

# TECHNICAL INFORMATION



PRODUCT

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**Models No.** ▶ VC1310L, VC2510L, VC3210L

**Description** ▶ Vacuum Cleaners

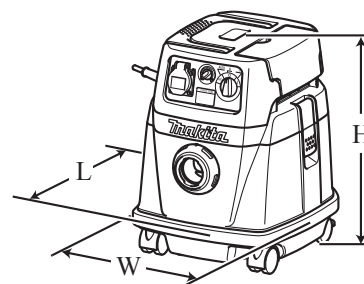
## CONCEPT AND MAIN APPLICATIONS

Models VC1310L, VC2510L and VC3210L are Wet & Dry vacuum cleaners approved for Dust Class L of EC regulations, featuring Automatic on/off system that operates simultaneously as connected power tool is switched on/off.

Their other main benefits are:

- High maneuverability and easy mobility
- High repairability
- Compact and lightweight design for easy storage
- Self-cleaning prefilter of our unique design

These models are also available with cleaning set as "X1 models"; VC1310LX1, VC2510LX1, VC3210LX1.



[Model: VC1310L]

Dimensions: mm (")			
Model No.	VC1310L	VC2510L	VC3210L
Length (L)	366 (14-3/8)	432 (17)	552 (21-3/4)
Width (W)	334 (13-1/8)	416 (16-3/8)	398 (15-5/8)
Height (H)	420 (16-1/2)	451 (17-3/4)	685 (27)

## ► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	10.0	50/ 60	1,050	---	---
120	9.2	50/ 60	1,050	---	---
220	5.0	50/ 60	1,050	---	---
230	4.8	50/ 60	1,050	---	---
240	4.6	50/ 60	1,050	---	---

Model No.	VC1310L	VC2510L	VC3210L	
Wet/Dry type	Wet & Dry			
Automatic on/off system interlocked with the switch of connected power tool	Yes			
Continuous rating input: W	1,050			
Max. air flow: m <sup>3</sup> /minute	2.0*1/ 3.5*2			
Max. sealed suction: kPa	22.0			
Tank capacity: L	Wet	7	14	27
	Dry	13	25	32
Noise: dB	72	73	73	
Variable suction power control by dial	Yes			
Protection from electric shock	Grounding			
Power supply cord: m (ft)	5.0 (16.4)			
Weight according to EPTA-Procedure 01/2003: kg (lbs)	9.6 (21.2)	10.5 (23.2)	14.5 (32.0)	

\*1: with Hose complete 28-3.5 \*2: with Hose complete 38-2.5

## ► Standard equipment

### For all models:

- Hose complete 28-3.5 set ..... 1 set (incl. Front cuffs 38)
- Holder 10-33 ..... 6 pcs
- Front cuffs 22 ..... 1 pc
- Front cuffs 24 ..... 1 pc

### For VC1310L/ X1:

- Plastic dust bag 650x650 ..... 1 pc

### For VC2510L/ X1, VC3210L/ X1:

- Plastic dust bag 800x650 ..... 1 pc

### For all models:

- Plastic dust bag set ..... 1 set (incl. 10 pcs of the Plastic dust bag described above.)

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

## ► Optional accessories

- Hose complete 28-2.5/ 28-3.5/ 28-5.0/ 38-2.5/ 38-5.0,
- Front cuff 22/ 24/ 38,
- Holder 10-33, Plastic dust bag set,
- Powder filter, Dumper, Pre-filter,
- Filter for wet type,
- Paper dust bag 15L/ 25L,
- Straight pipe, Bending pipe,
- Nozzle assembly, Corner nozzle,
- Anchor nozzle, Round brush,
- Cleaning set, Nozzle for wet type,
- Pipe holder

### For VC1310LX1, VC2510LX1, VC3210LX1:

- Cleaning set ..... 1 set
- Includes one each of:
- Hose complete 38-2.5
- Straight pipe
- Bending pipe
- Nozzle assembly
- Corner nozzle
- For VC1310LX1:
- Pipe holder ..... 1 pc

## ► Repair

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

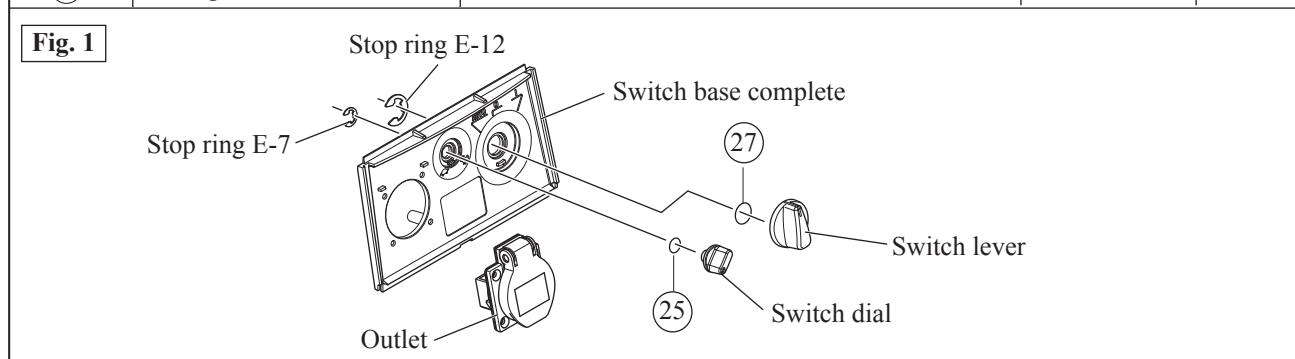
### [1] NECESSARY REPAIRING TOOLS

Code No.	Description	Use for
1R023	Pipe ring for Arbor press	holding Fan cover and Return vane when assembling Motor section
1R258	V Block	assembling Fan cover
1R263	Bearing extractor	disassembling Caster 50 and Caster 75
1R274	Type 72 Field insert jig	assembling Caster 50 to Tank
1R275	Type 94 Field insert jig	assembling Caster 75 to Tank
1R276	Acrylic dust box	cleaning Filter and Tank before disassembling the machine
1R291	Retaining Ring S & R Pliers	assembling Caster 170

### [2] LUBRICANT AND ADHESIVE APPLICATION

Apply the following lubricant to protect parts and product from unusual abrasion. (Fig. 1)

Item No.	Description	Portion to lubricate	Lubricant	Amount
②⑤	O ring 9	Whole portion	Makita SG No. 0	a little
②⑦	O ring 14			



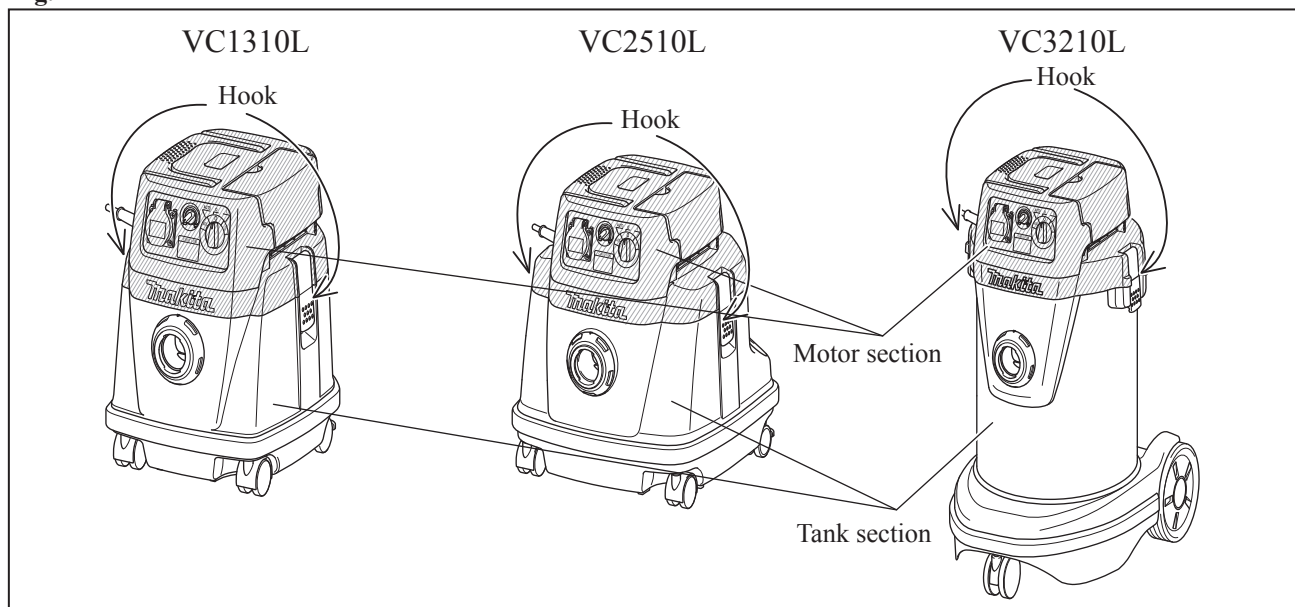
### [3] DISASSEMBLY/ASSEMBLY

#### [3]-1. Motor section

##### DISASSEMBLING

(1) Release Hook for separating the Motor section from Tank section. See Fig. 2.

Fig. 2



► **Repair**

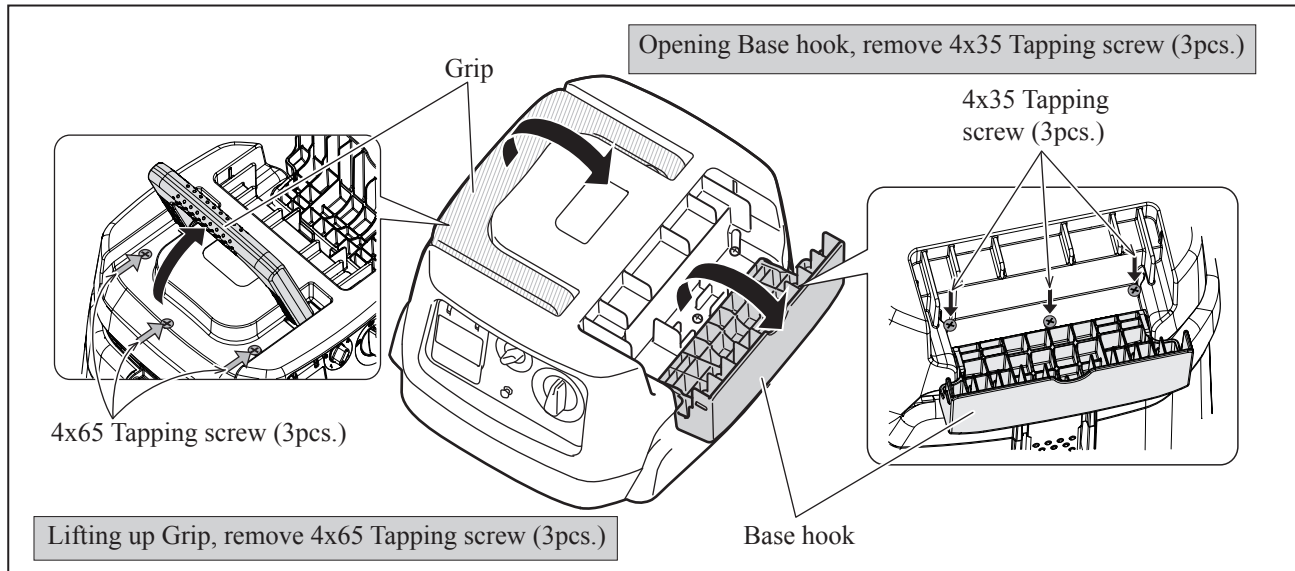
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-1. Motor section (cont.)**

