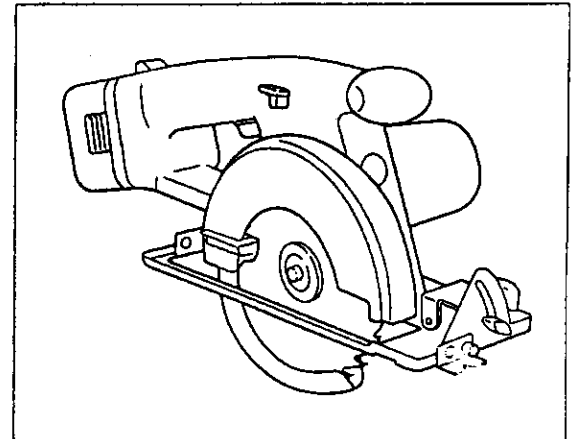


Service Manual

Cordless Wood Saw
EY3503

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SPECIFICATIONS

METAL CUTTER

Motor voltage	:	12V DC
Blade speed	:	3,400 min ⁻¹ (RPM)
Blade size	Outside diameter	: 135mm, 5-5/16"
	Mounting hole	: 20mm, 25/32"
Maximum cutting depth	:	3 ~ 46mm, 1/8 ~ 1-13/16" (φ135mm blade)
Dimensions	Length	: 365mm, 14-3/8"
	Width	: 201mm, 7-29/32"
	Height	: 181mm, 7-1/8"
	Cutting Angle	: 0 ~ 45°
Weight	:	2.7kg, 6.0lbs. 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
Weight	:	0.56kg, 1.21lbs.
Charging time	:	Approx. 15/20 min.

STANDARD EQUIPMENT

Battery charger, Battery pack, Blade, Hex wrench

⚠ 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.

Panasonic

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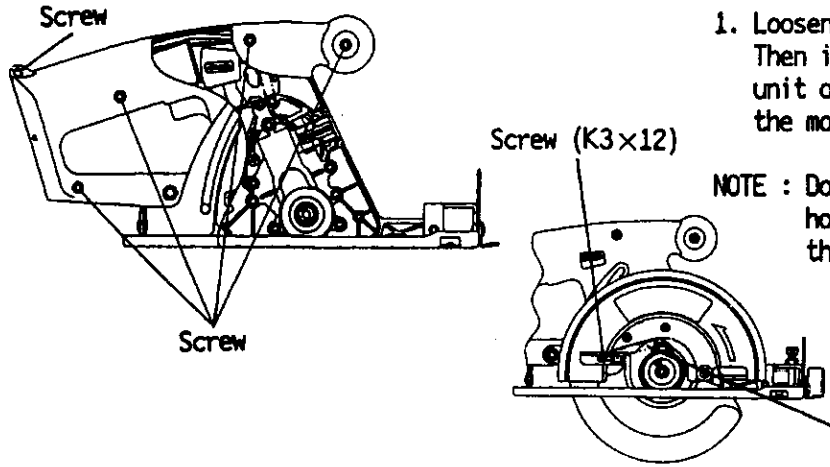
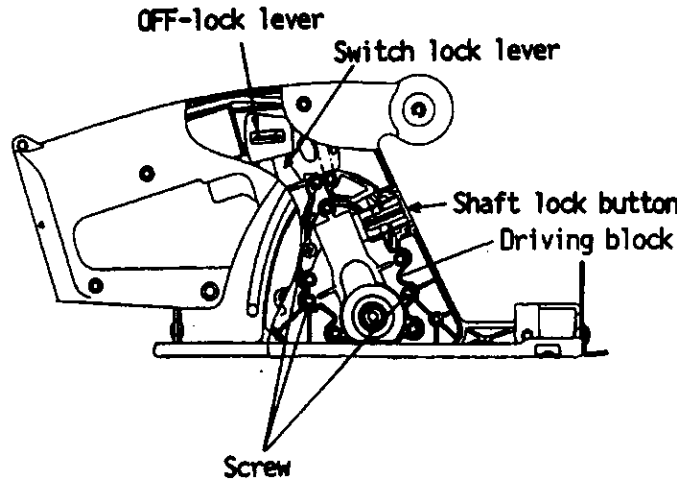
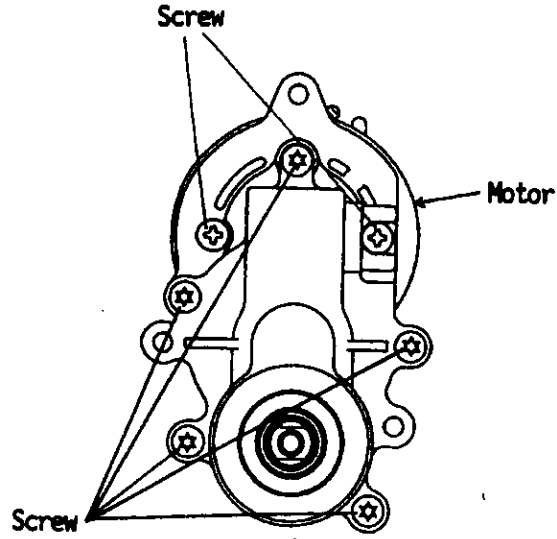
DISASSEMBLY INSTRUCTIONS

