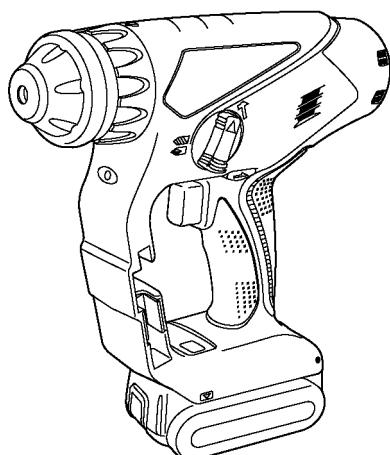


Service Manual

Cordless Rotary Hammer Drill & Driver

Model No. EY7840

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).

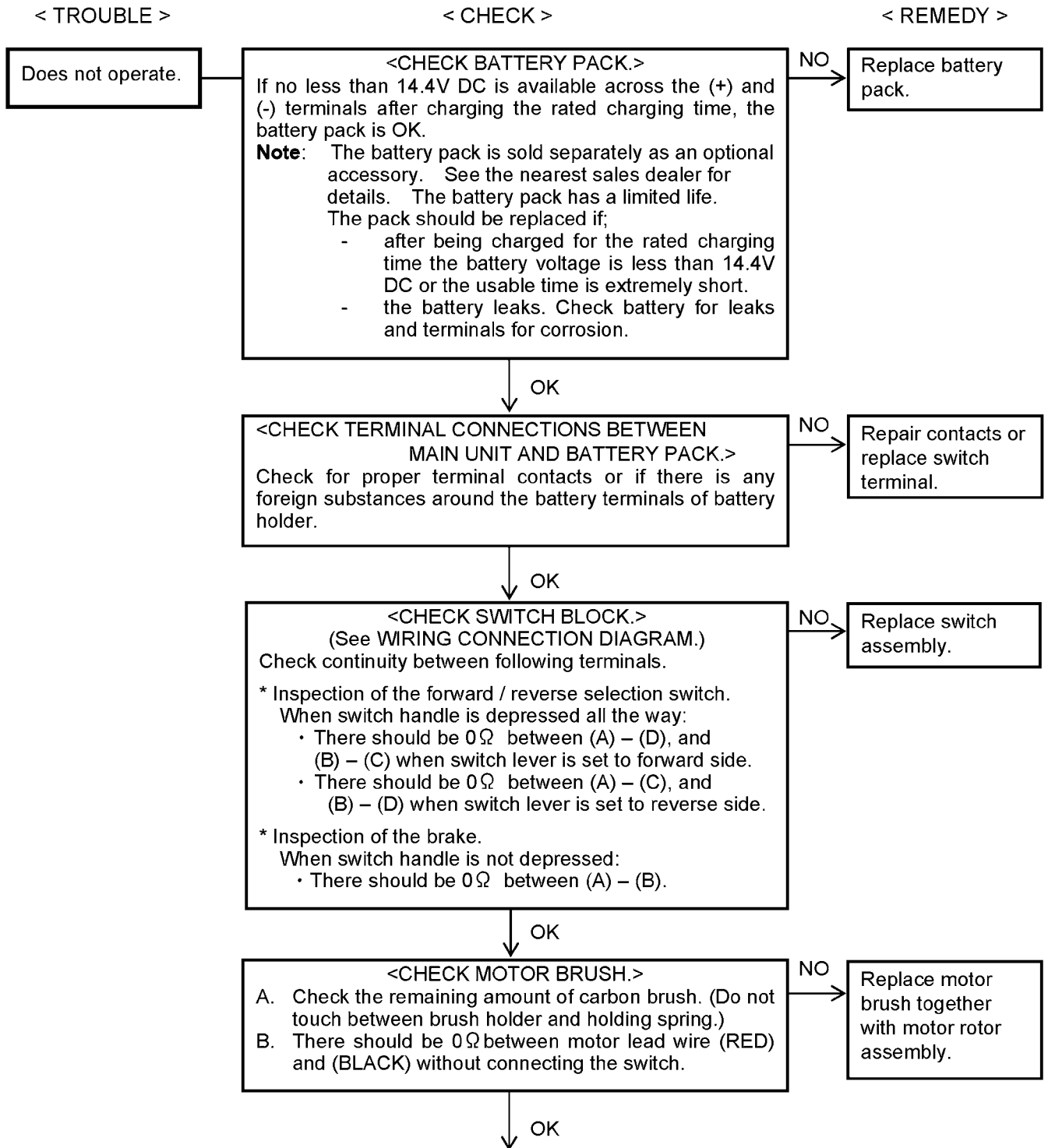
2 Specifications

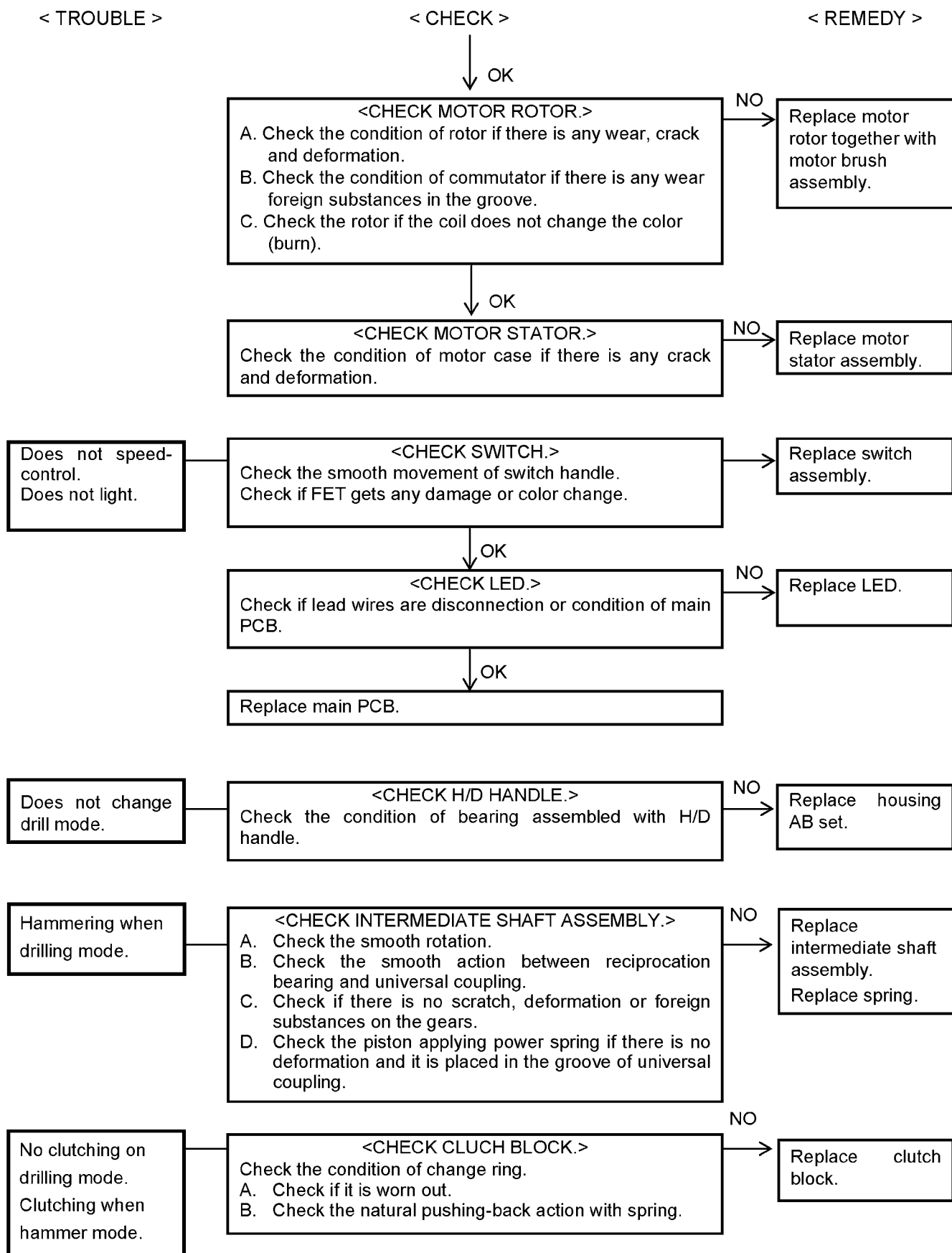
MAIN UNIT

Motor		14.4V DC
Speed at NO load		0-1000 min ⁻¹ (rpm)
Blows rate per minute		0-3800 min ⁻¹ (bpm)
Maximum drilling diameter	Concrete	φ 16.5mm (21/32") * *For work that can be completed with one battery pack. (φ 12.5mm (15/32") – 16.5mm (21/32"))
