

# Service Manual

Rechargeable Shaver

Model No. **ES-LA93**  
**ES-LA63**


North America



## **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.

## **IMPORTANT SAFETY NOTICE**

There are special components used in this equipment which are important for safety. These parts are marked by  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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# 1 Warning

## Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a soldering iron with temperature control and adjust it to 750 ± 20°F (400 ± 10°C). In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F / 600°C).

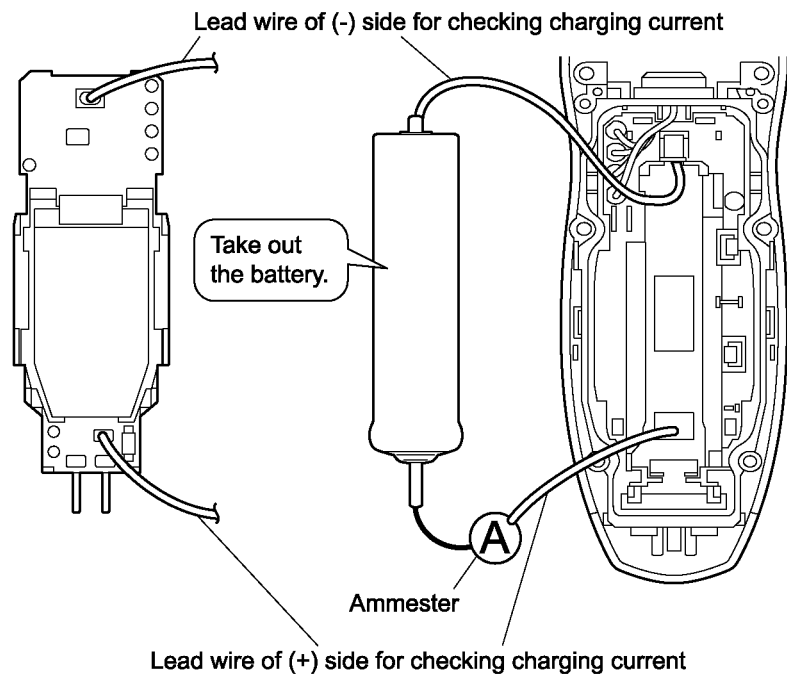
# 2 Specifications

Power source	AC 100-240V, 50-60Hz (Automatic voltage conversion)
Power consumption	Approx. 6W (when charging)
Charging time	1 Hour
Shaves per charge	14 times (3 minutes shave)
Measurement	(H)16.6 x (W)6.8 x (D)5.3 cm
Weight	200g
Supplied accessory	Self-cleaning recharger (ES-LA93 only)
	Soft case

