

Service Manual

Rechargeable Shaver

Model No. **ES7111**

ES7112

ES7115



Asia

⚠ 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

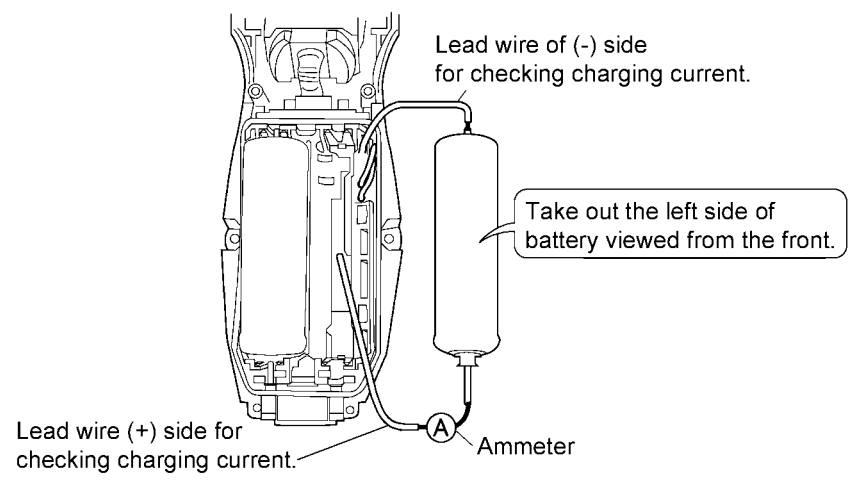
Power source	AC 100-240V, 50-60Hz (Automatic voltage conversion)
Power consumption	Approx. 6W
Motor voltage	2.4V DC
Charging time	1 Hour
Shaves per charge	14 times (3 minutes shave)
Measurement	(H)15.3 x (W)6.3 x (D)4.5 cm
Weight	200g

Supplied accessories	Drying/Charging stand (ES7115 only)
	Soft case
	Cleaning brush

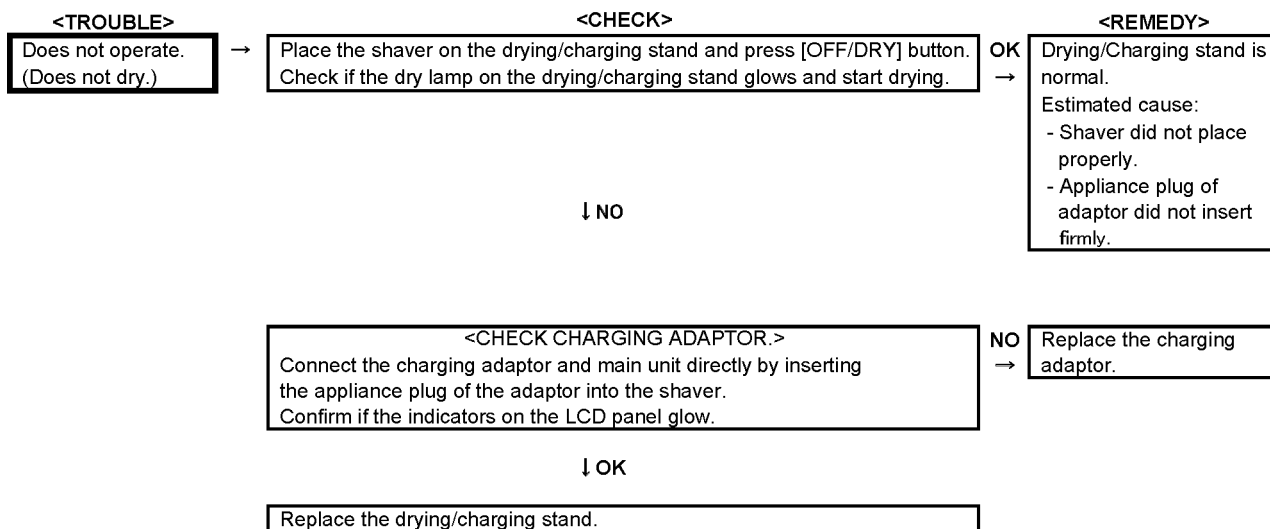
3 Troubleshooting Guide

3.1. Main unit and charging adaptor

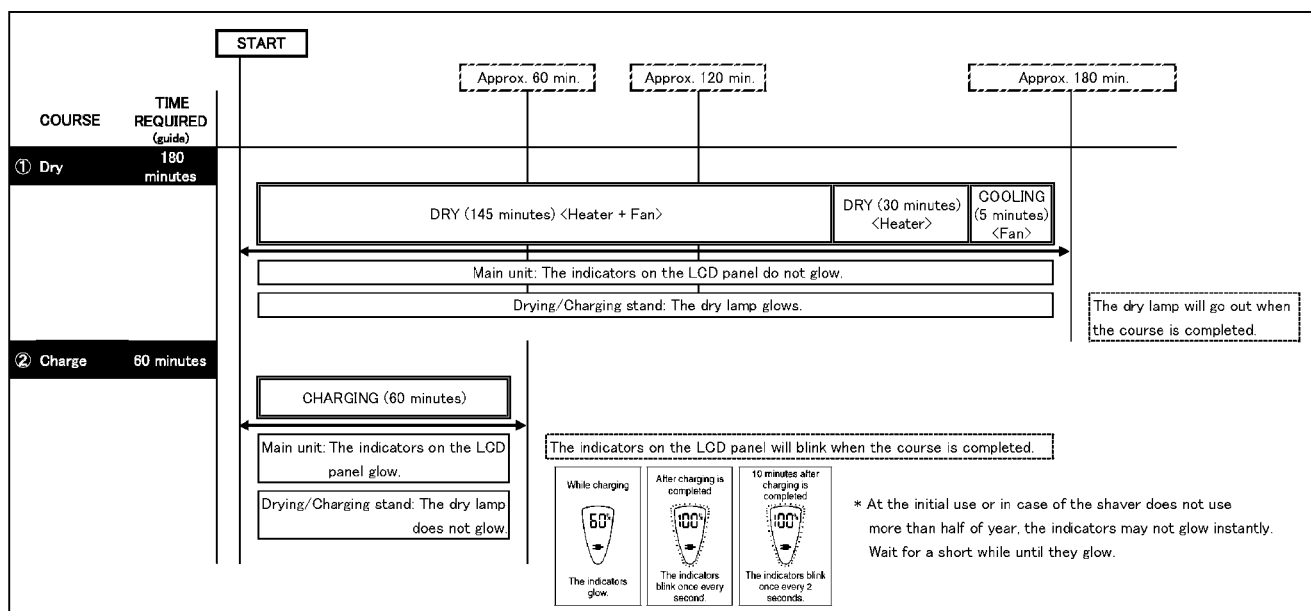
<TROUBLE>	<CHECK.>	<REMEDY>	
Motor does not rotate. Does not charge. Functions for a moment and stops.	<p align="center"><CHECK CHARGING ADAPTOR.></p> → Connect the rated voltage to the normal main unit by the charging adaptor. Check if the plug symbol of LED display glows. Supply the rated voltage to the adaptor and measure the voltage. OK if it is approximate DC 5.7V between the terminals of the plug with no-load operation.	NO → Replace charging adaptor.	
↓ OK			
<p align="center"><CHECK RECHARGEABLE BATTERIES.></p> Okay if the voltage of rechargeable batteries is more than approximately 1.2V DC between (+) and (-) terminals. (Replace two rechargeable batteries at the same time even though one battery is defective due to series connection.)			NO → Replace both rechargeable batteries at the same time.
↓ OK			
<p align="center"><CHECK SWITCH CONTACT.></p> Okay if there is a continuity and no deformation of switch terminals.			NO → Repair contact or replace housing A.
↓ OK			
<p align="center"><CHECK MOTOR.></p> Okay if motor rotates when DC2.4V is applied to (+) and (-) terminals.			NO → Replace motor.
↓ 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 charging adaptor. Take out the left battery (viewed from the front). 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 in between 700mA to 850mA.			NO → Replace module.



