

# Service Manual

## Vacuum Cleaner

### MC-E601 / MC-E603



#### SPECIFICATIONS


Model	MC-E601	MC-E603
Power source	AC230V 50Hz	AC230V 50Hz
Max. Input power	1400W	1400W
Vacuum	25 kPa	25 kPa
Power cord length	5 m	5 m
Radio of operation	7.3 m	7.3 m
Net weight (with accessories)	3.6 kg	3.6 kg
Dimensions (LxWxH) mm	320 x 263 x 256	320 x 263 x 256
Attachments: Floor nozzle	●	●
Extension tube	●	●
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**

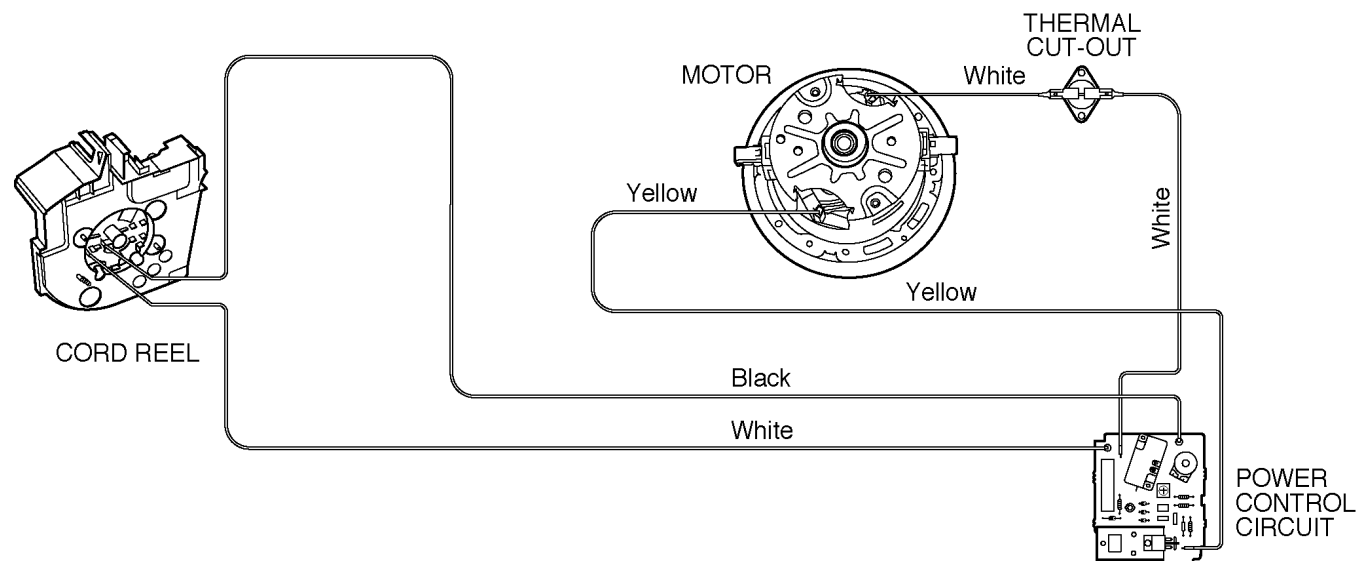
There are special components used in this equipment which are important for safety. These parts are marked by  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts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

# CONTENTS

	Page		Page
1 PICTORICAL DIAGRAM .....	2	6 EXPLODED VIEW (ATTACHMENTS) .....	12
2 SCHEMATIC DIAGRAM .....	3	7 PARTS LIST (ATTACHMENTS) .....	13
3 REPAIR OF MAIN PARTS .....	4	8 TROUBLE SHOOTING GUIDE .....	14
4 EXPLODED VIEW (BODY UNIT) .....	10	9 PACKING INSTRUCTION .....	15
5 PARTS LIST (BODY UNIT) .....	11	10 PACKING LIST .....	16

