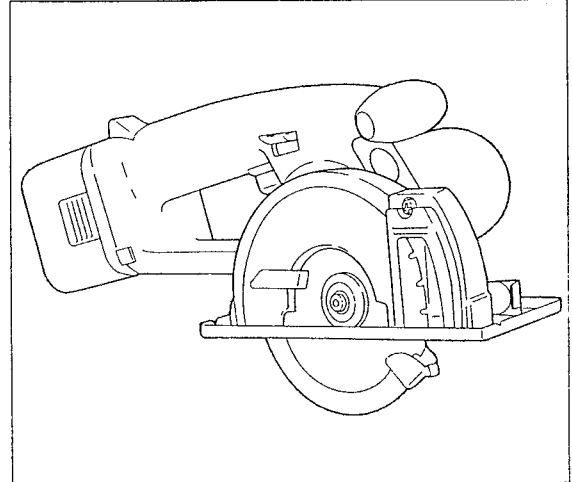


# Service Manual

Cordless Metal Cutter  
**EY3502**

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## SPECIFICATIONS

### METAL CUTTER

Motor voltage		: 12V DC
Blade speed		: 3,400 min <sup>-1</sup> (RPM)
Blade size	Outside diameter	: 110mm, 4-3/8"
	Mounting hole	: 20mm
Maximum cutting depth		: 36mm, 1-13/32"
Dimensions	Length	: 325mm, 12-51/64"
	Width	: 178mm, 7"
	Height	: 172mm, 6-49/64"
Mass (Weight)		: 2.4kg, 5.3lbs. including battery pack

### BATTERY PACK

Storage battery	: Ni-Cd battery
Battery voltage	: 12V DC ( 1.2V × 10 cells )
Battery life	: Approx. 1,200 cycles (1cycle = 1 charge / 1 discharge)

### BATTERY CHARGER

Input	: 120V AC
Mass	: 0.56kg, 1.2lbs.
Charging time	: Approx. 15/20 min.

### STANDARD EQUIPMENT

Battery charger, Battery pack, Blade, Hex wrench

# Panasonic

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**⚠ WARNING**

This service literature 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.

**DISASSEMBLY INSTRUCTIONS**

**■ HOW TO REMOVE THE BLADE.**

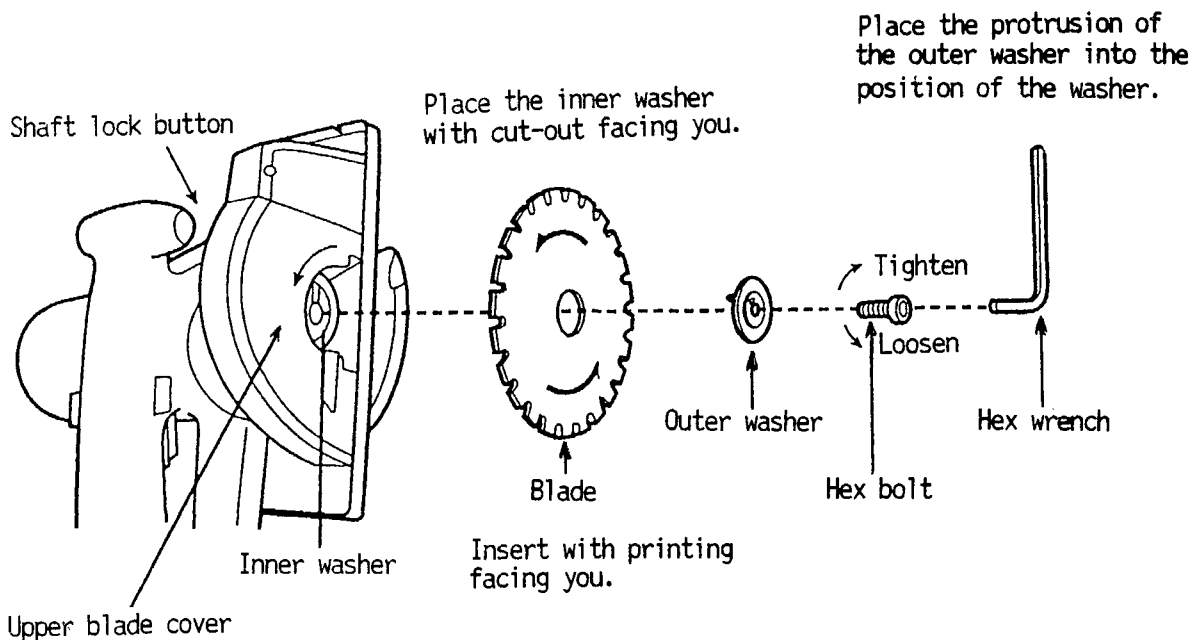
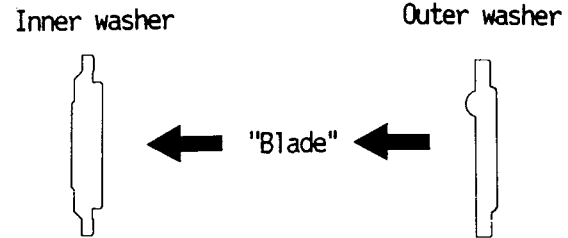
Ref. No. 1A	Procedure 1A	Removal or assembly of the blade.
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Note : Check if the battery pack is removed from the metal cutter.  
(Removal of the blade.)

