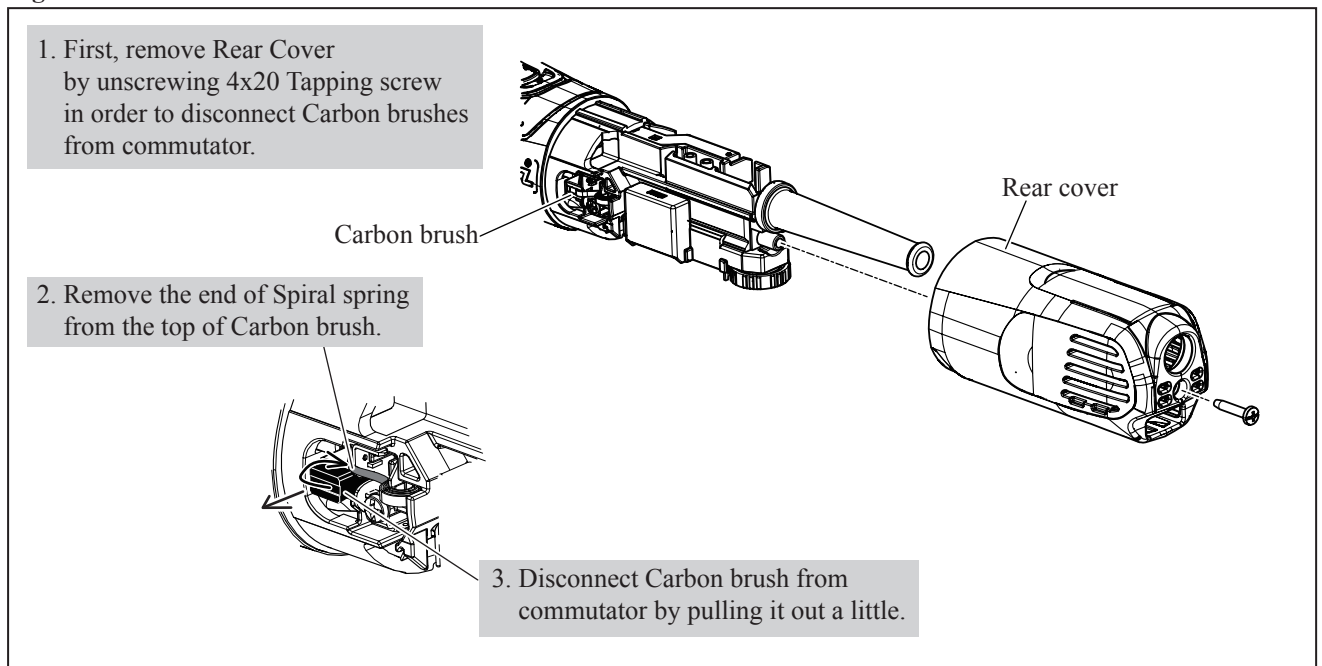
[3] -1. Armature

DISASSEMBLING

(1) No need to remove Carbon brushes completely from Brush holder.

After removing Rear cover, simply disconnect Carbon brush from Armature's commutator. (Fig. 2)

