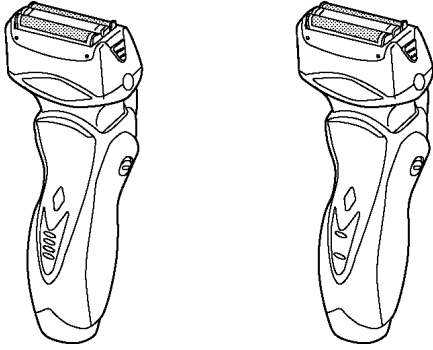


Service Manual

AC/Rechargeable Shaver

ES8046-A3
ES8047-A3



SPECIFICATIONS

Power source	AC 100-240V, 50-60Hz (Automatic voltage conversion)
Power consumption	Approx. 7W (at AC drive)
Motor voltage	3.6V DC
Charging time	1 Hour
Shaves per charge	14 times (3 minutes shave)
Measurement	(H)15.3 x (W)6.2 x (D)4.6 cm
Weight	180g
Supplied accessories	Soft case Cleaning brush Charging stand

⚠ 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.

CONTENTS

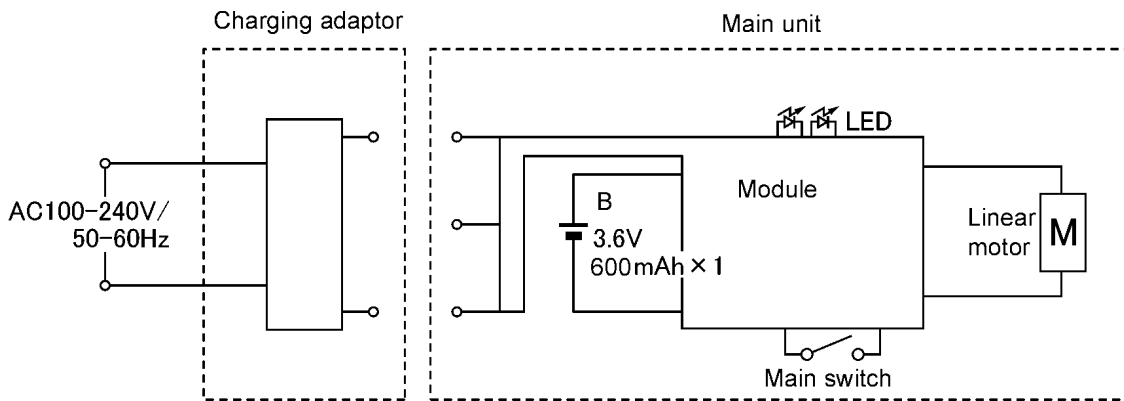
	Page		Page
1 SCHEMATIC DIAGRAM	2	4 TROUBLESHOOTING GUIDE	7
2 DISASSEMBLY INSTRUCTIONS	3	5 EXPLODED VIEW & REPLACEMENT PARTS LIST	9
3 ASSEMBLY INSTRUCTIONS	5		

Panasonic

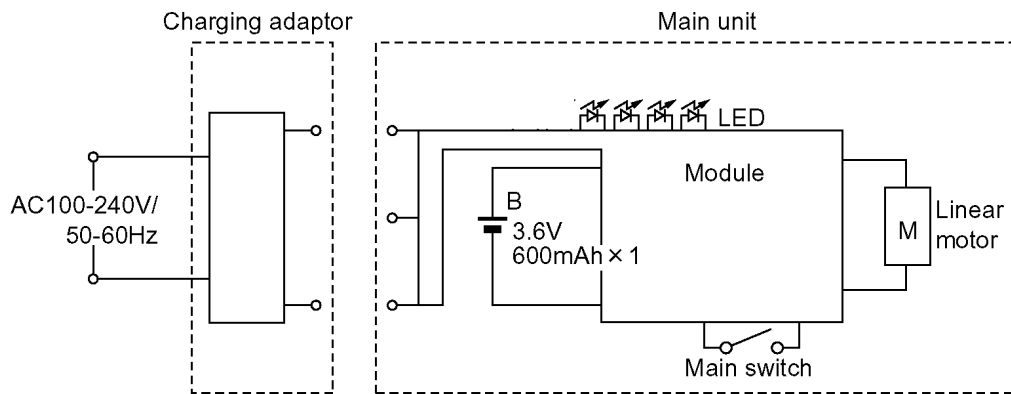
© 2005 Matsushita Electric Works, Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.

1 SCHEMATIC DIAGRAM

1.1. ES8046



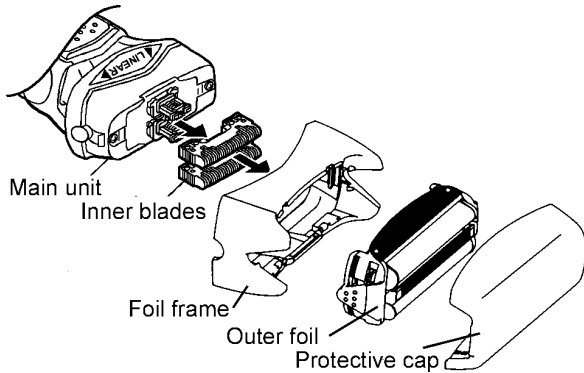
1.2. ES8047



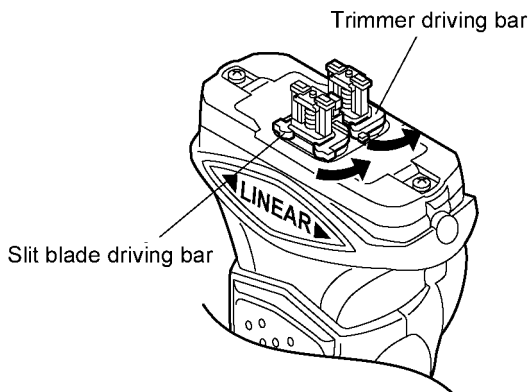
2 DISASSEMBLY INSTRUCTIONS

Follow the procedure below to disassemble the main unit.

