



# TECHNICAL INFORMATION

**Model No.** ▶ UM164D

**Description** ▶ Cordless Grass Shear 160mm (6-5/16)

## CONCEPT AND MAIN APPLICATIONS

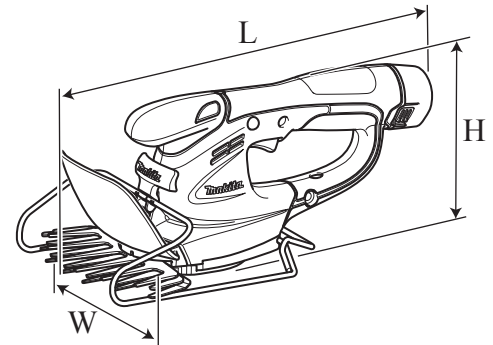
Model UM164D is 160mm Cordless grass shear powered by 10.8V/ 1.3Ah Li-ion battery BL1013.

Its main features are:

- Lightweight and compact design for easy handling
- Optional Hedge trimmer blade kit can convert this model into Model UH200D Cordless hedge trimmer.

This product is available in the following variations.

Model No.	Battery		Charger
	type	quantity	
UM164DZ	No	/	No
UM164DW	BL1013 (Li-ion 1.3Ah)	1	DC10WA
UM164DWE		2	



Dimensions*1: mm (")	
Length (L)	292 (11-1/2)
Width (W)	178 (7)
Height (H)	130 (5-1/8)

\*1 without base frame

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

## Specification

Specification		Model	UM164D
Battery	Voltage: V		10.8
	Capacity: Ah		1.3
	Cell		Li-ion
No load speed: min-1=spm*2			1,250
Cutting width: mm (")			160 (6-5/16)
Overload protection			Yes
Weight according to EPTA-Procedure 01/2003 *3: kg (lbs)			1.1 (2.4)

\*2 spm= stroke per minute

\*3 with shear blade, base frame

## Standard equipment

Base frame ..... 1  
Blade cover ..... 1

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

## Optional accessories

Battery BL1013  
Charger DC10WA  
Grass shear blade kit\*4 (with a bottle of lubricant grease)  
Hedge trimmer blade kit\*5 (with a bottle of lubricant grease)  
Extension handle kit\*4  
Chip receiver set\*5  
Accessory kit for use as a hedge trimmer\*5 (including Blade cover, etc.)  
Accessory kit for use as a grass shear\*4 (including Base frame, etc.)

\*4 for use as a grass shear

\*5 for use as a hedge trimmer

## ▶ Repair

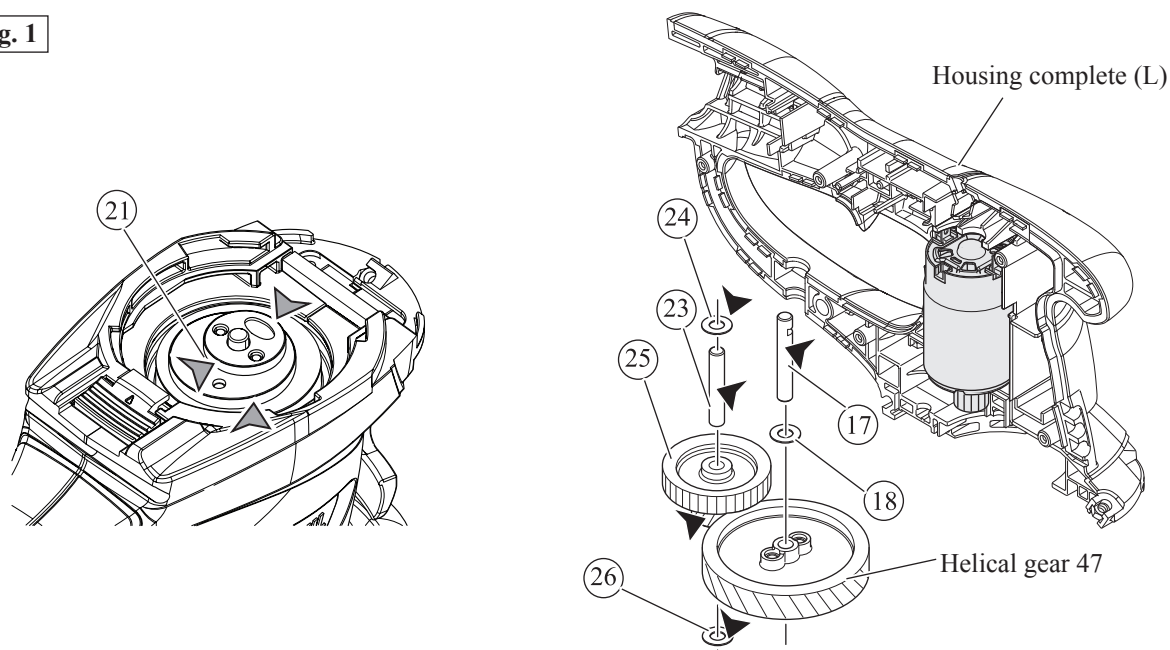
**CAUTION:** Repair the machine in accordance with “Instruction manual” or “Safety instructions”.