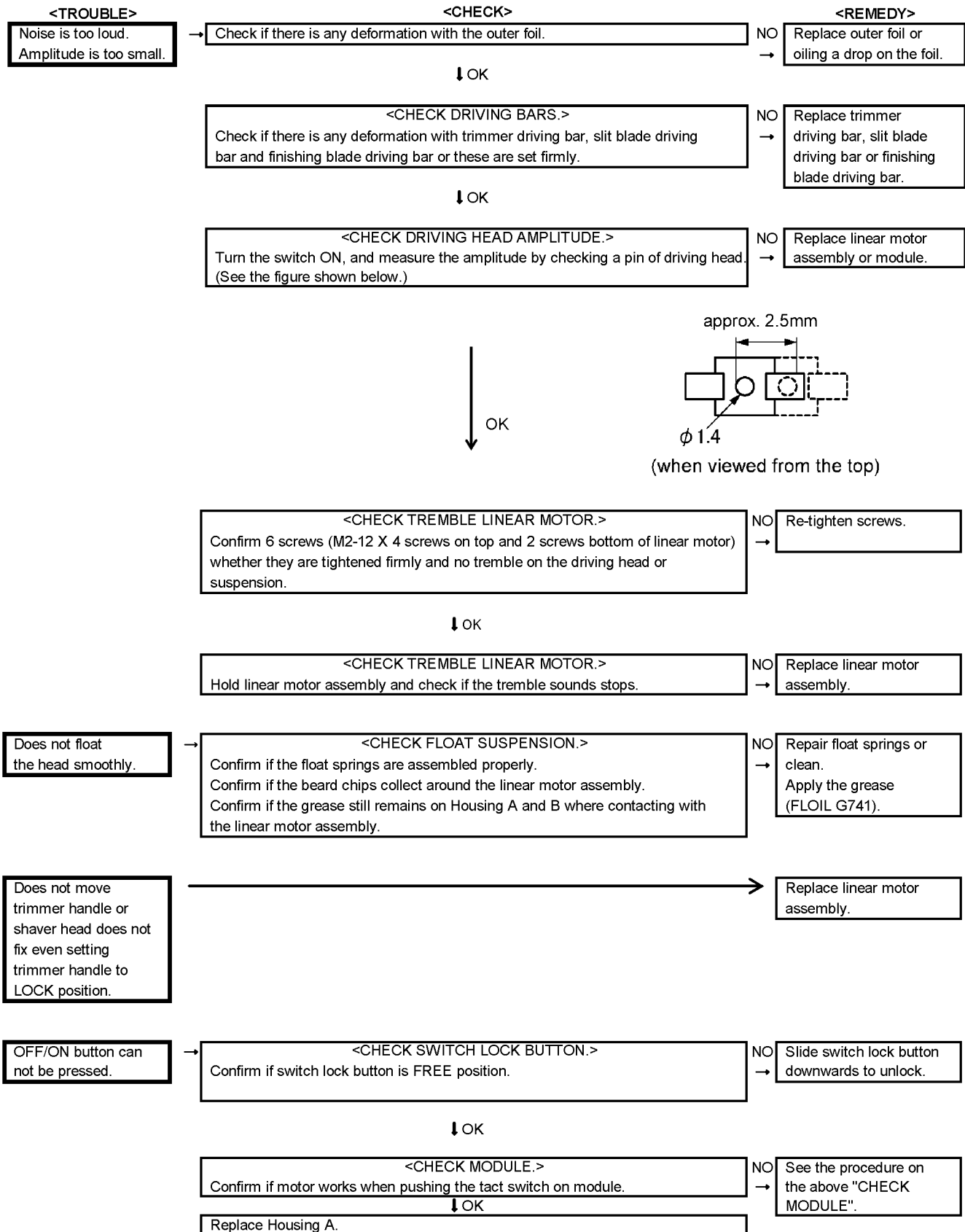
# 3 Troubleshooting Guide

## 3.1. Main unit and charging adaptor

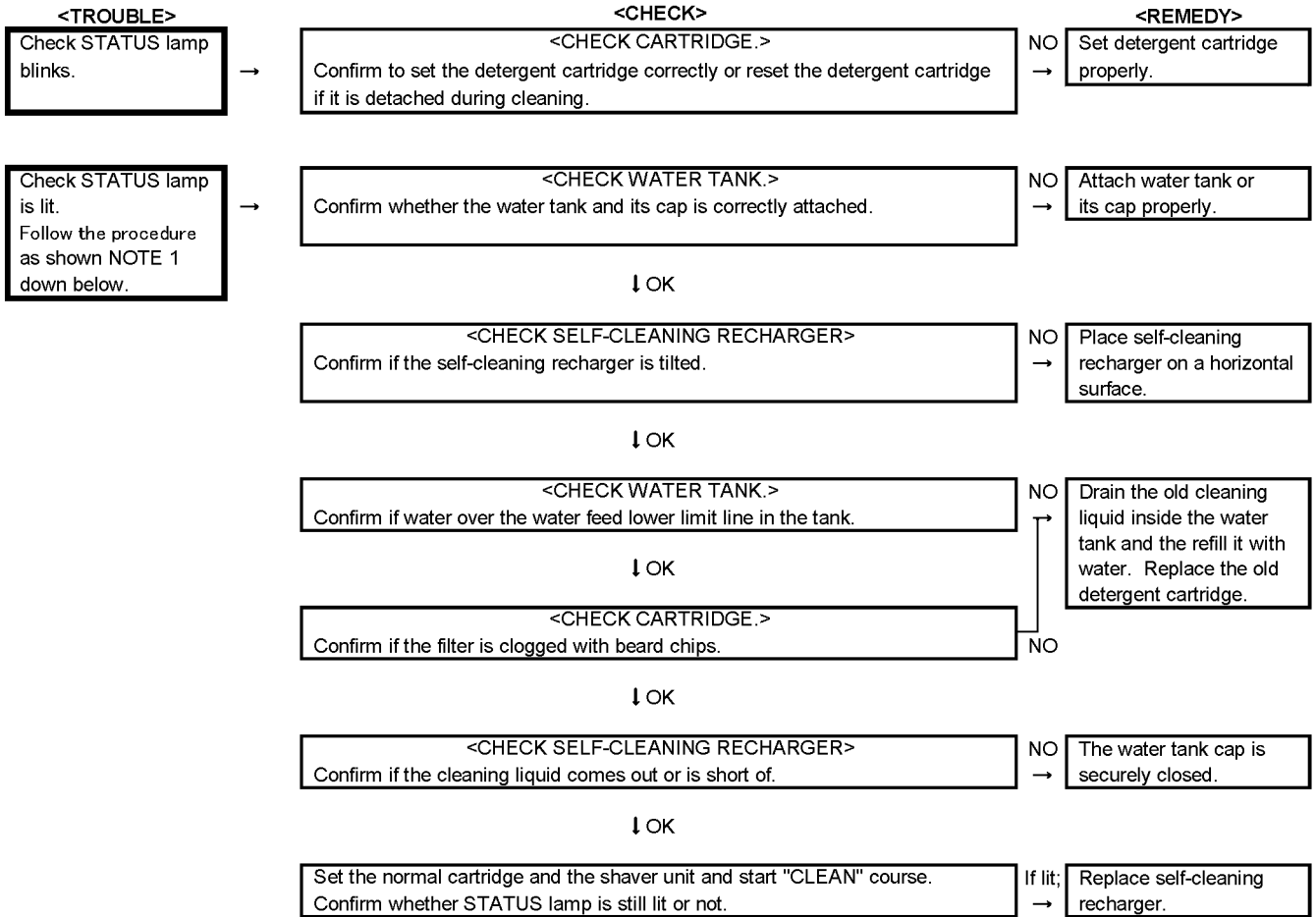
<TROUBLE>	<CHECK>	<REMEDY>
Motor does not rotate. Does not charge. Functions for a moment and stops.	<b>&lt;CHECK CHARGING ADAPTOR.&gt;</b> Supply the rated voltage to the adaptor. And confirm the continuity. OK if it is approx. DC6V between the terminals of the plug at the no-load operation.	NO → Replace charging adaptor.
↓ OK		
	<b>&lt;CHECK RECHARGEABLE BATTERY.&gt;</b> Okay if the voltage of rechargeable battery is more than approximately 3.6V DC between (+) and (-) terminal.	NO → Replace rechargeable battery.
↓ OK		
	<b>&lt;CHECK MODULE.&gt;</b> 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 the indicator of LCD is lid. Discharge the battery completely and check charging current, if it is more than 600-800mA when connecting the charging adaptor.	NO → Check the soldering points. ↓ OK Replace module. ↓ OK Replace linear motor assembly.



**NOTE:** Once taking the battery out, the shaver is RESET. The shaver must be charged for several seconds first.  
**NOTE:** Completely discharge and then fully charge before returning the shaver to the customer.



### 3.2. Self-cleaning recharger (ES-LA93 only)



NOTE 1: Hold down the SELECT button for approximately two seconds to extinguish the STATUS lamp.

The course will be aborted if the power is cut off during cleaning.

(Phenomenon)

The cleaning liquid remains the tray even the course is completed normally.

(Action)

Try to re-operate the course once again to exhaust the cleaning liquid on the cartridge tray.

Too much cleaning liquid remains the tray.

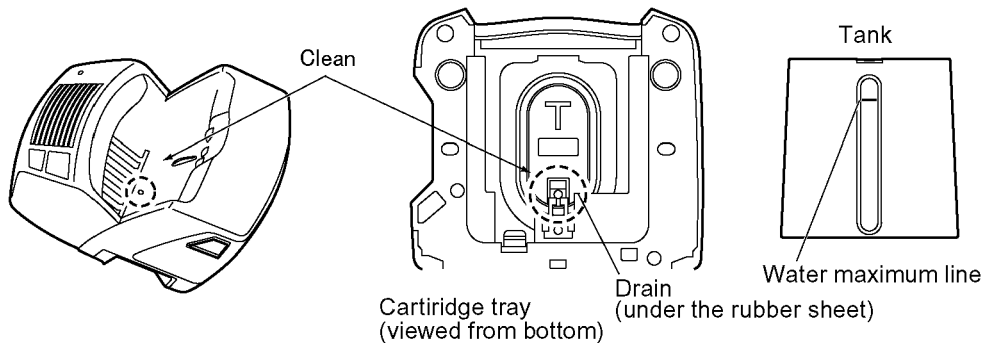
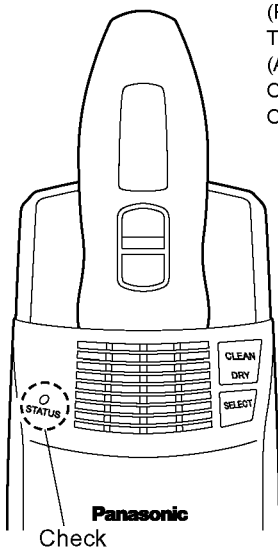
(Phenomenon)

The cleaning liquid remains the tray even the course is completed normally.

