

Service Manual

Vacuum Cleaner



MC-E8021
MC-E8021K
MC-E8023
MC-E8023K
MC-E8024
MC-E8024K

Destination : Europe


Model	MC-E8021 MC-E8021K	MC-E8023 MC-E8023K	MC-E8024 MC-E8024K
Power source	AC230V 50Hz AC230-240V 50Hz	AC230V 50Hz AC230-240V 50Hz	AC230V 50Hz AC230-240V 50Hz
Input power (max.)	1900W	2000W	2000W
Cord length	6.5m	6.5m	6.5m
Radius of operation	9.8m	9.8m	9.8m
Net weight	6.0kg	6.0kg	6.0kg
Dimensions (L x W x H) mm	420 x 290 x 290	420 x 290 x 290	420 x 290 x 290
Attachments : Floor nozzle	-	-	-
Telescopic wand	-	-	-
Dusting brush	-	-	-
Crevice nozzle	-	-	-

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.

Panasonic

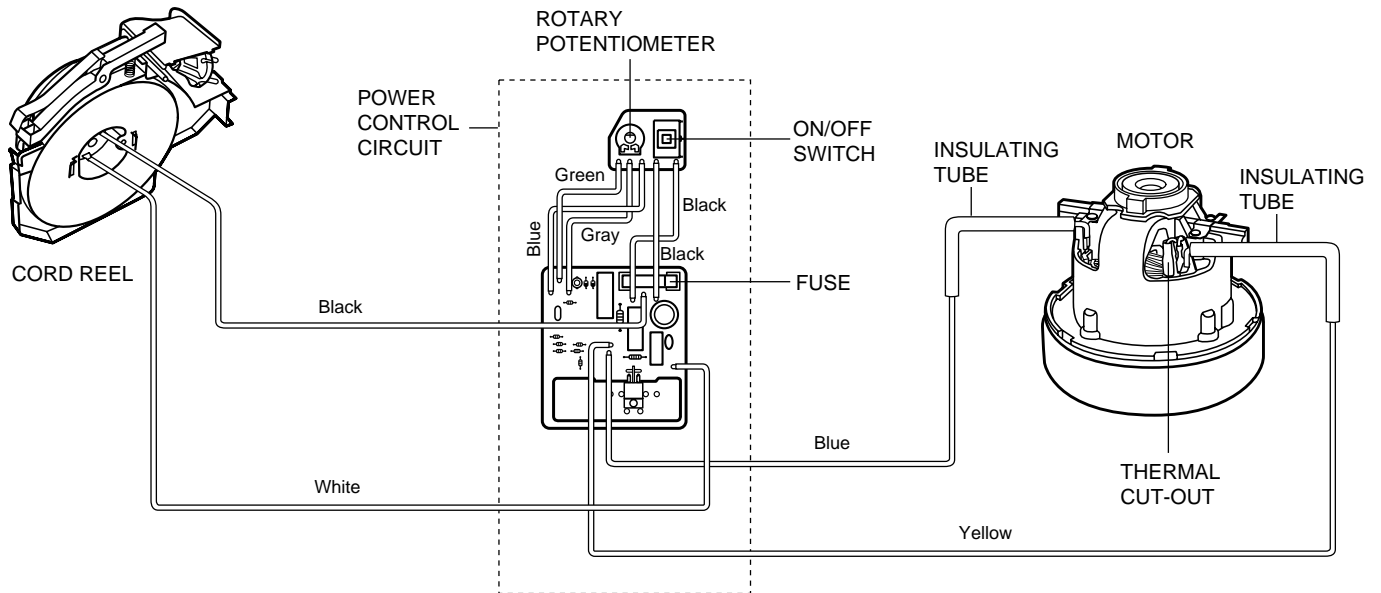
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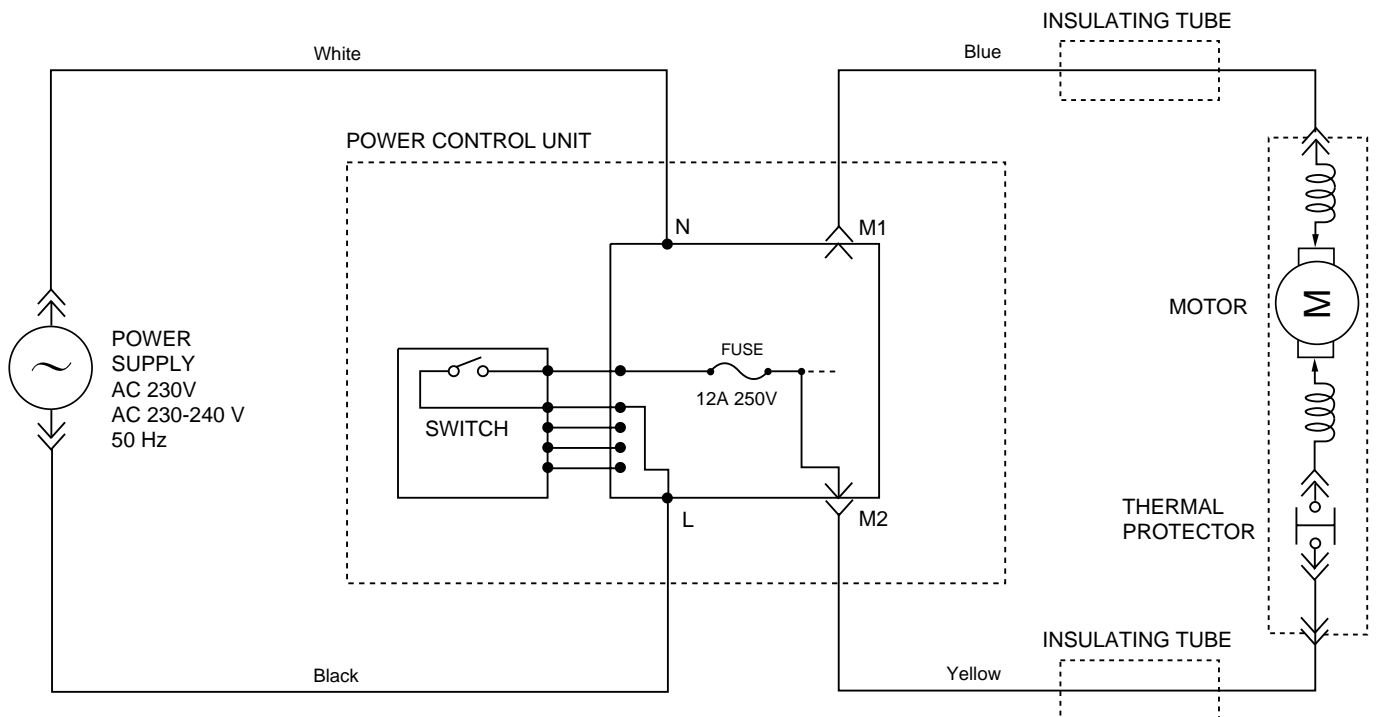
1 PICTORIAL WIRING DIAGRAM