	Steel	φ 13.0mm (33/64")
	Wood	φ 18.0mm (23/32")
Blow strength		21.6kN (2200kgf)
Overall length		249mm (9-51/64")
Weight (with battery pack EY9L40)		2.30kg (5.1lbs.)

3 Troubleshooting Guide

(Refer to WIRING CONNECTION DIAGRAM)



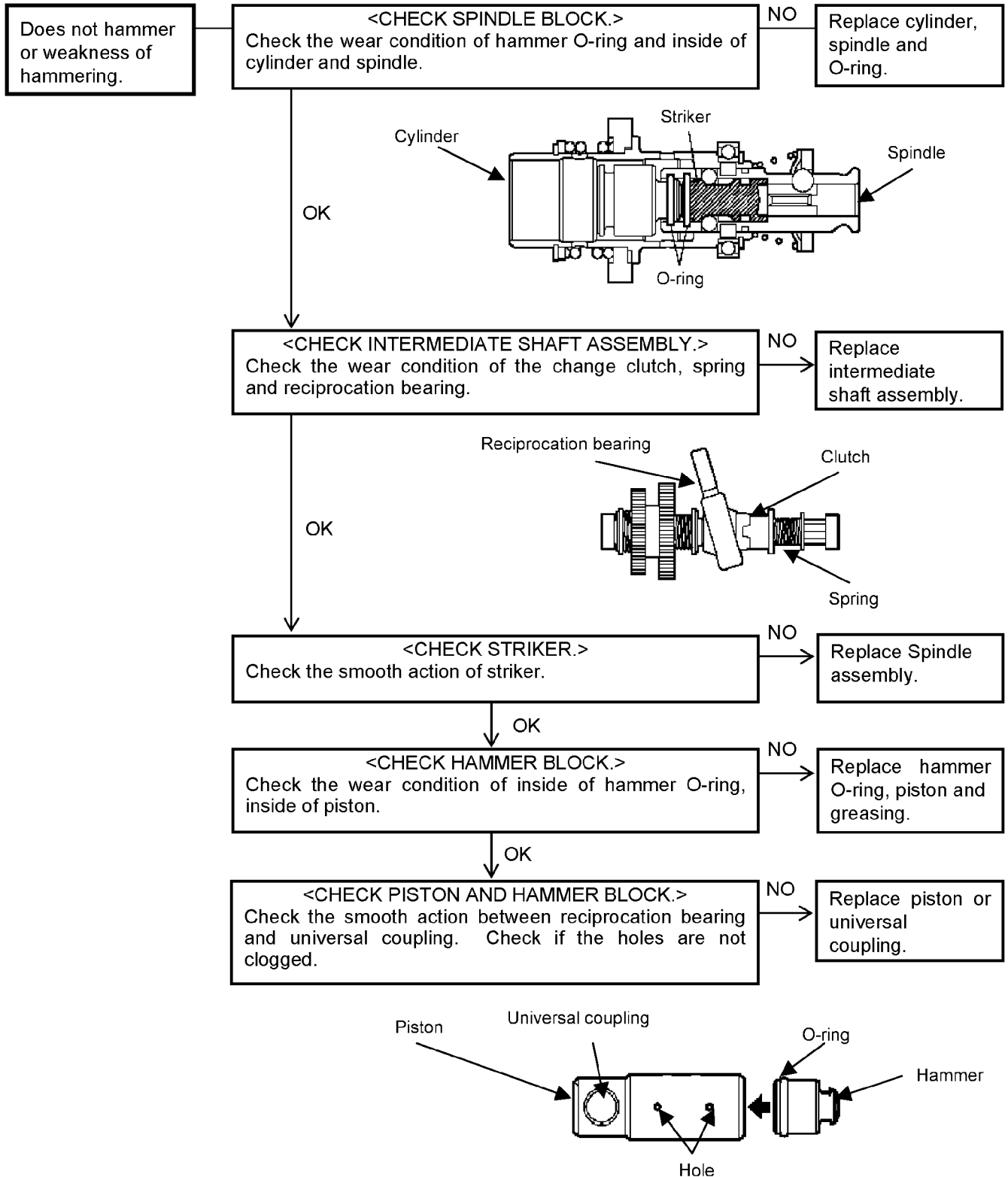


NOTE: Before starting the following procedure, check the battery pack and rotation speed of main unit. Confirm if it is 900-950rpm by applying DC14.4V on the constant voltage source. If not, replace motor brush, rotor and stator all together.

