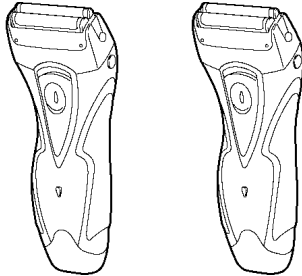


Service Manual

AC/Rechargeable Shaver



ES4033-A3
ES4035-A3

SPECIFICATIONS

Power source	AC 220V, 50-60Hz (Automatic voltage conversion)
Motor voltage	1.2V DC
Charging time	1 Hour for ES4035, 8 Hours for ES4033
Shaves per charge	7 times (3 minutes shave)
Measurement	(H)14.6 x (W)5.7 x (D)4.9 cm
Weight	155g
Supplied accessories	Soft case Cleaning brush

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.

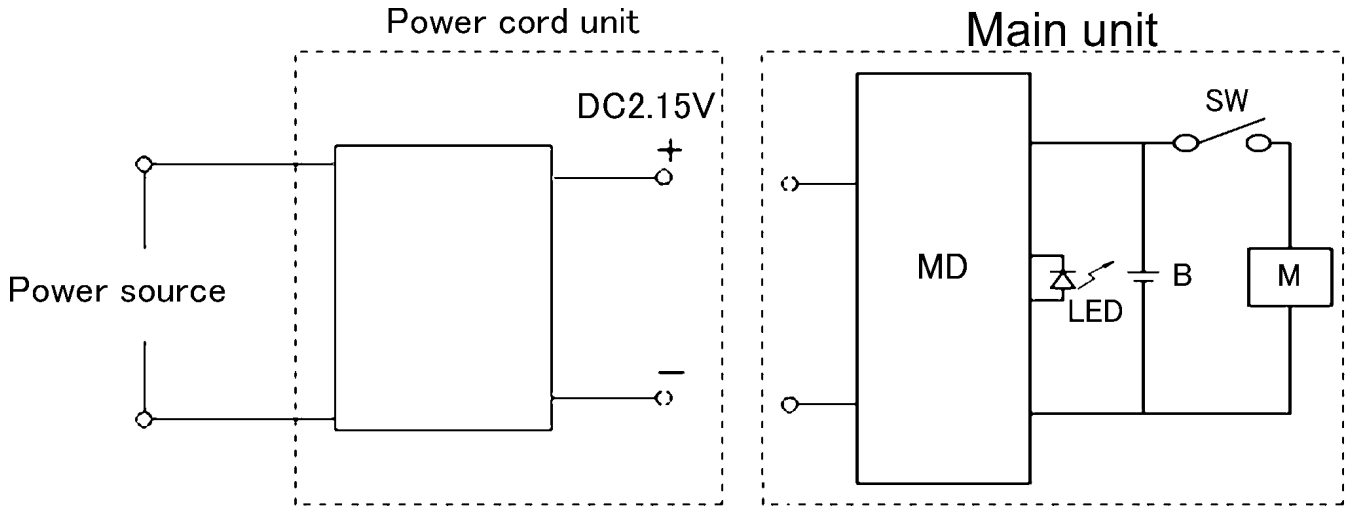
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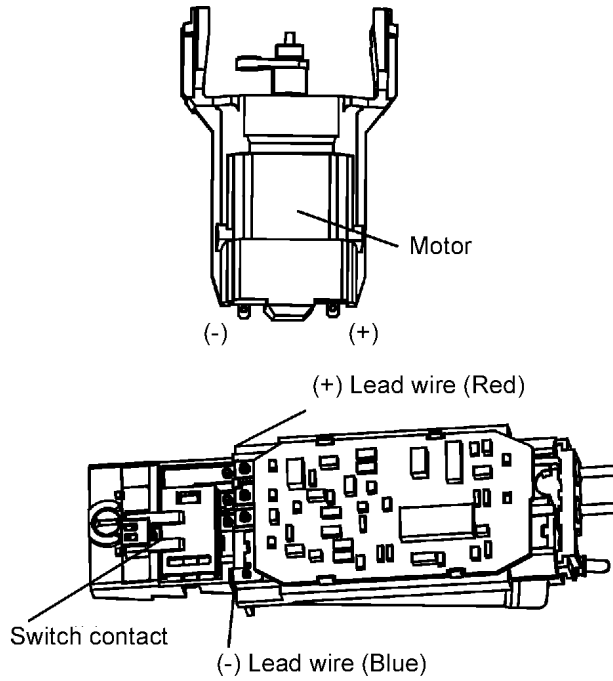
Panasonic

