ORDER NO. PTD1909E04CE

Service Manual

Cordless Impact Driver

Model No. EY76A1

Europe

⚠ 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

1 Warning

Caution:

- Pb free solder has a higher melting point that 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

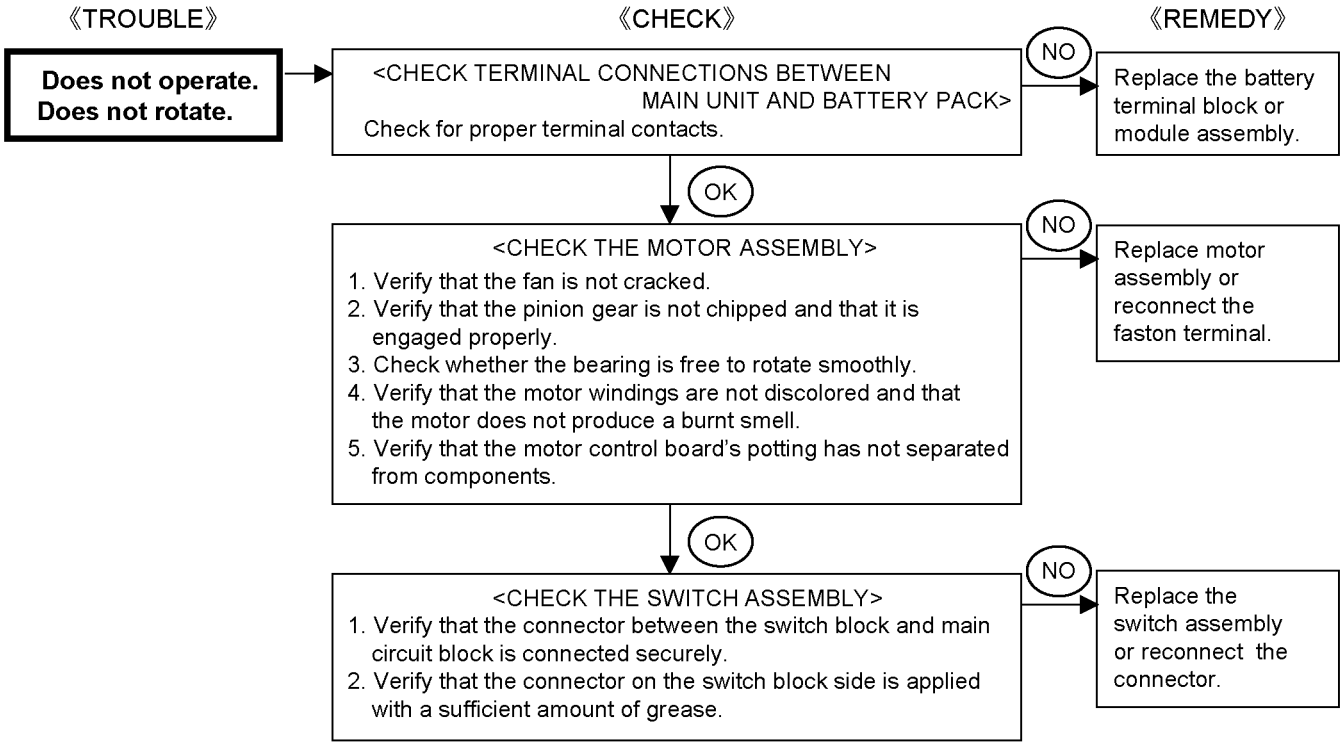
Model No.		EY76A1	
Motor voltage		14.4 V DC	18 V DC
No load speed [min^{-1} (rpm)]	Soft mode	0 – 950	
	Medium mode	0 – 1450	
	Hard mode	0 – 2800	
	Self-drilling screw mode	0 – 2800	
	Dash mode	2800	
Maximum torque		160 N•m	170 N•m
Impact per minute [min^{-1} (i.p.m.)]	Soft mode	0 – 1800	
	Medium mode	0 – 2500	
	Hard mode	0 – 3100	
	Self-drilling screw mode	0 – 1800	
	Dash mode	3100	
Overall length		127 mm	
Weight With battery pack:	EY9L45	1.55 kg	—
	EY9L47	1.35 kg	—
	EY9L50	—	1.65 kg
	EY9L51	—	1.70 kg
	EY9L52	—	1.45 kg
	EY9L53	—	1.45 kg
	EY9L54	—	1.70 kg

