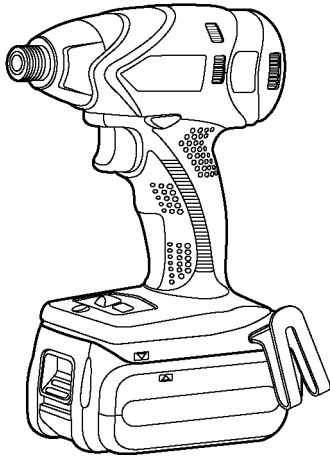


Service Manual

Cordless Impact Driver / Cordless Impact Wrench



Model No. **EY7546**

EY7550

(Cordless Impact
Driver)

Model No. **EY7547**

EY7551

(Cordless Impact
Wrench)

Europe and 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

2.1. MAIN UNIT

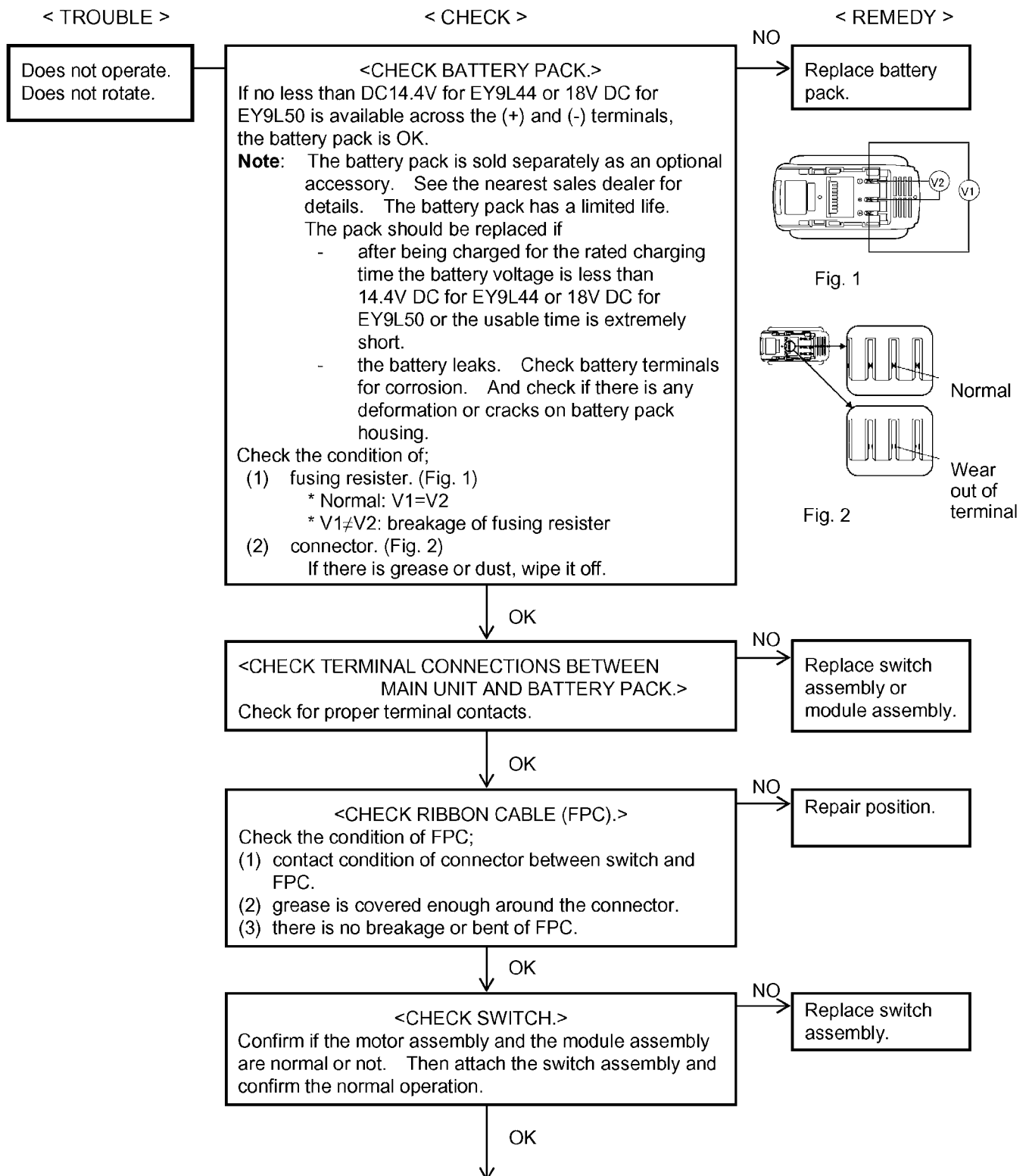
Model		EY7546	EY7547	EY7550	EY7551
Motor		14.4V DC		18V DC	
No load speed	Soft mode	0 ~ 1000 min ⁻¹ (rpm)			
	Medium mode	0 ~ 1400 min ⁻¹ (rpm)			
	Hard mode	0 ~ 2500 min ⁻¹ (rpm)	0 ~ 2300 min ⁻¹ (rpm)	0 ~ 2500 min ⁻¹ (rpm)	0 ~ 2300 min ⁻¹ (rpm)
Maximum torque		150N·m (1330 in.lbs)	200N·m (1770 in.lbs)	155N·m (1370 in.lbs)	205N·m (1815 in.lbs)
Impact per minute	Soft mode	0 ~ 2000 min ⁻¹ (rpm)			
	Medium mode	0 ~ 2800 min ⁻¹ (rpm)			
	Hard mode	0 ~ 3000 min ⁻¹ (rpm)	0 ~ 3500 min ⁻¹ (rpm)	0 ~ 3300 min ⁻¹ (rpm)	0 ~ 3500 min ⁻¹ (rpm)
Overall length		143mm (5-5/8")	155mm (6-1/8")	143mm (5-5/8")	155mm (6-1/8")
Weight (with battery pack EY9L44)		1.5kg (3.3lbs)	1.55kg (3.4lbs)		
Weight (with battery pack EY9L50)				1.6 kg (3.5lbs)	1.65kg (3.6lbs)

2.2. MAXIMUM RECOMMENDED CAPACITIES

Screw driving	Wood screw	Ø 3.5 mm - Ø 9.5 mm
	Self-drilling screw	Ø 3.5 mm - Ø 6.0 mm
Bolt fastening	Standard bolt	M6 – M16
	High tensile bolt	M6 – M12

3 Troubleshooting Guide

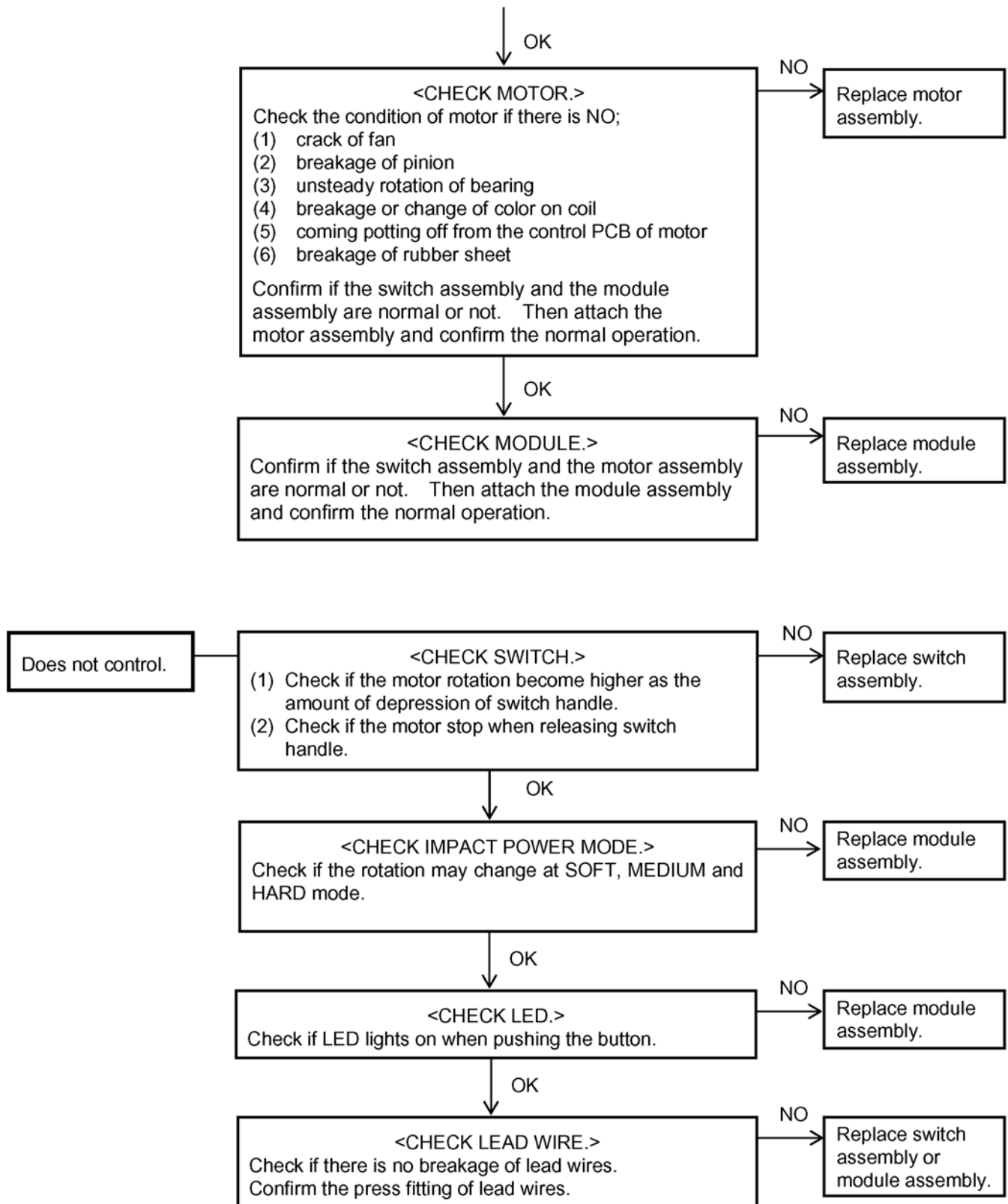
3.1. Troubleshooting Guide(Refer to Wiring Connection Diagram)

