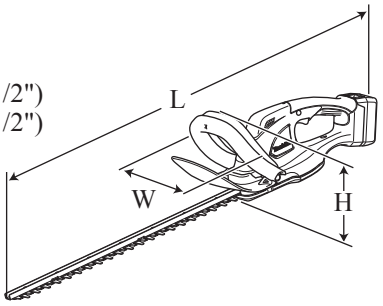
TECHNICAL INFORMATION

Model No. ► UH520D
UH422D/ UH482D/ UH522D
BUH481/ BUH521
BUH483/ BUH523

Description ► Cordless Hedge Trimmer 520mm (20-1/2")
Cordless Hedge Trimmers 420mm/ 480mm/ 520mm (16-1/2"/ 18-7/8"/ 20-1/2")
Cordless Hedge Trimmers 480mm/ 520mm (18-7/8"/ 20-1/2")
Cordless Hedge Trimmers 480mm/ 520mm (18-7/8"/ 20-1/2")



CONCEPT AND MAIN APPLICATIONS

The subject models are 14.4V/18V cordless hedge trimmers.
Their main features are:
• Anti-vibration structure
• User-replaceable blade

These products are compatible with the batteries and the chargers in the list below.

Model No.	Compatible battery	Compatible charger
UH520D	BL1411G	DC18WA
UH422D/ 482D/ 522D	BL1811G	
BUH481/ 521	BL1415 BL1430	DC18RC, DC18SD, DC24SC, DC18SE
BUH483/ 523	BL1815 BL1830	

Dimensions: mm (")		
Length (L)	UH520D	923 (36-1/4)
	UH422D/ 482D/ 522D	829 (32-5/8)/ 879 (34-1/2)/ 929 (36-1/2)
	BUH481/ 521	881 (34-3/4)/ 931 (36-3/4)*2 869 (34-1/4)/ 919 (36-1/4)*3
	BUH483/ 523	888 (35)/ 938 (37)*1 873 (34-3/8)/ 923 (36-1/4)*3
Width (W)		195 (7-5/8)
Height (H)		193 (7-5/8)

*2 with 3.0Ah Li-ion battery *3 with 1.3Ah Li-ion battery

► Specification

Specification \ Model		—/—/UH520D	UH422D/482D/522D	—/BUH481/521	—/BUH483/523
Battery	Cell	Li-ion			
	Voltage: V	14.4	18	14.4	18
	Capacity: Ah	1.1	1.1	1.3, 3.0	1.3, 3.0
	Energy capacity: Wh	16	20	19, 44	24, 54
	Charging time (approx.): min.	60 with DC18WA	60 with DC18WA	15, 22 with DC18RC	15, 22 with DC18RC
Max output (W)		190	210	190	210
Blade length: mm (")		420 (16-1/2)/ 480 (18-7/8)/ 520 (20-1/2)			
No load speed: min^{-1}=spm*3		1,350			
Max. cutting diameter*4: mm (")		ø15 (9/16)			
Weight according to EPTA-Procedure 01/2003*5: kg (lbs)		--- / --- / 3.0 (--- / --- / 6.7)	3.0/ 3.0/ 3.1 (6.6/ 6.7/ 6.8)	--- / 3.0/ 3.0 (--- / 6.5/ 6.7), --- / 3.1/ 3.2 (--- / 6.9/ 7.1)	--- / 3.0/ 3.1 (--- / 6.7/ 6.8), --- / 3.2/ 3.3 (--- / 7.1/ 7.3)

***3:** spm= strokes per minute
***4:** Indicates maximum diameter of the branch that can be received between adjacent two blade teeth. (See the figure on right.)

***5:** with battery, shear blade assembly

► Standard equipment

Blade cover 1
Battery cover ..... 1 (same quantity as that of spare battery)
Note: The standard equipment for the tool shown above may vary by country.

► Optional accessories

Shear blade complete set
Blade cover
Chip receiver assembly set
Battery BL1411G (for UH520D)
Battery BL1811G (for UH422D/ 482D/ 522D)
Battery BL1415 (for BUH481/ 521)
Battery BL1430 (for BUH481/ 521)
Battery BL1815 (for BUH483/ 523)
Battery BL1830 (for BUH483/ 523)
Charger DC18WA (for UH422D/ 482D/ 520D/ 522D)
Fast charger DC18RC (for BUH481/ 483/ 521/ 523)
Charger DC18SD (for BUH481/ 483/ 521/ 523)
Charger DC24SC (for BUH481/ 483/ 521/ 523)
Automotive charger DC18SE (for BUH481/ 483/ 521/ 523)

► Repair

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

[1] NECESSARY REPAIRING TOOLS

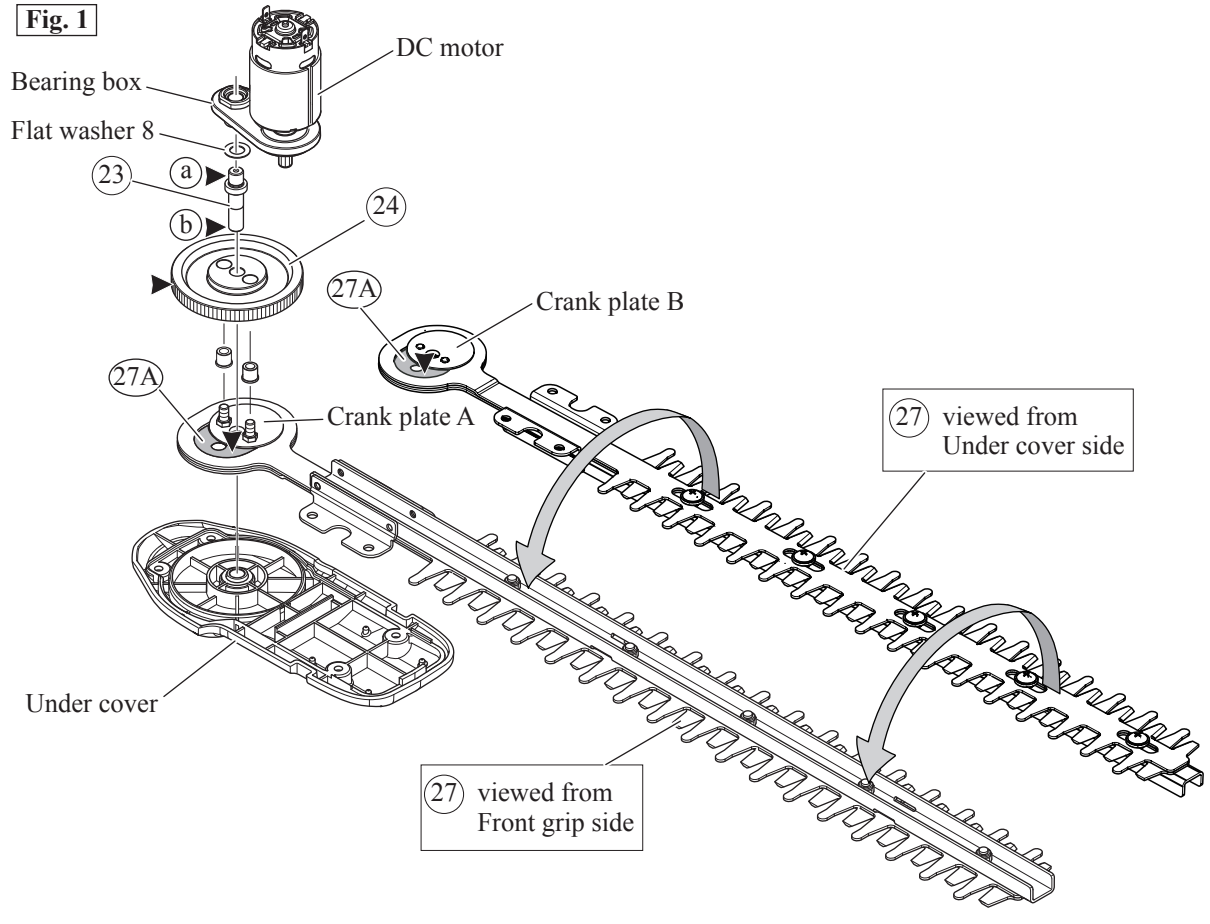
Code No.	Description	Use for
1R035	Bearing Setting Plate	Supporting Spur gear 93, when removing Spindle with Arbor press

[2] LUBRICATION

Apply the following grease to the portions designated with the black triangle to protect parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Grease	Amount
(23)	Spindle	(a) The drum portion which is accepted by Bearing box	Makita grease N No.2	a little
		(b) The drum portion which is accepted by Under cover		
(24)	Spur gear 93	Teeth portion for smooth engaging with DC motor's gear		3 g
(27A)	Spacer of Blade	Both side where Crank plate A and Crank plate B contact		a little

