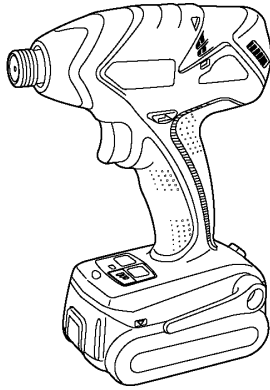


# Service Manual

## Cordless Impact Driver

### EY7540-X8



## SPECIFICATIONS

### MAIN UNIT

Motor		14.4V DC
No load speed	Soft mode	0-1000/min (rpm)
	Medium mode	0-1400/min (rpm)
	Hard mode	0-2300/min (rpm)
Maximum torque		150Nm (1530kgf-cm, 173in-lbs.)
Impact per minute	Soft mode	0-2000/min
	Medium mode	0-2800/min
	Hard mode	0-3000/min
Overall length		158mm (6-1/4")
Weight (with battery pack EY9L40)		1.45kg (3.1lbs.)

### 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.

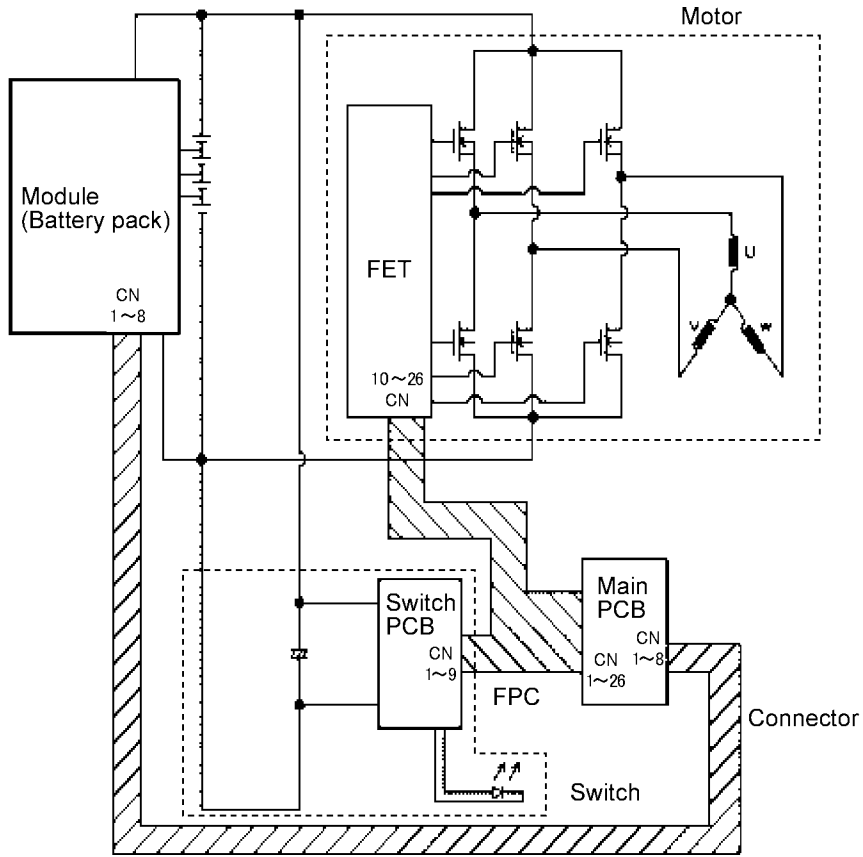
## CONTENTS

	Page		Page
1 SCHEMATIC DIAGRAM .....	2	5 CHECK PARTS IDENTIFY PROCEDURE .....	9
2 WIRING CONNECTION DIAGRAM .....	2	6 EXPLODED VIEW .....	11
3 DISASSEMBLY/ASSEMBLY INSTRUCTIONS .....	3	7 REPLACEMENT PARTS LIST .....	12
4 TROUBLESHOOTING GUIDE .....	7		