< TROUBLE >

< CHECK >

< REMEDY >



3.1. Trial Operation (After Checking Troubleshooting Guide.)

1. HAMMER/DRILL

Confirm the action when setting the H/D handle to HAMMER mode.

Rotation with hammering may work when the drill bit touches something like concrete or hard type of wood block. And confirm the power.

It is OK, if it takes about 4-6 seconds by 20kgf to hole ($\Phi 6 \times 30$) on the concrete.

Confirm the action when setting the H/D handle to DRILL mode.

No hammering when the drill bit touches something like concrete or hard type of wood block.

And confirm the forward and reverse side of rotation.

2. SWITCH

Change the rotation speed in proportion to the amount of pushing level on switch trigger.

900 -950 rpm

3. CLUTCH

Check if the clutch torque changes suited for the number of clutch.

Check if the bit does not slip on Drilling mode.

4. ASSEMBLY

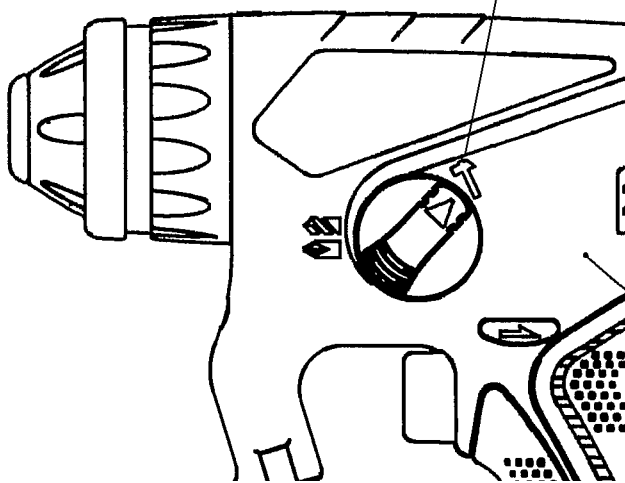
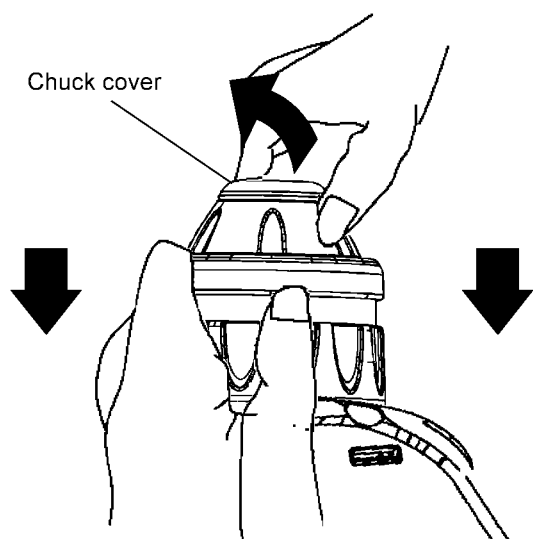
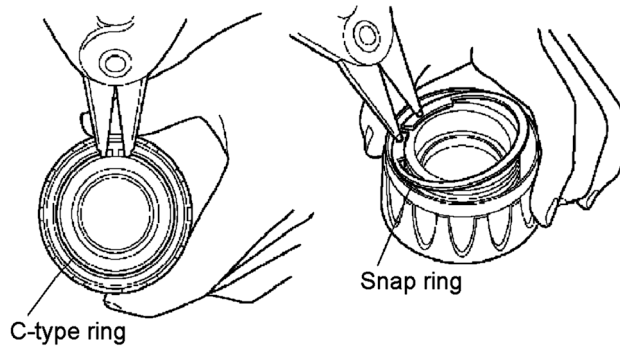
Confirm if there is NO gap between Housing A and B by pinching the lead wires.

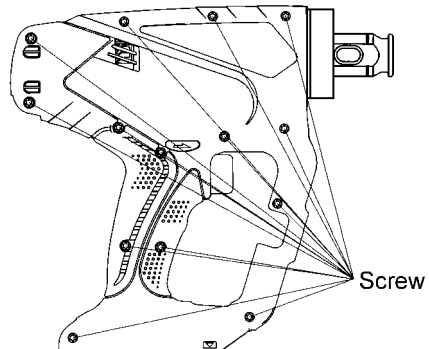
Confirm all screws are tightened firmly and gaskets are attached.

