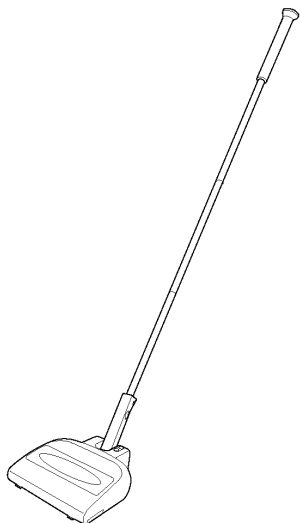


# Service Manual

Vacuum Cleaner (Cordless Cleaner)

MC-B250



## SPECIFICATIONS

Battery	Nickel-Cadmium Battery		
Rated voltage	3.6V DC		
Outer dimensions	Main unit:	W 203×D 219×H 180 mm	
	With handle:	W 203×D 219×H 1055 mm	
	Battery charger:	W 180×D 85×H 67 mm	
Working temperature range	0 - 40 °C		
Max. continuous running time	Approx. 15 min at full charge, 20 °C		
Battery life	Approx. 1000 charges (Measured according to JIS C8705 Durability Performance Test)		

Weight		0.8 kg (Main unit only) ... 1.0 kg (With handle)		
Battery charger	Input	220~240V AC, 50Hz 5.1VA		
	Output	4.2V DC, 210mA		
Accessories	Charging time	Approx. 12 hr	Cord length	1 m
	Recharge Base Ass'y (AMC79V-QT)..... ×1 Handle grip (AMC93B-QC)..... ×1 Extension pipe (AMC59P-QC)..... ×1set(3pcs.) Handle joint (AMC92B-QC)..... ×1			

Specifications are subject to change without notice for further improvement.

## ⚠ 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

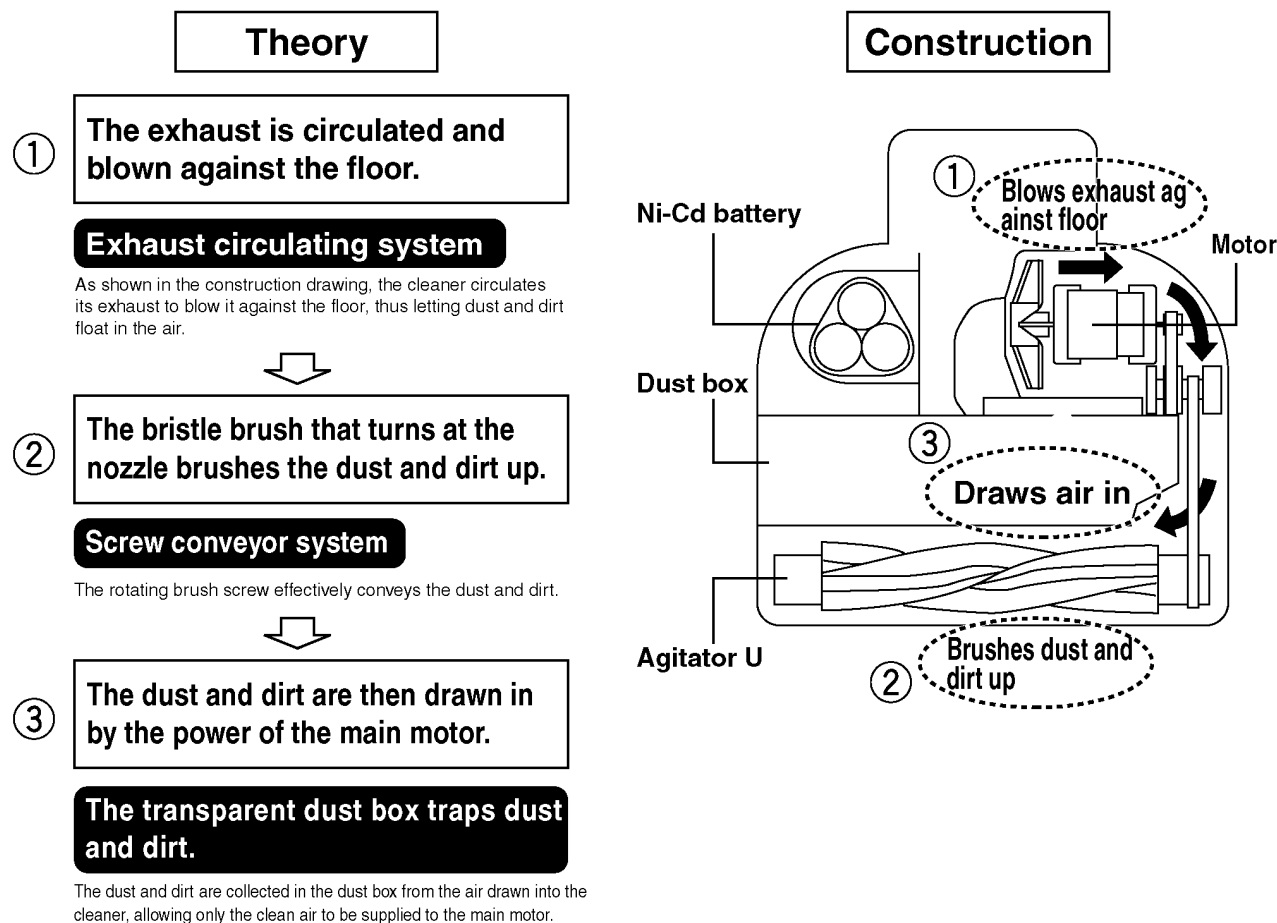
There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts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