3.2. Drying/Charging stand (ES7115 only)



3.3. Operation of Drying/charging stand (ES7115 only)

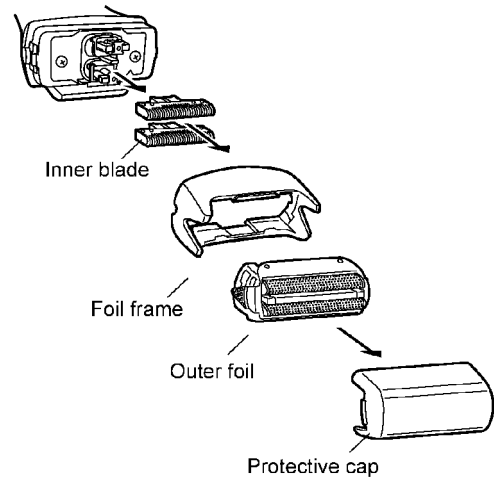


4 Disassembly and Assembly Instructions

4.1. Disassembly Instructions

Follow the procedure below to disassemble the main unit.

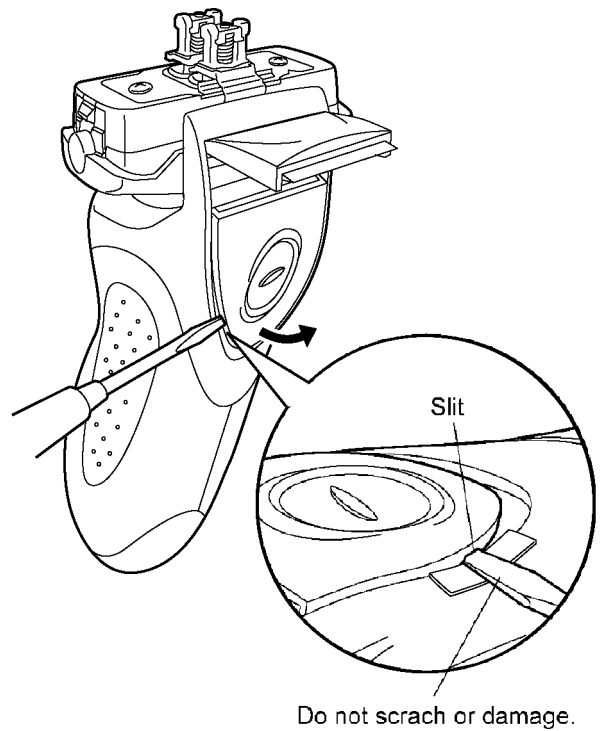
1. Remove the cap, the outer foil with foil frame and the inner blade.



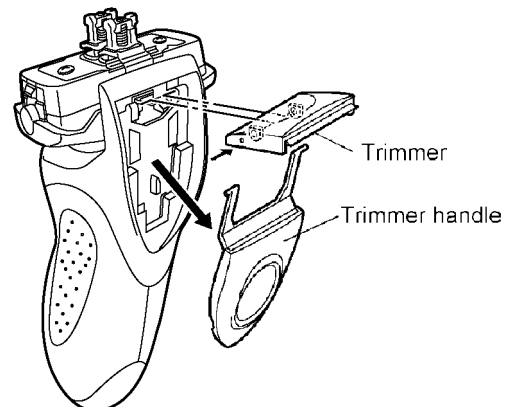
2. Slide the trimmer handle up to open the trimmer and unhook the trimmer handle by inserting something like a slotted screwdriver or plastic spatula into a slit.

NOTE:

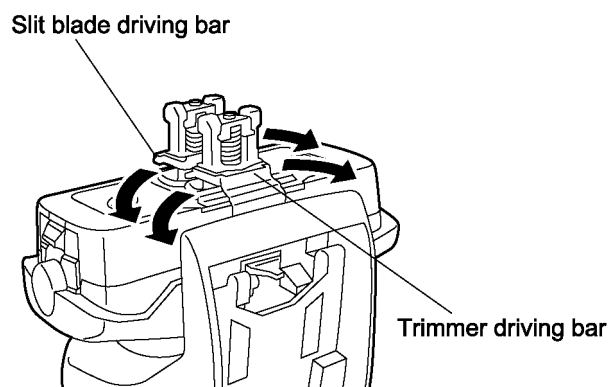
In order to prevent the scratch or damage on the housing, use the cushion under the screwdriver.



