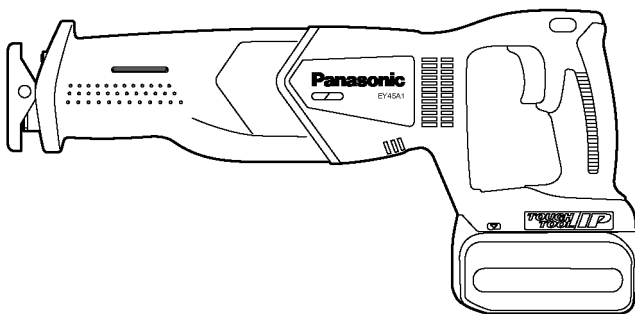


# Service Manual

## Cordless Reciprocating Saw

Model No. **EY45A1**

Europe  
Oceania



### **⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

### **IMPORTANT SAFETY NOTICE**

There are special components used in this equipment which are important for safety. These parts are marked by **⚠** in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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# Panasonic

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# 1 Warning

**Caution:**

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a soldering iron with temperature control and adjust it to 750 ± 20°F (400 ± 10°C). In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F / 600°C).

# 2 Specifications

**Main unit**

Model		EY45A1	
Motor		14.4 V DC	18 V DC
Max thickness of mounting blade		1.6 mm	
Length of strokes		28 mm	
Strokes per minute		0 - 2250 min <sup>-1</sup>	0 - 2800 min <sup>-1</sup>
Maximum cutting capacities	Wood	235 mm	
	Mild steel	130 mm	
Overall length		460 mm	
Weight (with battery pack : EY9L45)		3.3 kg	
Weight (with battery pack : EY9L51)		3.4 kg	
Noise, vibration		Typical Noise Emission Values according to EN 60745; Sound Pressure Level (L <sub>PA</sub> ): 80 dB (A) Sound Power Level (L <sub>WA</sub> ): 91 dB (A) Uncertainty (K) K <sub>PA</sub> : 3 dB (A) K <sub>WA</sub> : 3 dB (A) Typical Vibration according to EN 60745: a <sub>h,B</sub> = 24.49 m/s <sup>2</sup> (cutting boards) a <sub>h,WB</sub> = 23.48 m/s <sup>2</sup> (cutting wooden beams) Uncertainty (K) K <sub>B</sub> = 1.5 m/s <sup>2</sup> K <sub>M</sub> = 1.5 m/s <sup>2</sup>	

**Battery pack**

Model	EY9L41	EY9L42	EY9L44	EY9L45	EY9L50	EY9L51
Storage battery	Li-ion Battery					
Battery voltage	14.4 V DC (3.6 V x 4 cells)		14.4 V DC (3.6 V x 8 cells)		18 V DC (3.6 V x 10 cells)	

**NOTE :** This chart may include models that are not available in your area. Please refer to the latest general catalogue.

# 3 Troubleshooting Guide

## 3.1. Troubleshooting Guide (Refer to Wiring Connection Diagram)

《TROUBLE》

《CHECK》

《REMEDY》

**Does not operate**

**<CHECK BATTERY PACK>**  
 If no less than 18V DC/ 14.4V DC is available across the (+) and (-) terminals, the battery pack is OK.  
**Note:** The battery pack is sold separately as an optional accessory. See the nearest sales dealer for details. The battery pack has a limited life. The pack should be replaced if

- after being charged for the rated charging time the battery voltage is less than 18V DC / 14.4V DC or the usable time is extremely short.
- the battery leaks. Check battery terminals for corrosion, And check if there is any deformation or cracks on battery pack housing.

Check the condition of:  
 (1) fusing resistor. (Fig. 1)  
     \*Normal: V1=V2  
     \*V1≠V2: breakage oh fusing resistor  
 (2) connector. (Fig. 2)  
 If there is grease or dust, wipe it off.

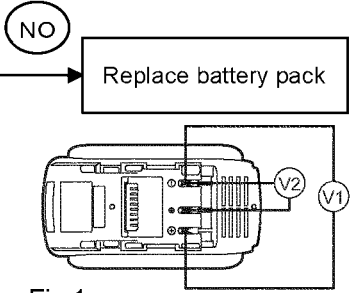


Fig.1

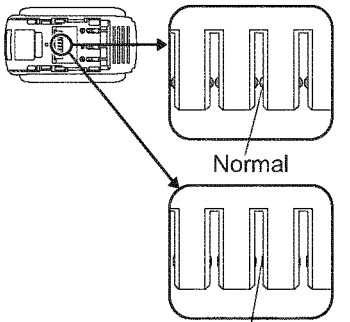


Fig.2

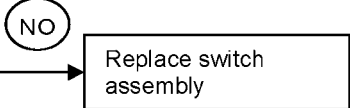
Wera out of terminal

Battery	Voltage across (+) and (-) terminals
EY9L41	14.4 V DC
EY9L42	
EY9L44	
EY9L45	
EY9L50	18.0 V DC
EY9L51	