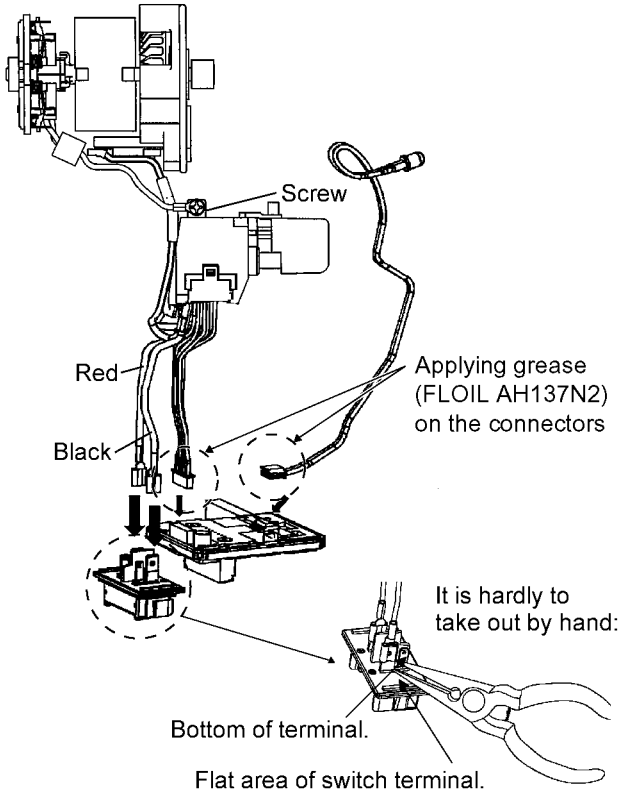
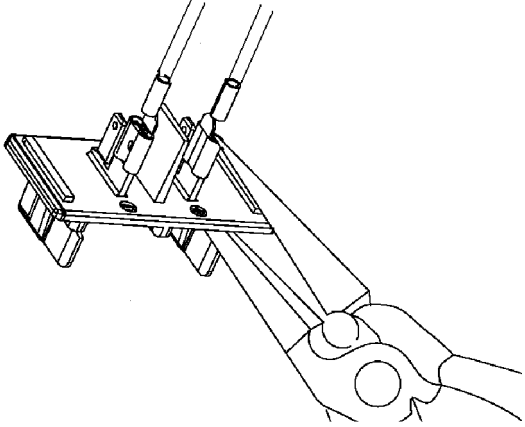
There should be no metallic sound and abnormal sound.

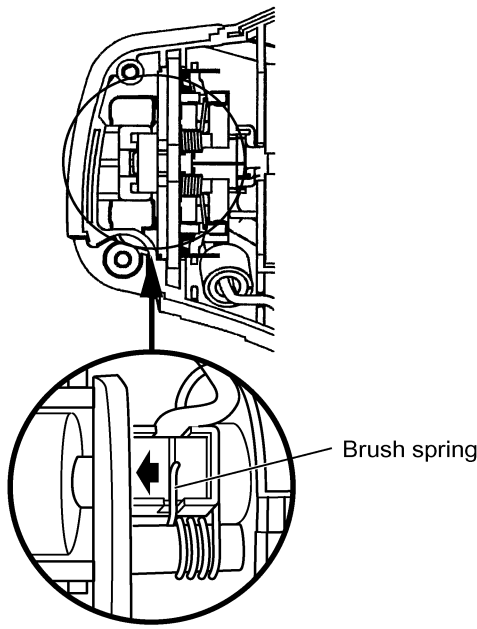
4 Disassembly and Assembly Instructions

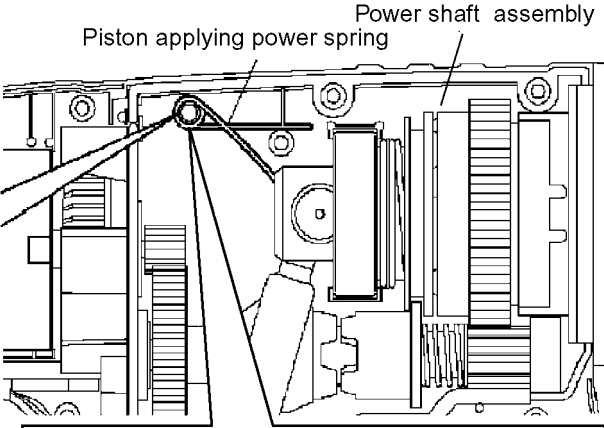
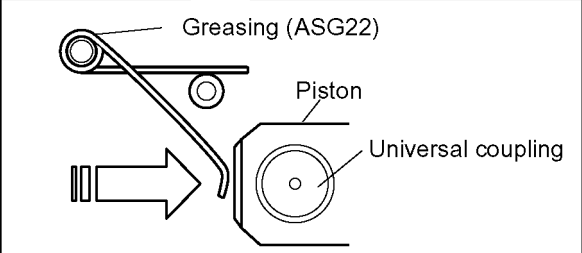
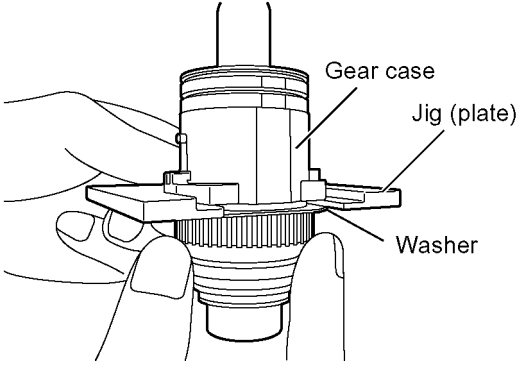
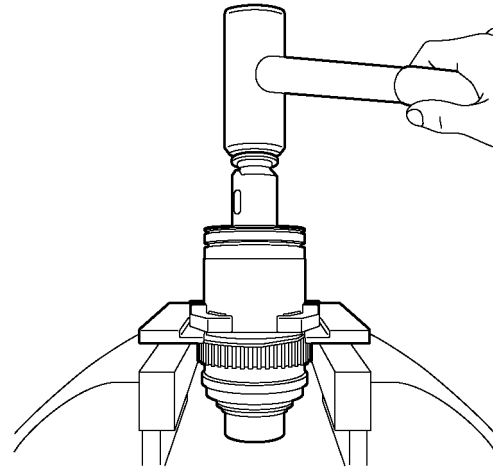
4.1. How to Disassemble the Main Unit.

Ref. No. 1A	Procedure 1A	Removal of the chuck handle.
	 Set the HAMMER mode.	1. Set the hammering/drilling switching lever to the position . 2. Pluck the chuck cover depressing the chuck handle. 3. Remove the chuck handle. 4. Take out a steel ball pushing the chuck spring with the chuck spring plate. 5. Remove the chuck spring plate and the chuck spring. 6. Remove C-type spring and white felt.
	 Chuck cover	 C-type ring Snap ring