■ HOW TO REMOVE THE BLADE.

Ref. No. 1A	Procedure 1A	Removal or assembly of the blade.
<p>Note : Check if the battery pack is removed from the wood saw. (Removal of the blade.)</p> <ol style="list-style-type: none"> 1. Hold the shaft lock button down. This prevents the blade from rotating. 2. Use the provided hex wrench to loosen the hex bolt. 3. Remove the hex bolt and outer washer. 4. Use the lower guard lift lever to retract the lower guard. 5. Carefully remove the blade. 		
<p>(Note for assembly) When assembling the inner washer and the outer washer, be sure to check the direction.</p> <div style="text-align: center; margin: 10px 0;"> </div>		
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>Place the inner washer with cut-out facing you.</p> </div> <div style="text-align: center;"> <p>Place the protrusion of the outer washer into the position of the washer.</p> </div> </div>		

■ 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 lower and upper blade guard.
<ol style="list-style-type: none"> 1. Loosen the depth adjustment screw which is located under the grip of main unit, and three screws. 2. Loosen the hex bolt. 3. Remove the base slightly down. 4. Remove the stop ring. 5. Remove the lower and upper blade guard. <p>Note : When removing the lower blade guard from the housing, do not lose the spring.</p>		
<div style="display: flex; align-items: center;"> </div>		

Ref. No. 2B	Procedure 1B → 2B	Removal of the housing.
		<ol style="list-style-type: none"> 1. Loosen the housing screws. (Frearson type) Then it is possible to disassemble the main unit or to check the switch block and the motor. <p>NOTE : Do not remove the screw (K3*12) that holds the Spring (φ5.45×47) except in the case of damage.</p>
Ref. No. 3B	Procedure 1B → 2B → 3B	Removal of the driving block.
		<ol style="list-style-type: none"> 1. Remove the OFF-lock lever and the switch lock lever. 2. Loosen the three screws which fasten the driving block. 3. Take out the driving block pushing the shaft lock button. <p>Note : The shaft lock button will pop out if it is not pushed.</p>
Ref. No. 4B	Procedure 1B → 2B → 3B → 4B	Removal of the gear box block.
		<ol style="list-style-type: none"> 1. Loosen the two screws which fasten the motor. 2. Loosen the five screws which assemble the gear box block.