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## 1 TECHNICAL EXPLANATION

### (1) Theory and construction of the product (MC-B250)



### (2) Ni-Cd Battery

- \*The battery has not been factory-charged before shipment. Be sure therefore to charge the battery before attempting to use the cleaner. (It takes about six hours to charge the battery.)
- \*The replacement battery is not charged, either. Be sure to fully charge it before using the cleaner.

#### ① Causes of a rundown Ni-Cd Battery:

**Cause 1:** Excessively discharged (if the cleaner is used until its motor no longer turns and that cycle of operation is repeated)  
Electrolyte characteristics deteriorating

**Cause 3:** Electrode plates wearing down Degraded performance of electrode plates

**Cause 2:** Use under high temperatures (40°C or higher)  
Battery components deteriorating

## 2 NAMES OF PARTS / STEP

Check the accessories before use.

Recharge Base Ass'y..... × 1

Handle grip..... × 1

Extension pipe..... × 1(3pcs.)

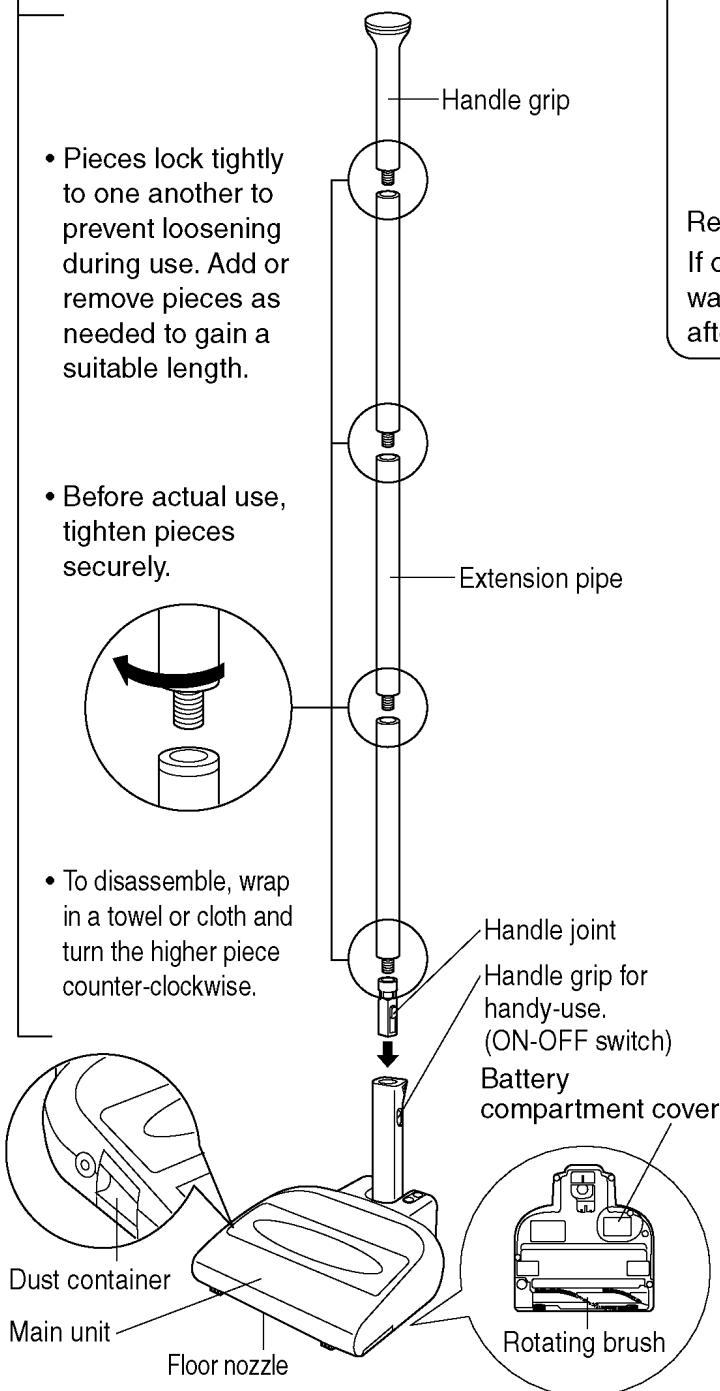
Handle joint..... × 1

Handle

- Pieces lock tightly to one another to prevent loosening during use. Add or remove pieces as needed to gain a suitable length.

- Before actual use, tighten pieces securely.