ODELS MC-E8021, MC-E8021K / MC-E8023, MC-E8023K / MC-E8024, MC-E8024K



2 SCHEMATIC DIAGRAM

MODELS MC-E8021, MC-E8021K / MC-E8023, MC-E8023K / MC-E8024, MC-E8024K



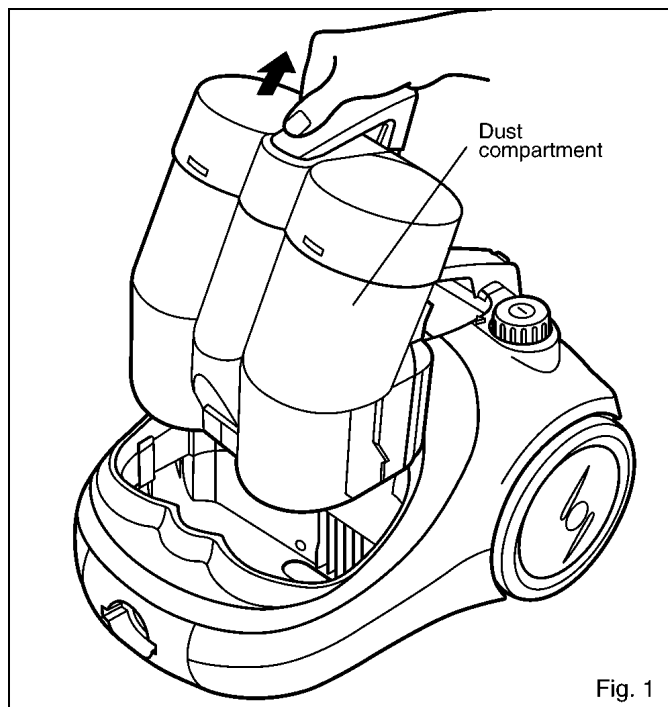
3 REPLACEMENT OF MAIN PARTS

IMPORTANT: Before replacing any part always

DISCONNECT THE CLEANER FROM THE ELECTRICITY SUPPLY.

3.1. MOTOR

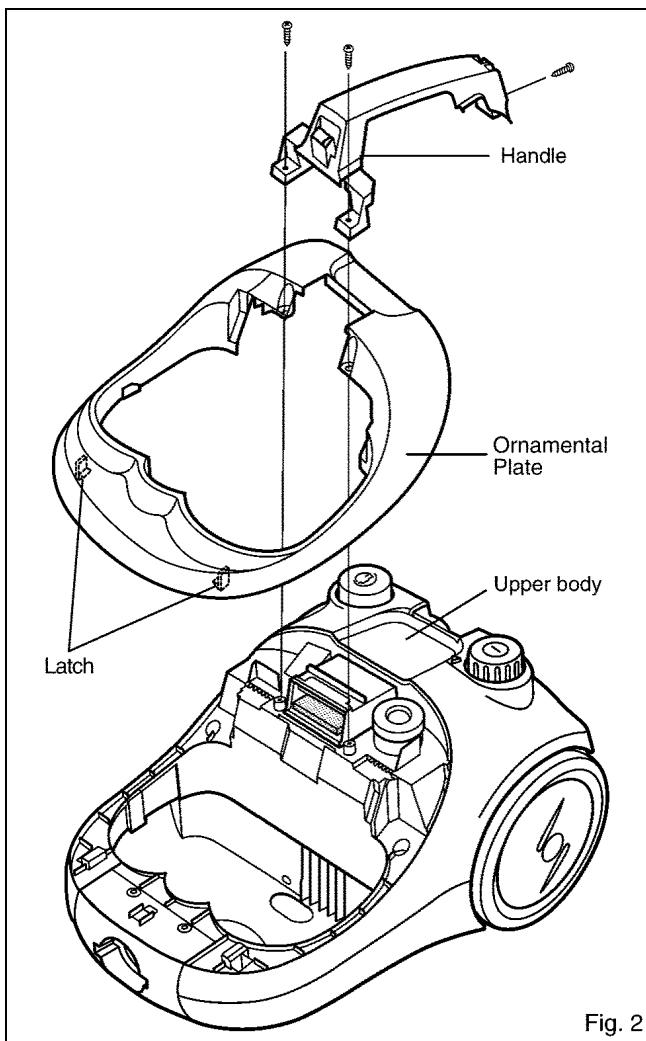
1. Lift up dust compartment and take it out. (Fig.1)



2. Remove screws from Ornamental Plate and handle and take them out. (Fig.2)

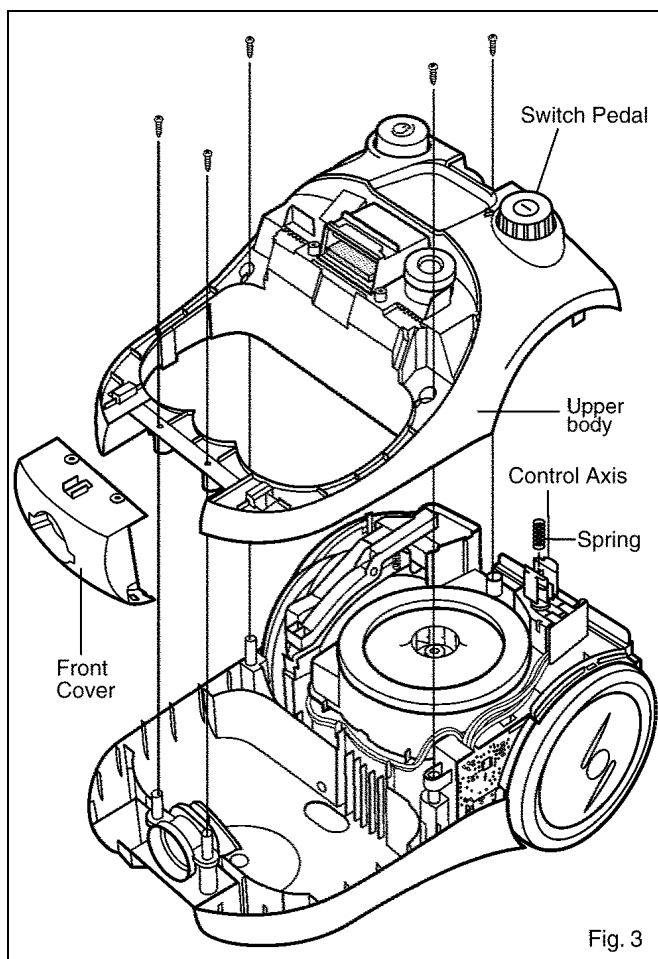
***There are 2 latches on the front side of Ornamental plate.**

Please remove it by pulling strongly from the back side.