CAUTION FOR REASSEMBLY

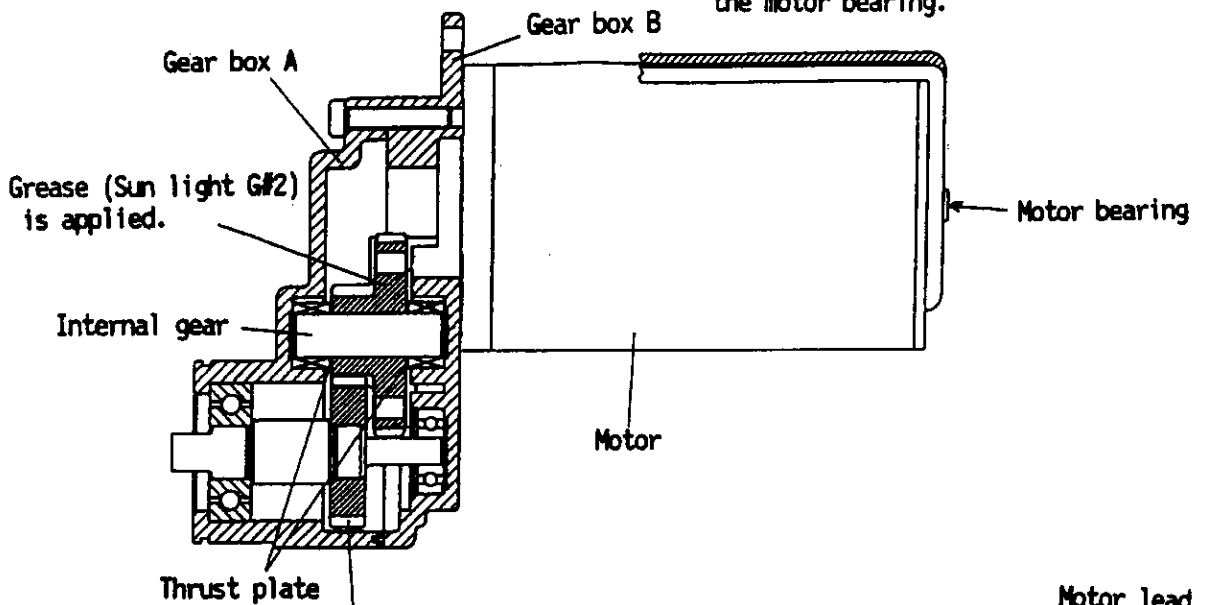
The proper operation of the "switch lock lever" is critical for the safe use and operation of the metal cutter. Be extra careful in re-assembling the unit and ensure that the "switch lock lever" and the "off-lock" are properly positioned. Verify the operation of the "switch lock lever" upon completing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

ASSEMBLY INSTRUCTIONS

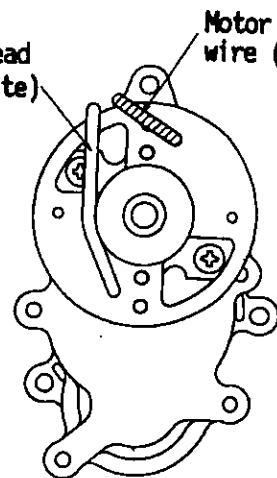
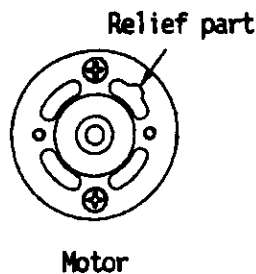
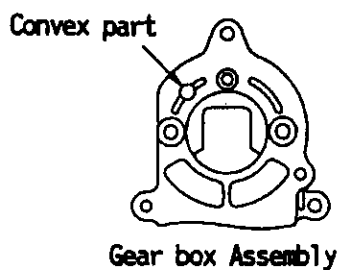
■ HOW TO ASSEMBLE THE DRIVING BLOCK.

Ref. No. 1A	Procedure 1A	Assembly of the gear box block.
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1. The internal gear block which is inside the gear box block has two thrust plates, note proper positioning for reassemble. If the thrust plates are not set, abnormal sounds may occur.
2. Align the convex part of gear box with the relief part of motor. Tighten two screw to assemble the gear box block with the motor. Do not set the motor lead wires over the motor bearing.