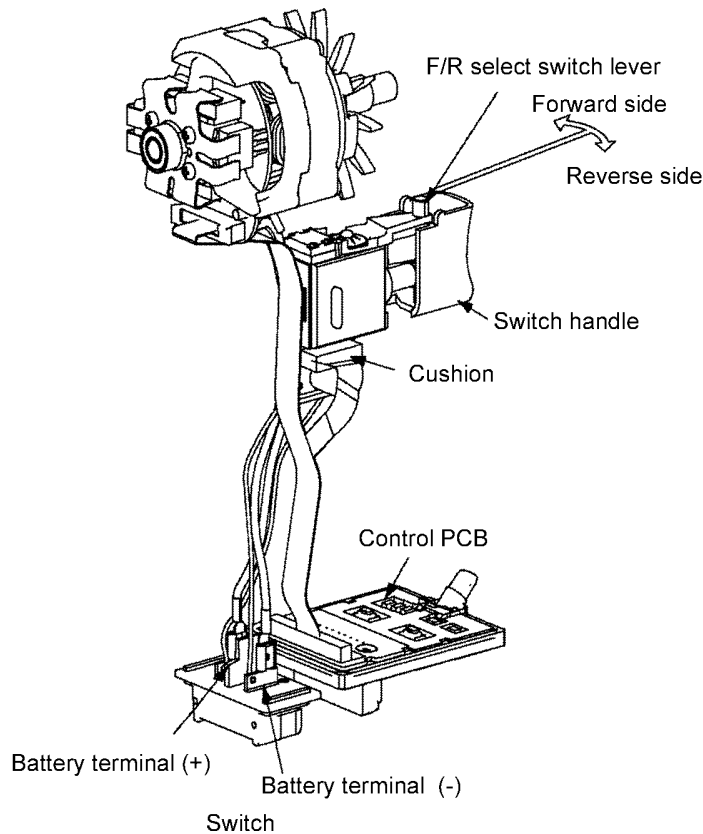
# Panasonic

© 2006 Matsushita Electric Works Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.

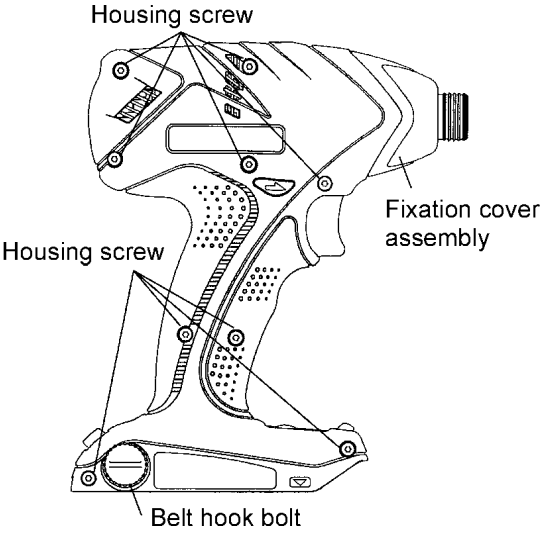
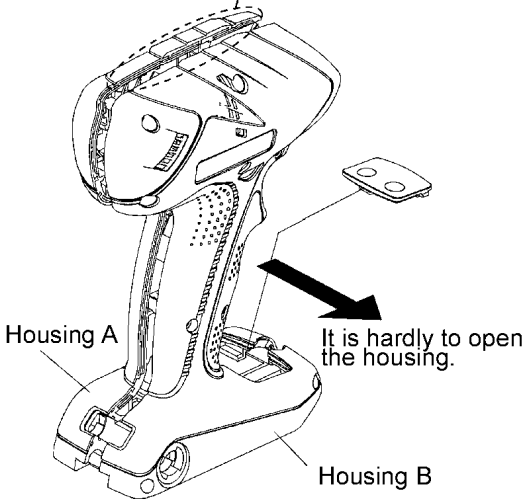
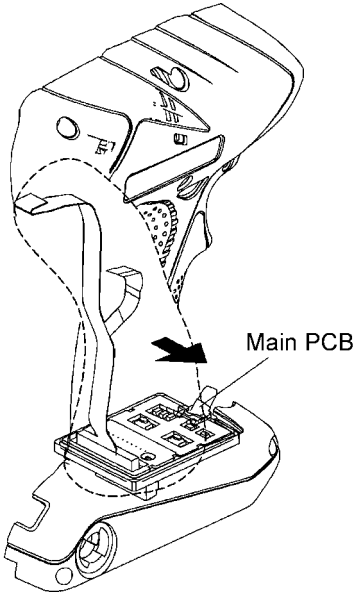
# 1 SCHEMATIC DIAGRAM