OK

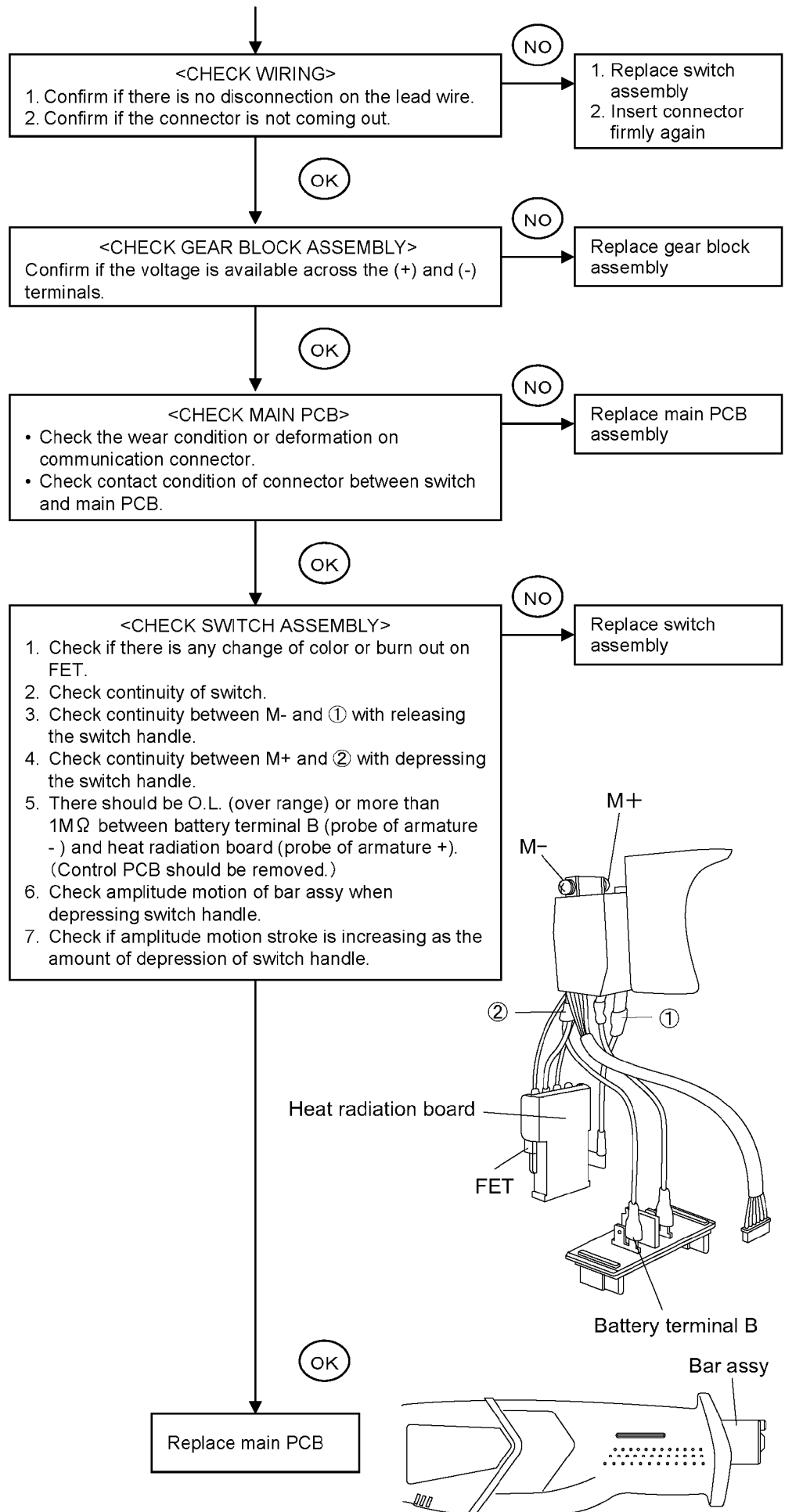
**<CHECK TERMINAL CONNECTIONS BETWEEN MAIN UNIT AND BATTERY PACK>**

- There are no much gull.
- Terminal connections are not blackened and allow conduction.
- Terminal connections are not rusty or deformed.



OK

Next page

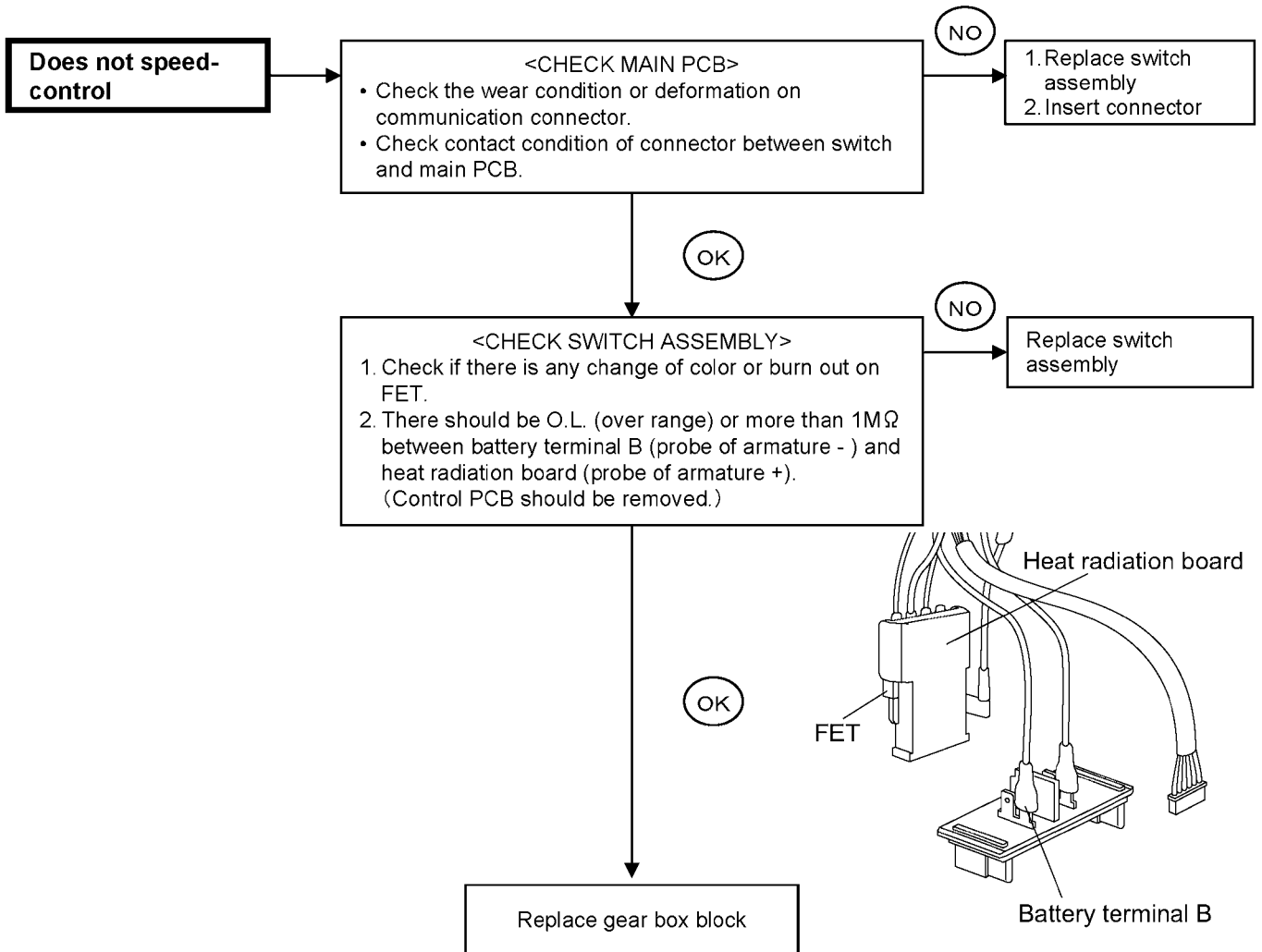


《TROUBLE》

《CHECK》

《REMEDY》

\*Check if the amplitude motion is increasing as the amount of depression of switch handle.



## **3.2. Trial Operation (after checking Troubleshooting Guide)**

### **3.2.1. Assembly**

- Confirm if there is no gap between housing A and B by pinching lead wires.
- There is no dust or deformation on battery terminals.