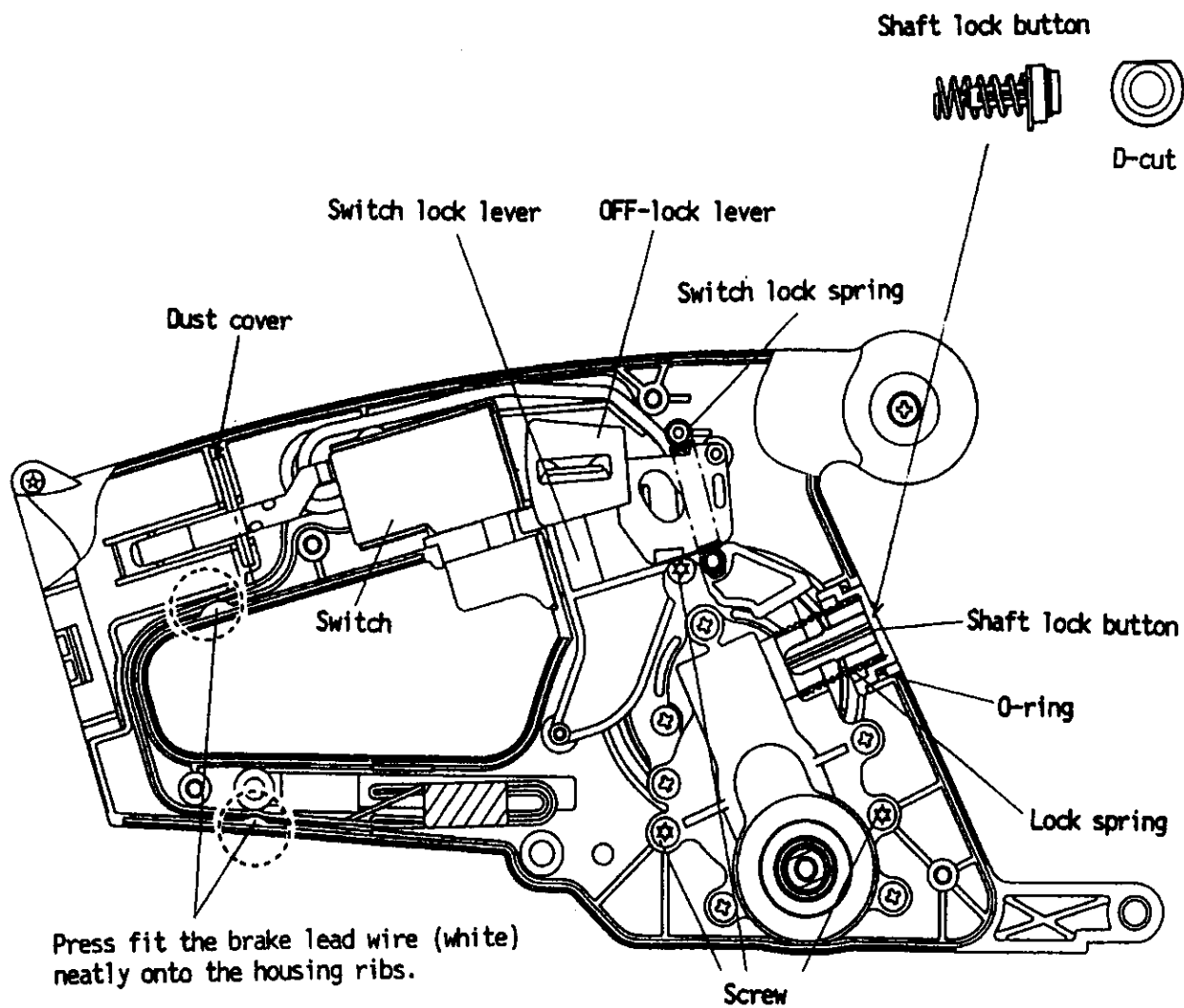
Grease (Sun light G#2) is applied.



