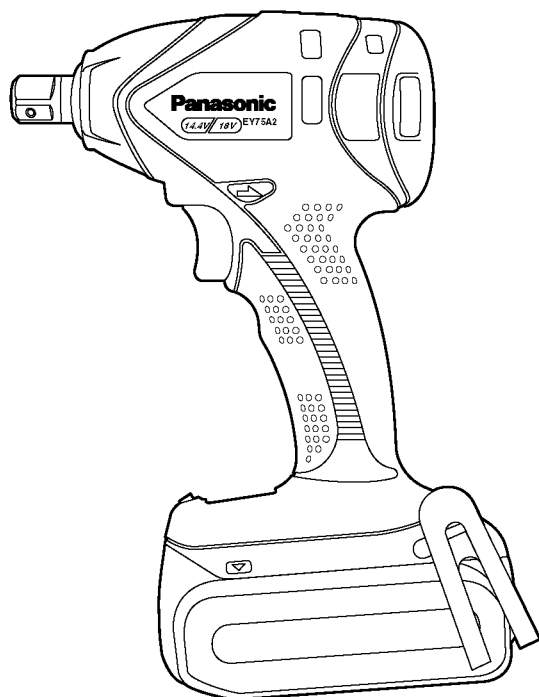


# Service Manual

**Cordless Impact Driver**

**Model No. EY75A2**

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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# 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 No.		EY75A2	
Motor voltage		14.4V DC	18V DC
No load speed	Soft mode	0~1000min <sup>-1</sup>	
	Medium mode	0~1400min <sup>-1</sup>	
	Hard mode	0~2300min <sup>-1</sup>	
Maximum torque		200N-m	205N-m
Impact per minute	Soft mode	0~2000rpm <sup>-1</sup>	
	Medium mode	0~2800rpm <sup>-1</sup>	
	Hard mode	0~3500min <sup>-1</sup>	
Overall length		155mm	
Weight (with battery pack:EY9L44)		-	-
Weight (with battery pack:EY9L45)		-	-
Weight (with battery pack:EY9L50)		1.55kg	1.65kg
Weight (with battery pack:EY9L51)		1.55kg	1.65kg
Noise, Vibration		Typical Noise Emission Values according to EN 60745; Sound Pressure Level (L <sub>PA</sub> ); 96 dB (A) Sound Power Level (L <sub>WA</sub> ); 109 dB (re1pw) Uncertainty (K): 3 dB Typical Vibration according to EN 60745; 17.0 m/s <sup>2</sup> (Impact tightening of fasteners of the maximum capacity of the tool) Uncertainty (K): 1.5 m/s <sup>2</sup>	

## Battery Pack

Model No.	EY9L41	EY9L42	EY9L44	EY9L45	EY9L50	EY9L51
Storage battery	Li-ion Battery					
Motor Voltage	14.4V DC (3.6V x 4cells)		14.4V DC (3.6V x 8cells)		18V DC (3.6V x 10cells)	

**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 (spin)**

**<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 of fusing resistor  
 (2) connector. (Fig. 2)  
 If there is grease or dust, wipe it off.

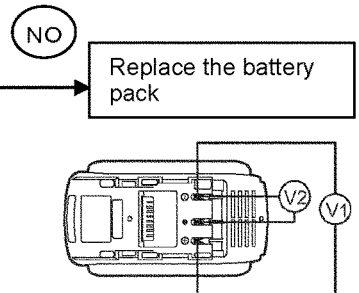


Fig1

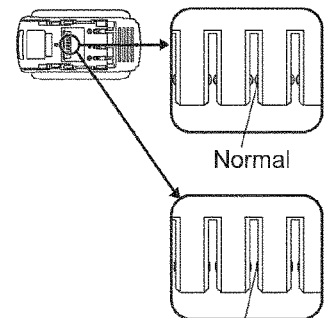


Fig2 Wear out of terminal

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

NO

Replace the switch assembly or module assembly

OK

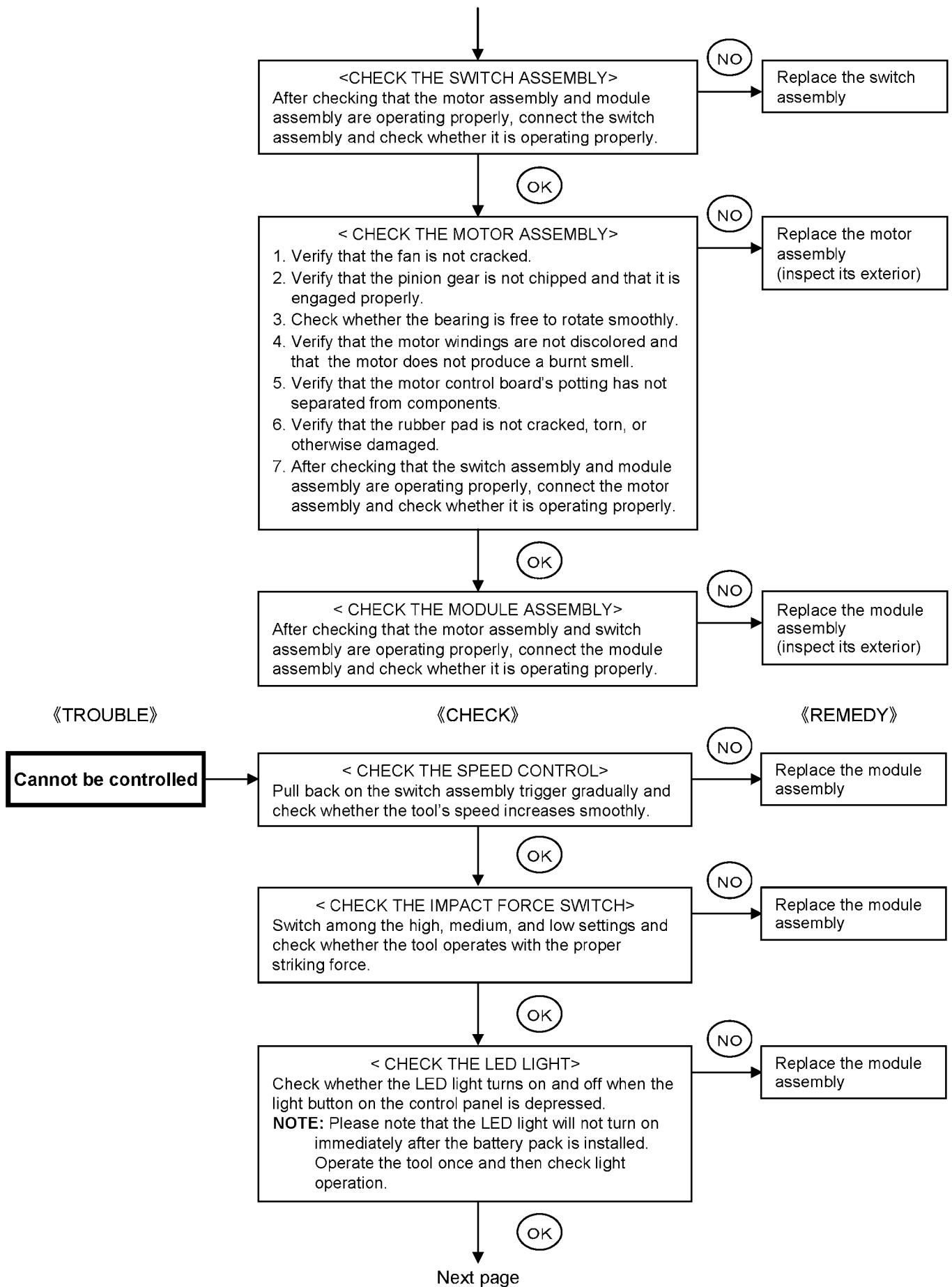
**<CHECK THE FPC MODULE>**  
 (1) Check for any looseness in the motor assembly and module assembly.  
 (2) Verify that grease has been applied properly to the module assembly connectors.  
 (3) Verify that there are no broken connections due to banding or tearing of the FPC cable.