DISASSEMBLING

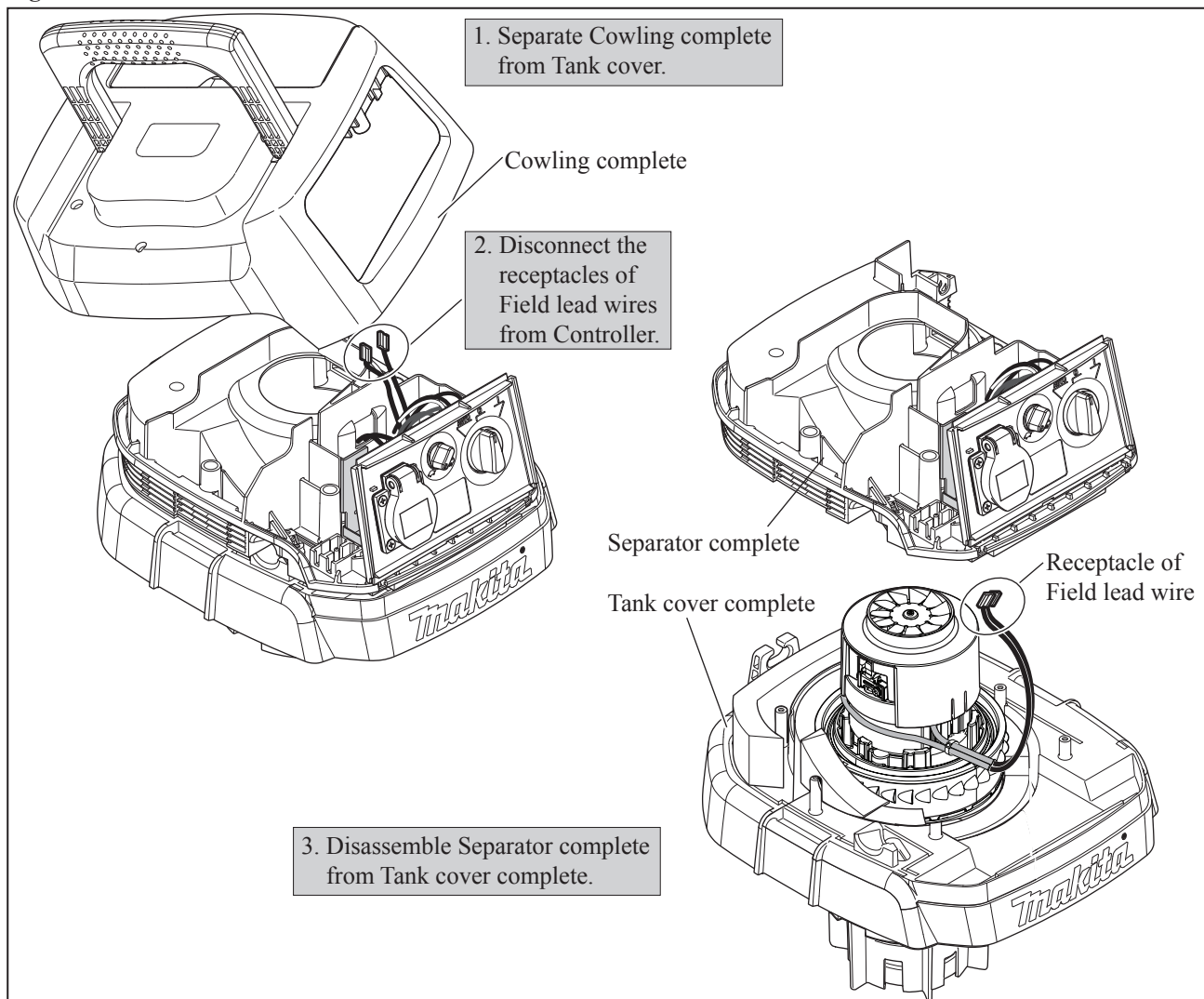
(2) Remove the screws drawn in **Fig. 3** for separating Cowling complete from Tank cover complete.

**Fig. 3**



(3) Remove Cowling complete and Separator complete as drawn in **Fig. 4**.

**Fig. 4**



► **Repair**

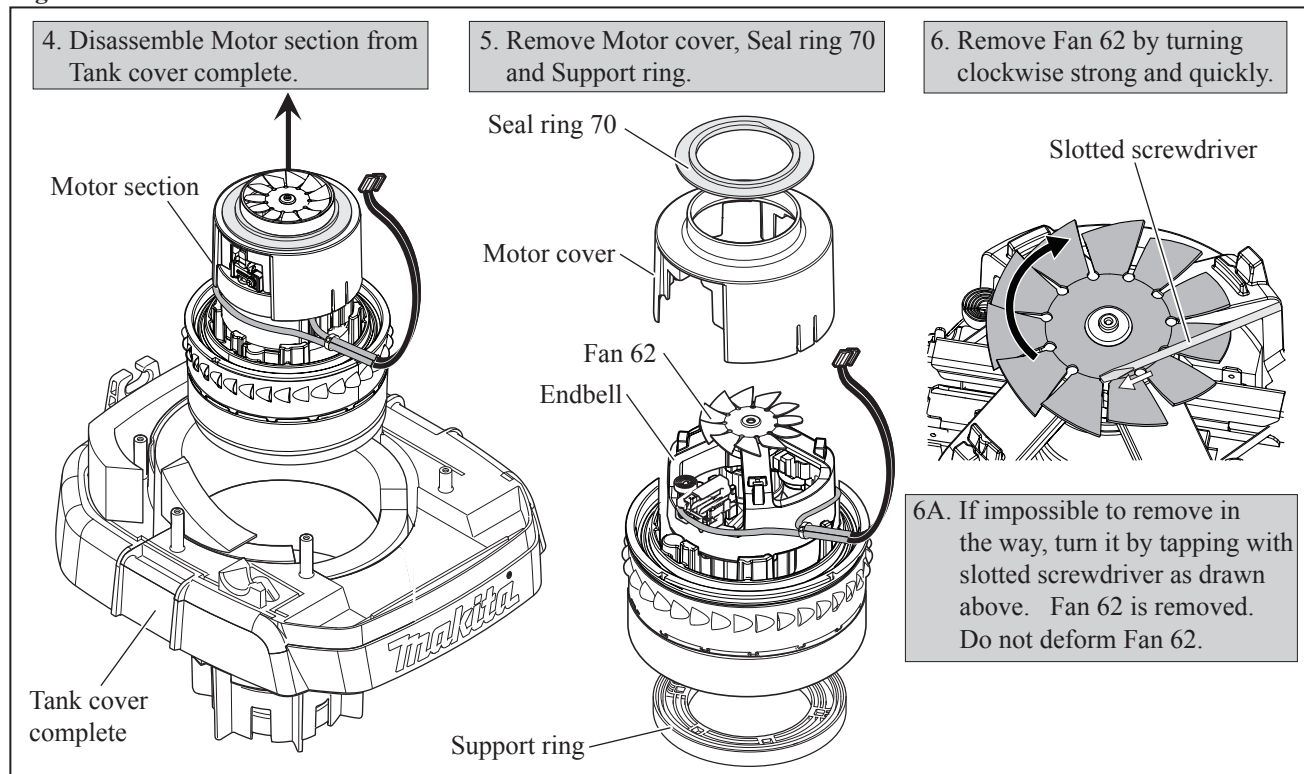
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-1. Motor section (cont.)**

DISASSEMBLING

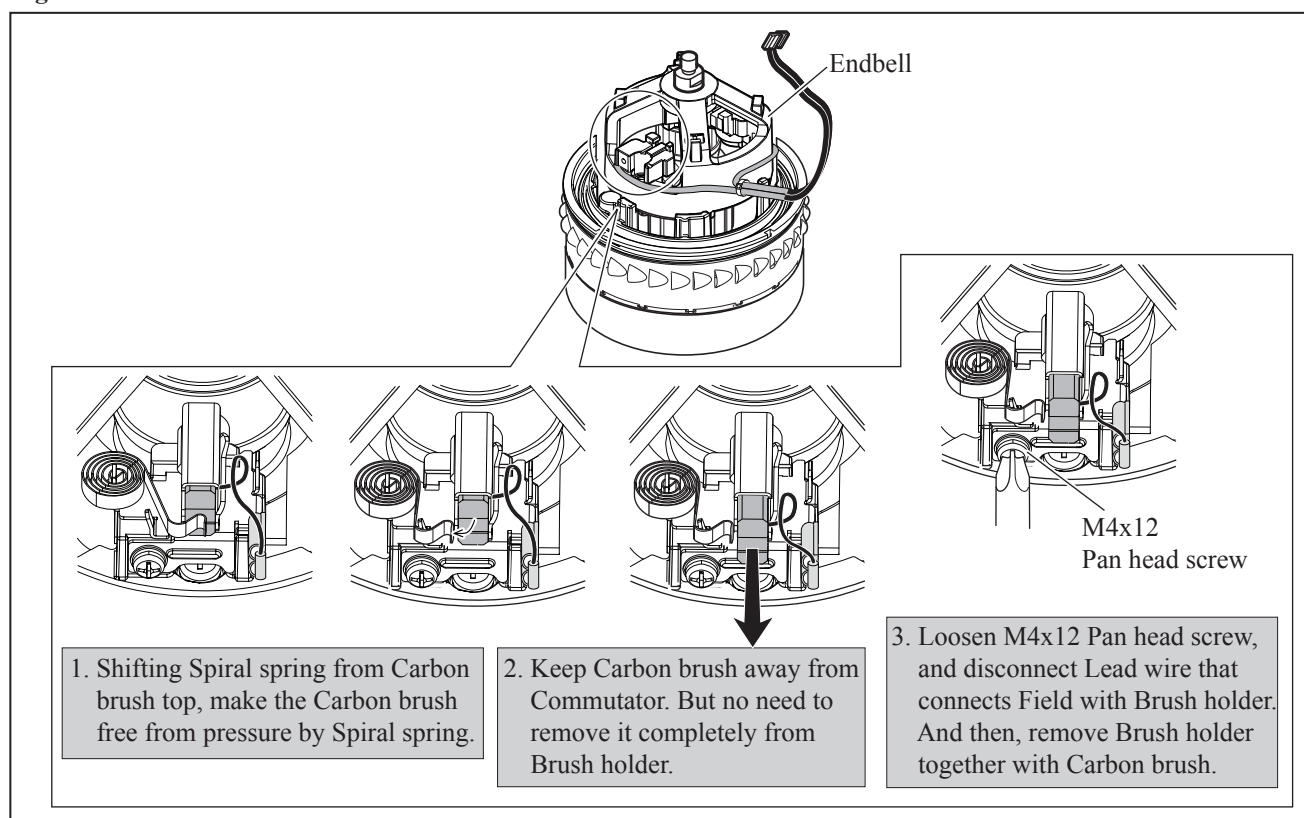
(4) Remove the Motor section and remove Fan 62 as drawn in Fig. 5.

Fig. 5



(5) For removing Armature, Endbell and Field have to be removed. They are fixed with M4x12 Pan head screw under Brush holder. Brush holder is removed as drawn in Fig. 6.

Fig. 6



► **Repair**

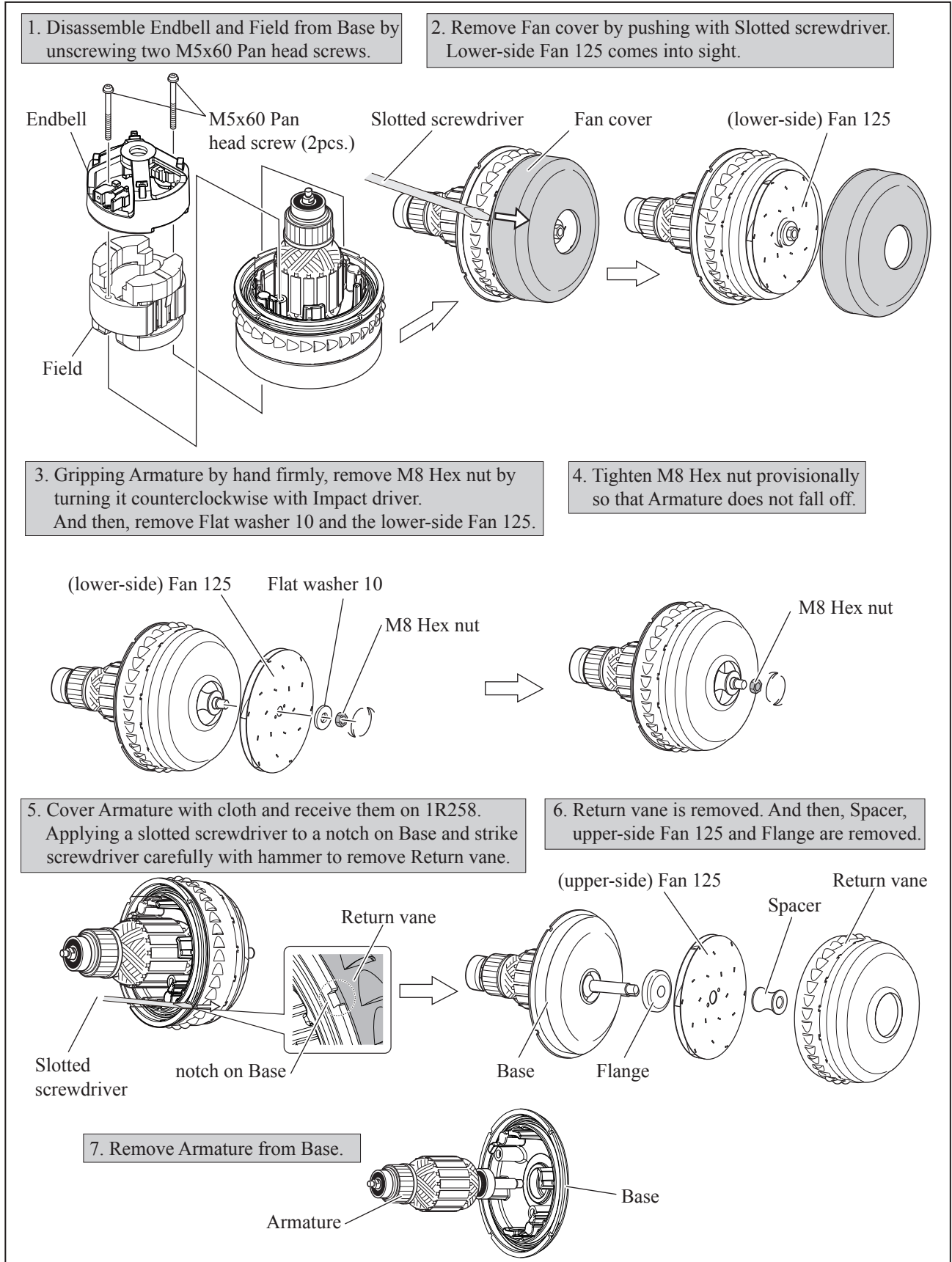
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-1. Motor Section (cont.)**

DISASSEMBLING

(6) After removing Endbell and Field, Motor section is disassembled as drawn in **Fig. 7**.