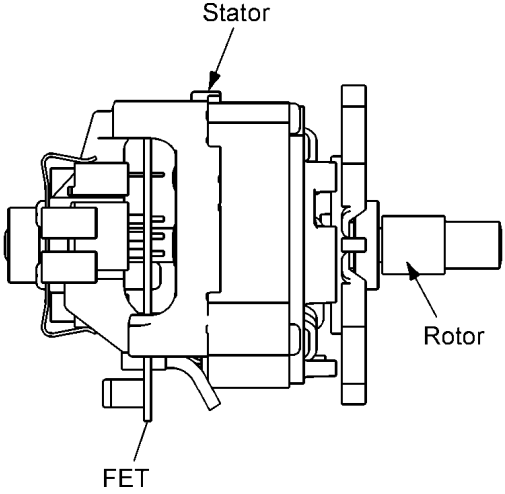


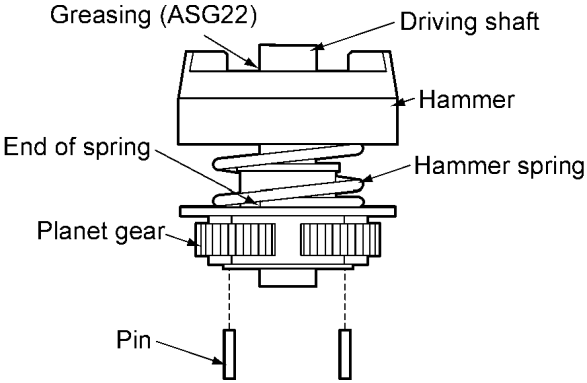
# 2 WIRING CONNECTION DIAGRAM



### 3 DISASSEMBLY/ASSEMBLY INSTRUCTIONS

Ref. No. 1A	Procedure 1A	Removal and attachment of the Housings.
	<p>Housing screw</p> <p>Fixation cover assembly</p> <p>Belt hook bolt</p>	<ol style="list-style-type: none"> <li>1. Loosen the belt hook bolt turning it counterclockwise, using a coin or a flat blade screwdriver.</li> <li>2. Take out the belt hook.</li> <li>3. Remove nine housing screws.</li> <li>4. Open the housing B.</li> </ol> <p><b>NOTE :</b> The housing A and B is tightened as the motor mounting base is joint fitting.</p> <p>Hold the housing B and take it out vertically.</p> <ol style="list-style-type: none"> <li>5. Take out the fixation cover, protectors and anvil block.</li> </ol>
<p>When making a crevice, open the housings from here.</p> 	<p>When making a crevice, open the housings from here.</p> <p>Housing A</p> <p>Housing B</p>	<p>(Removal)</p> <p><b>NOTE :</b> When opening the housings, make sure that the main PCB is on the housing A.</p> <p>If the main PCB sticks in the housing B and pull it out from the housing A, the ribbon cable may be defected.</p>
	<p>Main PCB</p>	

Ref. No. 1B	Procedure 1A → 1B	Removal and attachment of the Motor.
 <p>The diagram shows a cross-section of the motor assembly. The Stator is the main cylindrical housing. The Rotor is the central rotating part. The FET (Field Effect Transistor) is located at the bottom left of the assembly.</p>		<p>(Removal)</p> <ol style="list-style-type: none"> <li>1. Take out the motor with the driving block from housing.</li> <li>2. Separate the motor assembly from the driving block.</li> <li>3. Take out the motor rotor assembly from the motor stator.</li> </ol> <p><b>NOTE :</b> Make sure not to damage the magnet by motor rotor.</p> <p>(Attachment)</p> <ol style="list-style-type: none"> <li>1. Insert the motor rotor assembly into the stator with care of hitching FET.</li> </ol> <p><b>NOTE :</b> Make sure that there is no metal powder around the motor rotor.</p>