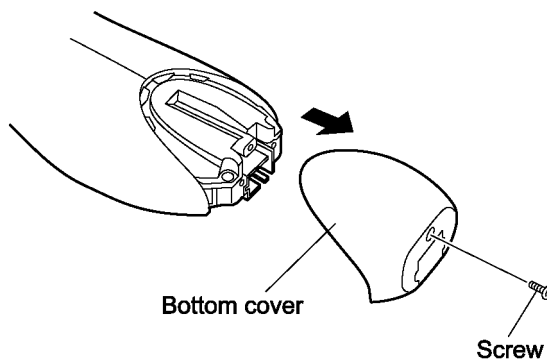
3. Remove trimmer and trimmer handle.



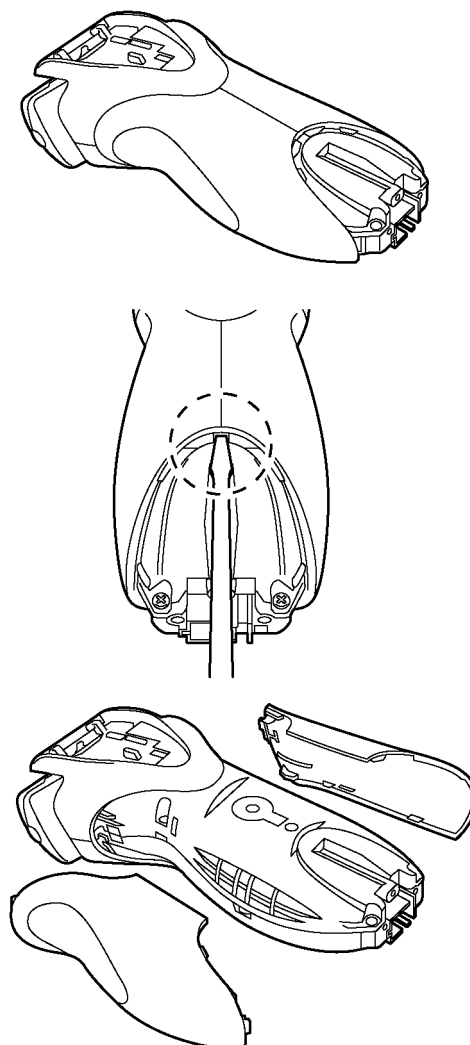
4. To remove the trimmer driving bar or the slit blade driving bar, press bars outward.



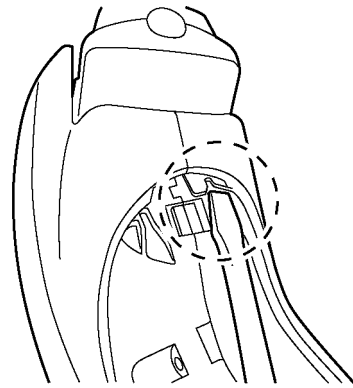
5. Loosen a screw and remove the bottom cover.



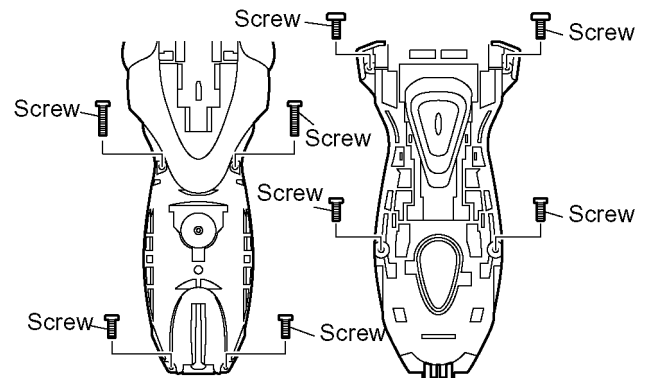
6. To remove the side panels, insert a small slotted screwdriver into the middle of housing and unhook.



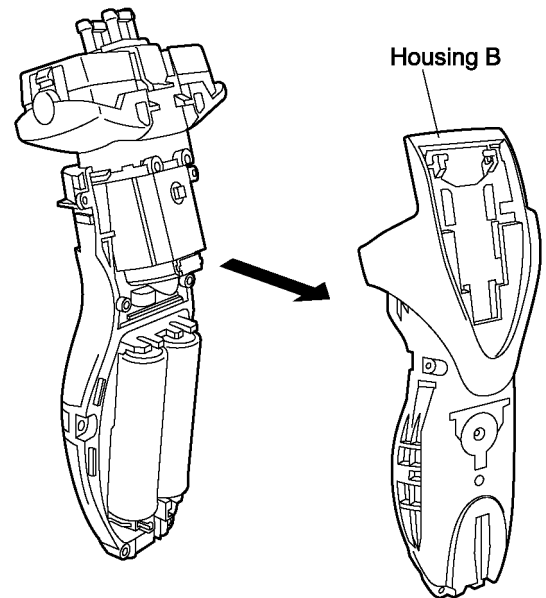
7. Insert a slotted screwdriver into the space between the front panel and housing. Unhook the front panel by lifting the screwdriver up.



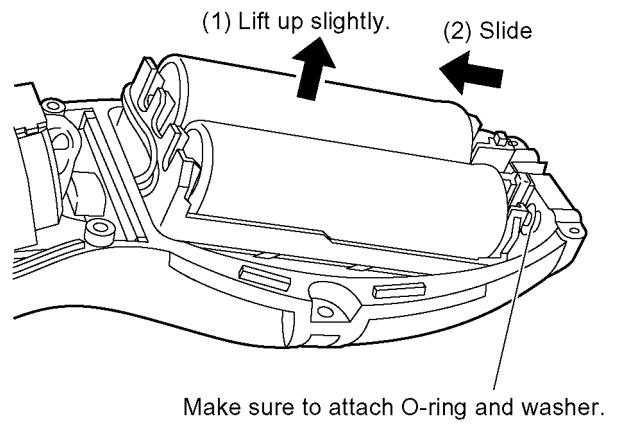
8. Loosen four screws on both front and back side of housing.