Fig. 2



► **Repair**

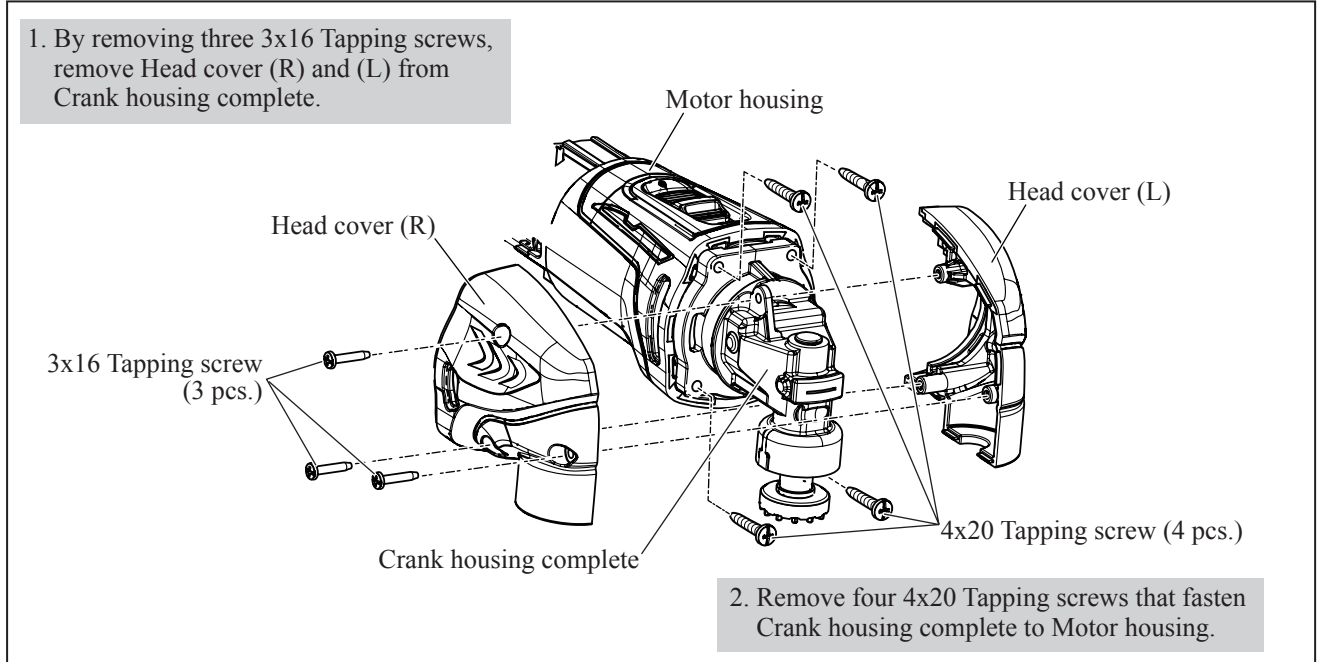
[3] DISASSEMBLY/ASSEMBLY

[3] -1. Armature

DISASSEMBLING

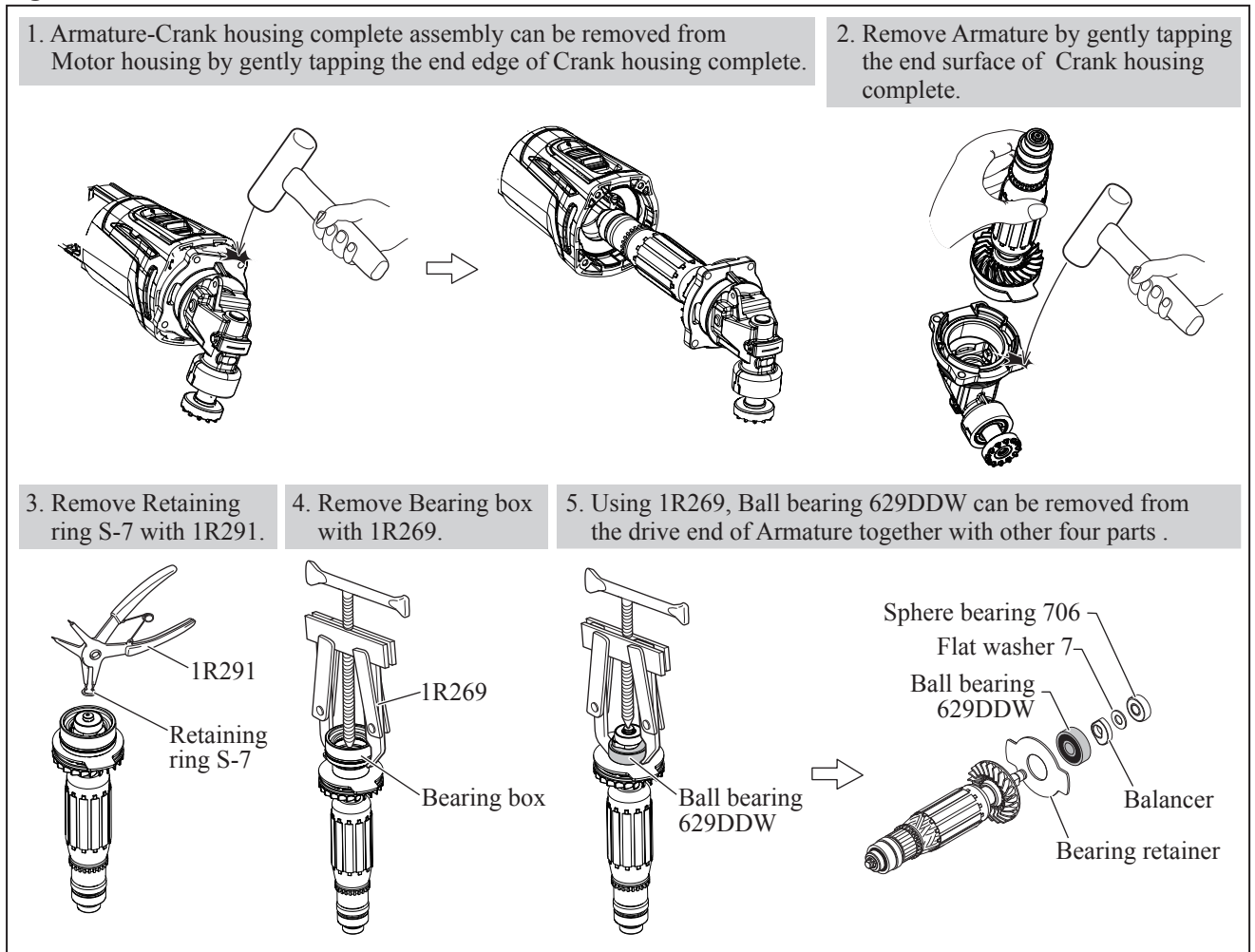
(2) Remove Head covers (L) and (R), then remove four 4x20 Tapping screws. (Fig. 3)

Fig. 3



(3) Remove Armature-Crank housing complete assembly from Motor housing, then remove the parts on the drive end of Armature. (Fig. 4)

Fig. 4



► **Repair**

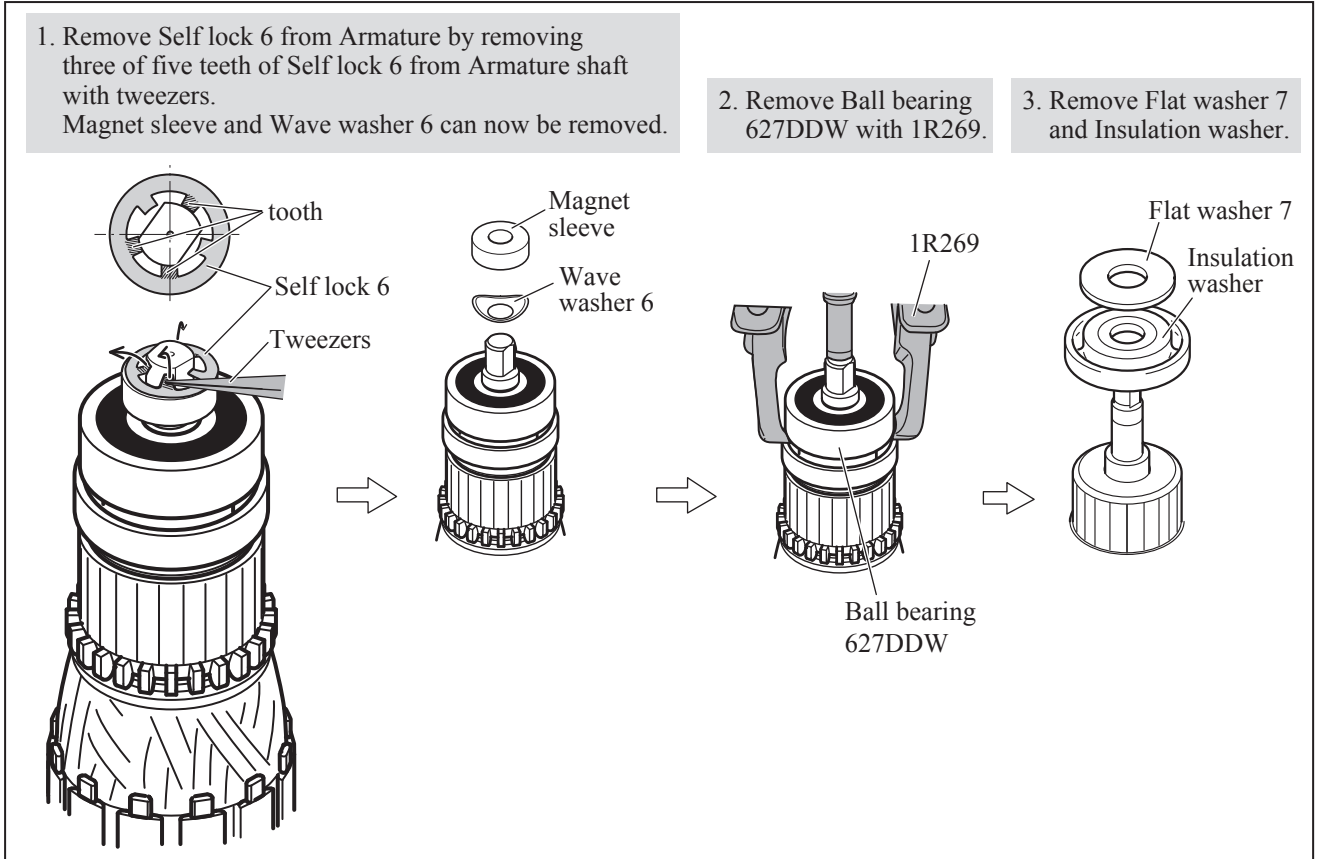
[3] DISASSEMBLY/ASSEMBLY

[3] -1. Armature

DISASSEMBLING

(4) Remove the parts on the commutator end of Armature. (Fig. 5)