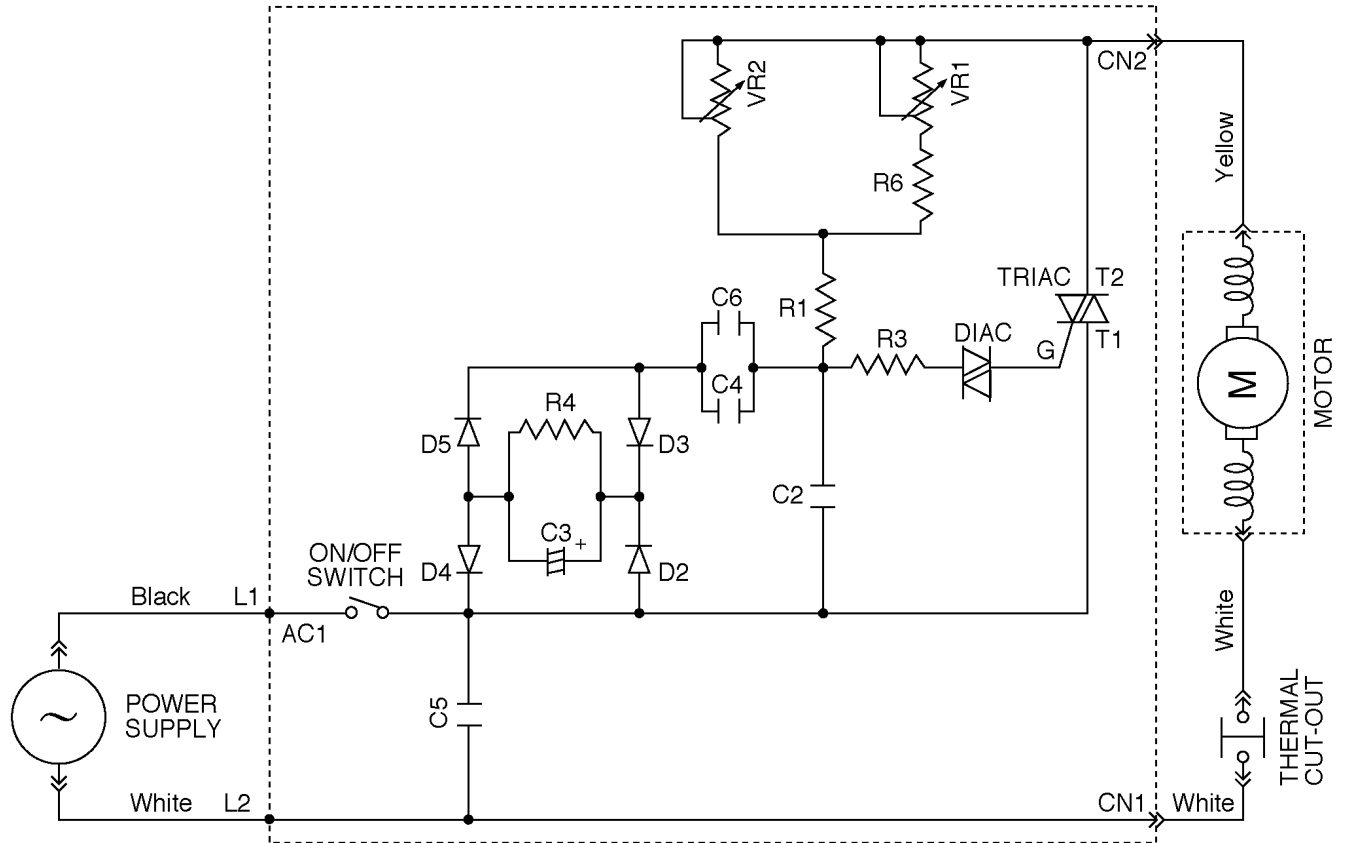
## 1 PICTORICAL DIAGRAM

MODELS MC-E601 / MC-E603



## 2 SCHEMATIC DIAGRAM

MODELS MC-E601 / MC-E603



### 3 REPAIR OF MAIN PARTS

**IMPORTANT NOTE:** Before replacing any part always, **DISCONNECT THE CLEANER FROM THE ELECTRICITY SUPPLY.**

#### 3.1. MOTOR

1. Lift up the handle and remove 2 screws from the control panel. (Fig.1)

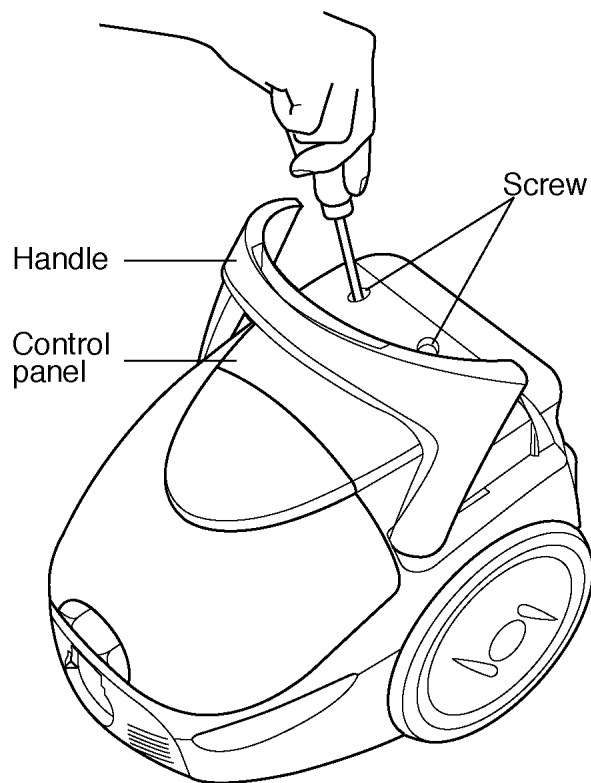


Fig.1

2. Open the dust cover and release (with a flat head screwdriver) the control panel fastening points and remove control panel. (Fig. 2)