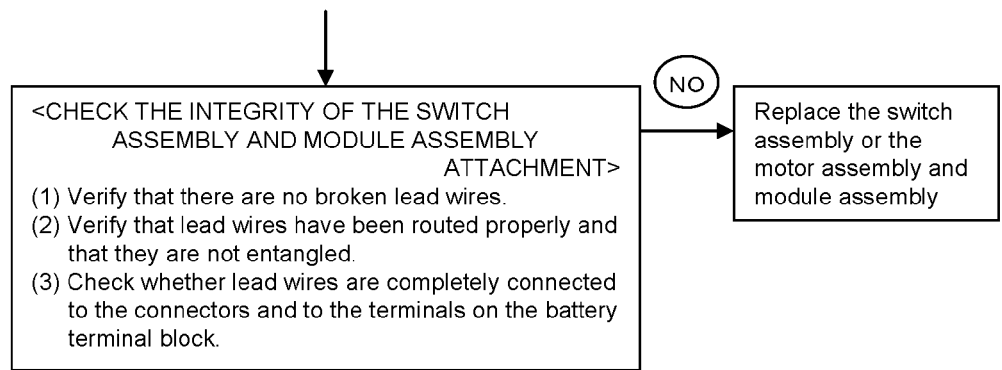
NO

Replace the motor assembly and module assembly (check connectors)

OK

Next page





《TROUBLE》

**The tool is not producing adequate impact force**

《CHECK》

\*Before inspecting the anvil, inspect the battery pack and check the tool speed. Using a constant-voltage source, energize the tool with 14.4 V DC or 18 V DC and pull back on the trigger with the impact indicator set to high mode. Check whether the tool speed is between 0 and 2,500 rpm. IF the speed falls outside this range, inspect the carbon brushes, rotor, and stator and start the inspection after setting the tool speed between 0 and 2,500 rpm.