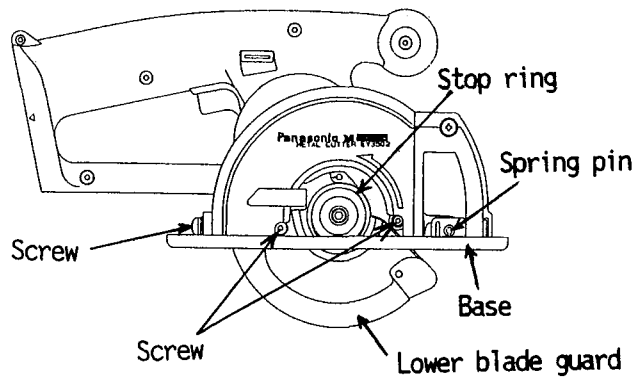
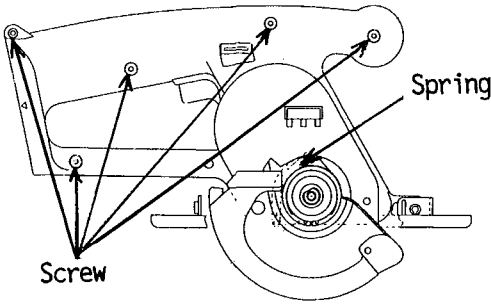
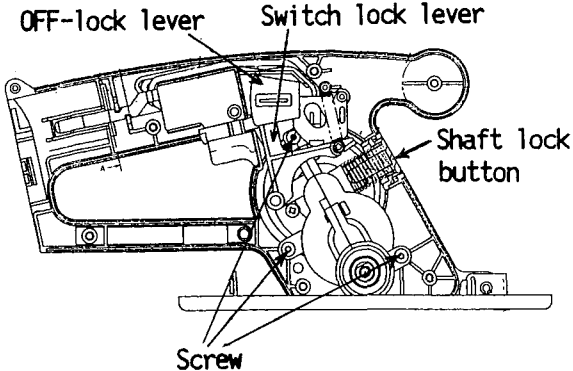
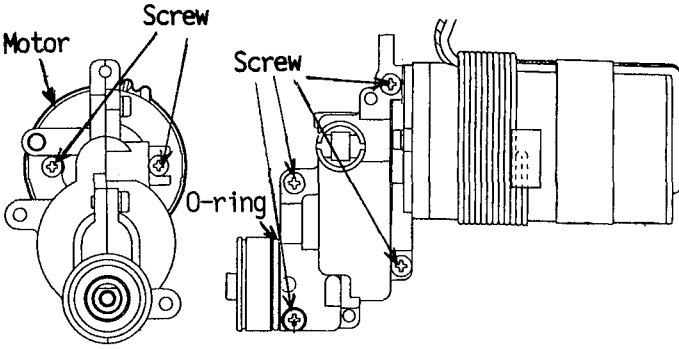
1. Hold the shaft lock button down. This prevents the blade from rotating.
2. Use the hex wrench provided to loosen the hex bolt.
3. Remove the hex bolt and outer washer.
4. Open the blade guard.
5. Carefully remove the blade.

(Note for assembly)

When assembling the inner washer and the outer washer, be sure to check the direction.



■ HOW TO DISASSEMBLE THE MAIN UNIT. (The main unit can be opened without disassembling the base.)  
 \* When disassembling the base, push out the spring pin with a rod having a diameter of 5mm.

Ref. No. 1B	Procedure 1B	Removal of the upper blade guard.
		<ol style="list-style-type: none"> <li>1. Loosen the screw.</li> <li>2. Remove the base slightly down.</li> <li>3. Remove the stop ring.</li> <li>4. Remove the lower blade guard.                      Note : When removing the lower blade guard from the housing, do not to lose the spring.</li> <li>5. Loosen the two screws which fasten the upper blade guard. And remove the upper blade guard by slightly lifting it.</li> </ol>
Ref. No. 2B	Procedure 1B → 2B	Removal of the housing.
		<ol style="list-style-type: none"> <li>1. Loosen the housing screws.                      Then it is possible to disassemble the main unit or to check the switch block and the motor.</li> </ol> <p>Note : Do not remove the spring except the case of the damage.                      It will cause the deformation.</p>
Ref. No. 3B	Procedure 1B → 2B → 3B	Removal of the driving block.
		<ol style="list-style-type: none"> <li>1. Remove the OFF-lock lever and the switch lock lever.</li> <li>2. Loosen the three screws which fasten the driving block.</li> <li>3. Take out the driving block pushing the shaft lock button.                      Note : The shaft lock button will pop out if it is not pushed.</li> </ol>
Ref. No. 4B	Procedure 1B → 2B → 3B → 4B	Removal of the gear box block.
		<ol style="list-style-type: none"> <li>1. Loosen the two screws which fasten the motor.</li> <li>2. Loosen the four screws which assemble the gear box block.</li> </ol>