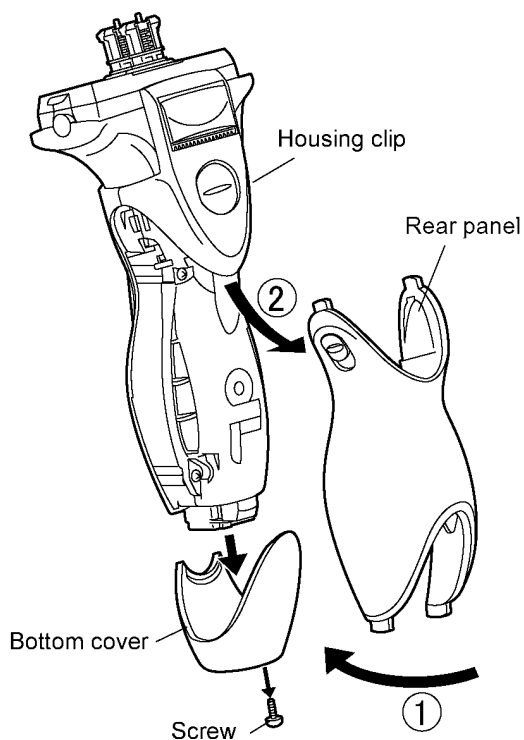
1. Remove the cap, the outer foil with foil frame and the inner blade.



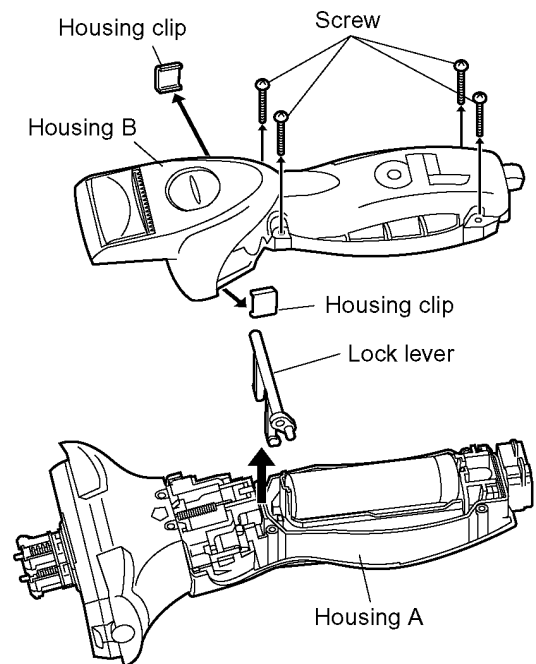
2. To remove the trimmer driving bar or the slit blade driving bar, press bars outward.



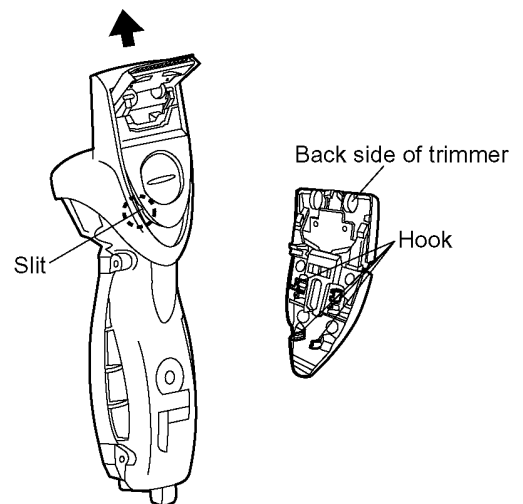
3. Loosen a screw and remove the bottom cover. Set the pivot action selector to "LOCK". Slide the rear panel and remove it with care of pivot action selector.



4. Remove the both side of housing clips. Loosen four screws and remove housing B. Take out the lock lever shaft.

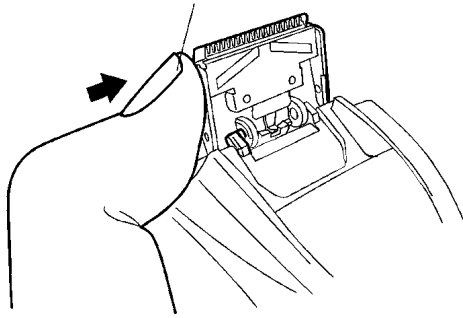


5. Slide the trimmer handle up to open the trimmer and unhook 2 locations on both side by inserting the slit with something like a slotted-head screw driver.

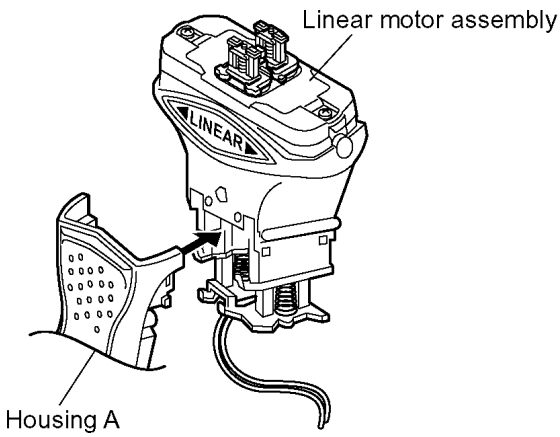


6. Remove trimmer and trimmer handle.

Unhook pressing on the side by finger.