《REMEDY》

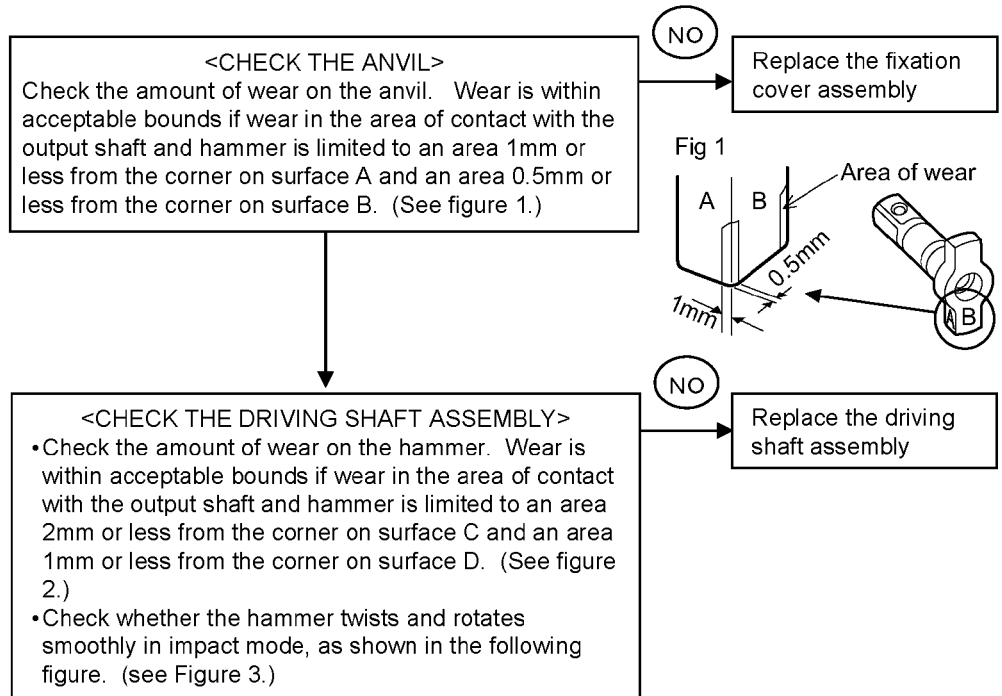


Fig 2

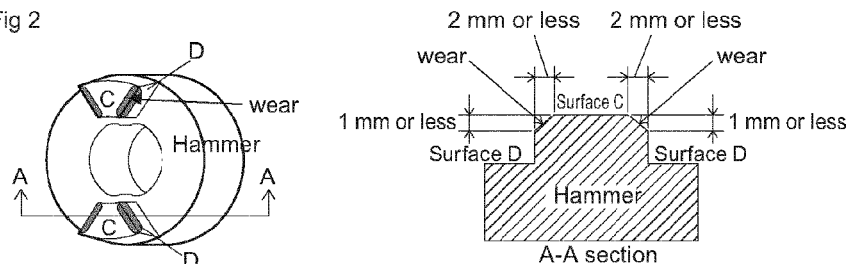
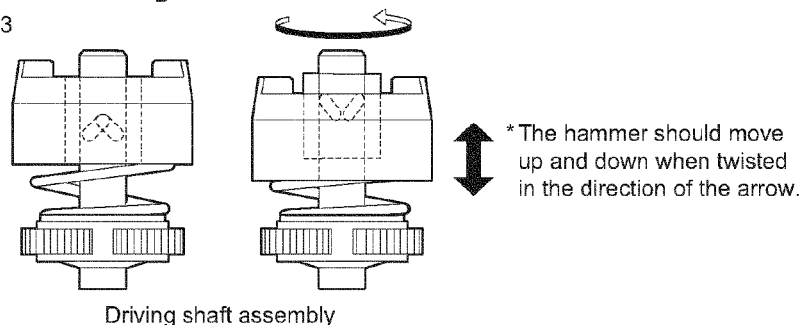


Fig 3



## **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.
- Confirm if there is no dirt when repairing.

### **3.2.2. Operation**

- Check whether the tool operates properly in both the forward and reverse directions.
- Check whether the LED light turns on and off each time the LED light on/off button is depressed.
- Check whether the tool speed increases continuously as the trigger is gradually engaged.
- Check whether the tool speed is normal after repair and reassembly.

High mode: 0 to 2,500 rpm

Medium mode: 0 to 1,400 rpm

Low mode: 0 to 1,000 rpm

- Check whether impact operation functions properly.

Check whether impact operation functions properly.

For an easy test of impact operation, check whether you can drill a universal screw ( $\phi 4.5 \times 75$ mm) into a substrate Douglas fir within about 5 seconds.

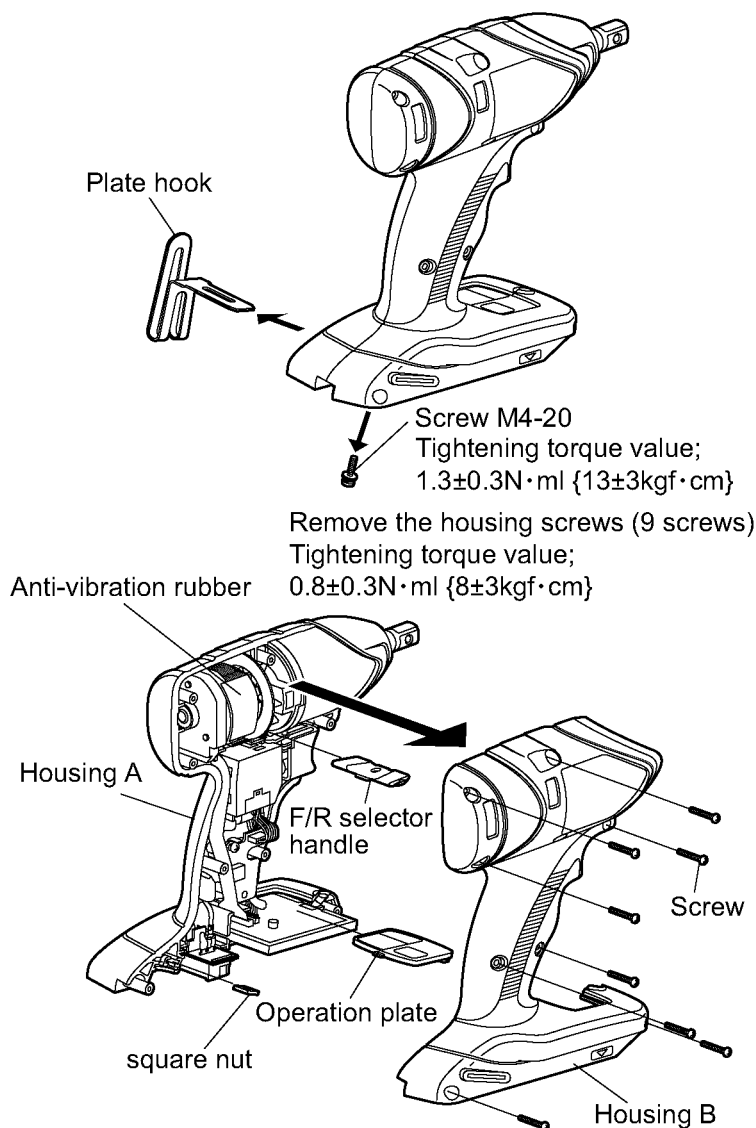
### **3.2.3. Integrity**

- With the switch activated, shake the tool back and forth and up and down and verify that its sound does not change excessively.
- Check for the presence of any dirt or foreign matter from the repair process on the outside of the tool.