Fig. 1



► Repair

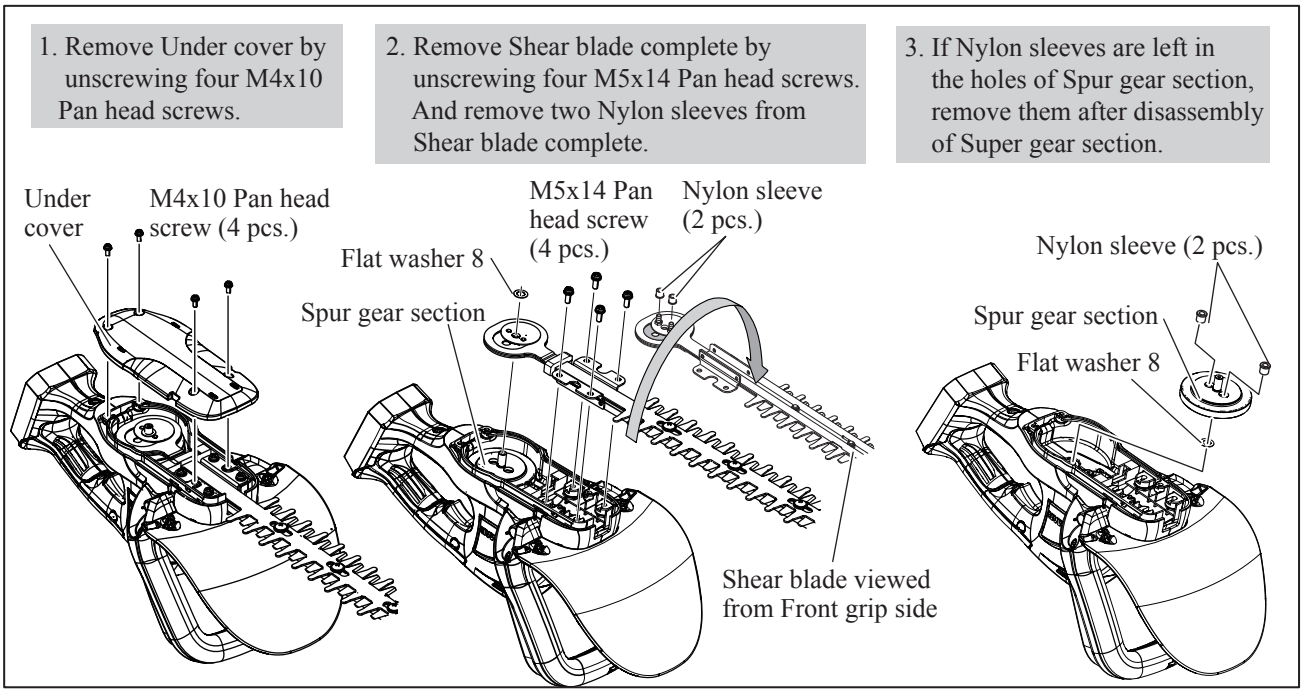
[3] DISASSEMBLY/ASSEMBLY

[3] -1. Shear blade complete

DISASSEMBLING

Disassemble Shear blade complete as drawn in **Fig. 2**.

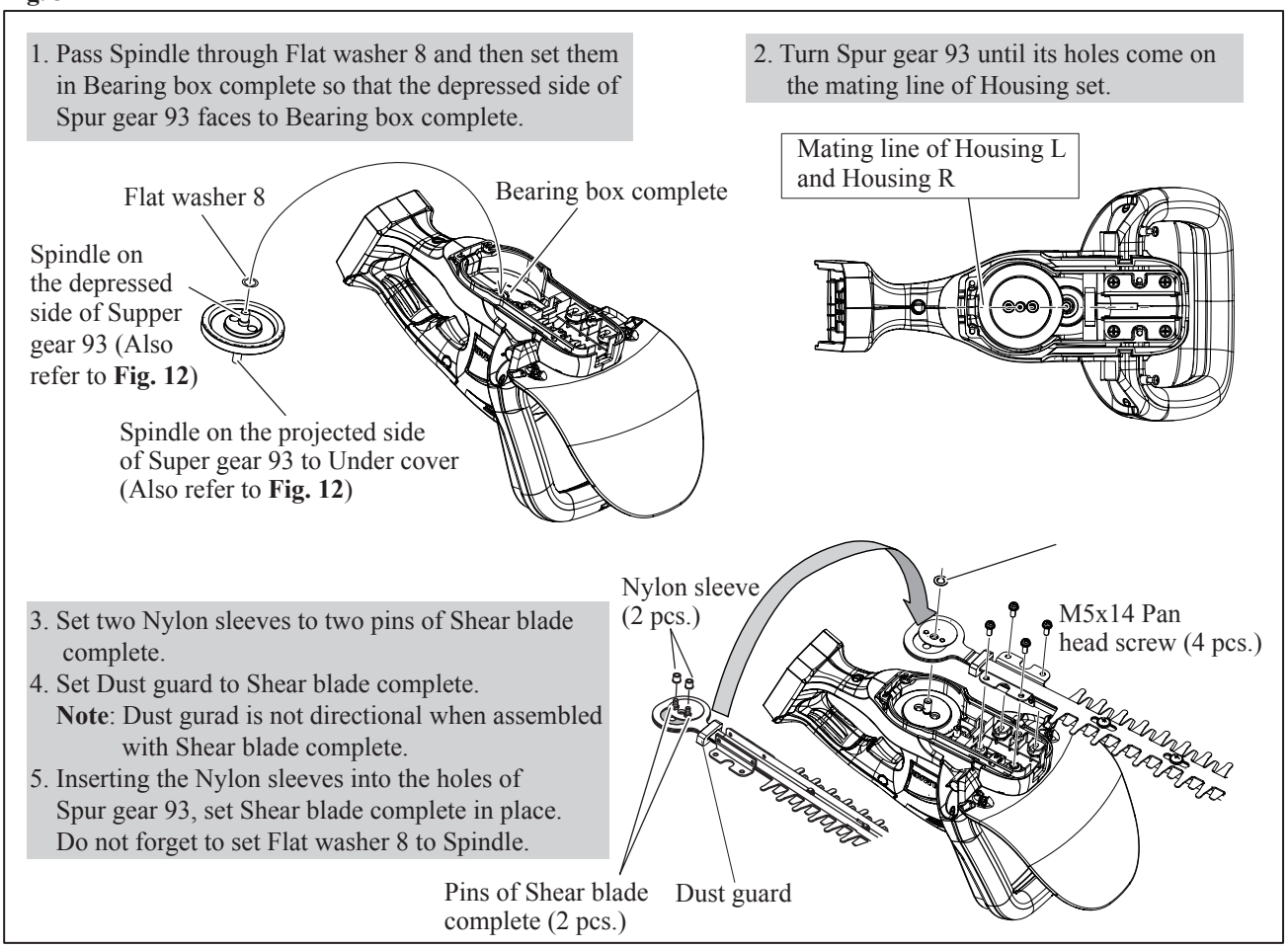
Fig. 2



ASSEMBLING

Assemble Shear blade complete to the machine as drawn in **Fig. 3**.