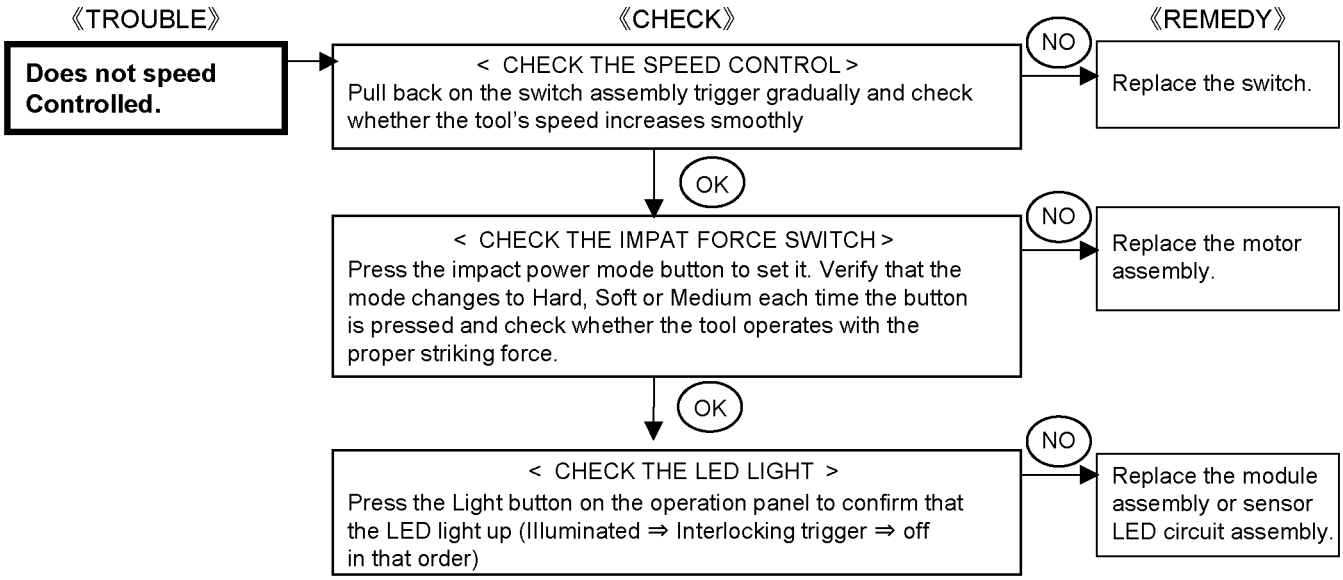
MAXIMUM RECOMMENDED CAPACITIES

Model No.		EY76A1
Screw driving	Wood screw	Φ 3.5 mm – Φ 9.5 mm
	Self-drilling screw	Φ 3.5 mm – Φ 6 mm
Bolt fasten-ing	Standard bolt	M6 – M16
	High tensile bolt	M6 – M12

3 Troubleshooting Guide

3.1. Troubleshooting Guide





《TROUBLE》 《CHECK》 《REMEDY》

The tool is not producing adequate impact force.

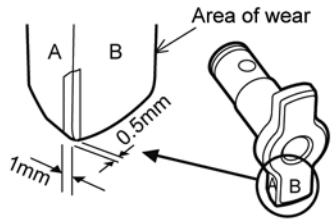
*Before inspecting the anvil, inspect the battery pack and check the tool speed. Using a constant-voltage source, energize the tool with 18V/14.4V DC and pull back on the trigger with the F/R selector handle normal rotation mode. Check whether the tool speed is between 0 and 2,500 rpm

< CHECK THE ANVIL>

Check the amount of wear on the anvil. Wear is within acceptable bounds if wear in the area of contact with the output shaft and hammer is limited to an area 1mm or less from the corner on surface A and an area 0.5mm or less from the corner on surface B. (See figure 1.)

NO → Replace the anvil.

Fig.1

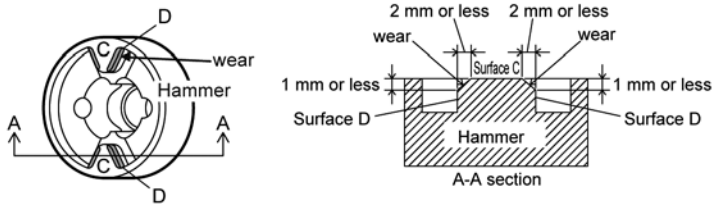


< CHECK THE DRIVING SHAFT ASSEMBLY>

- Check the amount of wear on the main hammer. Wear is within acceptable bounds if wear in the area of contact with the output shaft and hammer is limited to an area 2mm or less from the corner on surface C and an area 1mm or less from the corner on surface D. (See figure 2.)

