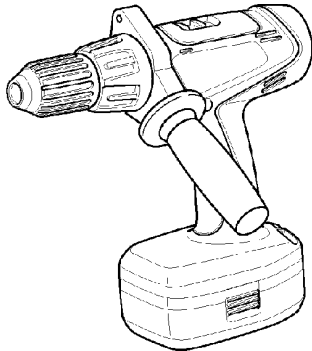


Service Manual

Cordless Hammer Drill Driver

EY6950-X8



SPECIFICATIONS

MAIN UNIT

Motor		DC Motor 18V	
Capability	Screw driving	Wood screw	ϕ 4.2mm (3/16") x 75mm (3")
		Self-drilling screw	ϕ 3mm (1/8") x 13mm (1/2") SPC t = 1.6mm (1/16")
		Masonry screw	ϕ 6.5mm (1/4") x 35mm (1-3/8") Soft concrete, Soft brick, Mortar
	Drilling	Masonry	ϕ 13mm (1/2") x 40mm (1-9/16") Soft concrete, Soft brick, Mortar
		Wood	ϕ 50mm (2") Yellow pine t = 38mm (1-1/2")
	Metal	ϕ 13mm (1/2") SPC t = 1.6mm (1/16")	
No load speed		LOW	75-450/min (rpm)
		HIGH	250-1550/min (rpm)
Blows rate per minute		LOW	1400-8100/min (rpm)
		HIGH	4500-28000/min (rpm)
Chuck capacity		ϕ 1.5 – ϕ 13mm (1/16" – 1/2")	
Chuck stage	Stage 1-15	Approx. 2Nm (20kgf-cm, 18in-lbs.) - 12Nm (122kgf-cm, 106in-lbs.)	
		For powerful driving and drilling.	
		Percussion	
Overall length		255mm (10")	
Weight (with battery pack)		2.7kg (5.9lbs.)	

WARNING

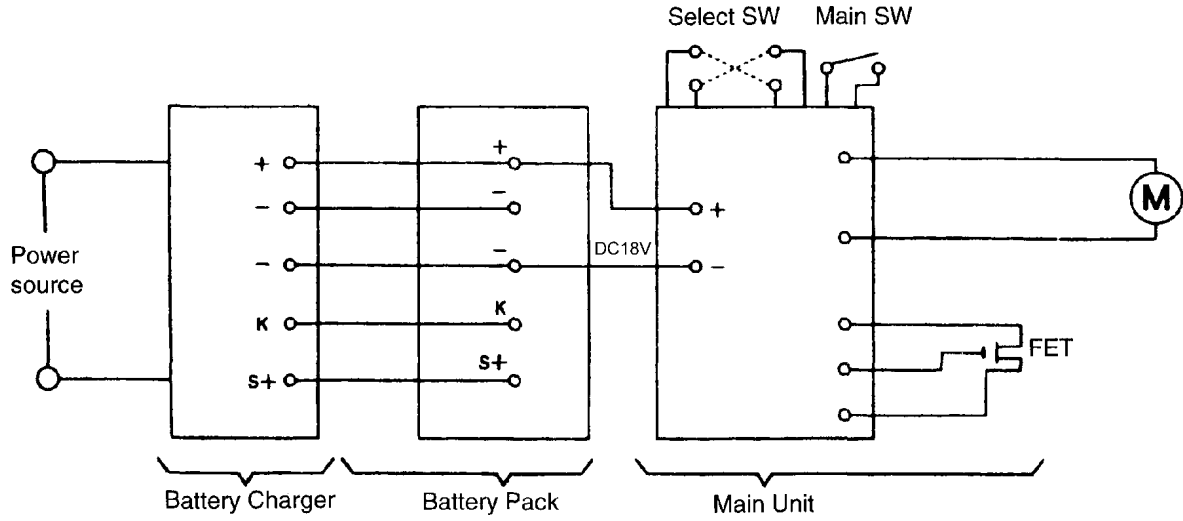
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should 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.