### [1] LUBRICATIONS

Apply the following lubricant to protect parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Lubricant	Amount
⑰	Pin 6 (with notch)	Drum portion for smooth rotation of Helical gear 47	Makita grease N No.2 ▼	a little
⑱⑳㉑㉒	Washer 6	Whole portion		
㉓	Crank	Drum portion where Blade contacts	Molybdenum disulfide ▼	1.5g
㉔	Pin 6	Drum portion for smooth rotation of ㉕ Gear 12-31	Makita grease N No.2 ▼	a little
㉖	Gear 12-31	Gear teeth with which Helical gear 47 and DC motor gear engage		2g

**Fig. 1**



► **Repair**

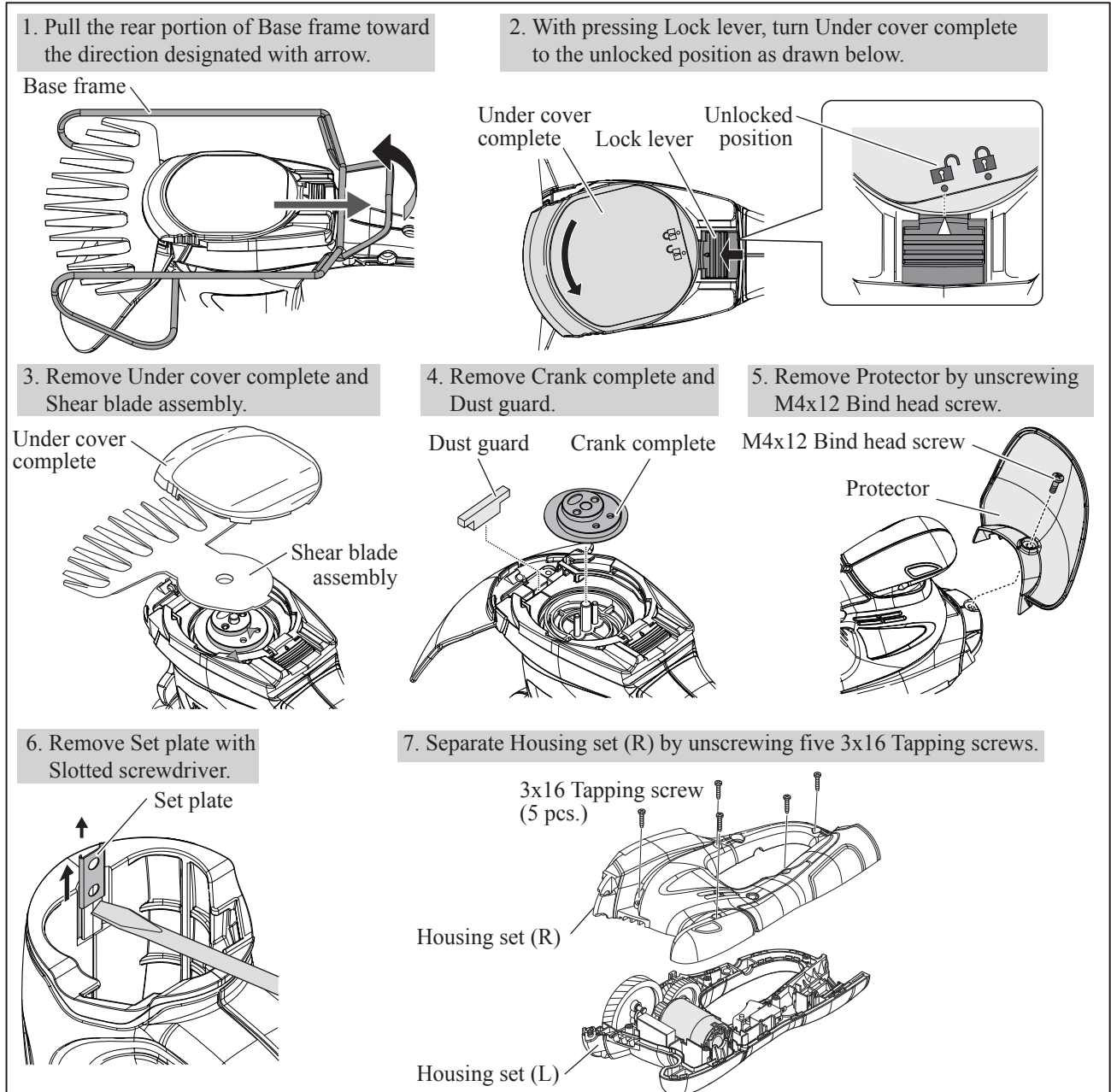
**[2] DISASSEMBLY/ASSEMBLY**

**[2]-1. Gear 12-31, Helical gear 47**

DISASSEMBLING

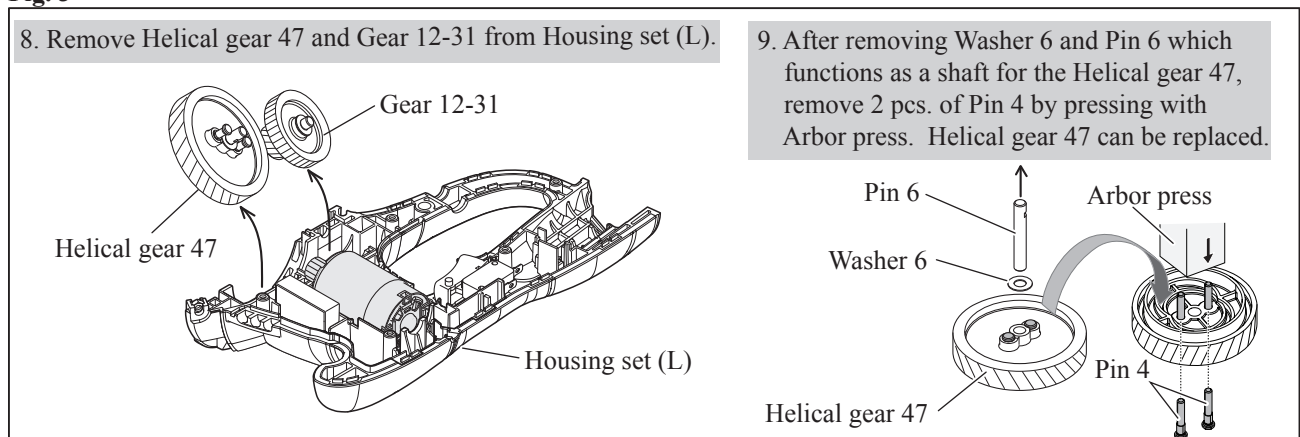
(1) Remove Blade, Crank and Housing set (R). (Fig. 2)

Fig. 2



(2) After removing Housing set (R), Helical gear 47 and Gear 12-31 can be removed. (Fig. 3)

Fig. 3



## ► Repair

### [2] DISASSEMBLY/ASSEMBLY

#### [2]-1. Gear 12-31, Helical gear 47 (cont.)

##### ASSEMBLING

- (1) Assemble Helical gear 47, Gear 12-31. (Figs. 4, 5)  
And mount them to Housing set (L). (Fig. 6)