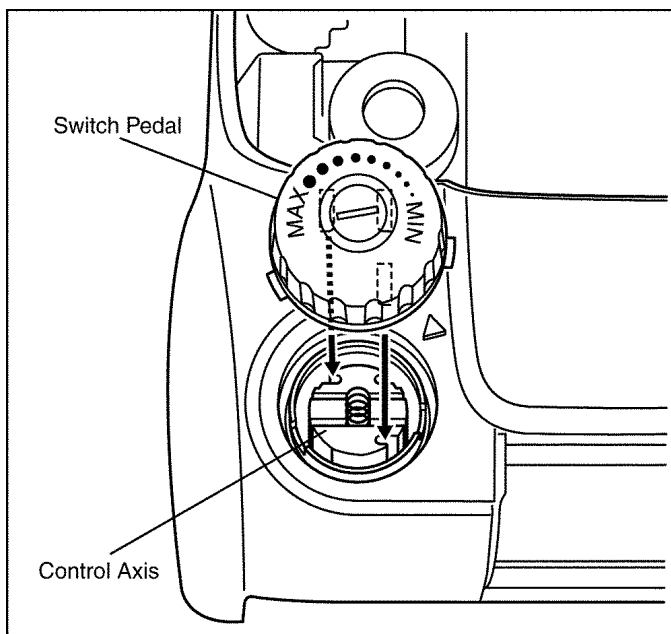


3. Remove screws from upper body and take out front cover and upper body. (Fig.3)

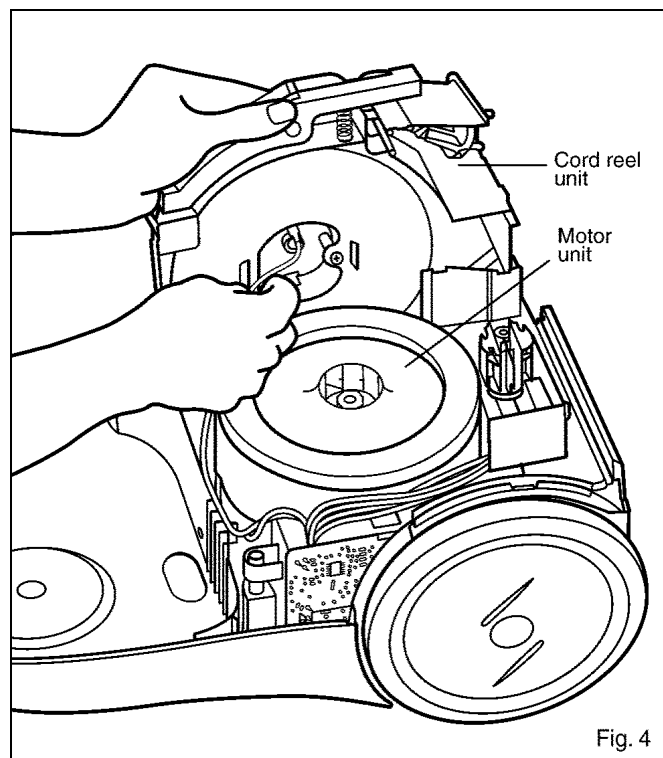
***There are 2 latches in the back side of Upper body.
Please remove it by pulling strongly from the front side.**



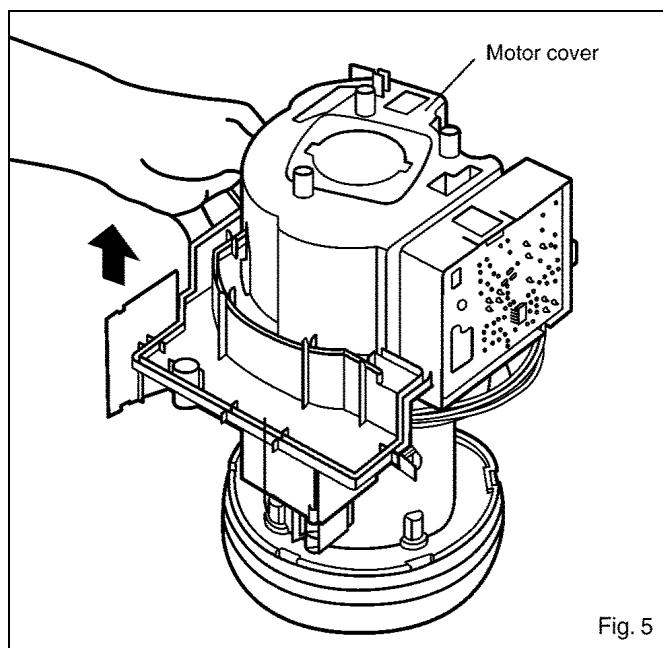
Important: When reassembling the Switch Pedal, please place ControlAxis and Switch Pedal in the right place as they can fit.



4. Lift up cord reel unit and remove the two lead wires (provided with quick-connect terminal) from the contact springs. (Fig. 4)



5. Take out motor unit and remove motor cover. (Fig.5)



6. Disconnect the two lead wires (provided with quick-connect terminals) from the motor tabs. (Fig.6)

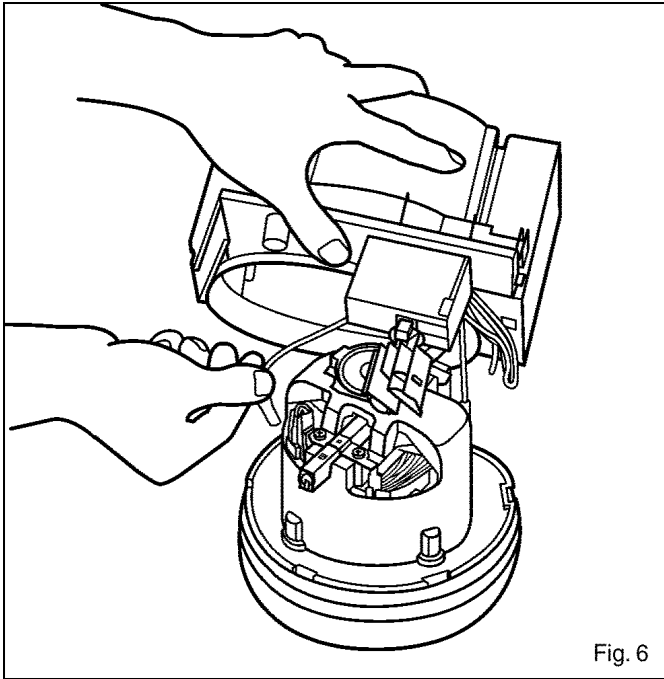


Fig. 6

7. Remove from the motor front / rear motor support and replace with a new one. (Fig.7)

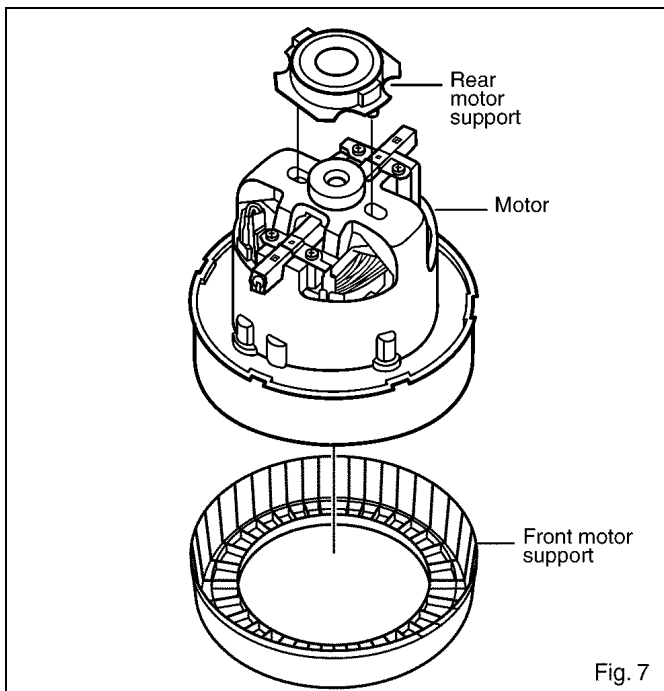


Fig. 7

8. Reassemble front / rear motor support and connect the two lead wires to the motor tabs. Place the motor cover and reinstall the motor unit into the lower body.
9. Connect the lead wires according to the schematic diagram and reassemble the remaining parts in the reverse order.

Note: Make sure the lead wires are correctly positioned to avoid pinching them between parts.

3.2. CARBON BRUSHES

Note: Replace both carbon brushes at the same time.

1. Take out motor unit and remove motor cover as explained previously in paragraph 3.1 Motor, points 1-6.
2. Disconnect lead wires (provided with quick-connect terminal) from the motor tabs.
3. Remove the two screws from the carbon brush holder and take it out. (Fig.8)

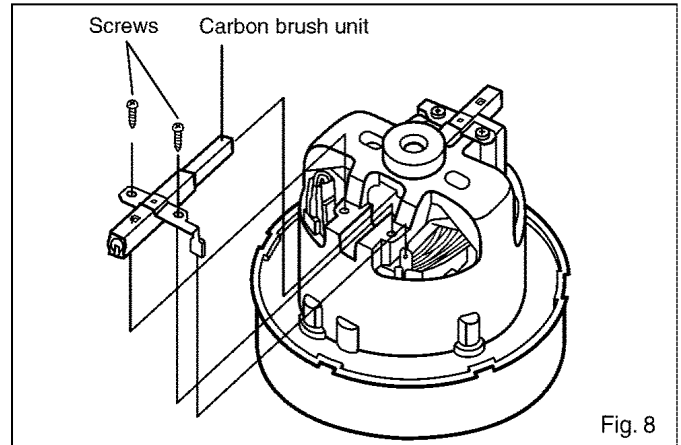


Fig. 8

4. Replace the carbon brush unit with a new one and reinstall it refastening with the screw.
5. Connect the lead wires according to the schematic diagram and reassemble the motor unit.
6. Re-install motor unit, cord reel ass'y into their lodging and reassemble the remaining parts in the reverse order.