Fig. 5



ASSEMBLING

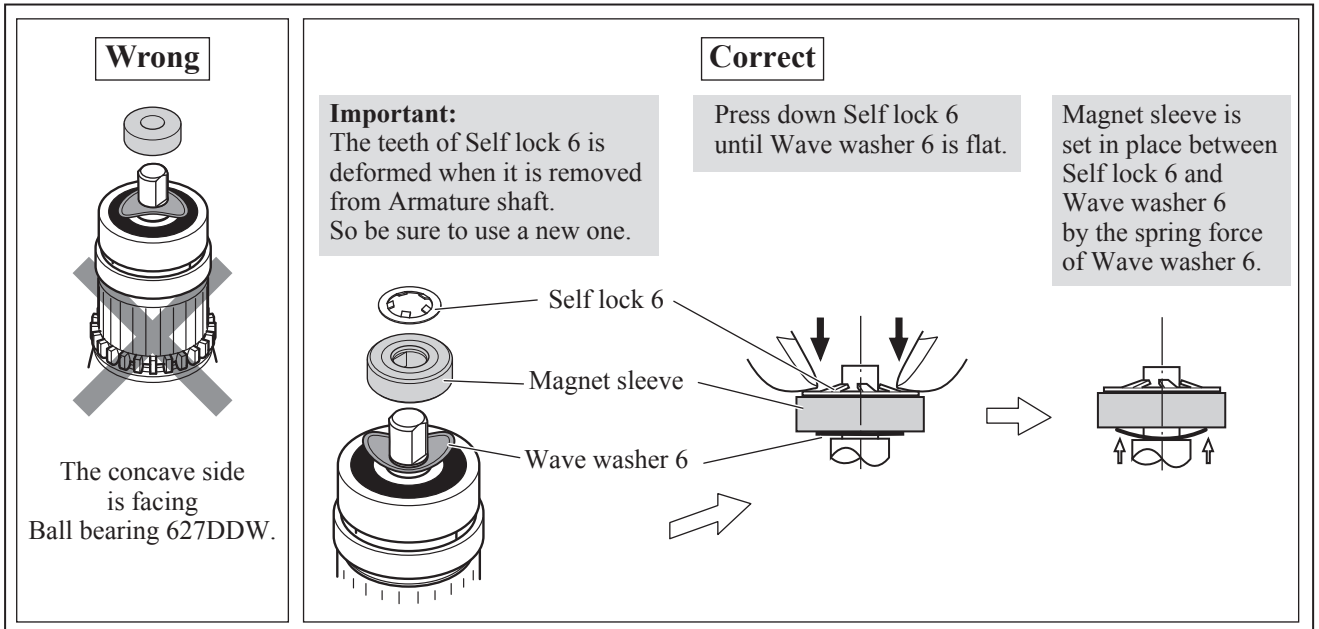
(1) Install Insulation washer, Flat washer 7 and Ball bearing 627DDW onto Armature shaft. (2 and 3 of Fig. 5)

Then install Wave washer 6 and Magnet sleeve, then secure them with Self lock 6. (Fig. 6)

Important: Wave washer 6 is directional when installed onto Armature shaft.

Be sure to install it with the concave side facing Magnet sleeve. If not, Wave washer 6 cannot press Magnet sleeve toward Self lock 6 to set Magnet sleeve in place.

Fig. 6



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3] -1. Armature

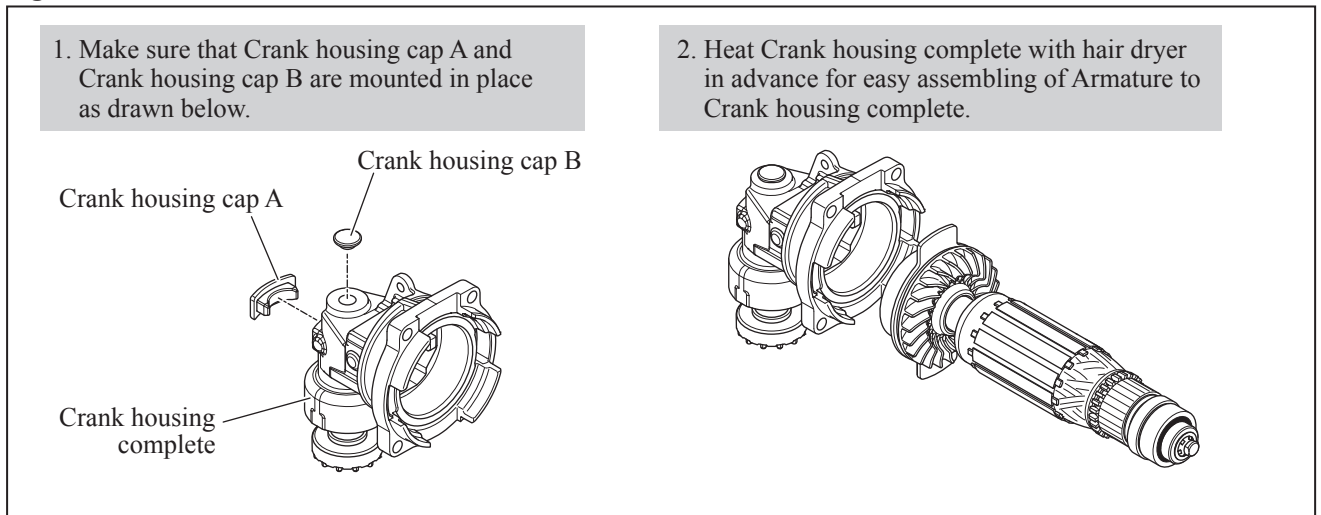
ASSEMBLING

(2) Mount the component parts to the drive end of Armature by following the steps of procedure described below: (3, 4 and 5 of Fig. 4)

1. Mount Bearing retainer, then assemble Ball bearing 629DDW onto Armature shaft with arbor press.
2. Mount Bearing box to the Ball bearing 629DDW with arbor press.
3. Mount Balancer, Flat washer 7, and Sphere ball bearing 706 onto Armature shaft, then secure them with Retaining ring S-7.