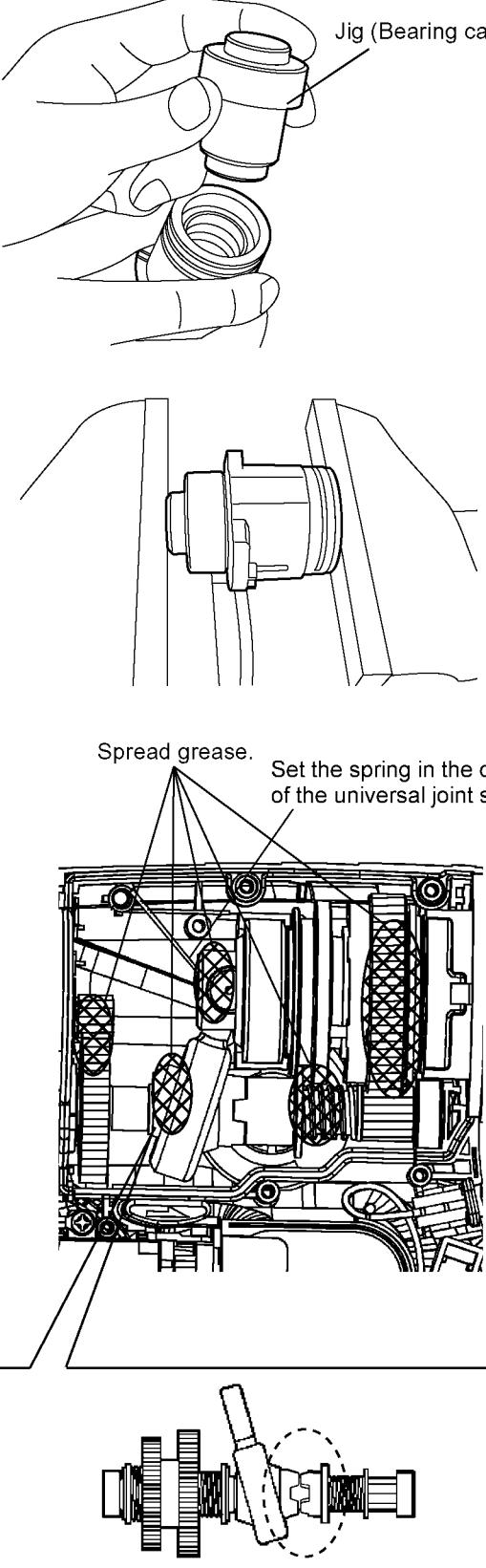
Ref. No. 1B	Procedure 1A → 1B	Removal of the housing.
	 Screw	1. Remove 14 housing screws.

Ref. No. 1C	Procedure 1A → 1B → 1C	Removal of the switch.
		1. Loosen two screws to remove the lead wires from motor assembly. 2. Take out the switch from the housing. 3. Take out the LED cover. For assembling NOTE: Make sure not to break or deform the terminals. 

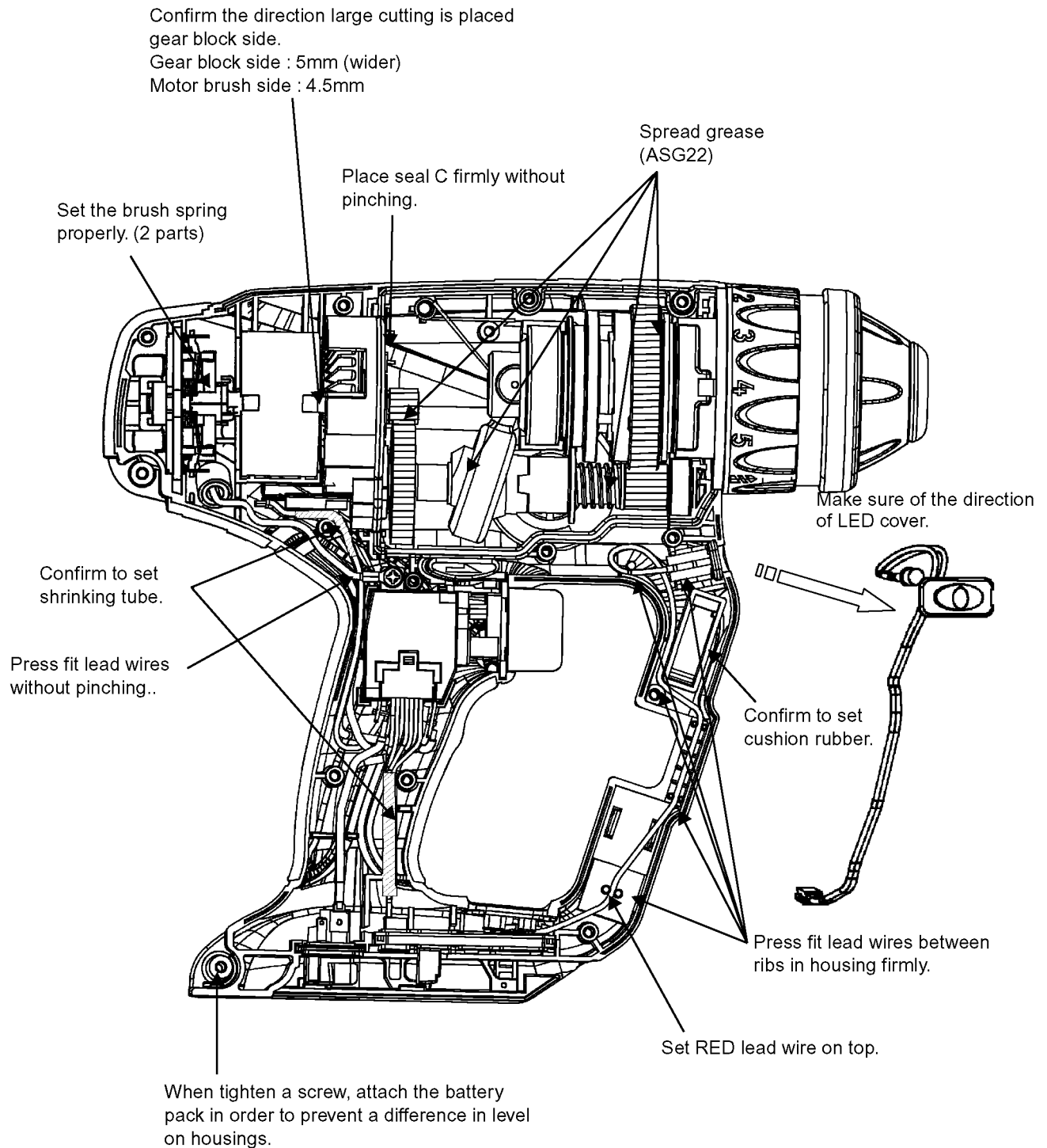
Ref. No. 1D	Procedure 1A → 1B → 1C → 1D	Removal of the motor assembly.
		1. Hitch the brush spring to the frame by something like a forceps and take the motor brush assembly with the switch out from the motor assembly. 2. Take out the rotor from the motor case. For assembling NOTE: Make sure to return the spring into the groove of the motor brush. Make sure to set the 5mm cut of stator should be placed on the hammer side when inserting the motor rotor assembly. Close the housing and try to apply the DC14.4V and check if the motor rotates or not.