- To disassemble, wrap in a towel or cloth and turn the higher piece counter-clockwise.



- The handle can be completely detached for handy-use.

- Reset button (Overload protector)

Reset button

If operation stopped while the unit was running, press the reset button after turning off. (See page 8)

Checking point to empty out the dirt.

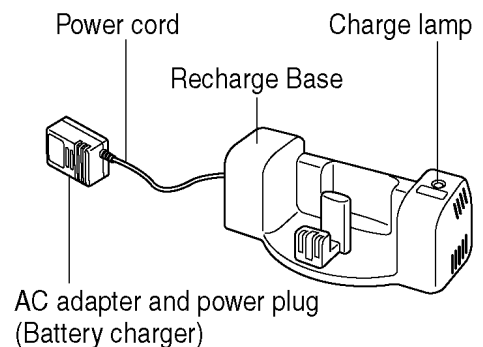
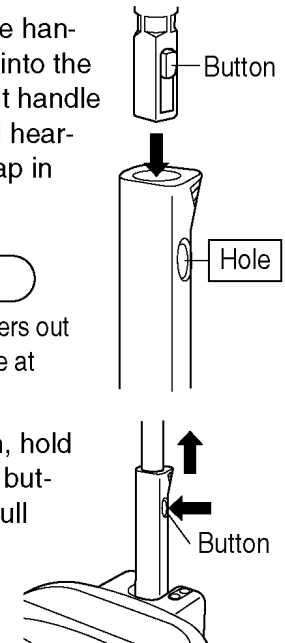
- Connecting the Handle to the Main unit

Insert the handle joint into the main unit handle grip until hearing it snap in place.

### Note

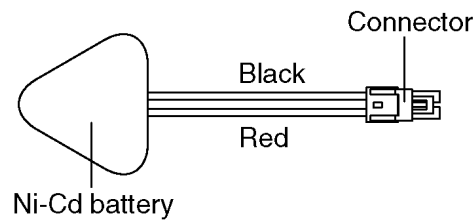
- Keep fingers out of the hole at right.

To detach, hold down the button and pull upward.