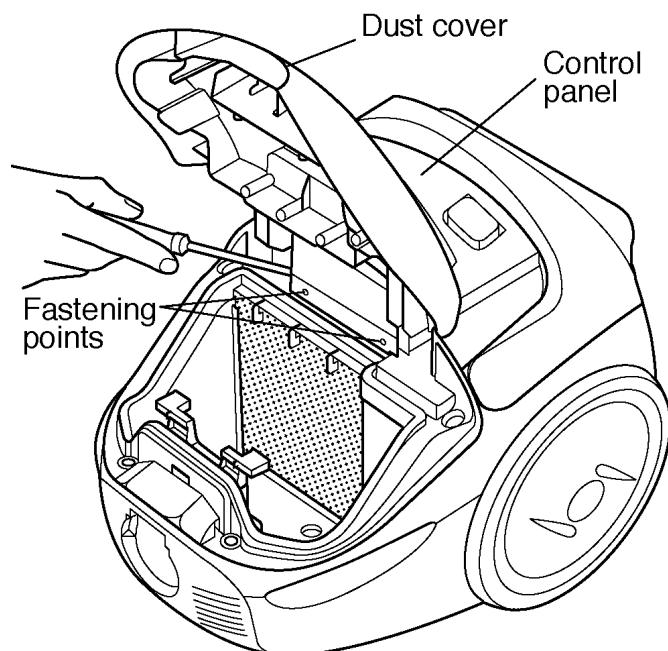


Fig.2

3. Remove exhaust cover, rear cover and 5 screws from upper body and pull to take it out. (Fig. 3) Note: To remove the exhaust cover pry out with a flat head screwdriver as shown in the illustration.

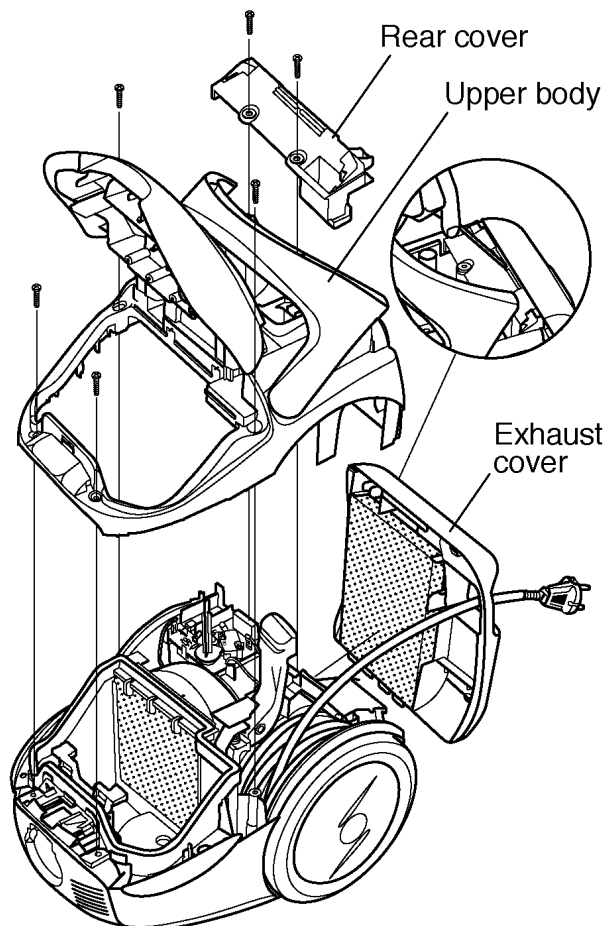


Fig.3

4. Take out cord reel ass'y and remove the lead wires (provided with quick-connect terminal) from the contact spring tabs. (Fig. 4)