Ref. No. 1C	Procedure 1A → 1B → 1C	Removal of the Driving Block.
 <p>The diagram shows a cross-section of the driving block assembly. The Driving shaft is at the top. Below it is the Hammer, which is connected to the Hammer spring. The End of spring is also shown. The Planet gear is located below the hammer spring. The Pin is shown at the bottom, connected to the planet gear.</p>		<p><b>Removal of the Driving Block.</b></p> <ol style="list-style-type: none"> <li>1. Take out the planet gears and pins slightly tapping the driving block on the table.</li> </ol>

Ref. No. 1D

Procedure 1A → 1B → 1C → 1D

**Removal and attachment of the Switch.**

1. Take out the switch assembly from the housing.

(Attachment)

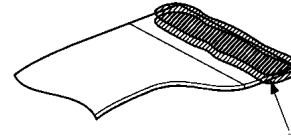
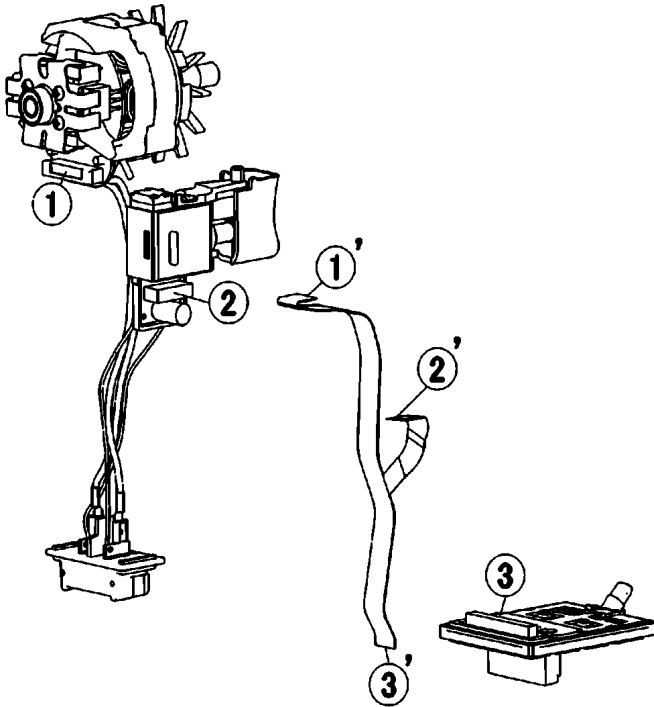
1. Connect the motor lead wires.

2. Insert the connectors into the FET, the main PCB and the motor stator.

**NOTE :**

Make sure to handle the ribbon cable gently in order to avoid the breakage.

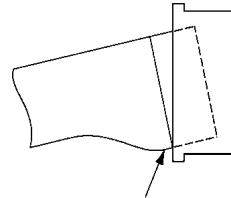
Apply the grease (FLOIL) on the places where insert into the connectors.



Connecting area



Spread grease thickly.