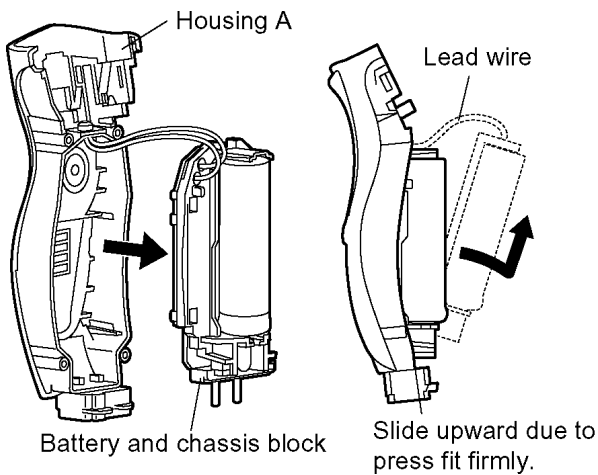
7. Move gently the linear motor assembly down and unhook it and remove the float springs from housing A.



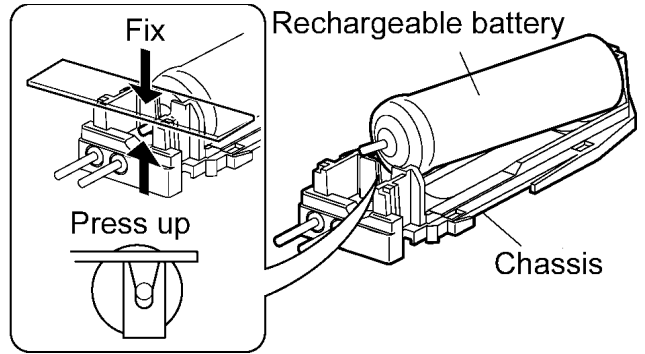
8. Pull up the battery and chassis block from the linear motor side first. Then, slide it upward and take it out from the housing A.

NOTE:

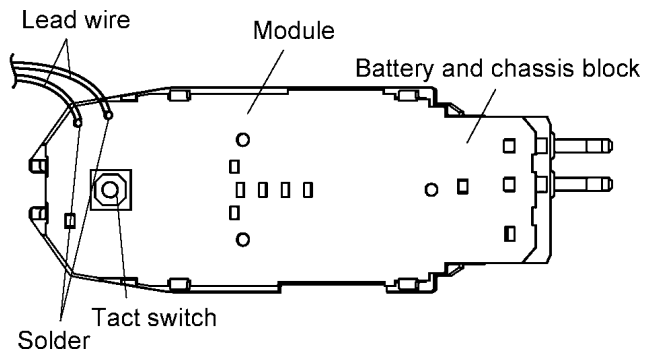
Do not pull the battery and chassis block forcefully due to connecting the linear motor by the lead wires.



9. Take out the battery from the chassis.



10. Unsolder the lead wires from the module.



3 ASSEMBLY INSTRUCTIONS

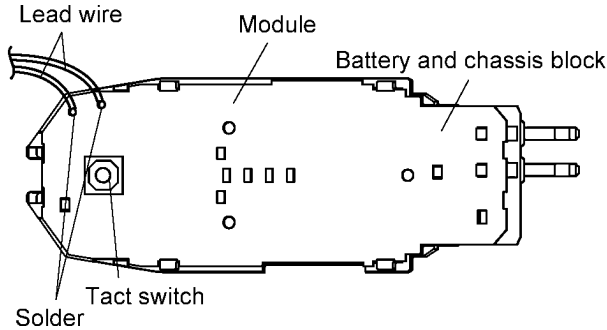
NOTE: When reassembling, replace the new waterproof rubber.

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

1. Solder the lead wires with the module.

NOTE:

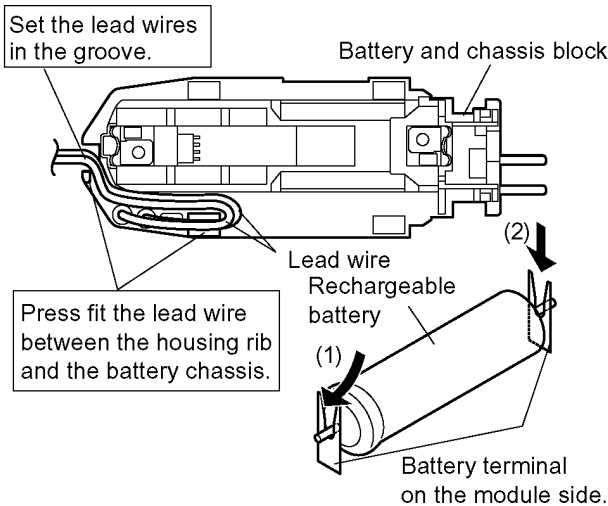
Make sure of the color of lead wires.