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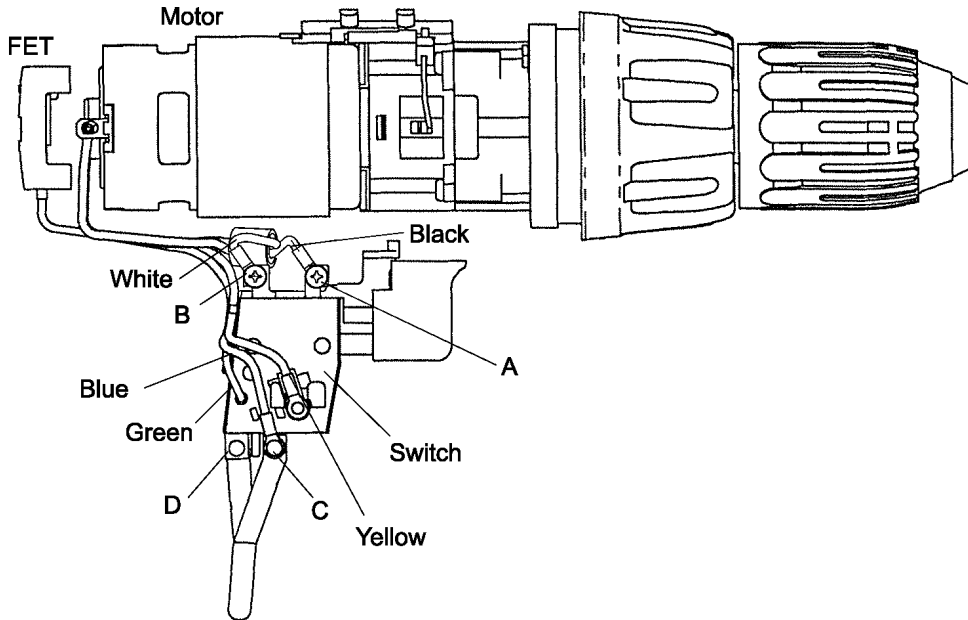
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1 SCHEMATIC DIAGRAM

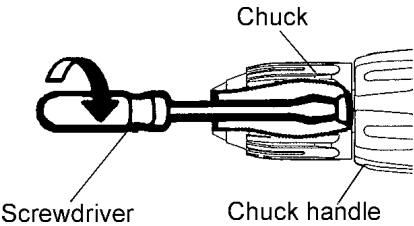
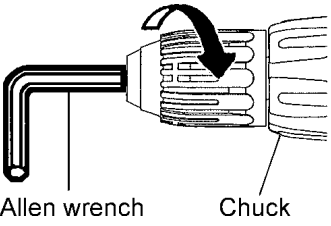
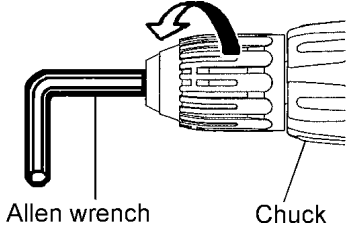


2 WIRING CONNECTION DIAGRAM

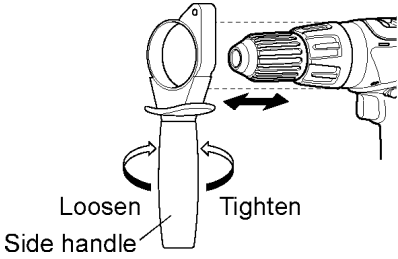
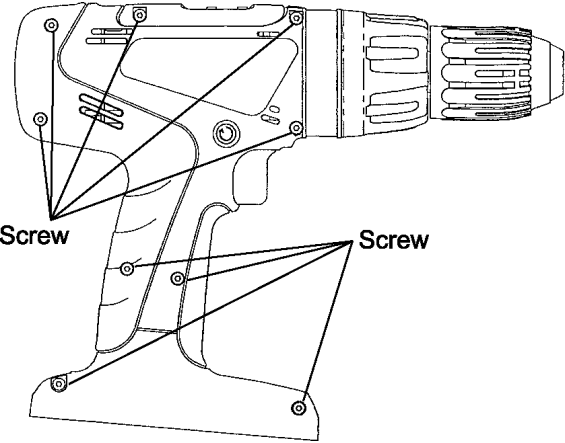
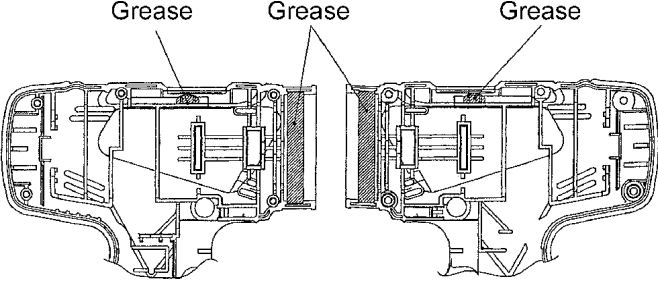