3.3. AS FOR THERMAL CUT-OUT

1. Take out motor unit and remove motor cover as explained previously in paragraph 3.1 Motor, points 1-6.
2. Disconnect lead wires (provided with quick-connect terminal) from the motor tabs.
3. The thermal cut-out is secured in the motor. (Fig.9)
*To change the Thermal Cut-out, replace the entire motor with new one. You can't replace only the Thermal Cut-out.

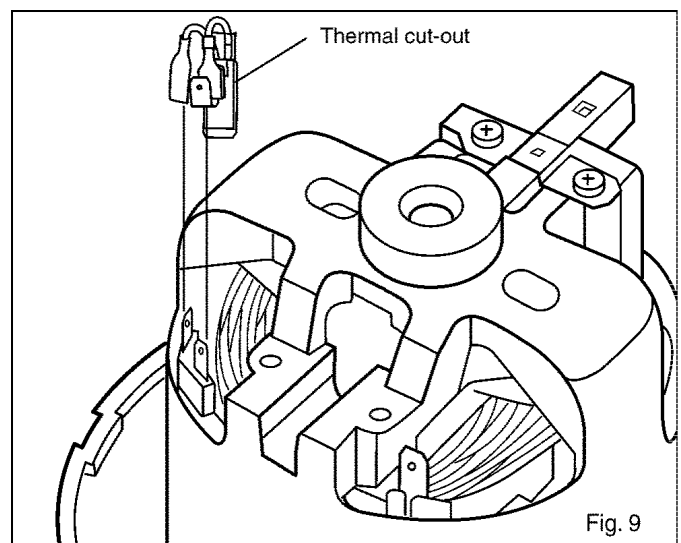
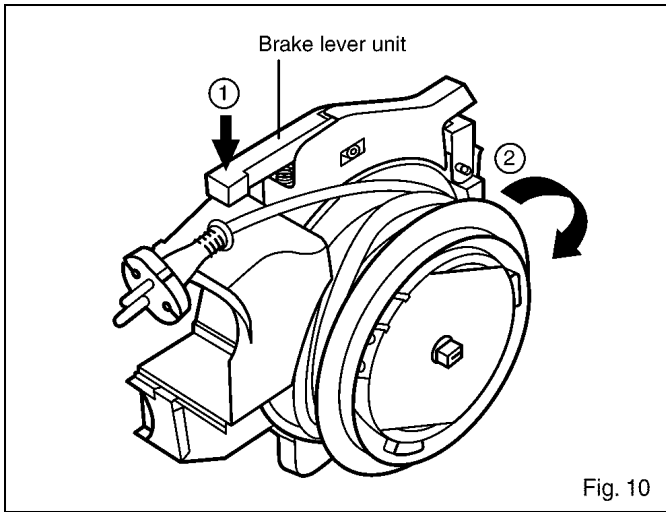


Fig. 9

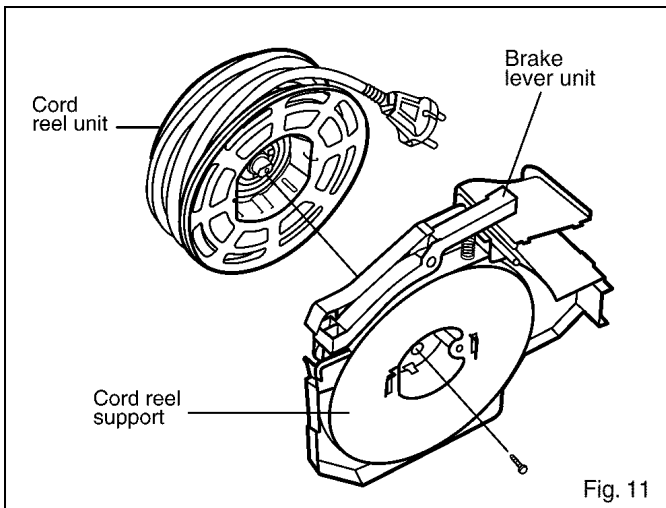
4. Connect the lead wires according to the schematic diagram and reassemble motor unit and remaining parts in the reverse order.

3.4. CORD REEL UNIT

1. Remove upper body and take out cord reel ass'y as explained previously in paragraph 3.1 Motor, points 1-4.
2. Press the brake lever and unwind the power supply cord three times to release the cord reel spring efficiency. (Fig.10)



3. Detach cord reel unit and cord reel support by removing the screw. (Fig.11)



4. Replace the cord reel unit with a new one and reassemble with the cord reel support refastening the screw.

Note: Wind up the power supply cord 2 extra times, as indicated on the spring plate, to maintain the spring efficiency.

5. Connect the lead wires according to the schematic diagram.
6. Reinstall cord reel ass'y into place and reassemble the remaining parts in the reverse order.

*** If the cord is damaged, replace the cord reel unit with new one.**

Reason:

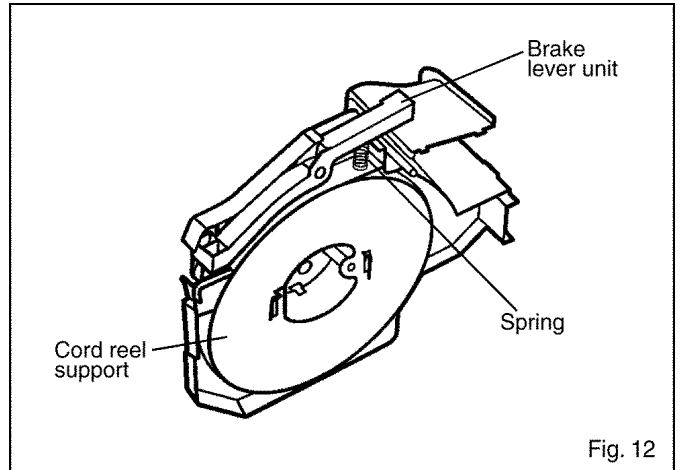
If the cord has worn out, the cord reel spring or the cord's electric-welded zone may also be adversely affected.

3.5. BRAKE LEVER UNIT

1. Remove upper body and cord reel assembly as explained previously in paragraph 3.1 Motor, points 1-5.
2. To change the brake lever unit, replace the body partition assembly with new one. (Fig.12)

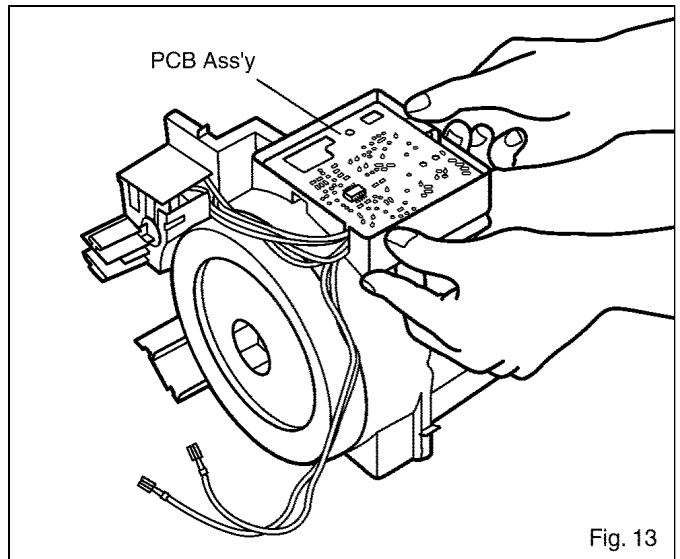
Reason:

The body partition and the brake lever cannot be individually removed.