**CAUTION FOR REASSEMBLY**

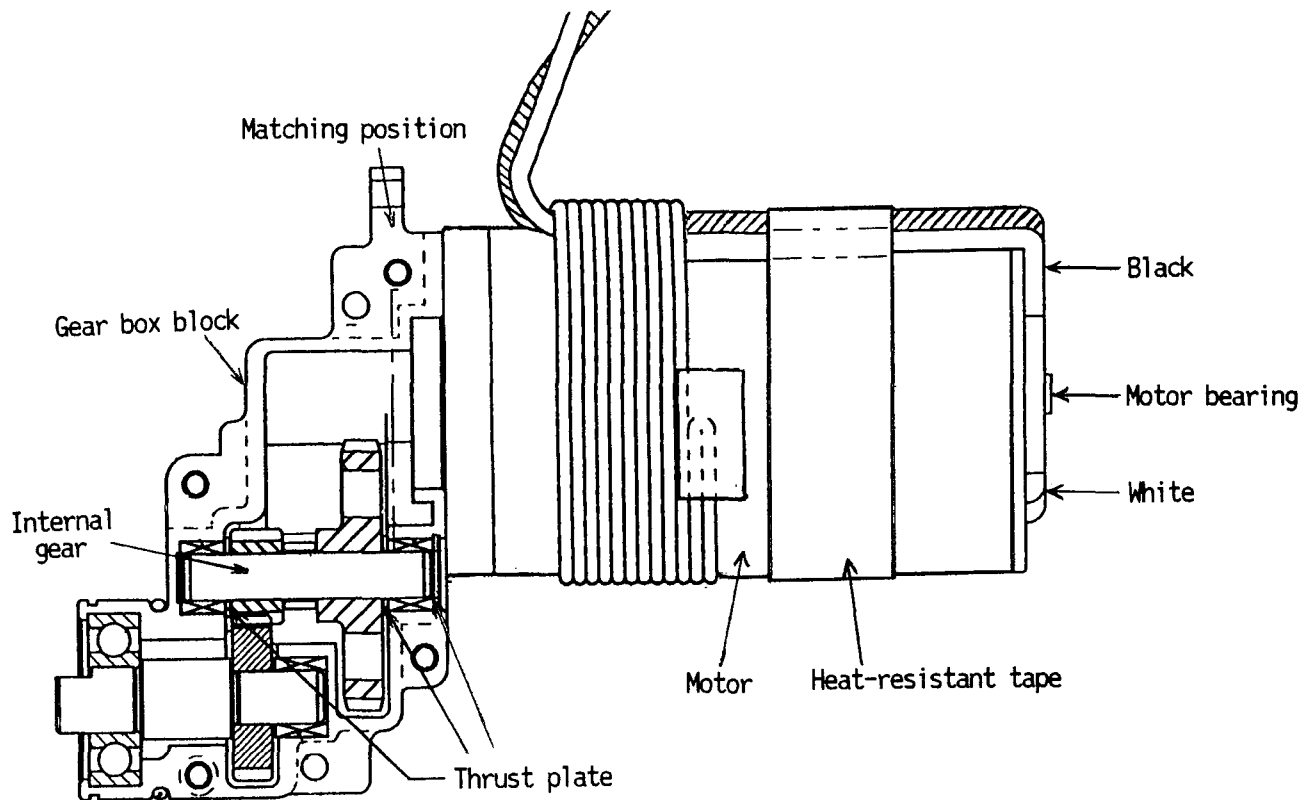
The proper operation of the "switch lock lever" is critical for the safe use and operation of the metal cutter. Be extra careful in re-assembling the unit and ensure that the "switch lock lever" and the "off-lock" are properly positioned. Verify the operation of the "switch lock lever" upon completing the re-assembly procedure. Ensure that the power switch can only be activated after depressing the "switch lock lever".

**ASSEMBLY INSTRUCTIONS**

■ HOW TO ASSEMBLE THE DRIVING BLOCK.

Ref. No. 1A	Procedure 1A	Assembly of the gear box block.
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1. Internal gear block which is inside the gear box block has three thrust plates, note proper positioning for reassembly. If thrust plates are not set, it is linked with the cause of the abnormal sounds.
2. Set the position of the black lead wire coming from the motor and the matching position of gear box block. Do not set the motor lead wires over the motor bearing. Fix the lead wires with the heat-resistant tape before reassembling.