## 4 Disassembly and Assembly Instructions

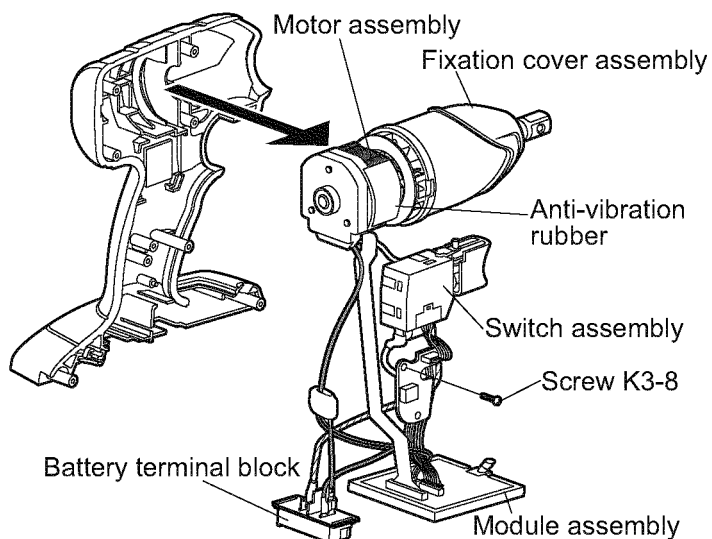
\*To assemble the tool, start with 4-6 and proceed to 4-1

### 4.1. Removing the Housing



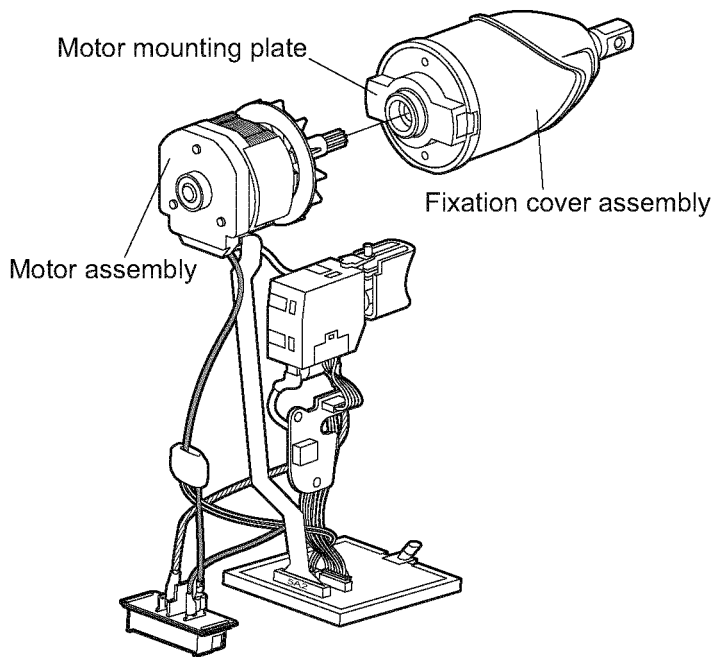
1. Remove the M4-20 screw.
2. Remove the plate hook.
3. Remove nine screws.
4. Remove housing B.
5. Remove the F/R selector handle.
6. Remove the operation plate.
7. Remove the square nut.

### 4.2. Removing the Assemblies



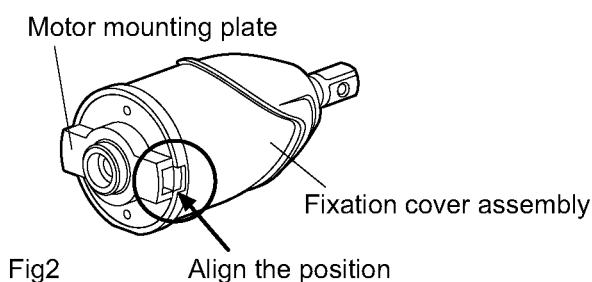
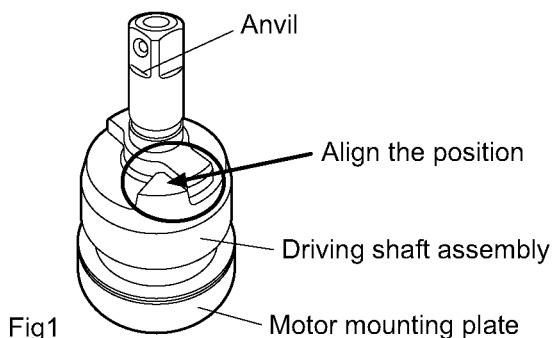
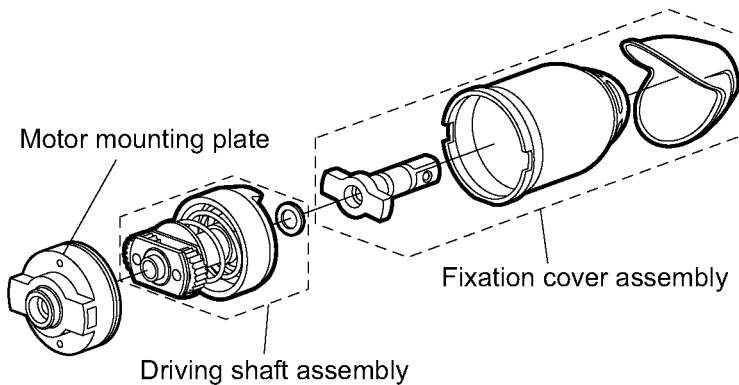
1. Remove the motor assembly, fixation cover assembly, switch assembly, and module assembly from housing A.

### 4.3. Removing the Motor Mounting Plate, Driving Shaft Assembly, and Fixation Cover Assembly from the Motor Assembly



1. Holding the motor assembly, remove the entire motor mounting plate, including the driving shaft assembly and the fixation cover assembly, from the motor assembly.