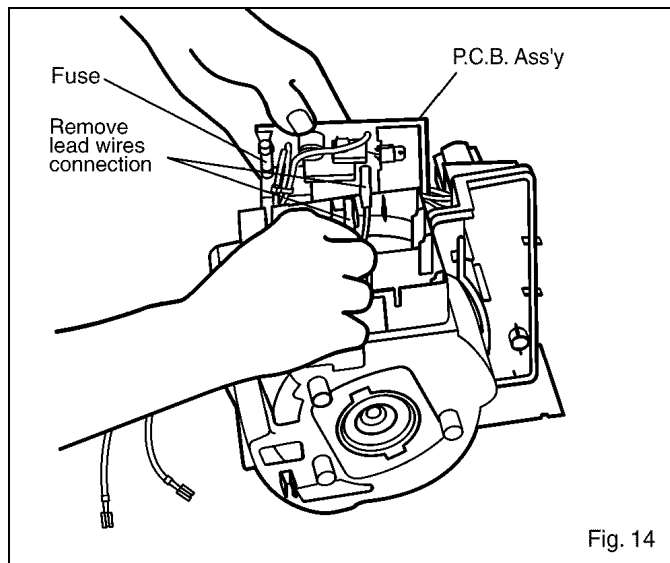
3.6. P.C.B. Ass'y

1. Remove upper body as explained previously in paragraph 3.1 Motor, points 1-3.
2. Remove connections from contact spring and take out motor unit.
3. Remove P.C.B. Ass'y from its support by releasing the fixing points. (Fig.13)

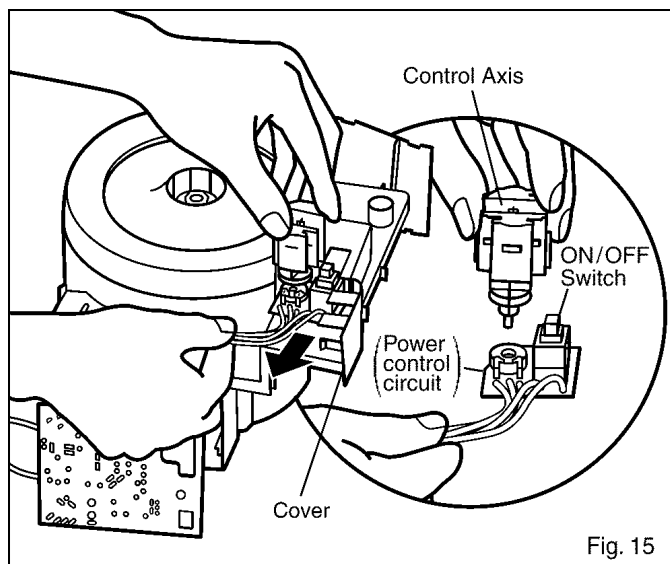


4. Remove from PCB the two lead wires provided with quick-connect terminal. (Fig.14)

*The fuse is replaceable at the same time.

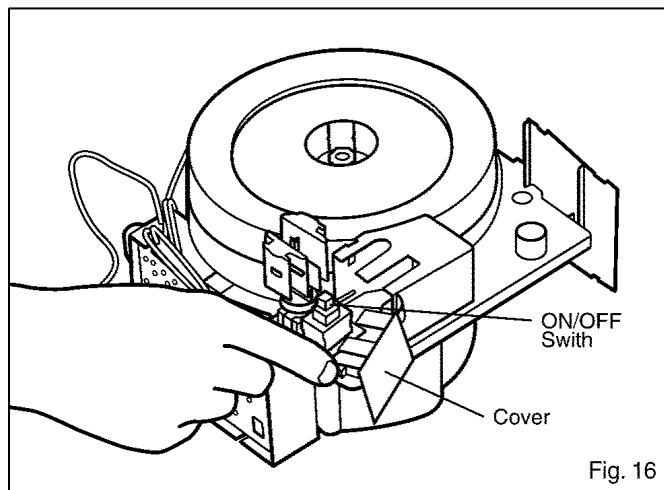


5. Open the cover, remove the small PCB (with ON / OFF Switch) from its lodging and take out control Axis. (Fig.15)

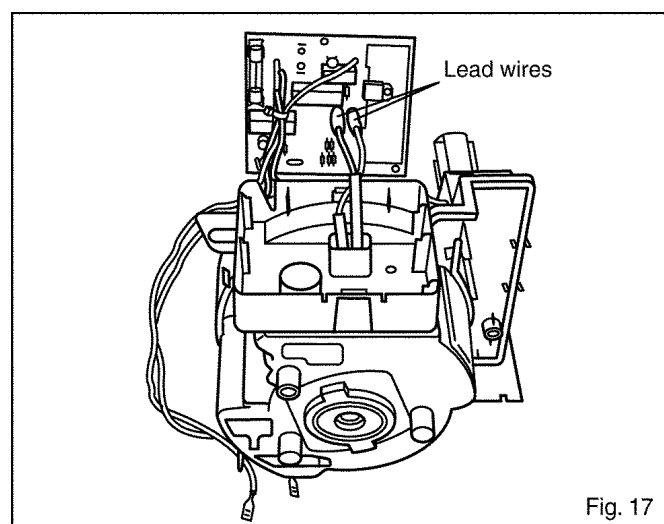


ON/OFF Switch

Power control circuit is welded to ON/OFF Switch that is connected to P.C.B.Assy.
You can cut off with weld it.