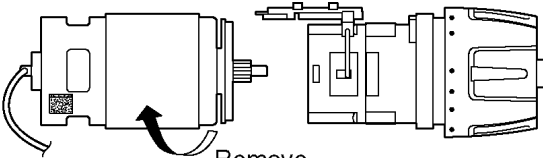
3 DISASSEMBLY/ASSEMBLY INSTRUCTIONS

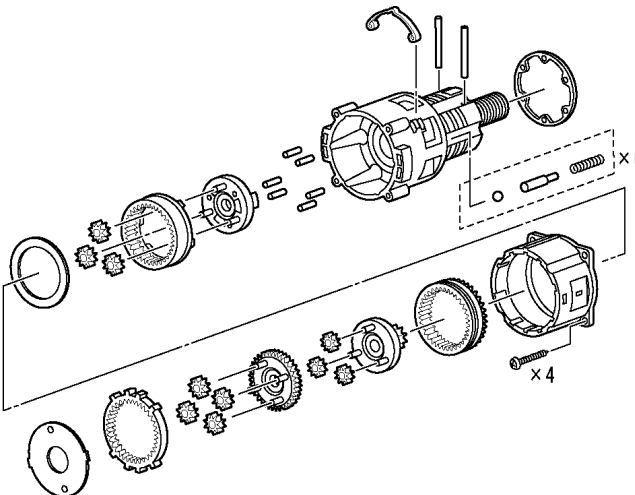
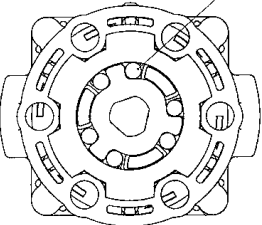
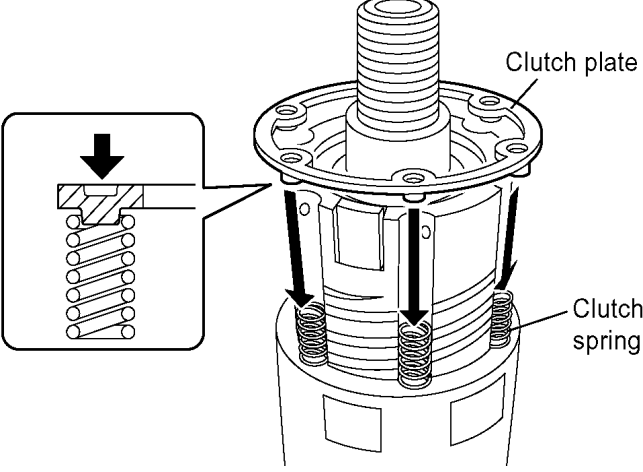
■HOW TO DISASSEMBLE KEYLESS CHUCK.

Ref. No. 1A	Procedure 1A	Removal of the Keyless Drill Chuck.
	 <p data-bbox="464 573 520 598">Fig. 1</p>  <p data-bbox="464 887 520 911">Fig. 2</p>  <p data-bbox="464 1200 520 1225">Fig. 3</p>	<p data-bbox="850 239 1267 264">Removal of the Keyless Drill Chuck.</p> <ol data-bbox="850 273 1513 416" style="list-style-type: none"> 1. Set the clutch handle to position 1 and select "LOW" position. 2. Turn the lock collar counterclockwise direction to open the chuck jaws. 3. Use a screwdriver to turn the chuck fastening screw inside the chuck clockwise direction of the arrow, and remove the screw. (See Fig. 1) <p data-bbox="850 416 935 441">NOTE :</p> <p data-bbox="887 441 1489 539">If the chuck fastening screw will not come loose, insert the allen wrench into the chuck and lightly tap in the clockwise direction with a hammer to tighten the chuck, and then loosen the chuck fastening screw. (See Fig. 2)</p> <ol data-bbox="850 551 1513 622" style="list-style-type: none"> 4. Insert the allen wrench into the chuck, and turn counterclockwise direction in the arrow with holding the unit by the vise to remove the chuck. (See Fig. 3)

■ HOW TO DISASSEMBLE MAIN UNIT.