### 4.4. Removing the Fixation assembly, Driving shaft assembly, and Motor Mounting Plate

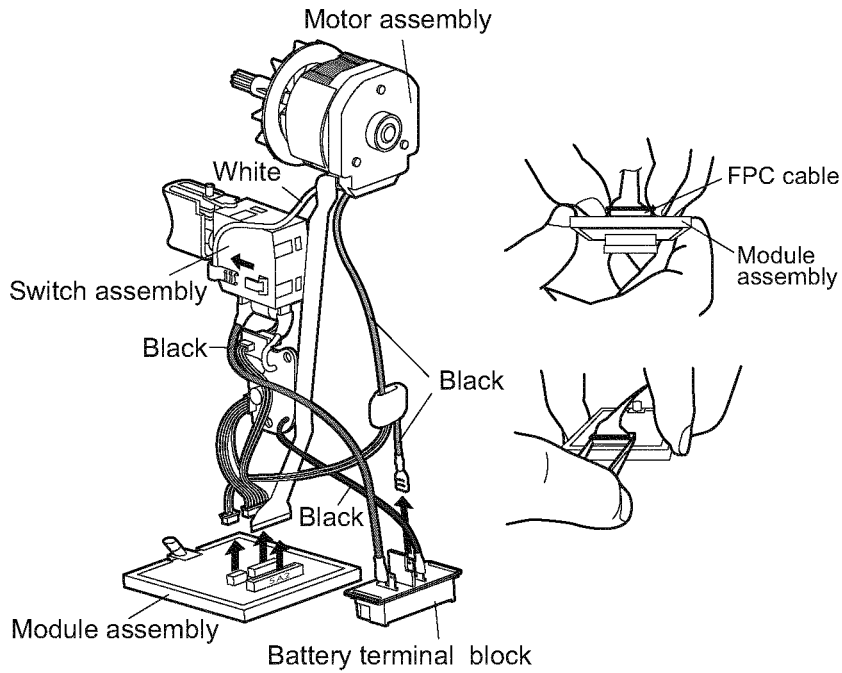


#### \*Assembly precautions

1. Attach the driving shaft assembly to the motor mounting plate.
2. Place a washer on the driving shaft assembly's shaft.
3. Attach the anvil to the driving shaft assembly as shown in Figure 1.
4. Place the fixation cover over the motor mounting plate and insert it while rotating, taking care to align the position of the fixation cover with the motor mounting plate as shown in Figure 2.
5. Place the remaining parts on the anvil and hold them in place with spring C.



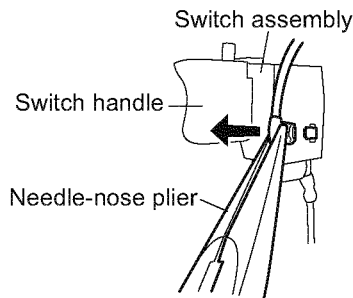
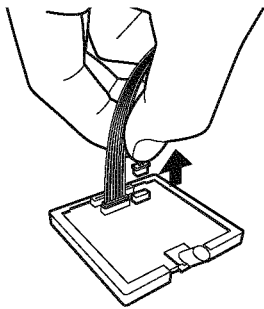
## 4.5. Removing the Motor Assembly, Switch Assembly, and Module assembly



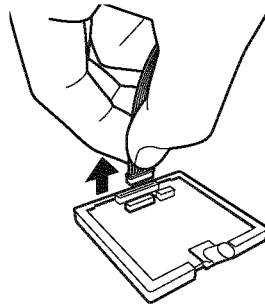
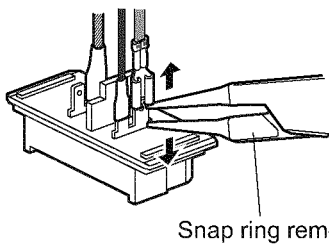
1. Disconnect the FPC cable from the module assembly from the connector.

\*Lift up on the connector catch gently. Using excessive force will cause the catch to break off. If you have difficulty lifting up the connector catch, use a pair of pincers to do so gently.

Grip the connector at its base and pull it out





2. Disconnect the two-pin connector from the module.
  3. Pull the faston terminal directly out from the switch assembly.
- \*Exercise care not to bend the terminal fitting.

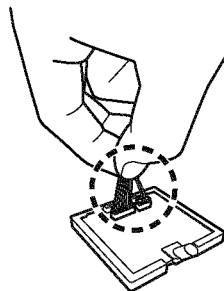
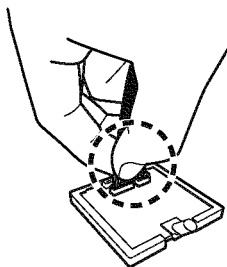


4. Disconnect the faston terminal from the battery terminal block.
5. Disconnect the eight-pin connector from the module assembly.

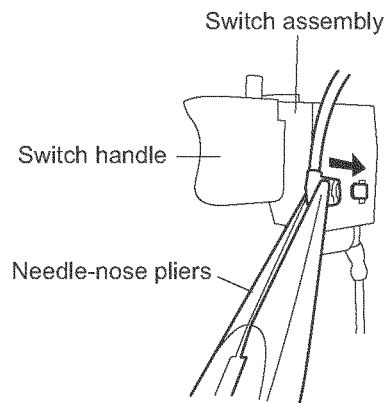
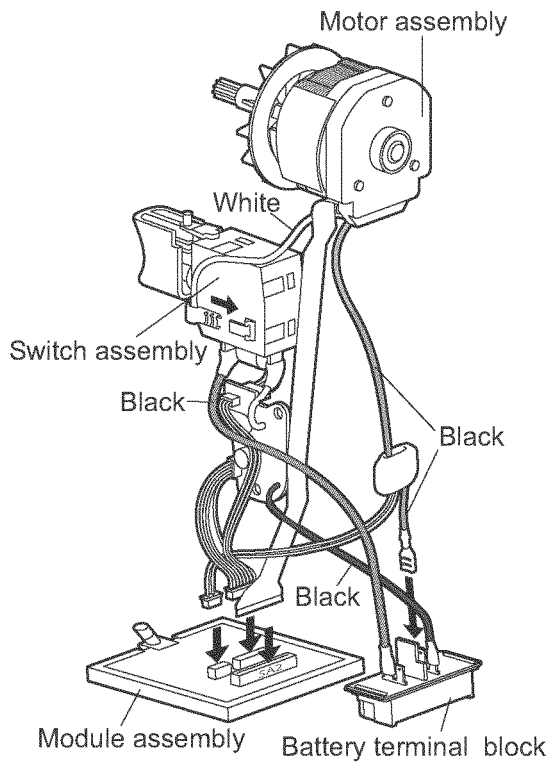
### Connecting and disconnecting the connector.