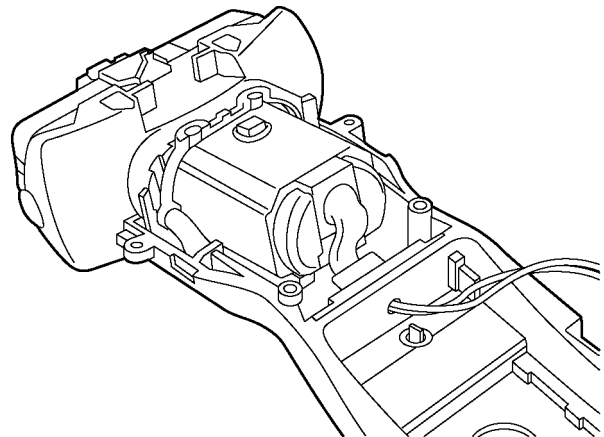
9. Take out the housing B.



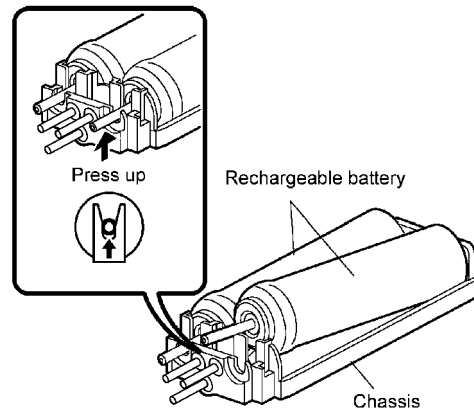
10. And take out the battery assembly from housing A.



11. Remove the motor assembly and tube holder.



12. Remove the battery o-ring and washer in each battery.
Take out the rechargeable batteries from the chassis.



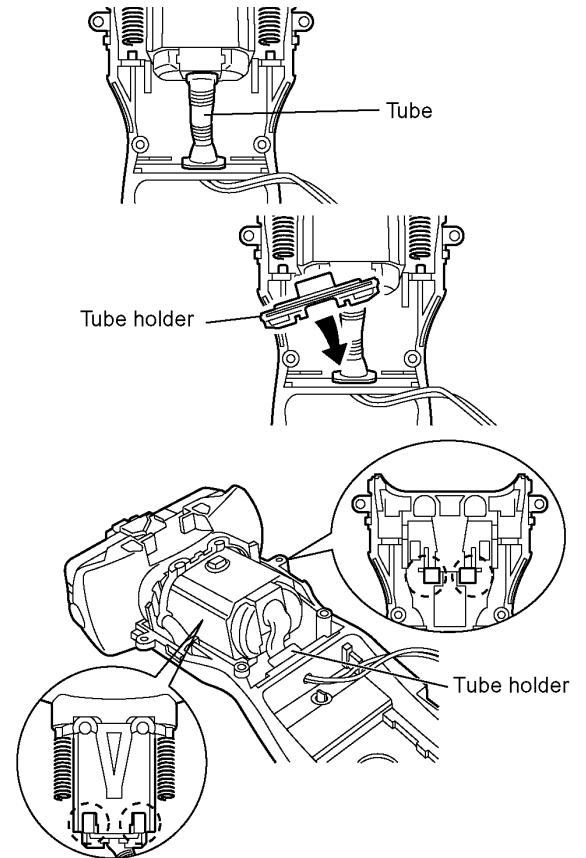
4.2. Cautions in Assembly

NOTE:

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

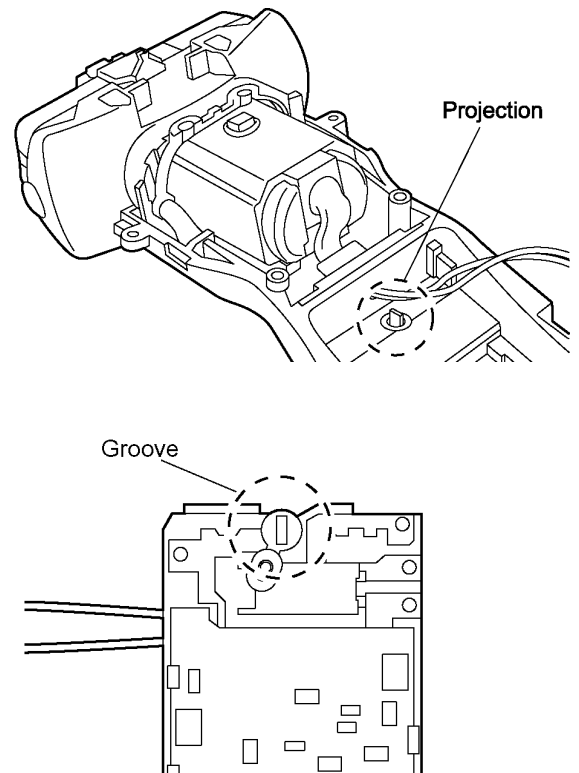
4.2.1. Motor

Insert the tube into the projection of the housing A and set the tube holder firmly. Then hook the motor holder to the housing and put the float springs properly.



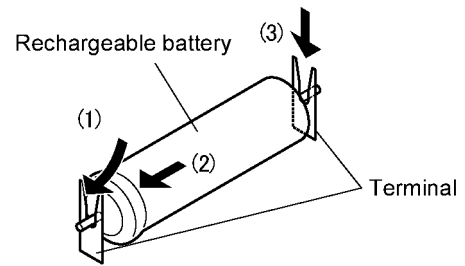
4.2.2. Module

Align the projection of switch select button on housing A with the groove of switch plate on module.



4.2.3. Rechargeable batteries

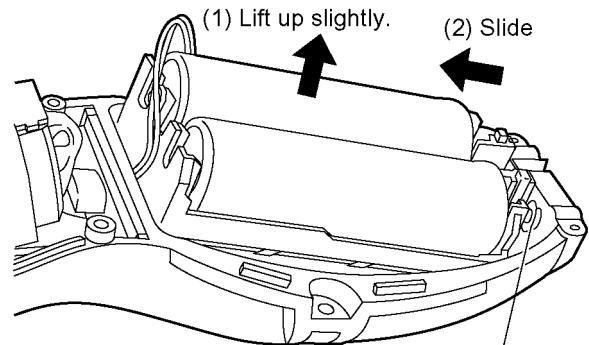
Insert the rechargeable batteries into chassis. Attach the battery o-ring and washer to the battery.