Ref. No. 1E	Procedure 1A → 1B → 1C → 1D → 1E	Removal of the power shaft assembly.
	  The spring has its own direction for reassembling. Make sure to set the spring on the groove of universal coupling.  	1. Remove the piston applying power spring. 2. Take out the power shaft assembly. 3. Remove the snap ring. 4. Slide the jig (plate) into between the washer and the gear case and hold it by a vise. 5. Tap the top of spindle block with a plastic hammer to take out the spindle and clutch block assembly. 6. Take out the snap ring on the rear side of the bearing. 7. Take out two pins by using absorption force about 30N magnet from the clutch block. 8. Take out four steel balls and remove the spindle & piston assembly. 9. Remove the striker with the O-ring and the O-ring. And take out the bearing. 10. Take out the piston block. And take out the piston and the universal coupling. 11. Remove the intermediate shaft assembly.

4.2. How to Reassemble the Main Unit.

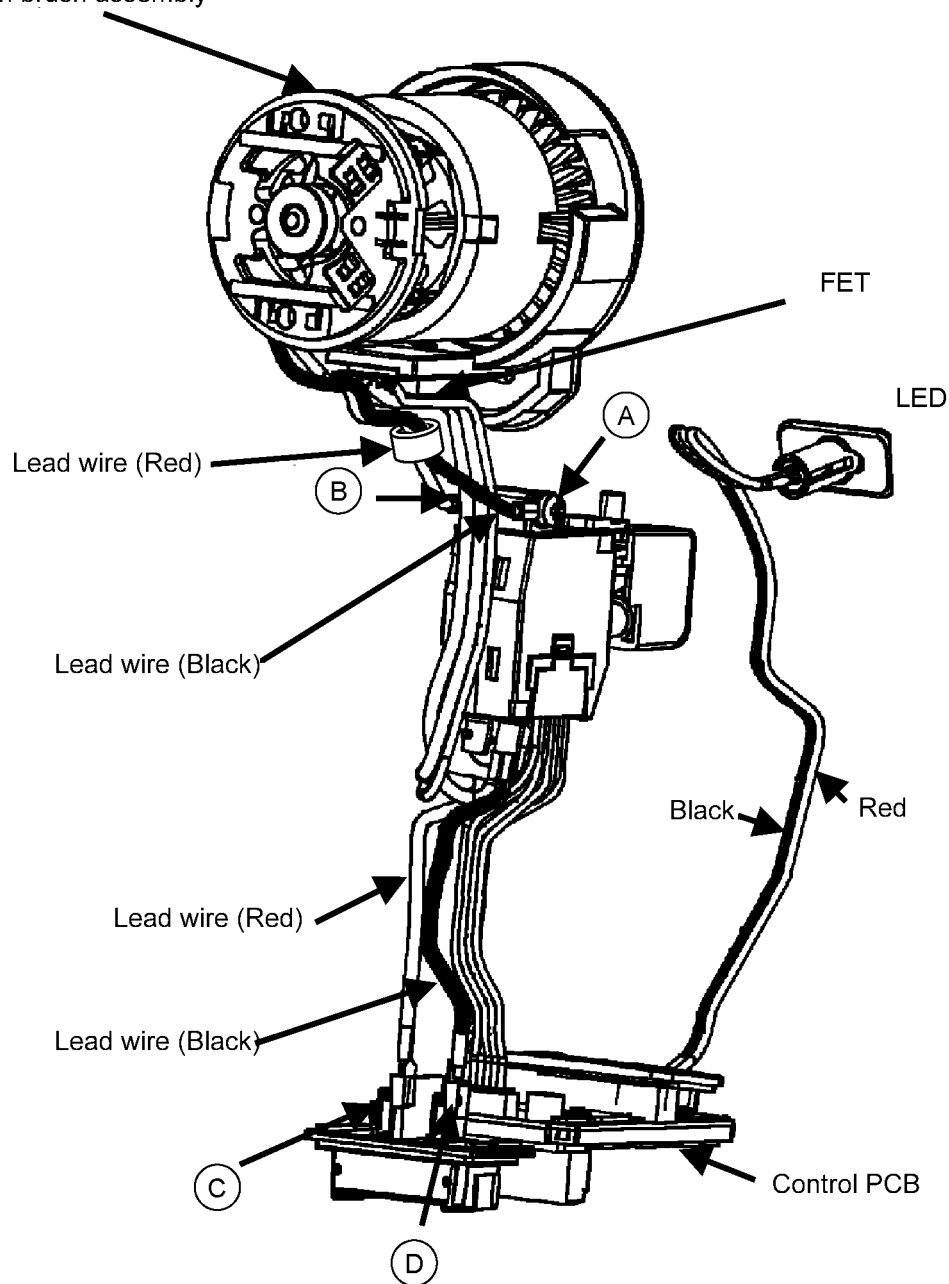
Ref. No. 2A	Procedure 2A	Assembly of gear case assembly.
	 Jig (Bearing cap) Spread grease. Set the spring in the ditch of the universal joint surely.	1. Set the jig (bearing cap) into the clutch case and hold it with a vise in order to take out the bearing. 2. Assemble the bearing with the spindle assembly. 3. Set the snap ring. NOTE: It has own direction for reassembly. Place the rounded face of snap ring to the clutch case side. 4. Fit O-ring onto the bearing. 5. Insert the reciprocation bearing shaft into the hole of universal coupling. Make sure two thrust plates should be set both side of reciprocation bearing shaft one of each. 6. Assemble the intermediate shaft assembly into the gear case from the motor side first. NOTE: Apply grease especially for the connection area between reciprocation bearing and universal coupling. In addition, hammer O-ring, inside of piston and cylinder for output shaft block also need to apply. Air compressed by the piston drives hammer. Take care to protect the piston and hammer from contamination by dust.