### **3.2.2. Operation**

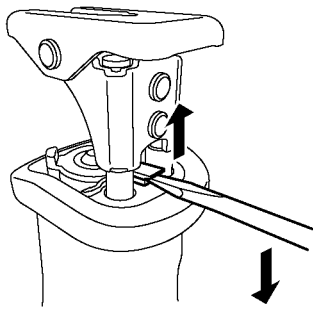
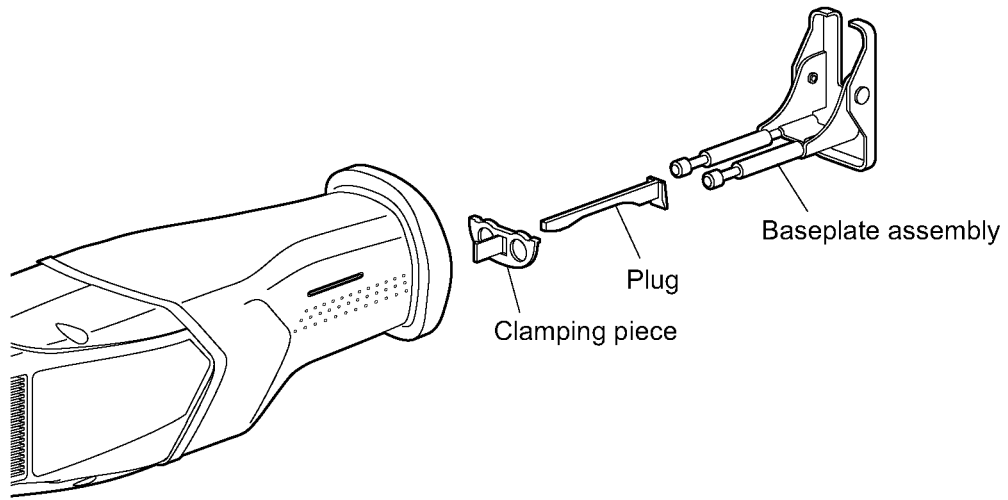
- Confirm the forward and reverse side of rotation.
- Confirm if the off-lock function works normally.
- Confirm if the switch handle move smoothly and properly.
- Check if the motor rotation become higher as the amount of depression of switch handle.
- Confirm if the blade bar assembly moves properly.
- Confirm if the rotation stops immediately when releasing the switch handle.
- There should be no metallic or abnormal sound and abnormal vibration when operating.
- Confirm if there is no abnormal sound when shaking the unit with the switch on.
- Confirm if there is no dirt when repairing.
- Confirm speed control.

# 4 Disassembly and Assembly Instructions

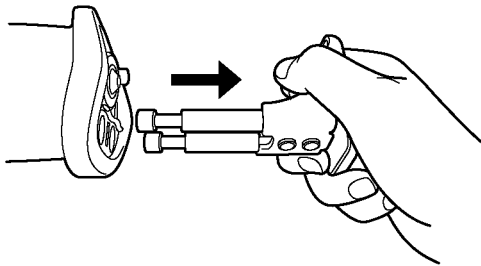
NOTE: Be sure to start disassembly after removing the blade and the battery pack.

## 4.1. Disassembly Instructions

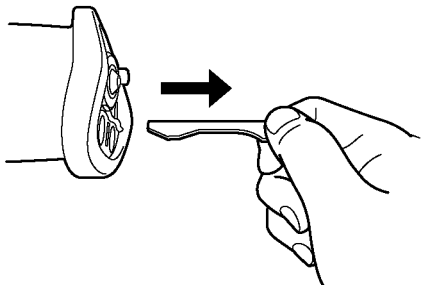
### 4.1.1. Remove the baseplate, plug and clamping piece.



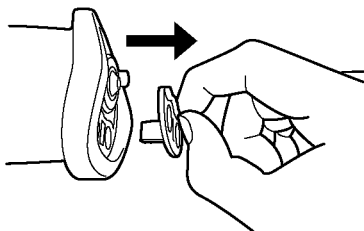
1. Insert a flathead screw driver between the main body and the plug, and push up the plug until the baseplate assembly lifts up with click.



2. And then pull out the baseplate.

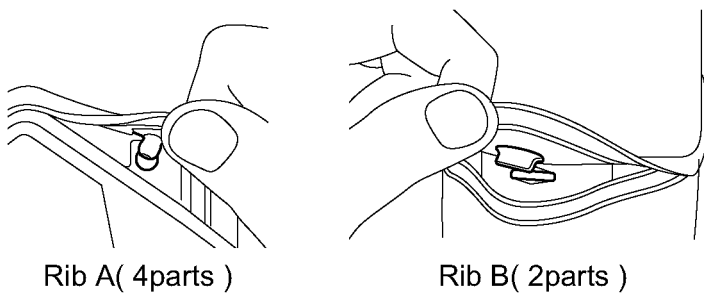
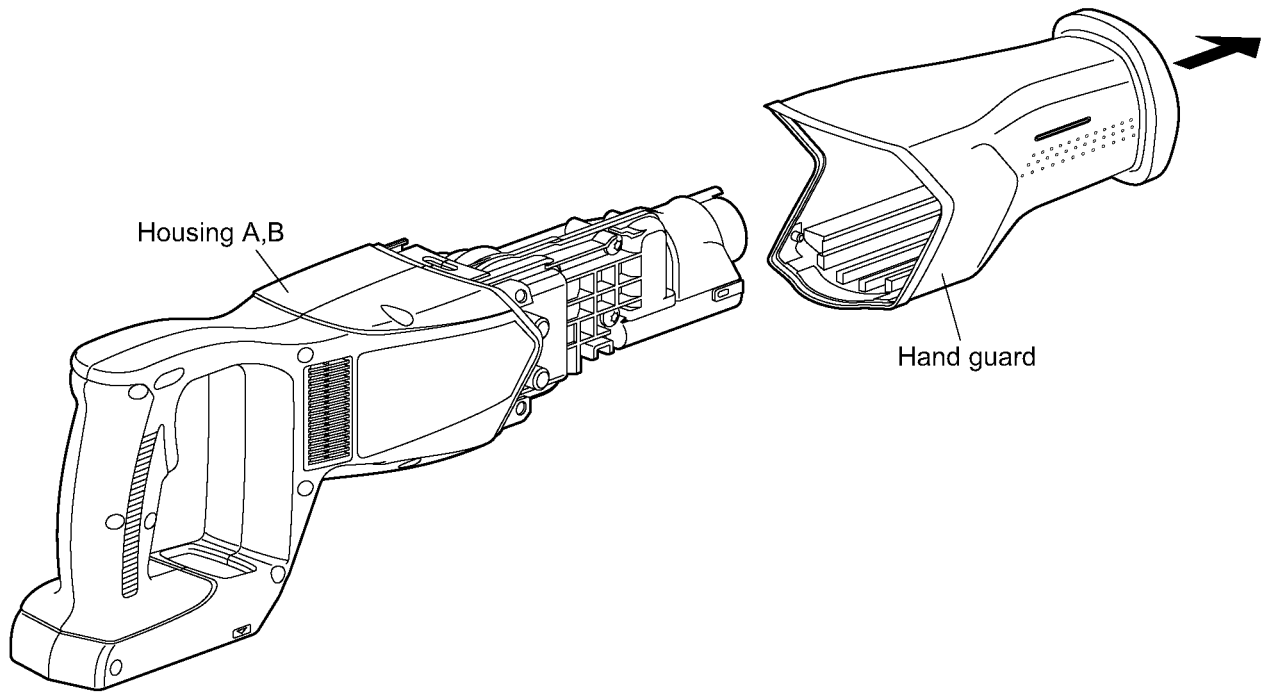