Fig. 4

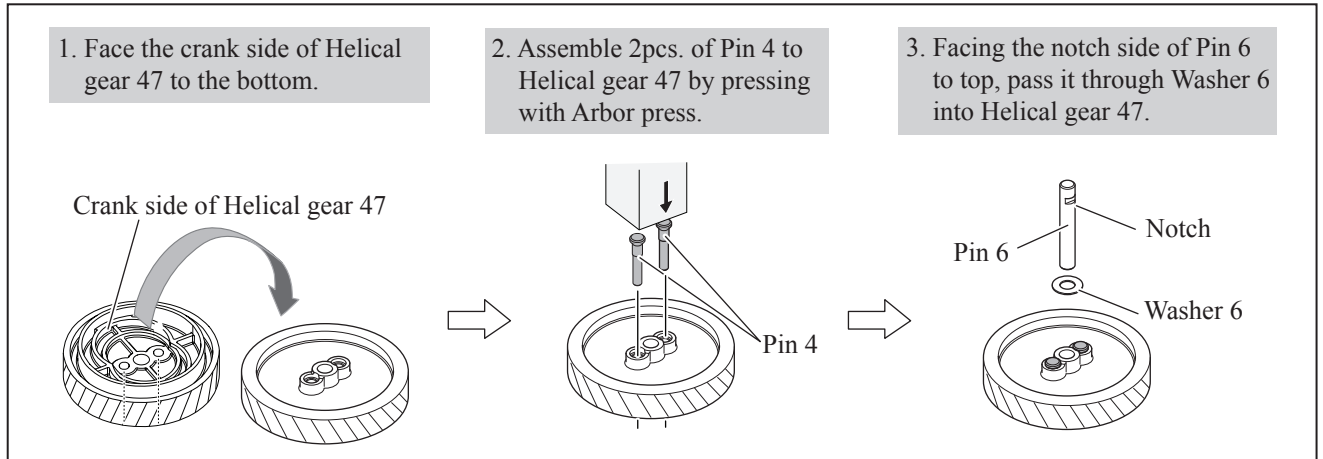


Fig. 5

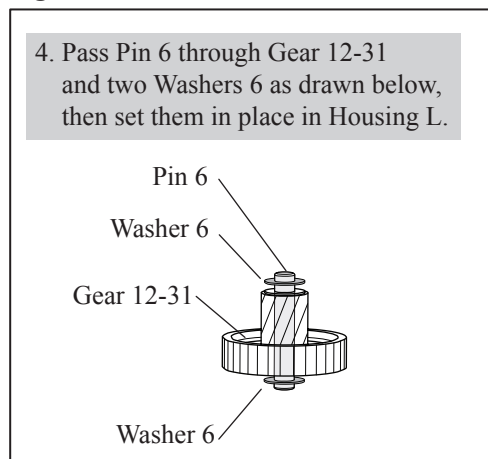
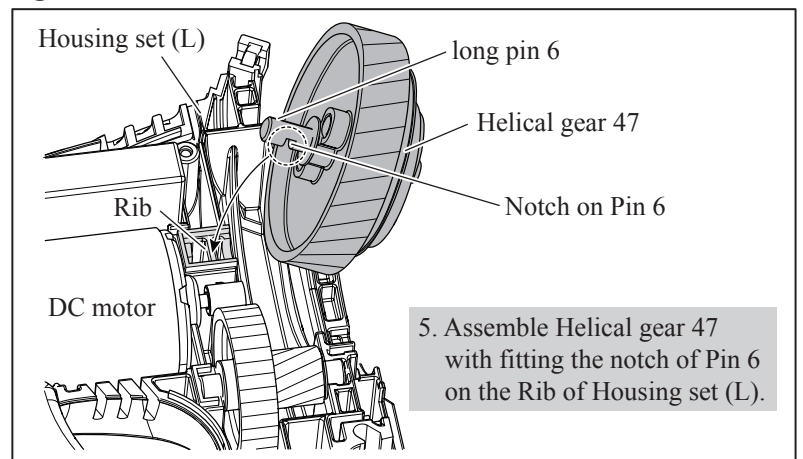
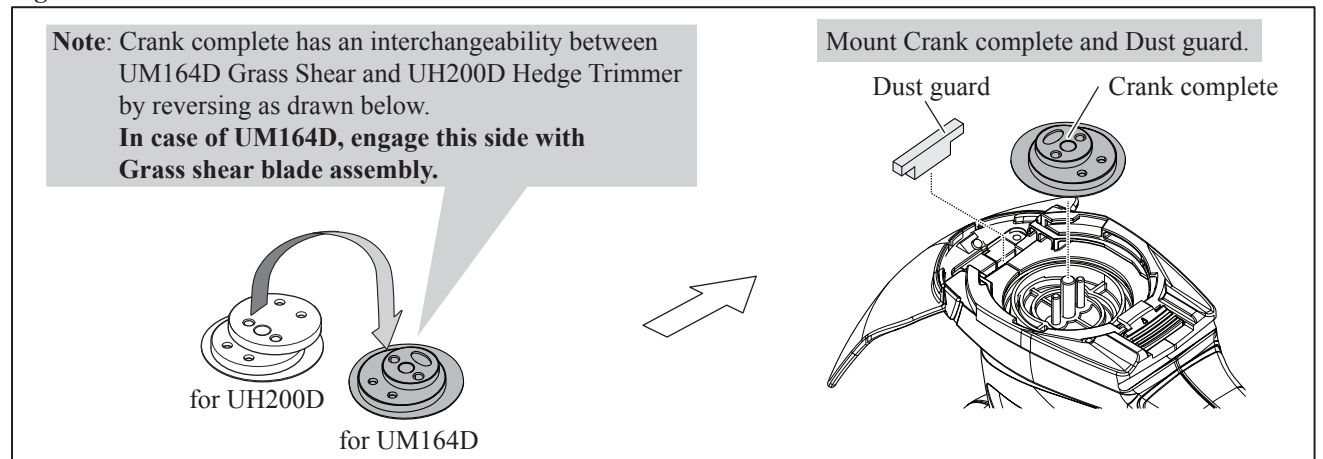


Fig. 6



- (2) Assemble Protector to housing set. (Center right in Fig. 2)
- (3) Mount Crank complete. (Fig. 7)

Fig. 7



- (4) Mount Grass shear blade assembly and Under cover. See Fig. 10 in [3]-3. Shear blade assembly.