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1 SCHEMATIC DIAGRAM



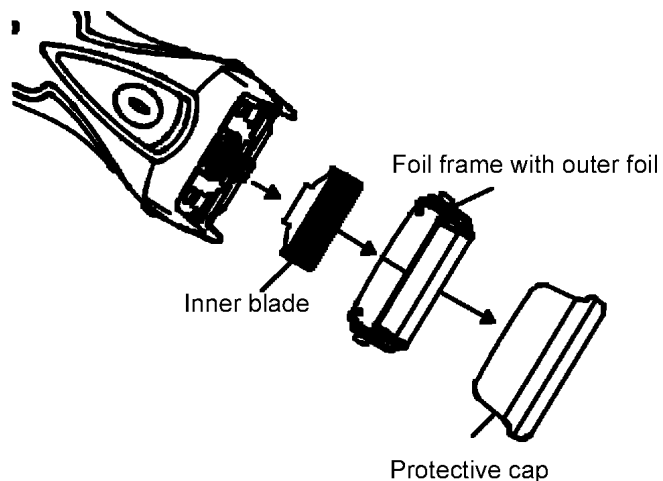
2 WIRING CONNECTION DIAGRAM



3 DISASSEMBLY INSTRUCTIONS

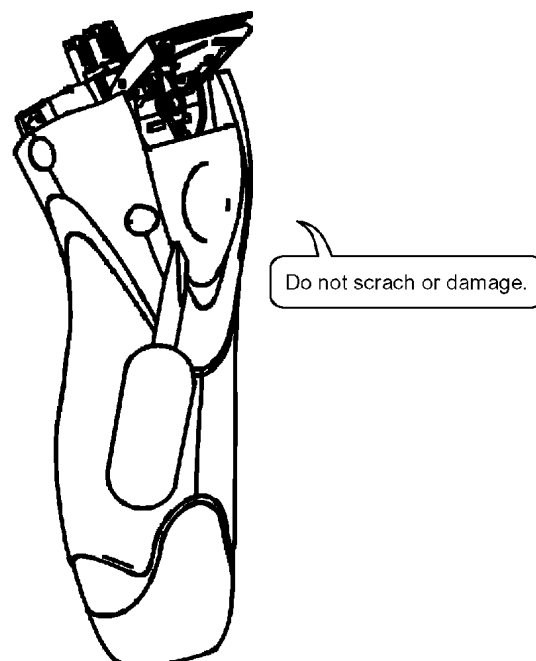
Follow the procedure below to disassemble the main unit.

1. Remove the cap, the outer foil with foil frame and the inner blade.

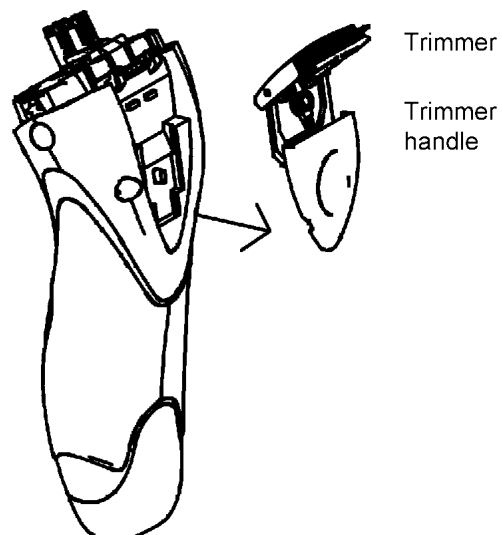


2. Slide the trimmer handle up to open the trimmer and unhook the trimmer handle by inserting something like a plastic spatula into a slit.