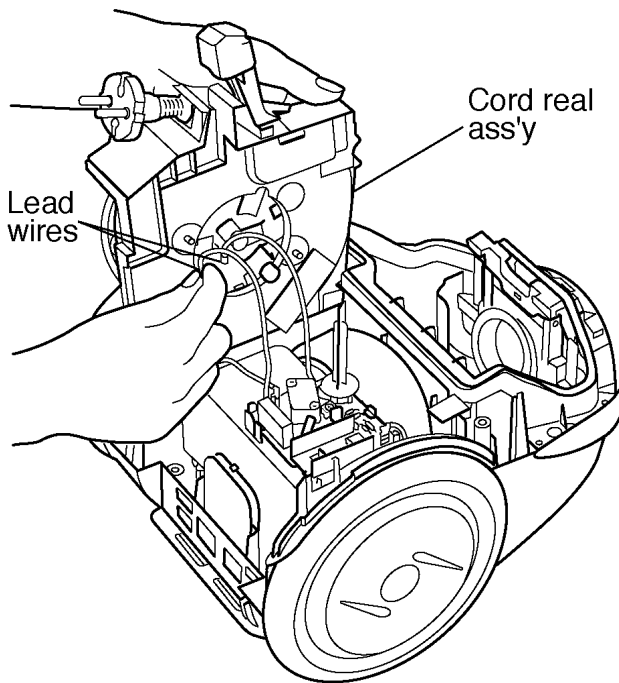


Fig.4

5. Take out motor unit and remove 2 screws to take out motor cover. (Fig. 5)

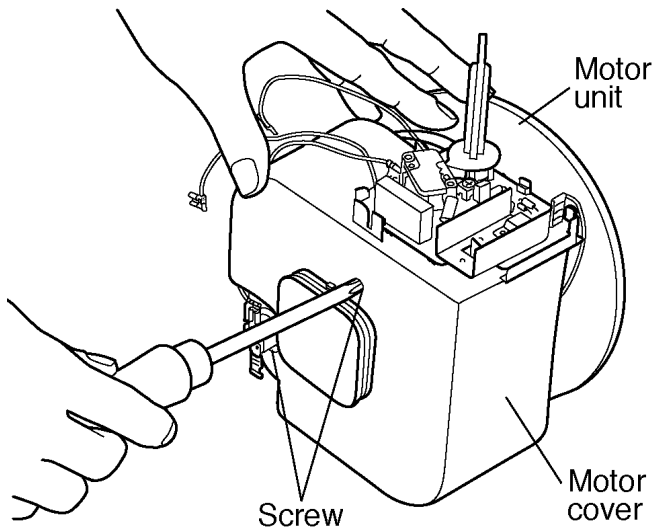


Fig.5

6. Disconnect the lead wires (provided with quick-connect terminals) from the carbon brush holder tabs and remove front motor support. (Fig. 6)
7. Replace the motor with a new one and connect the lead wires to the carbon brush holder tabs.