(3) Assemble Armature to Crank housing complete. (Fig. 7)

Fig. 7



[3] -2. Crank housing complete

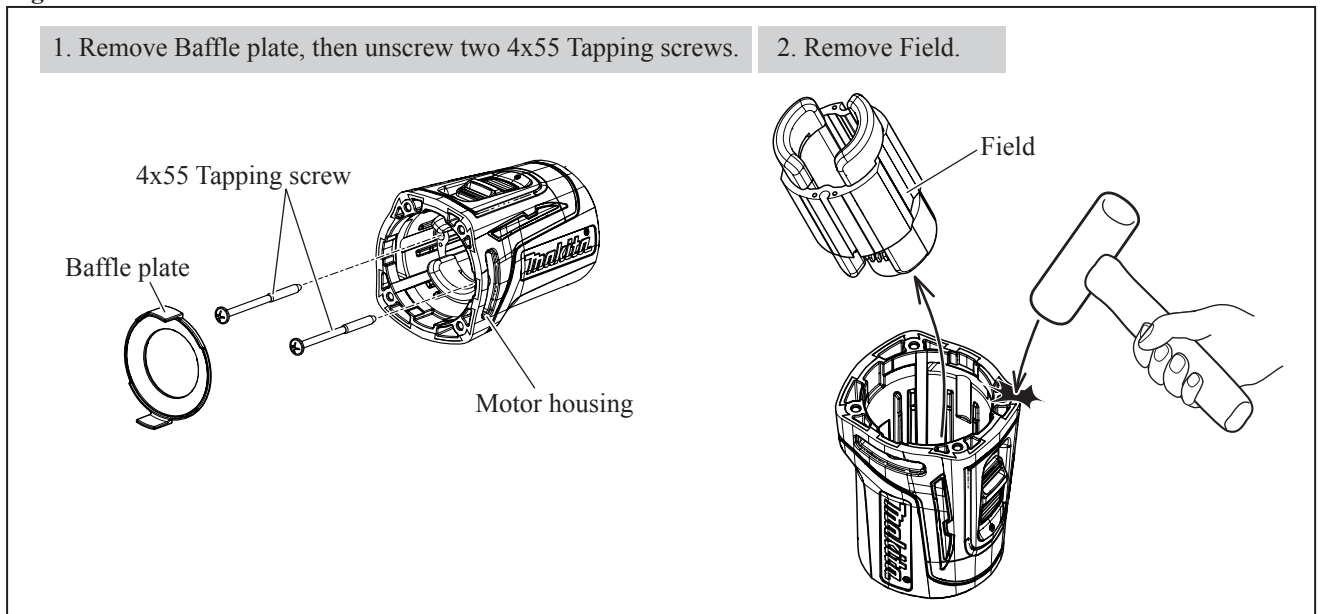
You must replace Crank housing complete as a unit, because it is a factory-assembled part and cannot be disassembled. Remove Crank housing complete from Motor housing as described in 1 and 2 of Fig. 4.

[3] -3. Switch lever

DISASSEMBLING

- (1) Separate Crank housing complete and Armature from Motor housing. (Figs. 2, 3 and 4)
- (2) Take out Field from Motor housing. (Fig. 8)

Fig. 8



► **Repair**

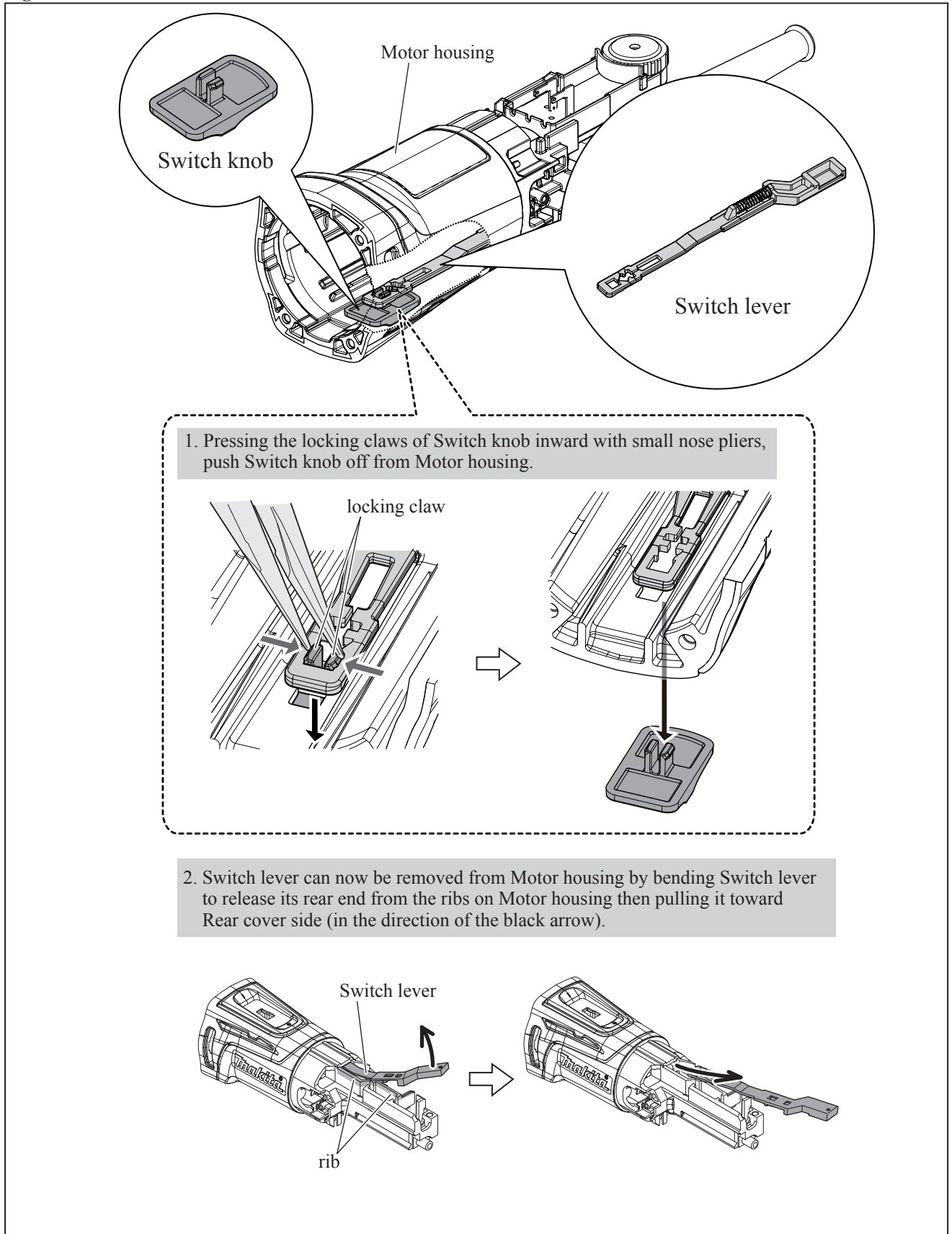
[3] **DISASSEMBLY/ASSEMBLY**

[3] **-3. Switch lever**

DISASSEMBLING

(3) Remove Switch knob and Switch lever. (Fig. 9)