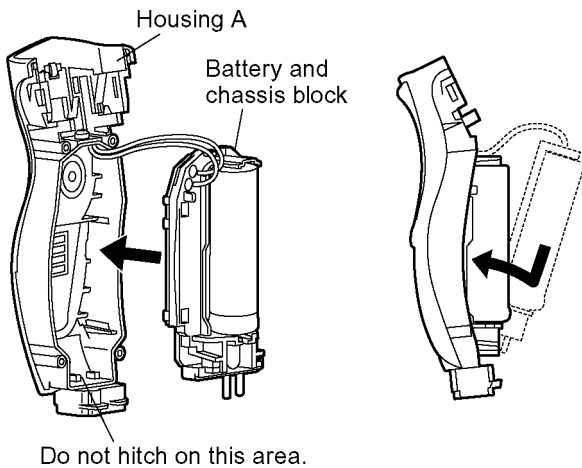
2. Make sure that the lead wires set in position. Install (+) terminal of battery into the terminal plate at the linear motor side and firmly set the battery sliding the direction of arrow.

NOTE:

Fix the lead wires with the adhesive tape.



3. When inserting the battery and module assembly into the housing A, confirm if the module does not get any damage or deformation.

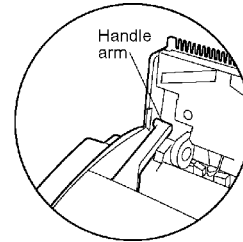


4. In case of trimmer is removed;

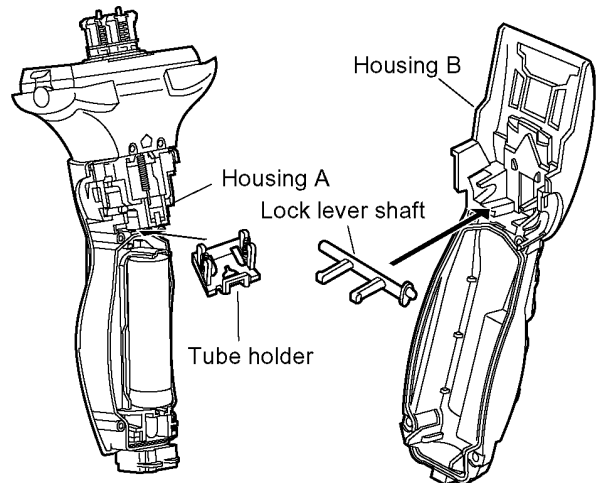
Make sure if the bosses of handle arm insert into the holes of trimmer. Align the bosses of housing with the holes of trimmer, and hook the trimmer. Then, slide the trimmer up and hook the both sides of trimmer handle.

NOTE:

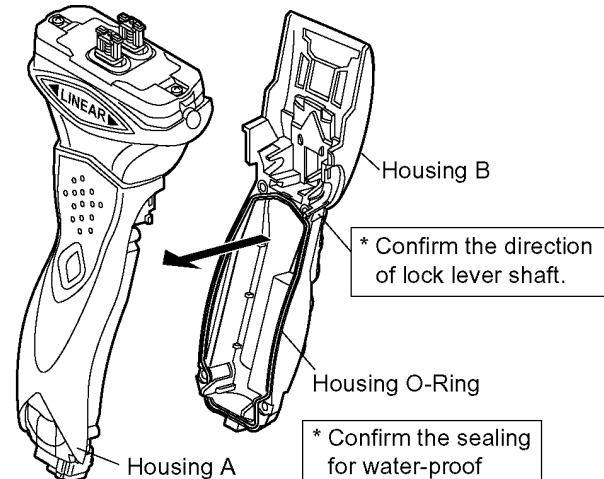
Confirm its operation or smooth movement of trimmer.



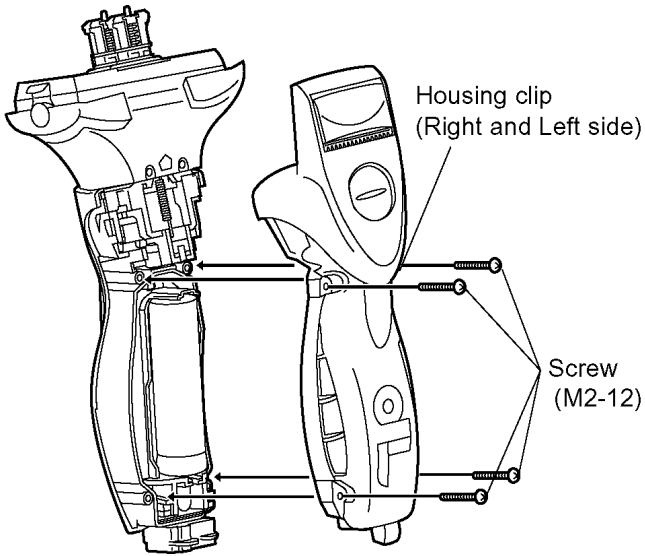
5. Set the linear motor assembly on the housing A and sliding it upward to hook. Confirm that the lead wire tube fits to the housing A firmly and no foreign substance sticking around. Attach the head block to housing A with care of the direction. And attach the rock lever shaft to housing B.