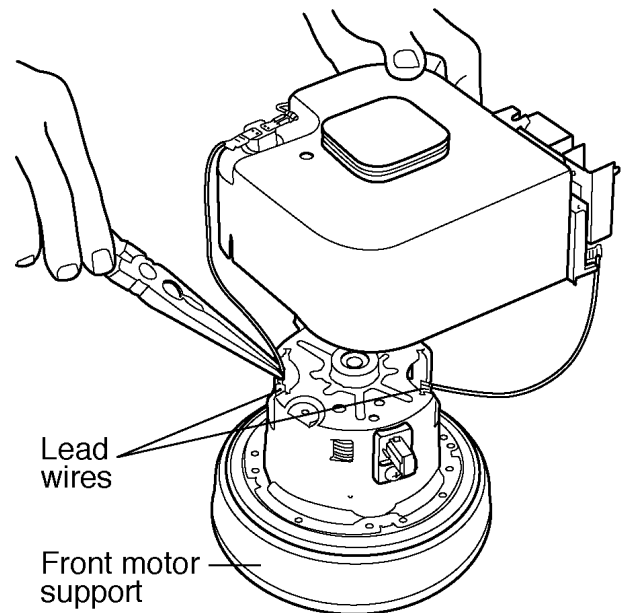


Fig.6

8. Reassemble front motor support and motor cover. Then refasten the two screws. (Fig. 7)

**Note**

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

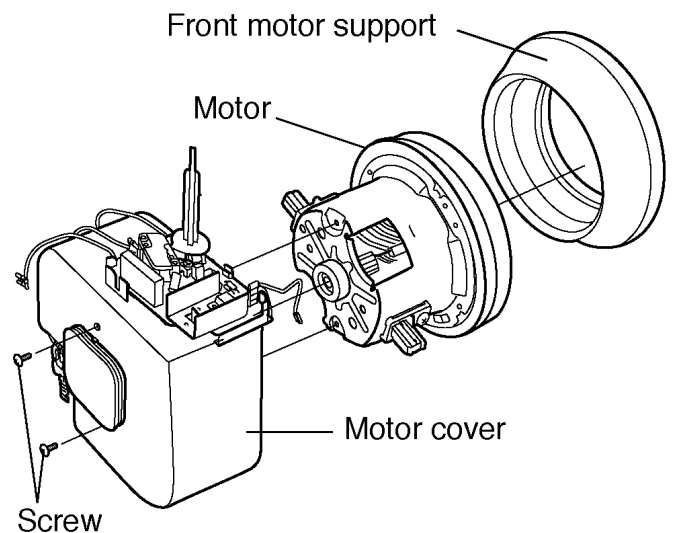


Fig.7

9. Place the motor unit and cord reel ass'y into the lower body. Note: Align rear motor support with the lower body guides. (Fig. 8)
10. Connect the lead wires according to the schematic diagram and reassemble the remaining parts in the reverse order.

**Note**

Before reassembling upper body and exhaust cover introduce the cord plug through their holes.

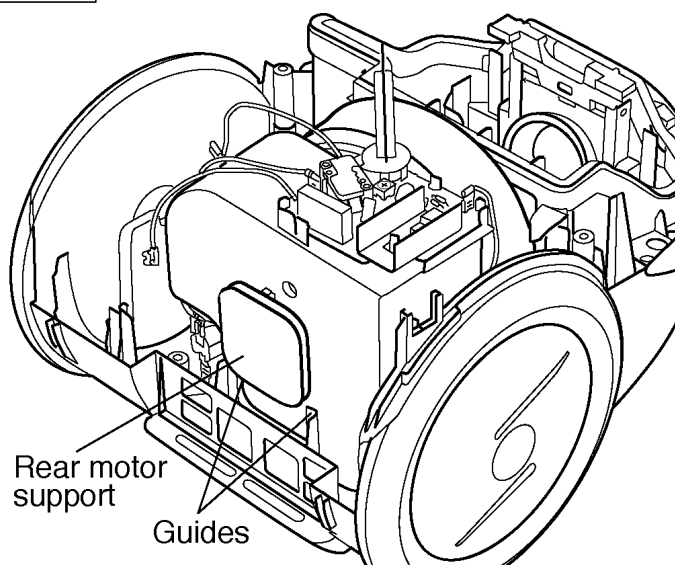


Fig.8

## 3.2. CARBON BRUSHES

### Note

The two carbon brushes should be replaced at the same time.

1. Take out motor unit and remove motor cover as explained previously in paragraph 3.1 Motor, points 1-5.
2. Disconnect lead wires (provided with quick-connect terminal) from the carbon brush holder tabs.
3. Remove the screw from the carbon brush holder to take it out. (Fig. 9)
4. Replace carbon brush unit with a new one.