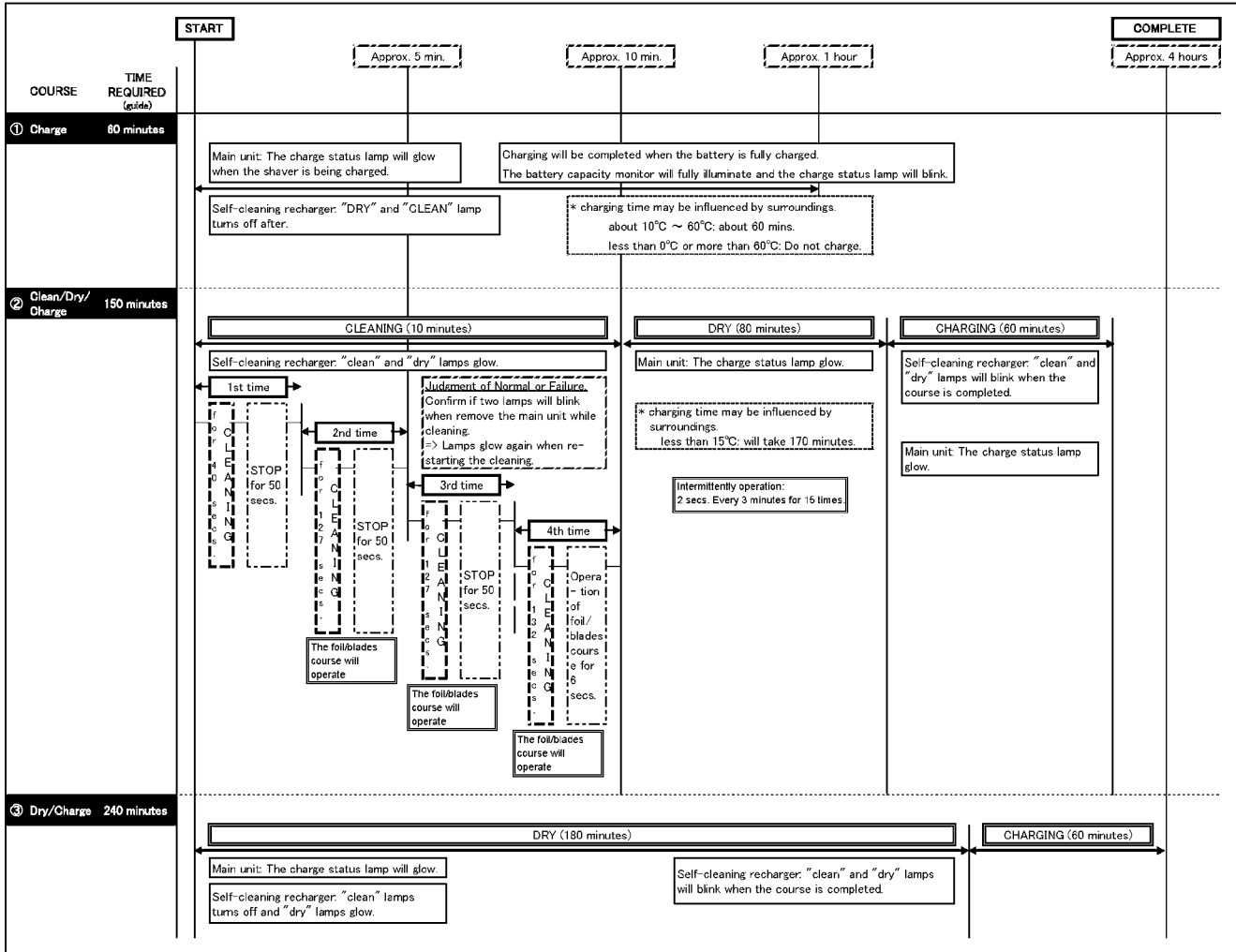
(Action)

Clean the drain holes as pointed with the circle down below.

Confirm if water under the maximum water line in the tank.



### 3.3. Operation of Self-cleaning Recharger (ES-LA93 only)



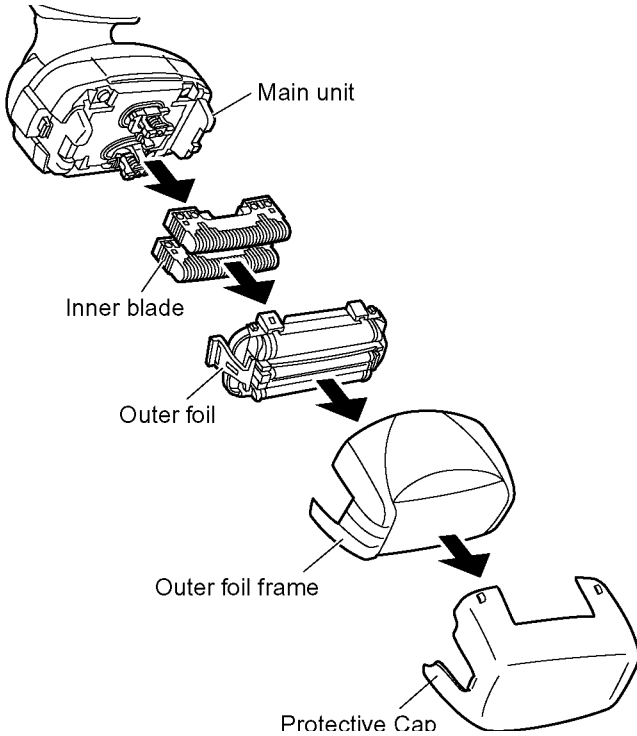
Course	Course selection indications	Time required (guide) [In the low temperature]
① Charge		Charge (0 to 60 min)
② Clean/Dry/Charge		Clean (10 min) ▼ Dry (80 min [170 min]) ▼ Charge (0 to 60 min)
③ Dry/Charge		Dry (180 min) ▼ Charge (0 to 60 min)