Ref. No. 2A

Procedure 1A → 2A

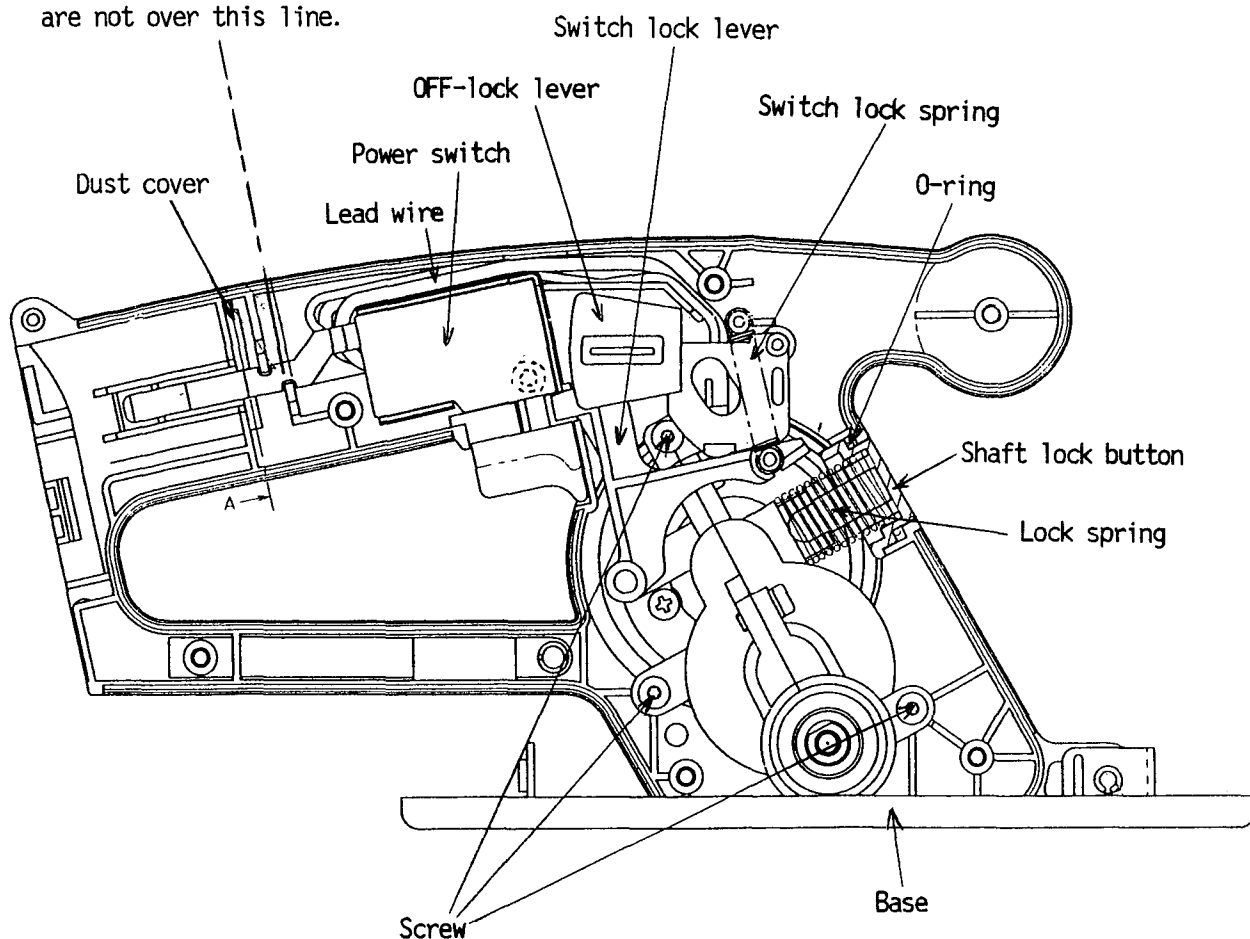
Assembly of the driving block.

1. When reassembling the gear box block into the housing, assemble the gear box block with setting lock spring and o-ring after checking the shaft lock button with correct direction for proper.
2. Attach the lead wire to the switch block.
3. Assemble the OFF-lock lever, the switch lock lever, and the switch lock spring.