► **Repair**

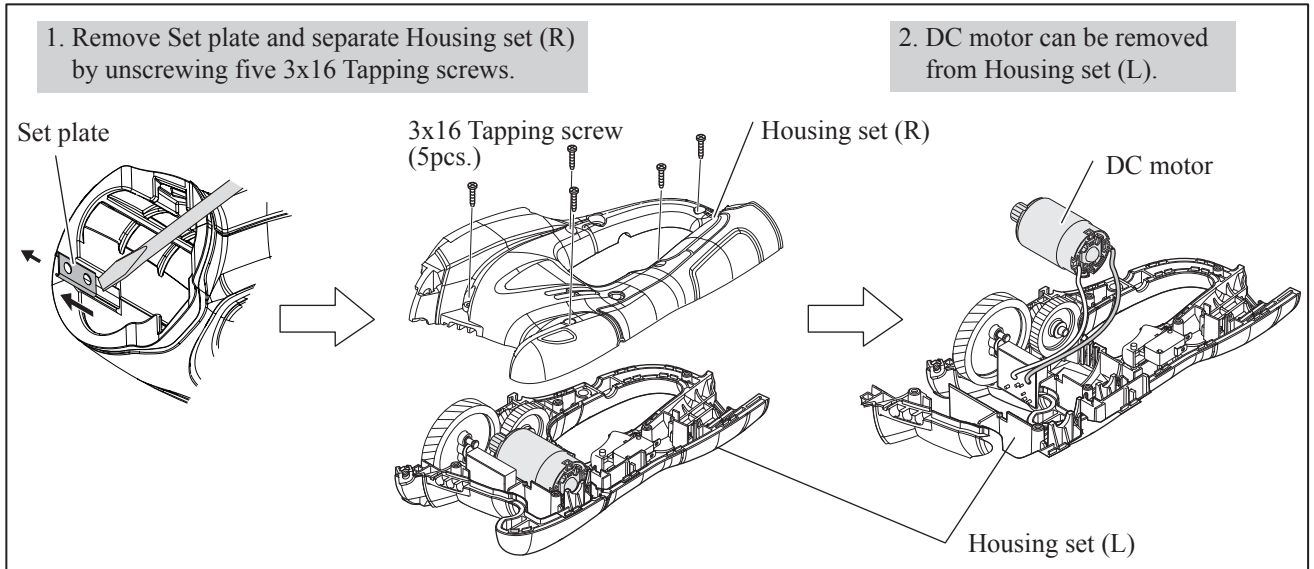
**[3] DISASSEMBLY/ASSEMBLY**

**[2]-2. DC motor**

**DISASSEMBLING**

(1) Disassemble DC motor. (Fig. 8)

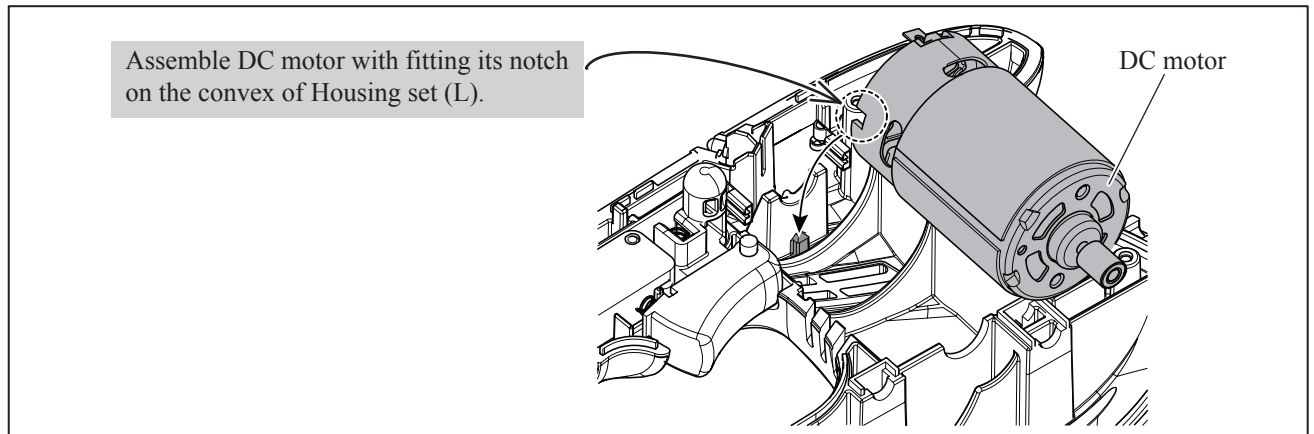
**Fig. 8**



**ASSEMBLING**

Set DC motor to Housing set (L). (Fig. 9)