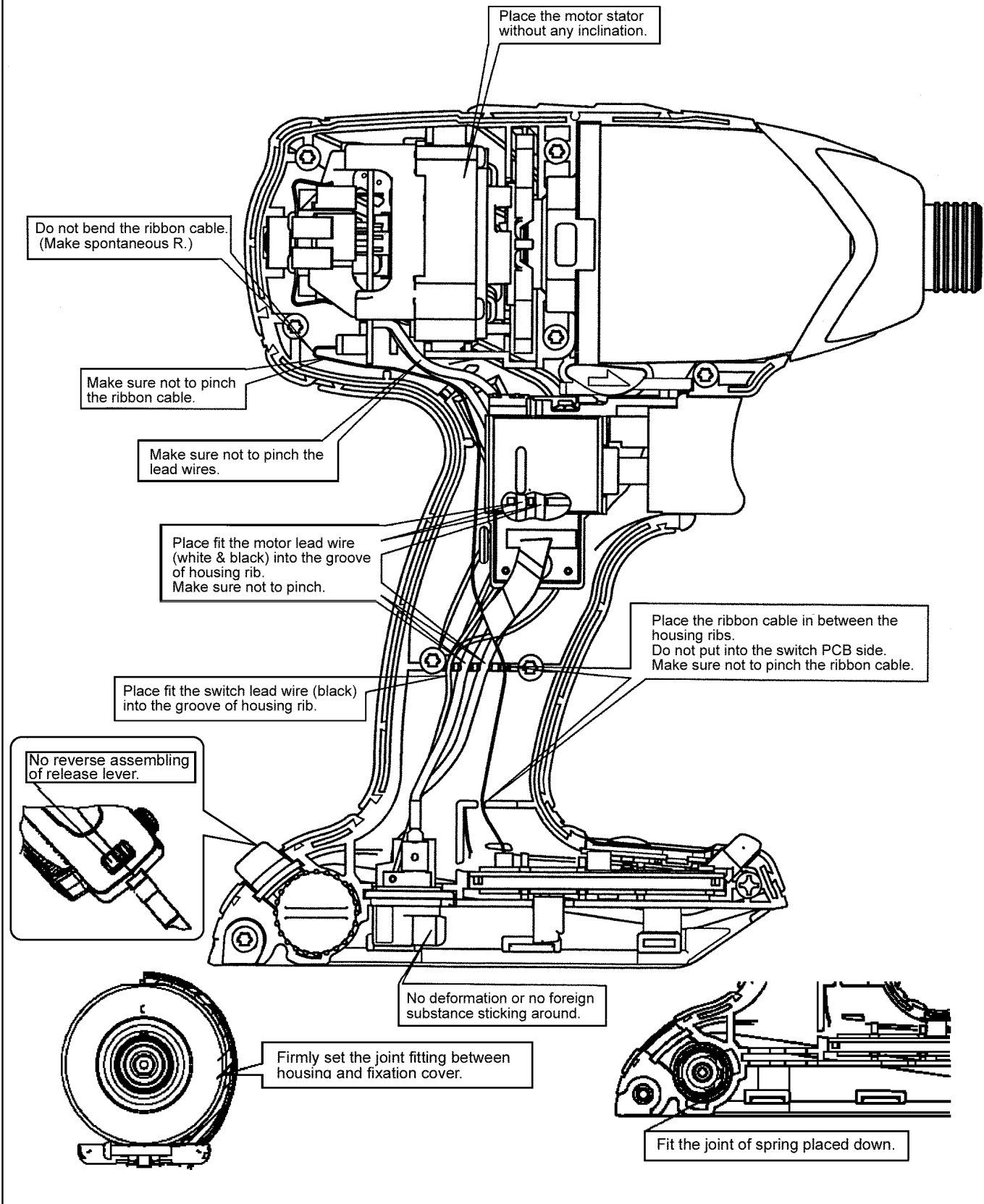
Make sure that the connector is inserted firmly. If it is obliquely, it may defect by short-circuited.