Fig. 9



► **Repair**

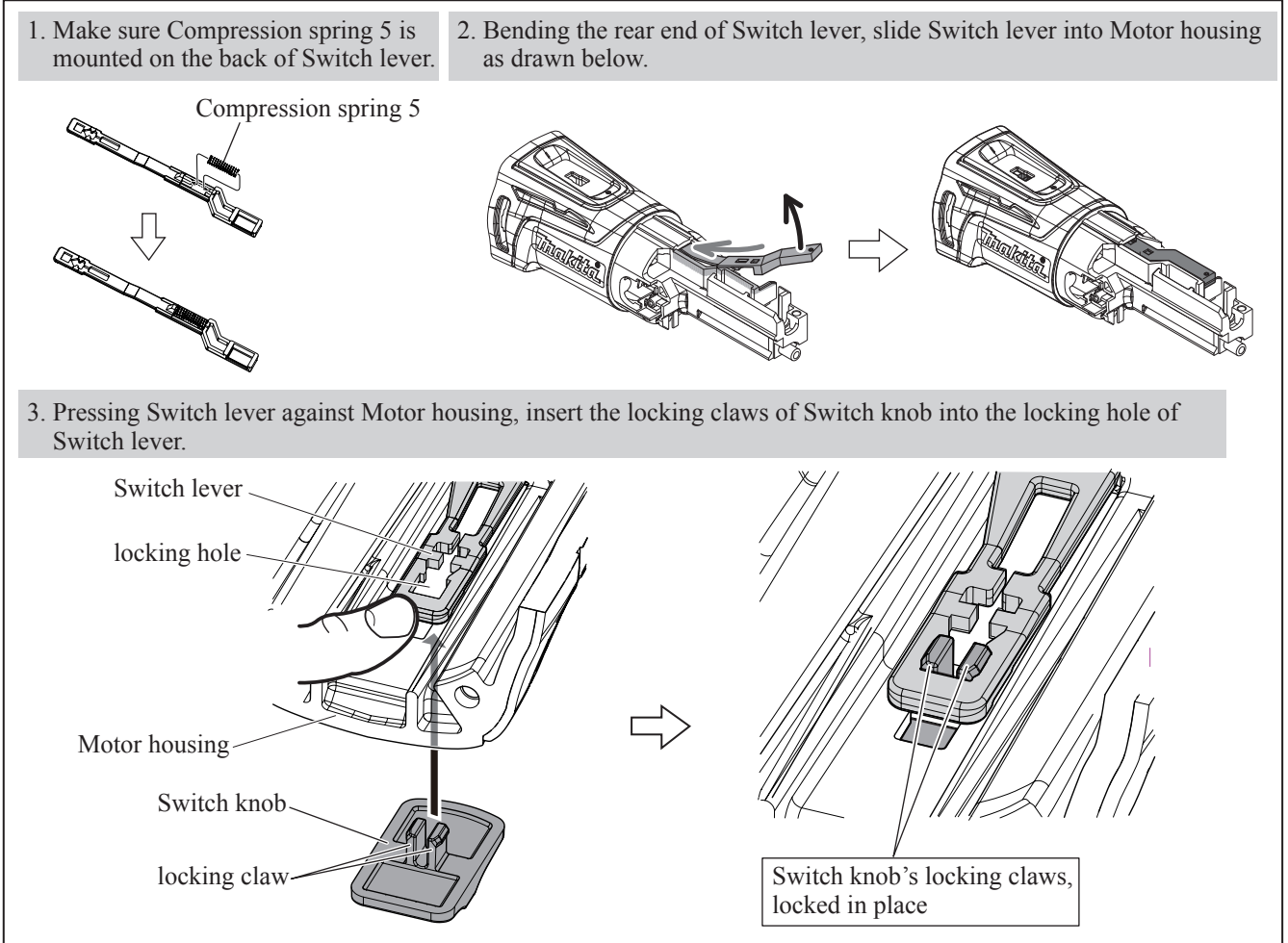
[3] DISASSEMBLY/ASSEMBLY

[3] -3. Switch lever

ASSEMBLING

(1) Mount Switch lever and Switch knob on Motor housing. (Fig. 10)