Fig. 3



► Repair

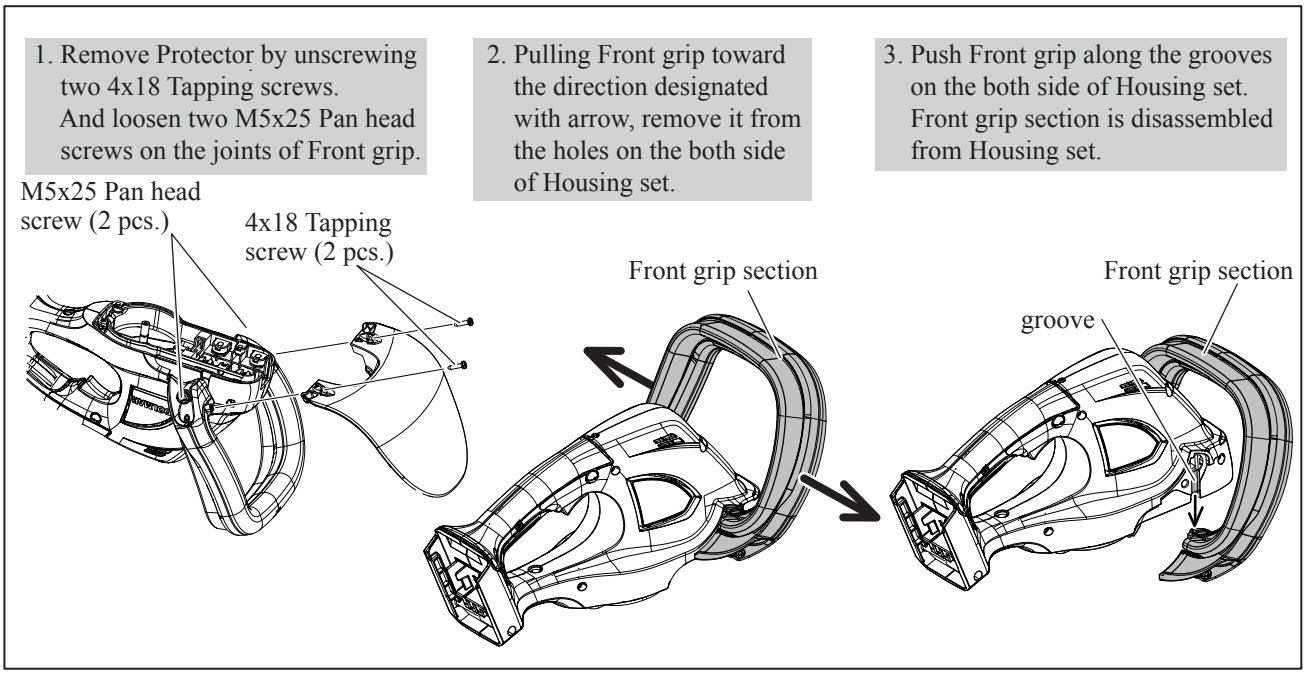
[3] DISASSEMBLY/ASSEMBLY

[3] -2. DC motor

DISASSEMBLING

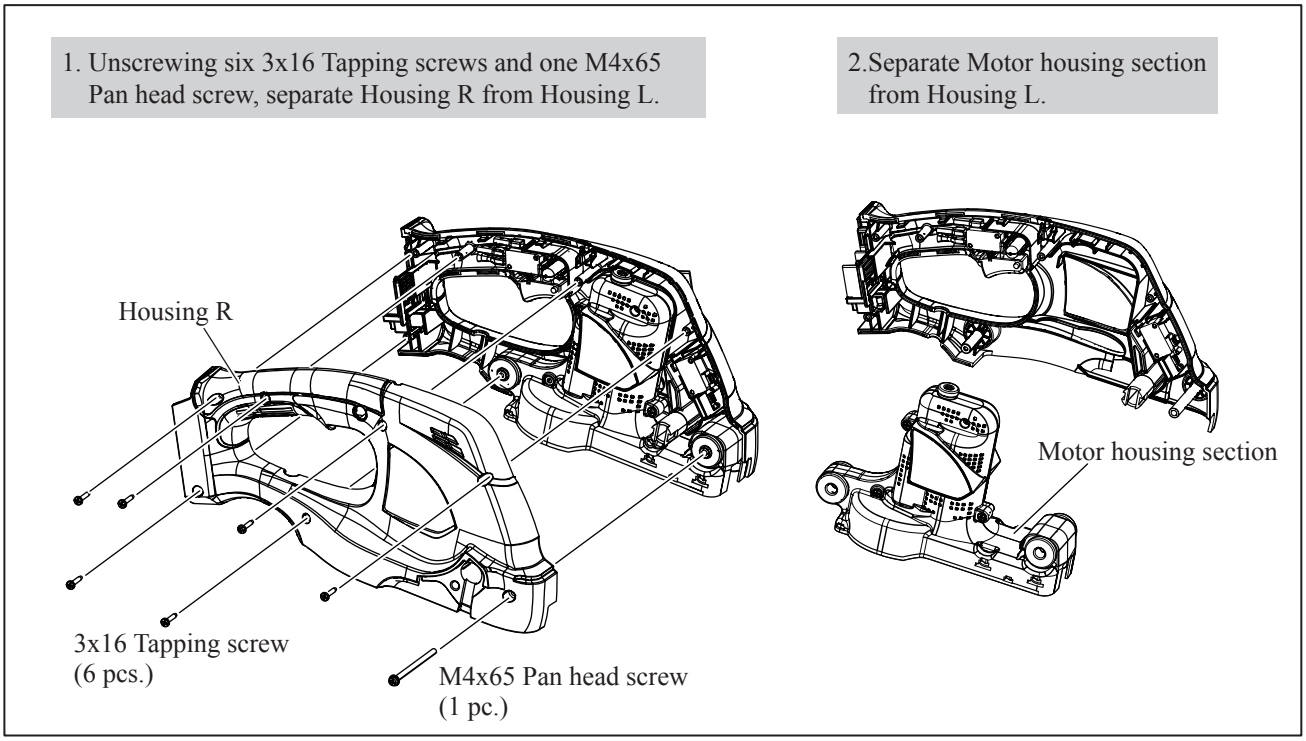
(1) Disassemble Shear blade complete and Spur gear 93 as drawn in **Fig. 2**.
(2) Remove Protector and Front grip section as drawn in **Fig. 4**.

Fig. 4



(3) Separate Housing R from Housing L. Then, remove Motor housing section from Housing L. See **Fig. 5**.

Fig. 5



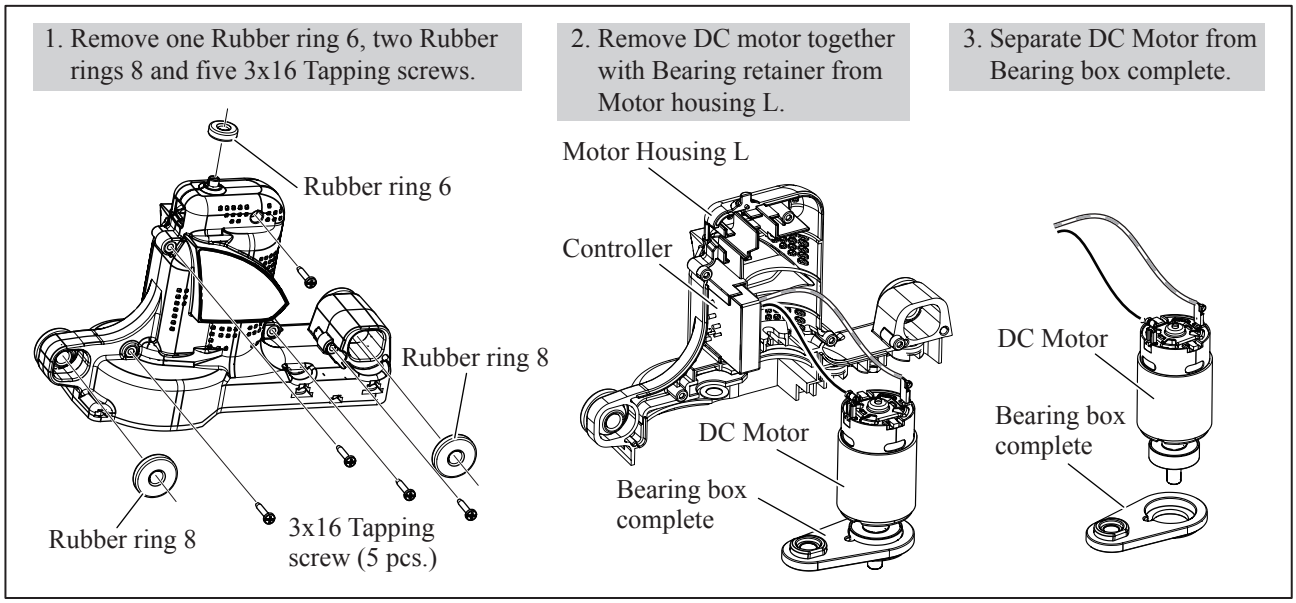
Repair

[3] DISASSEMBLY/ASSEMBLY
[3] -2. DC motor (cont.)

DISASSEMBLING

(4) Disassemble DC Motor from Motor housing as drawn in **Fig. 6**.