**Fig. 7**



## ► Repair

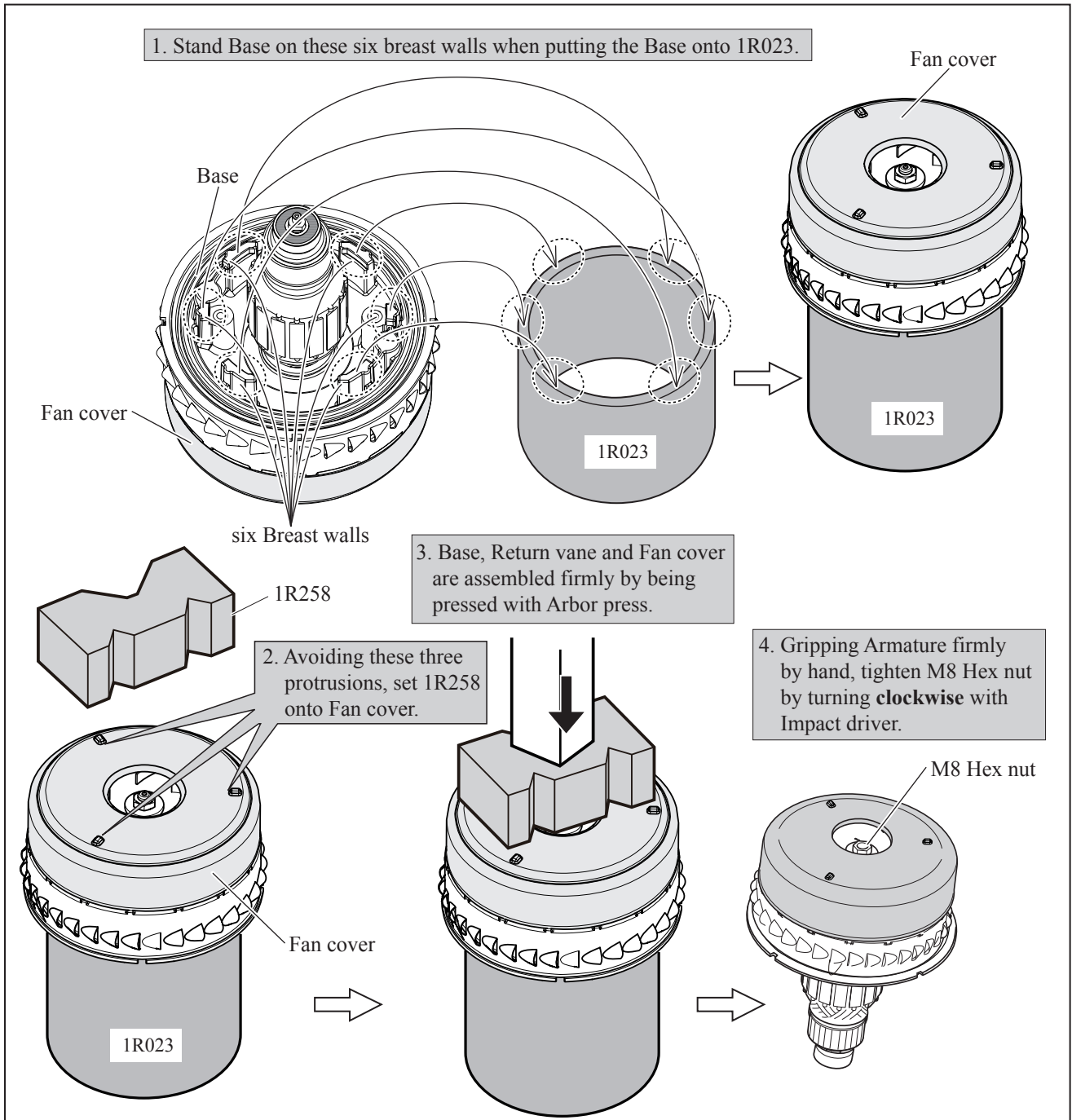
### [3] DISASSEMBLY/ASSEMBLY

#### [3]-1. Motor section (cont.)

##### ASSEMBLING

- (1) Assembling Armature to Base, pass Flange, upper-side Fan 125 and Spacer through Armature shaft, and mount Return vane. Refer to **Fig. 7**.
- (2) After assembling lower-side Fan 125 and Flat washer 10 to Armature shaft, tighten M8 Hex nut by turning clockwise. However, M8 Hex nut is tightened provisionally in this step. Refer to **Fig. 7**.
- (3) Fix Fan cover, Return vane and Base each other by pressing with Arbor press as drawn in **Fig. 8**.

**Fig. 8**



► **Repair**

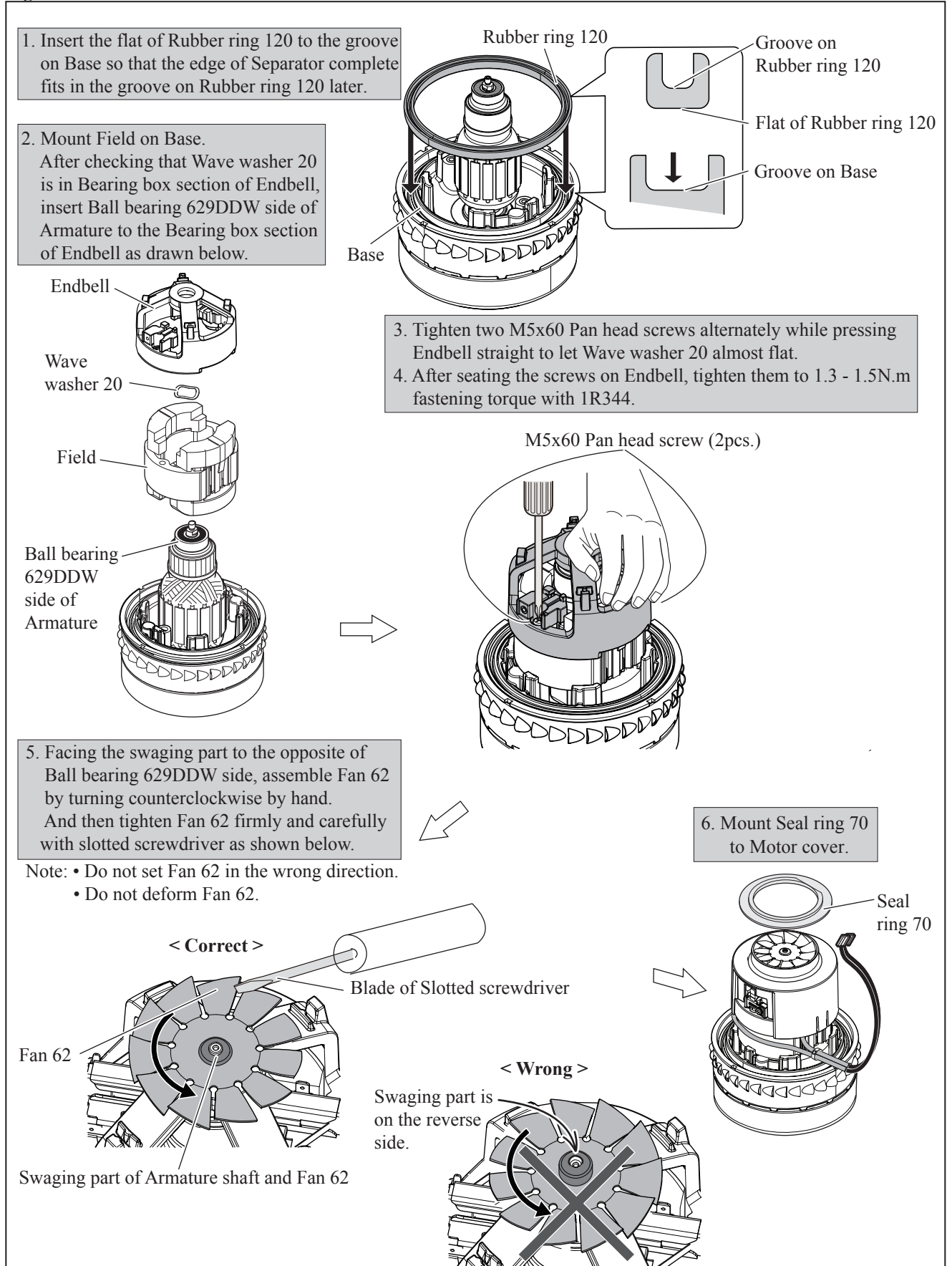
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-1. Motor section (cont.)**

ASSEMBLING

(4) Assemble Field, Endbell, Fan 62 and Seal ring 70 as drawn in **Fig. 9**.

**Fig. 9**



► **Repair**

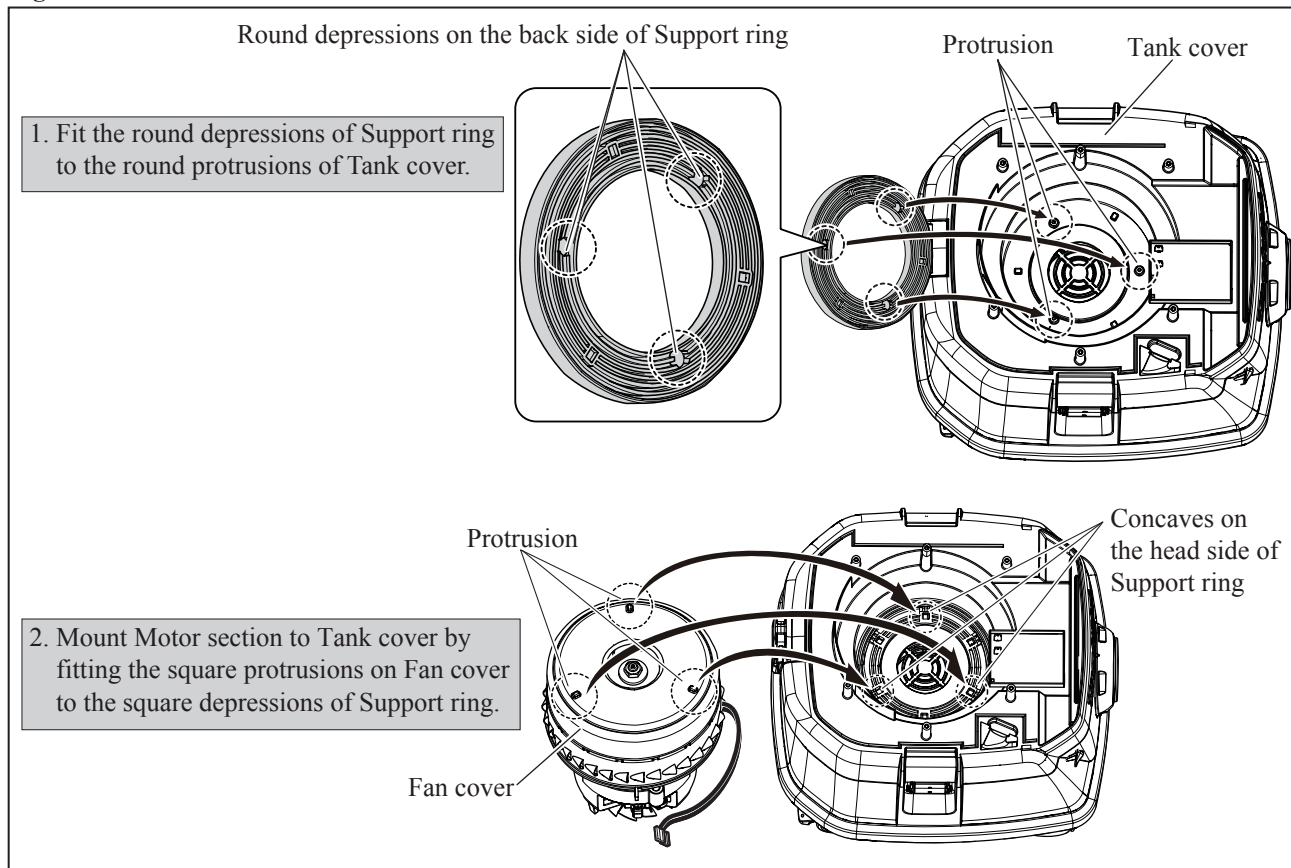
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-1. Motor section (cont.)**

ASSEMBLING

(5) Assemble Motor section to Tank cover complete as drawn in **Fig. 10**.