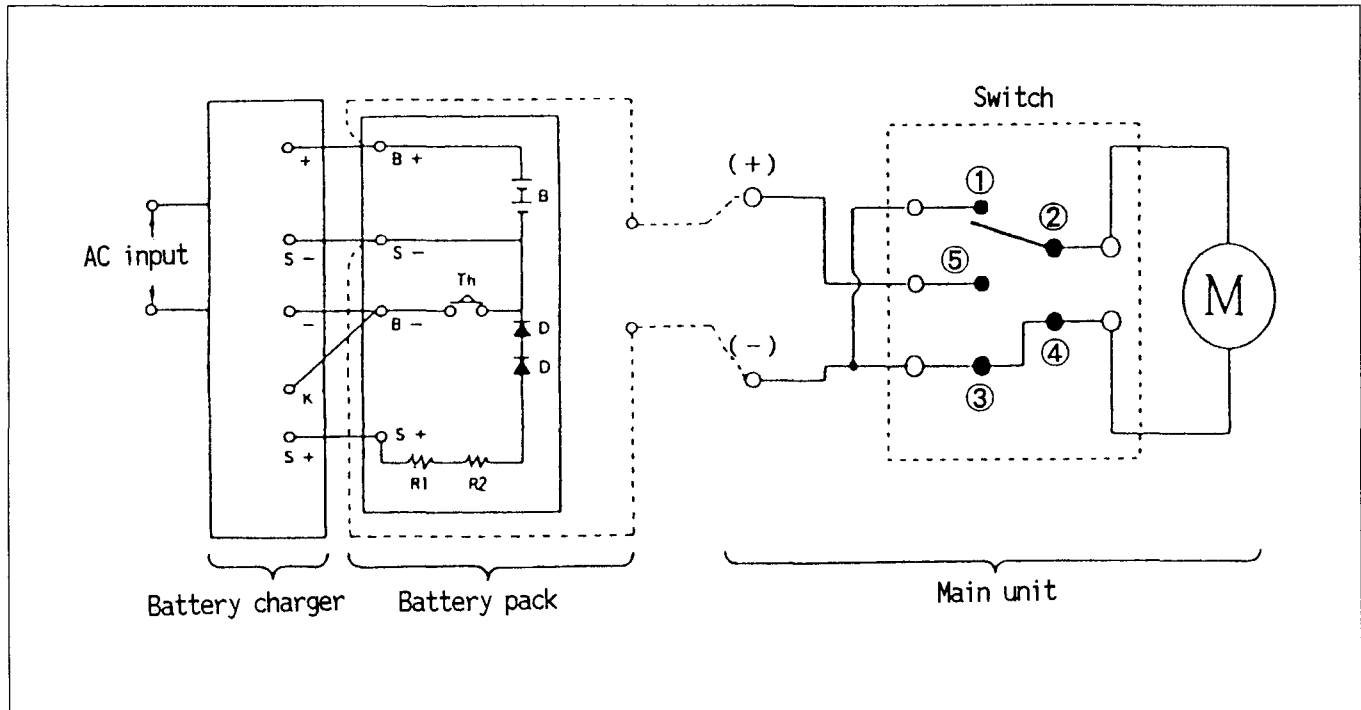
## (Check-Points)

1. Check the lead wires which they are mounted in a proper position.  
Note : If they are not mounted in a proper position, it is possible to break the wires by pinching the lead wires in the housings.
2. Check the lead wires whether they are not set on the screw bosses.
3. Check the lead wires whether they are over the housing ribs.
4. Check the battery contacts whether they are fitted in the housing or the dust cover.

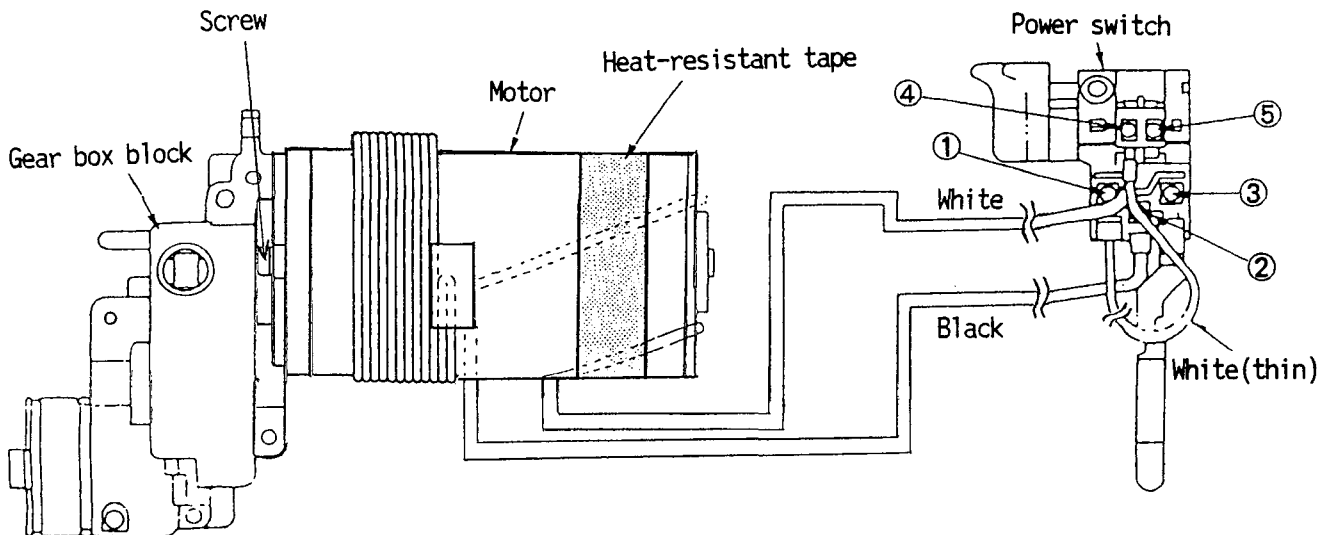
\* Confirm the proper position of the lead wires that they are not over this line.