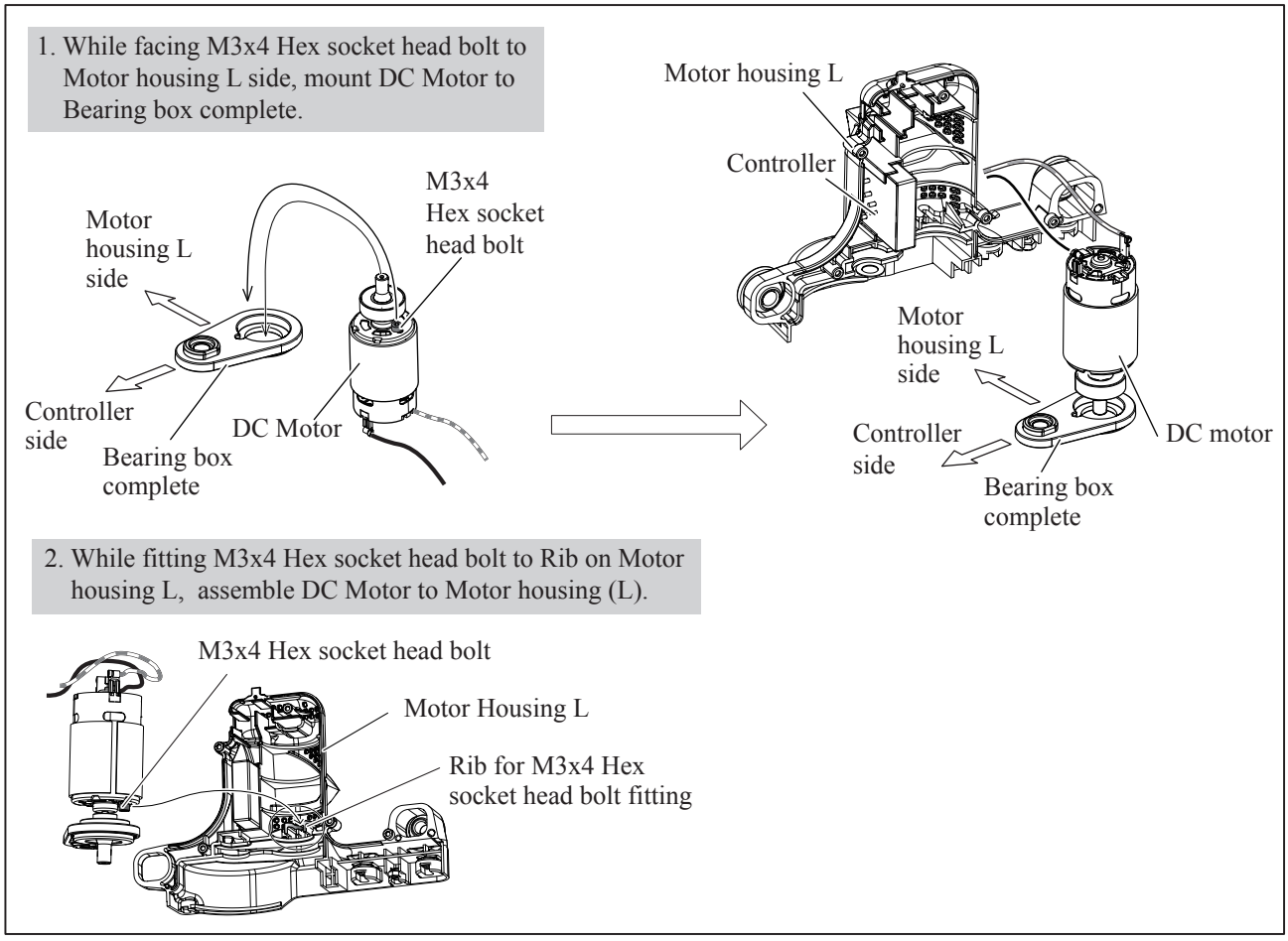
Fig. 6



ASSEMBLING

(1) Assemble DC Motor in the reverse order of Disassembly. (Refer to **Figs. 6**, **5** and **4**)
And also refer to **Fig. 7**.

Fig. 7



► Repair

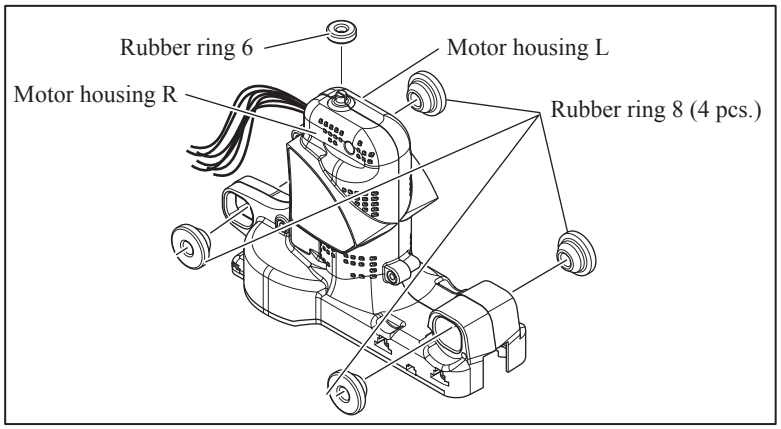
[3] DISASSEMBLY/ASSEMBLY

[3] -2. DC motor (cont.)

ASSEMBLING

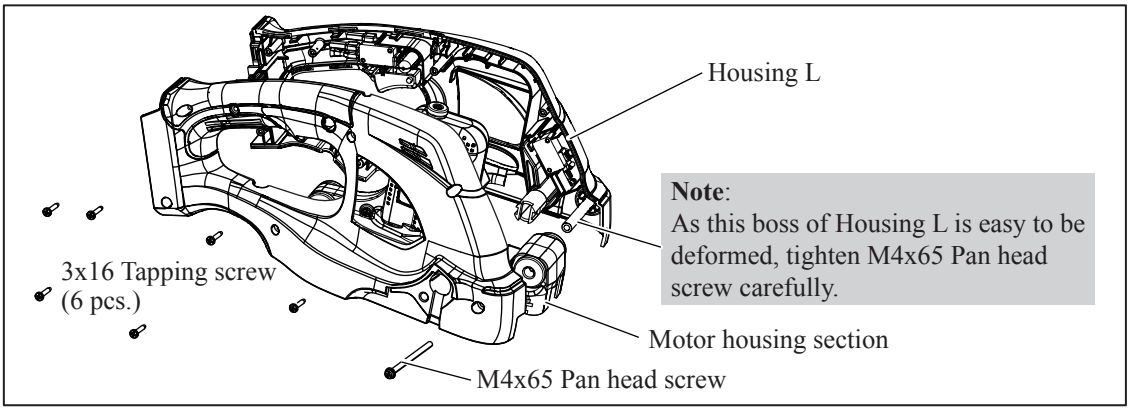
(2) Fix Motor housing R and Motor housing L with Rubber rings as drawn in **Fig. 8**.

Fig. 8



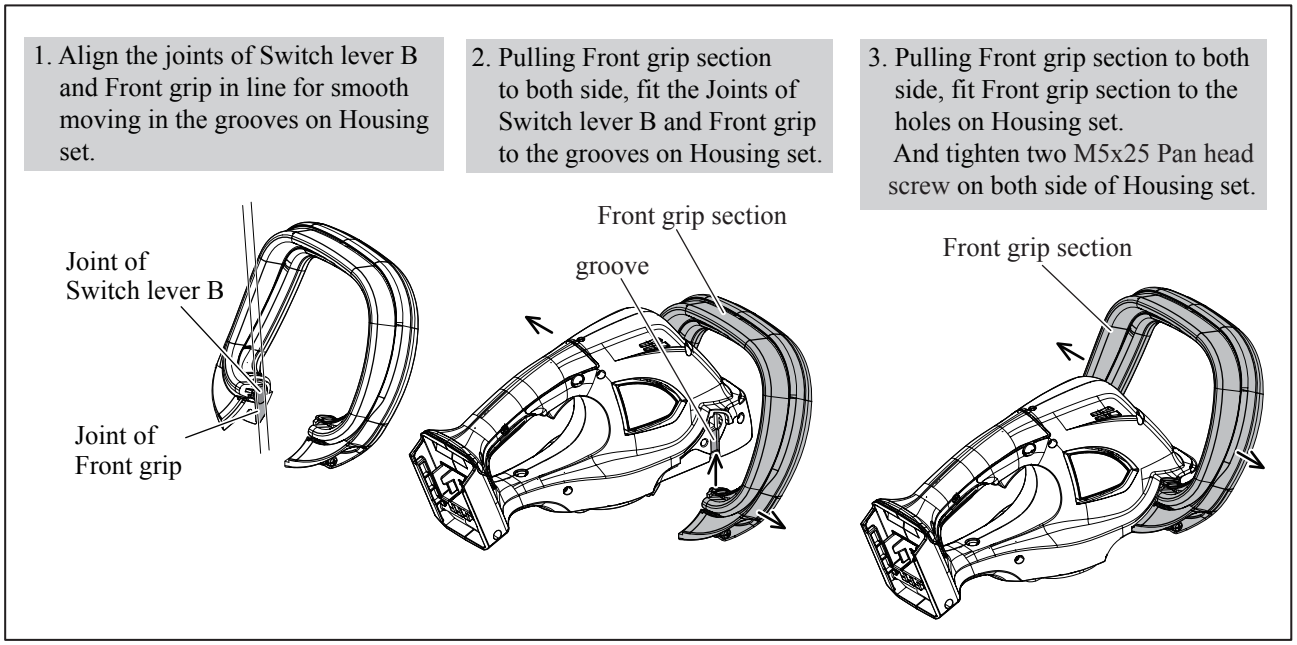
(3) Setting Motor housing section to Housing L, set Housing R in place with six 3x16 Tapping screws and one M4x65 Pan head screw as drawn in **Fig. 9**.