**Fig. 9**



► **Repair**

**[2] DISASSEMBLY/ASSEMBLY**

**[2]-3. Shear blade assembly**

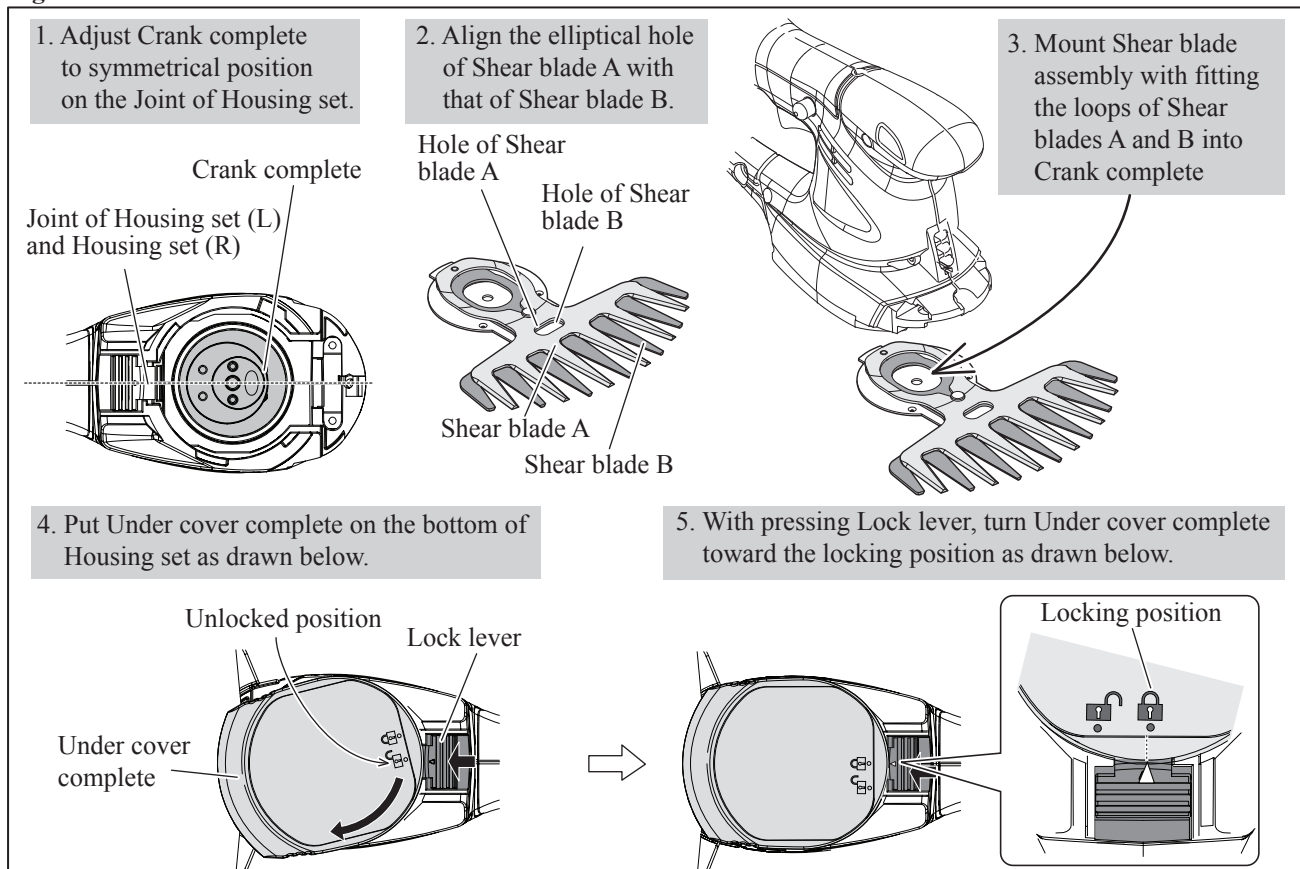
DISASSEMBLING

- (1) Pull the rear portion of Base frame toward rear side designated with arrow. (Top left in Fig. 2)
- (2) With pressing Lock lever, turn under cover complete to the unlocked position. (Top right in Fig. 2)
- (3) Disassemble Under cover, and then remove Shear blade assembly. (Center left in Fig. 2)

ASSEMBLING

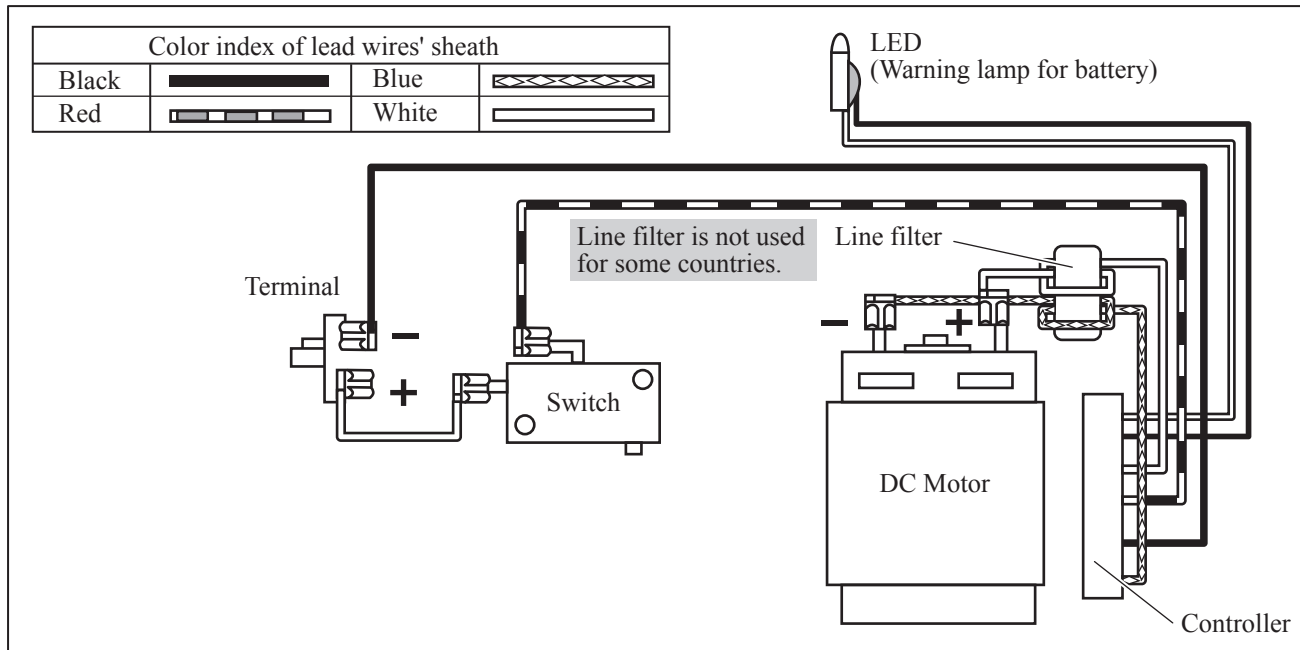
Mount Shear blade assembly. (Fig. 9)