Fig. 10

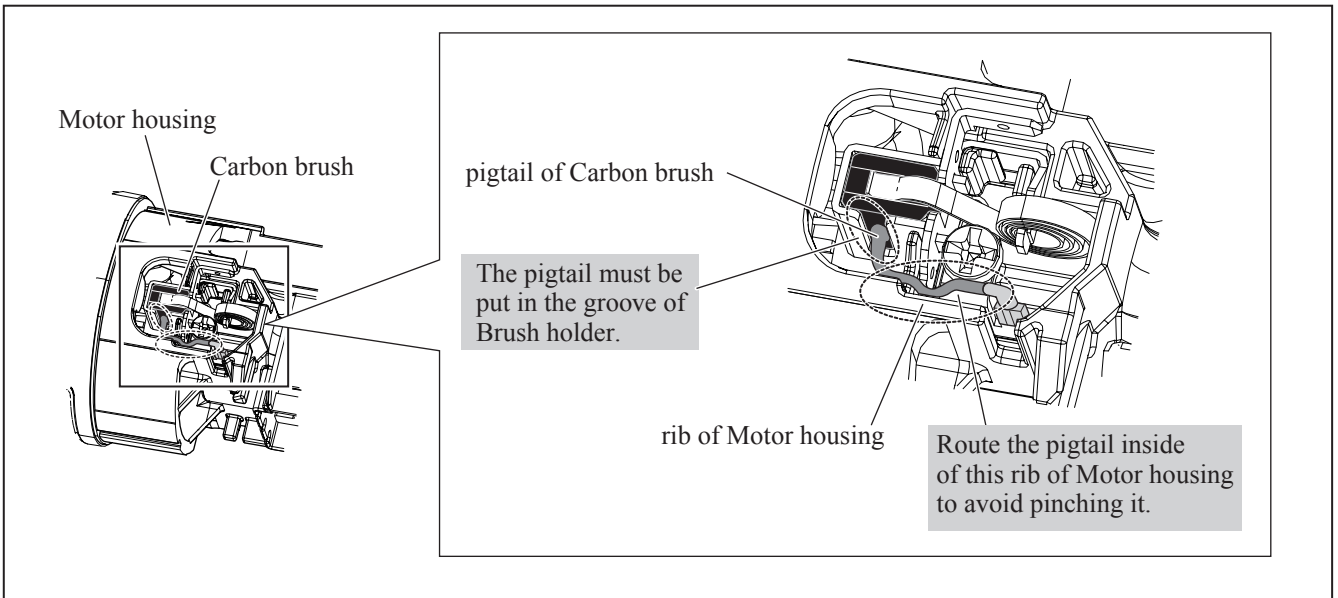


[3] -4. Carbon Brush

ASSEMBLING

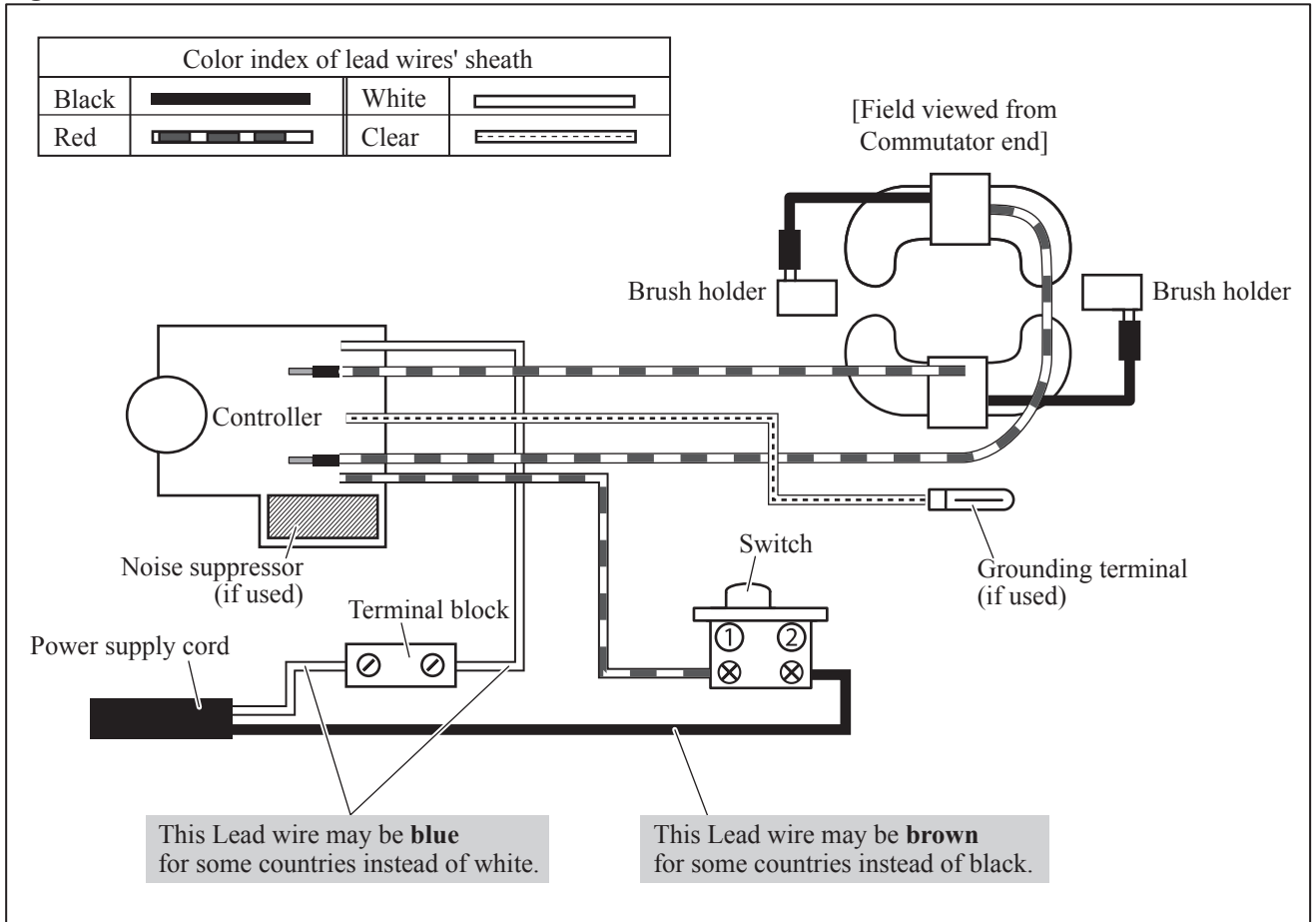
Mount Carbon brushes in place. (Fig. 11)