Ref. No. 1E

Procedure 1A → 1B → 1C → 1D → 1E

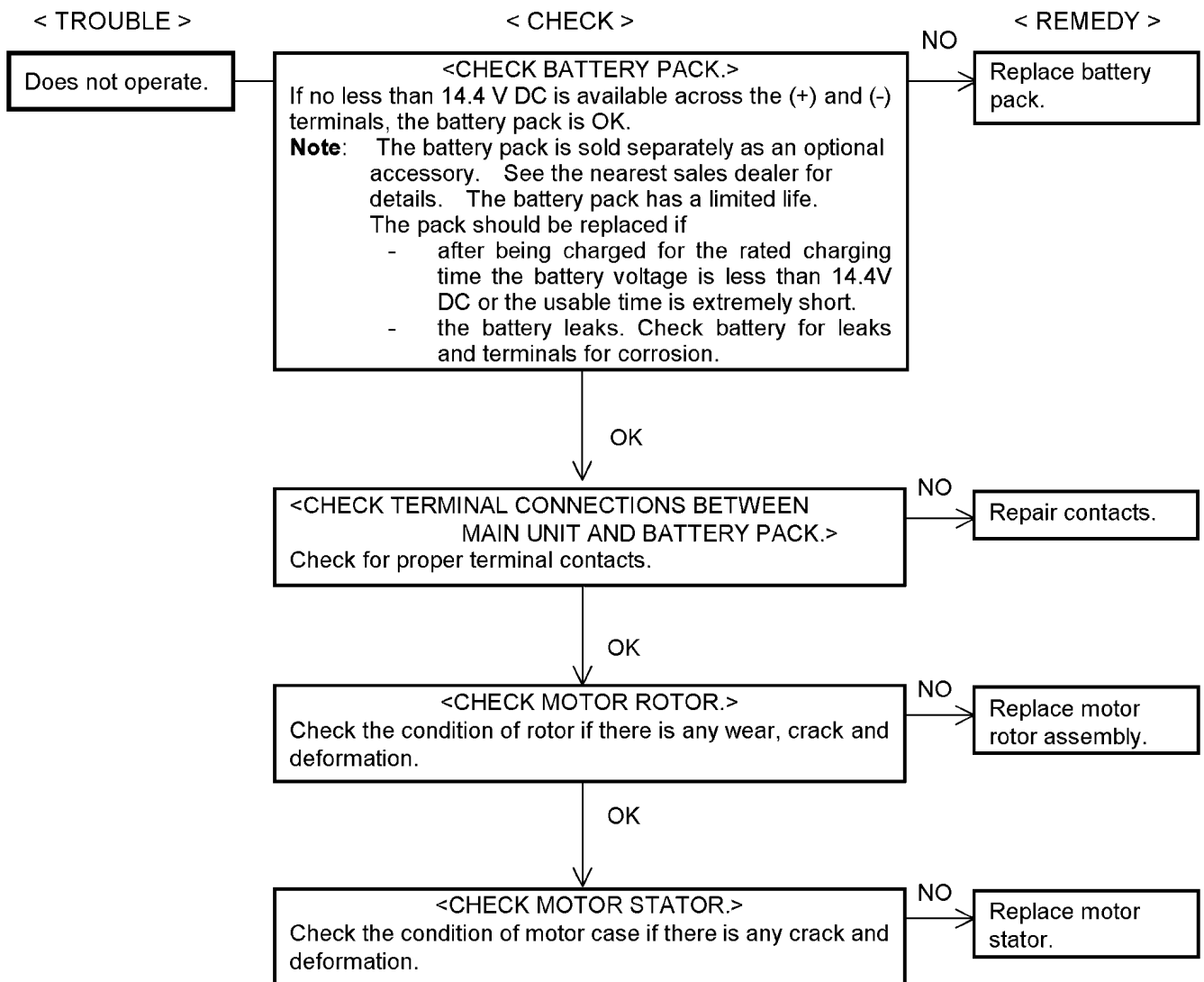
**Assembly of the Driving Block.**

1. Press fit the lead wires firmly.
2. Place the ribbon cable properly without getting caught in the lead wires.



## 4 TROUBLESHOOTING GUIDE

(Refer to WIRING CONNECTION DIAGRAM)



< TROUBLE >

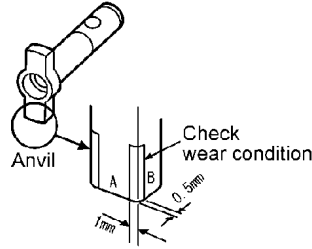
< CHECK >

< REMEDY >

Weakness of blowing.

**<CHECK ANVIL.>**

Check wear condition of anvil. If no less than 1mm from the corner at (A) side or 0.5mm from the corner at (B) side, anvil is OK.

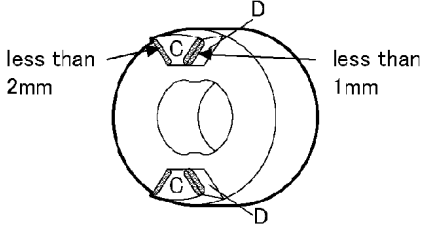


NO → Replace anvil.

OK ↓

**<CHECK HAMMER.>**

Check wear condition of hammer. If no less than 2mm from the corner at (C) side or 1mm from the corner at (D) side, hammer is OK.



NO → Replace hammer.

Does not operate control panel even the select button is pushed.  
Indication on control panel is not properly.

**<CHECK CONTROL PCB.>**

Remove the dust or any foreign substance stuck on the sure face of control PCB.  
See in detail at CHECK PARTS IDENTIFY PROCEDURE.

NO → Replace control PCB.