SCHMATIC DIAGRAM



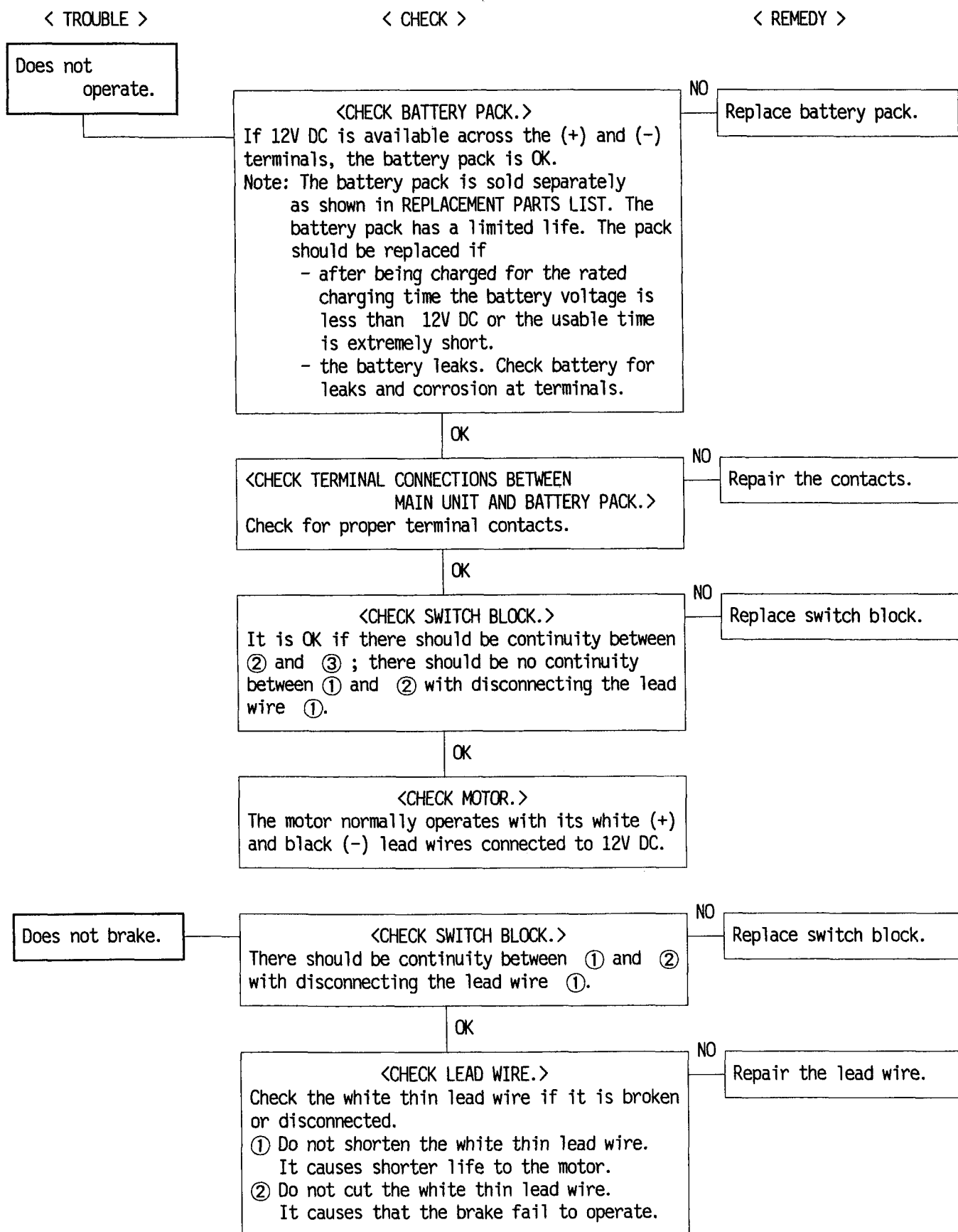
WIRING CONNECTION DIAGRAM



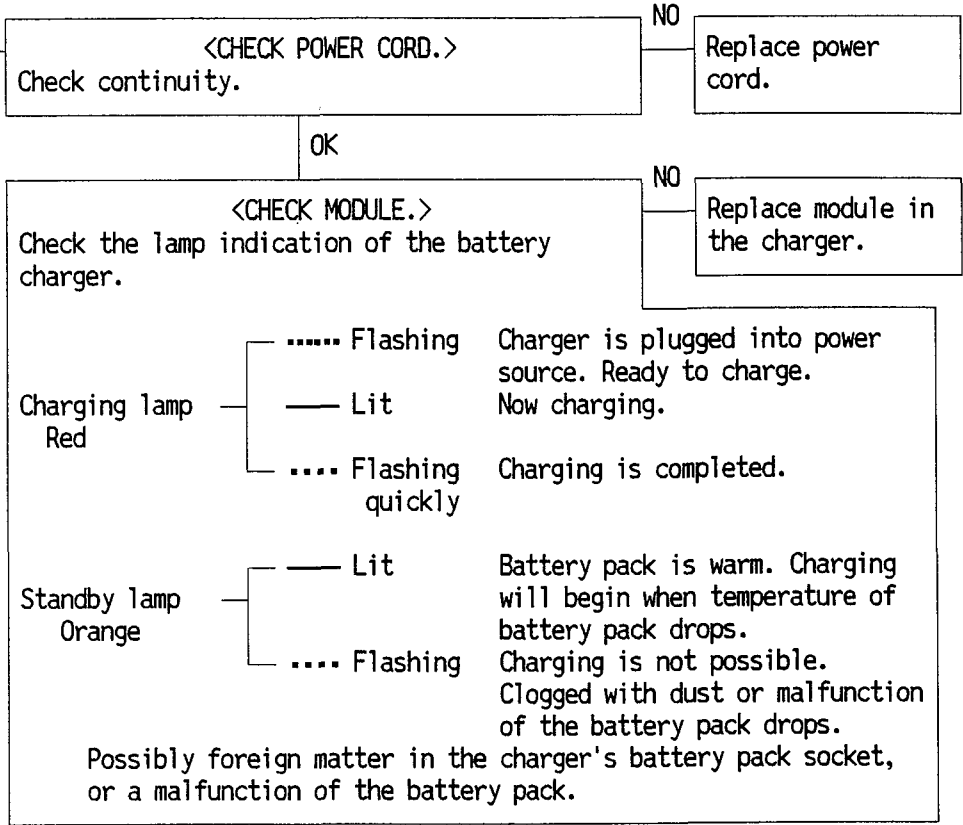
- \* The color of the lead wires may vary.
- \* Do not cut the white thin lead wire.