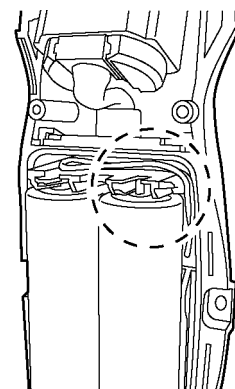
Put the battery assembly from the battery terminal side into housing A, and insert the motor side into housing A.

NOTE:

While setting the battery assembly, pull the lead wires out in order to prevent pinching. Then press fit the lead wires neatly.

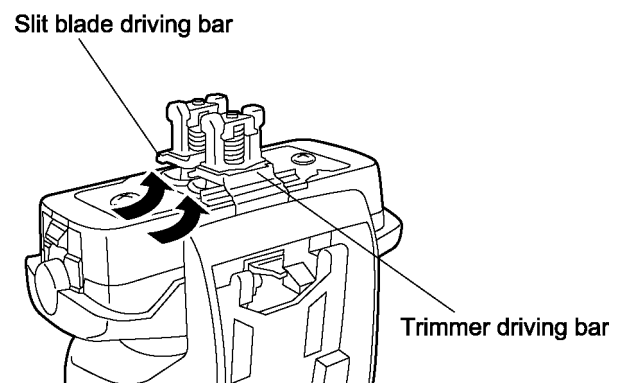


Make sure to attach O-ring and washer.



4.2.4. Driving bars

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

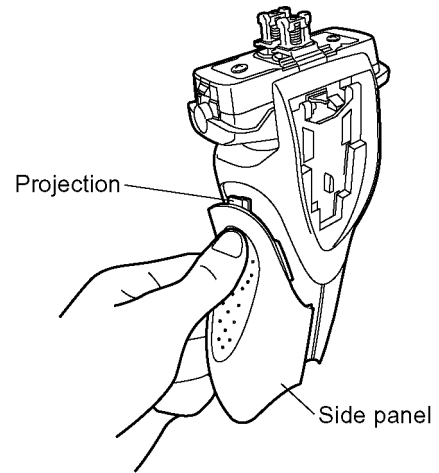


4.2.5. Side panel

Set the side panel on the body and insert the projection on top of side panel into the housing first. Then hook the front side and the rear side of the side panel in order.

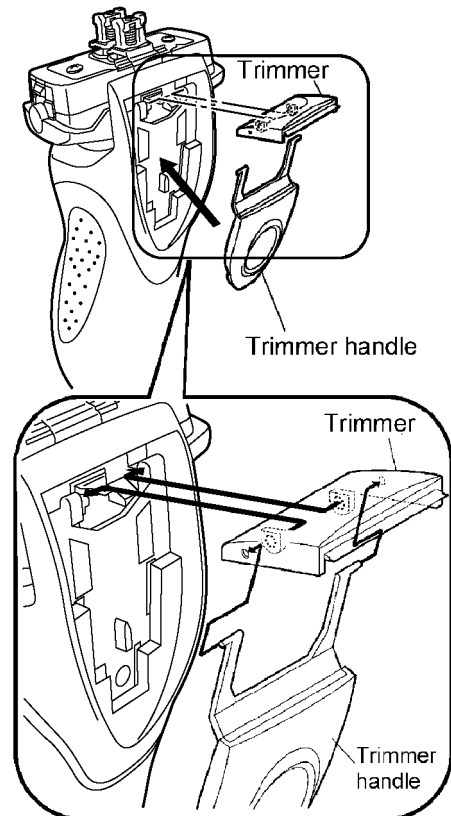
NOTE:

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

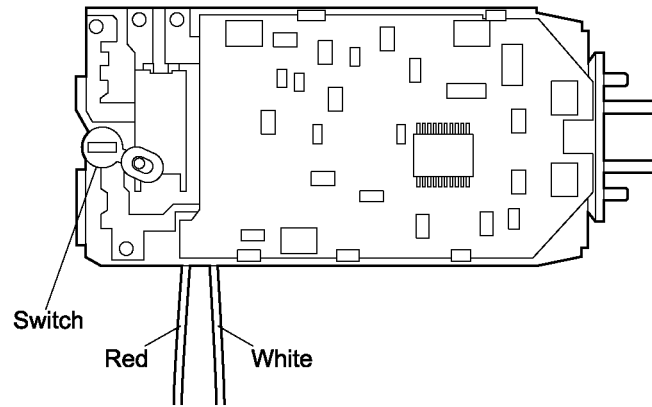


4.2.6. Trimmer

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.