 Grip the connector at its base and pull it out.

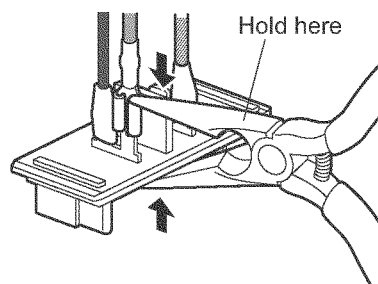
 Pulling on the lead wires will break the wires.



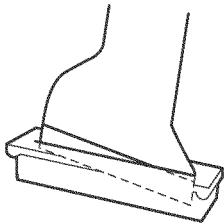
## 4.6. Precautions When Assembling the Motor Assembly, Switch Assembly, and Module Assembly



\*Exercise care not to bend the switch assy's terminal.

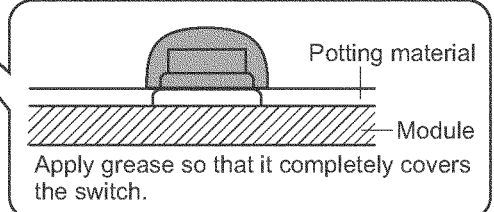
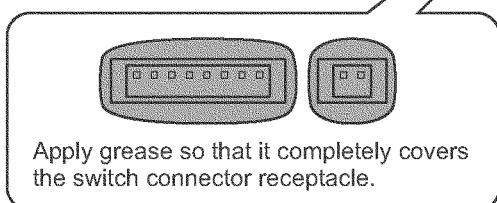
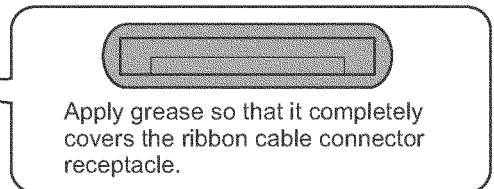
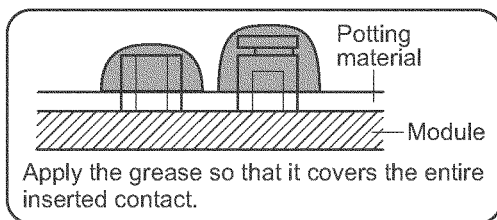
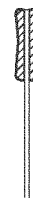
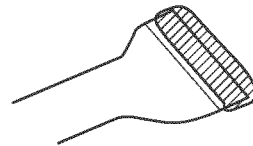


Insert the ribbon cable straight.

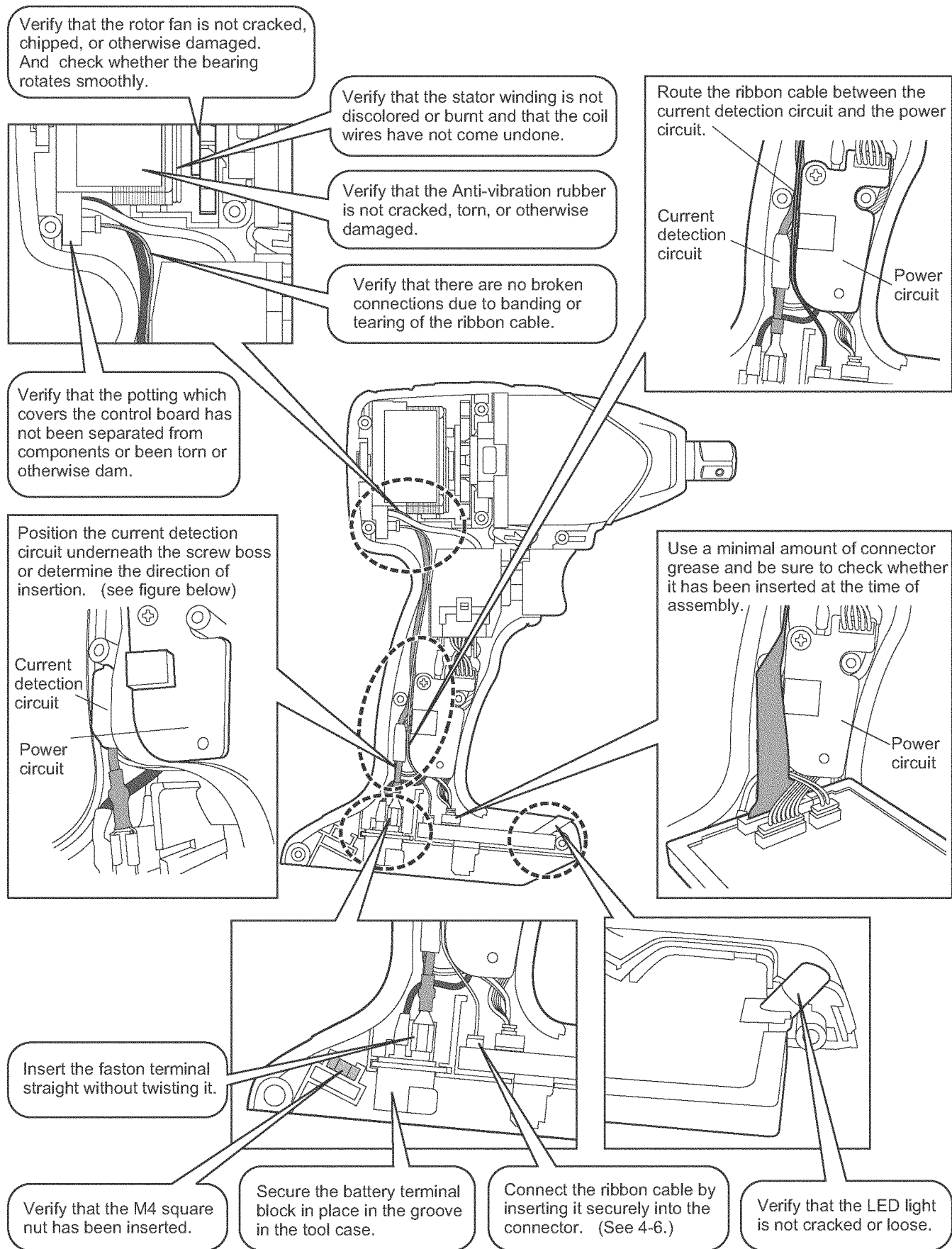


\*Apply some grease when inserting the ribbon cable into the connector.  
Grease: Permalub  
Order no.: EZ003W8957