3. Pull out the plug.

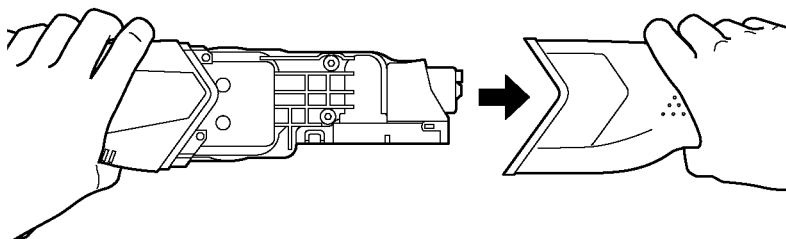
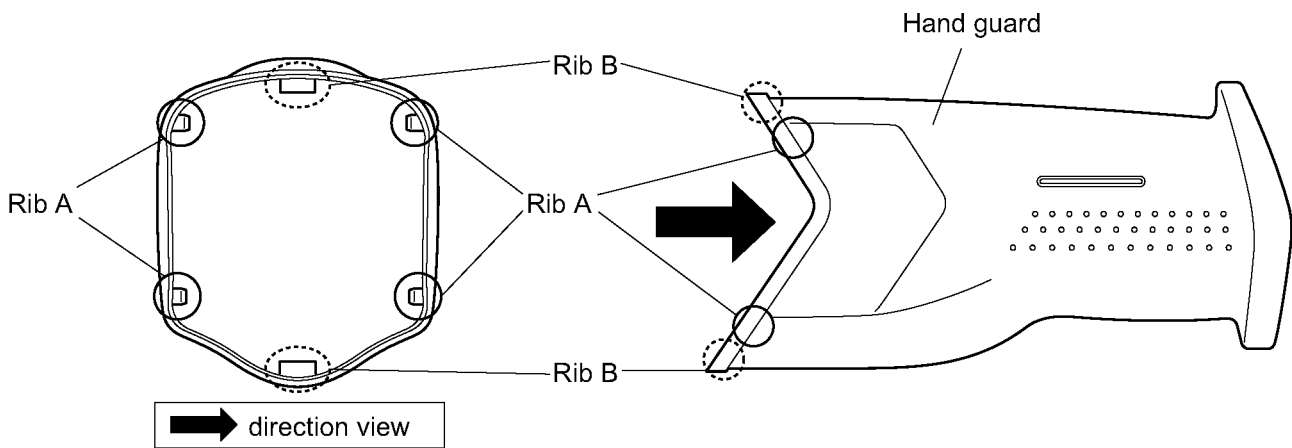


4. pull out the clamping piece holding the tab.

#### 4.1.2. Remove the hand guard.



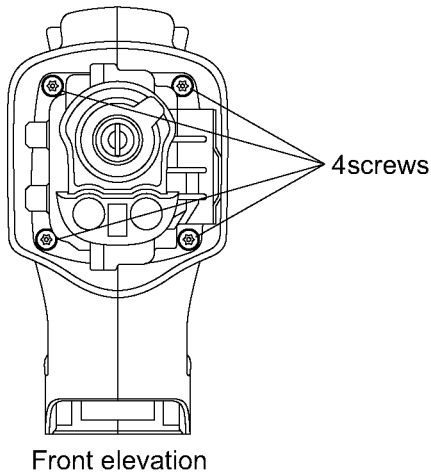
1. Remove 6 ribs of the hand guard from the housing A and B completely.



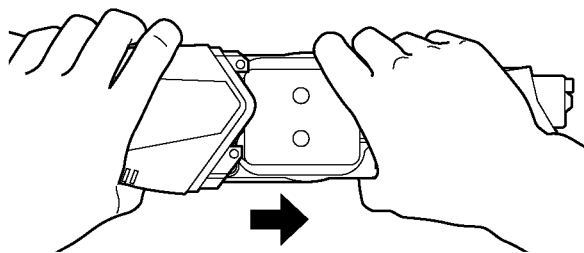
2. Pull out the hand guard strongly and gradually holding the main body firmly.



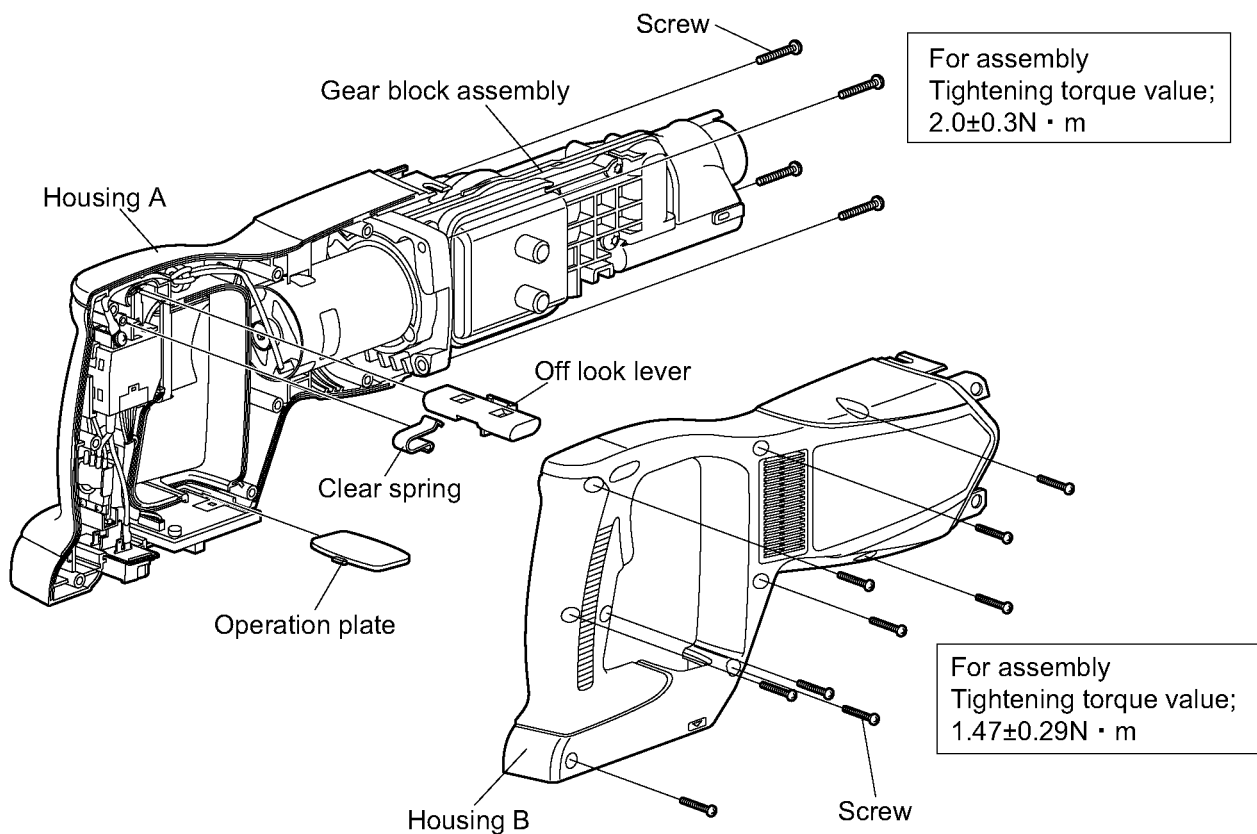
**4.1.3. Remove the housing B, off lock lever and operation plate.**