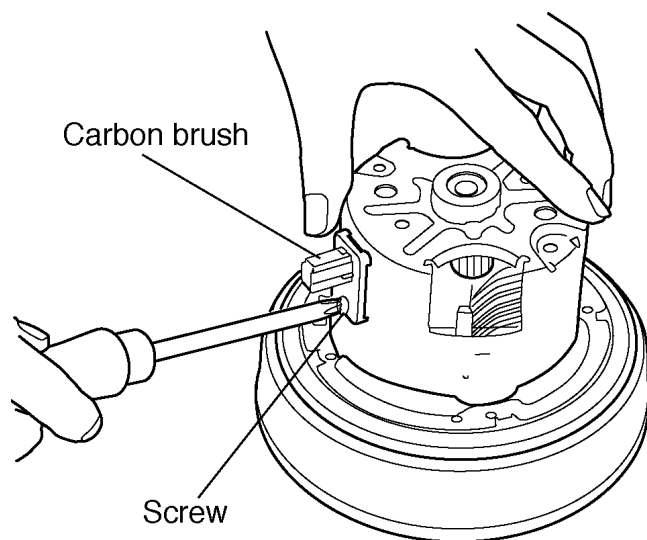


fig.9

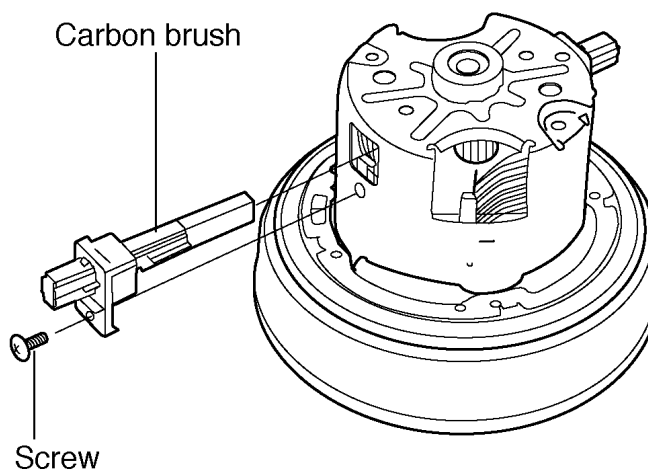


fig.10

5. Insert the new carbon brush unit into the motor housing and refasten the screw. (Fig. 10)
6. Connect the lead wires to the motor tabs and reassemble motor unit.
7. Connect the lead wires to the motor tabs and reassemble motor unit.

### 3.3. THERMAL CUT-OUT

1. Take out upper body and cord reel ass'y as explained previously in paragraph 3.1 Motor, points 1-4.
2. Take out motor unit. Remove thermal cut-out from its lodging and disconnect the lead wires (provided with quick-connect terminal) from the thermal cut-out tabs. (Fig. 11)
3. Replace thermal cut-out with a new one and connect the lead wires to its tabs.
4. Reinstall the thermal cut-out through its guides and place motor unit and cord reel ass'y into the lower body.
5. Connect the lead wires according to the schematic diagram and reassemble the remaining parts in the reverse order.

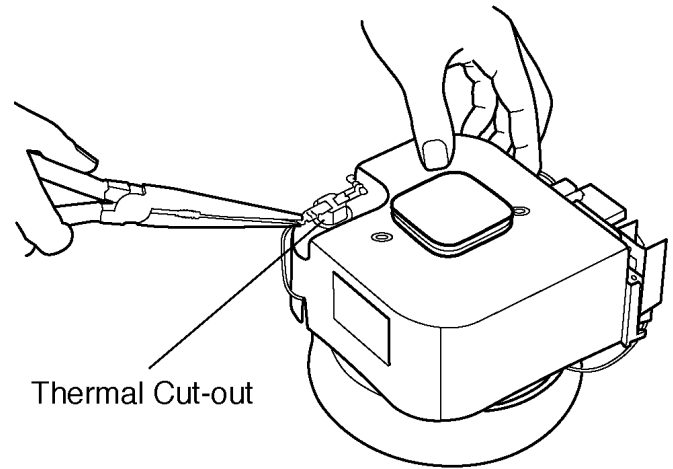


fig.11

### 3.4. POWER CONTROL CIRCUIT

1. Remove upper body as explained previously in paragraph 3.1 Motor, points 1-3.
2. Lift the cord reel ass'y and remove the lead wires (provided with quick-connect terminal) from the contact spring tabs.
3. Remove from power control circuit the lead wires (provided with quick-connect terminal) and the potentiometer button supplement. (Fig. 12)
4. Remove power control circuit from its fastening points and replace with a new one. (Fig. 13)