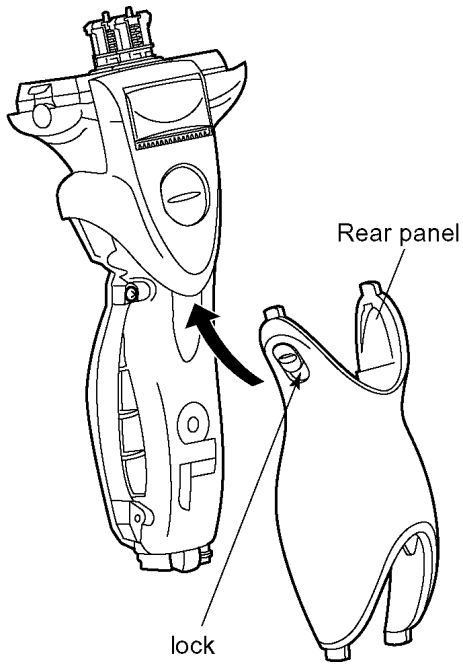
6. When putting the housing A and the housing B together, make sure if the waterproof seal must be fitted properly and no foreign substance sticking around.



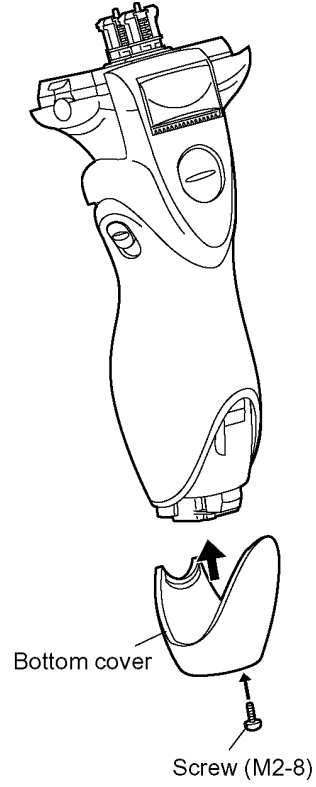
7. Tighten the four screws and set the housing clip.



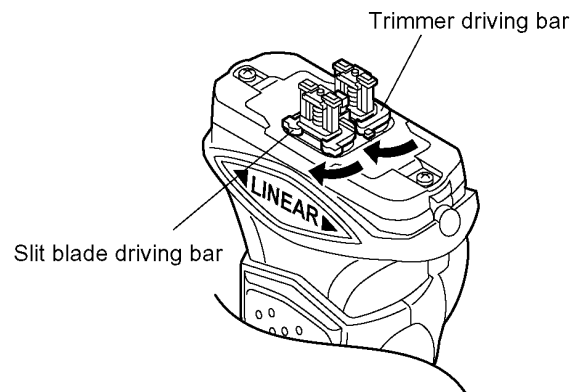
8. Attach the rear panel with the position "LOCK".