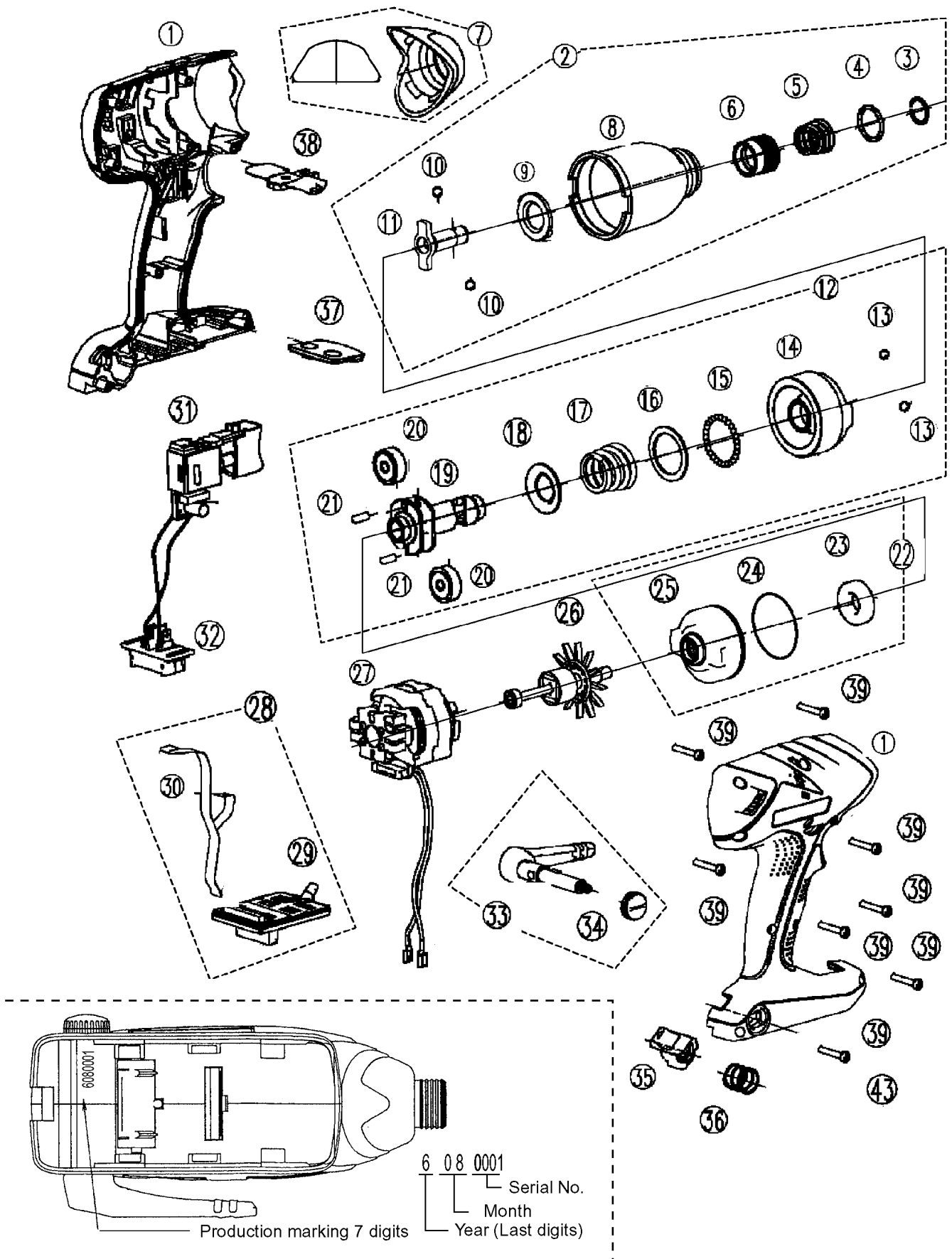


## 5 CHECK PARTS IDENTIFY PROCEDURE

Phenomenon		Pre-check	Check order of priority (1:prioritymost)				
Problem	LED lights on Control panel.		Stator block	Battery pack	Ribbon cable	Switch assembly	Main PCB
Operation stops in an instant even the switch handle is depressed.	No indication		3	1	2	4	5
	Blinking: Battery low warning lamp			1	3	4	2
Pulsatory motion and stops.	No indication or Blinking: Impact power mode display (Hard/Medium)		2		1	3	4
Does not operate. Operation stops in a moment.	Blinking: Battery low warning lamp			1			2
Stops in a impact blowing.	No indication or Blinking: Impact power mode display (Hard/Medium)		3	1	2	4	5
One direction only either forward rotation or reverse rotation.	-				3	1	2
Rotation stops while depressing the switch handle slowly.	-					1	
Operation does not start in an instant.	-					1	
-	LED does not light up.	Confirm if the switch handle is depressed before pressing LED light ON/OFF button.					1
-	Impact mode does not change even pressing the mode button.	Confirm if the switch handle is depressed before pressing the impact mode button.			3	2	1