# 4 Disassembly and Assembly Instructions

## 4.1. Disassembly Instructions

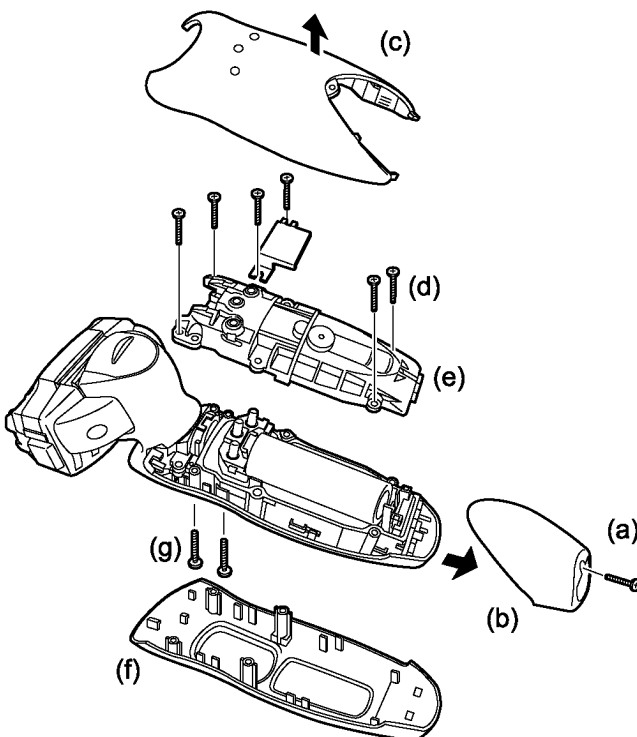
Follow the procedure below to disassemble the main unit.

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

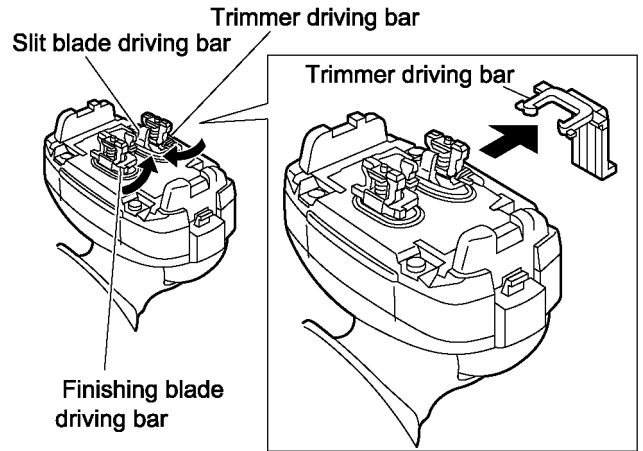


2. How to disassemble the housing A and B.

- a. Loosen a screw.
- b. Remove the bottom cover.
- c. Remove the rear panel.
- d. Loosen 6 screws.
- e. Remove the housing B.
- f. Remove the front panel.
- g. Loosen two screws.



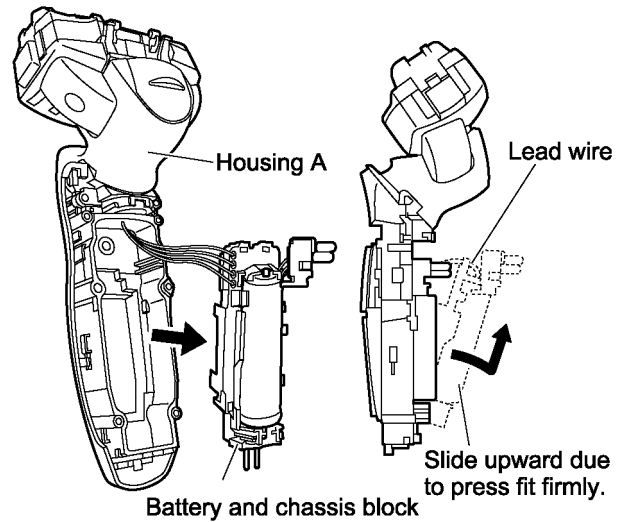
3. To remove the trimmer driving bar or the slit blade driving bar, press bars outward.



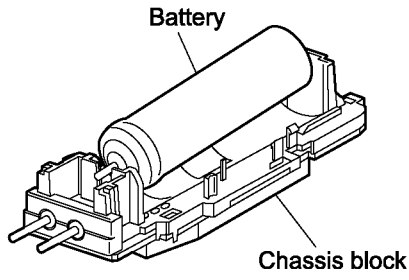
4. Pull up the battery and chassis block from the linear motor side first. Then, slide it upward and take it out from the housing A.

**NOTE:**

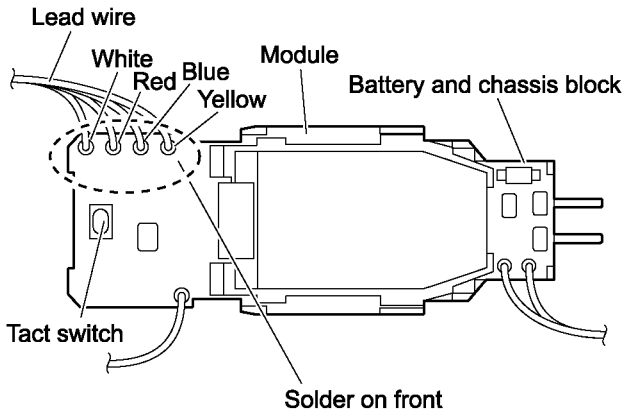
Do not pull the battery and chassis block forcefully due to connecting the linear motor by the lead wires.