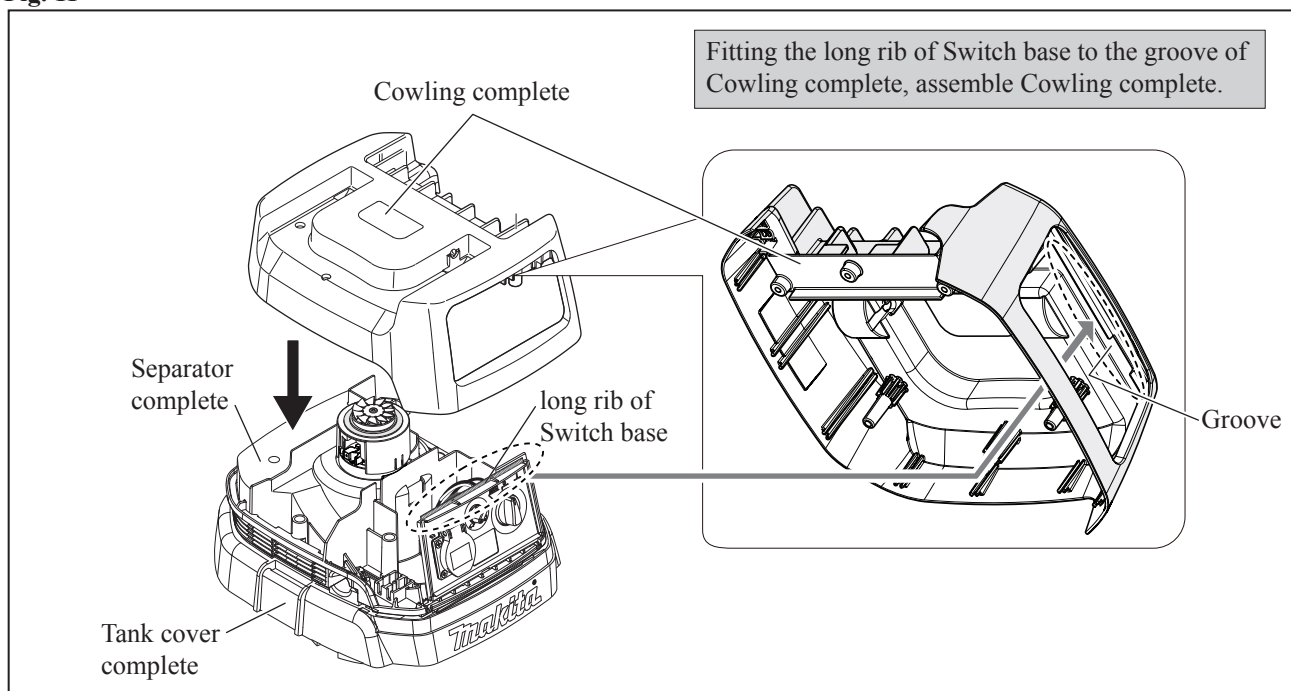
**Fig. 10**



(6) Mounting Separator complete, connect the receptacles of Field lead wires to Controller. Refer to **Fig. 4**.

(7) Assemble Cowling complete as drawn in **Fig. 11**.

**Fig. 11**





► **Repair**

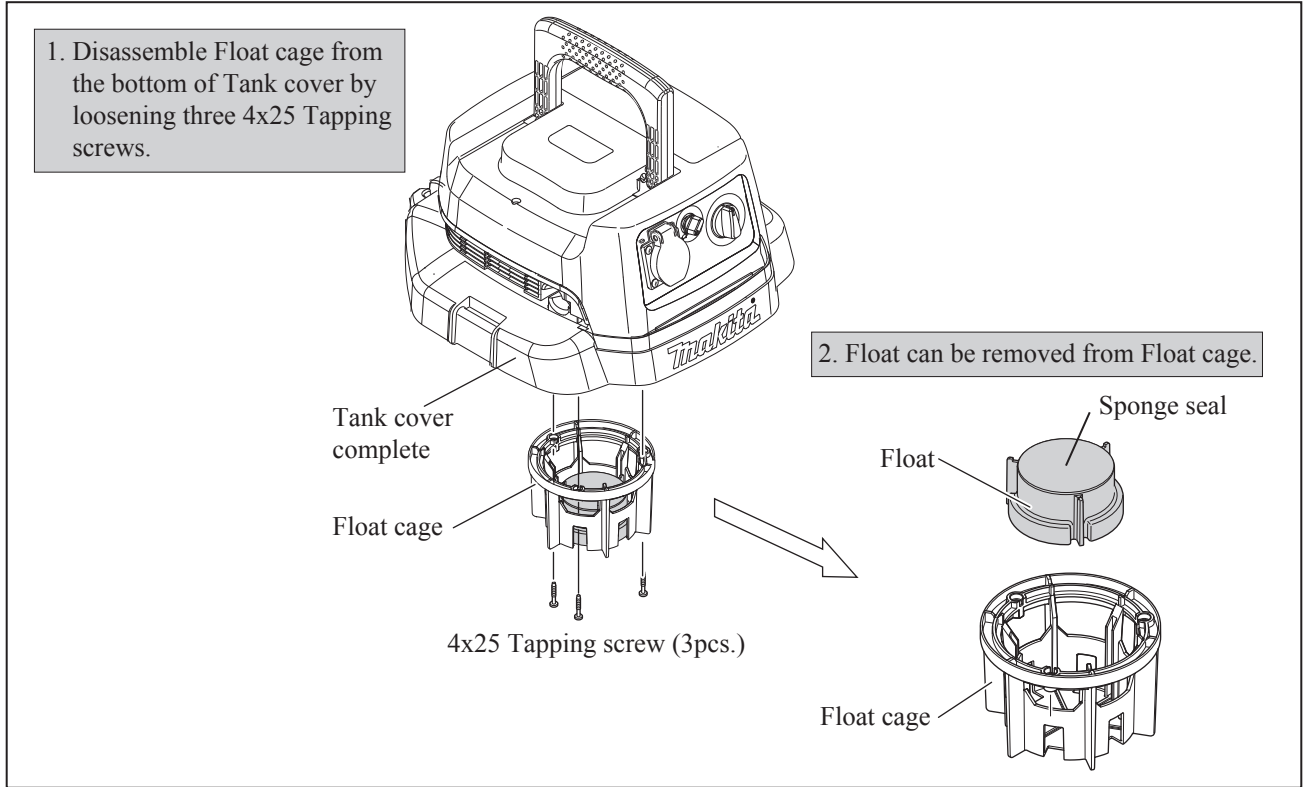
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-2. Float section**

**DISASSEMBLING**

- (1) Release Hook for separating the Motor section from Tank section. See **Fig. 2**.
- (2) Disassemble Float cage as drawn in **Fig. 11**.

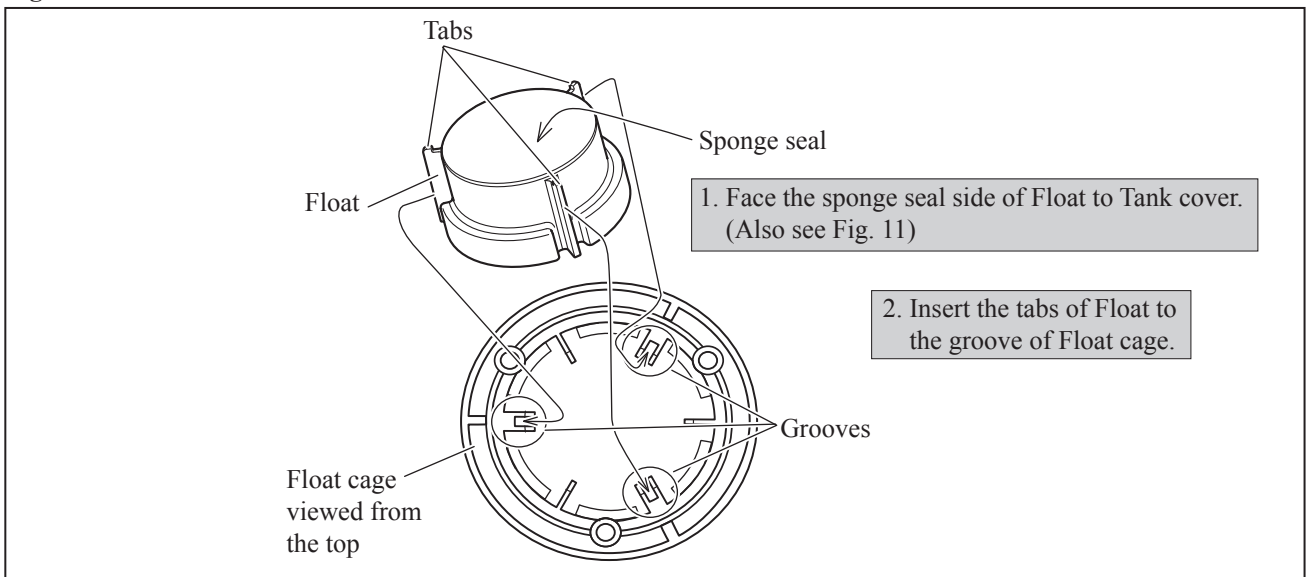
**Fig. 11**



**ASSEMBLING**

Assemble Float to Float cage as drawn in **Fig. 12**, and reverse the step shown in **Fig. 11**.

**Fig. 12**



► **Repair**

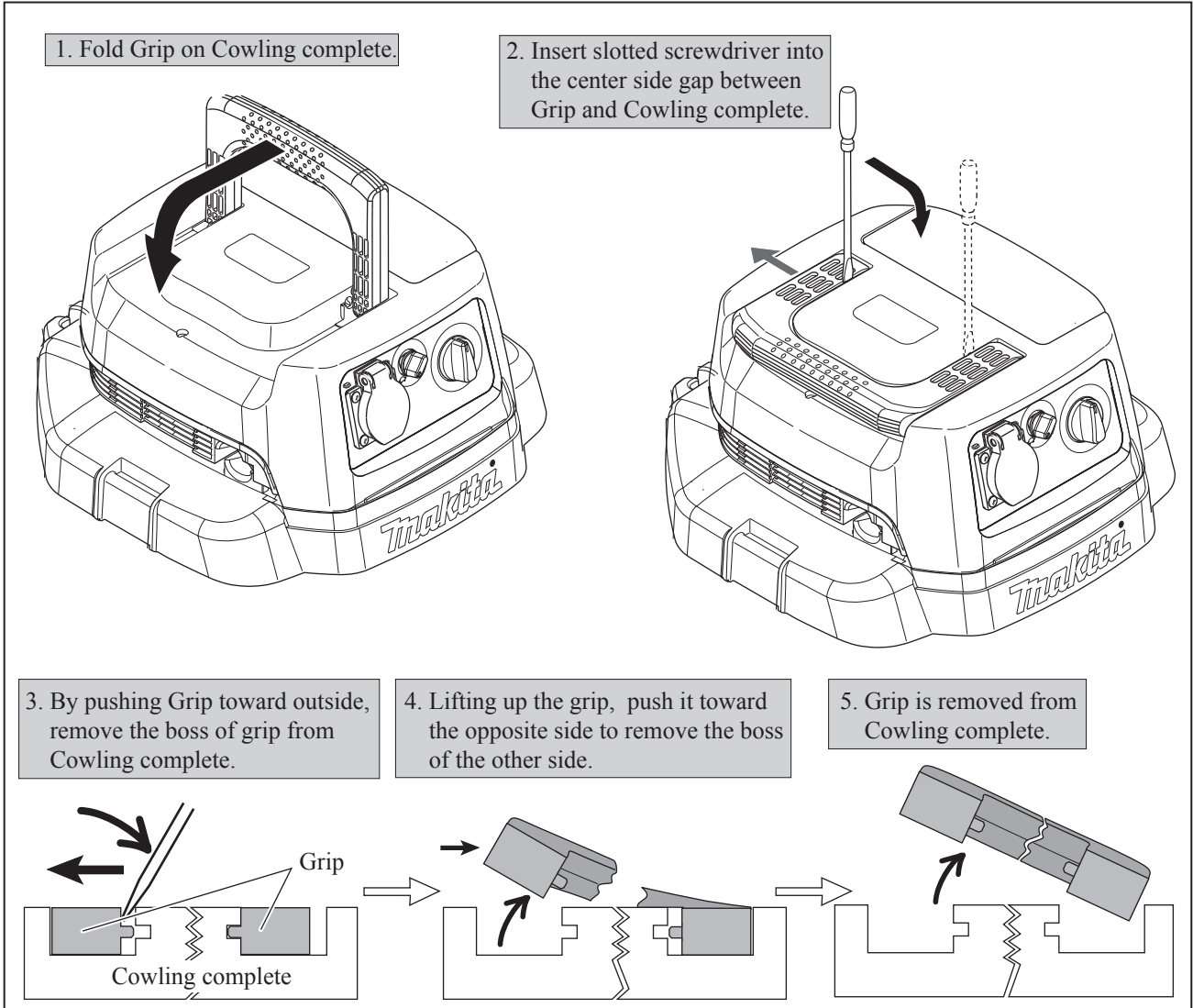
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-3. Grip**

DISASSEMBLING

Remove Grip as drawn in **Fig. 13**.