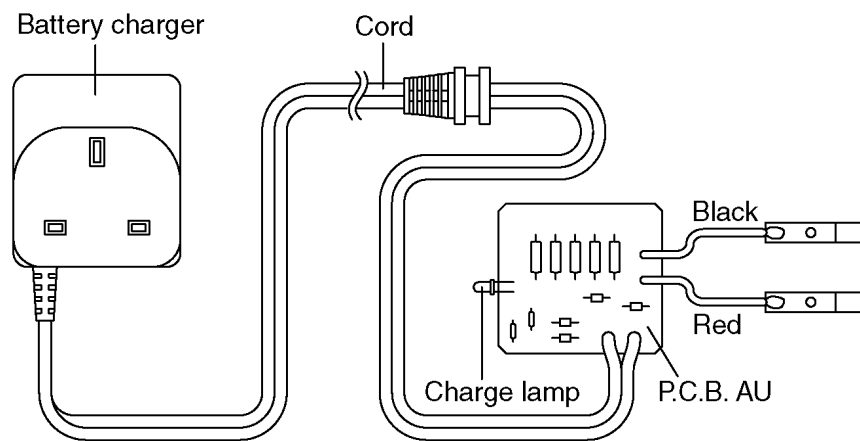


### 3 PICTORIAL WIRING DIAGRAM

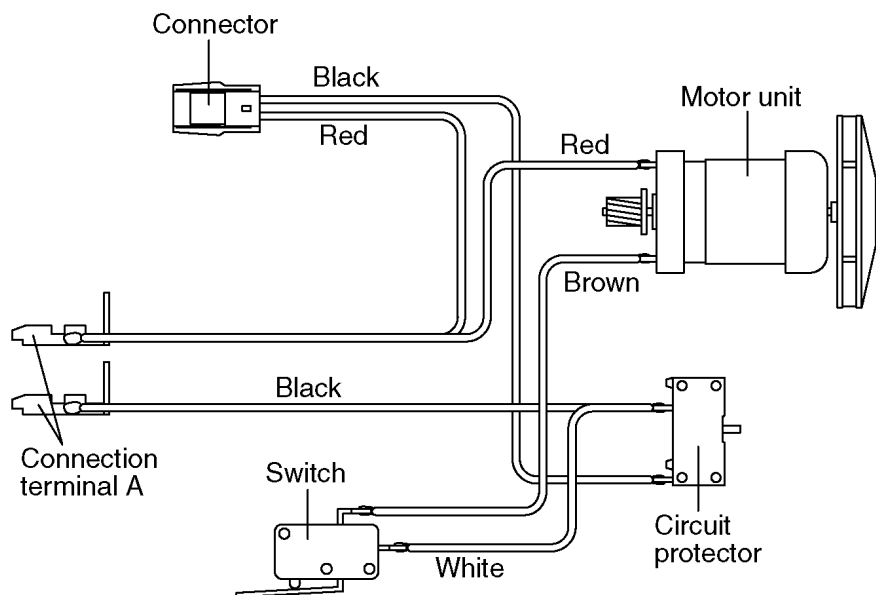
#### 3.1. Battery Unit



#### 3.2. Battery Charger



#### 3.3. Main Unit

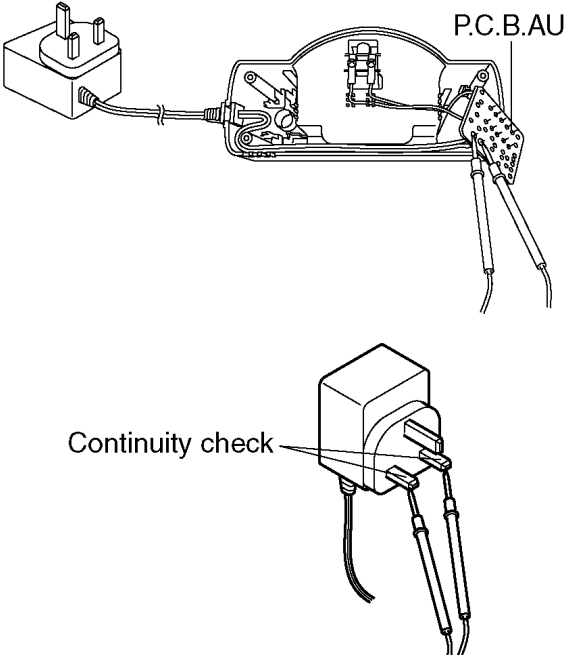


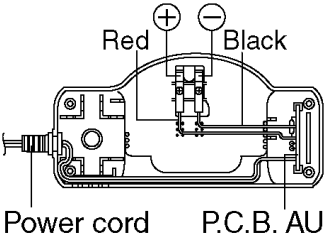
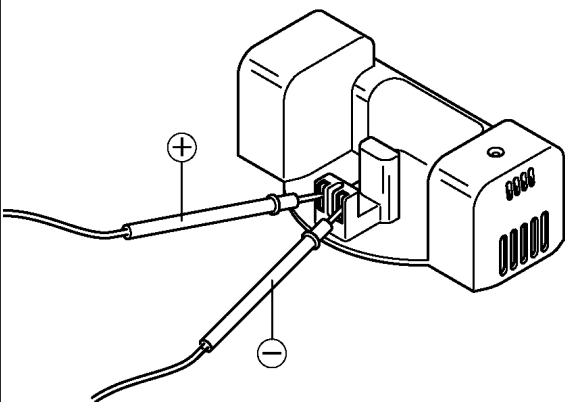
## 4 DIAGNOSTICS TABLE

Symptom	Check part	Main unit							Recharge base		
	Part name	Circuit Protector	Motor Unit	Belt	Switch	Battery	Filter	Agitator	Battery Charger	Terminal	P.C.B. AU
	Inspection code	A	B	C	D	E	F	G	H	I	J
Weak suction power						●	●	●			
Main motor (unit) does not turn.		●	●		●	●					
Agitator Assembly does not turn.			●	●	●	●		●			
Unable to charge battery (charge lamp ON)										●	●
Unable to charge battery (charge lamp OFF)									●	●	●

## 5 DIAGNOSTICS

### Parts Inspection and Remedial Action Procedures Based on Diagnostics Table

Inspection code	Inspection part	Inspection procedure	Action
A	Circuit Protector	<ul style="list-style-type: none"> <li>• Press the reset button and check continuity.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace Protector AMC06E-QC0Y</li> </ul>
B	Motor Unit	<ul style="list-style-type: none"> <li>• Apply voltage directly across both terminals of motor to check for motor operation. (DC-3.6V)</li> </ul>	<ul style="list-style-type: none"> <li>• Replace motor unit. AMC92F-QC0</li> </ul>
C	Belt	<ul style="list-style-type: none"> <li>• Check the belt is broken.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace belt AMC28S-QC0</li> </ul>
E	Battery	<ul style="list-style-type: none"> <li>• There is a voltage of about 4V DC when fully charged. A battery that is near the end of its service life cannot be fully charged. If the cleaner can be used only for a short period of time from a battery charged for six hours, the battery is very likely to be reaching the end of its service life.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace battery. AMC10V-QT0</li> </ul>
D	Switch	<ul style="list-style-type: none"> <li>• Check for continuity across both terminals of the switch.</li> <li>• Check the surface of contacts for foreign matter and deformation.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace switch. AMC01E-QC0</li> </ul>
F	Filter	<ul style="list-style-type: none"> <li>• Remove dust and tap the filter. If the filter has been cleaned with water, let it dry in a place not subject to direct sunlight.</li> </ul>	<ul style="list-style-type: none"> <li>• Clean or replace. AMC95K-QC0</li> </ul>
G	Agitator	<ul style="list-style-type: none"> <li>• Check the brush for a foreign object wedged in it. (At the same time, check that the belt has not snapped off.)</li> </ul>	<ul style="list-style-type: none"> <li>• Clean or replace agitator. AMC92S-QC0</li> <li>• Replace belt. AMC28S-QC0</li> </ul>
H	Battery Charger	<ul style="list-style-type: none"> <li>• Check the cord plugs for continuity.</li> </ul> 	<ul style="list-style-type: none"> <li>• Replace battery charger. AMC61V-QT0</li> </ul>
I	Recharge base assembly	<ul style="list-style-type: none"> <li>• Check terminals for dust and deformation.</li> <li>• Check polarity (+ and -). (Refer to inspection code K.)</li> </ul>	<ul style="list-style-type: none"> <li>• Clean or correct terminals.</li> </ul>