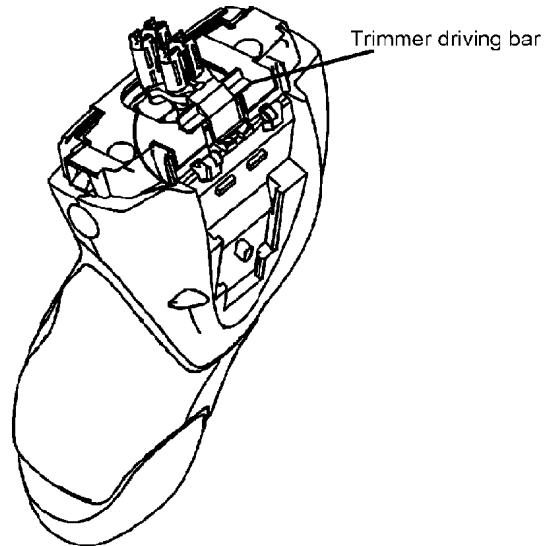
NOTE: Make sure not to scratch or damage on the housing.



3. Remove trimmer and trimmer handle.

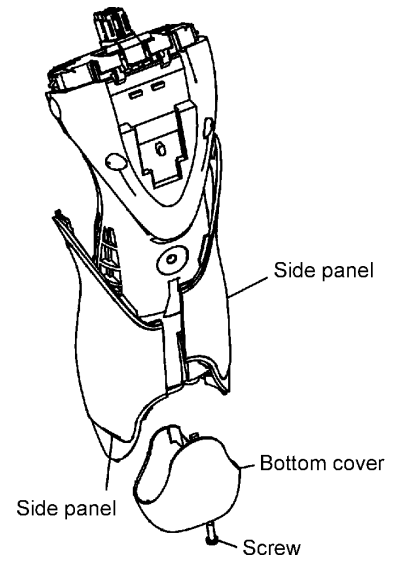


4. To remove the trimmer driving bar, press it outward.



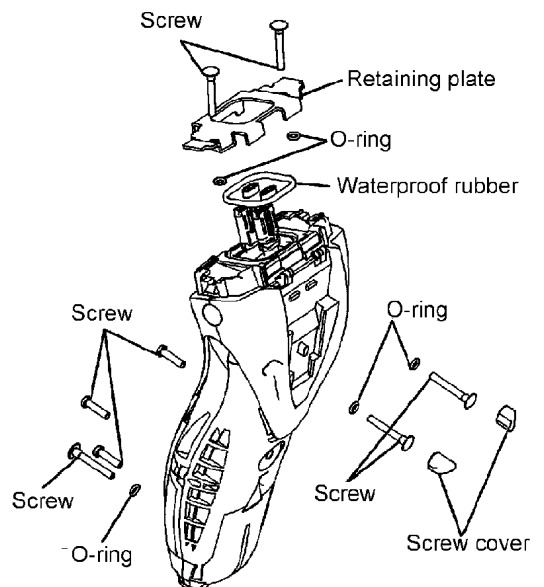
5. Loosen a screw and remove the bottom cover.