1. Remove 4 screws.

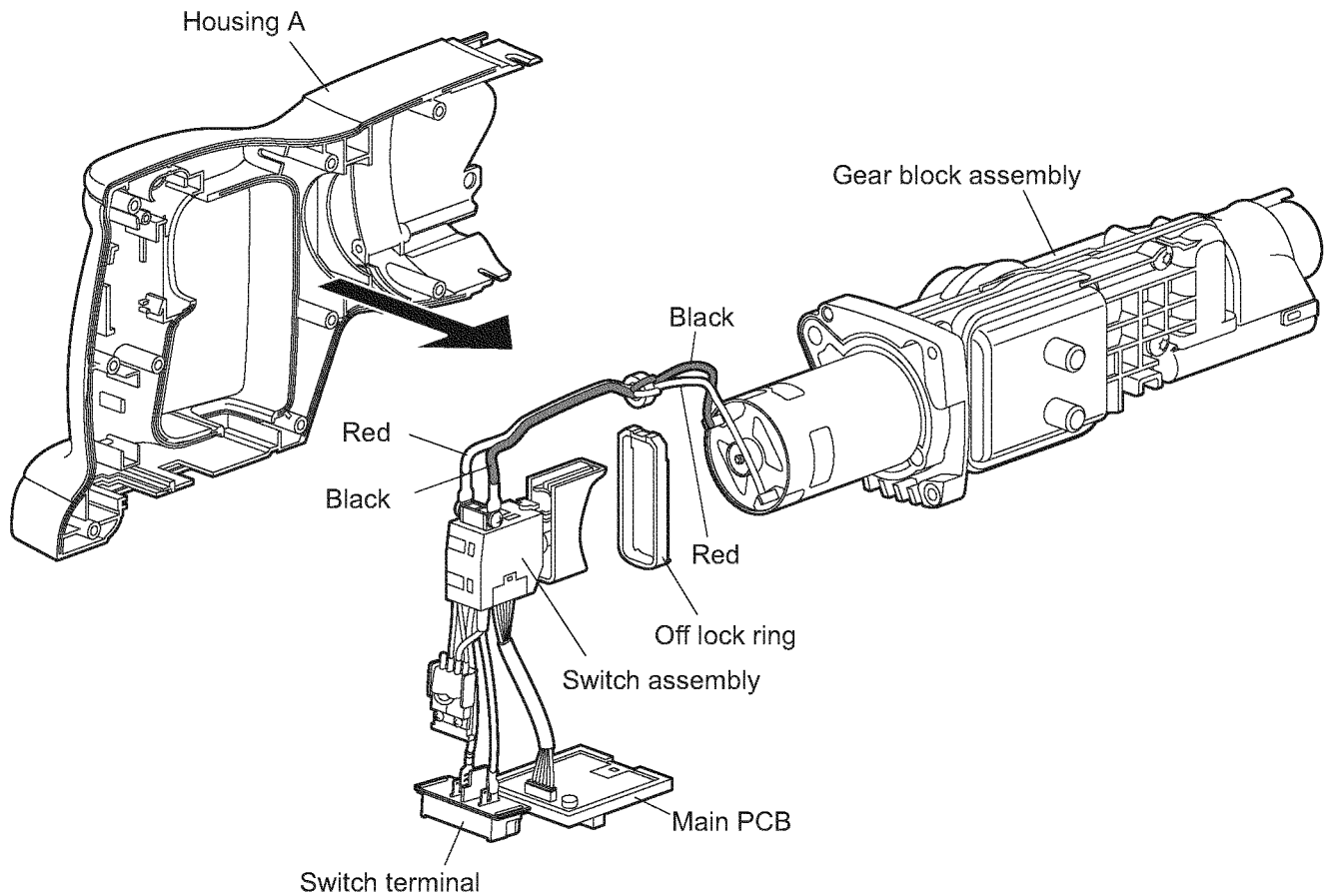


2. Pull the gear block assembly a little until it stops naturally.

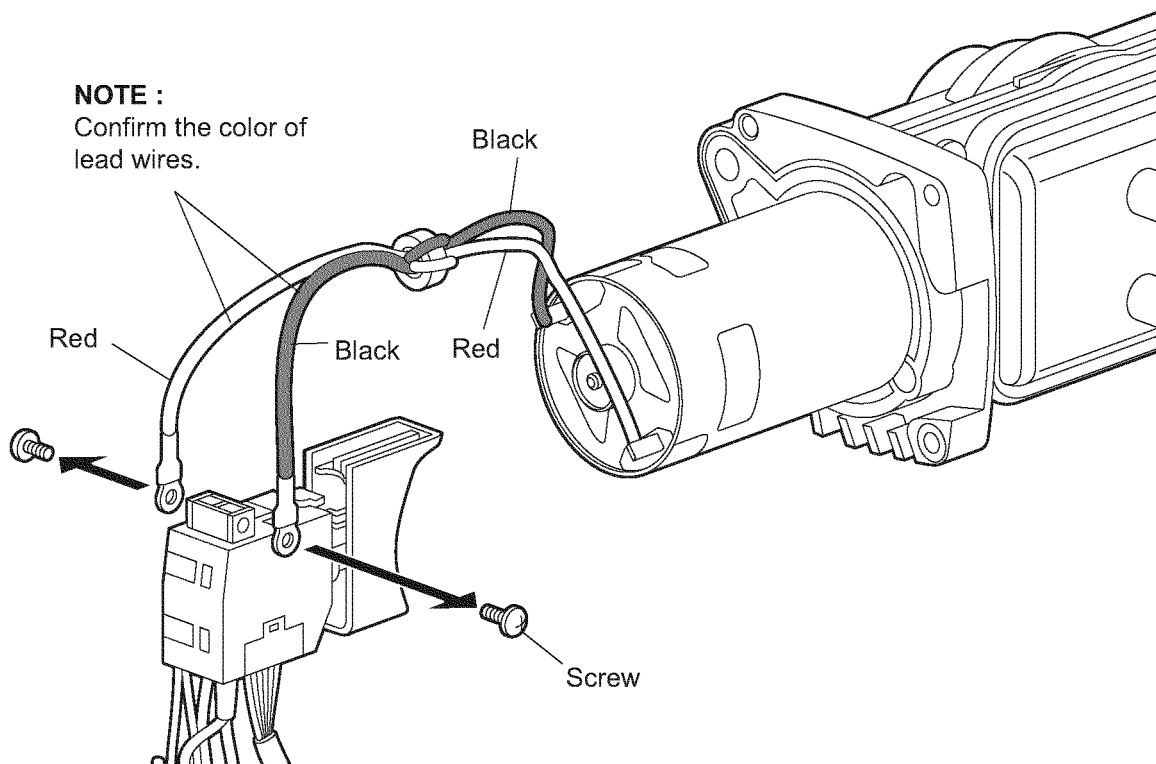


3. Remove 9 screws.
4. Remove the clear spring.
5. Remove the off lock lever.
6. Remove the operation plate.

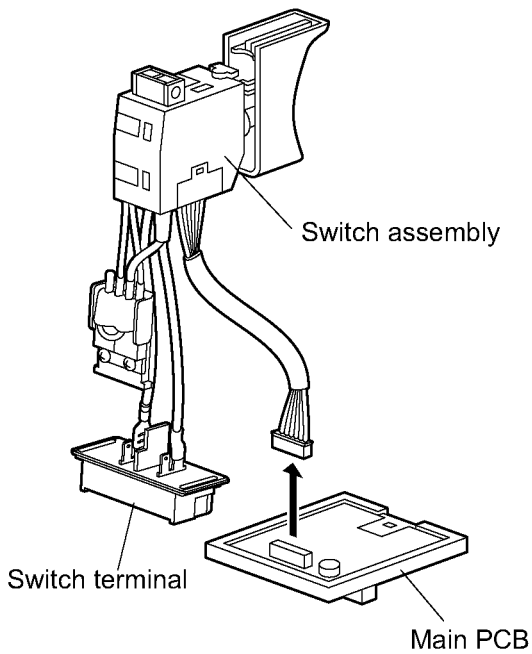
**4.1.4. Remove the gear block assembly, switch assembly and main PCB.