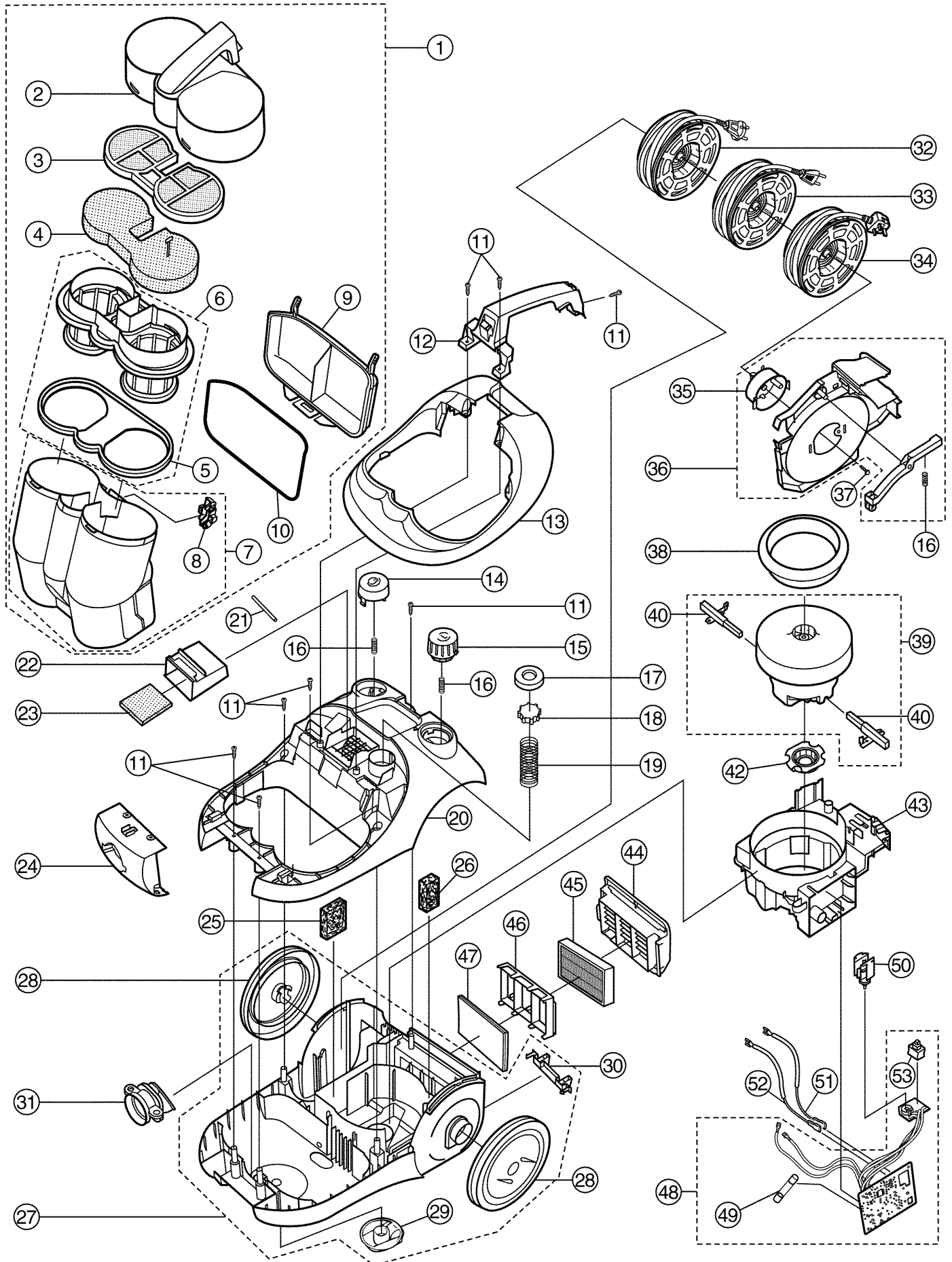
6. Replace P.C.B. Ass'y with a new one and control Axis.
7. Connect the two lead wires (provided with quick-connect terminal) to the PCB tabs and reinstall power control circuit in its support. (Fig.17)



Note: Before reinstalling the circuit, make sure the lead wires are correctly positioned in the cover slots.

8. Place back the motor unit. Connect the lead wires according to the schematic diagram and reassemble upper body and remaining parts in the reverse order.

4 EXPLODED VIEW (BODY UNIT)



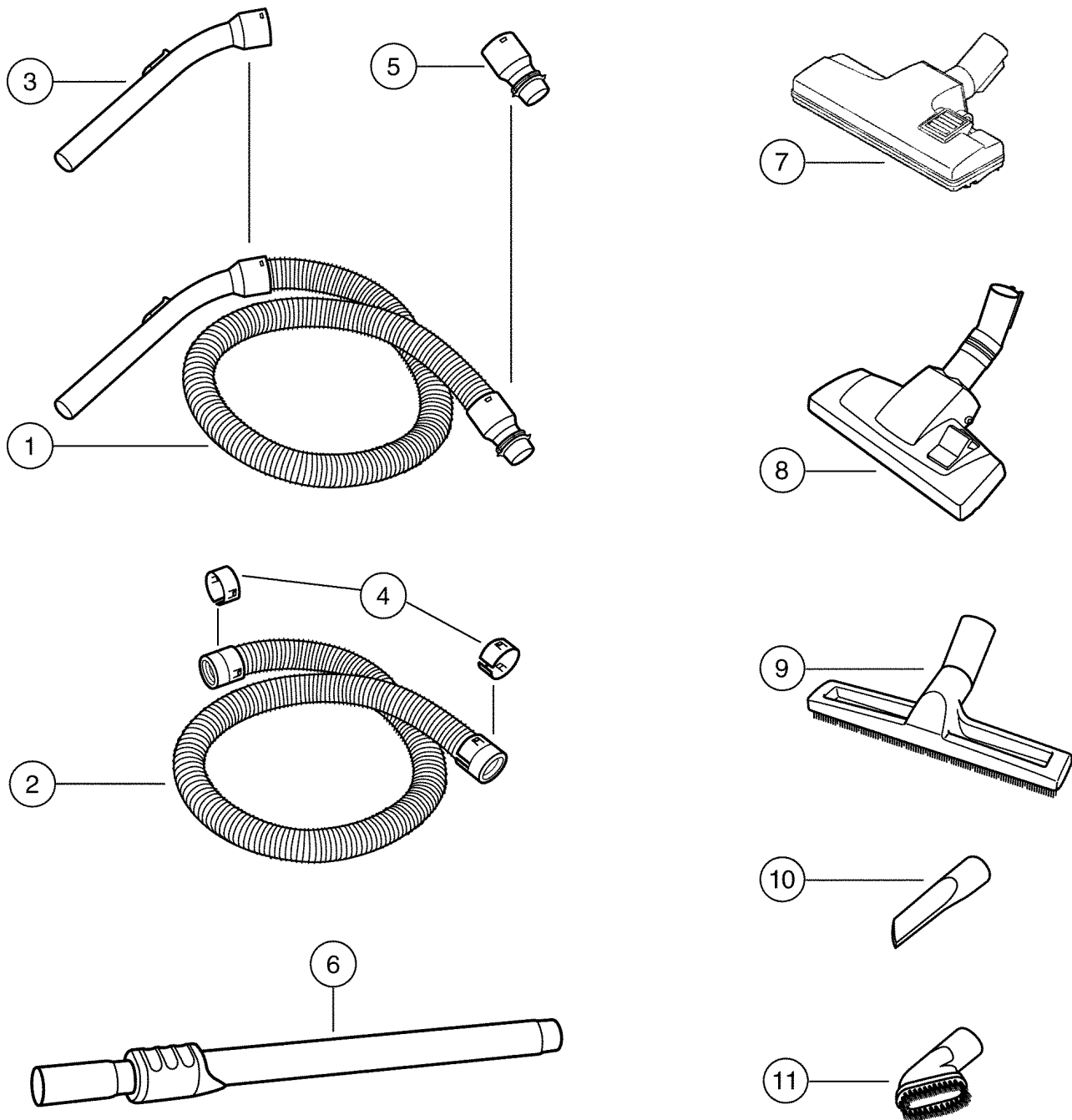
5 PARTS LIST (BODY UNIT)