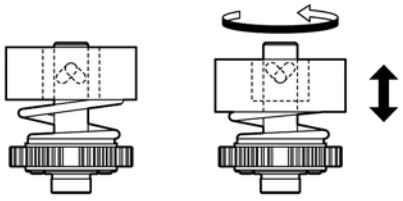
NO → Replace the driving shaft assembly.

Fig.2



- Check whether the hammer twists and rotates smoothly, as shown in the following figure. (See fig. 3)

Fig.3



* The hammer should move up and down when twisted in the direction of the arrow.

Driving shaft assembly

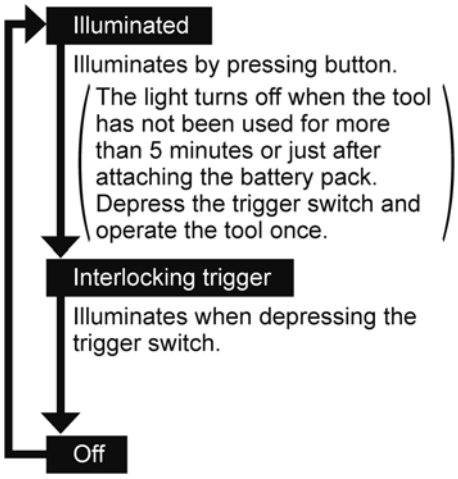
3.2. Trial Operation (after checking Troubleshooting Guide).

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 all screws are tightened firmly.
- Confirm if there is no dirt when repairing.

3.2.2. Operation

- Check whether the tool operates properly in both the forward and reveres directions.
- Check whether the LED lights ON.



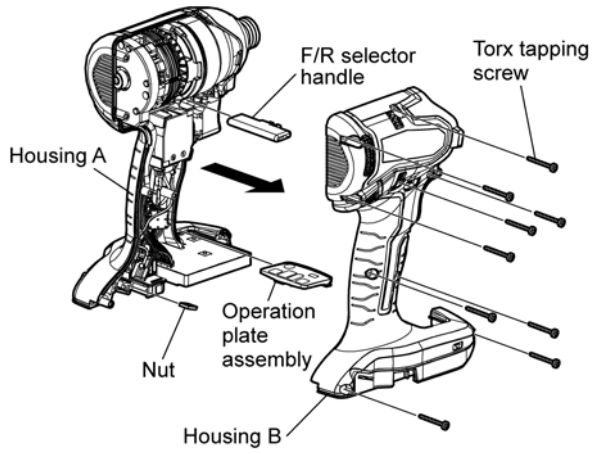
- Check whether the tool speed increases continuously as the trigger is gradually engaged.
- Check whether the tool speed is normal after repair and reassembly.
  Hard mode: 0 to 2800 rpm at 14.4V/18V.
  Medium mode: 0 to 1450 rpm at 14.4V/18V.
  Soft mode: 0 to 950 rpm at 14.4V/18V.
- Check whether the remaining battery power indicator lamp lights up or flashes when the Battery level button is pressed.

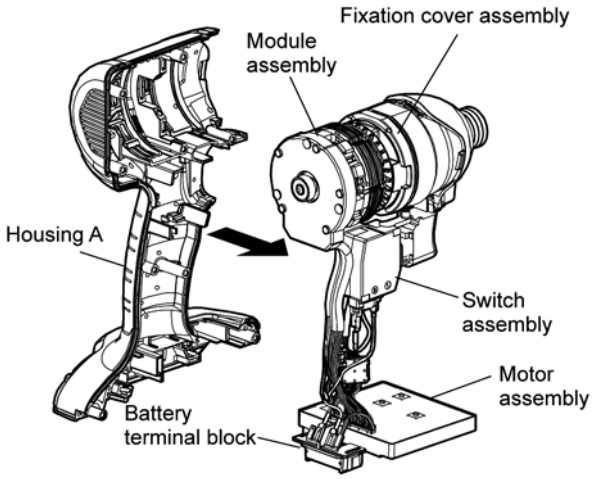
4 Disassembly and Assembly Instructions

*** To reduce the risk of injury, always remove battery pack before removing/installing the tool.**
*** To assemble the tool, start with 4-4 and proceed to 4-1**