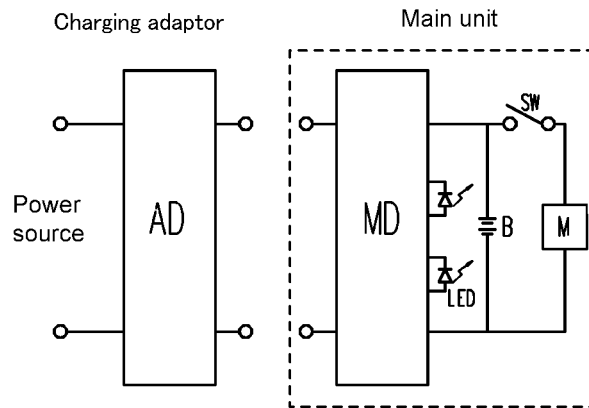


5 Wiring Connection Diagram

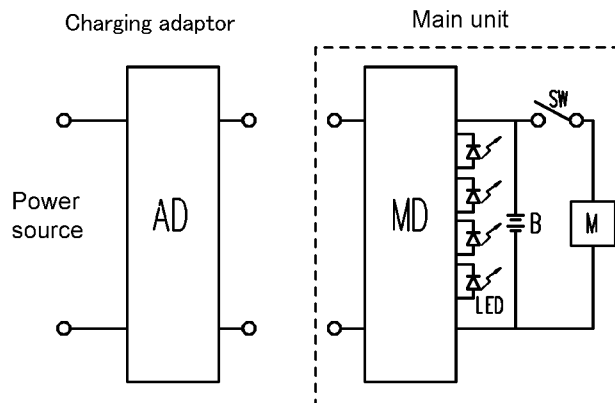


6 Schematic Diagram

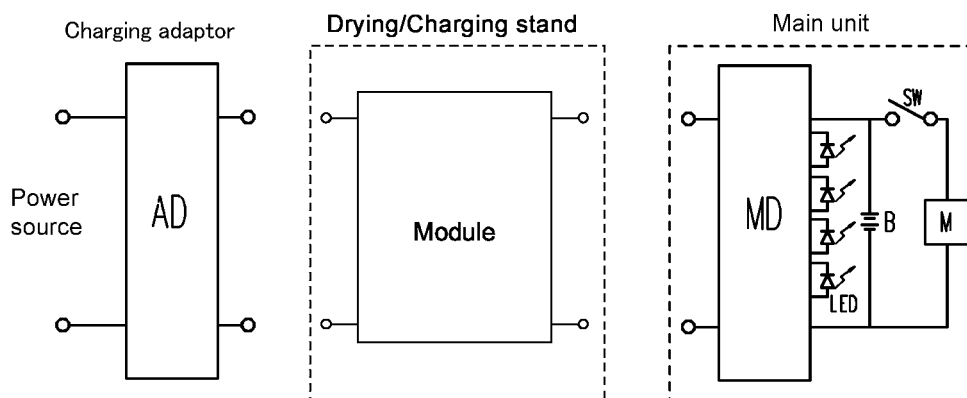
6.1. ES7111



6.2. ES7102

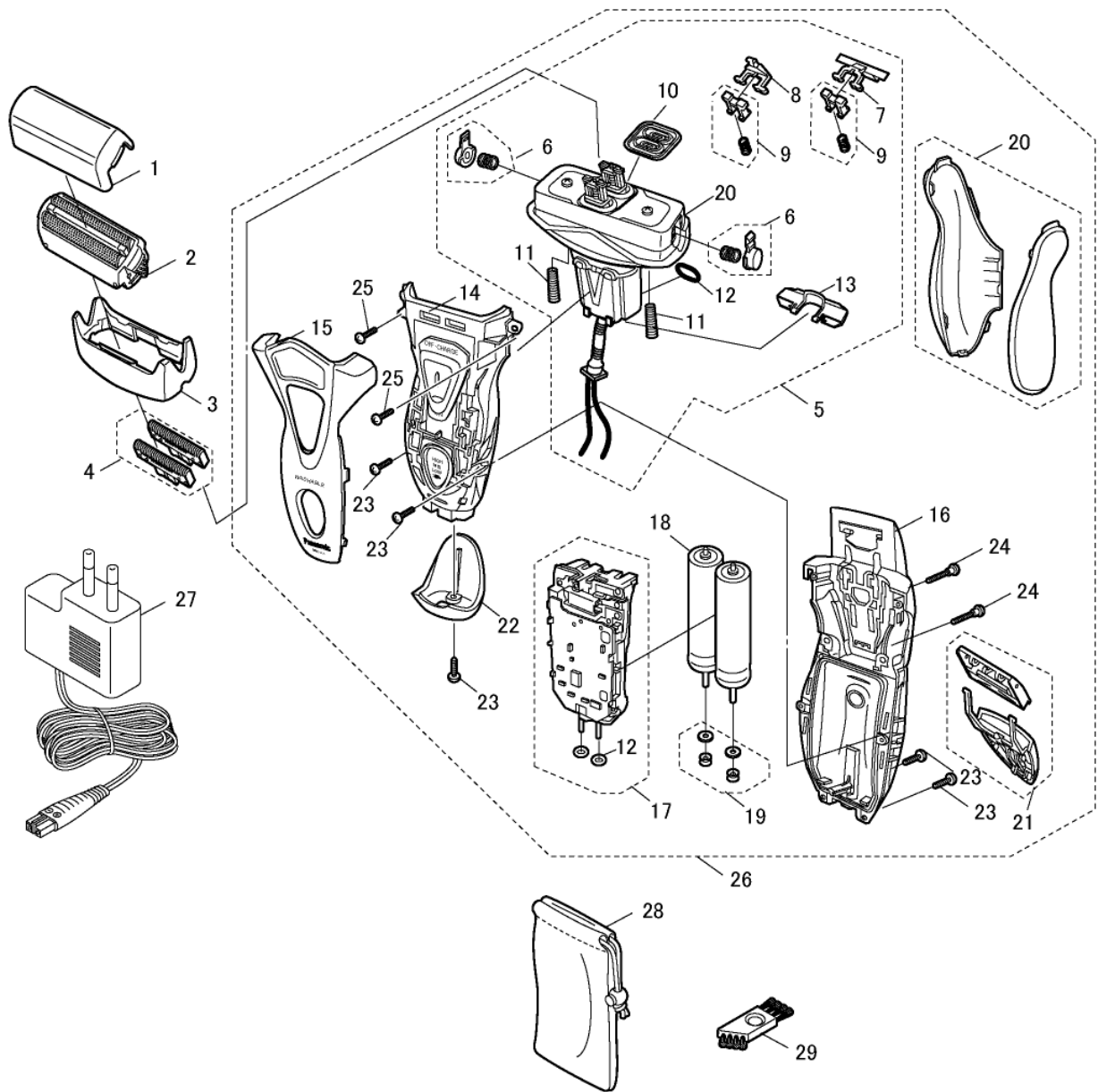


6.3. ES7115



7 Exploded View and Replacement Parts List

Model No. : ES7111/ES7112 Exploded View for ES7111/ES7112



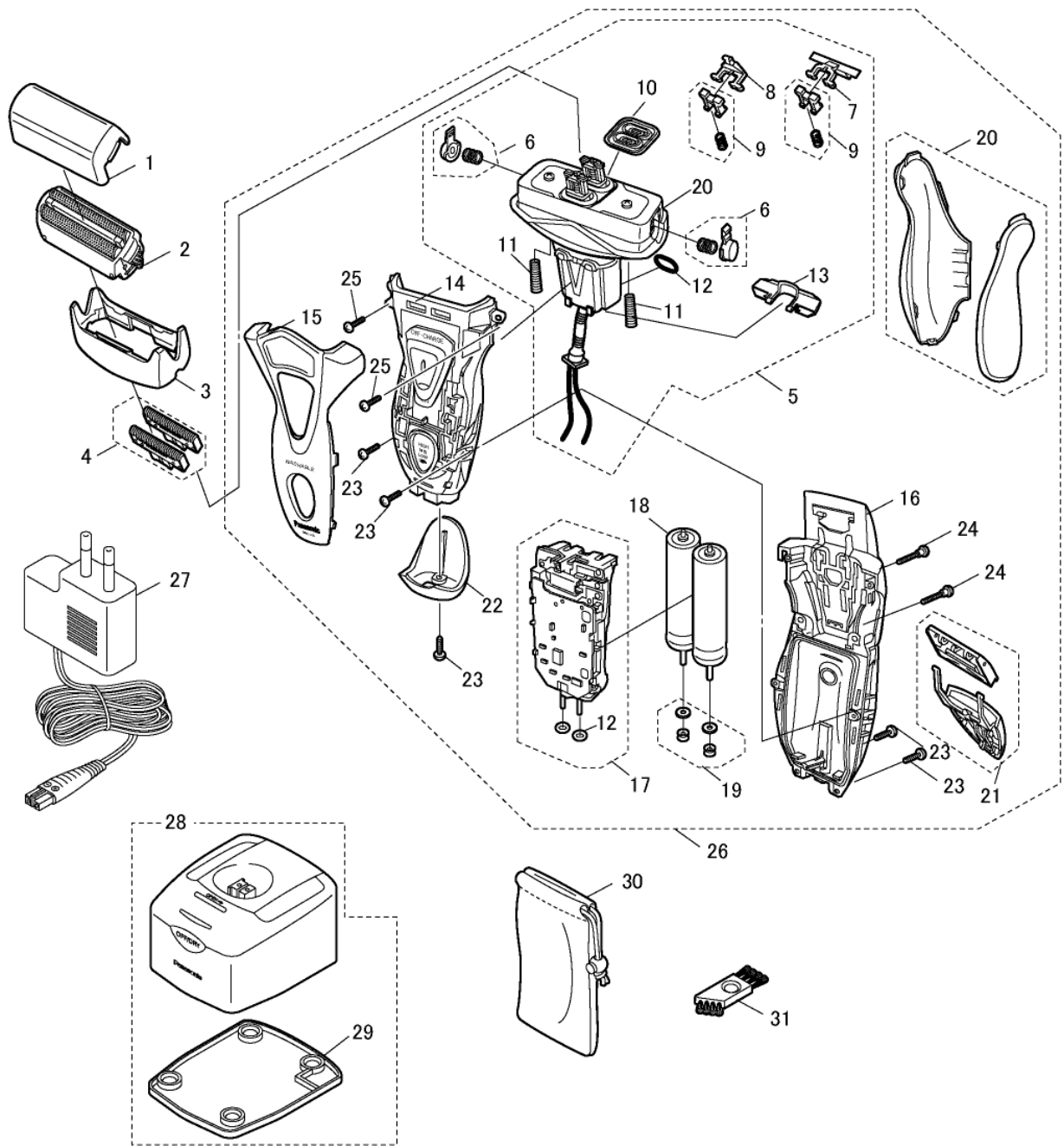
Model No. : ES7111/ES7112 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
ES7111					
	1	WES8044X7158	PROTECTIVE CAP	1	[BG]
	2	WES9085E	OUTER FOIL	1	
	3	WES7111W0048	OUTER FOIL FRAME	1	[BG]
	4	WES9064EP	INNER BLADE	1ST	
	5	WES7111L1008	MOTOR ASSEMBLY	1	[BG]
	6	WES7047H3268	FOIL RELEASE BUTTON	2	(2PCS/PK), [BG]
	7	WES7046L1087	TRIMMER DRIVING BAR	1	[BG]
	8	WES7046L1077	SLIT BLADE DRIVING BAR	1	[BG]
	9	WES7046L0587	SPRING AND STOPPER	2	(2SETS/PK), [BG]
	10	WES8080L0326	WATERPROOF RUBBER	1	[BG]
	11	WES7046L0227	FLOAT SPRING	2	(2PCS/PK), [BG]
	12	WES7046L0967	O-RING	1	[BG]
	13	WES7046L0237	TUBE HOLDER	1	[BG]
	14	WES7111K3058	HOUSING A	1	[BG]
	15	WES7111W3778	FRONT PANEL	1	[BG]
	16	WES7111W3068	HOUSING B	1	[BG]