Fig. 11



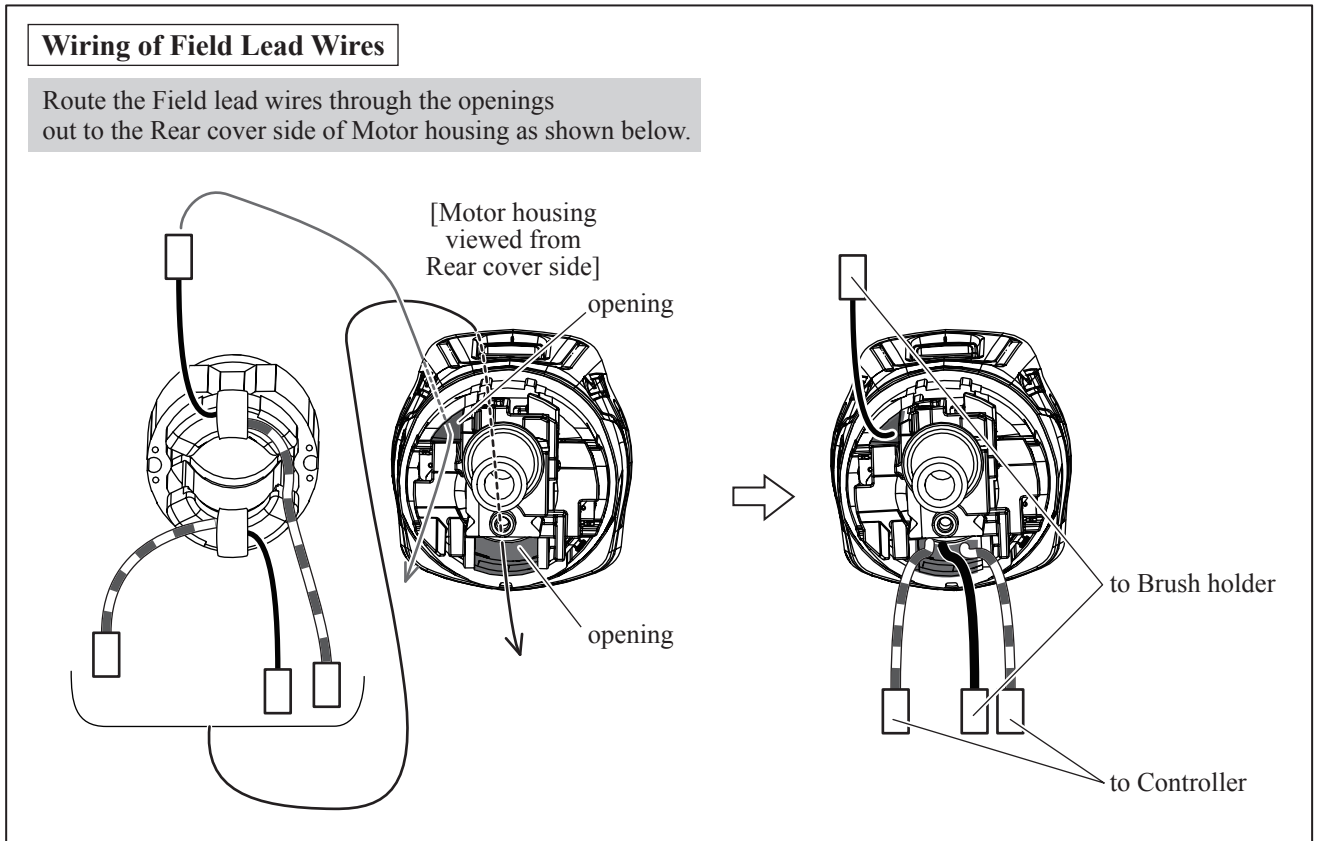
▶ **Circuit diagram**

Fig. D-1



▶ **Wiring diagram**

Fig. D-2



► **Wiring diagram**

Fig. D-3

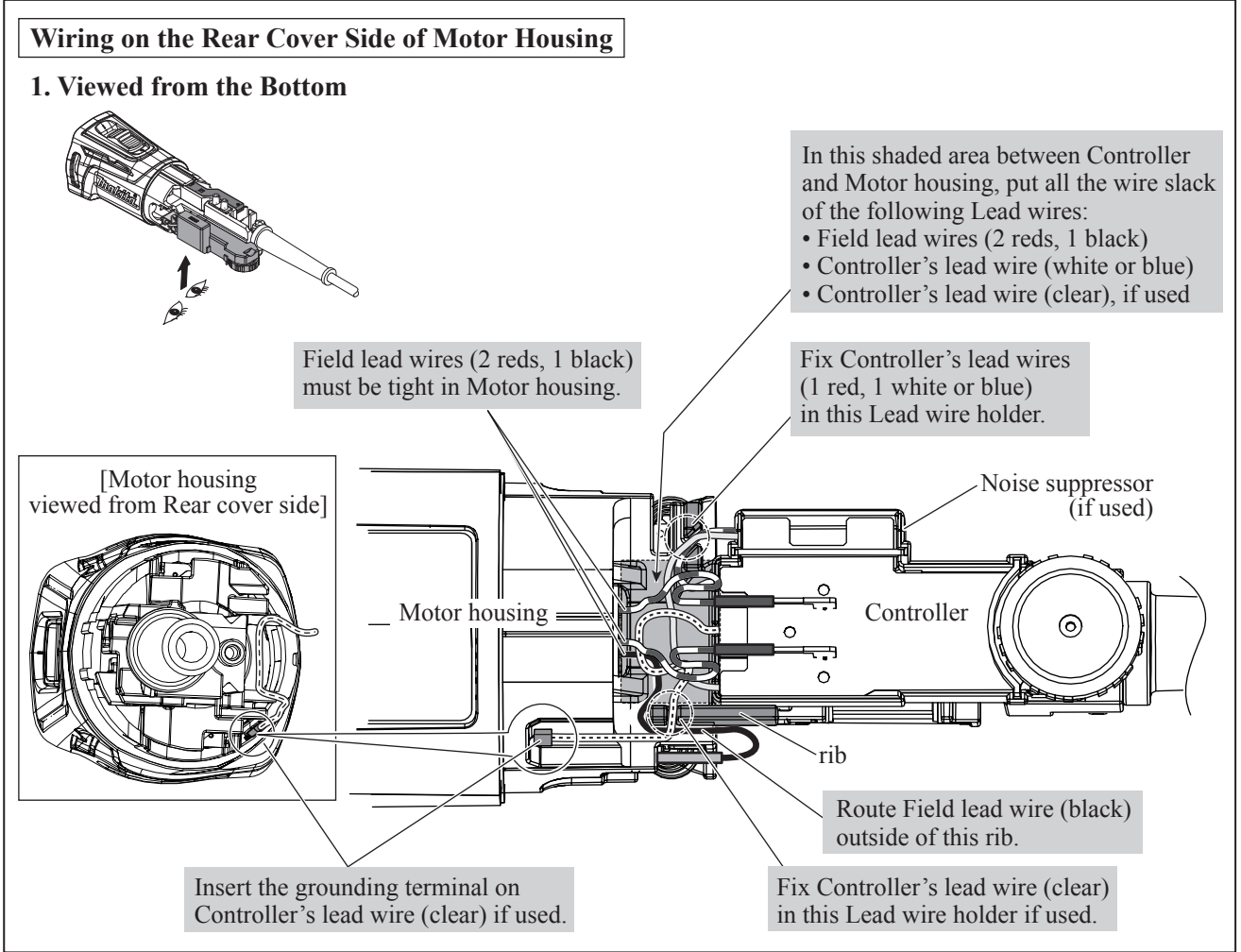
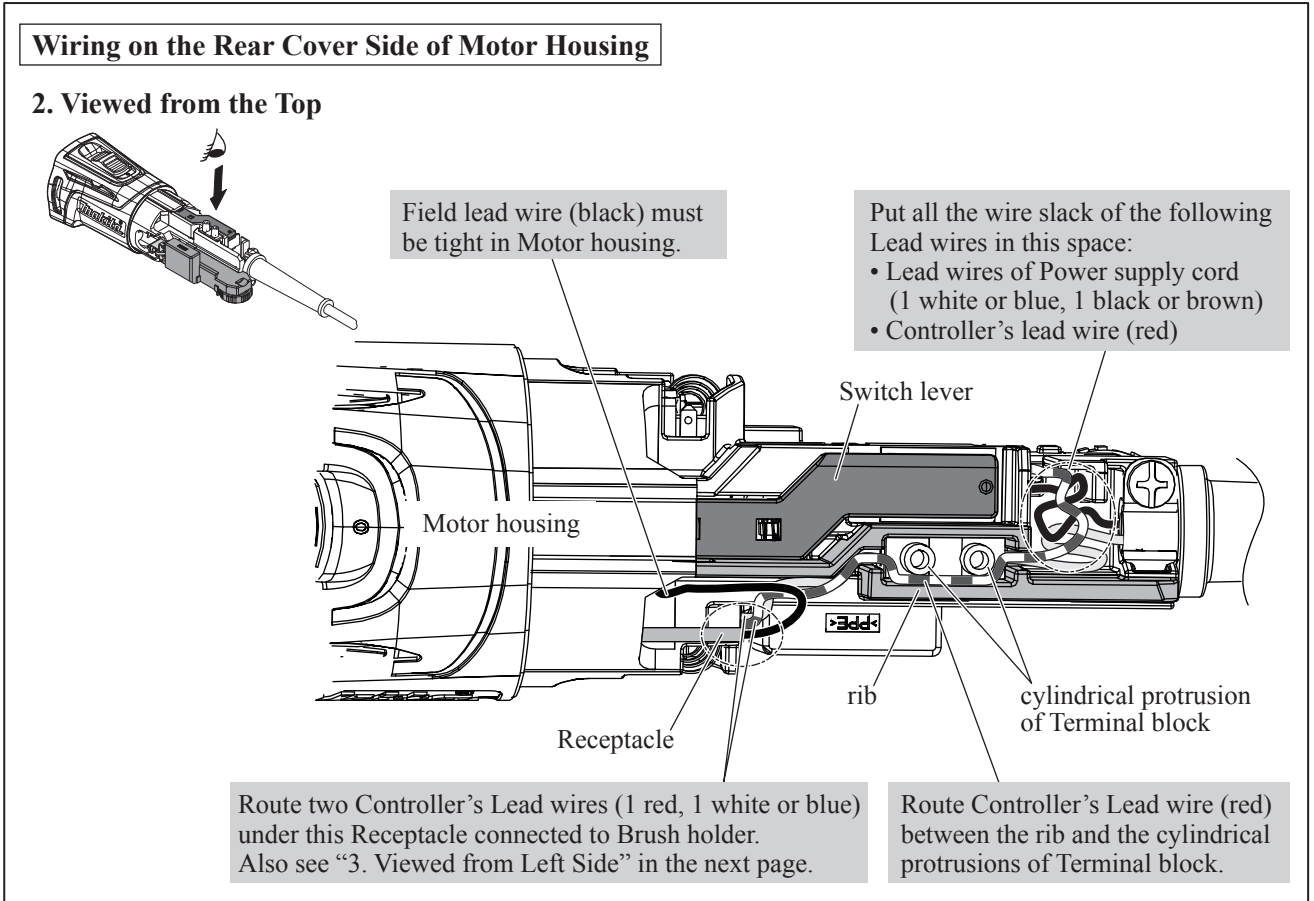