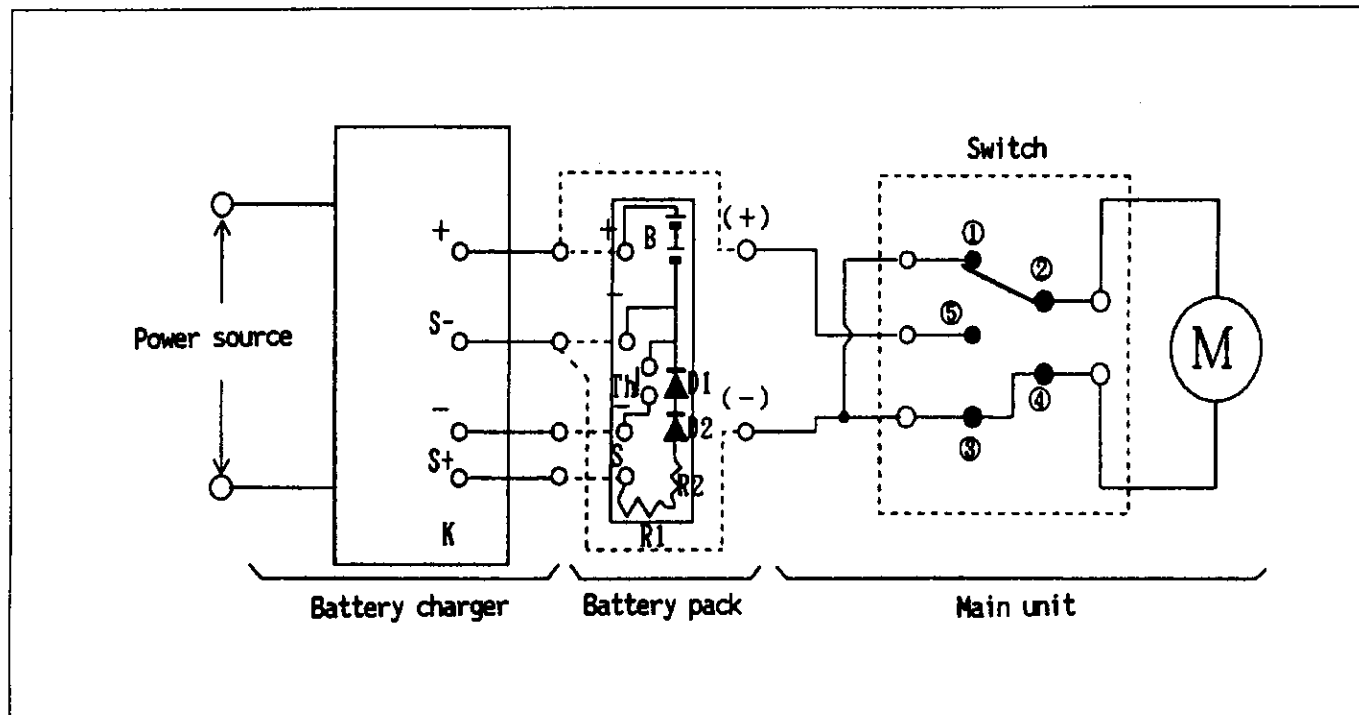
Ref. No. 2A	Procedure 1A → 2A	Assembly of the driving block.
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1. When reassembling the driving block into the housing, assemble the driving block while pushing the shaft lock button.
 Note : Confirm the direction of the shaft lock button.
 Align D-cut upwards.
2. Attach the white and black lead wires to the switch block.
3. Put the switch lock lever into the OFF-lock lever, then fit it to the housing boss. Fit the switch lock spring neatly to the housing boss and the switch lock lever boss.