Ref. No. 2A	Procedure 2A	Removal of the Housing.
	 <p data-bbox="395 555 459 584">Fig. 4</p>  <p data-bbox="395 1077 459 1106">Fig. 5</p>	<p data-bbox="772 208 1062 237">Removal of the Housing.</p> <ol data-bbox="772 244 1214 293" style="list-style-type: none"> 1. Remove the side handle. (See Fig. 4) 2. Remove nine housing screws. (See Fig. 5) <p data-bbox="772 293 863 315">NOTE :</p> <p data-bbox="810 315 1430 365">Grease rubbing part of housing with Shell Alvania for assembly. (See Fig. 6)</p>  <p data-bbox="1086 689 1145 719">Fig. 6</p>

Ref. No. 2B	Procedure 2A → 2B	Removal or attachment of the Motor.
	 <p data-bbox="395 1417 459 1447">Fig. 7</p>	<p data-bbox="772 1158 1203 1187">Removal or attachment of the Motor.</p> <p data-bbox="772 1193 874 1216">(Removal)</p> <ol data-bbox="772 1216 1430 1288" style="list-style-type: none"> 1. Take out the motor with the gear box block from housing. 2. Separate the motor from the gear box block by twisting the motor to unlock tabs. (See Fig. 7) <p data-bbox="772 1310 900 1332">(Attachment)</p> <ol data-bbox="772 1332 1430 1382" style="list-style-type: none"> 3. Motor mounting base and the positioning rib of gear case should be set.

Ref. No. 2C	Procedure 2A → 2B → 2C	Removal or attachment of the Gear Box Block.
		<p>(Removal)</p> <ol style="list-style-type: none"> 1. Turn the thrust plate to remove. 2. The internal parts of gear box block can be removed one after another. (See Fig. 8) <p>(Attachment)</p> <ol style="list-style-type: none"> 1. Start from inserting 6 pins into the driving block as shown in the Fig. 9. 2. Assemble the other parts in reverse order as shown in the Fig. 8. 3. Install steel balls, pins and clutch springs into 6 holes. (See Fig. 10) <p>NOTE: Carrier, Ring gear, and Clutch plate have their own correct directions for proper assembly.</p>
<p>Fig. 8</p> <p>Pins(6pcs)</p>  <p>Driving block</p> <p>Fig. 9</p>		
 <p>Clutch plate</p> <p>Clutch spring</p> <p>Fig. 10</p>		

Ref. No. 2D

Procedure 2D

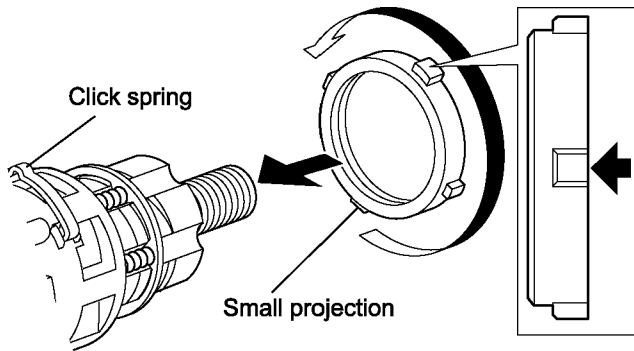
Assembly of the Adjusting Screw and the Clutch Handle.

Fig. 11

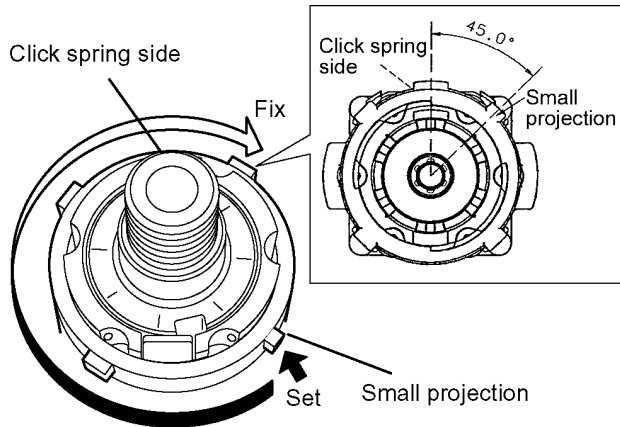


Fig. 12

1. Hold the driving block with the click spring on top, and align the smallest projection of adjusting screw with the clutch case at 5 o'clock position.