1. Set the H/D handle to HAMMER mode.
2. Insert the gear case assembly into the housing.
3. Connect the switch assembly with motor lead wires.

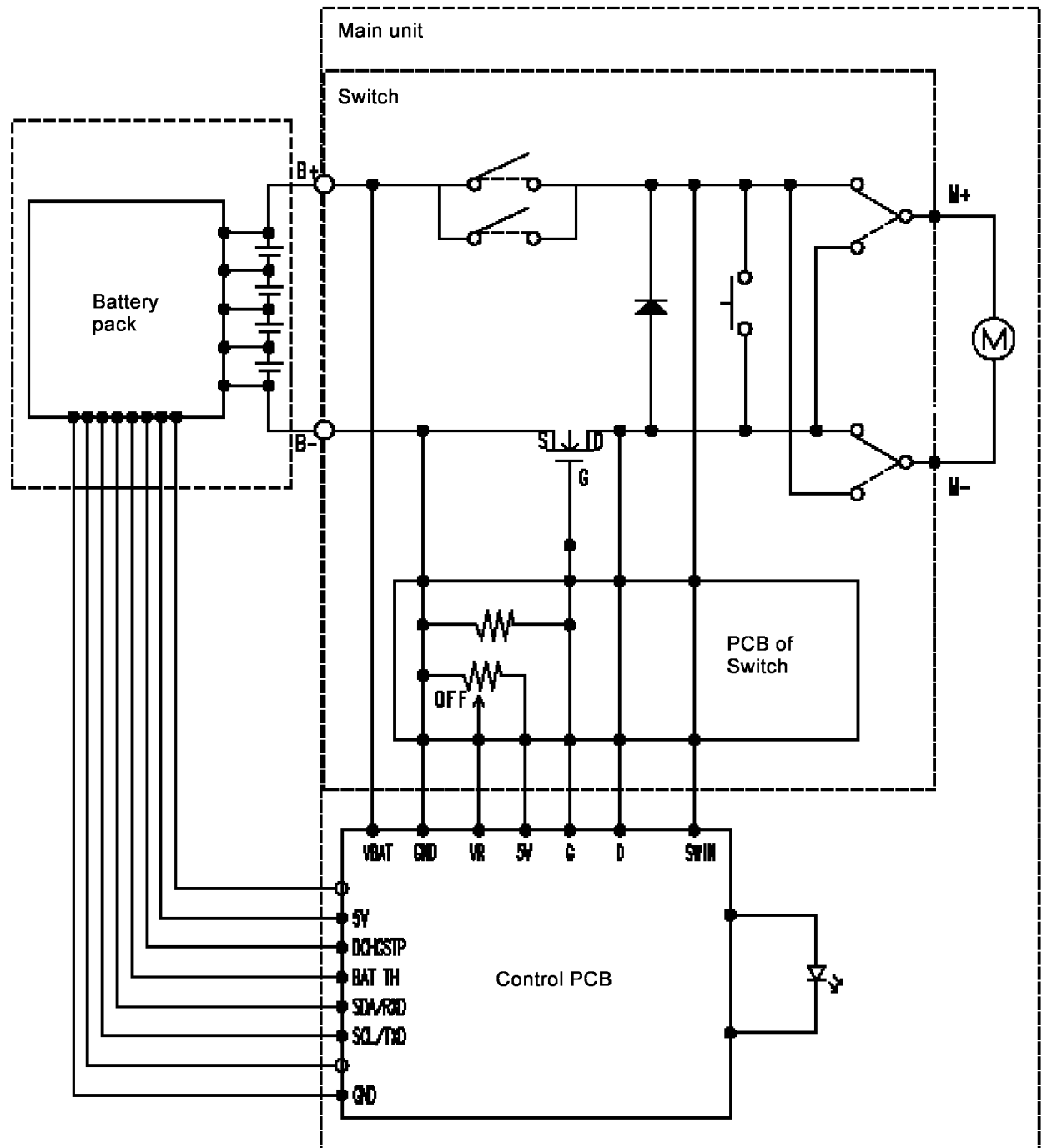


5 Wiring Connection Diagram

Motor carbon brush assembly

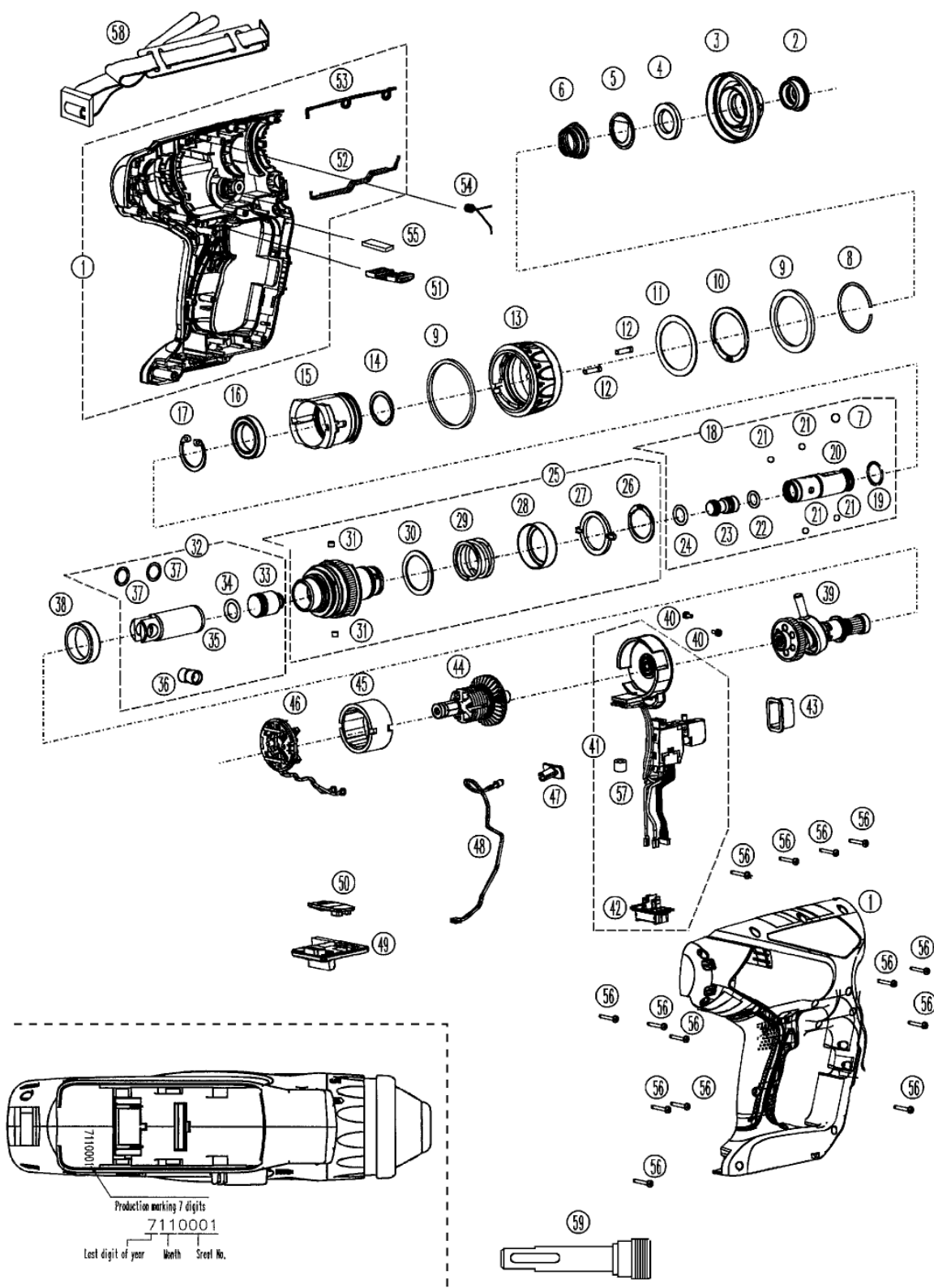


6 Schematic Diagram



7 Exploded View and Replacement Parts List

Model No. : EY7840 Exploded View



Model No. : EY7840 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	1	WEY7840K3079	HOUSING AB SET	1	(for EUROPE)
	1	WEY7840K3070	HOUSING AB SET	1	(for OCEANIA)
	2	WEY6813H3116	CHUCK COVER	1	
	3	WEY6803K3127	CHUCK HANDLE	1	
	4	WEY6813L0426	BALL GUIDE	1	
	5	WEY6813L0436	CHUCK SPRING STRIKE PLATE	1	
	6	WEY6813L0916	CHUCK SPRING	1	
	7	WEY6813L1916	STEEL BALL	1	($\phi 7$)
	8	WEY6803L1167	C-TYPE RING	1	
	9	WEY6803L3137	FELT	1	
	10	WEY6803L0467	SNAP RING	1	
	11	WEY6803L0857	THRUST PLATE	1	
	12	WEY6803L1707	LOCK PIN	2	(2PCS/PK)
	13	WEY7840H3227	CLUTCH HANDLE	1	
	14	WEY6813L0477	SNAP RING	1	
	15	WEY6803Y3297	CLUTCH CASE	1	
	16	WEY6813L4957	BALL BEARING	1	
	17	WEY6803L0477	SNAP RING	1	
	18	WEY6803L4067	SPINDLE ASSEMBLY	1	
	19	WEY6813L0317	O RING	1	
	20	WEY6803L0057	SPINDLE	1	
	21	WEY6813L1926	STEEL BALL	4	($\phi 5$), (4PCS/PK)
	22	WEY6813L0327	O RING	1	
	23	WEY6803L1237	STRIKER	1	
	24	WEY6813L0347	O RING	1	
	25	WEY7840L4907	CLUTCH ASSEMBLY	1	
	26	WEY6803L0257	SNAP RING	2	(2PCS/PK)