	17	WES7111L2128	MODULE	1	[BG]
	18	WES7043L2508	RECHARGEABLE BATTERY	2	(Ni-Mh Type), (2PCS/PK), [BG]
	19	WES7025L0977	WASHER & O-RING SET	2	[BG]
	20	WES7115K3367	SIDE PANEL	1	[BG]
	21	WES8046H1507	TRIMMER	1	[BG]
	22	WES7111K3848	BOTTOM COVER	1	[BG]
	22	WES7111K3849	BOTTOM COVER	1	(only for TAIWAN), [BG]
	23	WES7023L6058	TAPPING SCREW	5	(K2-8), [BG]
	24	WES7046L6008	P TIGHT SCREW	2	(K2-12), [BG]
	25	WES762L6007	P TIGHT SCREW	2	(K2-8), [BG]
	26	WES7111W3038	BODY BLOCK	1	[BG]
	26	WES7111W3039	BODY BLOCK	1	(only for TAIWAN), [BG]
	27	WES4853K7663	CHARGING ADAPTOR	1	(C-2 PLUG), [BG]
	27	WES7056K7671	CHARGING ADAPTOR	1	(KS PLUG), [BG]
	27	WES7115K7662	CHARGING ADAPTOR	1	(A-2 PLUG), [BG]
	28	WES7115K7007	SOFT CASE	1	[BG]
	29	WES8093H7056	CLEANING BRUSH	1	[BG]
	-	WES7111W8008	INDIVIDUAL BOX	1	[BG]
	-	WES7111W8009	INDIVIDUAL BOX	1	(only for KOREA), [BG]
	-	WES7111W8000	INDIVIDUAL BOX	1	(only for TAIWAN), [BG]
	-	WES7112K8108	OPERATING INSTRUCTIONS	1	[BG]
ES7112					
	1	WES8044X7158	PROTECTIVE CAP	1	[BG]
	2	WES9085E	OUTER FOIL	1	
	3	WES7111K0047	OUTER FOIL FRAME	1	[BG]
	4	WES9064EP	INNER BLADE	1ST	