NOTE:

Make sure that the adjusting screw has its own correct direction for proper assembly.

Failure to do so, the clutch handle does not rotate properly. (See Fig. 11)

2. Turn the adjusting screw into the driving block about 255° rotation (at 2 o'clock position) for clockwise direction. (See Fig. 12)

3. Insert 2 pins and set each length on top and bottom should be same. (See Fig. 13)

4. Set the clutch handle with position 1 on top. (See Fig. 14)

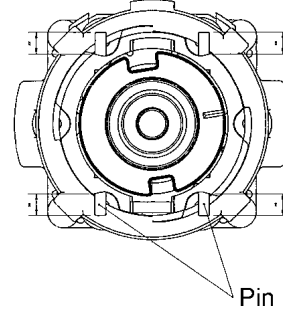


Fig. 13

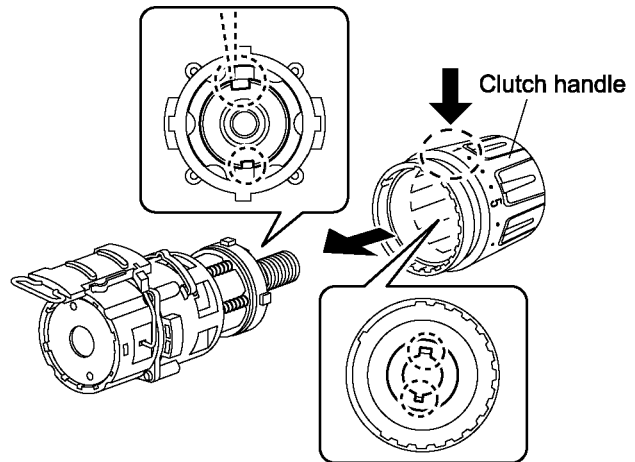


Fig. 14

Ref. No. 2E

Procedure 2A → 2B → 2C → 2D → 2E

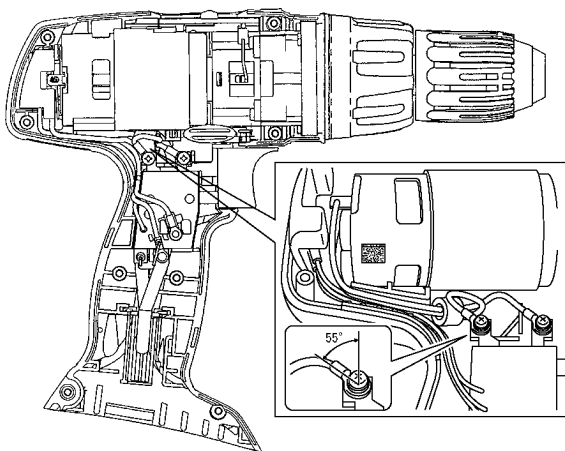
Assembly of the Switch.