6. Peel off the side panels on both sides.

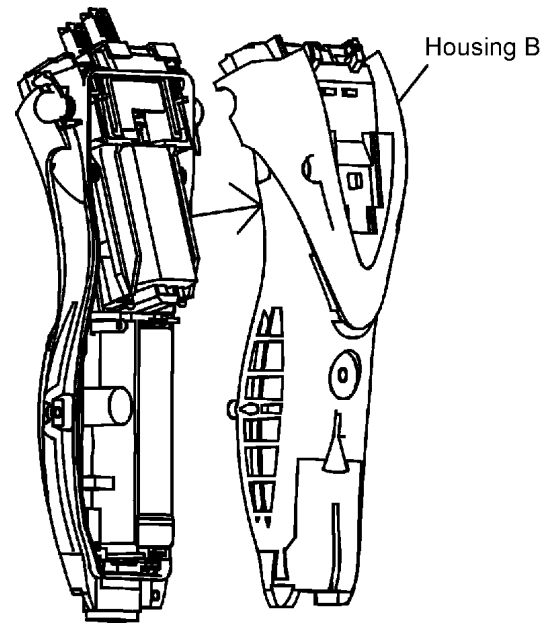


7. Loosen two screws and the retaining plate. Remove the waterproof rubber.

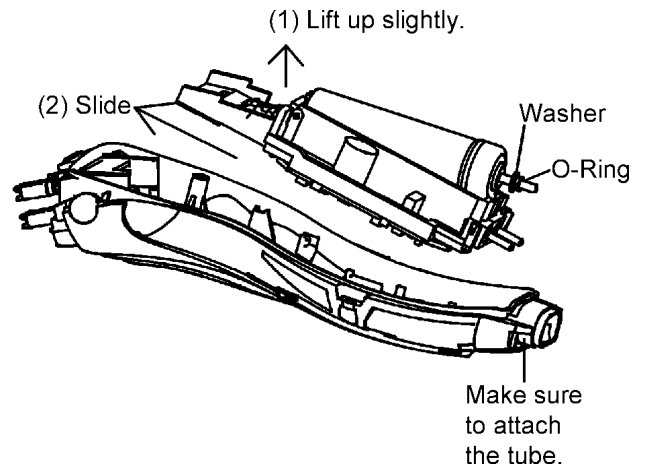
8. Remove the two screw covers using something like a toothpick and six screws.



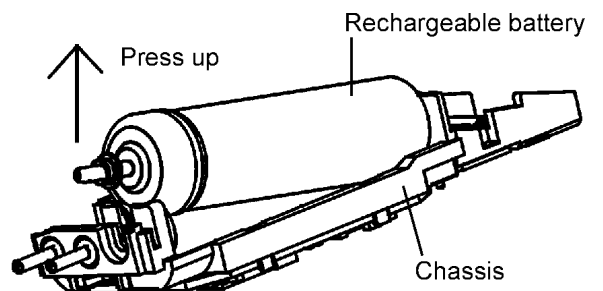
9. Take out the housing B.



10. Remove the motor assembly first. And take out the module assembly from housing A.



11. Remove the battery o-ring and washer from battery terminal. Take out the rechargeable battery from the chassis.



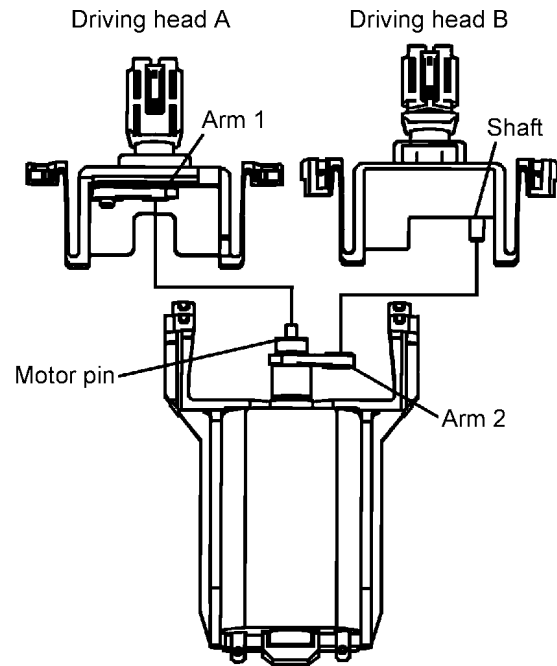
4 CAUTION IN ASSEMBLY

NOTE: When reassembling, replace the new waterproof rubber.

Make sure whether there is NO foreign substance sticking around a part covered with water seal.

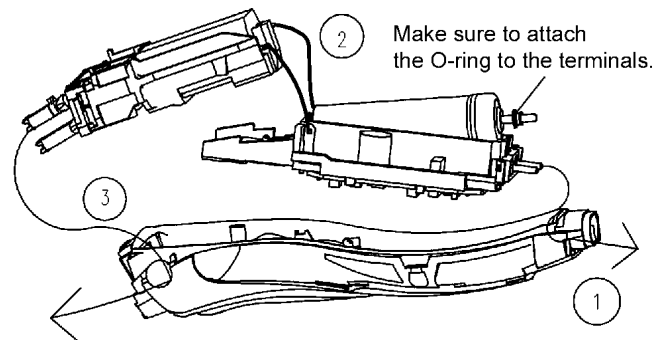
4.1. Driving heads

Install the driving head A in motor and assemble the driving head B.