4.1. How to remove the Housing.

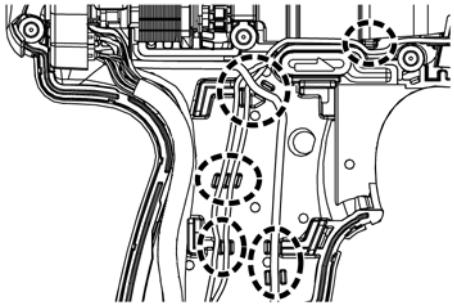
1. After removing the plate hook, remove 9 housing screws.
2. Then open the housing B.
3. Remove the interior parts.





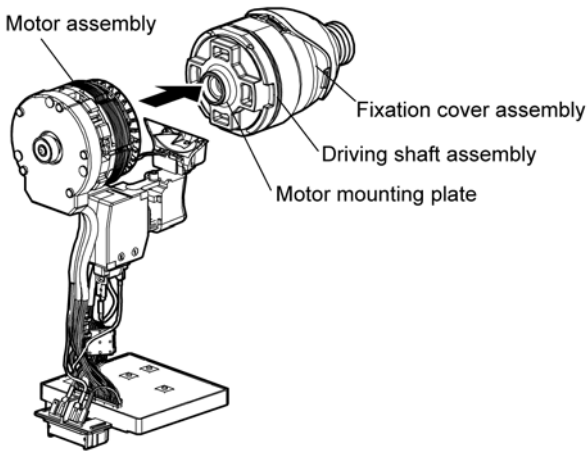
4. Remove the interior components from the housing A.

Note: (when assembling)
Route LED lead wires and motor lead wire between the ribs on housing A like the figure.

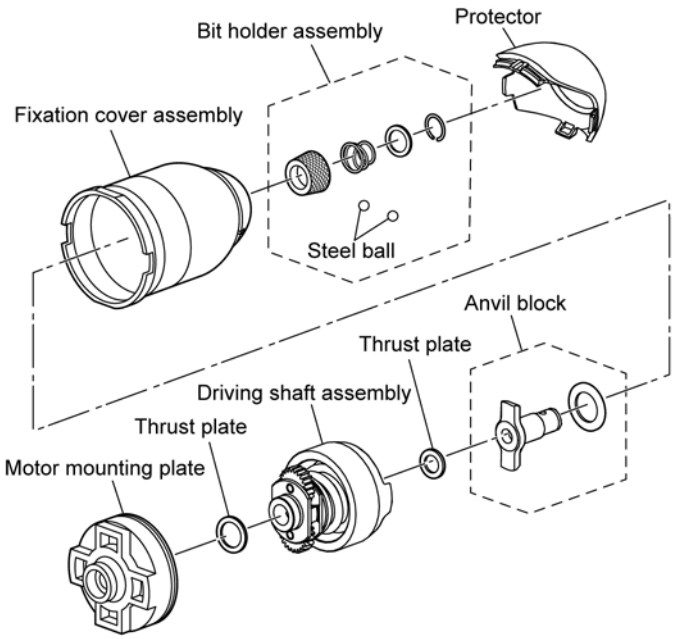


4.2. How to remove the Driving assembly.

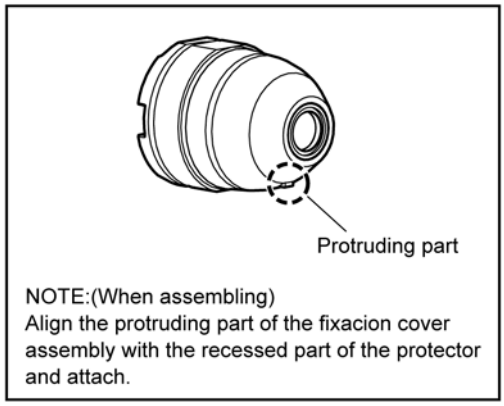
Hold the motor assembly, remove the fixation cover assembly and associated parts together from the motor assembly.