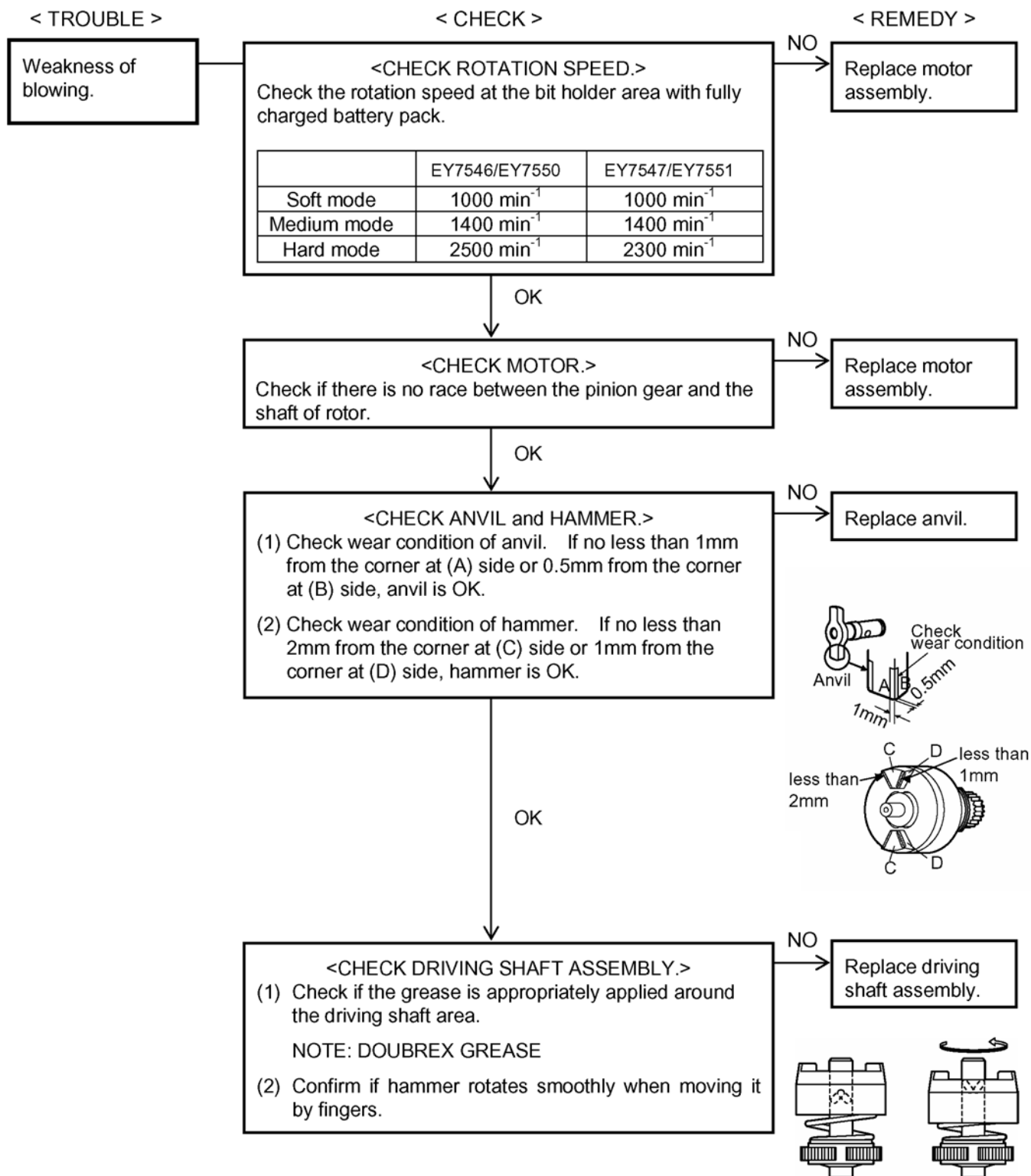


< TROUBLE >

< CHECK >

< REMEDY >





3.2. Trial Operation (after checking Troubleshooting Guide.)

3.2.1. ASSEMBLY

1. Confirm if there is NO gap between Housing A and B by pinching the lead wires.
2. Confirm all screws are tightened firmly.
3. There should be no metallic sound and abnormal sound.
4. There is no dust or deformation on battery terminals.
5. Confirm if there is no dirt when repairing.