Inspection code	Inspection part	Inspection procedure	Action
J	<p>P.C.B. AU</p>  <p>Power cord P.C.B. AU</p>	<ul style="list-style-type: none"><li>• Measure the voltage across both terminals of the charging stand. The voltage is about 6.0 VDC.</li></ul>  <ul style="list-style-type: none"><li>• Note the correct polarity of the two terminals of the charging stand. The left side is +.</li><li>• The charging lamp lights up when the circuit across the two terminals is closed.</li></ul>	<ul style="list-style-type: none"><li>• Replace printed-wiring board AU. AMC89V-QT0 (P.C.B. AU)</li></ul>

## 6 REPAIR OF MAIN PARTS

### 6.1. Removal of Battery

1. Remove the body cover (battery lid).
2. Take out the battery and disconnect the connector.

### 6.2. Removal of Ajitator Assembly

1. Remove the floor nozzle support plate U from the back of the main body and take out the agitation.  
[Removing the support plate U]

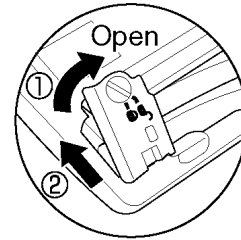


Fig.1

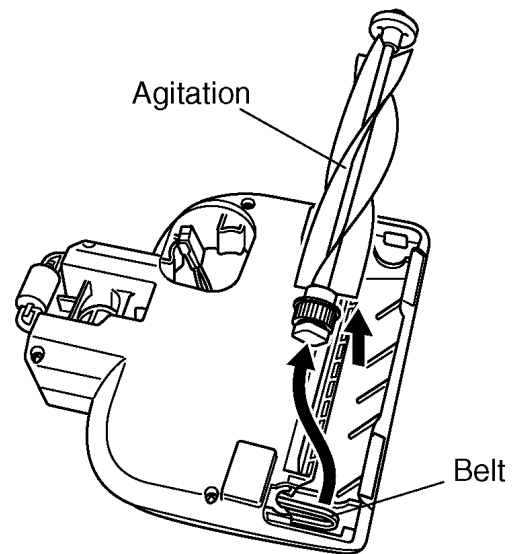


Fig.2

## 6.3. Separation of the upper body U and the lower body U

1. Separation of the upper body U and the lower body U
2. Turn the body over and remove the five screws from the lower body U.
3. Return the body to the upright position and remove the upper body U from the lower body U.

### Point

Pull the front of the lower nozzle U.

The lower nozzle U will be separated from the upper nozzle U.

### Points to note when assembling the Upper Body U with the Lower Body U.

Pay attention so that the belt of the Lower Body U will not get caught. Pull one end of the belt and straighten it up, and then assemble the body.