4.3. How to remove the Fixation cover assembly and Driving shaft assembly.

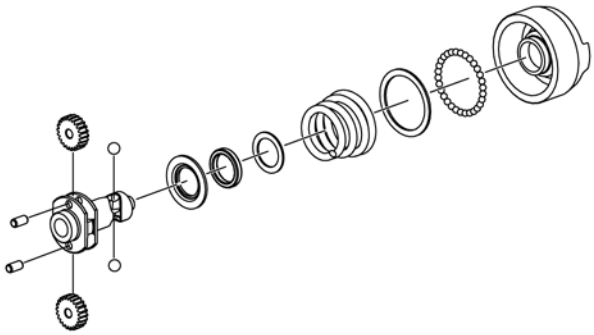


1. Remove the protector.
2. Remove the interior components from the fixation cover assembly.

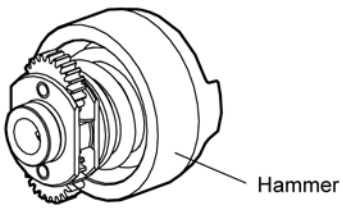


Note: (when assembling)

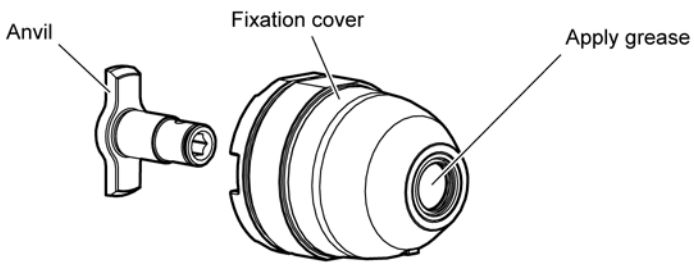
Apply grease (DOUBREX) inside of driving shaft assembly and to the sliding part of steel balls.



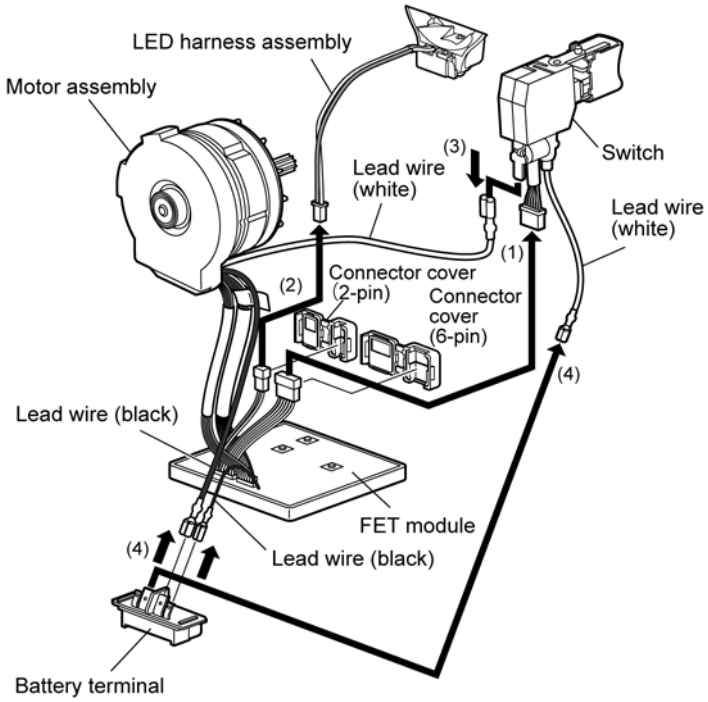
Apply grease (SUMITEC) to the hammer.



Apply grease (CALFOREX) to the contact between the anvil and the fixation cover.