CHECK POINT	
Motor stator	1. If there is continuity between (+) lead wire and motor coil, motor stator should be defective.
	2. If there is continuity between (-) lead wire and motor coil, motor stator should be defective.
	3. Operation test.
Battery pack	See in detail at TROUBLESHOOTING GUIDE.
Ribbon cable	Visual inspection for breakage.
Switch assembly	Operation test.
Module assembly	Operation test.
LED	ON/OFF operation test.
Motor rotor assembly	1. No wear, scratch and damage.
	2. No breakage of fan and seizure on bearing.
	3. No discoloration of coil.

# 6 EXPLODED VIEW



# 7 REPLACEMENT PARTS LIST

**NOTE:**

\*B=only available as set

\*C=available individually

Ref.No.	Part No.	Part Name & Description	Remarks		Per Unit
1	WEY7540K3079	HOUSING AB SET		for EUROPE	1
1	WEY7540K3070	HOUSING AB SET		for OCEANIA	1
2	WEY7540K4058	FIXATION COVER ASSEMBLY			1
3	WEY6507K1166	C-TYPE RING			1
4	WEY6507L0856	THRUST PLATE			1
5	WEY6507L0196	BIT HOLDER SPRING			1
6	WEY7540K3717	BIT HOLDER			1
7	WEY7540K3107	NOSE PROTECTOR			1
8	WEY7540L3137	FIXATION COVER			1
9	WEY6505L0866	SLIDER			1
10	WEY6507L6976	STEEL BALL	*B	∅ 5/32 (2PCS/PK)	2
11	WEY7540L1128	ANVIL			1
12	WEY7540L1067	DRIVING SHAFT ASSEMBLY			1
13	WEY7201L6966	STEEL BALL	*B	∅ 7/32 (2PCS/PK)	2
14	WEY7540L1377	HAMMER			1
15	WEY7300L6956	STEEL BALL	*B	(27PCS/PK)	27
16	WEY6505L0896	THRUST PLATE			1
17	WEY7540L0217	HAMMER SPRING			1
18	WEY6508L1146	SPRING FIXING PLATE			1
19	WEY7540L1137	DRIVING SHAFT			1
20	WEY6504L1357	PLANET GEAR	*B	(2PCS/PK)	2
21	WEY6506L1346	PIN	*B	(2PCS/PK)	2
22	WEY7540L0028	MOTOR MOUNTING PLATE ASSEMBLY			1
23	WEY7201L4956	BEARING			1
24	WEY7201L0986	O-RING			1
25	WEY7201L3746	MOTOR MOUNTING PLATE			1
26	WEY7540L1467	MOTOR ROTOR ASSEMBLY			1
27	WEY7540L1187	STATOR			1
28	WEY7540L2108	MODULE ASSEMBLY			1
29	WEY7540L2128	CONTROL PCB			1
30	WEY7540L2067	RIBBON CABLE			1
31	WEY7540K2007	SWITCH ASSEMBLY		(SH)	1
32	WEY7540L2157	BATTERY TERMINAL BLOCK			1
33	WEY7540K3217	BELT HOOK SET			1
34	WEY6470K3186	BELT HOOK BOLT			1
35	WEY7540H0407	HOOK RELEASE LEVER			1
36	WEY7540L0167	SPRING FOR RELEASE LEVER			1
37	WEY7540K3338	OPERATION PANEL			1
38	WEY7540H3247	F/R SELECTOR HANDLE			1
39	WEY6230K9216	TORX TAPPING SCREW	*C	K3-20	9
-	WEY9633K7018	TOOL CASE		(SH)	1
-	WEY7540K8109	OPERATING INSTRUCTIONS		(SH)	1

\*\*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.