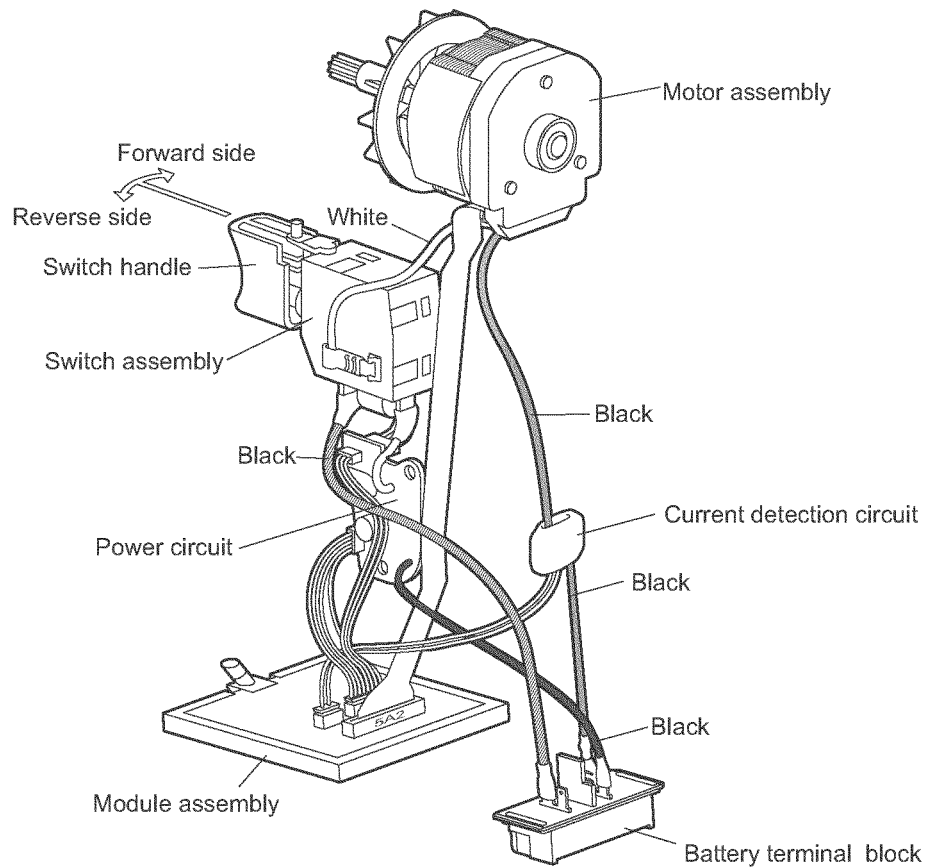
Apply the grease so that it covers the entire inserted contact.