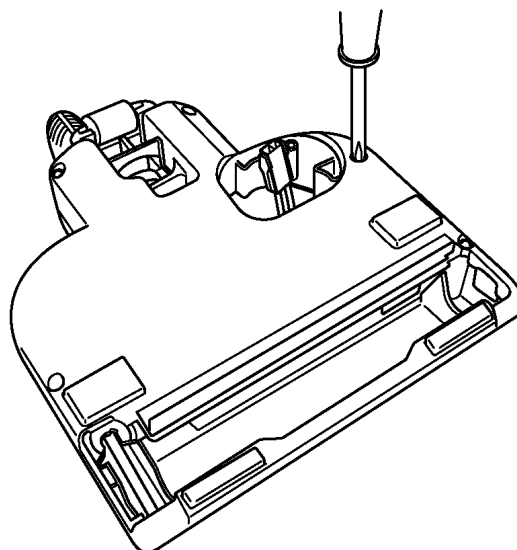


Fig.3

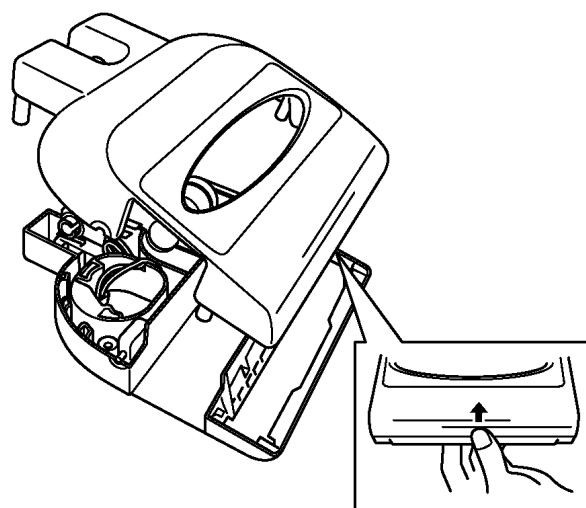


Fig.4

### Parts of the lower body U

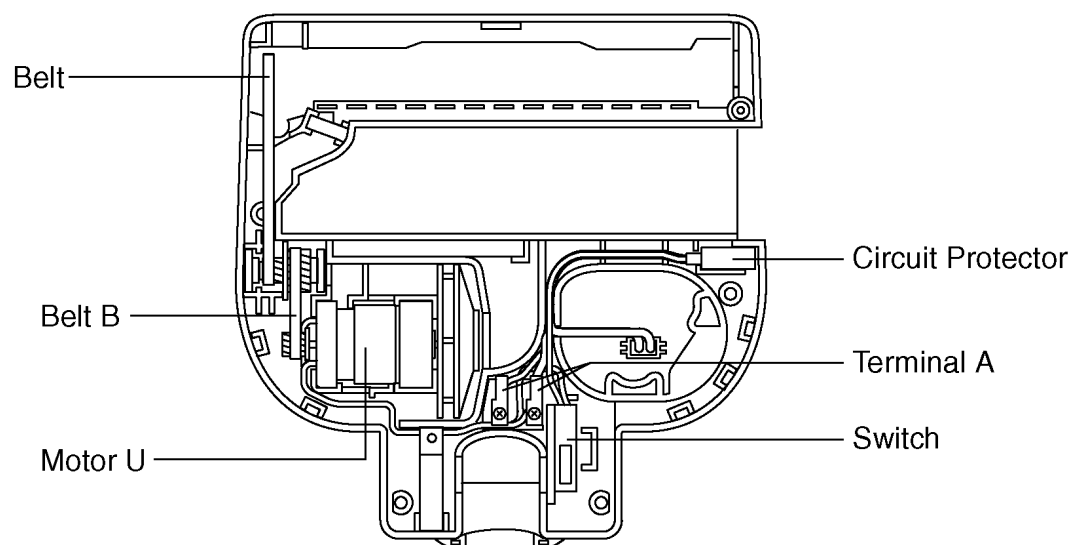


Fig.5



## 6.4. Motor U

1. Pull out the motor U from the lower body U. Remove solder from the lead wires and take out the motor.

## 6.5. Switch

1. Pull out the switch and the switch fitting plate from the lower body U.
2. As the picture shows, insert a minus screwdriver, etc. in the clearance between the fitting plate and the switch. Lift and remove the switch.
3. Remove solder from the switch.