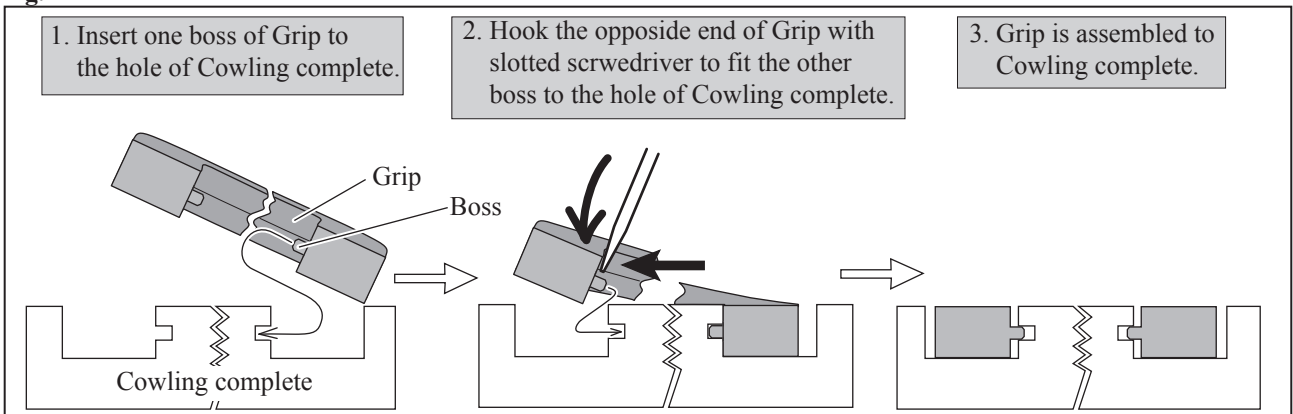
**Fig. 13**



ASSEMBLING

(1) Assemble Grip to Cowling complete as drawn in **Fig. 14**.

**Fig. 14**



► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**

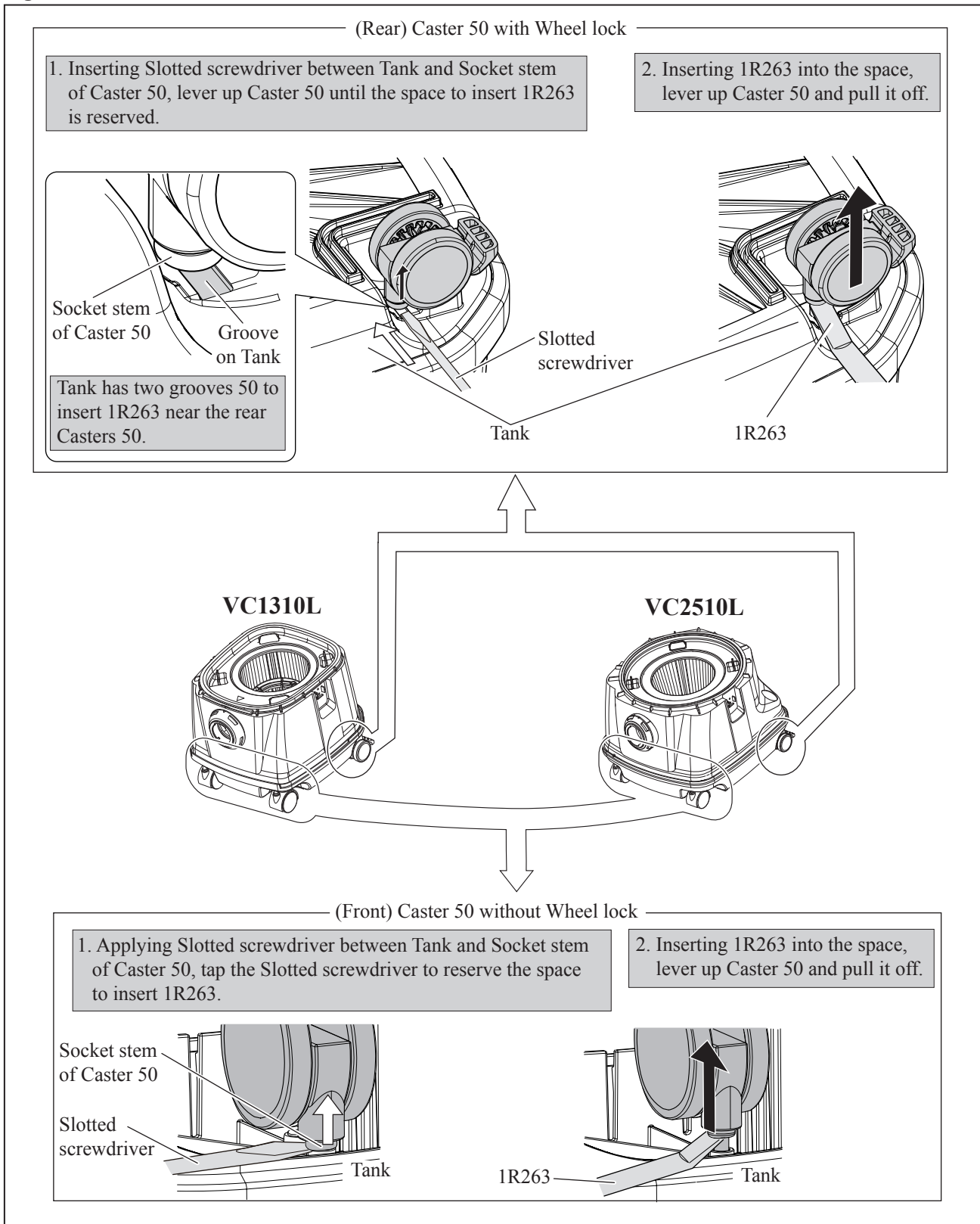
**[3]-4 Caster 50 for VC1310L and VC2510L: Four wheel type)**

**DISASSEMBLING**

Casters for VC1310L are different from those for VC2510L in the length of Socket stem. However, they can be removed and assembled in the same way.

- (1) Separate Motor section from Tank section as drawn in **Fig. 2**.
- (2) Remove Casters as drawn in **Fig. 15**.

**Fig. 15**



► **Repair**

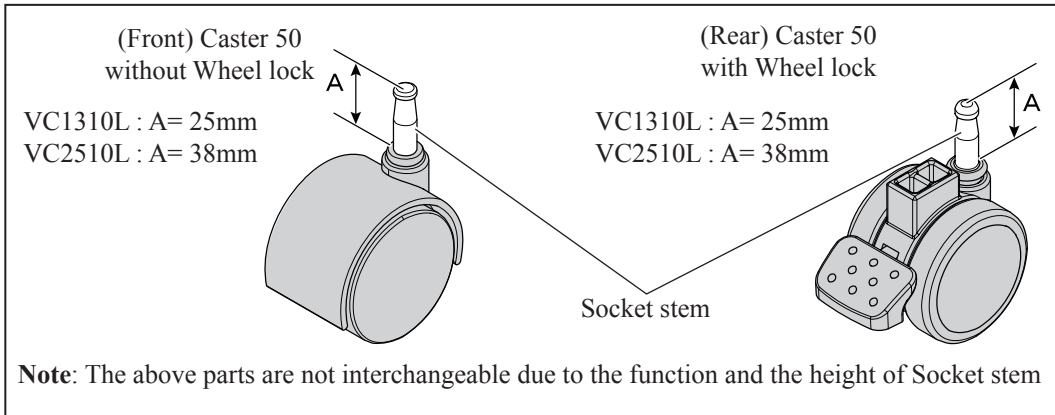
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-4. Caster 50 for VC1310L, VC2510L (Four Wheel type)**

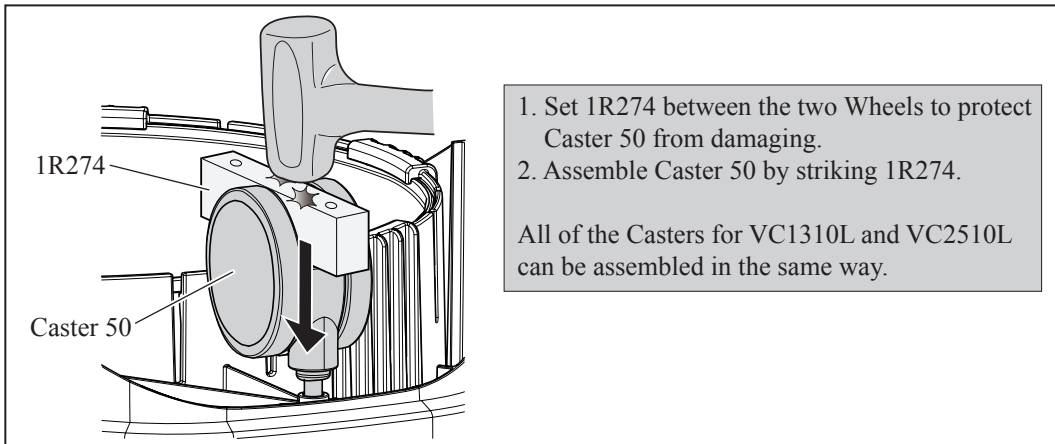
**ASSEMBLING**

Refer to **Figs. 16 and 17**. Set each Caster 50 in place.

**Fig. 16**



**Fig. 17**

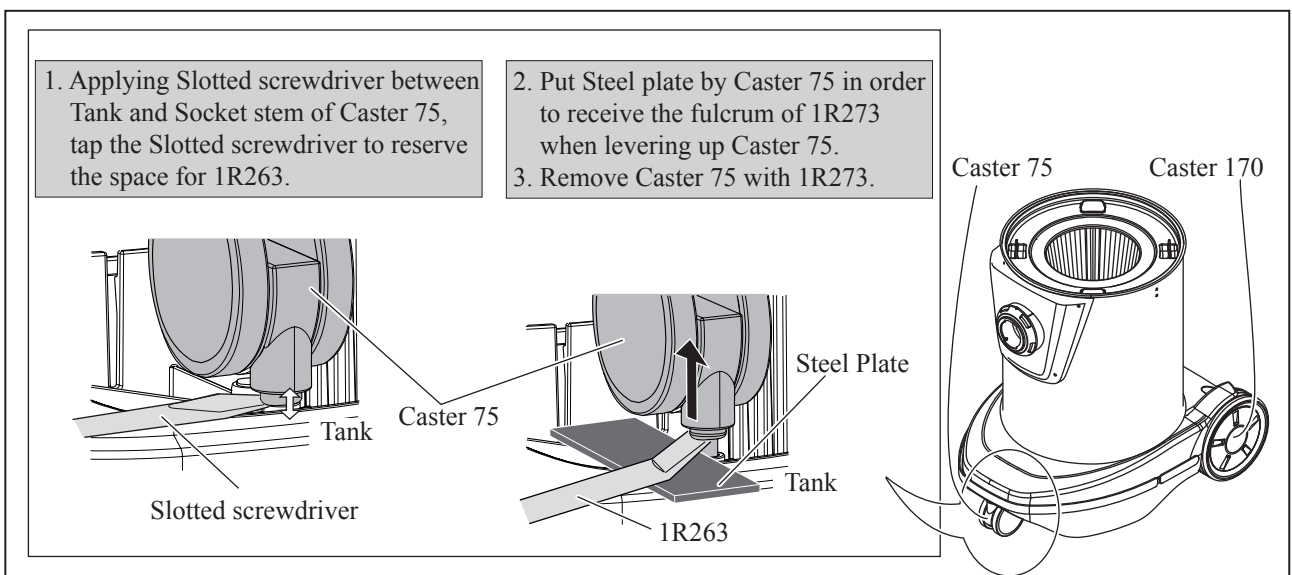


**[3]-5A. Caster 75 and Caster 170 for VC3210 (Tricycle type)**

**DISASSEMBLING**

1. Separate Motor section from Tank section as drawn in **Fig. 2**.
2. **Caster 75** can be disassembled as drawn in **Fig. 18**.

**Fig. 18**



► **Repair**

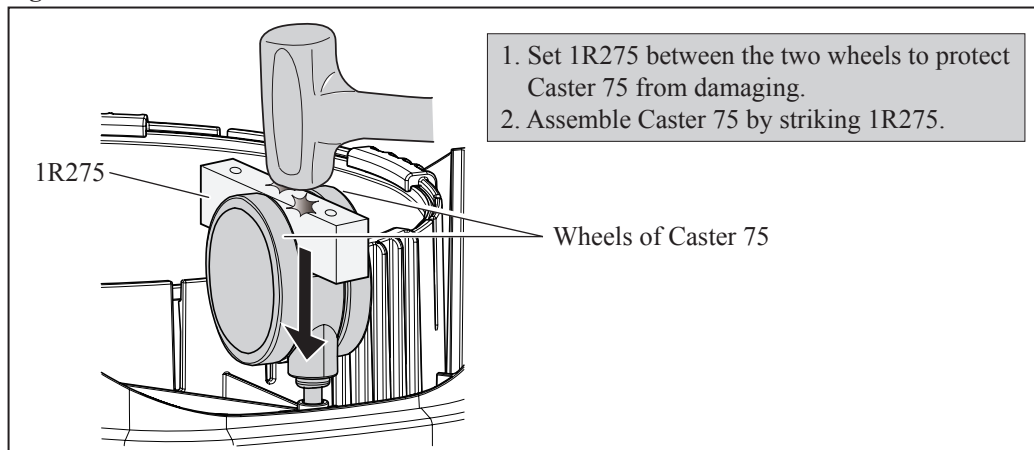
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-4A. Caster 75 and Caster 170 for VC3210L (cont.)**

**ASSEMBLING**

Caster 75 can be assembled as illustrated in Fig. 19.