Model No. : ES7111/ES7112 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	5	WES7111L1007	MOTOR ASSEMBLY	1	[BG]
	6	WES7047H3268	FOIL RELEASE BUTTON	2	(2PCS/PK), [BG]
	7	WES7046L1087	TRIMMER DRIVING BAR	1	[BG]
	8	WES7046L1077	SLIT BLADE DRIVING BAR	1	[BG]
	9	WES7046L0587	SPRING AND STOPPER	2	(2SETS/PK), [BG]
	10	WES8080L0326	WATERPROOF RUBBER	1	[BG]
	11	WES7046L0227	FLOAT SPRING	2	(2PCS/PK), [BG]
	12	WES7046L0967	O-RING	1	[BG]
	13	WES7046L0237	TUBE HOLDER	1	[BG]
	14	WES7112K3058	HOUSING A	1	[BG]
	15	WES7112K3778	FRONT PANEL	1	[BG]
	16	WES7111K3067	HOUSING B	1	[BG]
	17	WES7115L2128	MODULE	1	[BG]
	18	WES7043L2508	RECHARGEABLE BATTERY	2	(Ni-Mh Type), (2PCS/PK), [BG]
	19	WES7025L0977	WASHER & O-RING SET	2	[BG]
	20	WES7115K3367	SIDE PANEL	1	[BG]
	21	WES8046H1507	TRIMMER	1	[BG]
	22	WES7112K3848	BOTTOM COVER	1	[BG]
	22	WES7112K3849	BOTTOM COVER	1	(only for TAIWAN), [BG]
	23	WES7023L6058	TAPPING SCREW	5	(K2-8), [BG]
	24	WES7046L6008	P TIGHT SCREW	2	(K2-12), [BG]
	25	WES762L6007	P TIGHT SCREW	2	(K2-8), [BG]
	26	WES7112K3038	BODY BLOCK	1	[BG]
	26	WES7112K3039	BODY BLOCK	1	(only for TAIWAN), [BG]
	27	WES4853K7663	CHARGING ADAPTOR	1	(C-2 PLUG), [BG]
	27	WES7056K7671	CHARGING ADAPTOR	1	(KS PLUG), [BG]
	27	WES7115K7662	CHARGING ADAPTOR	1	(A-2 PLUG), [BG]
	28	WES7115K7007	SOFT CASE	1	[BG]
	29	WES8093H7056	CLEANING BRUSH	1	[BG]
	-	WES7112K8008	INDIVIDUAL BOX	1	[BG]
	-	WES7112K8009	INDIVIDUAL BOX	1	(only for KOREA), [BG]
	-	WES7112K8000	INDIVIDUAL BOX	1	(only for TAIWAN), [BG]
	-	WES7112K8108	OPERATING INSTRUCTIONS	1	[BG]

Model No. : ES7115 Exploded View for ES7115



Model No. : ES7115 Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
ES7115					
	1	WES8044X7158	PROTECTIVE CAP	1	[BG]
	2	WES9085E	OUTER FOIL	1	
	3	WES7115S0047	OUTER FOIL FRAME	1	[BG]
	4	WES9064EP	INNER BLADE	1ST	
	5	WES7115L1007	MOTOR ASSEMBLY	1	[BG]
	6	WES7047H3268	FOIL RELEASE BUTTON	2	(2PCS/PK), [BG]
	7	WES7046L1087	TRIMMER DRIVING BAR	1	[BG]
	8	WES7046L1077	SLIT BLADE DRIVING BAR	1	[BG]
	9	WES7046L0587	SPRING AND STOPPER	2	(2SETS/PK), [BG]
	10	WES8080L0326	WATERPROOF RUBBER	1	[BG]
	11	WES7046L0227	FLOAT SPRING	2	(2PCS/PK), [BG]
	12	WES7046L0967	O-RING	1	[BG]
	13	WES7046L0237	TUBE HOLDER	1	[BG]
	14	WES7115K3058	HOUSING A	1	[BG]
	15	WES7115S3778	FRONT PANEL	1	[BG]
	16	WES7115S3068	HOUSING B	1	[BG]
	17	WES7115L2128	MODULE	1	[BG]
	18	WES7043L2508	RECHARGEABLE BATTERY	2	(Ni-Mh Type), (2PCS/PK), [BG]
	19	WES7025L0977	WASHER & O-RING SET	2	[BG]
	20	WES7115K3367	SIDE PANEL	1	[BG]
	21	WES8046H1507	TRIMMER	1	[BG]
	22	WES7115K3848	BOTTOM COVER	1	[BG]
	22	WES7115K3849	BOTTOM COVER	1	(only for TAIWAN), [BG]
	23	WES7023L6058	TAPPING SCREW	5	(K2-8), [BG]
	24	WES7046L6008	P TIGHT SCREW	2	(K2-12), [BG]
	25	WES762L6007	P TIGHT SCREW	2	(K2-8), [BG]
	26	WES7115S3038	BODY BLOCK	1	[BG]
	26	WES7115S3039	BODY BLOCK	1	(only for TAIWAN), [BG]
	27	WES4853K7663	CHARGING ADAPTOR	1	(C-2 PLUG), [BG]
	27	WES7056K7671	CHARGING ADAPTOR	1	(KS PLUG), [BG]
	27	WES7115K7662	CHARGING ADAPTOR	1	(A-2 PLUG), [BG]
	28	WES7115W4218	DRYING/CHARGING STAND	1	[BG]
	28	WES7115W4219	DRYING/CHARGING STAND	1	(only for TAIWAN), [BG]
	29	WES7115W3177	DRYING MAT	1	[BG]
	30	WES7115K7007	SOFT CASE	1	[BG]
	31	WES8093H7056	CLEANING BRUSH	1	[BG]
	-	WES7115S8008	INDIVIDUAL BOX	1	[BG]
	-	WES7115S8009	INDIVIDUAL BOX	1	(only for KOREA), [BG]
	-	WES7115S8000	INDIVIDUAL BOX	1	(only for TAIWAN), [BG]
	-	WES7115S8108	OPERATING INSTRUCTIONS	1	[BG]