**



**4.1.5. Remove the motor lead wires.**

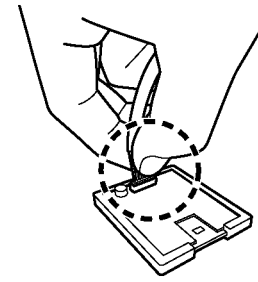


#### 4.1.6. Remove the connector of switch assembly from the main PCB.

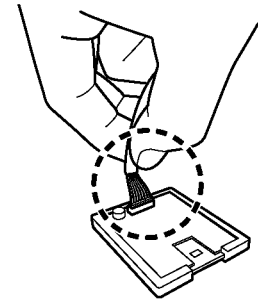


#### ■ How to remove connectors

○ Pull a connector out holding the base of it.

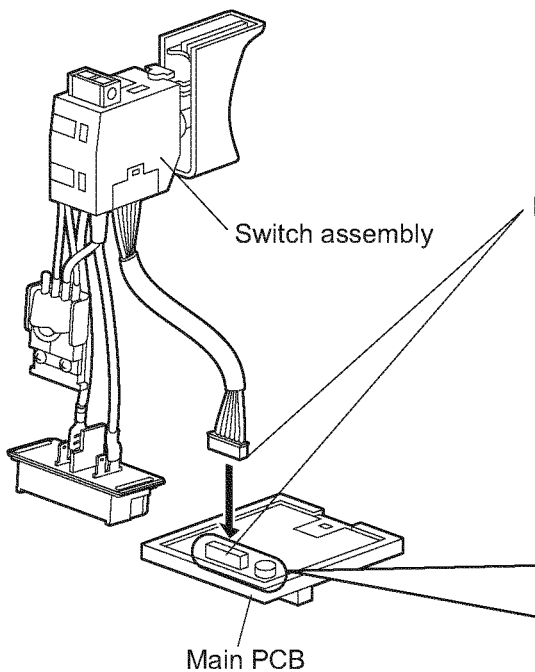


✗ Holding the lead wire makes it broken.