※ CAUTION ... Make sure that battery pack and blade are removed before checking or repair.

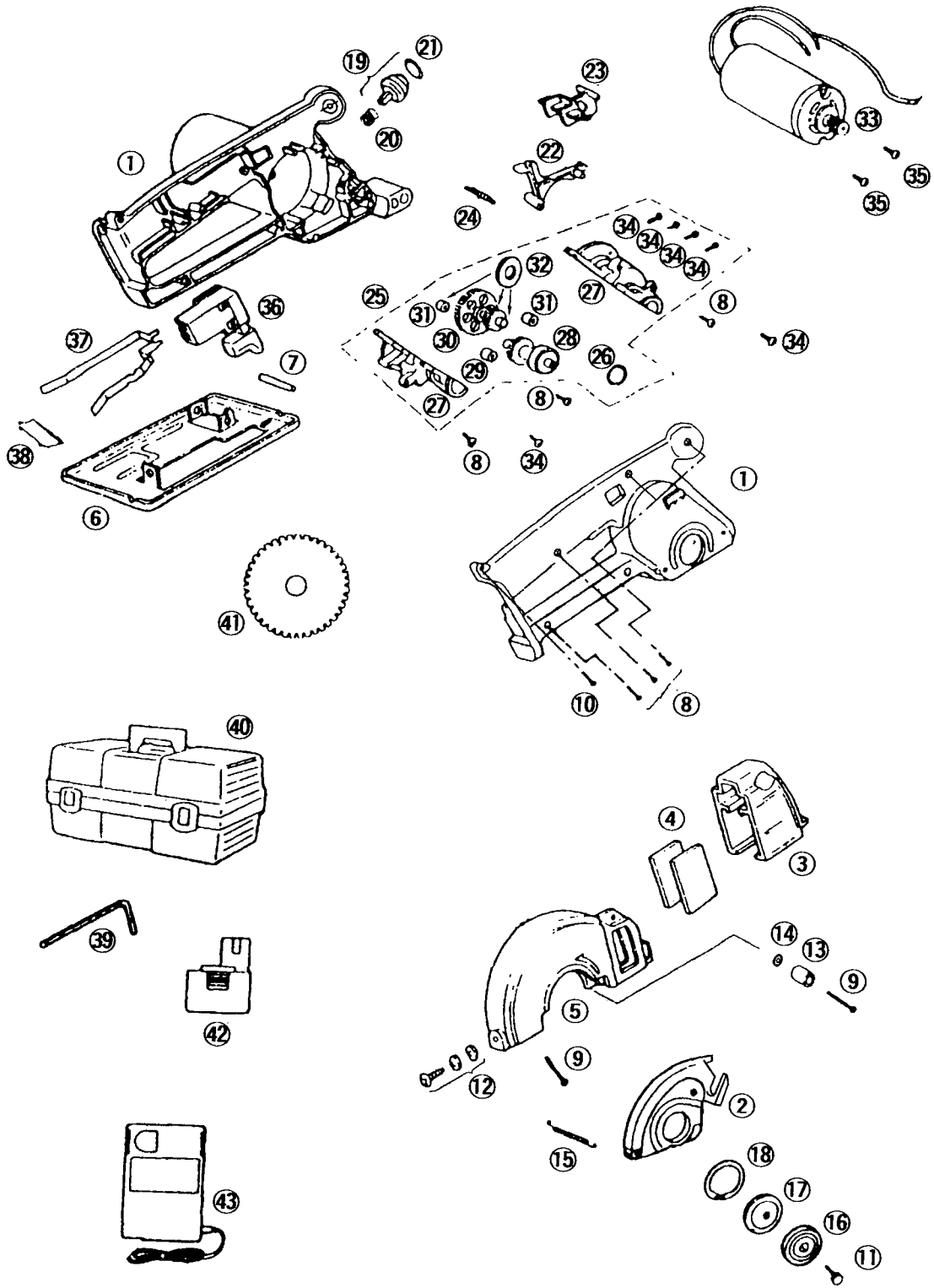
**TROUBLESHOOTING GUIDE ( Refer to WIRING CONNECTION DIAGRAM )**