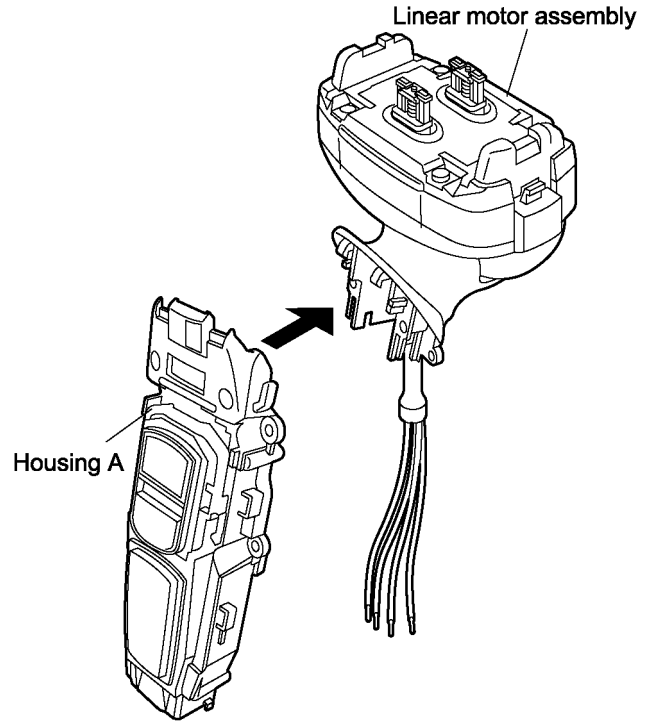
5. Take out the battery from the chassis.



6. Unsolder the lead wires from the module.



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



## 4.2. Caution in Assembly

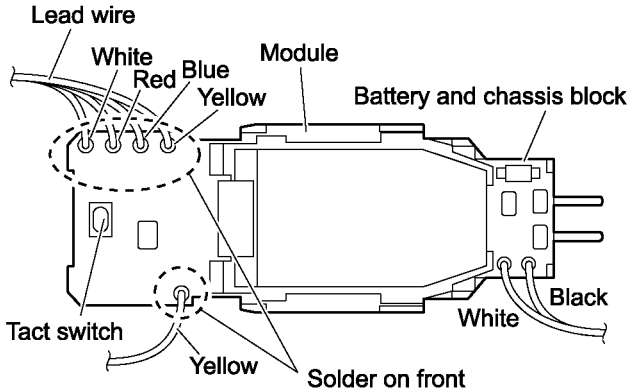
### NOTE:

When reassembling, replace the new waterproof seal. Make sure whether there is NO foreign substance sticking around a part covered with waterproof seal.

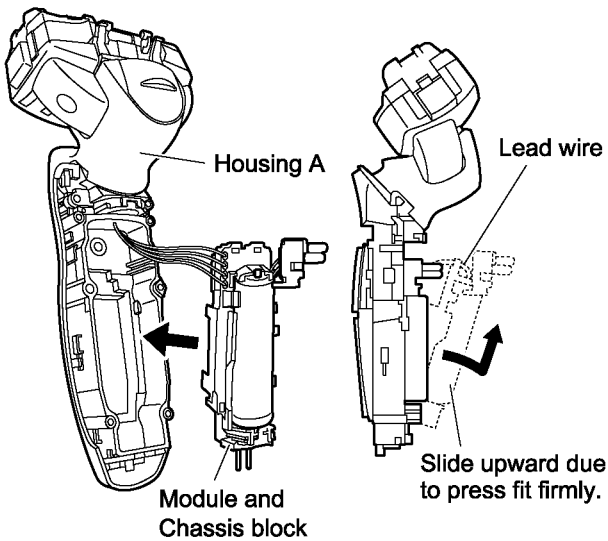
1. Solder the lead wires with the module.

### NOTE:

Make sure of the color of lead wires.

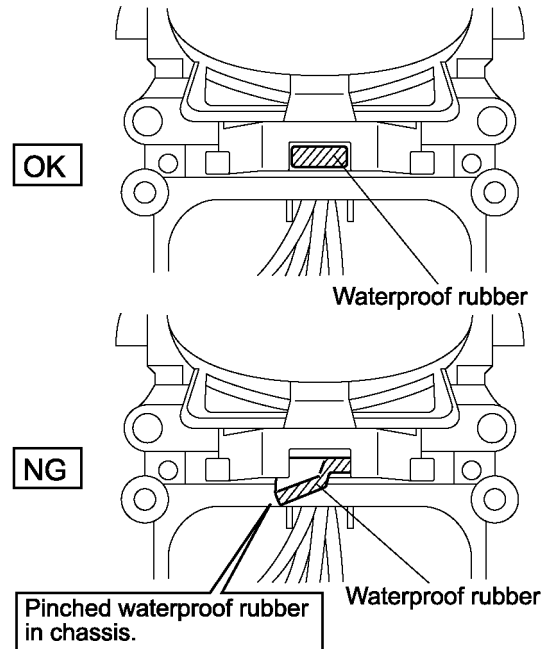


2. Attach the tube holder. Tighten two screws between the linear motor assembly and the housing A.
3. When inserting the module and chassis block into the housing A, confirm if the module does not get any damage or deformation.



### NOTE:

Confirm the position of waterproof rubber.



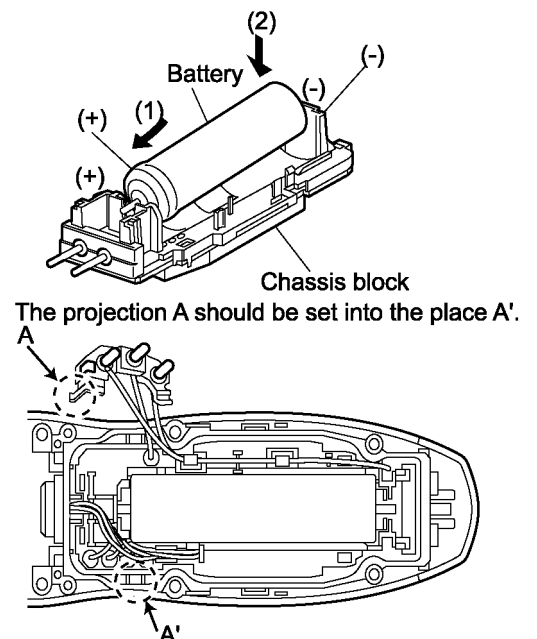
4. Make sure that the lead wires set in position to avoid abnormal noise. Install (+) terminal of battery into the terminal plate at the bottom cover side and firmly set the battery sliding the direction of arrow. Attach (-) terminal of battery.