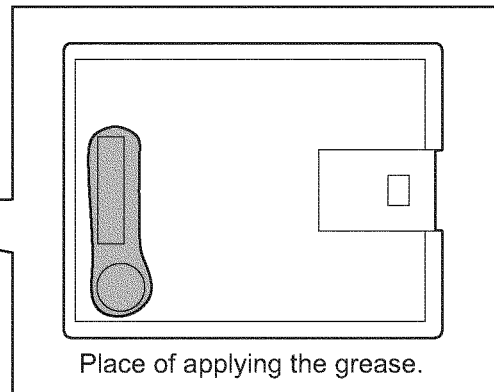
### 4.2. Assembly Instructions

#### 4.2.1. Insert the connector of the switch assembly into the main PCB.

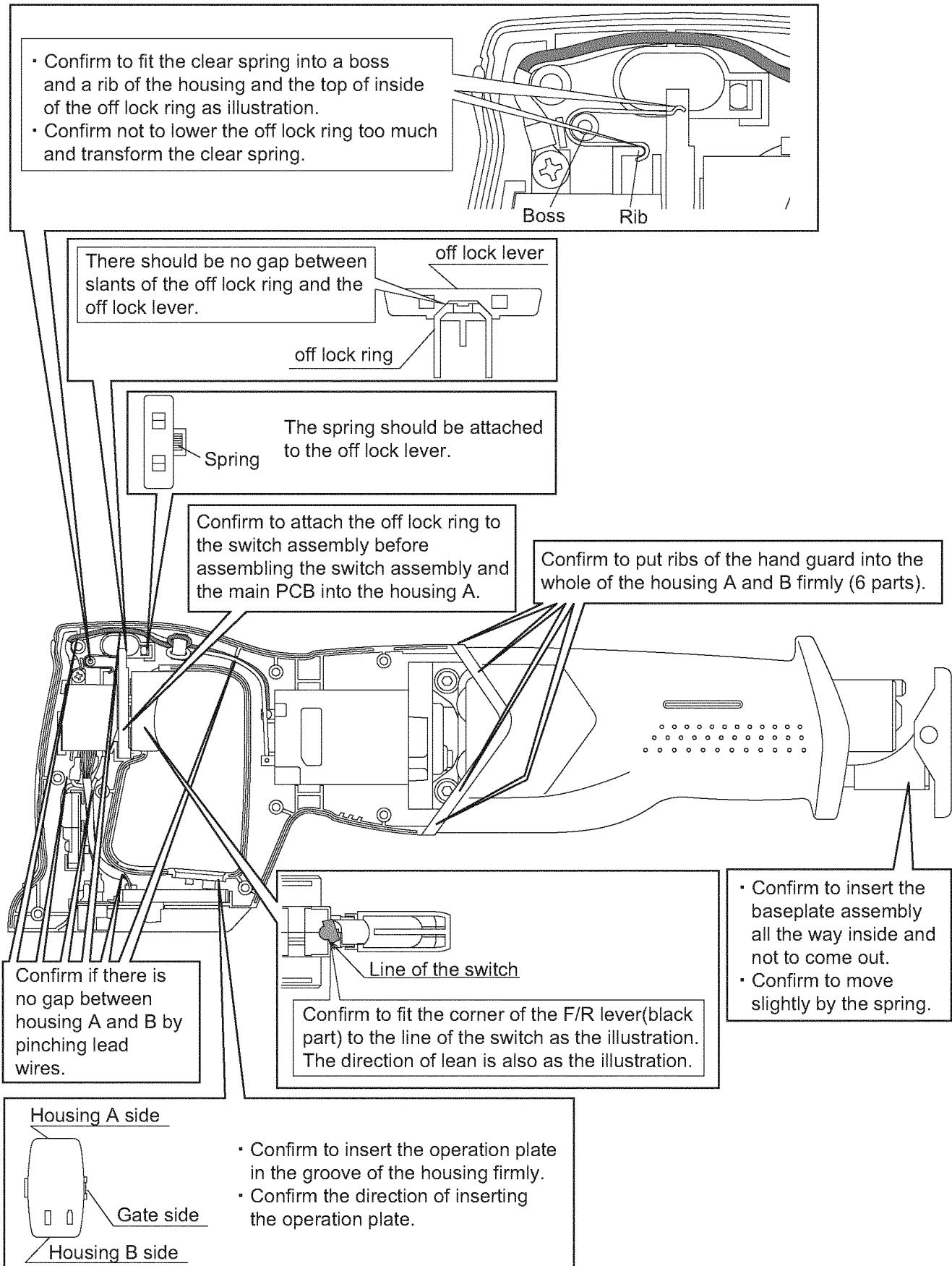


#### NOTE :

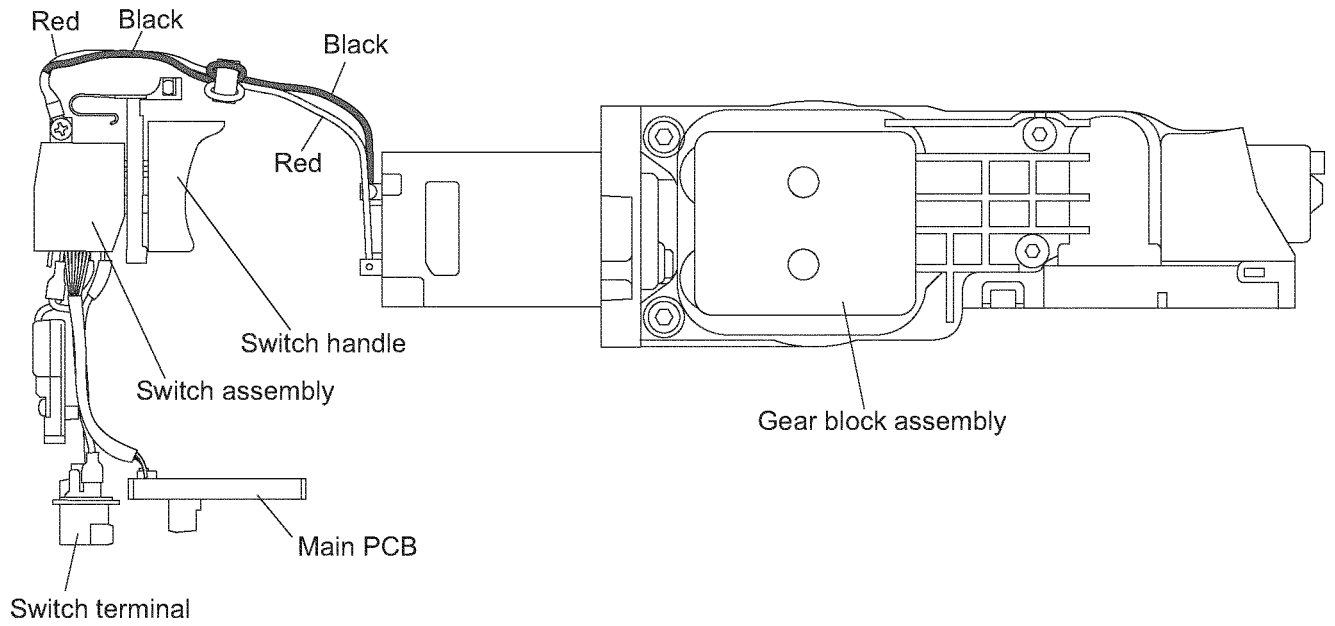
- Apply the grease around the connector of the main PCB before inserting the connector of the switch assembly into it.
- Insert the connector all the way inside firmly.