9. Set the bottom cover tight with a screw.

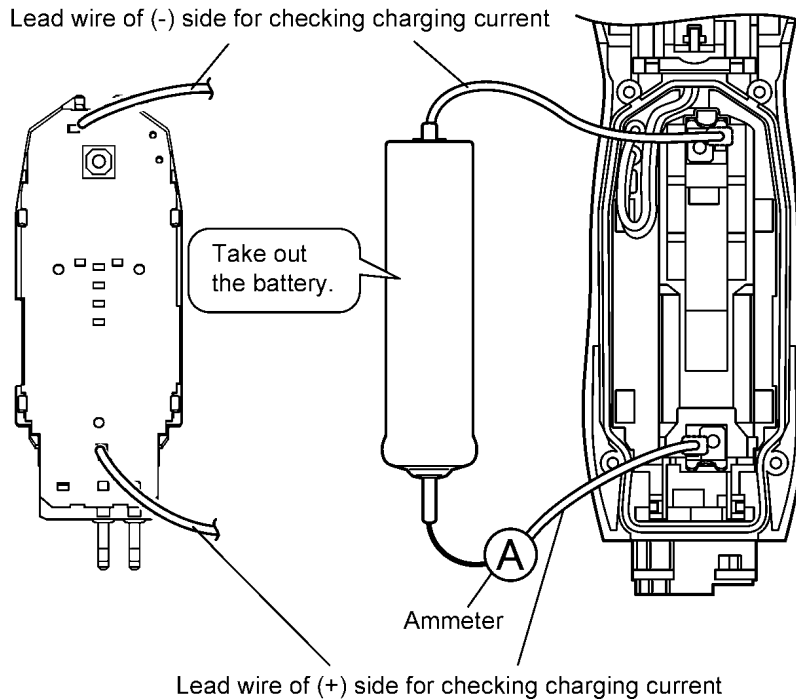


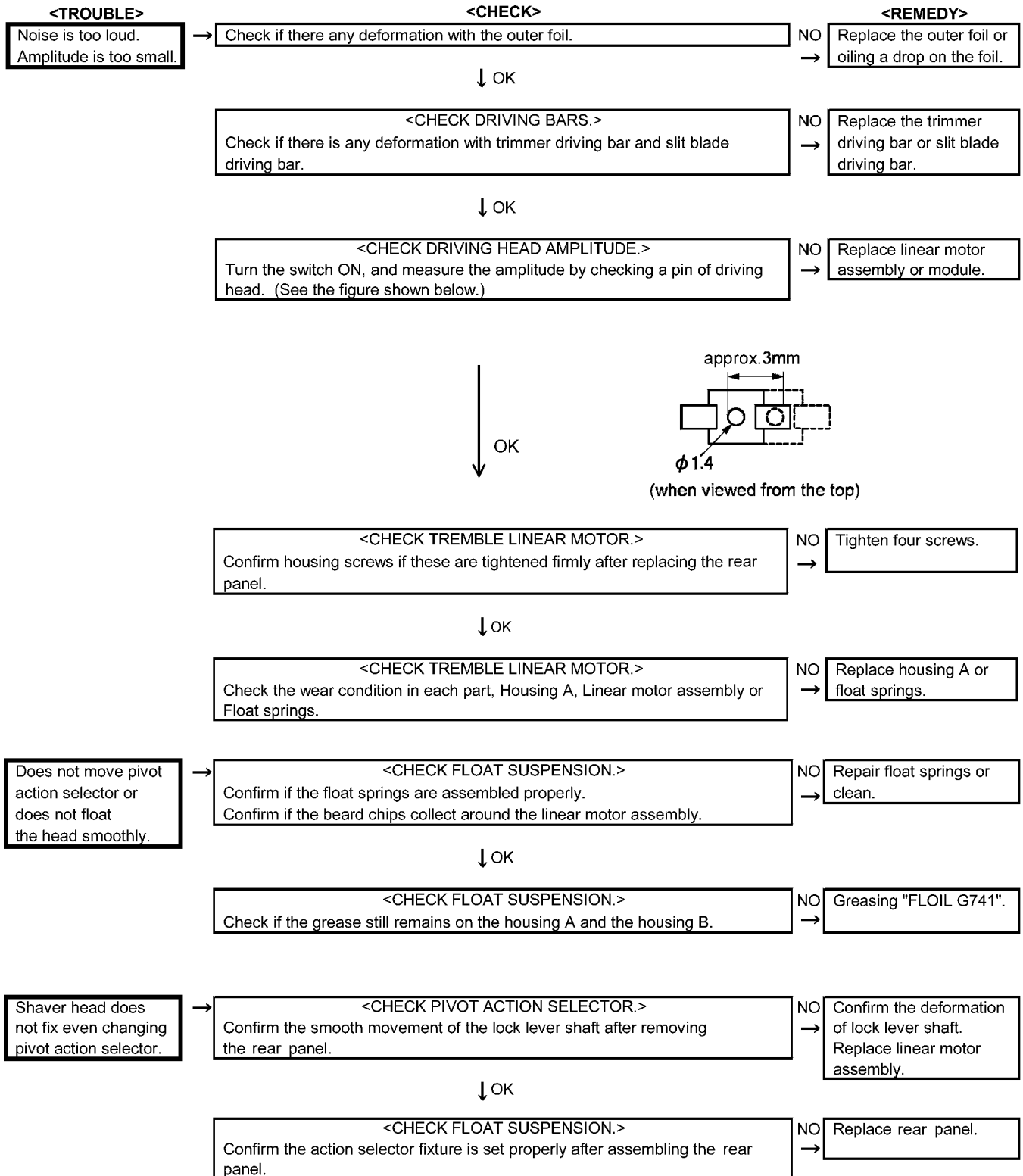
10. Set the trimmer driving bar and the slit blade driving bar.



4 TROUBLESHOOTING GUIDE

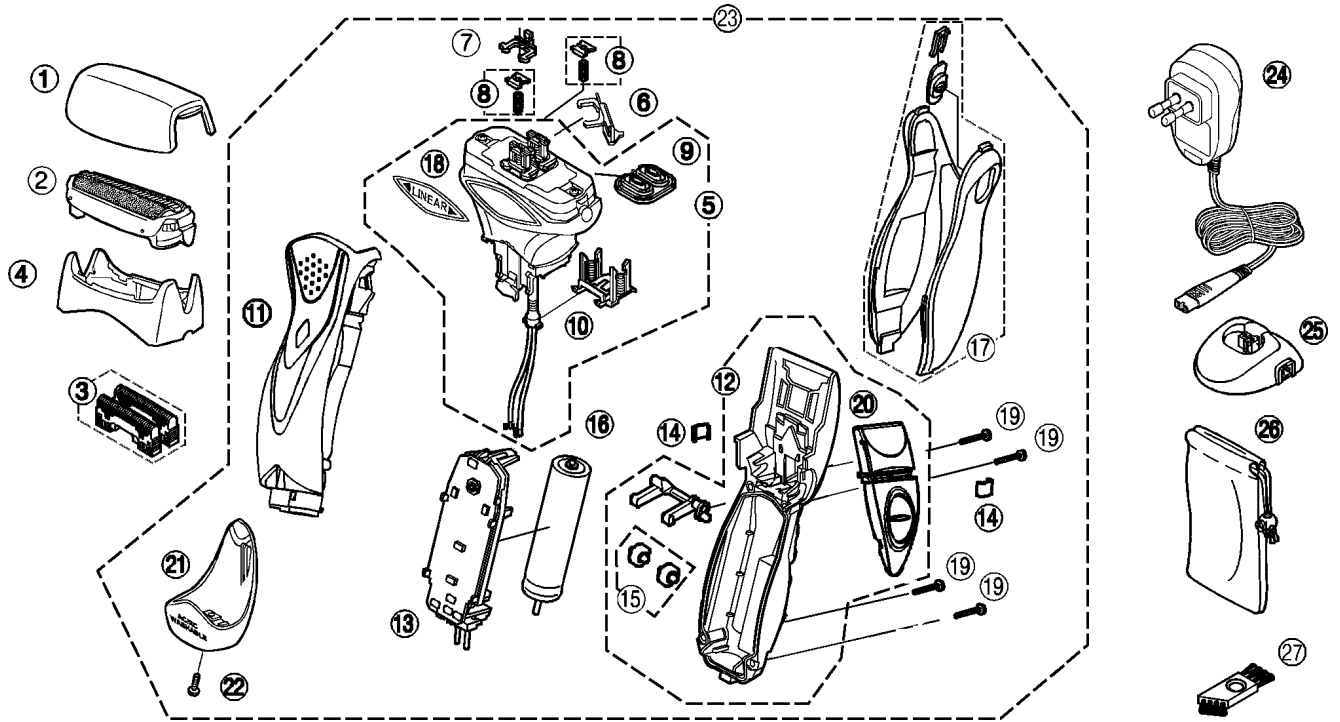
<TROUBLE>	<CHECK>	<REMEDY>
Motor does not rotate. Does not charge. Functions for a moment and stops.	<CHECK CHARGING ADAPTOR.> Supply the rated voltage to the adaptor. And confirm the continuity. OK if it is approx. DC5.7V between the terminals of the plug at the no-load operation.	NO → Replace charging adaptor.
↓ OK		
	<CHECK RECHARGEABLE BATTERY.> Okay if the voltage of rechargeable battery is more than approximately 3.6V DC between (+) and (-) terminal.	NO → Replace rechargeable battery.
↓ OK		
	<CHECK MODULE.> Wire the main unit returned from a customer refer with the following figure, and connect the rated voltage to it by the normal adaptor. When switching ON and OFF, check if motor rotates and red light of LED is lid. Discharge the battery and check charging current, if it is more than 680mA when connecting AC power source.	NO → Check the soldering points. ↓ OK Replace module. ↓ OK Replace linear motor assembly.