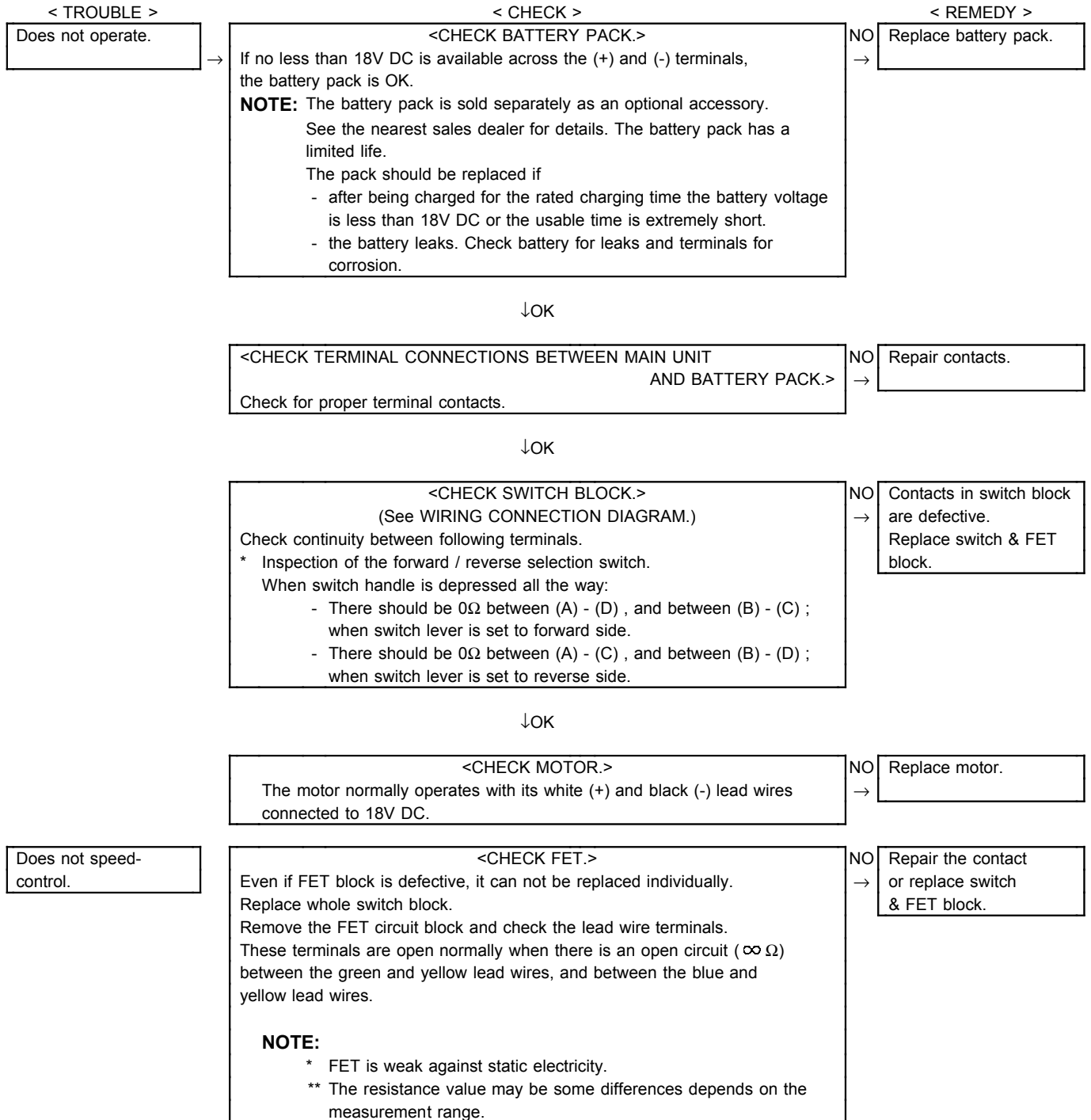
Fig. 15


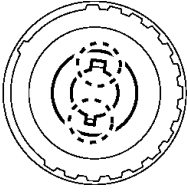

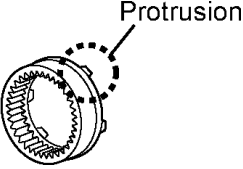
1. Press fit the lead wires firmly and set the black lead wire on top.