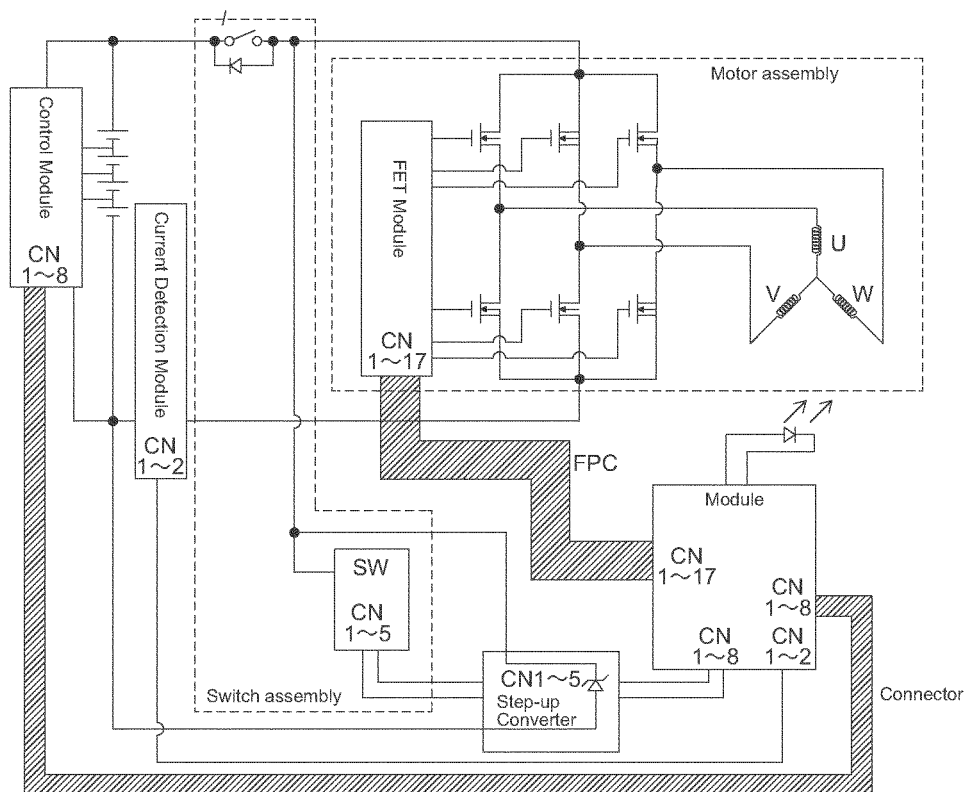
## 4.7. Wiring and Assembly Points



## 5 Wiring Connection Diagram

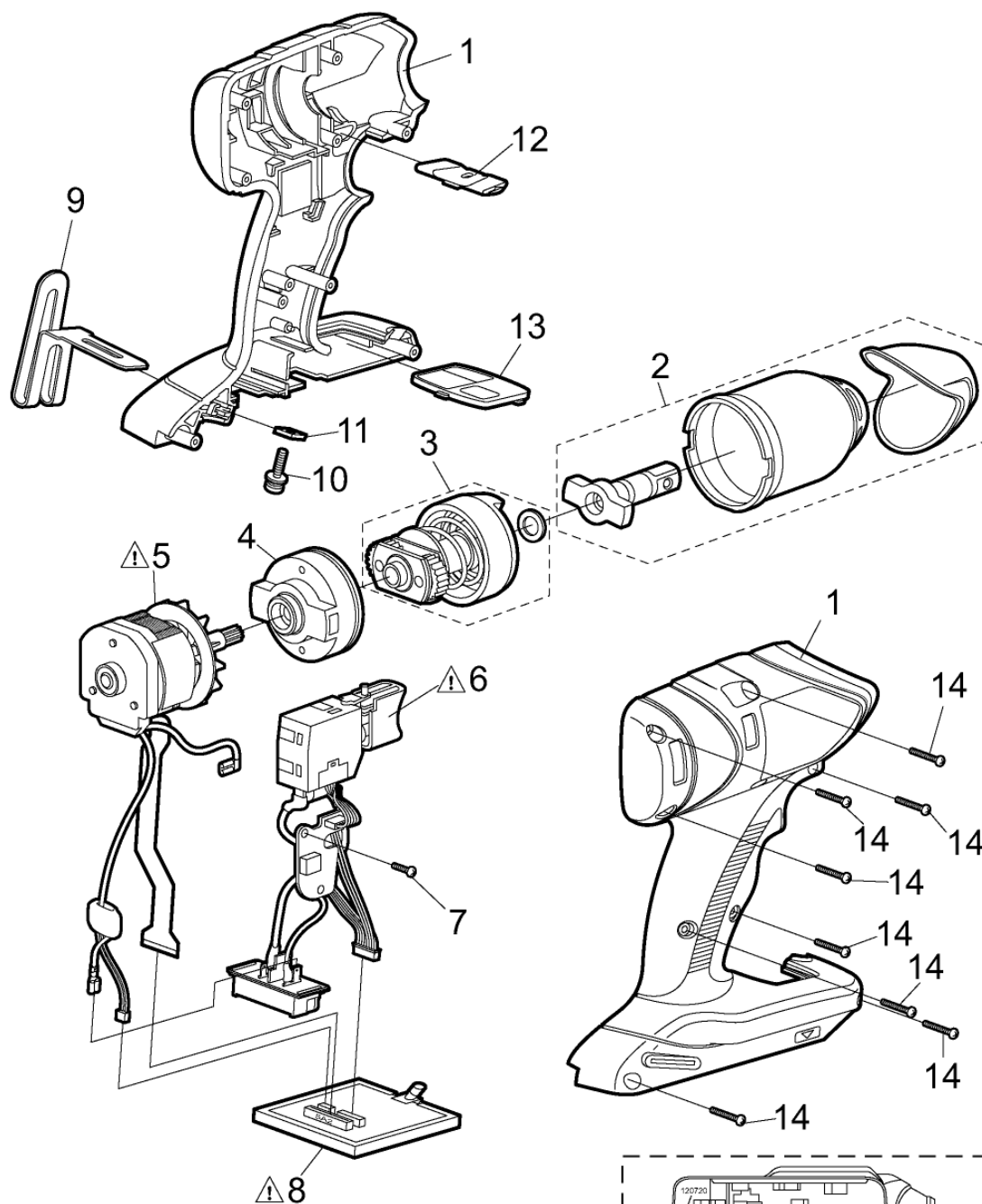


## 6 Schematic Diagram

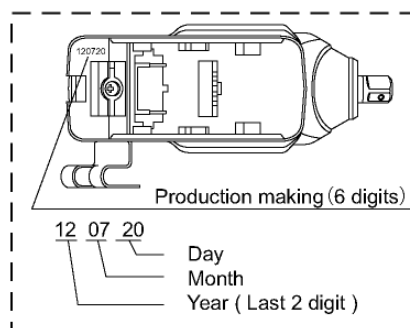


# 7 Exploded View and Replacement Parts List

Model No. : EY75A2 Exploded View



- \* 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. : EY75A2 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	1	WEY75A2H3079	HOUSING AB SET	1	(for EUROPE)
	1	WEY75A2H3070	HOUSING AB SET	1	(for OCEANIA)
	2	WEY75A2K4058	FIXATION COVER ASSEMBLY	1	
	3	WEY75A2L1067	DRIVING SHAFT ASSEMBLY	1	
	4	WEY7546L0027	MOTOR MOUNTING PLATE ASSEMBLY	1	
	5	WEY75A1L1108	MOTOR ASSEMBLY	1	
	6	WEY75A1K2007	SWITCH ASSEMBLY	1	
	7	WEY0L81L9048	TAPPING SCREW	1	(K3*8)
	8	WEY75A2L2128	MODULE ASSEMBLY	1	
	9	WEY7543K3187	PLATE HOOK	1	
	10	WEY7441K6217	SEMS SCREW	1	(M4*14)
	11	WEY7441L6487	NUT	1	(M4)
	12	WEY7547H3247	F/R SELECTOR HANDLE	1	
	13	WEY7546K3338	OPERATION PLATE	1	
	14	WEY7441K9038	TORX TAPPING SCREW	9	(K3*20)
	-	WEY9L40R2788	BATTERY PACK COVER	1	
	-	WEY9644K7019	TOOL CASE	1	
	-	WEY75A1K8109	OPERATING INSTRUCTIONS	1	
	-	WEY003W8957	GREASE (PERMALUB)	1	
	-	WEY004X8967	GREASE (CALFOREX)	1	
	-	WEY002X8977	GREASE (DOUBREX)	1	