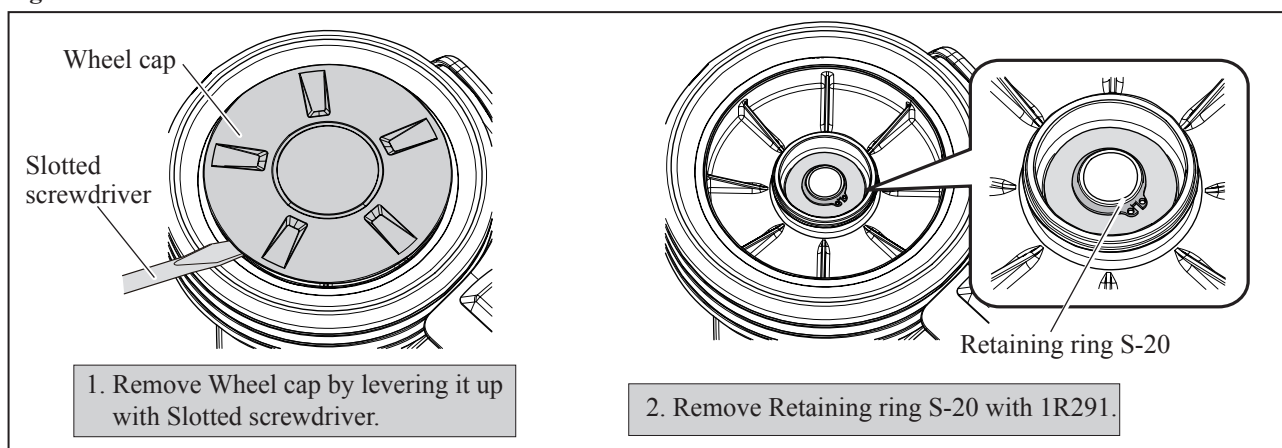
**Fig. 19**



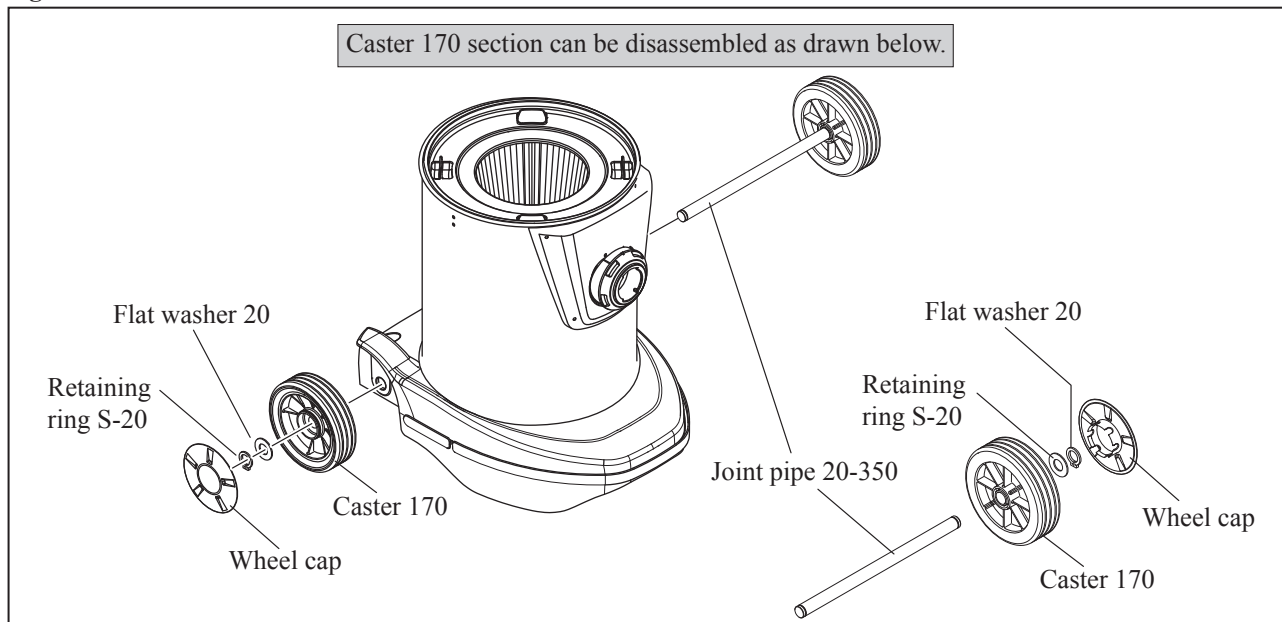
**DISASSEMBLING**

Caster 170 can be disassembled as drawn in Figs. 20 and 21.

**Fig. 20**



**Fig. 21**



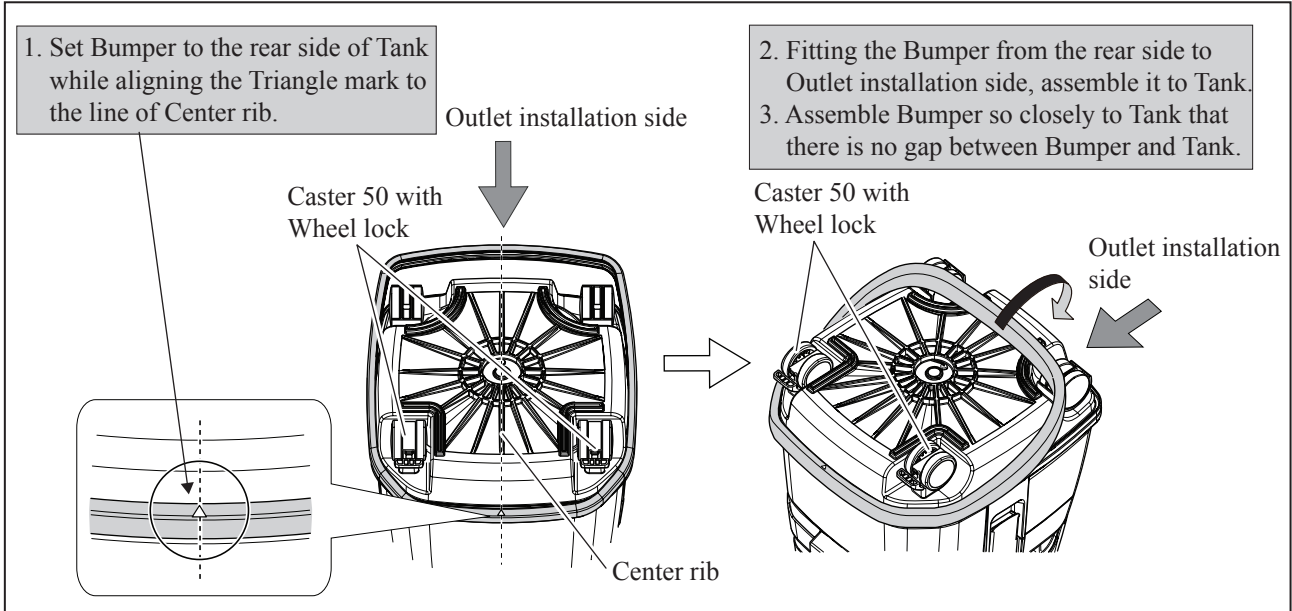
► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**  
**[3]-5. Bumper for VC1310L, VC2510L**

ASSEMBLING

Bumper can be assembled as drawn in Fig. 22.

**Fig. 22**

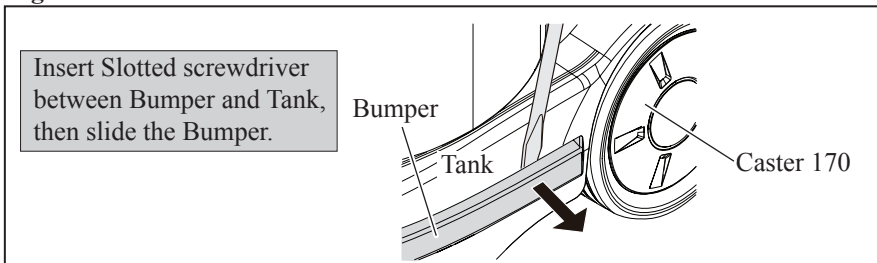


**[3]-6A. Bumper for VC3210L**

DISASSEMBLING

Remove Bumper as drawn in Fig. 23.

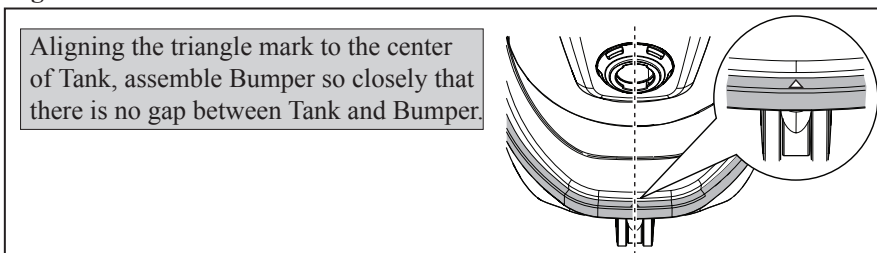
**Fig. 23**



ASSEMBLING

Mount Bumper as drawn in Fig. 24.

**Fig. 24**



► **Repair**

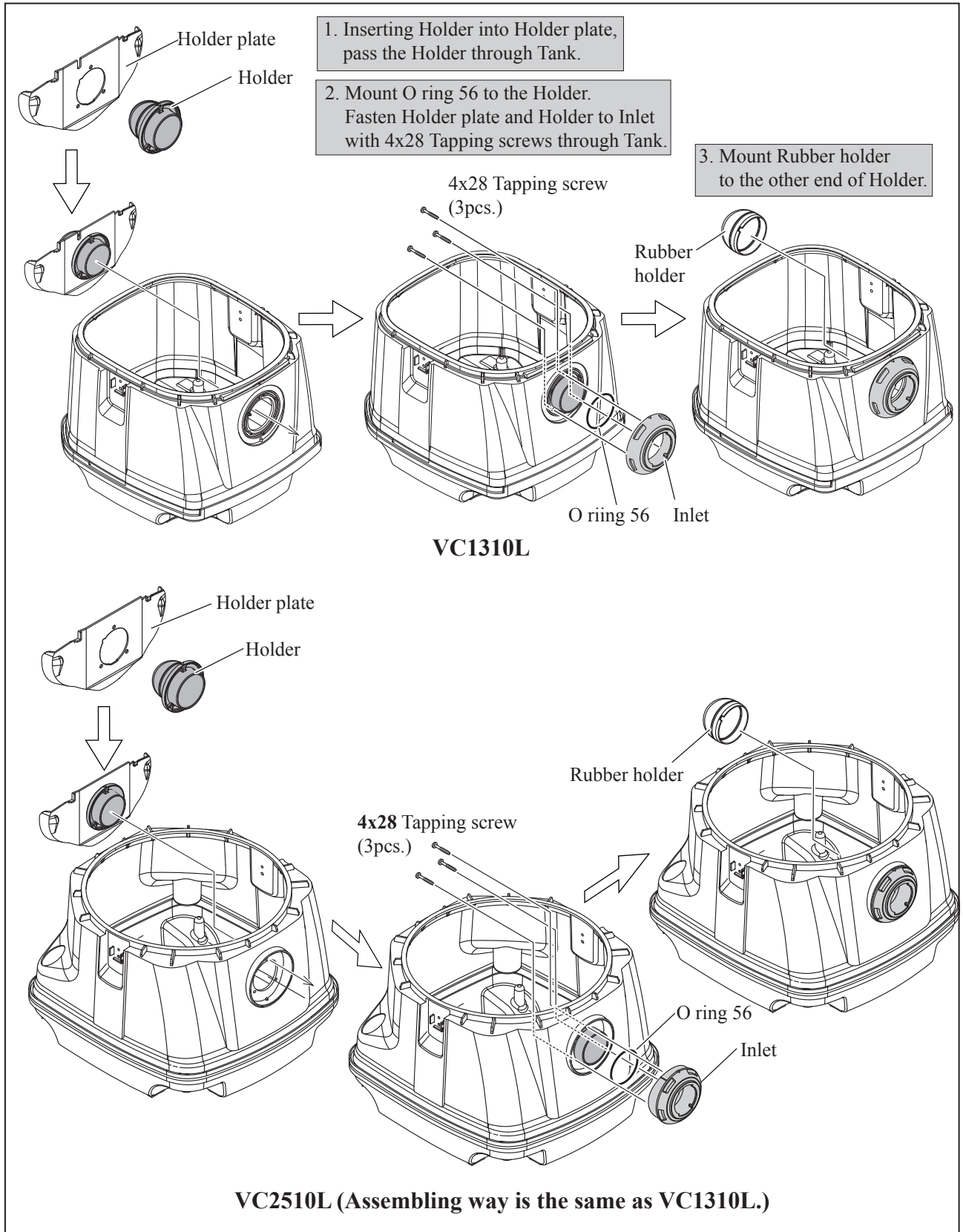
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-6. Inlet for VC1310L, VC2510L (cont.)**

**ASSEMBLING**

Assemble Inlet as drawn in Fig. 25.