2. Connect the switch with the white and black lead wire at 55° position. (See Fig. 15)

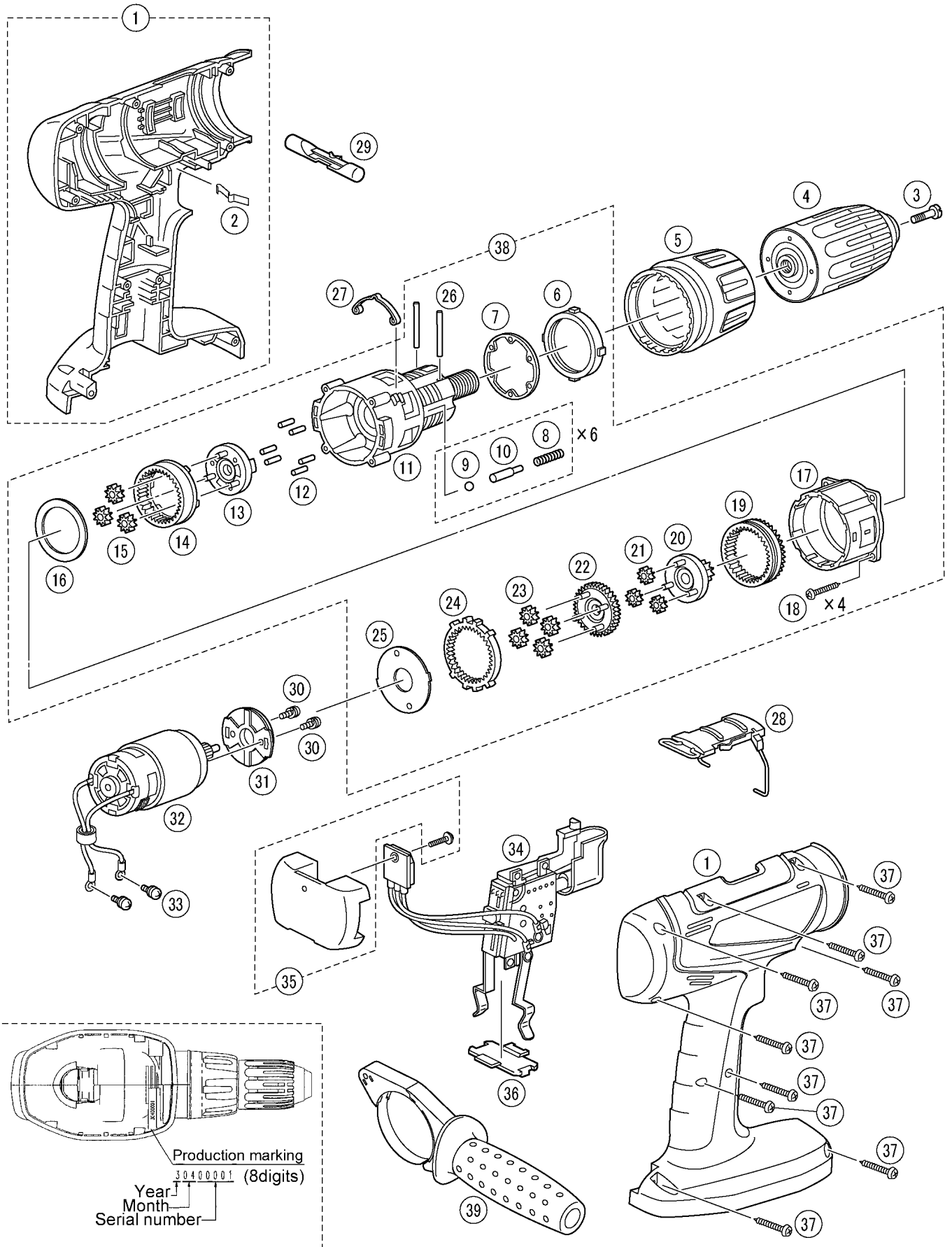
4 TROUBLESHOOTING GUIDE

(Refer to WIRING CONNECTION DIAGRAM)



< TROUBLE >	< CHECK >	< REMEDY >	
Does not vibrate. (When setting clutch handle to )	<p data-bbox="603 159 901 181"><CHECK CLUTCH HANDLE.></p> <p data-bbox="368 188 1034 241">Check the condition of inside of clutch handle if two projections were broken or not.</p> 	NO → Replace clutch handle.	
Weakness of vibration. (When setting clutch handle to )	<p data-bbox="608 533 896 555"><CHECK DRIVING BLOCK.></p> <p data-bbox="368 562 826 584">Check wear condition of driving shaft and cam.</p>	NO → Replace driving block.	
Weakness of clutch operation.	<p data-bbox="632 703 873 725"><CHECK RING GEAR.></p> <p data-bbox="368 732 895 754">Check wear condition of protrusion parts of ring gears.</p> 	NO → Replace ring gear.	
↓OK			
<p data-bbox="608 1137 896 1160"><CHECK CLUTCH SPRING.></p> <p data-bbox="395 1167 890 1220">Check wear condition of 6 pieces of clutch springs. connected to 18V DC.</p>			NO → Replace clutch springs.
↓OK			
<p data-bbox="587 1305 917 1328"><CHECK ADJUSTING SCREW.></p> <p data-bbox="395 1335 970 1366">Check wear condition of projection parts of adjusting screw.</p>			NO → Replace adjusting screw.
↓OK			
<p data-bbox="632 1480 873 1503"><CHECK GEAR CASE.></p> <p data-bbox="395 1509 975 1541">Check wear condition of gear case if it is cracked or broken.</p>			NO → Replace gear case.