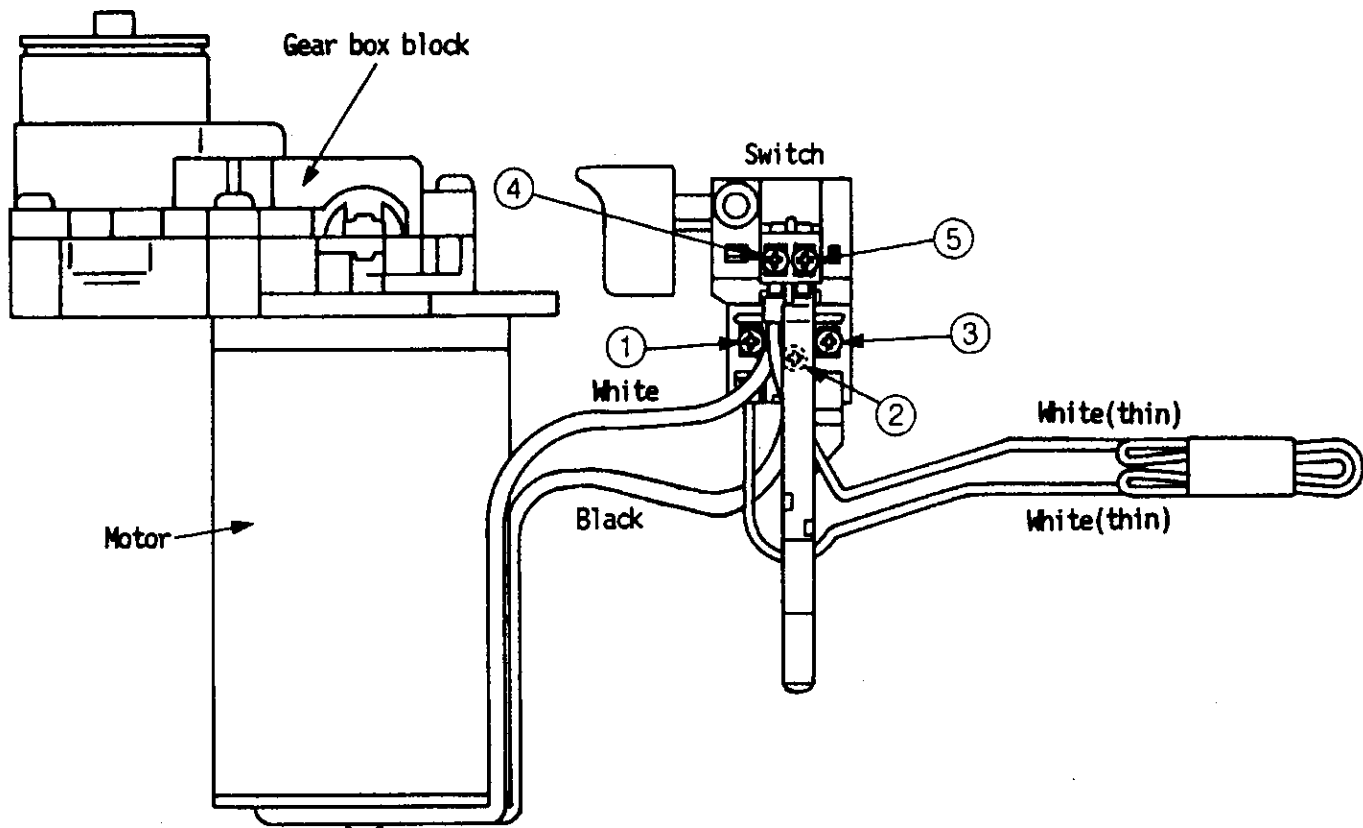
- (Check-Points)
1. Check the lead wires, be certain they are mounted in the proper position.
 Note : If they are not mounted in the proper position, it is possible to break the wires by pinching the lead wires in the housings.
 2. Check the lead wires, make sure they are not set on the screw bosses.
 3. Check the lead wires, make sure they are over the housing ribs.



SCHMATIC DIAGRAM



WIRING CONNECTION DIAGRAM



* 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)

< TROUBLE >

< CHECK >

< REMEDY >

Does not operate.

<CHECK BATTERY PACK.>
 If 12V DC is available across the (+) and (-) terminals, the battery pack is OK.
 Note: The battery pack has a limited life. The pack should be replaced if

- after being charged for the rated charging time the battery voltage is less than 12V DC or the usable time is extremely short.
- the battery leaks. Check battery for leaks and corrosion at terminals.

NO
 Replace battery pack.

OK

<CHECK TERMINAL CONNECTIONS BETWEEN MAIN UNIT AND BATTERY PACK.>
 Check for proper terminal contacts.

NO
 Repair the contacts.

OK

<CHECK SWITCH BLOCK.>
 When the switch handle is pulled all the way;

- There should be continuity between ② and ③.
- There should be no continuity between ① and ② disconnecting the white motor lead wire at ①.

NO
 Replace switch block.

OK

<CHECK MOTOR.>
 The motor normally operates with its white (+) and black (-) lead wires connected to 12V DC.

Does not brake.

<CHECK SWITCH BLOCK.>
 When the switch handle is not pulled;

- There should be continuity between ① and ② disconnecting the white motor lead wire at ①.

NO
 Replace switch block.

OK

<CHECK LEAD WIRE.>
 Check the white thin lead wire if it is broken or disconnected.
 * Do not cut the white thin lead wire. It causes shorter life to the motor.

NO
 Replace the lead wire.

Does not charge.

<CHECK POWER CORD.>
Check continuity.

NO

Replace power cord.

OK

<CHECK FUSE.>

- Check the fuse if it burns out.
- The case of defective fuse even though the fuse is replaced new one, the module might be defective.

NO

Replace fuse.

NO

Replace module.