**Fig. 25**



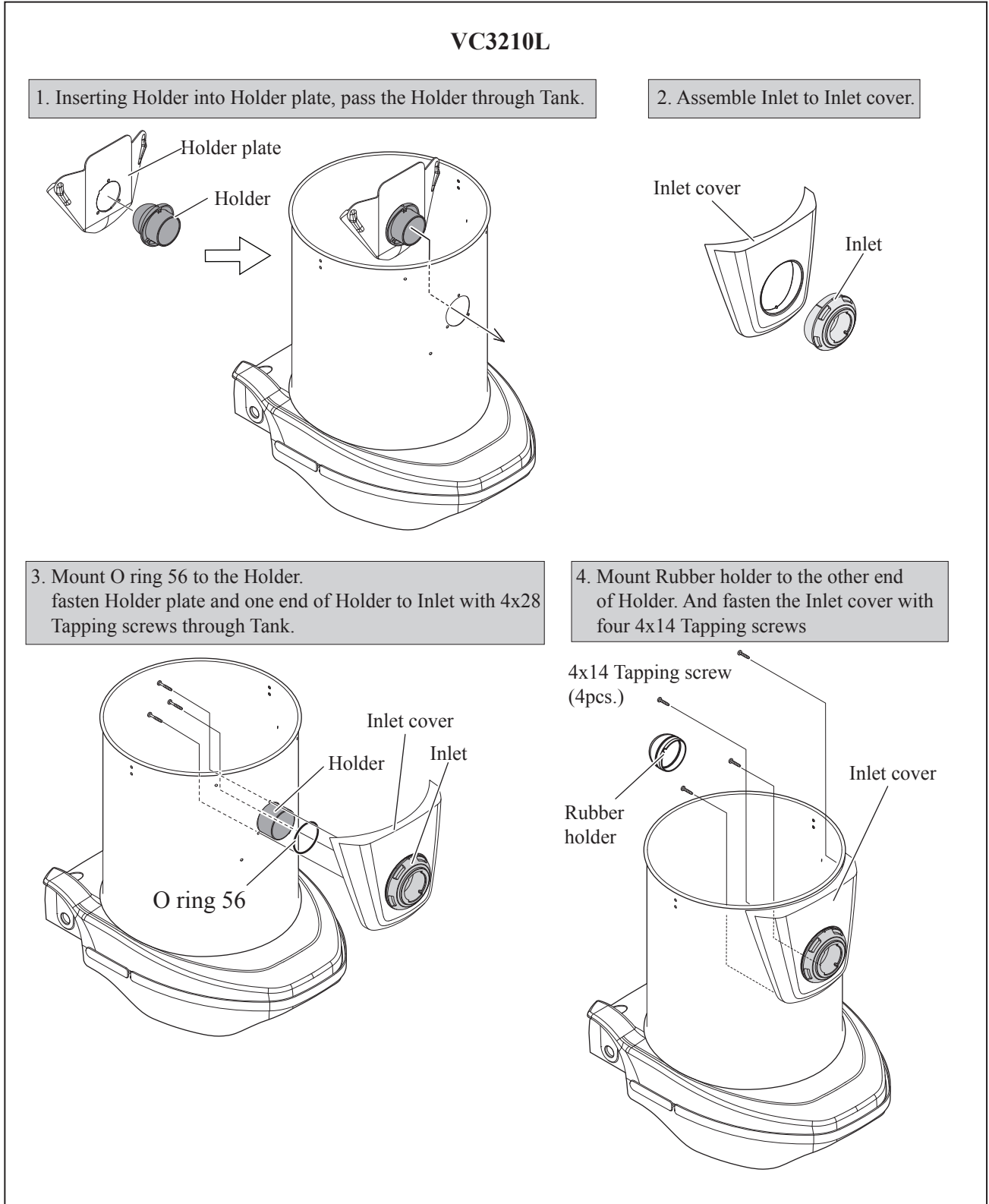
► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**  
**[3]-6A. Inlet for VC3210L**

**ASSEMBLING**

Set Inlet in place as drawn in Fig. 25A.

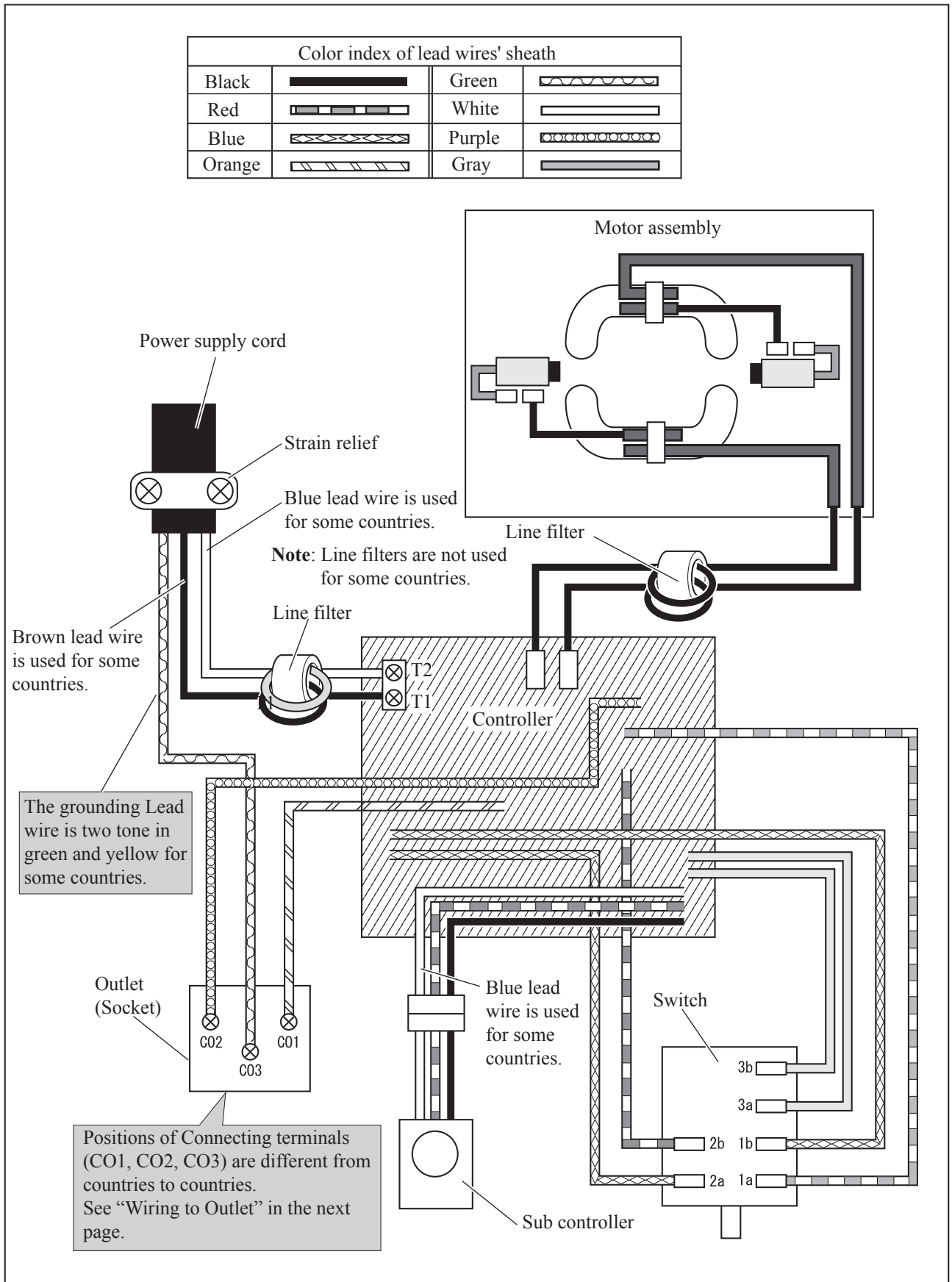
**Fig. 25A**








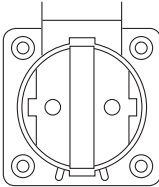
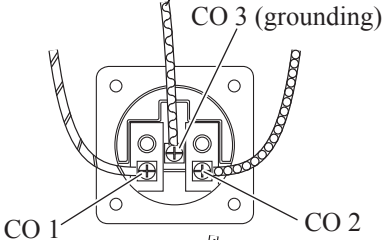
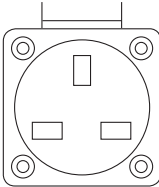
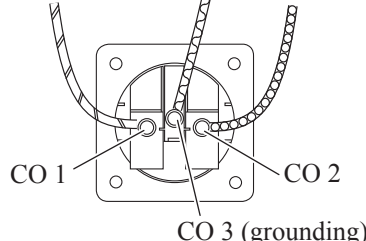
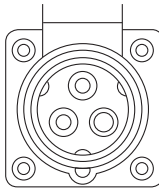
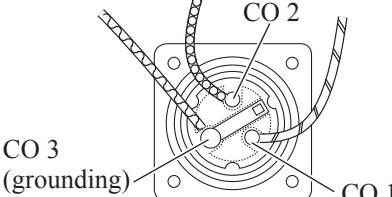
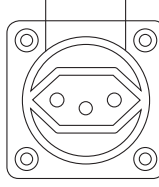
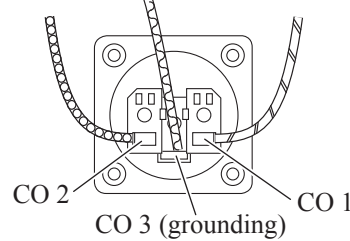
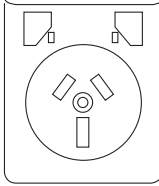
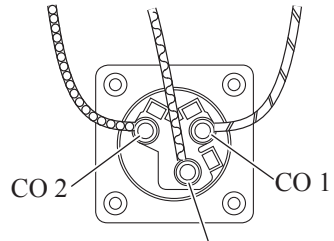
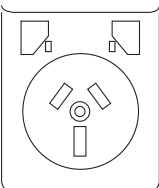
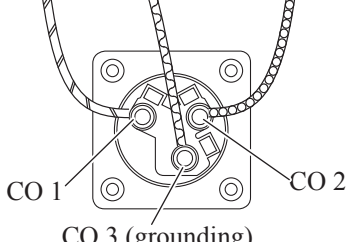
► **Circuit diagram**

Fig. D-1



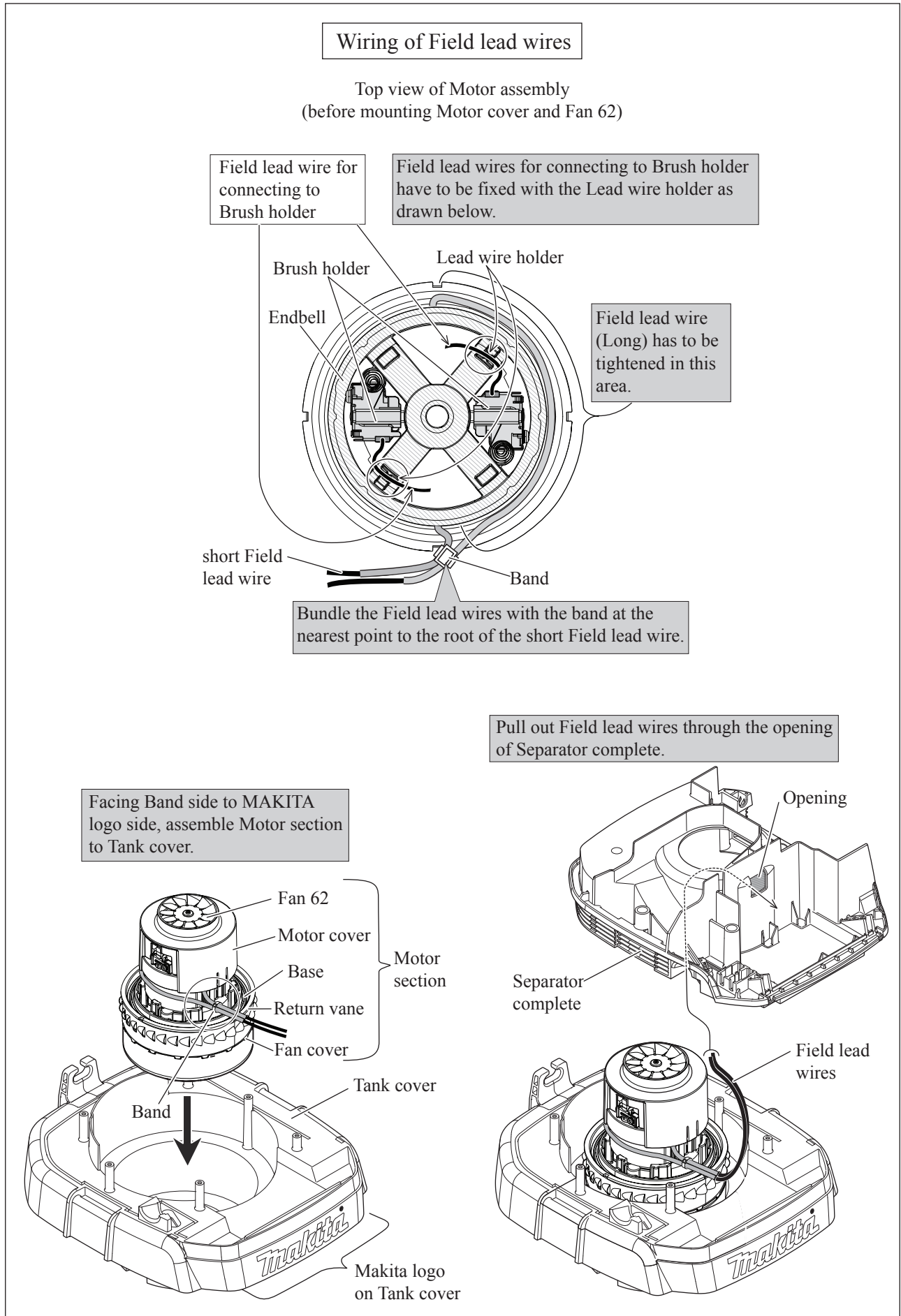
► **Wiring diagram**

Fig. D-2

Wiring to Outlet		
		Orange Lead Wire:  Purple Lead Wire:  Green or Green/Yellow Lead Wire: 
Destinations	Outlet viewed from outside of Tank	Outlet viewed from inside of Tank
Europe and Other countries		
UK (240V)		
UK (110V)		
Brazil		
Australia		
Argentina		