	27	WEY6803L0087	CLICK PLATE	1	
	28	WEY6803L0017	ADJUST RING	1	
	29	WEY7840L0167	CLUTCH SPRING	1	
	30	WEY6803L0867	THRUST PLATE	1	
	31	WEY6813L0907	PIN	4	($\phi 5 \times 4$), (4PCS/PK)
	32	WEY7840L1247	PISTON ASSEMBLY	1	
	33	WEY6803L4627	HAMMER	1	
	34	WEY6803L0977	O RING	1	
	35	WEY6803L1987	PISTON	1	
	36	WEY7840L1257	UNIVERSAL COUPLING	1	
	37	WEY6812L0846	THRUST PLATE	2	(2PCS/PK)
	38	WEY6803L0387	NEEDLE BEARING	1	
	39	WEY6803L4057	INTERMEDIATE SHAFT ASSEMBLY	1	
	40	WEY6261B6026	SCREW	2	(K3-6)
	41	WEY7840L2007	SWITCH ASSEMBLY	1	
	42	WEY7880L2157	BATTERY TERMINAL BASE	1	

Model No. : EY7840 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	43	WEY7840K3137	TRIGGER COVER	1	
	44	WEY7840L1467	MOTOR ROTOR ASSEMBLY	1	
	45	WEY7840L1187	MOTOR STATOR ASSEMBLY	1	
	46	WEY7840L2307	MOTOR BRUSH ASSEMBLY	1	
	47	WEY6803L2337	LED COVER	1	
	48	WEY7840L2337	LED LIGHT	1	
	49	WEY7840L2117	MAIN PCB ASSEMBLY	1	
	50	WEY7840K3338	OPERATION PANEL	1	
	51	WEY7880L3147	F/R HANDLE	1	
	52	WEY6803L3987	SEAL B	1	
	53	WEY6803L3997	SEAL A	1	
	54	WEY6803L0927	PISTON APPLYING POWER SPRING	1	
	55	WEY6803L0137	CUSHION RUBBER	1	
	56	WEY6230K9216	TORX TAPPING SCREW	14	(K3-20)
	57	WEY7840K0208	FERRITE CORE	1	
	58	WEY7880L3417	SHOULDER STRAP	1	[SH]
	59	WEY9HX403	BIT ADAPTOR	1	
	-	WEY9L40R2788	BATTERY PACK COVER	1	[SH]
	-	WEY9637K7018	TOOL CASE	1	[SH]
	-	WEY7840K8109	OPERATING INSTRUCTIONS	1	[SH]