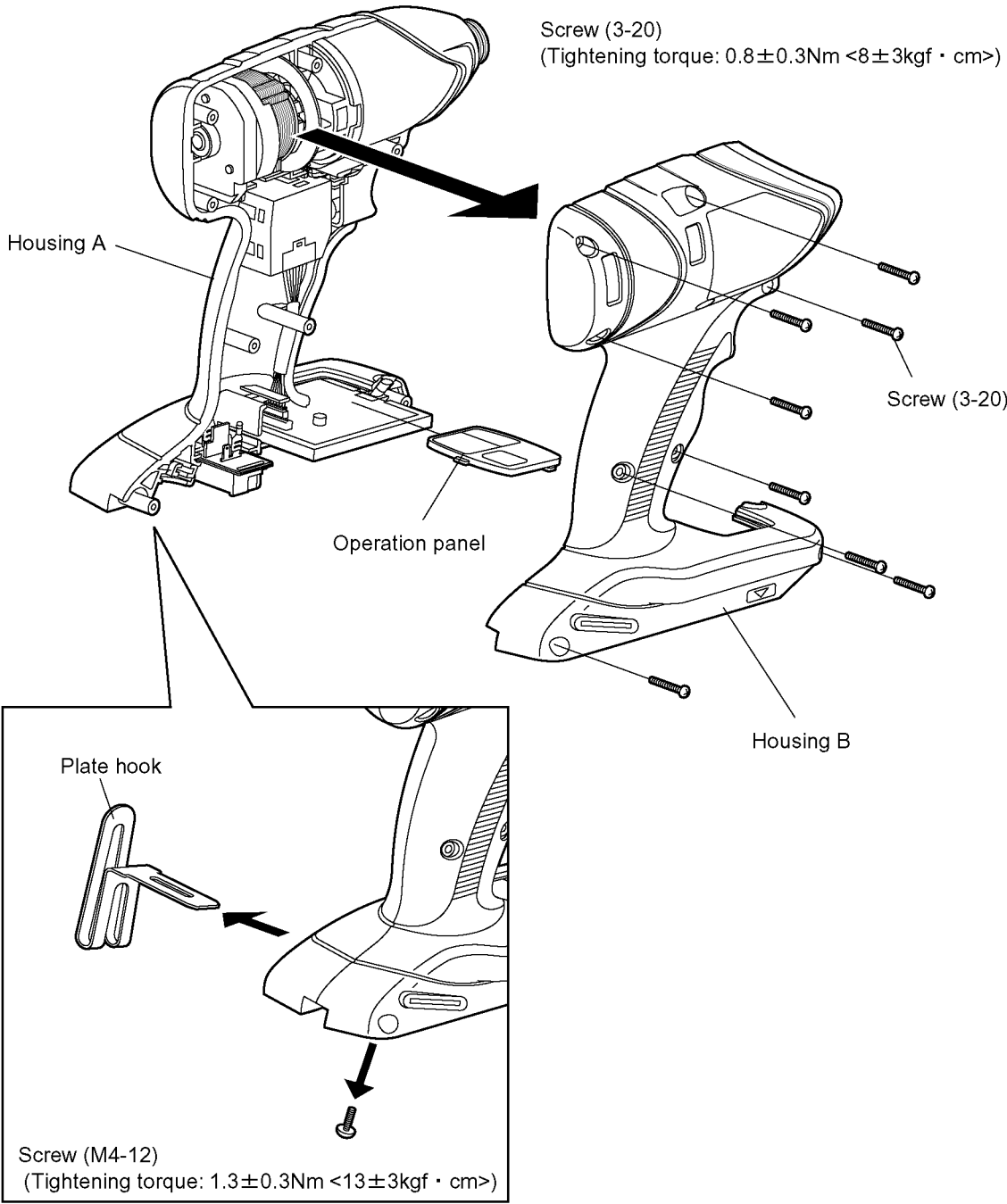
3.2.2. OPERATION

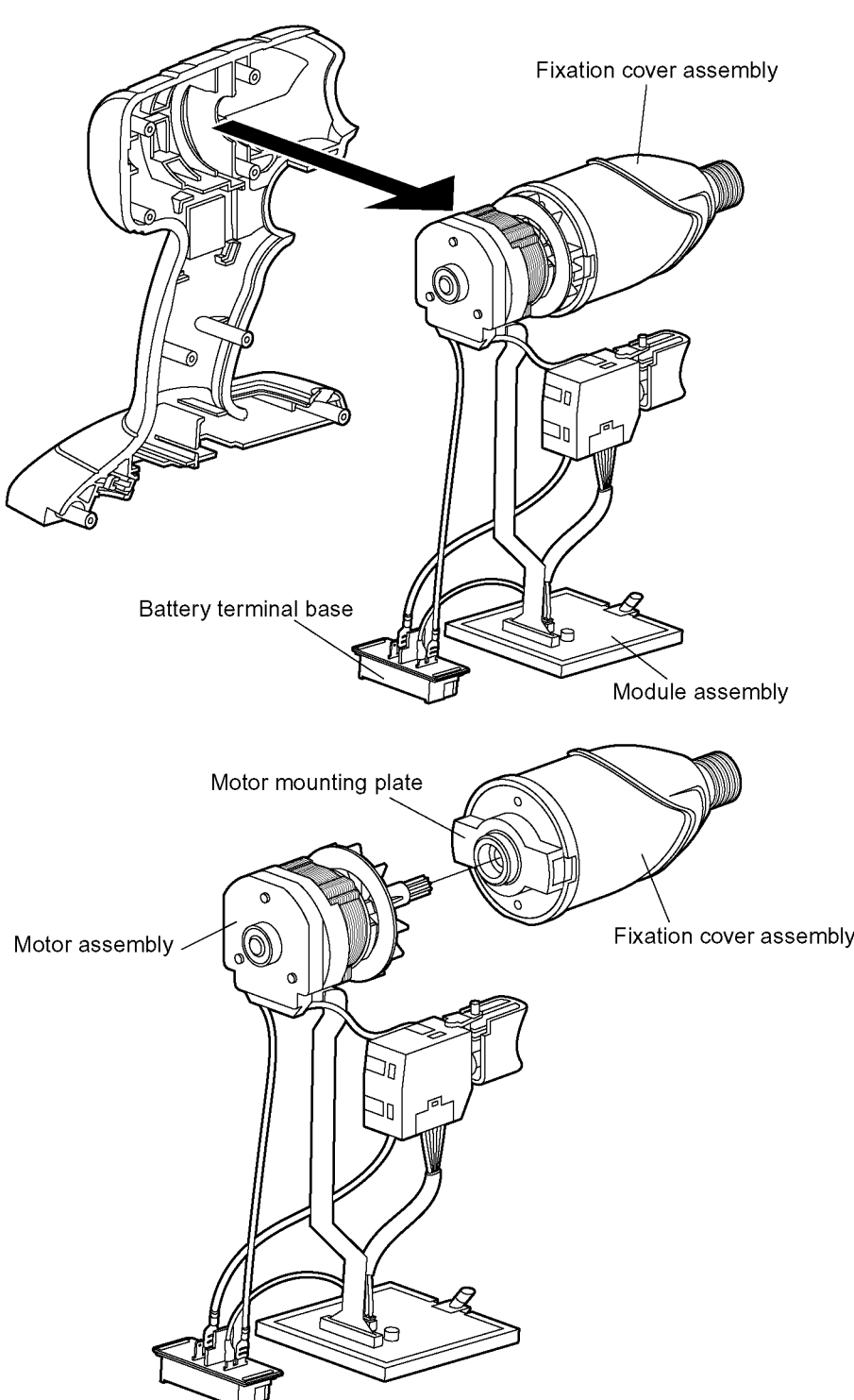
1. Confirm the forward and reverse side of rotation.
2. Confirm if LED lights ON. Once battery pack is removed and attached, press the switch handle, otherwise LED does not light ON.
3. Confirm the rotation of speed if it changes in proportion to the amount of pushing level on switch handle.

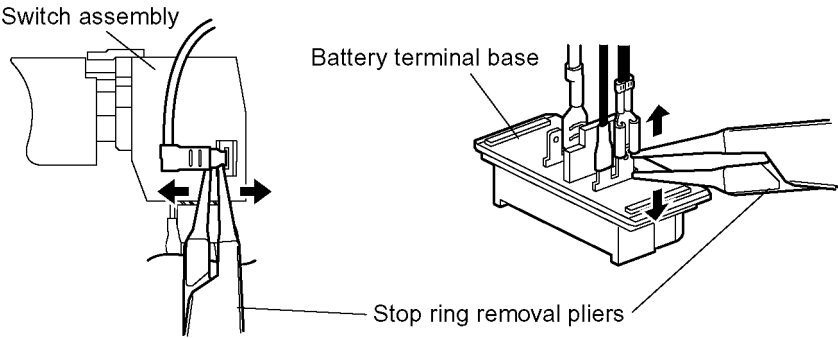
	EY7546/EY7550	EY7547/EY7551
Soft mode	0 ~ 1000 min ⁻¹ (rpm)	0 ~ 1000 min ⁻¹ (rpm)
Medium mode	0 ~ 1400 min ⁻¹ (rpm)	0 ~ 1400 min ⁻¹ (rpm)
Hard mode	0 ~ 2500 min ⁻¹ (rpm)	0 ~ 2300 min ⁻¹ (rpm)

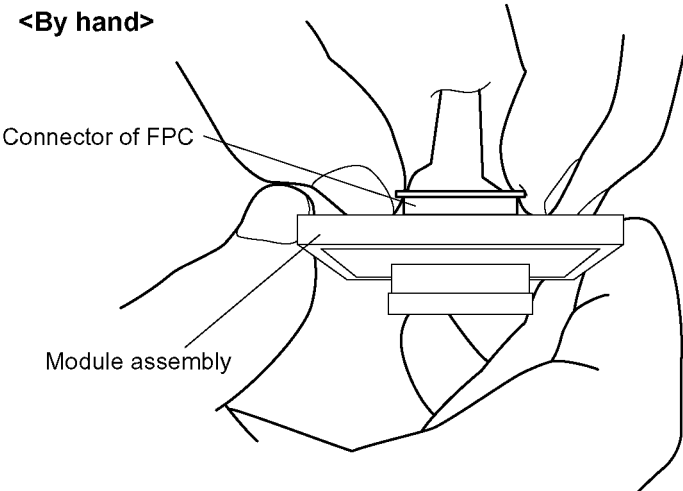
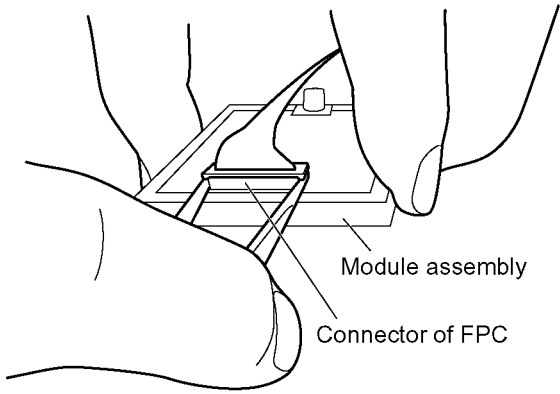
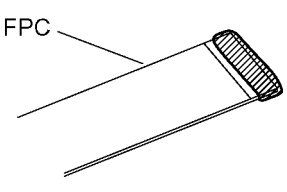
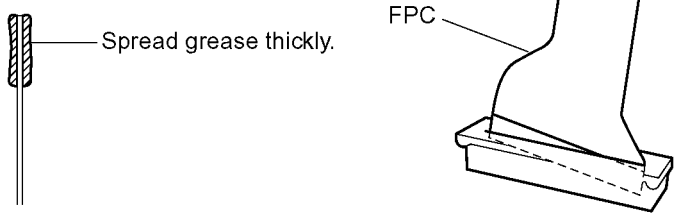
4. Confirm if the rotation stops when releasing the switch handle.
5. Confirm the smooth movement of the bit holder.
6. Confirm the impact operation.