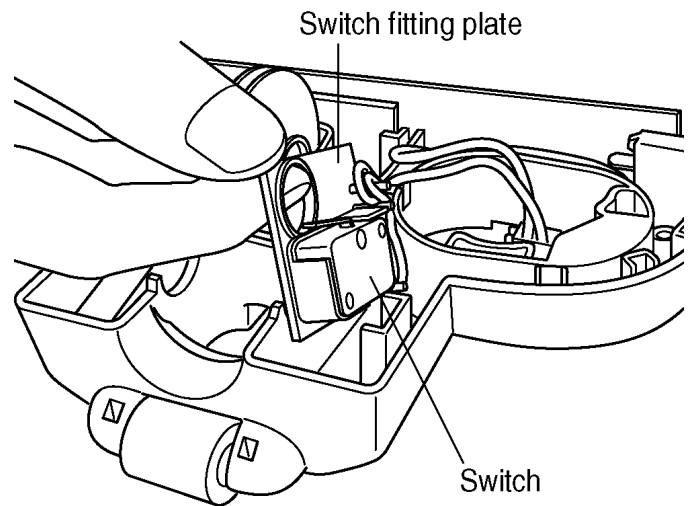


Fig.6

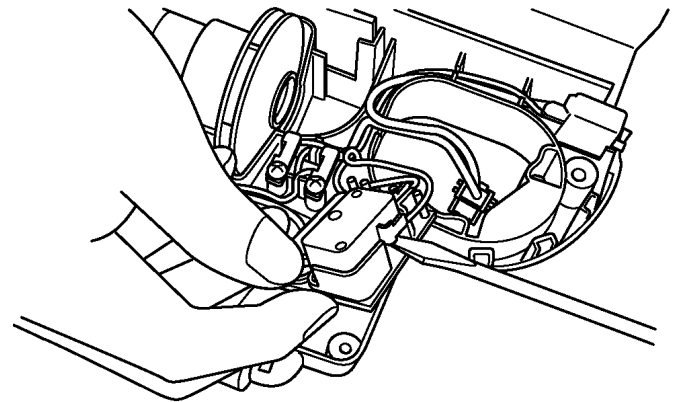
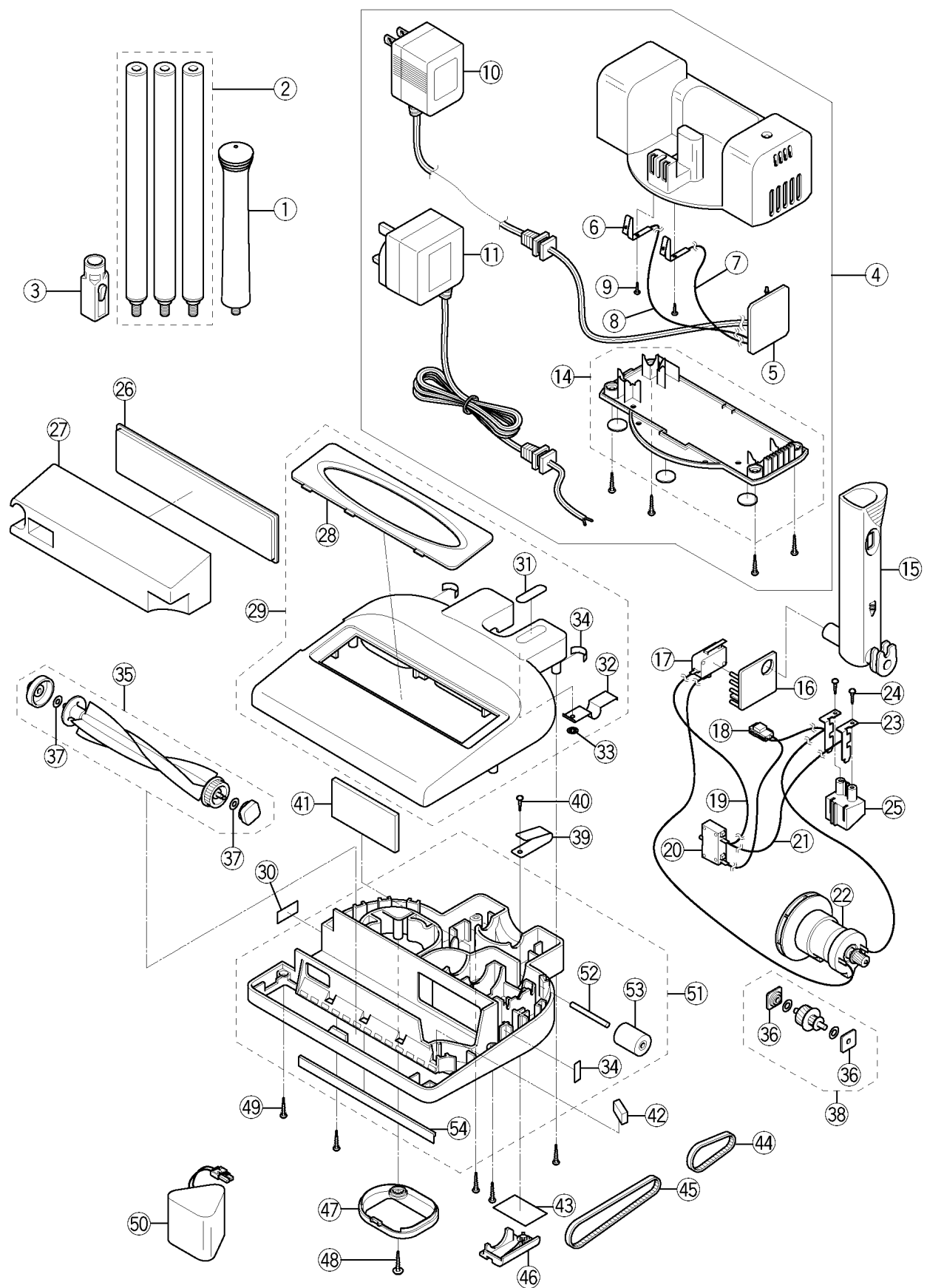