Fig. 9



(4) Assemble Front grip section as drawn in **Fig. 10**.

Fig. 10



► Repair

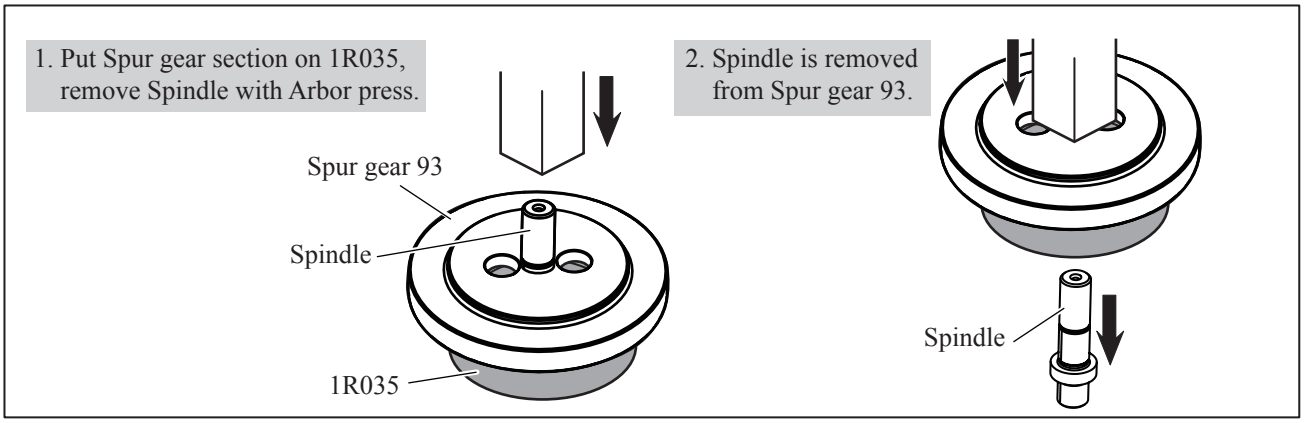
[3] DISASSEMBLY/ASSEMBLY

[3] -3. Spur Gear 93

DISASSEMBLING

(1) Disassemble Shear blade complete, and then, remove Spur gear section as drawn in **Fig. 2**.
(2) Disassemble Spur gear 93 as drawn in **Fig. 11**.

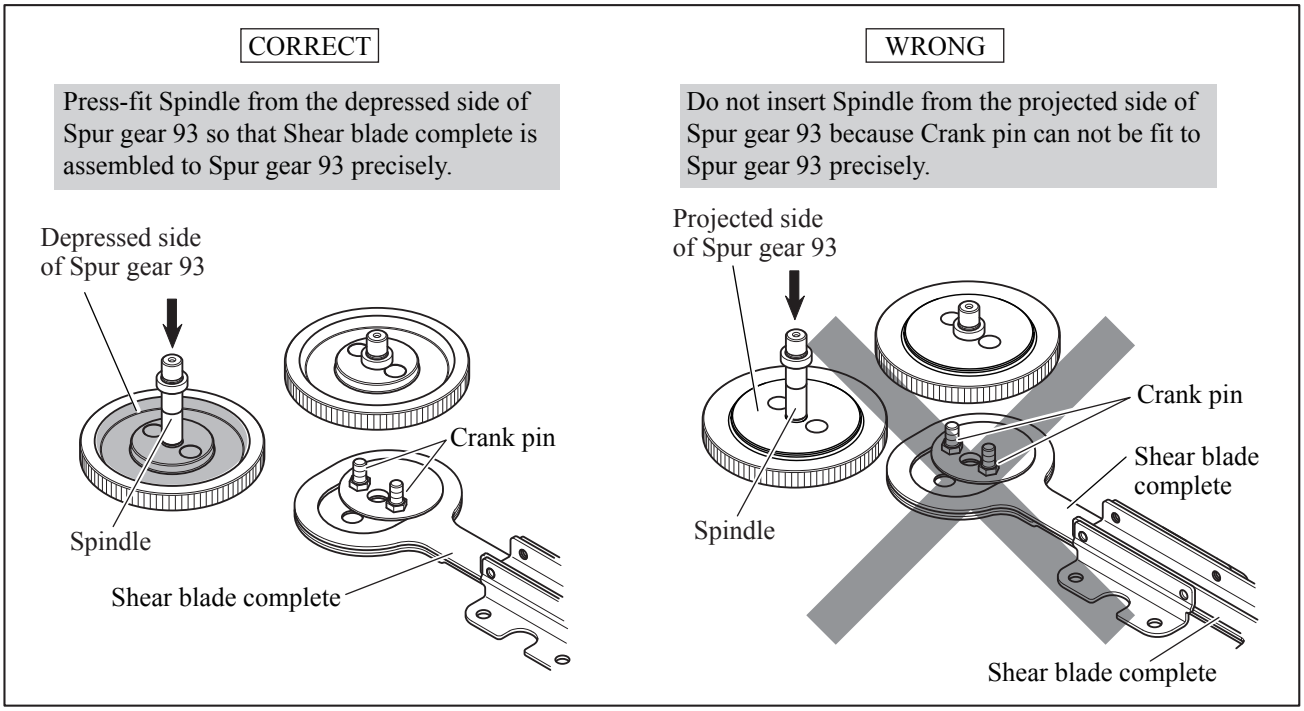
Fig. 11



ASSEMBLING

(1) Assemble Spindle to Spur gear 93 as drawn in **Fig. 12**.

Fig. 12



(2) Face its grooved side of Spur gear 93 to Bearing box complete and assemble Spur gear sesction to Bearing box complete.
Note: Be sure to set two Flat washers 8 on both Spindle ends, two Nylon sleeves into holes of Shear blade complete as drawn in **Fig. 3**.

► Repair

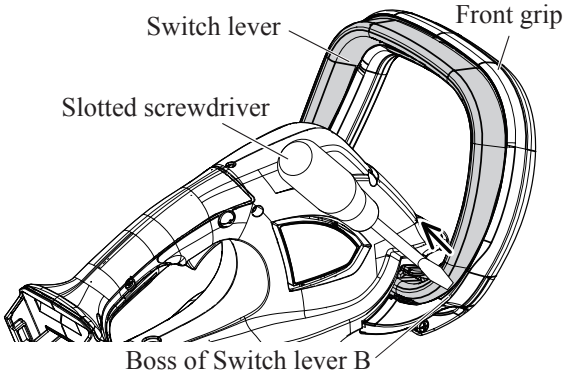
[3] DISASSEMBLY/ASSEMBLY

[3] -4. Front grip

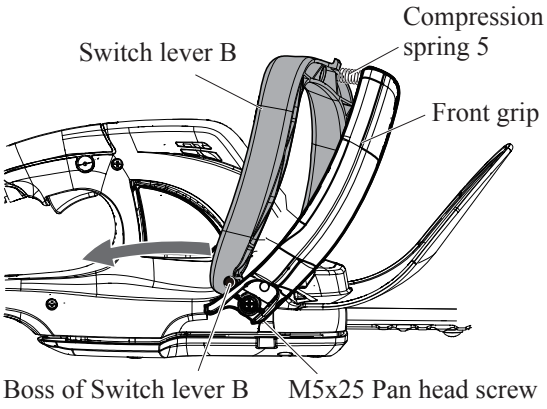
DISASSEMBLING

(1) Remove Front grip section without disassembling Under cover as drawn in **Fig. 13**.

Fig. 13



1. Insert a slotted screwdriver into the gap between Front handle and Switch lever B, and push Switch lever B toward the direction designated with black arrow.
   One of Boss of Switch lever B is removed from the hole of Front handle.