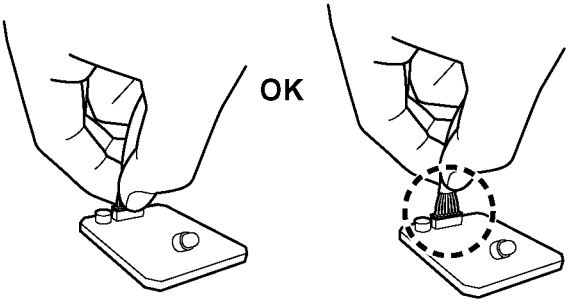
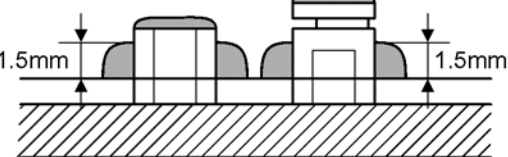
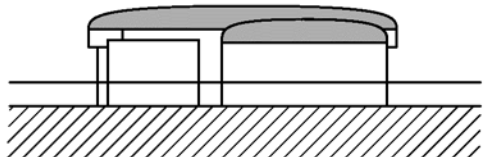
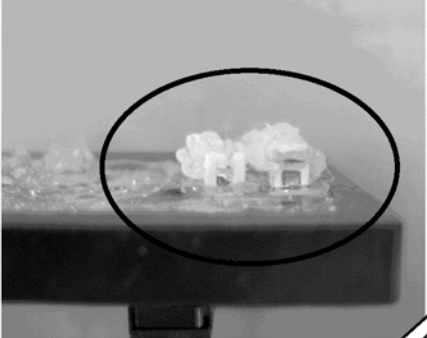
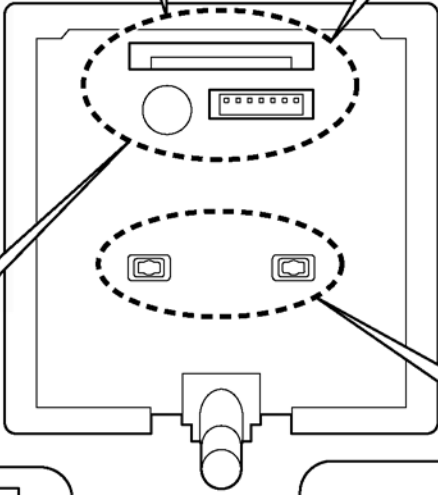
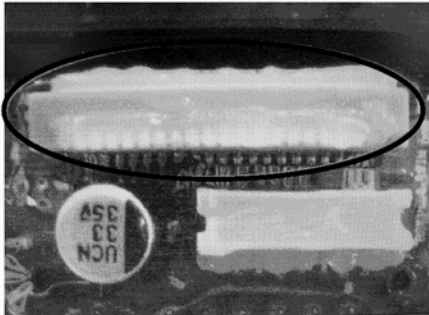
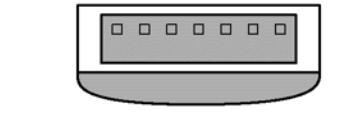
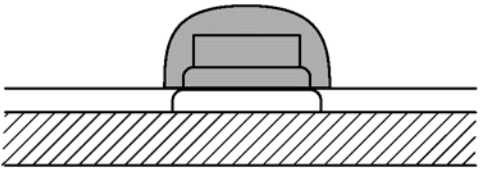
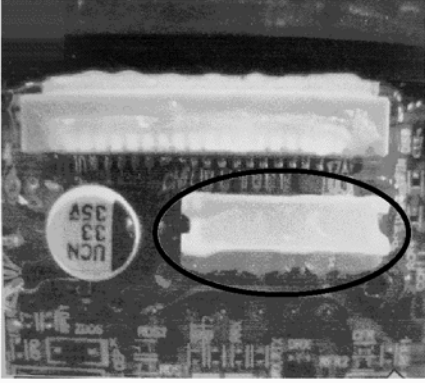
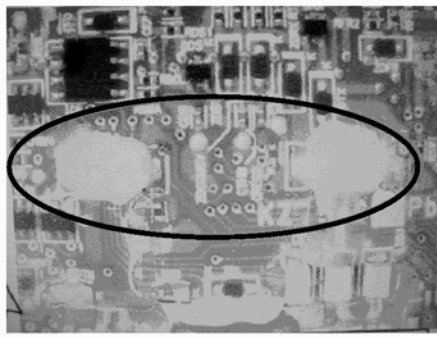
4 Disassembly and Assembly Instructions

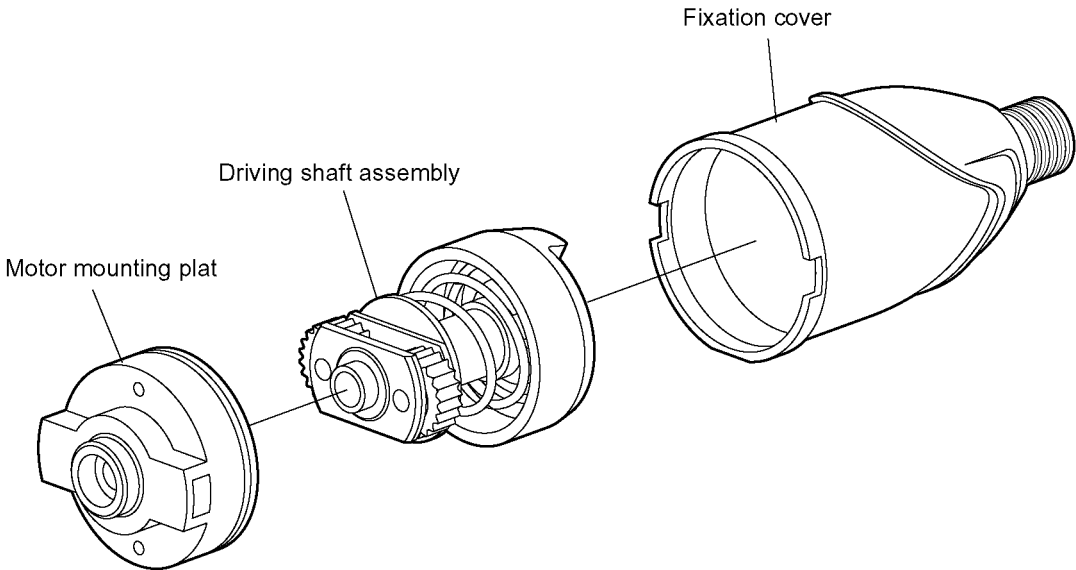
Ref. No. 1A	Procedure 1A	Removal of Housing.
	 Housing A Operation panel Plate hook Housing B Screw (3-20) (Tightening torque: $0.8 \pm 0.3 \text{ Nm}$ <$8 \pm 3 \text{ kgf} \cdot \text{cm}$>) Screw (M4-12) (Tightening torque: $1.3 \pm 0.3 \text{ Nm}$ <$13 \pm 3 \text{ kgf} \cdot \text{cm}$>)	Removal of Housing. 1. Loosen a screw. 2. Take out the plate hook. 3. Remove nine housing screws.