4.2. Rechargeable battery

Insert the rechargeable battery into chassis. Attach the battery o-ring and washer to the battery.



4.3. Motor and Module assembly

Put the motor and module assembly from the battery terminal side into housing A, and insert the driving heads side into housing A.

NOTE: Make sure that the red lead wire is not over the chassis rib.

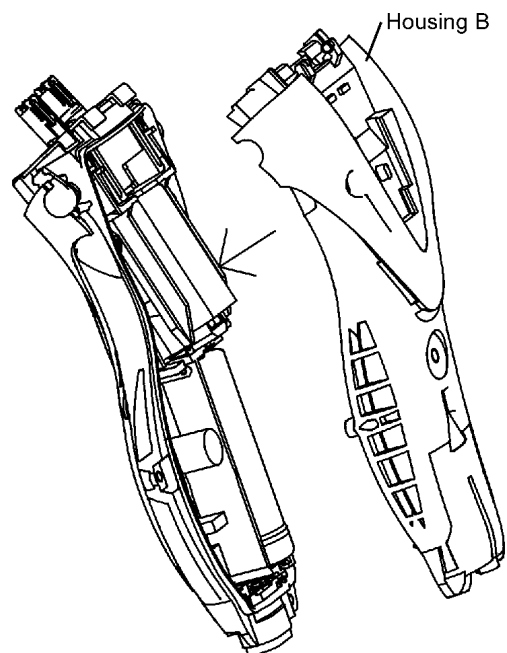
Press fit the red lead wire neatly under the rib of motor holder and the blue lead wire in between batteries certainly in order to protect pinching.

4.4. Housing

Set the both sides of foil frame release buttons with springs.

Put the housing B on the housing A.

Tighten the screws with care of pinching screw o-rings.



4.5. Waterproof rubber

The waterproof rubber must be fitted the right way around.

Install as shown in figure by inserting firmly to the proper position.

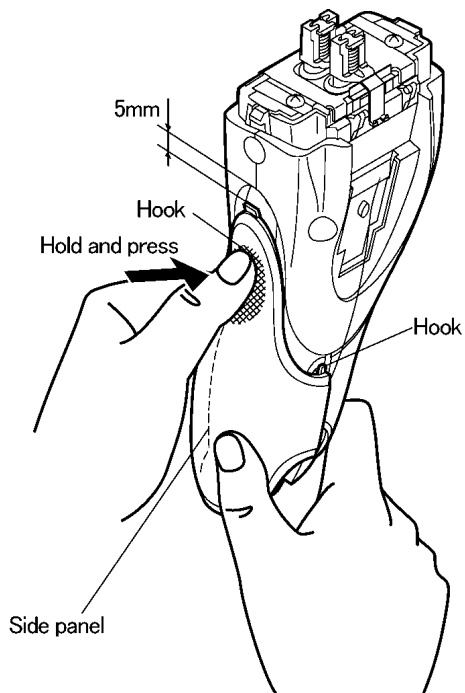
4.6. Driving bar

Set the trimmer driving bar.

4.7. Side panel

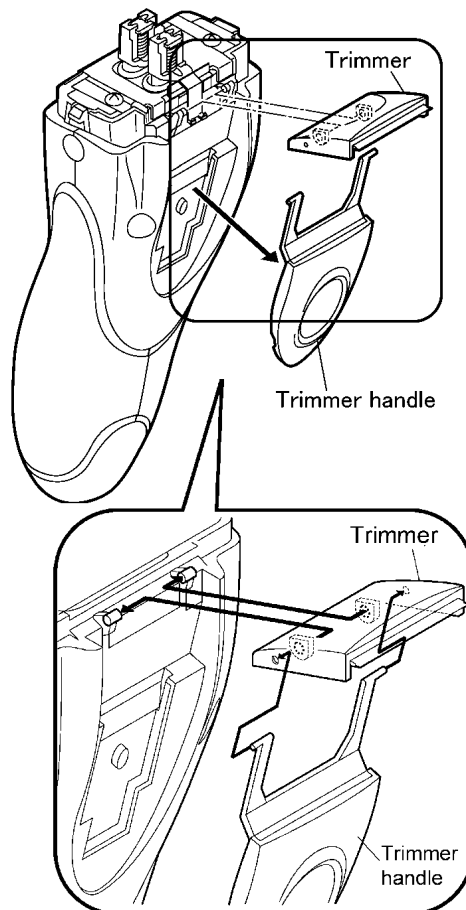
Set the side panel on the body and press fit until clicking the hook of panel at three locations. Fit the hook on top first, then front side and rear side.