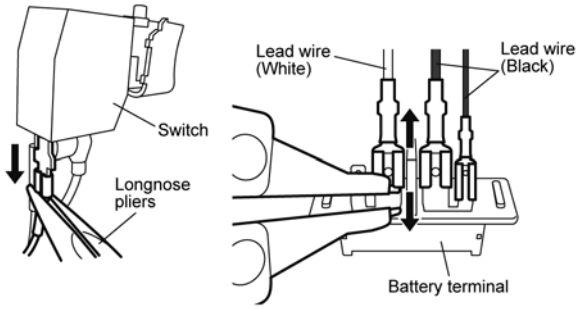


4.4. How to remove the Switch assembly, LED harness assembly and Battery terminal.



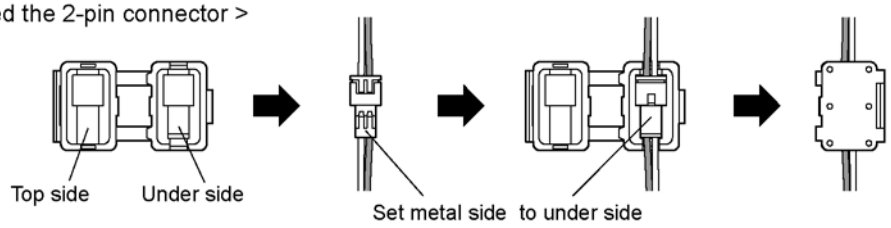
1. Remove the connector(6-pin/2-pin) covers.
2. Disconnect the connecters or lead wires in order to (1) to (4).

Note:
Exercise care not to bend the terminal fitting.

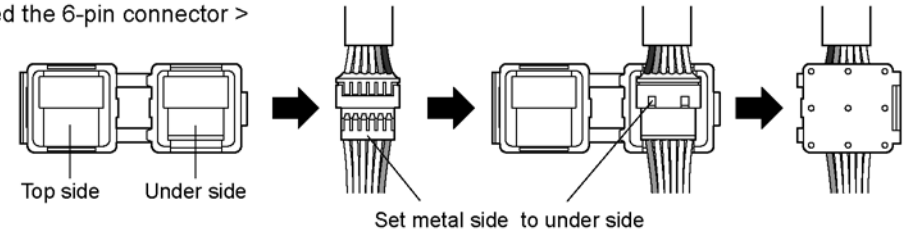


Note: (when assembling)
The connect cover cannot be reused after being repaired.