Ref. No. 1B	Procedure 1A → 1B	Removal of Motor assembly and Driving shaft assembly..
		1. Take out the motor assembly with the driving shaft assembly from the housing. 2. Separate the motor assembly from the driving shaft assembly with holding the motor mounting plate. 3. Pull off the fixation cover assembly.  The diagram consists of two parts. The top part shows a perspective view of the motor assembly being removed from the housing. A large black arrow points from the housing to the motor assembly. Labels include 'Fixation cover assembly' pointing to the top of the motor, 'Battery terminal base' pointing to the base of the module, and 'Module assembly' pointing to the main body. The bottom part shows a perspective view of the motor assembly being separated from the driving shaft assembly. Labels include 'Motor mounting plate' pointing to the plate between the motor and the shaft, 'Motor assembly' pointing to the motor itself, and 'Fixation cover assembly' pointing to the top of the motor.

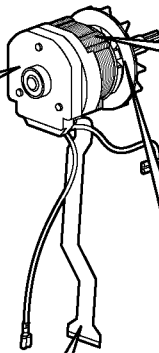
Ref. No. 1C	Procedure 1A → 1B → 1C	Removal of Battery terminal base assembly.
		1. Hold the switch and the battery terminal base assembly. 2. Pull out the quick-connect terminal by something like the stop ring removal pliers. NOTE: Make sure to pull out straight away.
		

Ref. No. 1D	Procedure 1A → 1B → 1C → 1D	Removal or attachment of FPC.
		(Removal) 1. Slightly pull up the connector. NOTE: Connector is not able to remove from the control PCB. 2. Pull out FPC. NOTE: Make sure to handle FPC gently in order to avoid the breakage. (Attachment) 1. Apply the grease on the places where insert into the connectors.
<By hand> 		<By tweezers> 
NOTE: Do not pull up the connector forcefully.		
		
		NOTE: Make sure that FPC is inserted straight.

Ref. No. 1E	Procedure 1A → 1B → 1C → 1D → 1E	Removal or assembly of module assembly.
		(Removal) 1. Pull out the connector from the module assembly. NOTE: Make sure hold the connector at the bottom area. (Attachment) 1. Apply the permalub grease around the tact switch and connectors. NOTE: Make sure to apply the grease to keep IP56. 2. Insert the connector firmly.
		 1.5mm 1.5mm Apply grease 1.5mm height on the girth of connectors.  Fully apply grease up to the top of FPC connector.     Fully apply grease up to the top of switch connector.  Apply grease to cover the tact switch.  

Ref. No. 1F	Procedure 1A → 1B → 1C → 1D → 1E → 1F	Removal of Fixation cover assembly.
		1. Take out the motor mounting plate assembly. 2. Pull out the driving shaft assembly from the fixation cover.  The diagram illustrates the removal of the fixation cover assembly. It shows three main components: the motor mounting plate on the left, the driving shaft assembly in the center, and the fixation cover on the right. The motor mounting plate is a circular component with a central flange. The driving shaft assembly consists of a central shaft with a gear and a housing. The fixation cover is a large, cylindrical component with a flange at the front and a threaded section at the back. Lines connect the labels to their respective parts in the exploded view.

Confirm the condition of potting on the control board if there is no breakage or coming off.

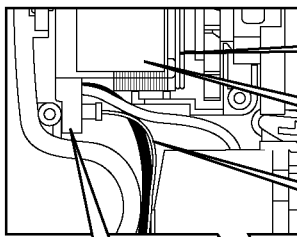


Confirm if there is no color of change or burning smell on the coil.
Confirm if there is no breakage of rubber sheet.

Confirm if there is no crack or chipped of fan. Confirm the smooth rotation of bearing.

Confirm if there is no breakage or bent of FPC.
NOTE: The connector of stator side is not able to pulled up.

1. Assemble the fixation cover and the driving shaft assembly.
2. Check the condition of motor assembly and attach the above #1.
3. Insert the above #2 into the housing.
4. Connect the lead wires in (1) - (5) order as shown the figure.
5. Place the lead wires properly.

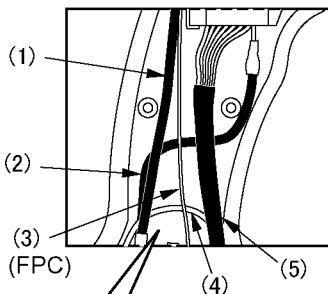


Confirm if there is no color of change or burning smell on the coil.
Confirm if there is no breakage of rubber sheet.

Confirm if there is no crack or chipped of fan.
Confirm the smooth rotation of bearing.

Confirm if there is no breakage or bent of FPC.
NOTE: The connector of stator side is not able to pulled up.

Confirm the condition of potting on the control board if there is no breakage or coming off.

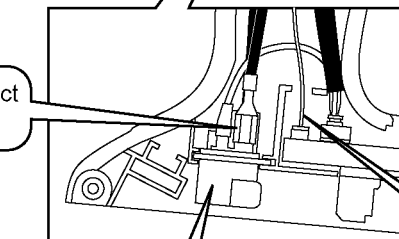


Place fit the lead wires in order.

Confirm if there is no breakage or out of place on tube.

Confirm the condition of LED if there is no crack or wobbly.

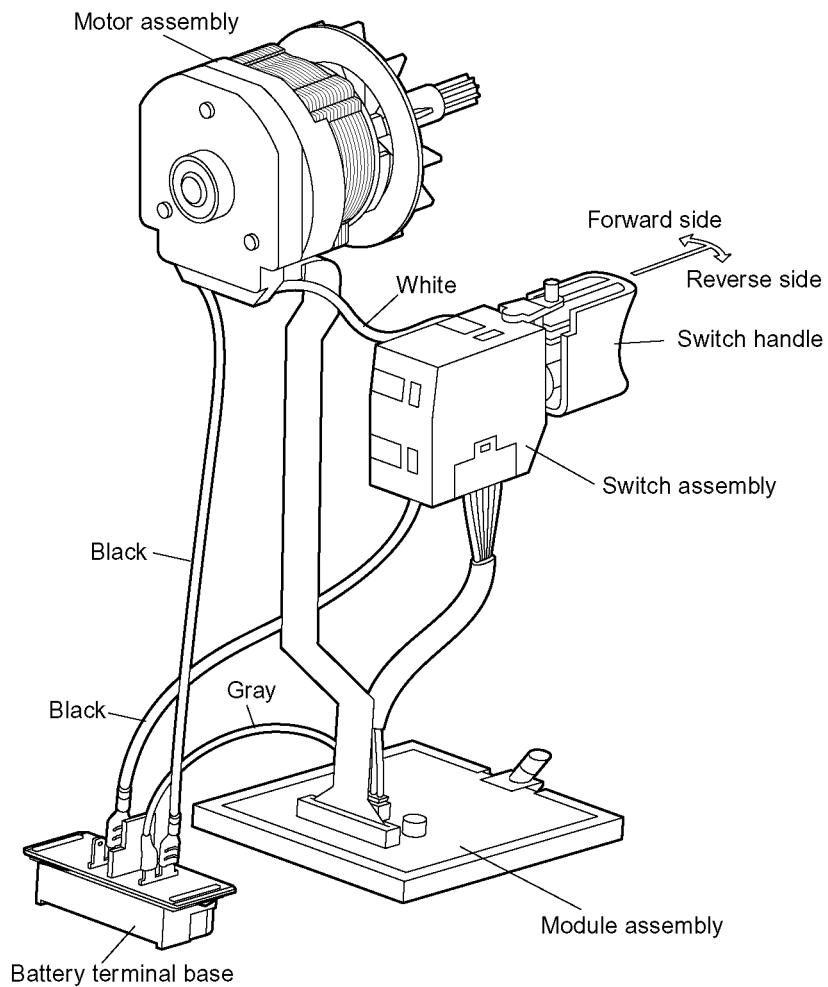
Insert the quick-connect terminal straight.



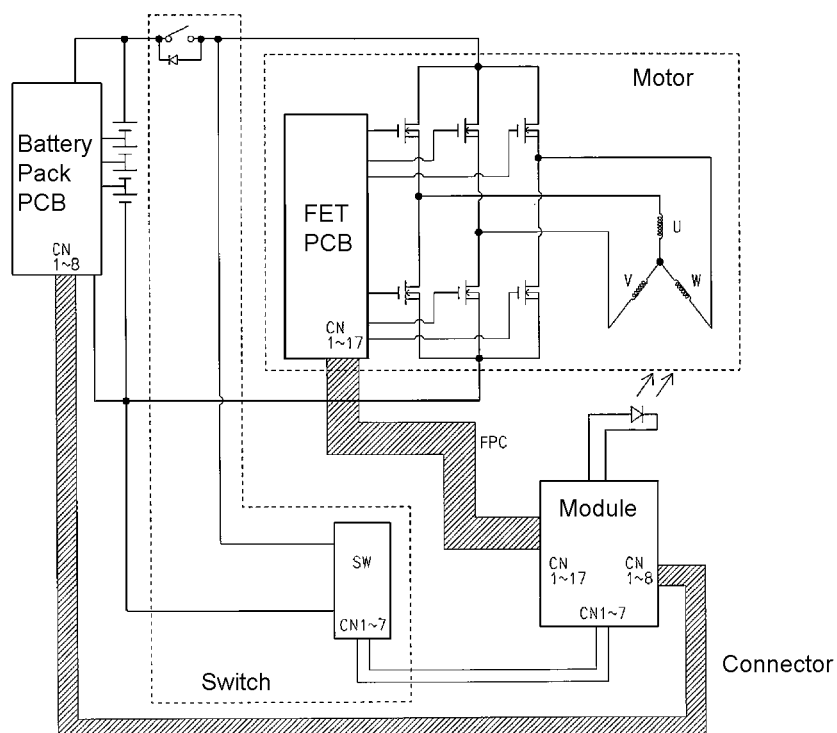
Place fit the battery terminal base into the groove of housing.