Fig. 10



► **Circuit diagram**

Fig. D-1



► **Wiring diagram**

Fig. D-2

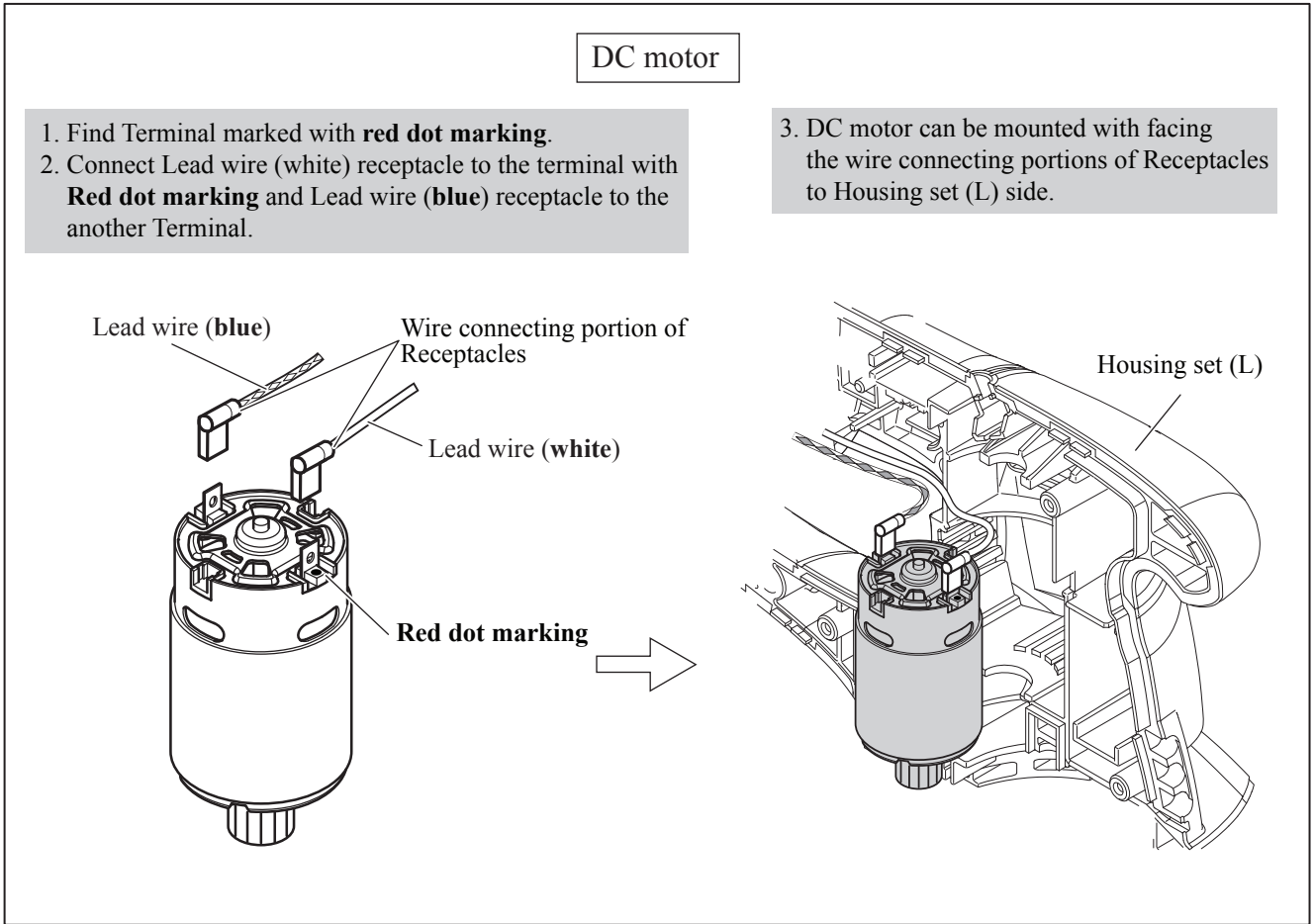


Fig. D-3

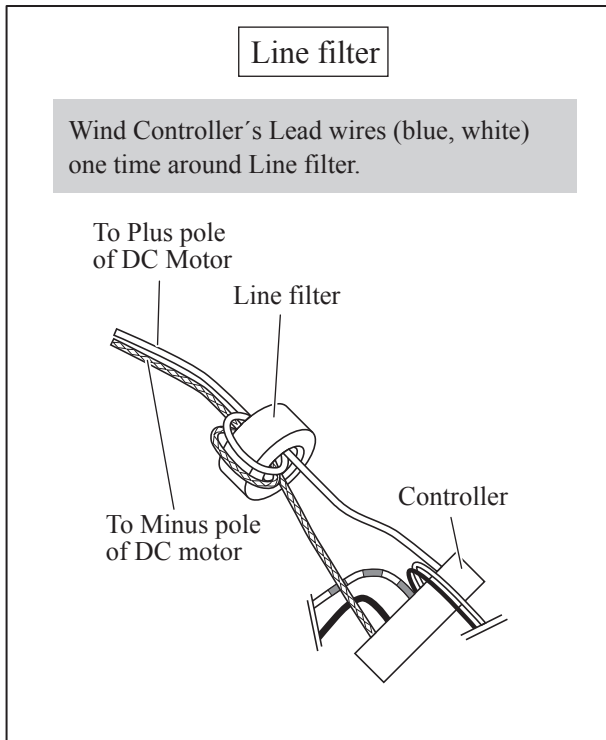