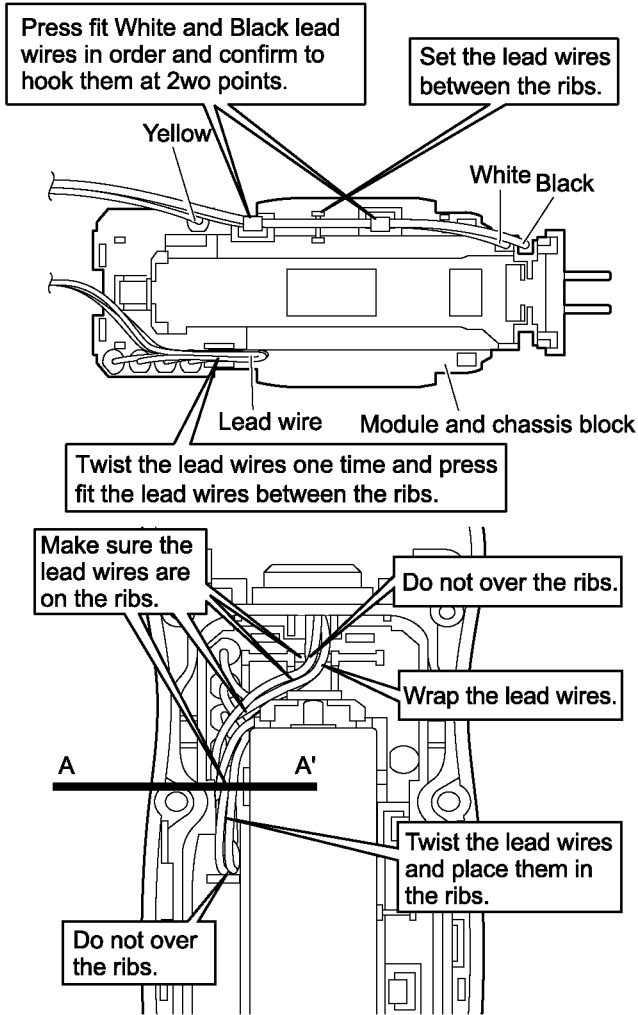
### NOTE:

Once taking the battery out, the shaver is RESET. The shaver must be charged for about 10 seconds first.

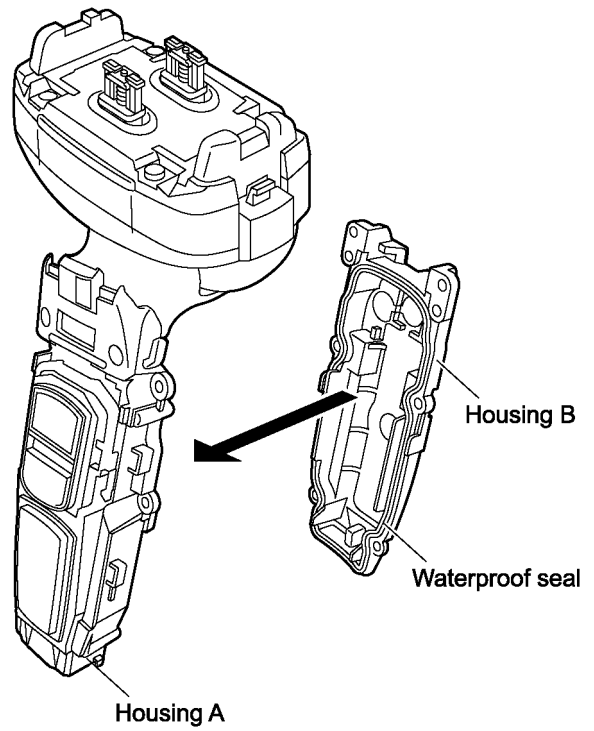
### NOTE:

Completely discharge and then fully charge before returning the shaver to the customer.

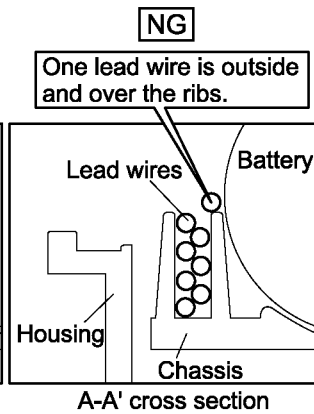
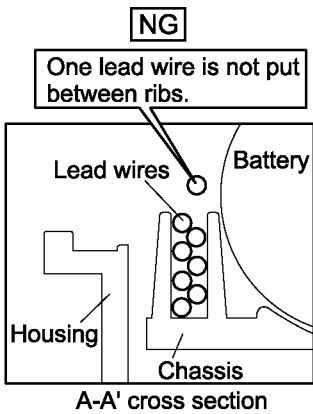
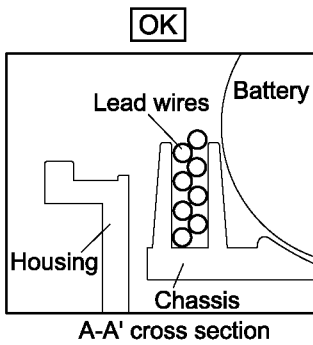
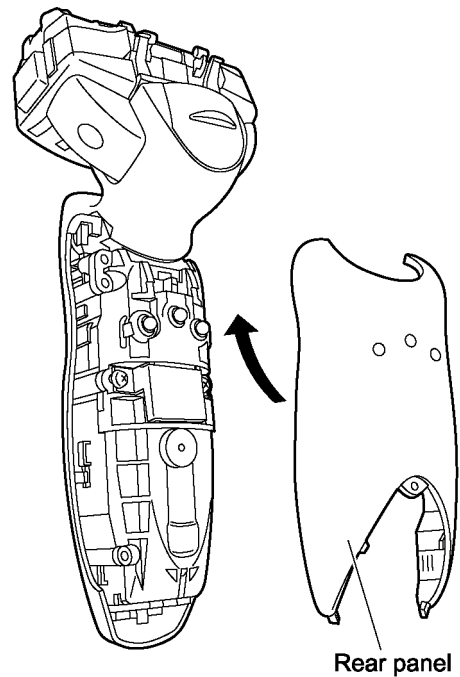