2. Remove the other boss of Switch lever B in the same step.

3. Remove M5x25 Pan head screws on the both side of Housing set.

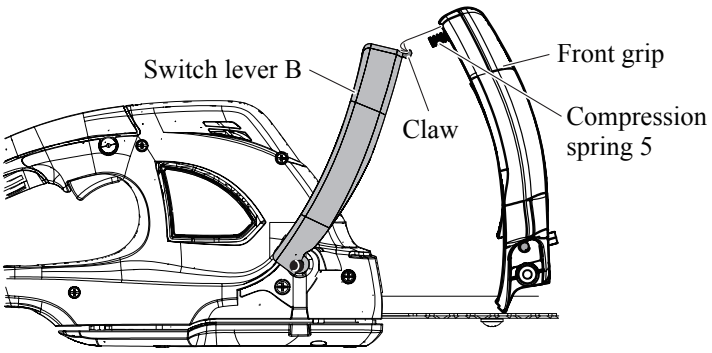
<Note in Disassemble>
Pay attention not to lose Compression spring 5 when disassembling Front grip.

ASSEMBLING

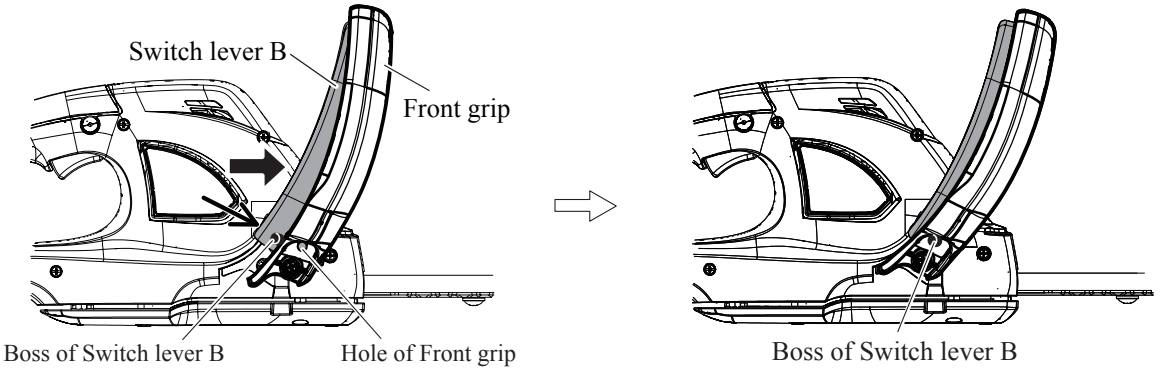
(1) Assemble Front grip as drawn in **Fig. 14**.
(2) Assemble Protector to Front grip. Refer to **Fig. 4**.

Fig. 14

1. While hooking the claw of Switch lever B to Front grip, assemble Front grip to Switch lever B.



2. Push Switch lever B toward Front grip, and fit the bosses of Switch lever B to the holes of Front grip.



► Repair

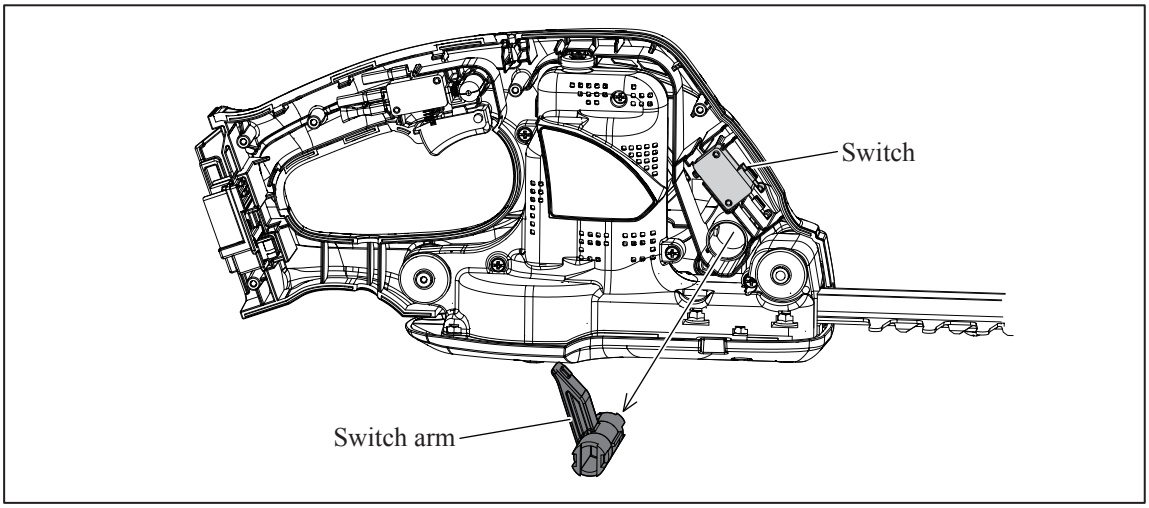
[3] DISASSEMBLY/ASSEMBLY

[3] -5. Switch arm

DISASSEMBLING

(1) Disassemble Front grip section as drawn in **Fig. 4**.
(2) Remove Housing R as drawn in **Fig. 5**.
(3) Switch arm is removed as drawn in **Fig. 15**.

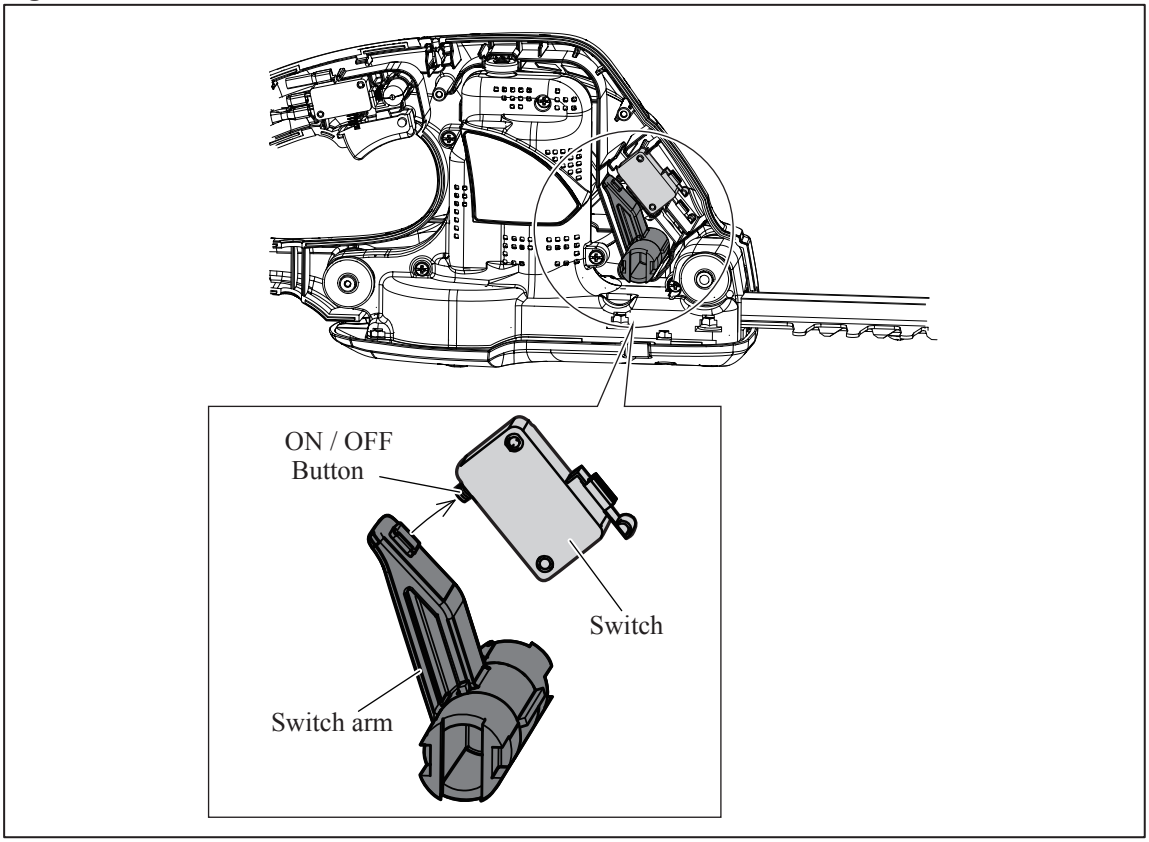
Fig. 15



ASSEMBLING

Switch arm has to be assembled to Housing L so that it can push ON/OFF button of Switch to link with Switch lever B's action. See **Fig. 16**.