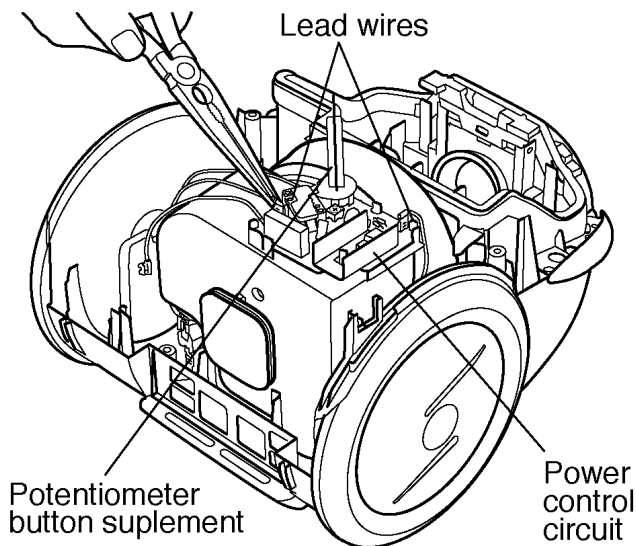


fig.12

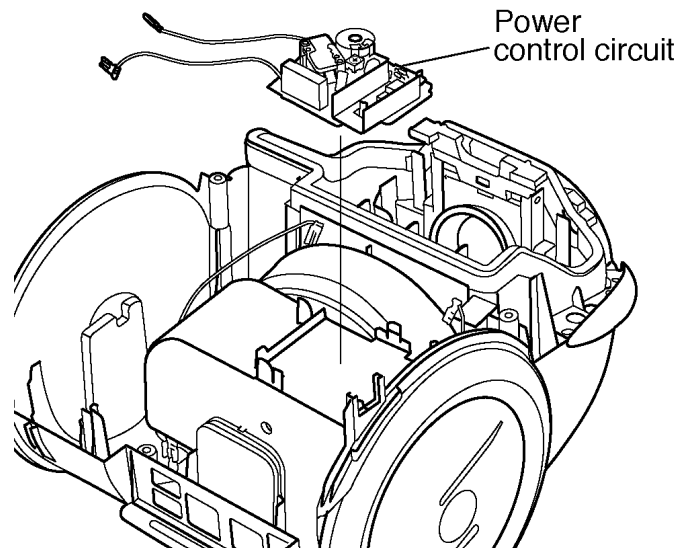


fig.13

5. Reinstall power control circuit and potentiometer button supplement. Then connect the lead wires according to the schematic diagram.
6. How to adjust the minimum power at 450W. To do it, place the trimming potentiometer (VR1) to its centre position, then place the rotary potentiometer (VR2) at minimum position and adjust the trimming potentiometer at 450W.
7. Reassemble upper body and remaining parts in the reverse order.

### 3.5. CORD REEL UNIT

1. Remove upper body as explained previously in paragraph 3.1 Motor, points 1-3.
2. Take out cord reel ass'y and remove connections from the contact spring tabs.
3. Press the brake lever pedal and unwind the power supply cord to release the cord reel spring efficiency. (Fig. 14)

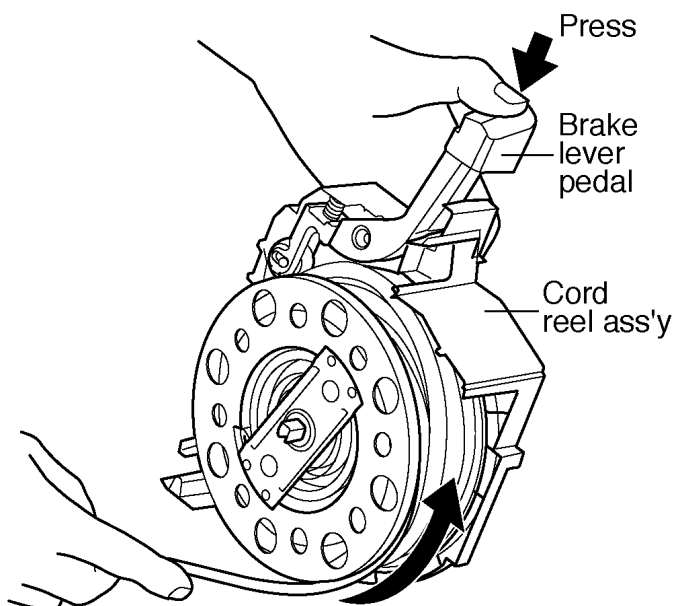


fig.14

4. Turn the cord reel shaft in the arrow direction and detach cord reel unit from cord reel support. (Fig. 15)
5. Replace the cord reel unit with a new one.