*()Within Remarks indicates parts number of instruction book for the UK

Ref. No.	Part Name & Description	Part No.	Q'TY	Remarks
1	Dust Compartment Unit	AMC88K-XJ0AE	1	MC-E8021.E8021K
1	Dust Compartment Unit	AMC88K-XL0SE	1	MC-E8023.E8023K
1	Dust Compartment Unit	AMC88K-XU0SE	1	MC-E8024.E8024K
2	Dust Box Lid Unit	AMC92L-XJ0AE	1	MC-E8021.E8021K / light blue (AMC92L-XJ0L)
2	Dust Box Lid Unit	AMC92L-XL0SE	1	MC-E8023.E8023K / silver (AMC92L-XL0S)
2	Dust Box Lid Unit	AMC92L-XU0SE	1	MC-E8024.E8024K / silver (AMC92L-XU0S)
3	Upper Filter Unit	AMC96K-XL03E	1	(AMC96K-XL03)
4	Sponge Filter Unit	AMC0HK-XL00E	1	(AMC0HK-XL0)
5	Filter Packing A	AMC76K-XL00E	1	
6	Lower Filter Unit	AMC72K-XL03E	1	(Pre-filter AMC72K-XL03)
7	Dust Box Unit	AMC85K-XJ0CE	1	MC-E8021.E8021K / blue (AMC40K-XL0C)
7	Dust Box Unit	AMC85K-XL0NE	1	MC-E8023.E8023K, MC-E8024.E8024K / black (AMC40K-XL0N)
8	Lid Holding Knob	AMC42H-XL03E	1	
9	Dust Box Plate	AMC25K-XL02E	1	light blue
10	Dust Box Packing	AMC73K-XL00E	1	
11	Tapping Screw	XTN4+18BFY	8	
12	Handle	AMC64B-XL0AE	1	MC-E8021.E8021K / blue
12	Handle Unit	AMC95B-XL0SE	1	MC-E8023.E8023K / silver
12	Handle Unit	AMC95B-XU0SE		MC-E8024.E8024K / silver
13	Ornamental Plate Unit	AMC27T-XJ02E	1	MC-E8021.E8021K / light blue
13	Ornamental Plate Unit	AMC27T-XK0SE	1	MC-E8023.E8023K / silver
13	Ornamental Plate Unit	AMC27T-XU0SE		MC-E8024.E8024K / silver
14	Cord Rewind Button	AMC46N-XL02E	1	MC-E8021.E8021K / light blue
14	Cord Rewind Button	AMC46N-XL03E	1	MC-E8023.E8023K, MC-E8024.E8024K / gray
15	Control Terminal Unit	AMC88F-XL02E	1	MC-E8021.E8021K / light blue
15	Control Terminal Unit	AMC88F-XL03E	1	MC-E8023.E8023K, MC-E8024.E8024K / gray
16	Spring A	AMC34D-XL00E	3	
17	Indicator Cover	AMC17M-XL00E	1	
18	Indicator Needle	AMC03M-XL00E	1	
19	Indicator Spring	AMC04M-XL00E	1	
20	Upper Body	AMC02A-XL0AE	1	MC-E8021.E8021K / blue
20	Upper Body	AMC02A-XL0KE	1	MC-E8023.E8023K, MC-E8024.E8024K /black
21	Suction Inlet Rail	AMC34W-XL00E	1	
22	Air Inlet Guide	AMC61H-XL00E	1	
23	Secondary Filter	AMC37K-XL00E	1	
24	Front Cover	AMC01H-XL0AE	1	MC-E8021.E8021K / blue
24	Front Cover	AMC01H-XL0KE	1	MC-E8023.E8023K, MC-E8024.E8024K / black
25	Sound Absover A	AMC08Q-XL00E	1	
26	Sound Absover B	AMC09Q-XL00E	1	
27	Lower Body Unit	AMC97A-XJ0AE	1	MC-E8021.E8021K / blue
27	Lower Body Unit	AMC97A-XK0KE	1	MC-E8023.E8023K, MC-E8024.E8024K / black
28	Wheel	AMC01C-XJ02E	1	MC-E8021.E8021K / light blue
28	Wheel	AMC01C-XL0KE	1	MC-E8023.E8023K, MC-E8024.E8024K / black
29	Caster Unit	AMC95C-XL0KE	1	
30	Attachment Holder	AMC32R-XL0KE	1	
31	Valve Grommet	AMC50K-XL00E	1	
32	Cord Reel Assy	AMC99N-XL00E	1	MC-E8021.E8023, E8024 East & West European countries, except Switzerland, UK and Ireland.
33	Cord Reel Assy	AMC99N-XL00L	1	MC-E8021. E8023, E8024 Switzerland
34	Cord Reel Assy	AMC99N-XL008	1	MC-E8021K. E8023K, E8024K UK and Ireland
35	Contact Base Unit	AMC19N-XL00E	1	
36	Body Partition Assy	AMC96A-XL0KE	1	
37	Tapping Screw	XTN4+16BFY	1	
38	Motor Support Rubber(Front)	AMC02F-XL00E	1	
39	Fan Motor Unit 230-240-50Hz	AMC92F-XL00C	1	MC-E8021K. E8023K, E8024K UK and Ireland.
39	Fan Motor Unit 230-240-50Hz	AMC92F-XL00E	1	MC-E8021.E8023, E8024 East & West European countries, except UK and Ireland.
-	Thermal cut-out		1	(Assembled in Motor)
40	Carbon Brush	AMC27F-XL00E	2	
42	Motor Support Rubber(Rear)	AMC03F-XL00E	1	
43	Motor Support Cover	AMC63F-XL00E	1	
44	Rear Cover	AMC01L-XL0AE	1	MC-E8021.E8021K / blue
44	Rear Cover	AMC01L-XL0KE	1	MC-E8023.E8023K, MC-E8024.E8024K / black
45	Filter Unit	AMC95K-XL0WE	1	MC-E8023.E8023K ,E8024,E8024K (AMC95K-XL0W)
46	Filter Case	AMC42K-XJ0KE	1	MC-E8021.E8021K /Black
47	Exhaust Filter	AMC38K-XJ0WE	1	MC-E8021.E8021K (AMC38K-XJ0)
48	P.C.B Unit	AMC87G-XL00E	1	
49	Fuse	AMC13W-XL00E	1	12A 250V (Assembled in P.C.B)
50	Control Axis	AMC37M-XL00E	1	
51	Blue Lead Wire Unit	AMC82G-XL00E	1	

Ref. No.	Part Name & Description	Part No.	Q'TY	Remarks
52	Yellow Lead Wire Unit	AMC84G-XL00E	1	
53	Switch Unit	AMC26E-XL00E	1	