OK

<CHECK MODULE.>

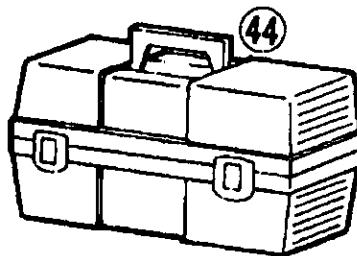
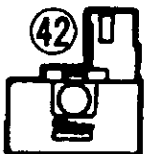
Check the lamp indication of the battery charger.

NO

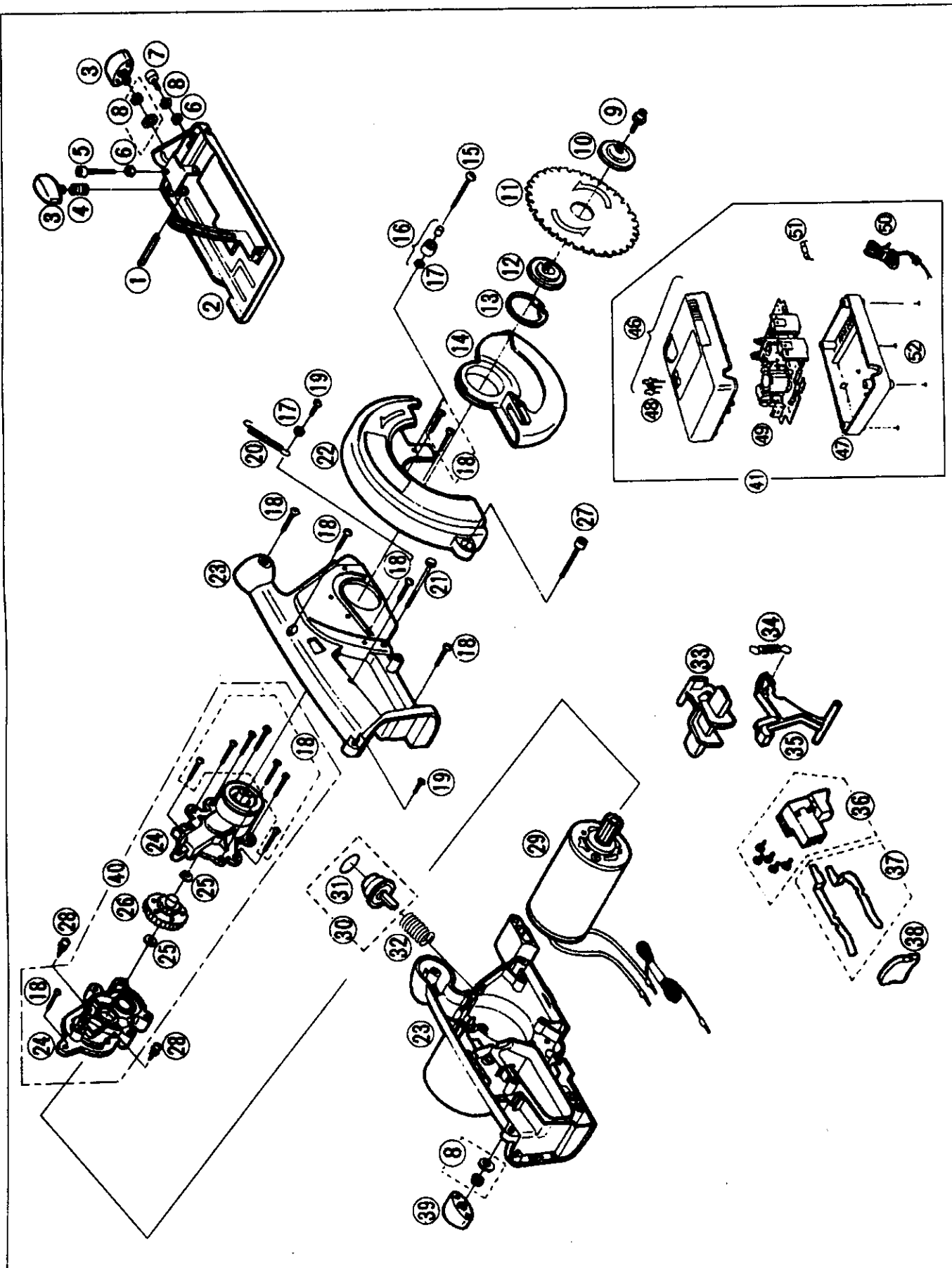
Replace module in the charger.