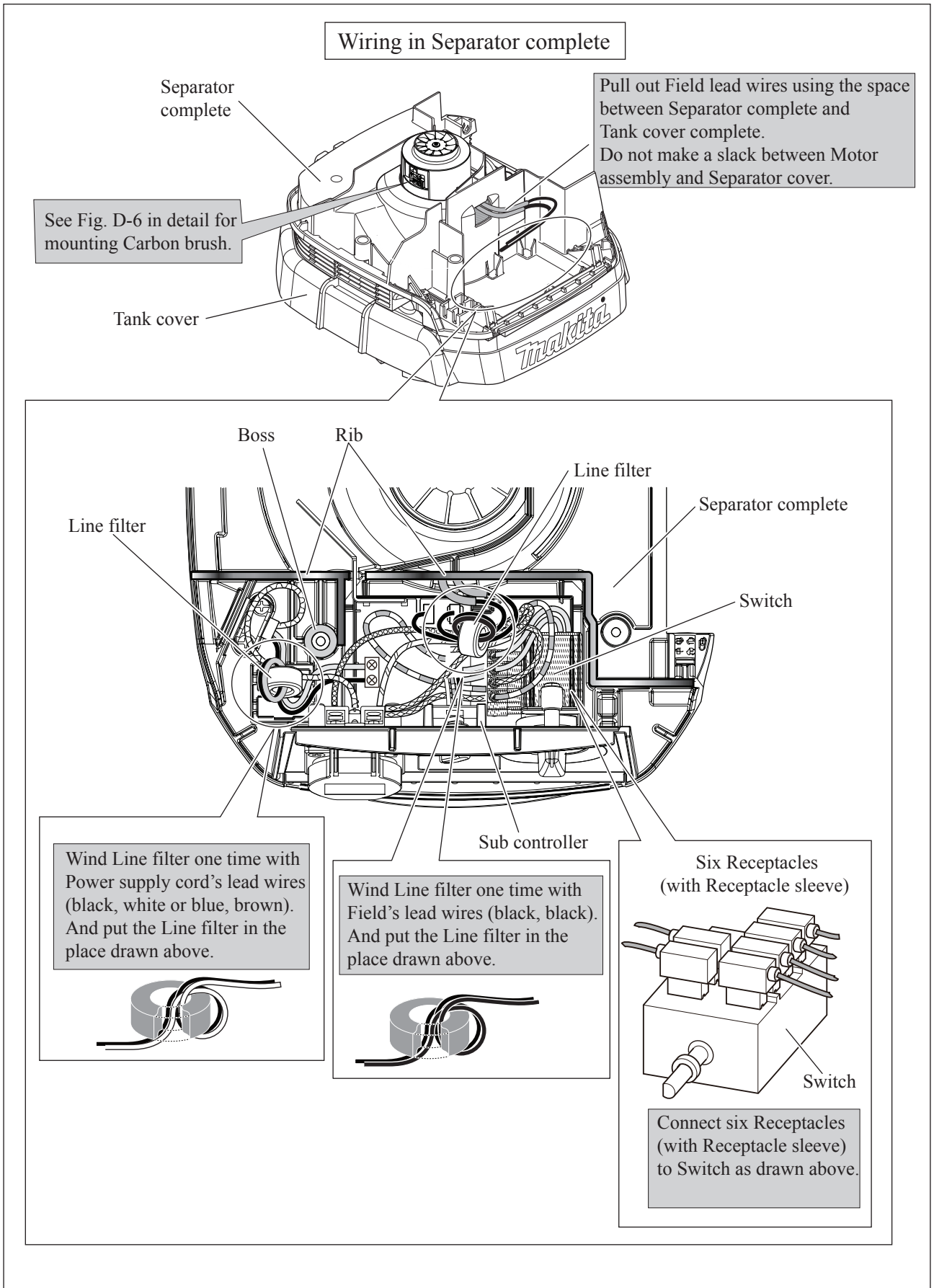
# ▶ Wiring diagram

Fig. D-3



► **Wiring diagram**

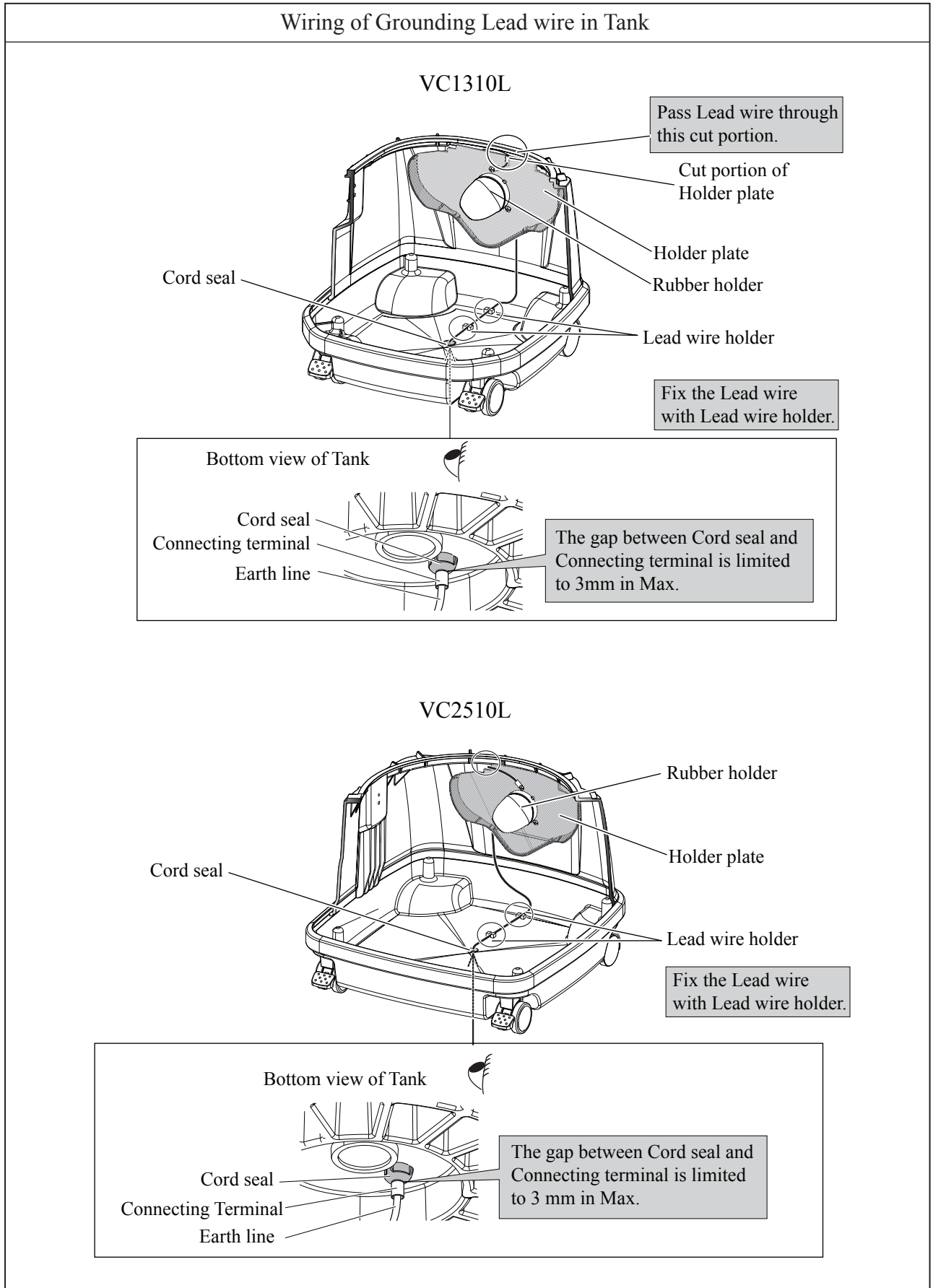
Fig. D-4



► **Wiring diagram**

In case of VC1310L and VC2510L, Holder plate is connected to Tank with Grounding lead wire as drawn in Fig. D-5.

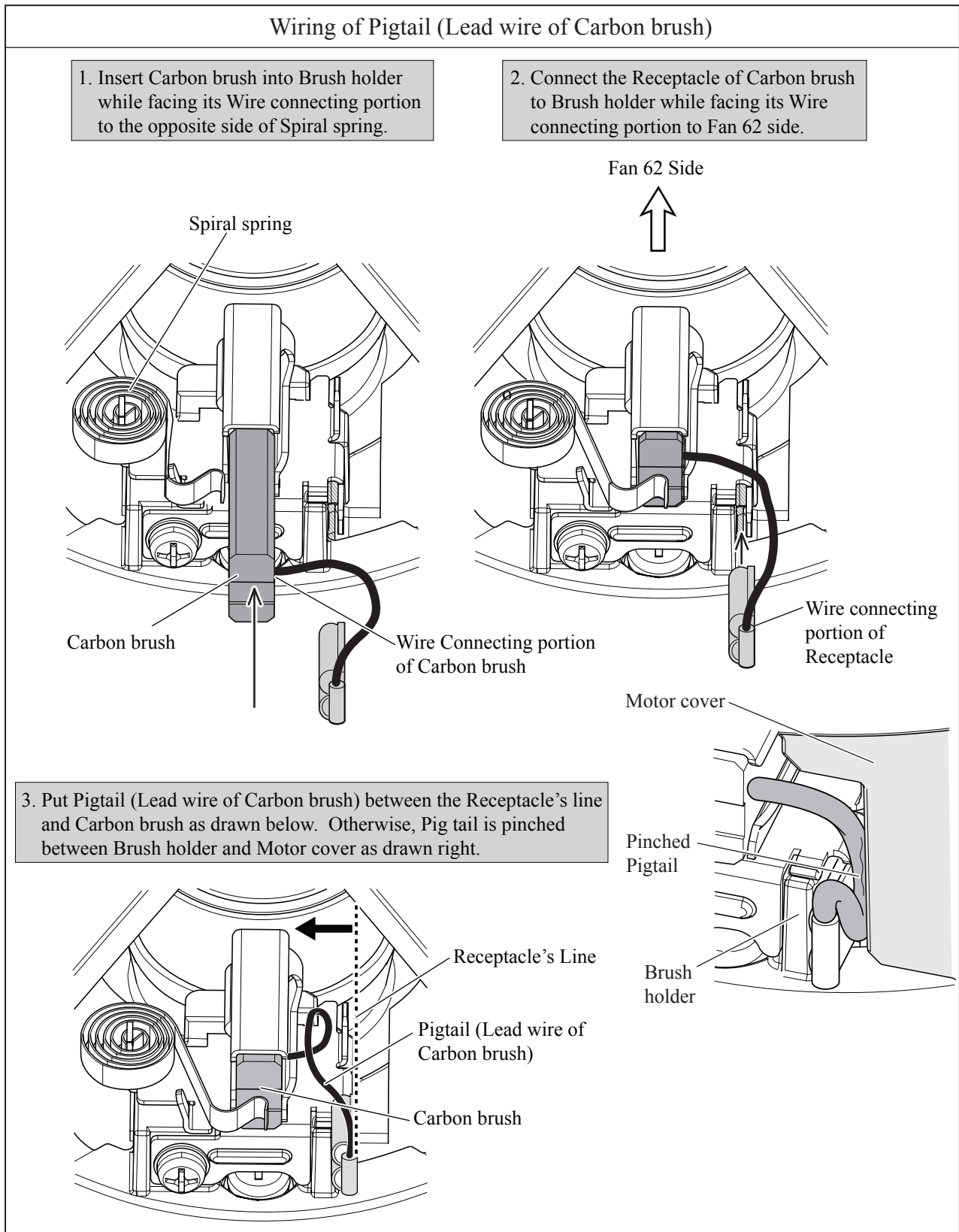
Fig. D-5



► **Wiring diagram**

Mount Carbon brush and put the Pig tail ( lead wire of Carbon brush) as drawn in **Fig. D-6**.

**Fig. D-6**



## ▶ Wiring diagram

Fig. D-7