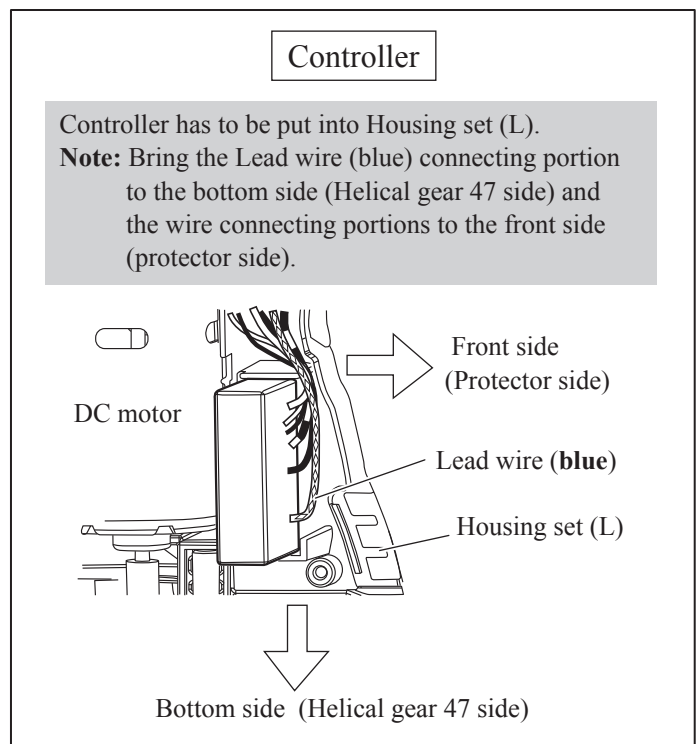
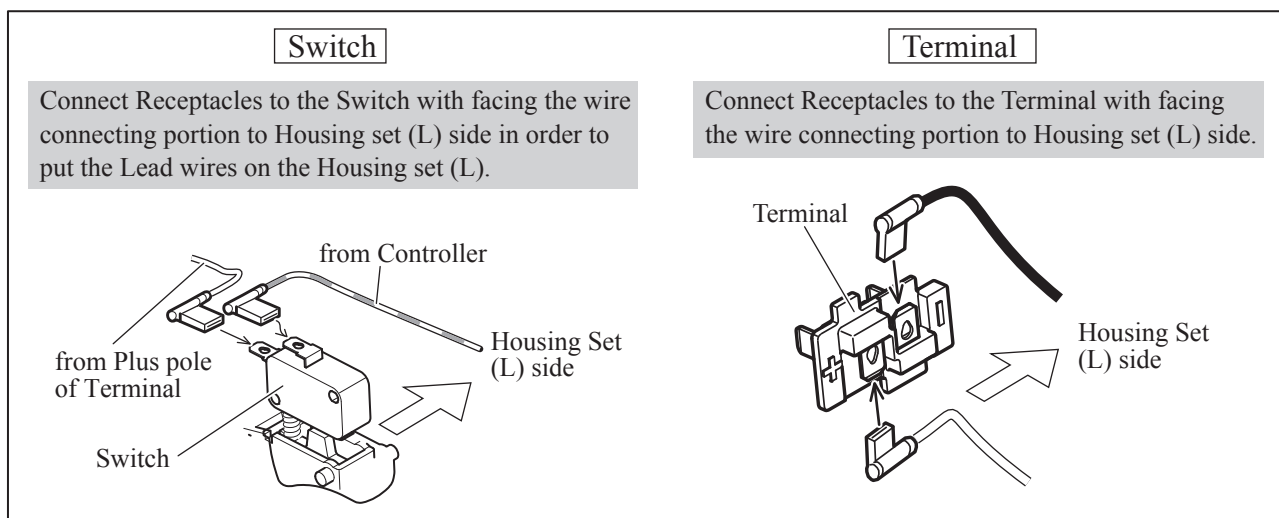


Fig. D-4



► **Wiring diagram**

**Fig. D-5**



**Fig. D-6**