NOTE: Make sure that the left and right side panels are firmly fitted on both rear and front side.



4.8. Trimmer

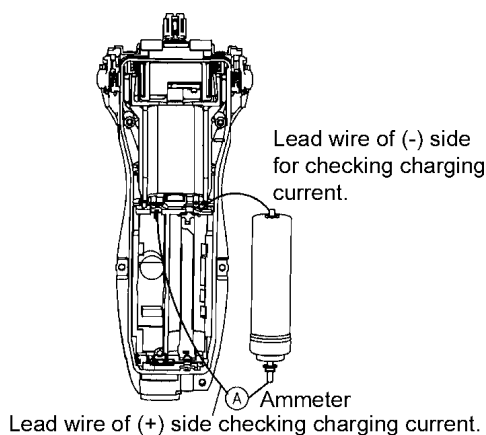
1. Make sure if the bosses of handle arm insert into the holes of trimmer.
2. Align the bosses of housing with the holes of trimmer, and hook the trimmer handle.
3. Confirm its operation or smooth movement of trimmer.



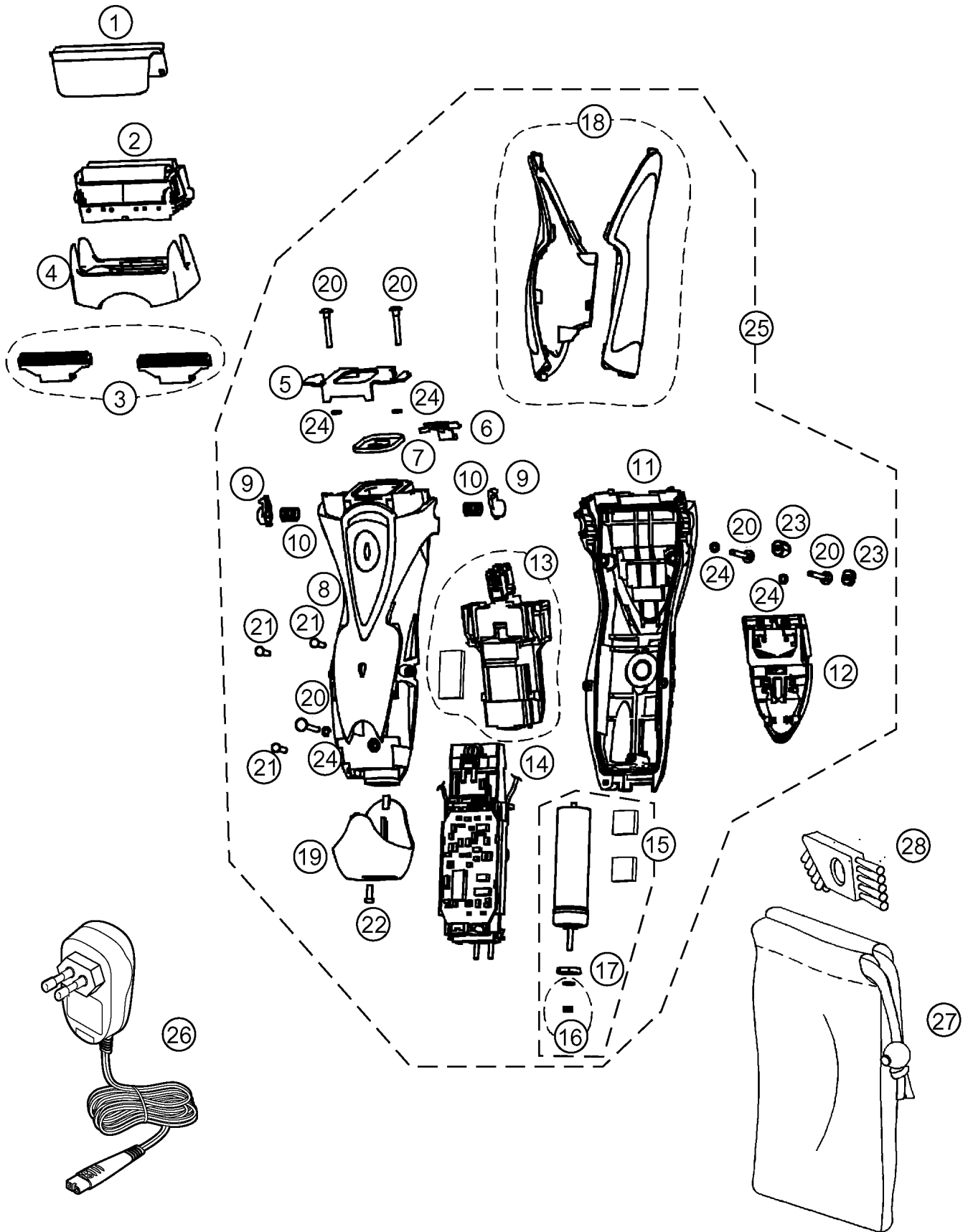
5 TROUBLESHOOTING GUIDE

(Refer to)

<TROUBLE>	<CHECK>	<REMEDY>	
Motor does not rotate. Does not charge. Functions for a moment and stops. Does not operate by AC power source.	<p align="center"><CHECK POWER CORD UNIT.></p> Connect the rated voltage to the normal main unit of empty charge capacity by the power cord unit. Check if the charge status lamp of main unit is lit. Confirm if the motor rotates more than one minutes by AC power source when turning ON the switch. Confirm if the output voltage is about DC2.7V with no load operation when connecting the rated voltage.	NO → Replace power cord unit.	
↓ OK			
<p align="center"><CHECK RECHARGEABLE BATTERY.></p> Okay if the voltage of rechargeable battery is more than approximately 1.2V DC between (+) and (-) terminals.			NO → Replace both rechargeable battery.
↓ OK			
<p align="center"><CHECK MODULE.></p> Wire the main unit returned from a customer refer with the following figure, and connect the rated voltage to it by the power cord unit. Take out the battery. Connect the chassis and (-) terminal of battery with the lead wire. Check charging current with the wire between chassis and (+) terminal of battery. Check charging current, if it is approx. 1100mA.			NO → Check the soldering points. ↓ OK Replace module.
↓ OK			
<p align="center"><CHECK MOTOR.></p> Okay if motor rotates when DC1.2V is applied to (+) and (-) terminals.			NO → Replace motor.
Noise is too loud. Amplitude is too small.	Check if there any deformation with the outer foil.	NO → Replace the outer foil or oiling a drop for the foil.	
↓ OK			
<p align="center"><CHECK DRIVING BAR.></p> Check if there is any deformation with trimmer driving bar.			NO → Replace or repair the trimmer driving bar.
↓ OK			
<p align="center"><CHECK MOTOR.></p> Confirm to tighten the screws firmly.			NO → Tighten the screws.