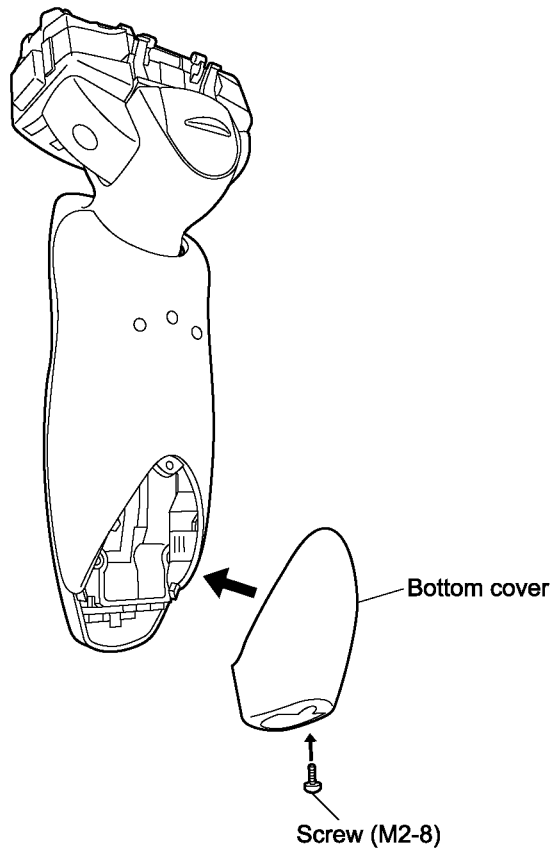
5. When putting the housing A and the housing B together, make sure if the waterproof seal must be fitted properly and no foreign substance sticking around.



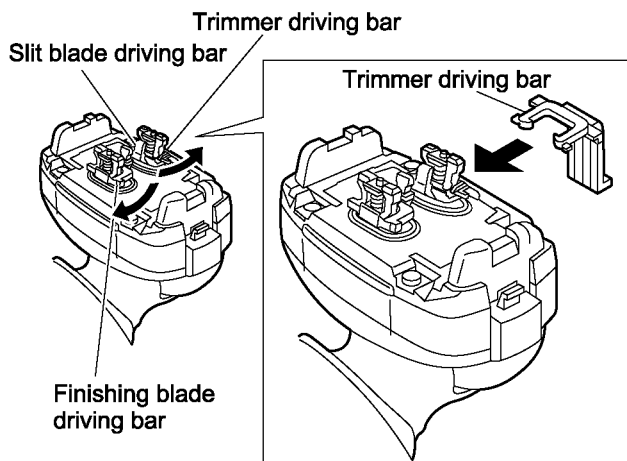
6. Attach the rear panel firmly.