6 EXPLODED VIEW (ATTACHMENTS)

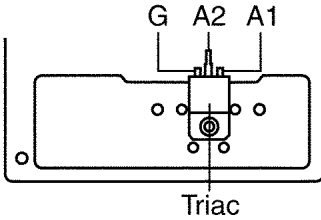


7 PARTS LIST (ATTACHMENTS)

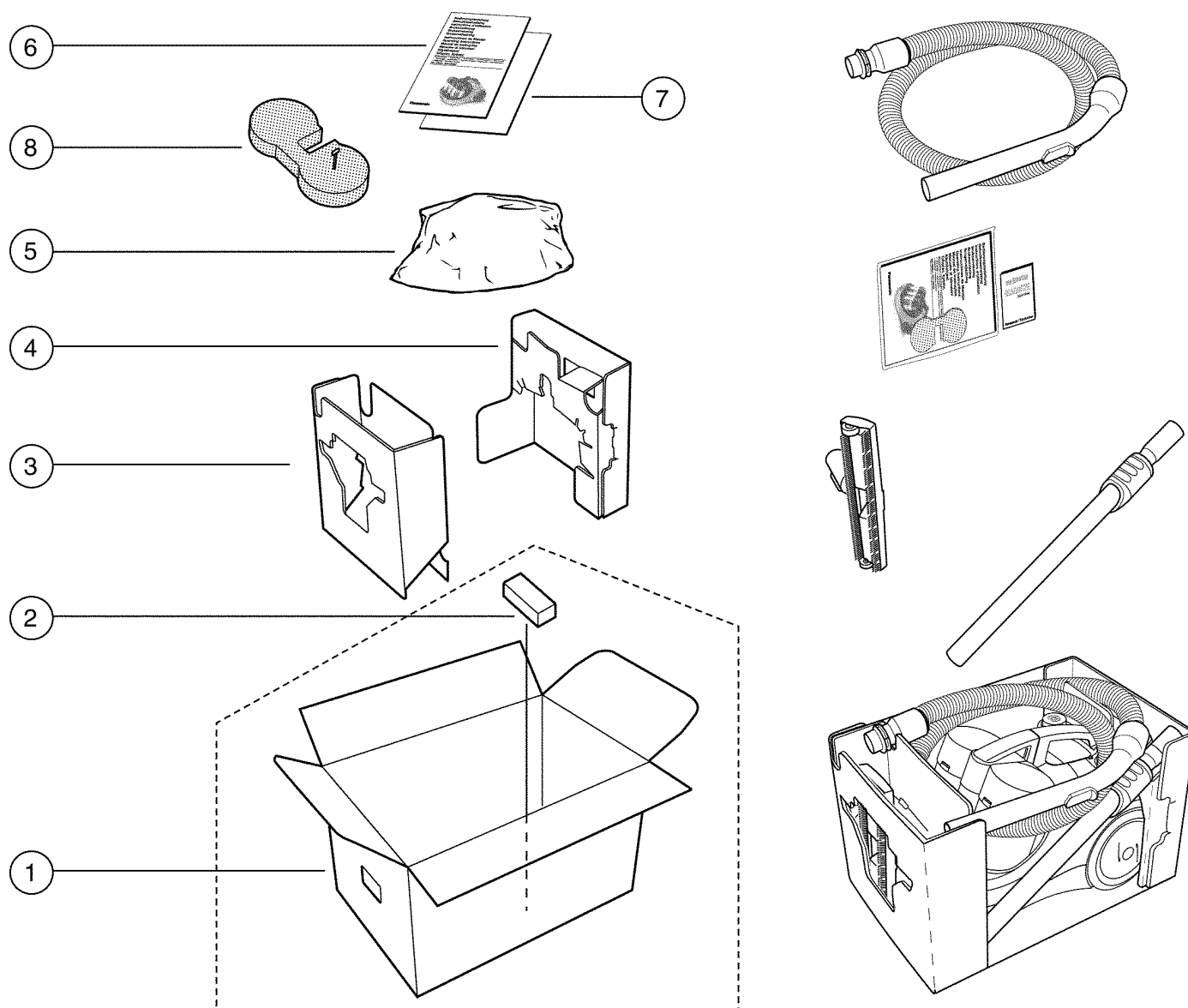
*()Within Remarks indicates parts number of instruction book for the UK

Ref. No.	Part Name & Description	Part No.	Q`TY	Remarks
1	Hose Assy	AMC94P-XL0KE	1	(AMC94P-XL0K)
2	Hose Unit	AMC84P-XL0KE	1	
3	Curved Pipe Unit	AMC98P-XL00E	1	
4	Hose Support	AMC24P-XL04E	2	
5	Connection Pipe	AMC02P-XL04E	1	
6	Extension Wand Unit	AMC99P-XL06E	1	(Telescopic tube AMC99P-XL06)
7	Nozzle Assy	AMC99R-UA0KE	1	MC-E8021.E8021K(AMC99R-UA0K)
8	Nozzle Assy	AMC99R-XK0KE	1	MC-E8023.E8023K,MC-E8024.E8024K(AMC99R-XK0K)
9	Nozzle Assy	AMC99R-XK0KQ	1	MC-E8024.E8024K (Parquet floor nozzle AMC99R-XK0Q)
10	Crevice Tool	AMC60R-XL04E	1	(Crevice nozzle AMC60R-XL04)
11	Dusting Brush Unit	AMC88R-XL04E	1	(Dusting brush AMC88R-XL04)

8 TROUBLE SHOOTING GUIDE

CONDITION	CHECKPOINT	METHOD OF INSPECTION	CAUSE / REMEDY
Motor fails to rotate (no noise is heard at all)	Power supply cord	Check power supply cord continuity.	If there is no continuity, replace the cord reel unit.
	Fuse (Plug for UK only)	Check plug fuse continuity.	If there is no continuity, replace the cord reel unit.
	Fuse of P.C.B. Ass'y (250V, 12 A)	Check fuse continuity.	If there is no continuity, replace P.C.B. Ass'y.
	Motor continuity	Check motor continuity between carbon brush holder tabs.	If there is no continuity, replace the carbon brush or motor.
	Check the motor performance.	Apply a voltage directly to both sides of the motor terminal to see if the motor performs as specified.	If the motor fails to perform, replace it with new one.
	ON/OFF Switch	Check continuity across switch connections	If there is no continuity, replace Switch or P.C.B. Ass'y.
	Triac (Inside of P.C.B.)	Check if the triac is in open circuit.	If it is in open circuit, replace P.C.B.Ass'y.
<div style="text-align: center; background-color: black; color: white; padding: 5px; margin-bottom: 10px;"> Check the triac on the P.C.B. </div> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>When the triac functions well, the following is observed.</p> <p>*Using a tester, see if continuity is detected between each pair of triac legs.</p> <ol style="list-style-type: none"> 1. A1 — A2 : No continuity 2. A2 — G : No continuity 3. A1 — G : Continuity </div> </div>			
	P.C.B. Ass'y	Check the internal parts for anything unusual. (burn-out, melt-down, etc.)	If anything is found unusual, replace the P.C.B. assembly with new one.
Motor runs but there is no suction	Hose or Suction inlet	Check if there is any blockage in the hose or suction inlet.	If there is any blockage, remove it.
	Dust compartment / Filters	Check if dust compartment is full or there is dust accumulated in the filters.	If dust compartment is full, empty it. If the filters are dirt of dust, clean them out or replace.
Noise or vibration	Motor fan	Check dust accumulated in motor fan (it could happen if the vacuum cleaner has been used without central filter).	If there is dust accumulated in the motor fan, replace the motor and check filter condition. (never try to dismantle the motor fan)
Motor does not change power (runs always at full speed)	Control Axis	Check if the potentiometer is short-circuited.	If it is short-circuited, replace power control circuit.
	P.C.B. Ass'y	Check if power control circuit is short-circuited.	If it is short-circuited, replace it.
Motor runs irregularly	control Axis	Check possible bad contact of P.C.B. Ass'y.	If there is bad contact, replace P.C.B. Ass'y.

9 PACKING INSTRUCTIONS



10 PACKING LIST

*() Within Remarks indicates parts number of instruction book for the UK

Ref. No.	Part Name & Description	Part No.	Q`TY	Remarks
1	Individual Carton	AMC61Z-XJ00E	1	MC-E8021.E8021K
1	Individual Carton	AMC61Z-XK00E	1	MC-E8023.E8023K
1	Individual Carton	AMC61Z-XU00E	1	MC-E8024.E8024K
2	Cushion Bottom	AMC56Z-XL00E	1	
3	Cushion A	AMC69Z-XL00E	1	
4	Cushion B	AMC70Z-XL00E	1	
5	Body Bag	AMC10Z-XL00E	1	
6	Instruction Book	AMC01Z-XL008	1	Language: English UK version MC-E8021K,E8023K, E8024K
6	Instruction Book	AMC01Z-XL009	1	Language: Polish, Czech, Romanian, Hungarian, Bulgarian and Ukrainian MC-E8021.E8023
6	Instruction Book	AMC01Z-XL00E	1	Language: German, Dutch, French, Swedish, Norwegian, Danish, Spanish, English, Portuguese, Italian, Finish and Greek.MC-E8021,E8023, E8024
7	Instruction Sheet	AMC09Z-XL008	1	Language: English UK version MC-E8021K,E8023K, E8024K
7	Instruction Sheet	AMC09Z-XL009	1	Language: Polish, Czech, Romanian, Hungarian, Bulgarian and Ukrainian MC-E8021.E8023
7	Instruction Sheet	AMC09Z-XL00E	1	Language: German,Dutch,French,Swedish,Norwegian,Danish,Spanish,English, Portuguese, Italian, Finish and Greek. MC-E8021,E8023, E8024
8	Sponge Filter	AMC0HK-XL00E	1	
-	Instruction Book Bag	AMC0QZ-XL00E	1	