Charging lamp Red Flashing	Charger is plugged into power source. Ready to charge. Now charging.
	— Lit	
 Flashing quickly	Charging is completed.
Standby lamp Orange	— Lit	Battery pack is warm. Charging will begin when temperature of battery pack drops. Charging is not possible. Clogged with dust or malfunction of the battery pack drops. Possibly foreign matter in the charger's battery pack socket, or a malfunction of the battery pack.
 Flashing	

INCLUDED ACCESSORIES



EXPLODED VIEW



REPLACEMENT PARTS LIST

NOTE : *A . . . available as an optional accessory
 *B . . . only available as set
 *C . . . available individually

Ref.No	Part No.	Part Name & Descriptions	Per unit	Remarks
1	EY3500K0357	SPRING PIN	1	φ 6X45
2	EY3503S3428	BASE	1	
3	EY3503K6487	ADJUSTING BOLT	2	*C
4	EY3503K0197	SPRING	1	φ 7.6X15
5	EY3503K6757	HEX HOLE BOLT	1	M5X35
6	EY3503S6547	HEX NUT	2	*C M5
7	EY3503K6708	SOCKET BUTTON HEAD CUP SCREW	1	M5X14
8	EY3503S6387	WASHER	3	*B φ 5(1), φ 5X0.8(2)
9	EY3500K6257	FLANGE SOCKET	1	M5X12
10	EY3501K1177	OUTER WASHER	1	
11	EY9PW13A	BLADE	1	*A
12	EY3503L1167	INNER WASHER	1	
13	EY3503L0427	STOP RING	1	
▲14	EY3503H1197	LOWER BLADE GUARD	1	
15	EY3503S9387	TAPPING SCREW	1	S4X40
16	EY3503K0397	LOWER GUARD STOPPER	1	
17	EY3503S6518	PLAIN WASHER	1	φ 3
18	EY3503K6208	TAPPING SCREW	14	*C K4X20
19	EY3503K6228	TAPPING SCREW	2	*C K3X12
20	EY3503L0927	SPRING	1	φ 5.45X47
21	EY3503L6537	SQUARE SCREW	1	
▲22	EY3503H3108	UPPER BLADE COVER	1	
▲23	EY3503K3078	HOUSING AB SET	1	
24	EY3503L1769	GEAR BOX AB SET	1	
25	EY3503L0847	THRUST PLATE	1	
26	EY3503L1439	INTERNAL GEAR	1	
27	EY3503K6748	HEX HOLE BOLT	1	M5X30
28	EY3503L6067	SEMS SCREW	2	*C K4X10
29	EY3503L1009	MOTOR	1	
30	EY3503Y0368	SHAFT LOCK BUTTON	1	
31	EY3500K0967	O-RING	1	
32	EY3500K0197	LOCK SPRING	1	φ 15.4X37
33	EY3503Y3238	OFF LOCK LEVER	1	
34	EY3500K0917	SWITCH LOCK SPRING	1	φ 5.7X28.2
35	EY3503Y1588	SWITCH LOCK LEVER	1	
▲36	EY3502Y2008	POWER SWITCH	1	
37	EY3500K0067	BATTERY CONTACTS	1	
38	EY3510L0207	DUST COVER	1	
39	EY3503K0897	DEPTH ADJUSTING NUT	1	
40	EY3503L1458	GEAR BOX BLOCK	1	
41	EY0202	BATTERY CHARGER	1	*A
42	EY9106	BATTERY PACK	1	*A
43	EY3542B7867	HEX WRENCH	1	
44	EY9609	TOOL CASE	1	*A
45	EY3500B7727	RIP FENCE	1	*A
46	EY0202B3098	HOUSING A FOR CHARGER	1	
47	EY0202B3028	HOUSING B FOR CHARGER	1	
48	EY0200C0547	LAMP COVER	1	
49	EY0202B2133	MODULE	1	
50	EY0202B2058	POWER CORD	1	
51	EY0202B5260	FUSE	1	
52	EY0202B9038	TAPPING SCREW FOR CHARGER	4	*C
-	EY3503X5528	GREASE(SUN LIGHT G#2)	1	
▲-	EY3503K8008	INDIVIDUAL BOX	1	
▲-	EY3503K8108	OPERATING INSTRUCTIONS	1	