Insert FPC firmly.

5 Wiring Connection Diagram

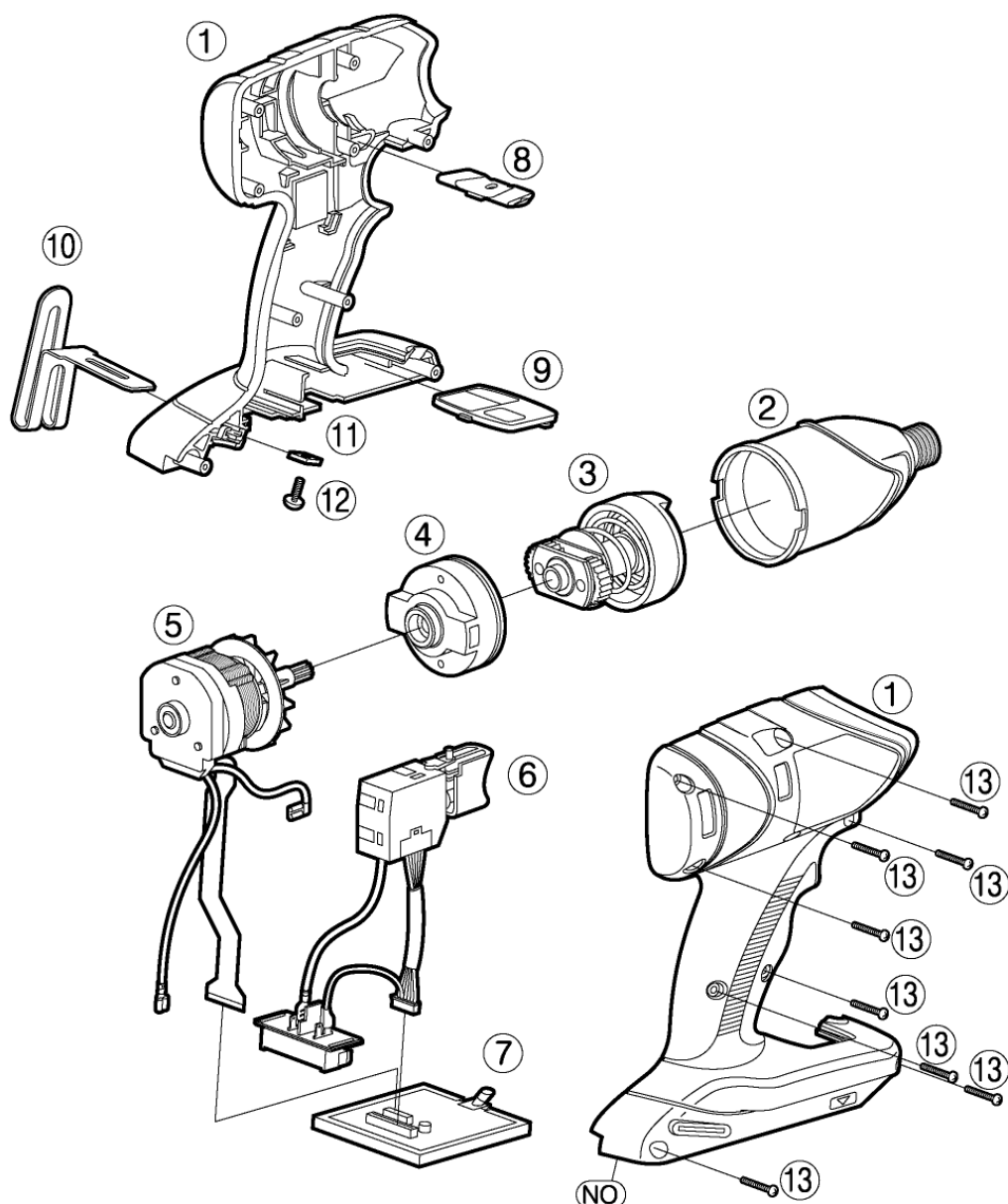


6 Schematic Diagram



7 Exploded View and Replacement Parts List

Model No. : EY7546 Exploded View for EY7546



** 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.

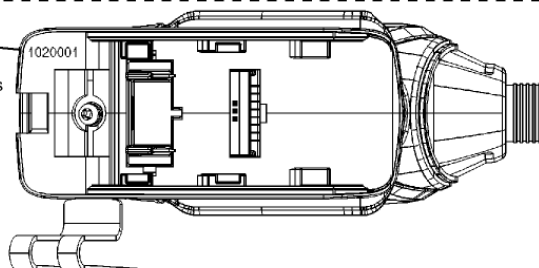
Production marking 7 digits

1 02 0001

Production marking 7 digits

Month

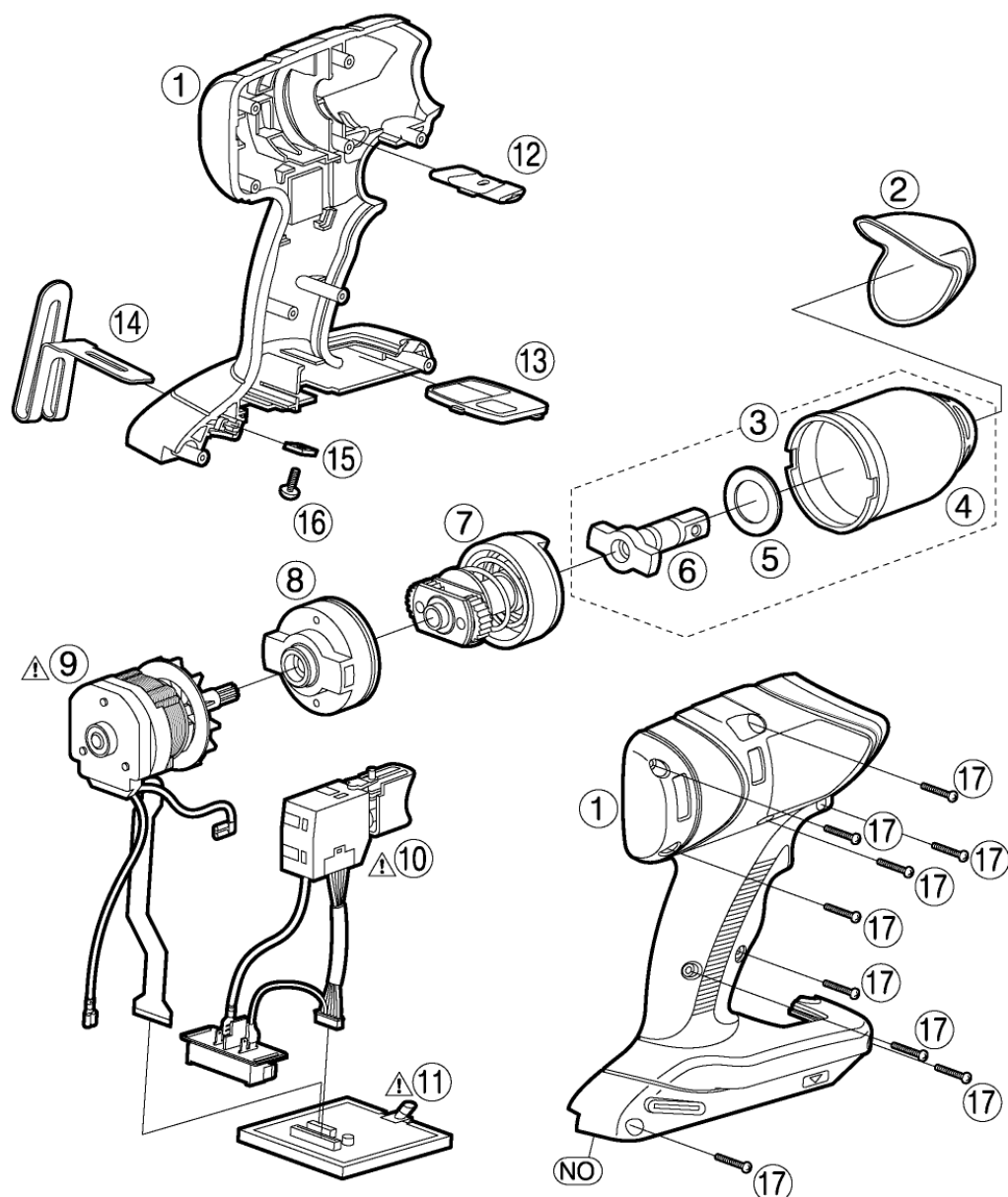
Last digit of year



Model No. : EY7546 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
EY7546					
	1	WEY7546K3079	HOUSING AB SET	1	(for EUROPE)
	1	WEY7546K3070	HOUSING AB SET	1	(for OCEANIA)
	2	WEY7546K4058	FIXATION COVER ASSEMBLY	1	
	3	WEY7546L1067	DRIVING SHAFT ASSEMBLY	1	
	4	WEY7546L0027	MOTOR MOUNTING PLATE ASSEMBLY	1	
	5	WEY7546L1108	MOTOR ASSEMBLY	1	
	6	WEY7546K2007	SWITCH ASSEMBLY	1	
	7	WEY7546L2127	MODULE ASSEMBLY	1	
	8	WEY7547H3247	F/R SELECTOR HANDLE	1	
	9	WEY7546K3338	OPERATION PANEL	1	
	10	WEY7543K3187	PLATE HOOK	1	
	11	WEY7441L6487	NUT	1	
	12	WEY7441K6217	SCREW	1	(4*14)
	13	WEY7441K9038	TORX TAPPING SCREW	9	(3*20)
	-	WEY9L40R2788	BATTERY PACK COVER	1	
	-	WEY9633K7010	TOOL CASE	1	
	-	WEY7550K8109	OPERATING INSTRUCTIONS	1	
	-	WEY002X8977	GREASE (DOUBREX)	1	
	-	WEY003W8957	GREASE (PERMALUB)	1	

Model No. : EY7547 Exploded View for EY7547



** Battery Pack is available as an optional accessory. See the nearest sales dealer for details.

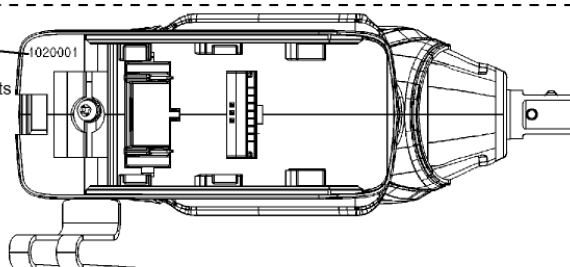