7. Attach the bottom cover and tighten a screw.

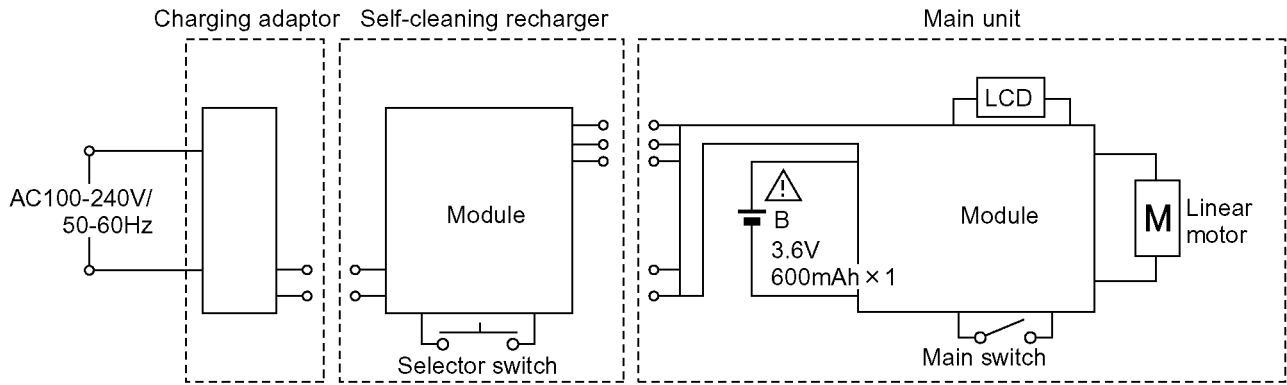


8. Set the trimmer driving bar and the slit blade driving bar.

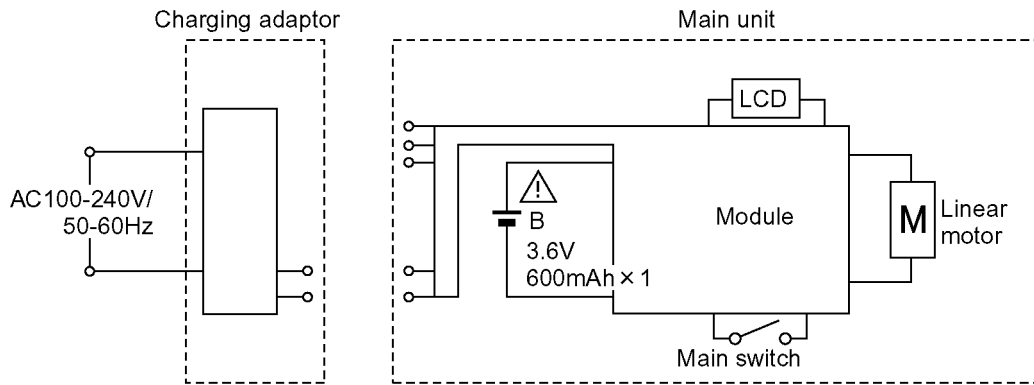


# 5 Schematic Diagram

## 5.1. ES-LA93

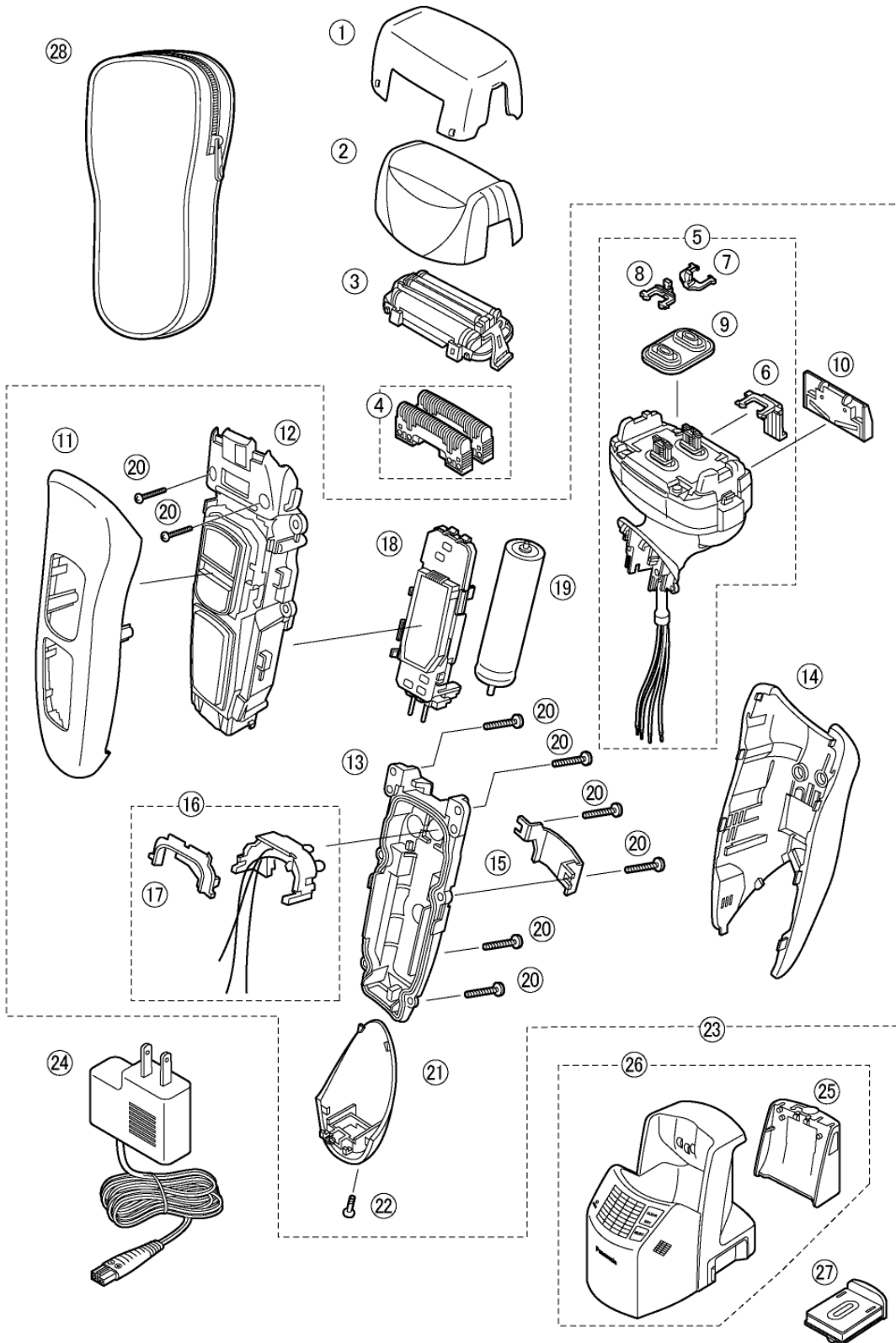


## 5.2. ES-LA63



# 6 Exploded View and Replacement Parts List

Model No. : ES-LA93 Exploded View



## Model No. : ES-LA93 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
ES-LA93					
	1	WESLA93K7159	PROTECTIVE CAP	1	
	2	WESLA92K0047	OUTER FOIL FRAME	1	
	3	WES9165PC	OUTER FOIL	1	
	4	WES9068PC	INNER BLADE	1ST	
	5	WESLA92L1007	LINEAR MOTOR ASSEMBLY	1	
	6	WESLA92L1087	TRIMMER DRIVING BAR	1	
	7	WES8258L1077	SLIT BLADE DRIVING BAR	1	
	8	WES8258L1177	FINISHING BLADE DRIVING BAR	1	
	9	WES8258L0327	WATERPROOF RUBBER	1	
	10	WESLA92K1507	TRIMMER	1	
	11	WESLA93K3858	FRONT PANEL	1	
	12	WESLA92K3057	HOUSING A	1	
	13	WESLA92H3067	HOUSING B	1	
	14	WESLA92K3367	REAR PANEL	1	
	15	WESLA92L0487	CONNECTING PLATE	1	
	16	WES8258L0497	TERMINAL BASE	1	
	17	WES8238H0527	TERMINAL COVER	1	
	18	WESLA93L2128	MODULE	1	
	19	WES8163L2504	RECHARGEABLE BATTERY	1	(LM-ION TYPE)
	20	WES8176L6007	P TIGHT SCREW	8	(M2-12)
	21	WESLA93K3120	BOTTOM COVER	1	
	22	WES8176L6057	TAPPING SCREW	1	(M2-8)
	23	WESLA93K3030	BODY BLOCK	1	
	24	WESGA21K7662	CHARGING ADAPTOR	1	(A-2 PLUG)
	25	WESLA92K7358	WATER TANK	1	
	26	WESLA93K4219	SELF-CLEANING RECHARGER	1	
	27	WES035K7770	DETERGENT CARTRIDGE	1	(3PCS/BOX)
	28	WESLA92K3747	SOFT CASE	1	
	-	WESLA93K8000	INDIVIDUAL BOX	1	
	-	WESLA93K8109	OPERATING INSTRUCTIONS	1	



## Model No. : ES-LA63 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
ES-LA63					
	1	WESLA93X7159	PROTECTIVE CAP	1	
	2	WESLA82S0047	OUTER FOIL FRAME	1	
	3	WES9165PC	OUTER FOIL	1	
	4	WES9068PC	INNER BLADE	1ST	
	5	WESLA63L1008	LINEAR MOTOR ASSEMBLY	1	
	6	WESLA92L1087	TRIMMER DRIVING BAR	1	
	7	WES8258L1077	SLIT BLADE DRIVING BAR	1	
	8	WES8258L1177	FINISHING BLADE DRIVING BAR	1	
	9	WES8258L0327	WATERPROOF RUBBER	1	
	10	WESLA63H1508	TRIMMER	1	
	11	WESLA63S3858	FRONT PANEL	1	
	12	WESLA82K3057	HOUSING A	1	
	13	WESLA92H3067	HOUSING B	1	
	14	WESLA63H3368	REAR PANEL	1	
	15	WESLA63L0498	REAR COVER	1	
	16	WESLA63L2128	MODULE	1	
	17	WES8163L2504	RECHARGEABLE BATTERY	1	(LM-ION TYPE)
	18	WES8176L6007	P TIGHT SCREW	8	(M2-12)
	19	WESLA63S3120	BOTTOM COVER	1	
	20	WES8176L6057	TAPPING SCREW	1	(M2-8)
	21	WESLA63S3030	BODY BLOCK	1	
	22	WESGA21K7662	CHARGING ADAPTOR	1	(A-2 PLUG)
	23	WESLA92K3747	SOFT CASE	1	
	-	WESLA63S8000	INDIVIDUAL BOX	1	
	-	WESLA63S8109	OPERATING INSTRUCTIONS	1	