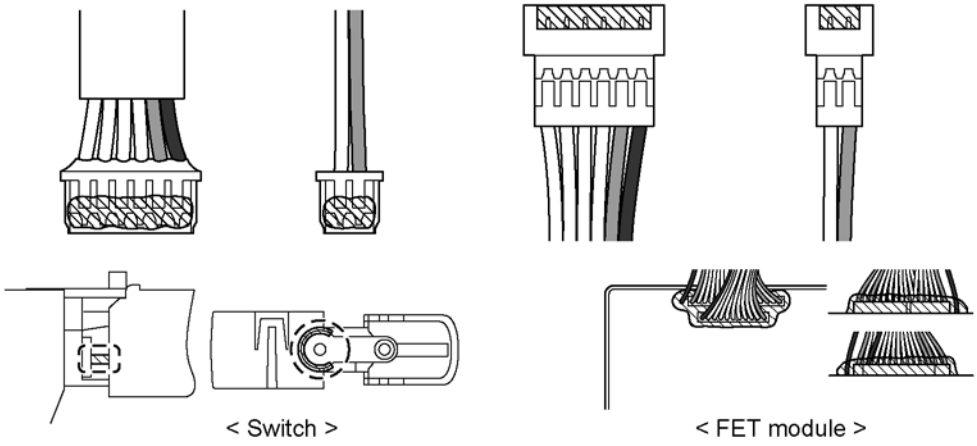
< How to attached the 2-pin connector >



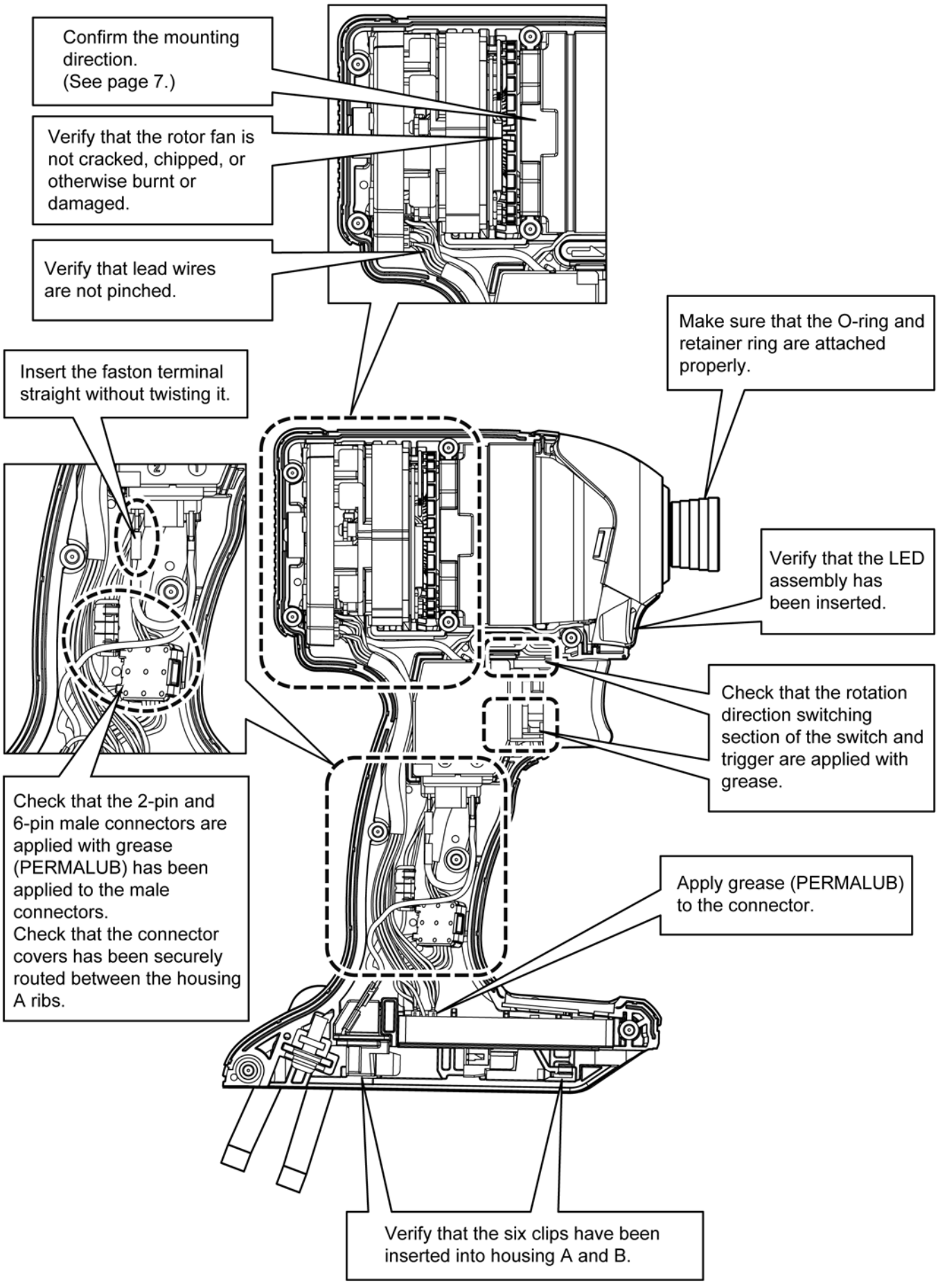
< How to attached the 6-pin connector >



NOTE:(When attaching the connectors/switch).
Apply grease (Permalub) to the indicated by the shaded area.