5 EXPLODED VIEW & REPLACEMENT PARTS LIST

5.1. ES8046 EXPLODED VIEW



5.2. ES8046 REPLACEMENT PARTS LIST

NOTE:

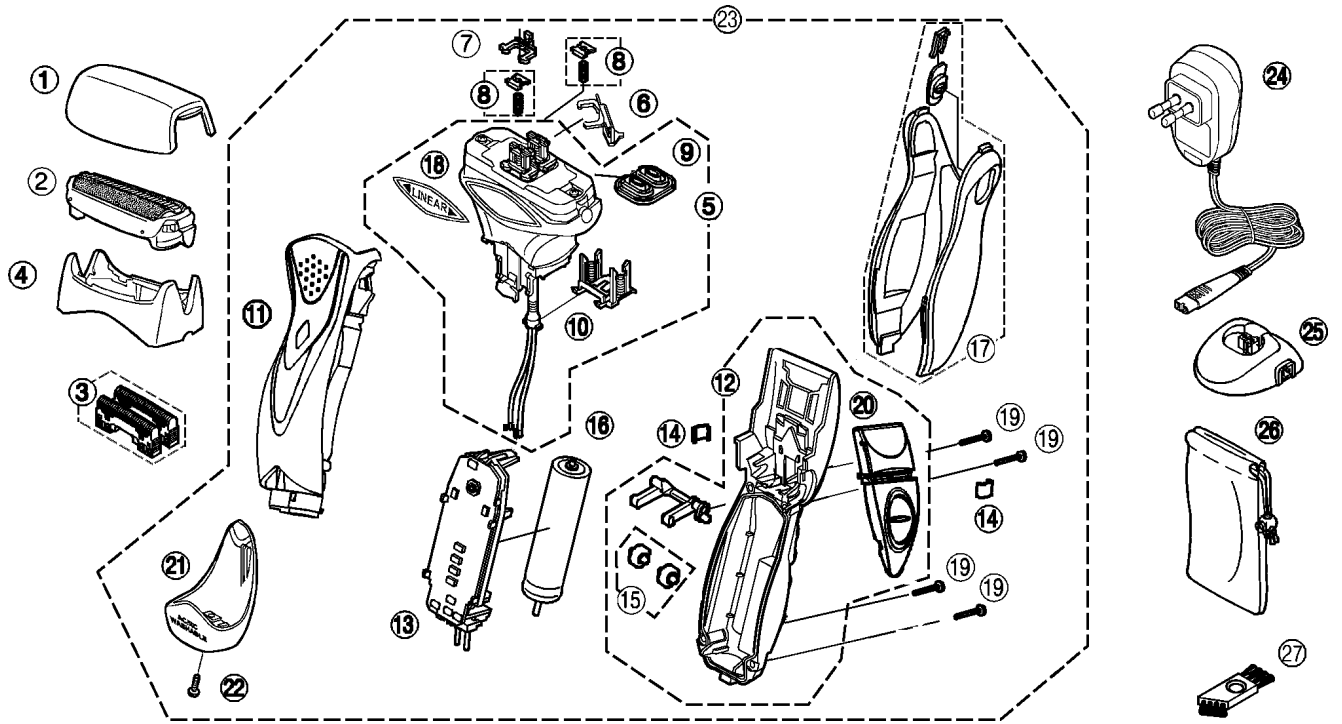
*A=available as an optional accessory

*B=only available as set

*C=available individually

Ref. No.	Part No.	Part Name & Description	Remarks	Per Unit
1	WES8046X7158	PROTECTIVE CAP		1
2	WES9085E	OUTER FOIL		1
3	WES9064EP	INNER BLADE		1ST
4	WES8045W0047	OUTER FOIL FRAME		1
5	WES8045L1007	LINEAR MOTOR ASSEMBLY		1
5	WES8046L1008	LINEAR MOTOR ASSEMBLY	only for KOREA	1
6	WES8046L1087	TRIMMER DRIVING BAR		1
7	WES8046L1077	SLIT BLADE DRIVING BAR		1
8	WES8046L0587	SPRING AND STOPPER	*B (2SET/PK)	2
9	WES8176L0327	WATERPROOF RUBBER		1
10	WES8046L0227	TUBE HOLDER		1
11	WES8046W3058	HOUSING A		1
12	WES8045W3067	HOUSING B		1
13	WES8046L2128	MODULE		1
14	WES8176L0167	HOUSING CLIP	*C	2
15	WES8046L0377	ROLLER	*B (2PCS/PK)	2
16	WES8176L2508	RECHARGEABLE BATTERY	LITHIUM-ION TYPE	1
17	WES8045A3367	REAR PANEL		1
18	WES8045S3347	LOGO PLATE		1
18	WES8046S3348	LOGO PLATE	only for KOREA	1
19	WES8176L6007	P TIGHT SCREW	*C M2-12	4
20	WES8045A1507	TRIMMER		1
21	WES8046A3848	BOTTOM COVER		1
21	WES8046A3849	BOTTOM COVER	only for TAIWAN	1
21	WES8046A3840	BOTTOM COVER	only for CHINA	1
22	WES8176L6057	TAPPING SCREW	M2-8	1
23	WES8046S3038	BODY BLOCK		1
23	WES8046S3039	BODY BLOCK	only for KOREA	1
23	WES8046S3030	BODY BLOCK	only for TAIWAN	1
23	WES8046S3031	BODY BLOCK	only for CHINA	1
24	WES8047K7663	CHARGING ADAPTOR	C-2 PLUG	1
24	WES8046K7662	CHARGING ADAPTOR	A-2 PLUG only for TAIWAN	1
24	WES8047K7671	CHARGING ADAPTOR	KS PLUG only for KOREA	1
24	WES8047K7676	CHARGING ADAPTOR	GB PLUG only for CHINA	1
25	WES8047K7669	ADAPTOR STAND	only for CHINA	1
26	WES8023A7008	SOFT CASE		1
27	WES8093H7057	CLEANING BRUSH		1
-	WES8046S8008	INDIVIDUAL BOX		1
-	WES8046S8009	INDIVIDUAL BOX	only for KOREA	1
-	WES8046S8000	INDIVIDUAL BOX	only for CHINA	1
-	WES8046S8108	OPERATING INSTRUCTIONS		1
-	WES8046S8109	OPERATING INSTRUCTIONS	only for CHINA	1

5.3. ES8047 EXPLODED VIEW



5.4. ES8047 REPLACEMENT PARTS LIST

NOTE:

*A=available as an optional accessory

*B=only available as set

*C=available individually

Ref. No.	Part No.	Part Name & Description	Remarks		Per Unit
1	WES8046X7158	PROTECTIVE CAP			1
2	WES9085E	OUTER FOIL			1
3	WES9064EP	INNER BLADE			1ST
4	WES8046S0047	OUTER FOIL FRAME			1
5	WES8046L1007	LINEAR MOTOR ASSEMBLY			1
5	WES8047L1008	LINEAR MOTOR ASSEMBLY		only for KOREA	1
6	WES8046L1087	TRIMMER DRIVING BAR			1
7	WES8046L1077	SLIT BLADE DRIVING BAR			1
8	WES8046L0587	SPRING AND STOPPER	*B	(2SET/PK)	2
9	WES8176L0327	WATERPROOF RUBBER			1
10	WES8046L0227	TUBE HOLDER			1
11	WES8047H3058	HOUSING A		ES8047	1
12	WES8046H3067	HOUSING B		ES8047	1
13	WES8961L2127	MODULE		ES8047	1
14	WES8176L0167	HOUSING CLIP	*C		2
15	WES8046L0377	ROLLER	*B	(2PCS/PK)	2
16	WES8176L2508	RECHARGEABLE BATTERY		LITHIUM-ION TYPE	1
17	WES8046H3367	REAR PANEL			1
18	WES8046N3347	LOGO PLATE			1
18	WES8047N3348	LOGO PLATE		only for KOREA	1
19	WES8176L6007	P TIGHT SCREW	*C	M2-12	4
20	WES8046H1507	TRIMMER			1
21	WES8047H3848	BOTTOM COVER			1
21	WES8047H3849	BOTTOM COVER		only for CHINA	1
22	WES8176L6057	TAPPING SCREW		M2-8	1
23	WES8047S3038	BODY BLOCK			1
23	WES8047S3039	BODY BLOCK		only for KOREA	1
23	WES8047S3030	BODY BLOCK		only for CHINA	1
24	WES8047K7663	CHARGING ADAPTOR		C-2 PLUG	1
24	WES8046K7662	CHARGING ADAPTOR		A-2 PLUG only for TAIWAN	1
24	WES8047K7671	CHARGING ADAPTOR		KS PLUG only for KOREA	1
24	WES8047K7676	CHARGING ADAPTOR		GB PLUG only for CHINA	1
25	WES8047K7668	ADAPTOR STAND			1
25	WES8047K7669	ADAPTOR STAND		only for CHINA	1
26	WES8023A7008	SOFT CASE			1
27	WES8093H7057	CLEANING BRUSH			1
-	WES8047S8008	INDIVIDUAL BOX			1
-	WES8047S8009	INDIVIDUAL BOX		only for KOREA	1
-	WES8046S8108	OPERATING INSTRUCTIONS			1
-	WES8046S8109	OPERATING INSTRUCTIONS		only for CHINA	1