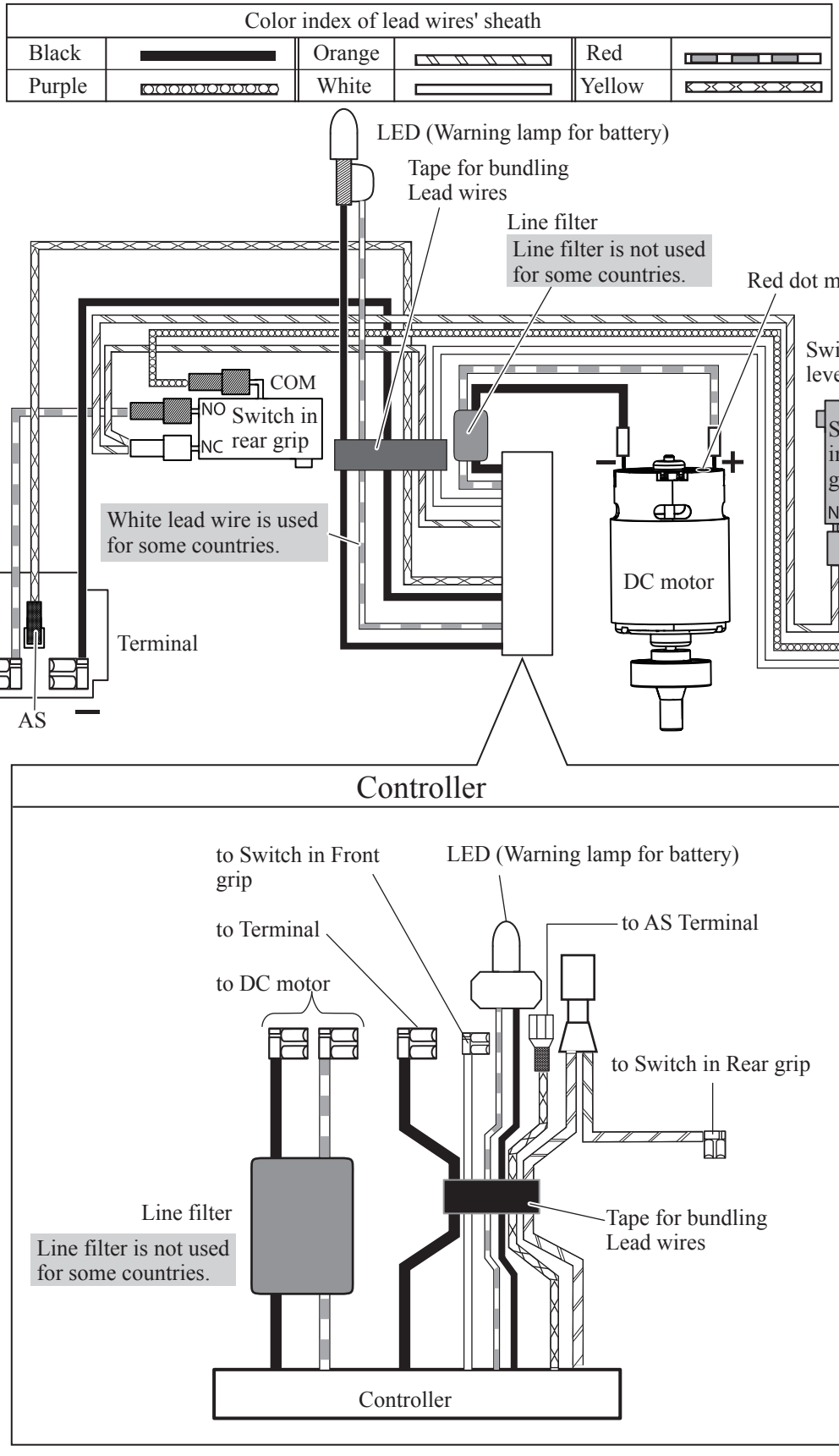
Fig. 16



► Circuit diagram

Fig. D-1

Model No.	Power source Battery
BUH481/ 521	BL1415, BL1430 14.4 V
BUH483/ 523	BL1815, BL1830 18 V

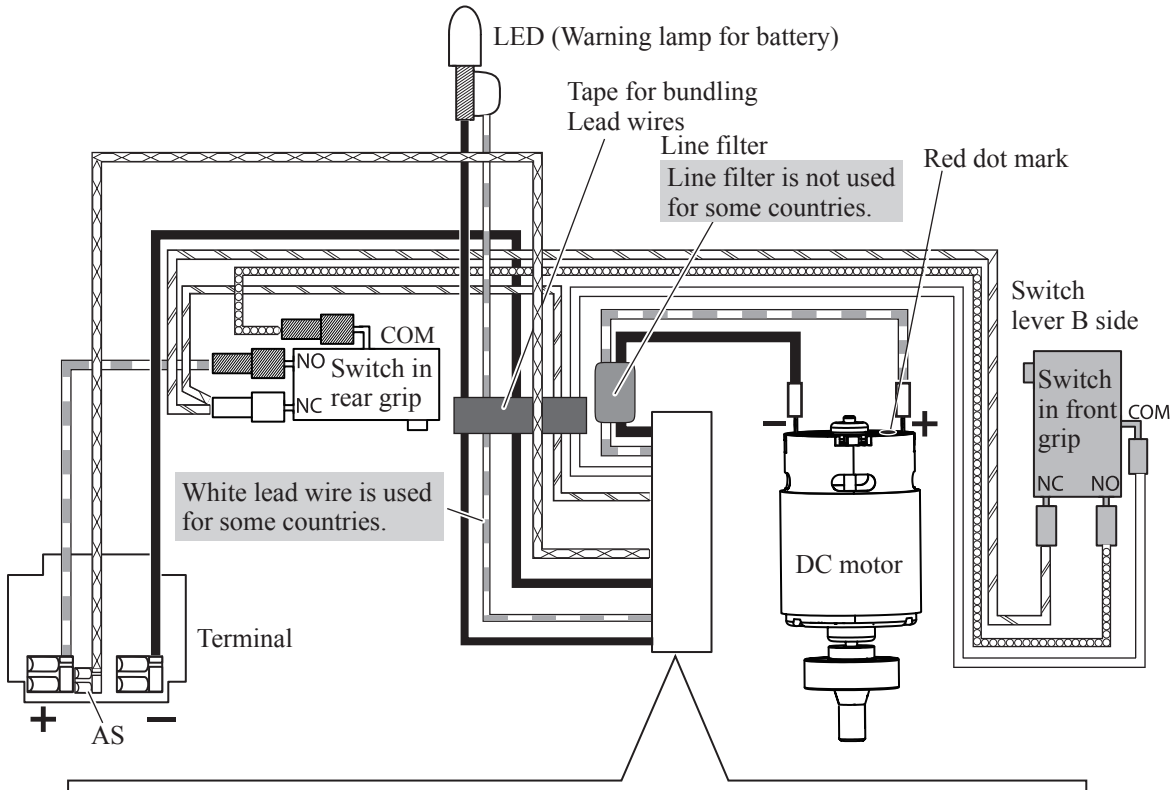


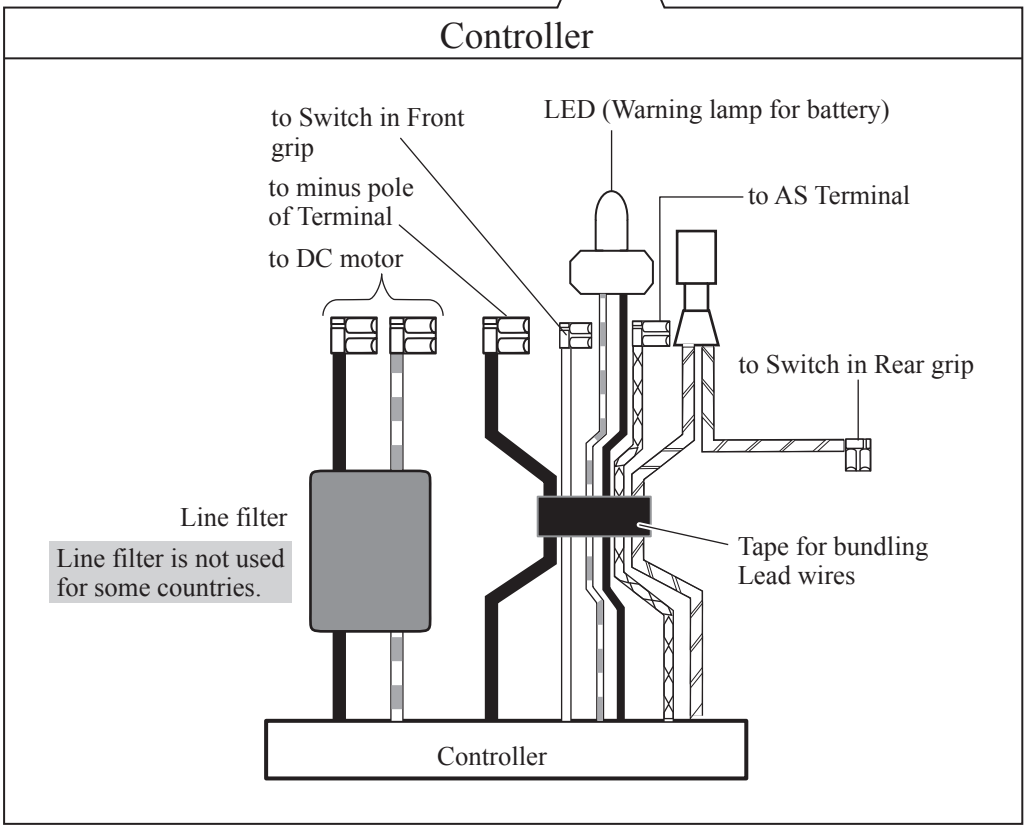
► Circuit diagram (cont.)