Fig.7

# 7 EXPLODED VIEW



# 8 PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
1	AMC93B-QC0V	Handle Grip U	
2	AMC57D-QC0V	Connector U	
3	AMC92B-QC0V	Handle Release Assy	(Handle Joint)
4	AMC79V-QC0VB	Recharge Base Assy	220V-A2
4	AMC79V-QC0VR	Recharge Base Assy	220V-A2 / for China
4	AMC79V-QC0VT	Recharge Base Assy	110V-A2 / for Taiwan
4	AMC79V-QC0VC	Recharge Base Assy	240V-C3
4	AMC79V-QC0VH	Recharge Base Assy	220-240V-(C3) / for Hong Kong
4	AMC79V-QC0VV	Recharge Base Assy	220-240V-(C3) / for Malaysia
5	AMC89V-QT0	P.C.B.AU	
6	AMC41W-QC0	Terminal B	
7	R032T150U	Lead Wire Black	
8	R032T130R	Lead Wire Red	
9	XTN3+8BFY	Screw	
10	AMC61V-QT00B	Battery Charger	220V-A2
10	AMC61V-QT00R	Battery Charger	220V-A2 / for China
10	AMC61V-QT00T	Battery Charger	110V-A2 / for Taiwan
11	AMC61V-QT00C	Battery Charger	240V-C3
11	AMC61V-QT00H	Battery Charger	220-240V-(C3) / for Hong Kong
11	AMC61V-QT00V	Battery Charger	220-240V-(C3) / for Malaysia
14	AMC78N-QT0V	Recharge Base Lower	
15	AMC51B-QC0V	Handle Arm	
16	AMC27E-QC0	Switch Fitting Plate	
17	AMC01E-QC0	Switch	
18	AMC29G-QC0	Connector AU	
19	R075T250W	Lead Wire White	
20	AMC06E-QC0Y	Circuit Protector	
21	R075T130U	Lead Wire Black	
22	AMC92F-QC0	Motor U	
23	AMC40W-MY0	Terminal A	
24	XTN30+10BFY	Screw	
25	AMC77B-QC0V	Terminal Plate	
26	AMC95C-QC0	Filter U	
27	AMC40K-QC0V	Dust Compartment	
28	AMC21H-QC0G	Window / cover	
28	AMC21H-QC0P	Window / cover	
29	AMC98A-QT0GC	Upper Body U	Green
29	AMC98A-QT0PC	Upper Body U	Pink
30	AMC46R-QT00R	Support Plate	only China
30	AMC46R-QT00H	Support Plate	
31	AMC35T-QT0	Label	
32	AMC70N-QC0	Stop Latch Spring	
33	AMC46P-QC0	Nut	
34	AMC83N-MY0	Bearing Packing	
35	AMC92S-QC0	Agitator Assy	
36	AMC98S-QC0	End Cap B	
37	AMC09U-QC0	Washer	
38	AMC47S-QC0	Pulley Median U	
39	AMC40R-QC0	Floor Nozzle Spling	
40	XTN30+12BFY	Screw	
41	AMC43K-QC0	Pre-Filter	
42	AMC37K-QC0	Secondary Filter	
43	AMC01T-QT00C	Name Plate	240V / England
43	AMC01T-QT00B	Name Plate	220V / Tai
43	AMC01T-QT00H	Name Plate	220-240V / Hong Kong
43	AMC01T-QT00R	Name Plate	220V / China
43	AMC01T-QT00T	Name Plate	110V / Taiwan
43	AMC01T-QT00V	Name Plate	220-240V / Malaysia
44	AMC39S-QC0	Belt B	
45	AMC28S-QC0	Belt	
46	AMC47R-QC0V	Support Plate U	
47	AMC24A-QT0V	Body Cover	
48	AMC25B-QC0	Screw	
49	XTN35+16BFY	Screw	
50	AMC10V-QT00C	Battery	England
50	AMC10V-QT00H	Battery	Hong Kong
50	AMC10V-QT00T	Battery	Taiwan
50	AMC10V-QT00V	Battery	Malaysia / Tai
50	AMC10V-QT00R	Battery	China
51	AMC97A-QT0V	Lower Body U	
52	AMC39R-MY0	Floor Nozzle Shaft	

Ref. No.	Part No.	Part Name & Description	Remarks
53	AMC90R-MY0	Floor Nozzle Roller U	
54	AMC42T-QC0	Floor Nozzle Rear	
-	AMC61Z-QT0GC	Individual Carton	England (PANASONIC)
-	AMC61Z-QT0PC	Individual Carton	England (PANASONIC)
-	AMC61Z-QT0GV	Individual Carton	Tai / Taiwan / Malaysia (NATIONAL)
-	AMC61Z-QT0PV	Individual Carton	Tai / Taiwan / Malaysia (NATIONAL)
-	AMC61Z-QT0GH	Individual Carton	Hong Kong (NATIONAL)
-	AMC61Z-QT0PH	Individual Carton	Hong Kong (NATIONAL)
-	AMC61Z-QT0GR	Individual Carton	China (NATIONAL)
-	AMC61Z-QT0PR	Individual Carton	China (NATIONAL)
-	AMC51Z-QT0GC	Outer Carton Case	England
-	AMC51Z-QT0PC	Outer Carton Case	England
-	AMC51Z-QT0GH	Outer Carton Case	Tai / Taiwan / Malaysia / China / Hong Kong
-	AMC51Z-QT0PH	Outer Carton Case	Tai / Taiwan / Malaysia / China / Hong Kong
-	AMC01Z-QT00C	Instruction Book	England
-	AMC01Z-QT00R	Instruction Book	Tai / China
-	AMC01Z-QT00H	Instruction Book	Taiwan / Malaysia / Hong Kong
-	AMC09Z-QT00H	Instruction Sheet	England / Malaysia / Hong Kong
-	AMC09Z-QT00R	Instruction Sheet	China
-	AMC09Z-QT00B	Instruction Sheet	Tai
-	AMC09Z-QT00T	Instruction Sheet	Taiwan
-	AMC10Z-QC0	Body Bag	
-	AMC16Z-QC0	Attachment Container	
-	AMC62Z-QC0	Cushion Plate	
-	AMC69Z-QC0	Cushion A	
-	AMC70Z-QC0	Cushion B	