6 EXPLODED VIEW



7 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	Remarks	Per Unit
1	WES4025X7158	PROTECTIVE CAP		(BG) 1
2	WES9837EP	OUTER FOIL		1
3	WES9850EP	INNER BLADE	*B	2
4	WES4033S0047	FOIL FRAME	ES4033	(BG) 1
4	WES4035S0047	FOIL FRAME	ES4035	(BG) 1
5	WES4035X0207	RETAINING PLATE		(BG) 1
6	WES4035K1087	TRIMMER DRIVING BAR		(BG) 1
7	WES725L0327	WATERPROOF RUBBER		1
8	WES4033A3058	HOUSING A	ES4033	(BG) 1
8	WES4035S3058	HOUSING A	ES4035 (only for Hong Kong)	(BG) 1
8	WES4035S3059	HOUSING A	ES4035 (only for China)	(BG) 1
9	WES4033A3268	LOCK RELEASE BUTTON	*B ES4033	(BG) 2
9	WES4035K3268	LOCK RELEASE BUTTON	*B ES4035 (only for Hong Kong)	(BG) 2
9	WES4035H3268	LOCK RELEASE BUTTON	*B ES4035 (only for China)	(BG) 2
10	WES4035S0187	SPRING FOR RELEASE BUTTON	*B	(BG) 2
11	WES4033A3067	HOUSING B	ES4033	(BG) 1
11	WES4035S3067	HOUSING B	ES4035	(BG) 1
12	WES4033A1507	TRIMMER	ES4033	(BG) 1
12	WES7026K1507	TRIMMER	ES4035 (only for Hong Kong)	(BG) 1
12	WES4951H1507	TRIMMER	ES4035 (only for China)	(BG) 1
13	WES4035L1007	MOTOR ASSEMBLY		(BG) 1
14	WES4033L2127	CHASSIS ASSEMBLY	ES4033	(BG) 1
14	WES4035L2127	CHASSIS ASSEMBLY	ES4035	(BG) 1
15	WES4035L2508	RECHARGEABLE BATTERY	Ni-Cd type	(BG) 1
16	WES7025L0977	WASHER W/ORING SET		(BG) 1
17	WES7015L0307	SPACER		(BG) 1
18	WES4033A0048	SIDE PANEL	ES4033	(BG) 1
18	WES4035K0047	SIDE PANEL	ES4035 (only for Hong Kong)	(BG) 1
18	WES4035S0048	SIDE PANEL	ES4035 (only for China)	(BG) 1
19	WES4033A3128	BOTTOM COVER	ES4033	(BG) 1
19	WES4033A3129	BOTTOM COVER	ES4033 (only for Hong Kong)	(BG) 1
19	WES4035K3128	BOTTOM COVER	ES4035 (only for Hong Kong)	(BG) 1
19	WES4035H3128	BOTTOM COVER	ES4035 (only for China)	(BG) 1
20	WES7025L9707	SCREW	*C K2-15	(BG) 5
21	WES626A6057	TAPPING SCREW	*C K2-8	(BG) 3
22	WES4033L9008	TAPPING SCREW	K2-6	(BG) 1
23	WES7025H3767	SCREW CAP	*B Gray	(BG) 2
24	WES4035L0967	O-RING	*B	(BG) 5
25	WES4033S3038	BODY BLOCK	ES4033	(BG) 1
25	WES4033S3039	BODY BLOCK	ES4033 (only for Hong Kong)	(BG) 1
25	WES4035S3038	BODY BLOCK	ES4035 (only for Hong Kong)	(BG) 1
25	WES4035S3039	BODY BLOCK	ES4035 (only for China)	(BG) 1
26	WES4033K7663	CHARGING ADAPTOR	C-2 Plug	(BG) 1
26	WES4033K7674	CHARGING ADAPTOR	C-2 Plug (only for Hong Kong)	(BG) 1
26	WES4033K7671	CHARGING ADAPTOR	Korean Plug	(BG) 1
27	WES7025K7007	SOFT CASE		(BG) 1
28	WES861B7057	CLEANING BRUSH		1
-	WES4033S8008	INDIVIDUAL BOX	ES4033	(BG) 1
-	WES4033S8009	INDIVIDUAL BOX	ES4033 (only for Hong Kong)	(BG) 1
-	WES4033S8000	INDIVIDUAL BOX	ES4033 (only for China)	(BG) 1
-	WES4035S8008	INDIVIDUAL BOX	ES4035 (only for Hong Kong)	(BG) 1
-	WES4035S8009	INDIVIDUAL BOX	ES4035 (only for China)	(BG) 1
-	WES4033S8108	OPERATING INSTRUCTIONS		(BG) 1
-	WES4033S8100	OPERATING INSTRUCTIONS	only for China	(BG) 1