Fig. D-2

Model No.	Power source Battery
UH520D	BL1411G 14.4V
UH422D/ 482D/ 522D	BL1811G 18V

Color index of lead wires' sheath					
Black		Orange		Red	
Purple		White		Yellow	





► Wiring diagram

Fig. D-3

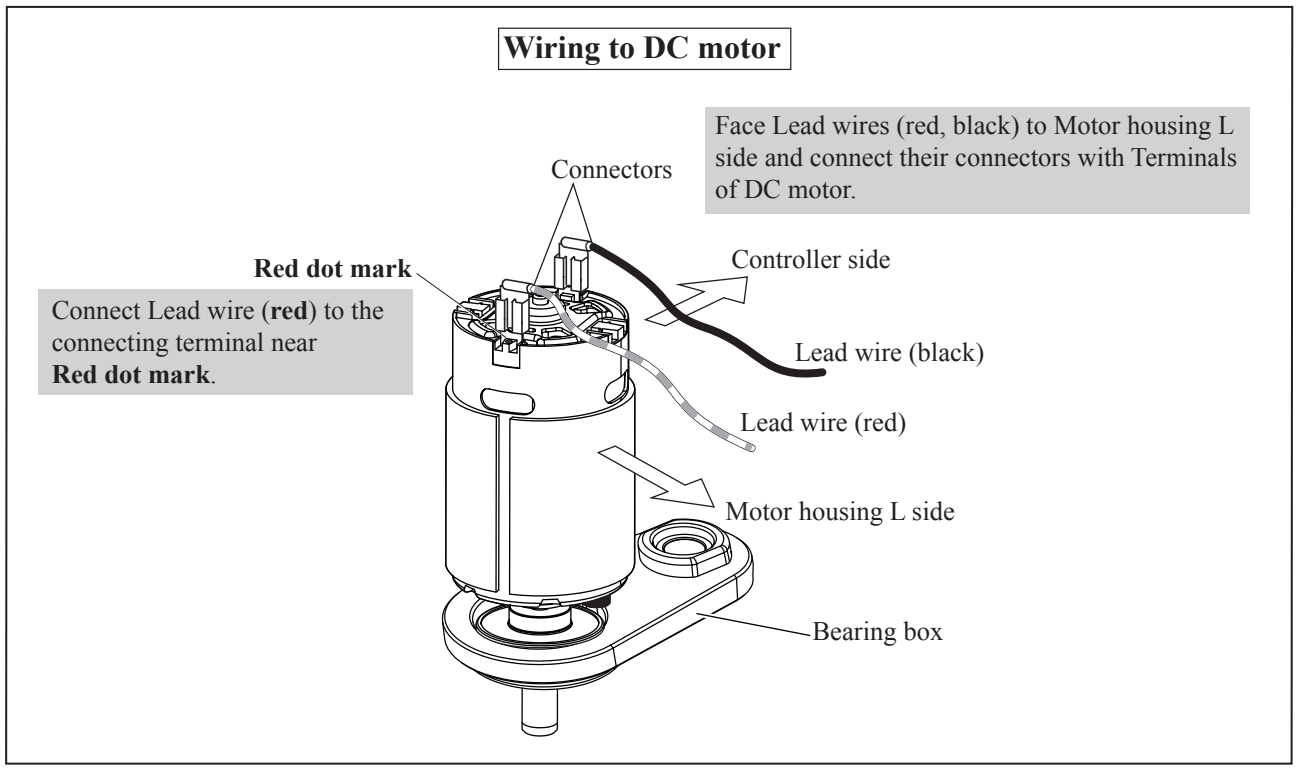
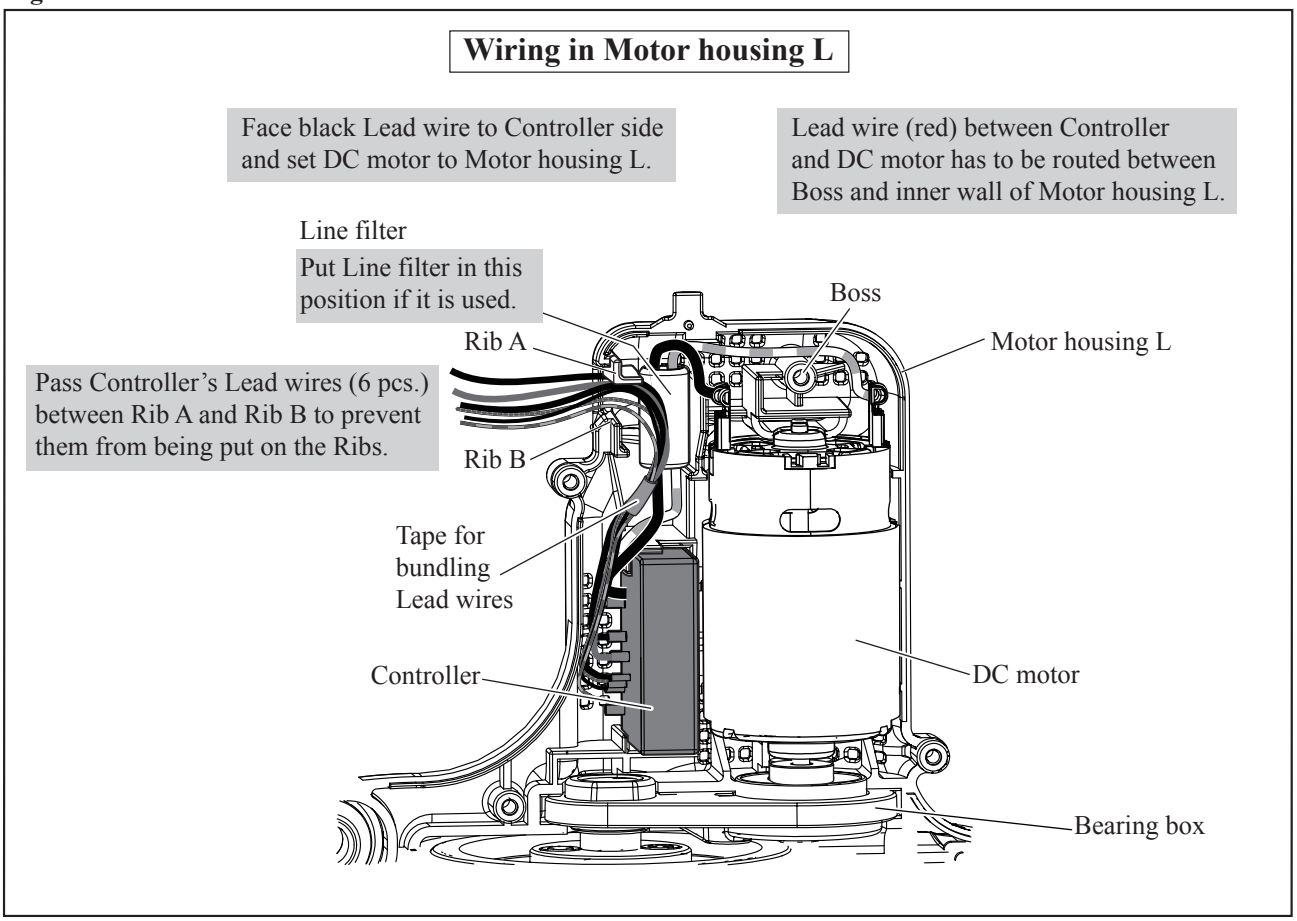


Fig. D-4



► Wiring diagram (cont.)

Fig. D-5