*** For replacement parts of charger, see the charger service manual.

Charger complete set is available as an optional accessory. See the nearest sales dealer for details.

Production marking 7 digits

1 02 0001

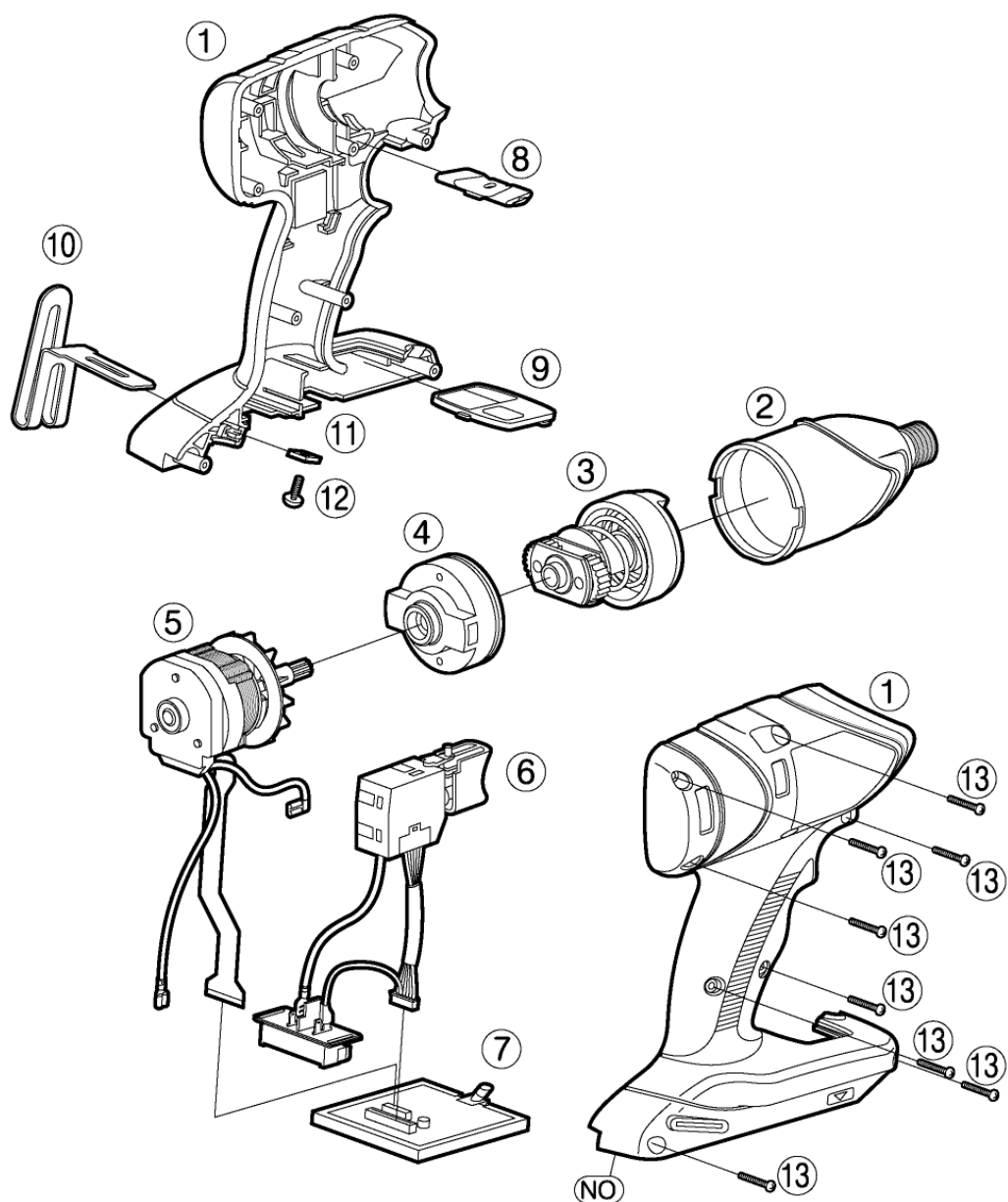
Production marking 7 digits
Month
Last digit of year



Model No. : EY7547 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
EY7547					
	1	WEY7547K3079	HOUSING AB SET	1	(for EUROPE)
	1	WEY7547K3070	HOUSING AB SET	1	(for OCEANIA)
	2	WEY7547K3107	NOSE PROTECTOR	1	
	3	WEY7547K4058	FIXATION COVER ASSEMBLY	1	
	4	WEY7547K3137	FIXATION COVER	1	
	5	WEY7547L0867	SLIDER	1	
	6	WEY7547L1128	ANVIL	1	
	7	WEY7546L1067	DRIVING SHAFT ASSEMBLY	1	
	8	WEY7546L0027	MOTOR MOUNTING PLATE ASSEMBLY	1	
	9	WEY7546L1108	MOTOR ASSEMBLY	1	
	10	WEY7546K2007	SWITCH ASSEMBLY	1	
	11	WEY7547L2127	MODULE ASSEMBLY	1	
	12	WEY7547H3247	F/R SELECTOR HANDLE	1	
	13	WEY7546K3338	OPERATION PANEL	1	
	14	WEY7543K3187	PLATE HOOK	1	
	15	WEY7441L6487	NUT	1	
	16	WEY7441K6217	SCREW	1	(4*14)
	17	WEY7441K9038	TORX TAPPING SCREW	9	(3*20)
	-	WEY9L40R2788	BATTERY PACK COVER	1	
	-	WEY9633K7010	TOOL CASE	1	
	-	WEY7550K8109	OPERATING INSTRUCTIONS	1	
	-	WEY002X8977	GREASE (DOUBREX)	1	
	-	WEY003W8957	GREASE (PERMALUB)	1	

Model No. : EY7550 Exploded View for EY7550



** Battery Pack is available as an optional accessory. See the nearest sales dealer for details.

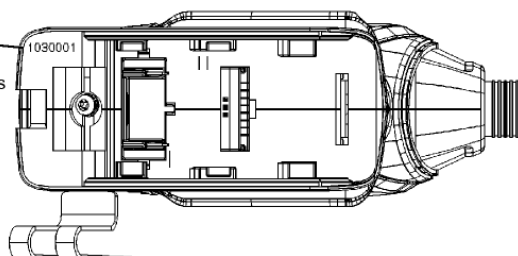
*** For replacement parts of charger, see the charger service manual.