5 EXPLODED VIEW



6 REPLACEMENT PARTS LIST

NOTE:

*B=only available as set

*C=available individually

Ref.No.	Part No.	Part Name & Description	Remarks		Per Unit
1	WEY6950K3079	HOUSING AB SET		for EUROPE	▲ 1
1	WEY6950K3070	HOUSING AB SET		for OCEANIA	▲ 1
2	WEY6481L0177	CLICK SPRING			▲ 1
3	WEY6450L6808	CHUCK FASTENING SCREW			▲ 1
4	WEY6950K7918	KEYLESS CHUCK			▲ 1
5	WEY6950Y3228	CLUTCH HANDLE			▲ 1
6	WEY6450L0638	ADJUSTING SCREW			▲ 1
7	WEY6450L0578	CLUTCH PLATE			▲ 1
8	WEY6450L0168	CLUTCH SPRING	*B	(6pcs/PK)	▲ 6
9	WEY6813L1927	STEEL BALL	*B	(6pcs/PK) $\phi 5$	▲ 6
10	WEY6450L0388	PIN	*B	(6pcs/PK) $\phi 5.3 \times 20.3$	▲ 6
11	WEY6950L1078	DRIVING BLOCK			▲ 1
12	WEY6283L0377	PIN	*B	(6pcs/PK) $\phi 3.175 \times 7.2$	▲ 6
13	WEY6901L1107	CARRIER			▲ 1
14	WEY6450L1488	RING GEAR			▲ 1
15	WEY6450L1348	PLANET GEAR	*B	(3pcs/PK)	▲ 3
16	WEY6450L0858	THRUST PLATE			▲ 1
17	WEY6450L1768	GEAR CASE			▲ 1
18	WEY6406K9038	TORX TAPPING SCREW	*C	K3-12	▲ 4
19	WEY6450L1128	CARRIER A			▲ 1
20	WEY6450L1358	PLANET GEAR A	*B	(3pcs/PK)	▲ 3
21	WEY6200B1468	RING GEAR B			▲ 1
22	WEY6950L1118	CARRIER			▲ 1
23	WEY6950L1478	RING GEAR			▲ 1
24	WEY6230L1367	PLANET GEAR	*B	(4pcs/PK)	▲ 4
25	WEY6450L0868	THRUST PLATE			▲ 1
26	WEY6950L0358	PIN	*B	(2pcs/PK)	▲ 2
27	WEY6450L0178	CLICK SPRING A			▲ 1
28	WEY6450Y3238	H/L CHANGE HANDLE			▲ 1
29	WEY6405Y3248	F/R SELECTOR HANDLE			▲ 1
30	WEYT184L6077	SCREW	*C	K4-6	▲ 2
31	WEY6450L0028	MOTOR MOUNTING PLATE			▲ 1
32	WEY6450L1009	DC MOTOR			▲ 1
33	WEY6450S6028	SEMS SCREW	*C	K3-5	▲ 2
34	WEY6950Y2008	SWITCH			▲ 1
35	WEY6406L2568	HEAT SINK		with a screw	▲ 1
36	WEY6230L0207	DUST PREVENTIVE PLATE			▲ 1
37	WEY6230K9218	TORX TAPPING SCREW	*C	K3-20	▲ 9
38	WEY6950L1458	GEAR BOX BLOCK			▲ 1
39	WEY6450K4628	SIDE HANDLE			▲ 1
-	WEY9517K7018	TOOL CASE			▲ 1
-	WEY6950K8109	OPERATING INSTRUCTIONS			▲ 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.