Does not charge.



EXPLODED VIEW



## REPLACEMENT PARTS LIST

Ref No.	Parts No.	Parts Name & Descriptions	Per set	Remarks
Note : *A ... commercial available    *B ... only available as set    *C ... available individually				
1	EY3502K3078	HOUSING AB SET	1	
2	EY3502K1198	LOWER BLADE GUARD	1	
3	EY3502X3748	TRANSPARENT WINDOW	1	
4	EY3502X3518	GLASS PLATE	2	*B
5	EY3502K3108	UPPER BLADE GUARD	1	
6	EY3502S3428	BASE	1	
7	EY3500K0357	SPRING PIN	1	φ6-45
8	EY3502K9448	TAPPING SCREW	6	*C K4-20
9	EY3502K9438	TAPPING SCREW	2	*C K4-30
10	EY3502K9038	TAPPING SCREW	1	*C K3-12
11	EY3500K6257	HEX BOLT	1	M5-12
12	EY3501L6357	SCREW	1	M5-14
13	EY3500K0397	LOWER GUARD STOPPER	1	
14	EY3500Y6457	FLAT WASHER	1	
15	EY3502L0928	SPRING	1	φ4
16	EY3500K1178	OUTER WASHER	1	
17	EY3502K1168	INNER WASHER	1	
18	EY6800B0437	STOP RING	1	
19	EY3502Y0368	SHAFT LOCK BUTTON	1	
20	EY3500K0197	LOCK SPRING	1	
21	EY3500K0957	O-RING FOR SHAFT LOCK BUTTON	1	
22	EY3502Y3238	OFF LOCK LEVER	1	
23	EY3502Y1588	SWITCH LOCK LEVER	1	
24	EY3500K0917	SWITCH LOCK SPRING	1	
25	EY3502L1458	GEAR BOX BLOCK	1	
26	EY3500K0967	O-RING	1	
27	EY3502L1768	GEAR BOX SET	1	
28	EY3502L4698	OUTPUT GEAR	1	
29	EY3502L0388	BEARING A	1	φ8
30	EY3502L1438	INTERNAL GEAR	1	
31	EY3502L0378	BEARING B	2	*C φ7
32	EY3500K0847	THRUST PLATE	3	*C
33	EY3502L1008	MOTOR	1	
34	EY3500Y6067	SCREW	6	*C K4-12
35	EY3502S6048	SCREW	1	
36	EY3502Y2008	POWER SWITCH	1	
37	EY3500K0067	BATTERY CONTACTS	1	
38	EY3510L0207	DUST COVER	1	
39	EY3542B7867	HEX WRENCH	1	
40	EY9602	TOOL CASE	1	*A
41	EY9PM11C	BLADE	1	*A
42	EY9101	BATTERY PACK	1	*A
43	EY0202	BATTERY CHARGER	1	*A
-	EY3501K8238	SAFETY INSTRUCTIONS	1	
-	EY3502K8108	OPERATING INSTRUCTIONS	1	