Charger complete set is available as an optional accessory. See the nearest sales dealer for details.

Production marking 7 digits

1 03 0001

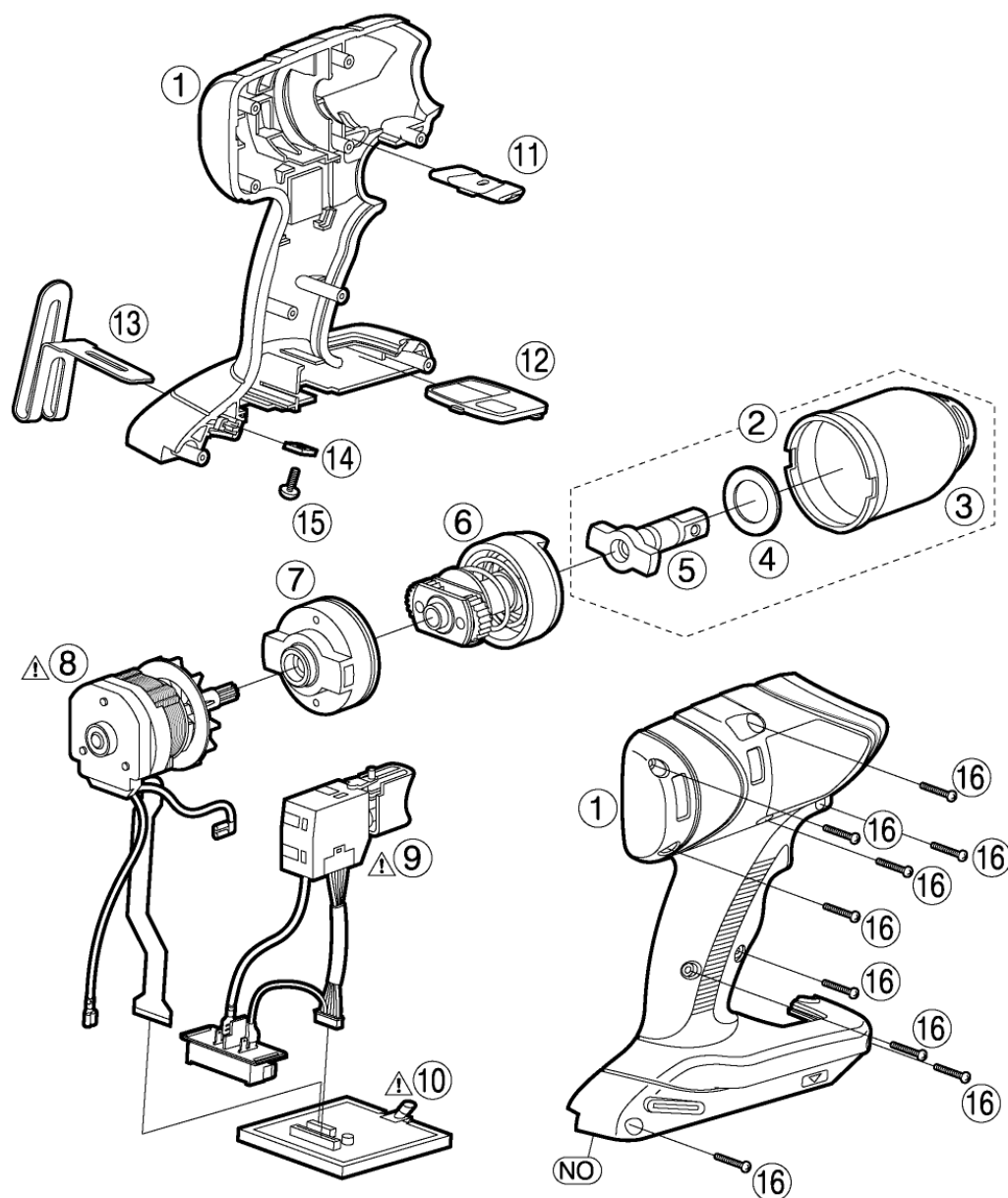
Production marking 7 digits
Month
Last digit of year



Model No. : EY7550 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
EY7550					
	1	WEY7550K3079	HOUSING AB SET	1	(for EUROPE)
	1	WEY7550K3070	HOUSING AB SET	1	(for OCEANIA)
	2	WEY7546K4058	FIXATION COVER ASSEMBLY	1	
	3	WEY7546L1067	DRIVING SHAFT ASSEMBLY	1	
	4	WEY7546L0027	MOTOR MOUNTING PLATE ASSEMBLY	1	
	5	WEY7550L1108	MOTOR ASSEMBLY	1	
	6	WEY7546K2007	SWITCH ASSEMBLY	1	
	7	WEY7550L2127	MODULE ASSEMBLY	1	
	8	WEY7547H3247	F/R SELECTOR HANDLE	1	
	9	WEY7546K3338	OPERATION PANEL	1	
	10	WEY7543K3187	PLATE HOOK	1	
	11	WEY7441L6487	NUT	1	
	12	WEY7441K6217	SCREW	1	(4*14)
	13	WEY7441K9038	TORX TAPPING SCREW	9	(3*20)
	-	WEY9L40R2788	BATTERY PACK COVER	1	
	-	WEY9633K7010	TOOL CASE	1	
	-	WEY7550K8109	OPERATING INSTRUCTIONS	1	
	-	WEY002X8977	GREASE (DOUBREX)	1	
	-	WEY003W8957	GREASE (PERMALUB)	1	

Model No. : EY7551 Exploded View for EY7551



** Battery Pack is available as an optional accessory. See the nearest sales dealer for details.

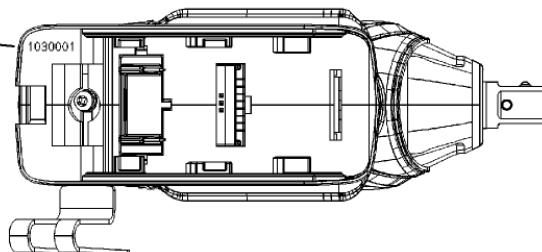
*** For replacement parts of charger, see the charger service manual.

Charger complete set is available as an optional accessory. See the nearest sales dealer for details.

Production marking 7 digits

1 03 0001

1 03 0001
 — Production marking 7 digits
 — Month
 — Last digit of year



Model No. : EY7551 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
EY7551					
	1	WEY7551K3079	HOUSING AB SET	1	(for EUROPE)
	1	WEY7551K3070	HOUSING AB SET	1	(for OCEANIA)
	2	WEY7547K4058	FIXATION COVER ASSEMBLY	1	
	3	WEY7547K3137	FIXATION COVER	1	
	4	WEY7547L0867	SLIDER	1	
	5	WEY7547L1128	ANVIL	1	
	6	WEY7546L1067	DRIVING SHAFT ASSEMBLY	1	
	7	WEY7546L0027	MOTOR MOUNTING PLATE ASSEMBLY	1	
	8	WEY7550L1108	MOTOR ASSEMBLY	1	
	9	WEY7546K2007	SWITCH ASSEMBLY	1	
	10	WEY7551L2127	MODULE ASSEMBLY	1	
	11	WEY7547H3247	F/R SELECTOR HANDLE	1	
	12	WEY7546K3338	OPERATION PANEL	1	
	13	WEY7543K3187	PLATE HOOK	1	
	14	WEY7441L6487	NUT	1	
	15	WEY7441K6217	SCREW	1	(4*14)
	16	WEY7441K9038	TORX TAPPING SCREW	9	(3*20)
	-	WEY9L40R2788	BATTERY PACK COVER	1	
	-	WEY9633K7010	TOOL CASE	1	
	-	WEY7550K8109	OPERATING INSTRUCTIONS	1	
	-	WEY002X8977	GREASE (DOUBREX)	1	
	-	WEY003W8957	GREASE (PERMALUB)	1	