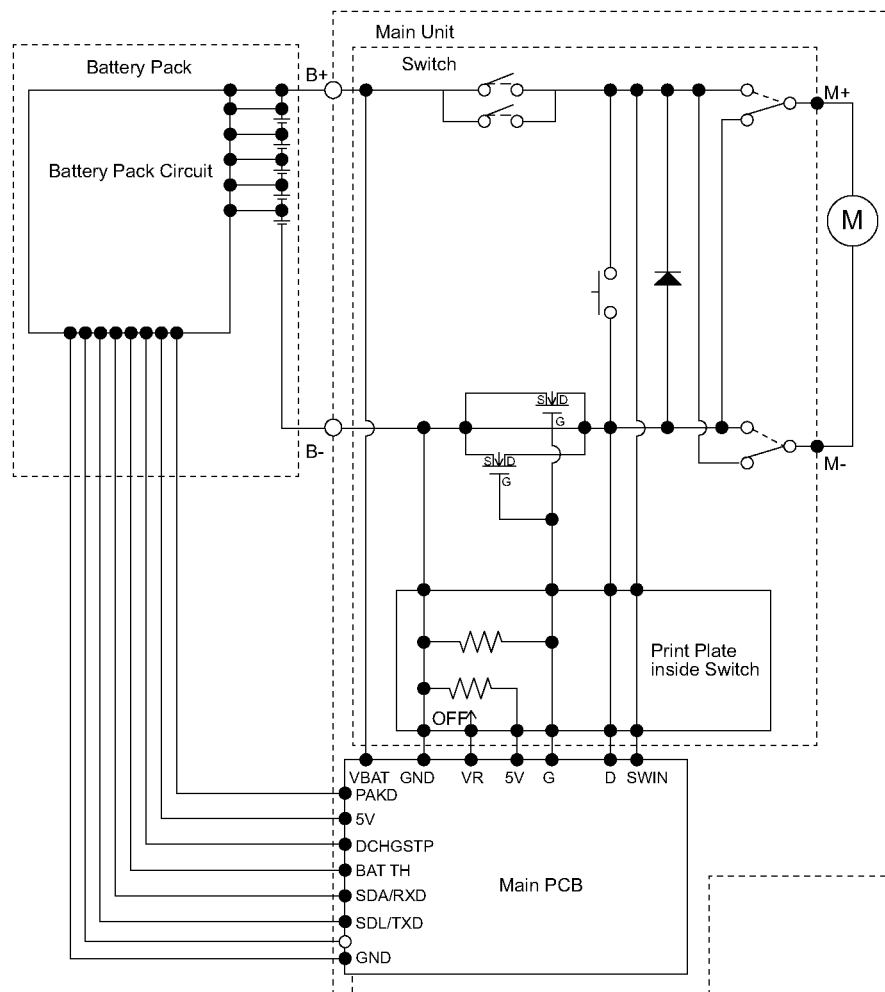
## 4.2.2. Caution for assembly



## 5 Wiring Connection Diagram

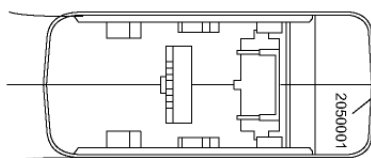
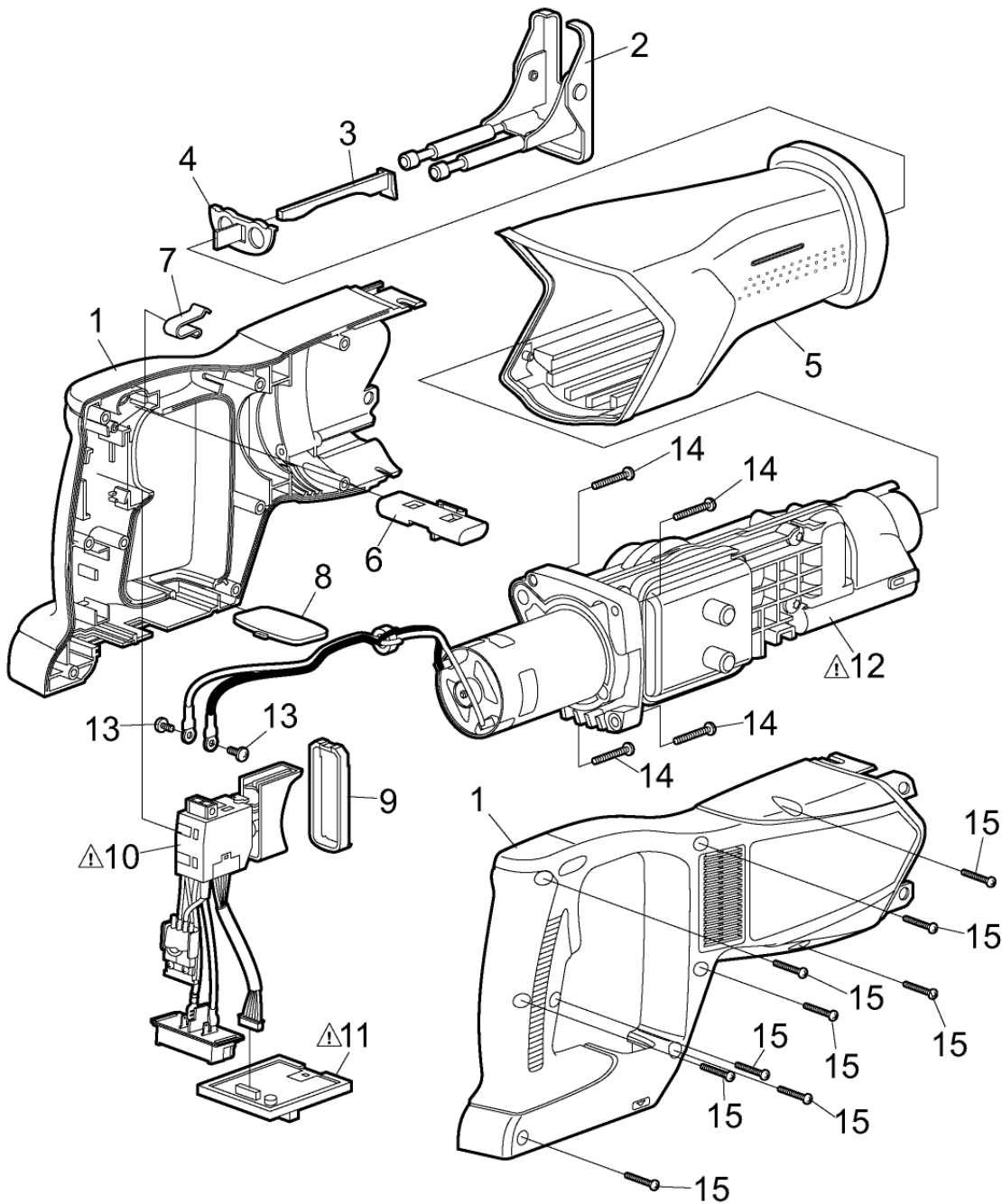


## 6 Schematic Diagram



# 7 Exploded View and Replacement Parts List




Model No. : EY45A1 Exploded View



Production making (7 digits)  
 2 05 0001  
 Serial Number  
 Month  
 Year (Last 1 digit)

- \* Battery Pack is available as an optional accessory. See the nearest sales dealer for details.
- \* For replacement parts of charger, see the charger service manual.
- Charger complete set is available as an optional accessory. See the nearest sales dealer for details.

## Model No. : EY45A1 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	1	WEY45A1H3078	HOUSING AB SET	1	Only for U.K. and Europe
	1	WEY45A1H3079	HOUSING AB SET	1	Only for Australia
	2	WEY45A1K4728	BASEPLATE ASSEMBLY	1	
	3	WEY45A1K0398	PLUG	1	
	4	WEY45A1K0208	CLAMPING PIECE	1	
	5	WEY45A1K3108	HAND GUARD	1	
	6	WEY45A1H3238	OFF LOCK LEVER	1	
	7	WEY45A1L0928	CLEAR SPRING	1	
	8	WEY45A1K3958	OPERATION PLATE ASSEMBLY	1	
	9	WEY45A1H0648	OFF LOCK RING	1	
	10	WEY45A1L2008	SWITCH ASSEMBLY	1	
	11	WEY45A1K2118	MAIN PCB ASSEMBLY	1	
	12	WEY45A1K4058	GEAR BLOCK ASSEMBLY	1	
	13	WEY6230L6027	SCREW	2	K3*6
	14	WEY45A1L6238	TORX SCREW	4	K4*30
	15	WEY45A1L6239	TORX TAPPING SCREW	9	K4*18
	-	WEY45A1K7018	TOOL CASE	1	Only for U.K. and Europe
	-	WEY45A1K8108	OPERTING INSTRUCTIONS	1	