Fig. D-4



▶ **Wiring diagram**

Fig. D-5

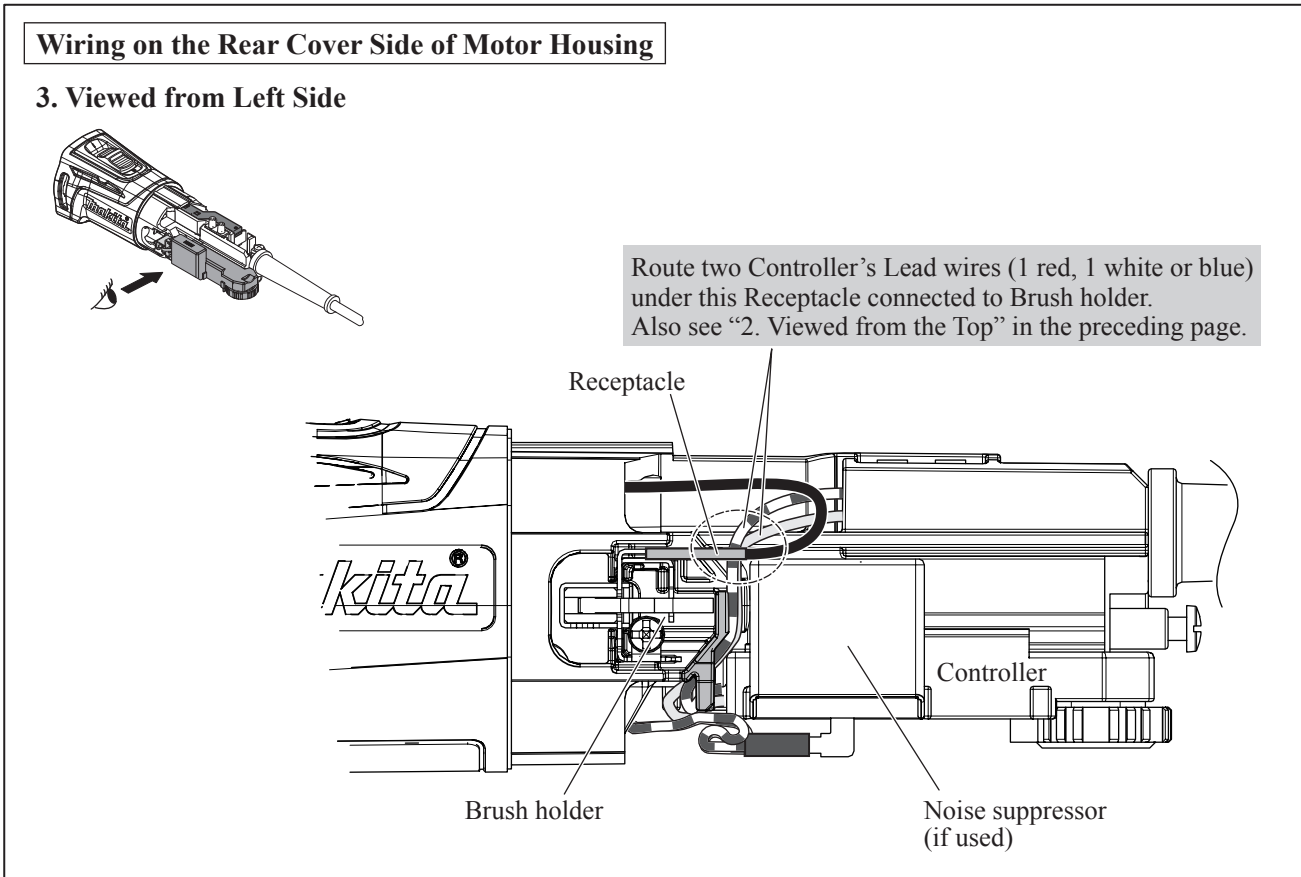


Fig. D-6