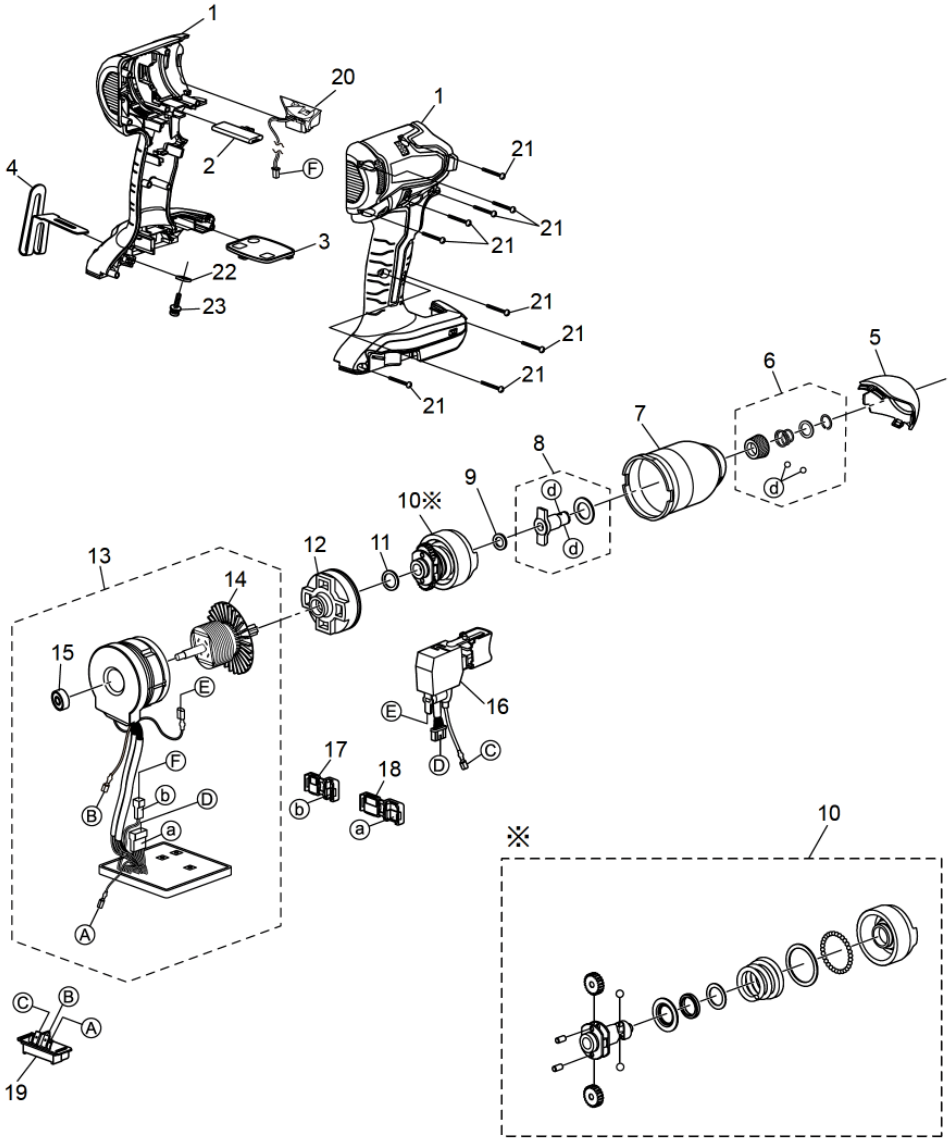


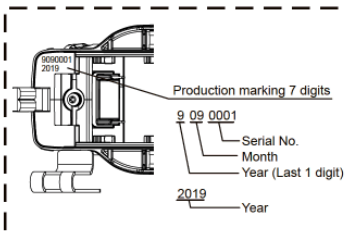
4.5. Wiring and Assembly Points.



5 Exploded View and Replacement Parts List

Model No. : EY76A1　Exploded View





Model No. : EY76A1 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		1	WEY76A1K3102	HOUSING AB SET	1	
		2	WEY75A7H3247	F/R SELECTOR HANDLE	1	
		3	WEY76A1L3202	OPERATION PLATE	1	
		4	WEY7543K3187	PLATE HOOK	1	
		5	WEY76A1L1111	PROTECTOR	1	
		6	WEY76A1L1201	BIT HOLDER ASSEMBLY	1	
		7	WEY76A1L1101	FIXATION COVER ASSEMBLY	1	
		8	WEY76A1L1302	ANVIL BLOCK	1	
		9	WEY75A7K0847	THRUST PLATE	1	
		10	WEY75A7S1157	DRIVING SHAFT ASSEMBLY	1	
		11	WEY75A7K0857	THRUST PLATE	1	
		12	WEY75A7L0027	MOTOR MOUNTING PLATE ASSEMBLY	1	
		13	WEY76A1L2102	MOTOR ASSEMBLY	1	
		14	WEY76A1L2112	ROTOR ASSEMBLY	1	
		15	WEY76A1L2121	BEARING	1	
		16	WEY75A8L2007	SWITCH ASSEMBLY	1	
		17	WEY75A8W3117	CONNECTOR COVER 2P	1	
		18	WEY75A8W3127	CONNECTOR COVER 6P	1	
		19	WEY75A7K2157	BATTERY TERMINAL ASSEMBLY	1	
		20	WEY76A1L2201	LED ASSEMBLY	1	
		21	WEY6230K9216	TORX TAPPING SCREW	9	(K3-20)
		22	WEY7441L6487	NUT	1	(M4)
		23	WEY7441K6217	SCREW	1	(4-14)
		-	WEY76A1K8108	OPERATING INSTRUCTIONS	1	
		-	WEY002X8977	GREASE (DOUBREX)	1	
		-	WEY004X8967	GREASE (CALFOREX)	1	
		-	WEY7543X5517	GREASE (SUMITEC)	1	
		-	WEY7880L7877	CEMEDINE	1	