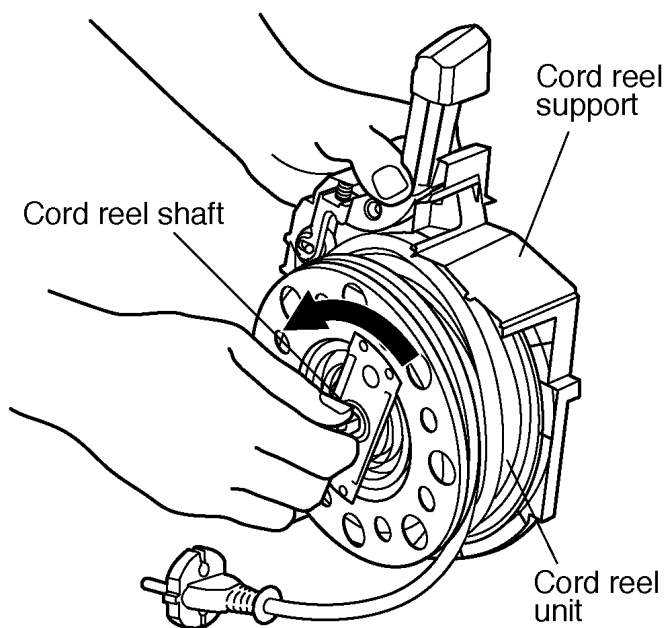


fig.15

6. Press the brake lever pedal to reassemble cord reel unit and cord reel support, then turn the cord reel shaft in the arrow direction to join both parts. (Fig. 16)

#### Note

Wind up the power supply cord the extra times indicated on the cord reel body to maintain the spring efficiency.

7. Connect the lead wires according to the schematic diagram and place the cord reel ass'y into the lower body. Then reassemble the remaining parts in the reverse order.

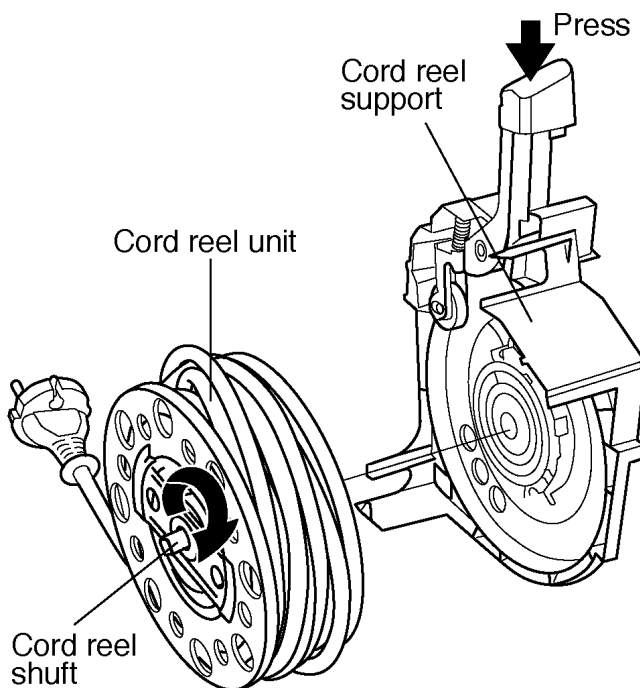


fig.16



### 3.6. BRAKE LEVER UNIT

1. Remove upper body and cord reel ass'y as explained previously in paragraph 3.1 Motor, points 1-4.
2. Press the brake lever pedal and unwind the power supply cord to release the cord reel spring efficiency. (see figure 14)
3. Turn the cord reel shaft in the arrow direction and detach cord reel unit from cord reel support. (see figure 15)
4. Remove brake lever unit and spring. (Fig. 17)
5. Replace brake lever unit with a new one and reinstall it.
6. Press the brake lever pedal to reassemble cord reel unit and cord reel support, then turn the cord reel shaft to join both parts. (see figure 16)

**Note**

Wind up the power supply cord the extra times indicated on the cord reel plate to maintain the spring efficiency.

7. Connect the lead wires according to the schematic diagram and place the cord reel ass'y into the lower body. Then reassemble the remaining parts in the reverse order.

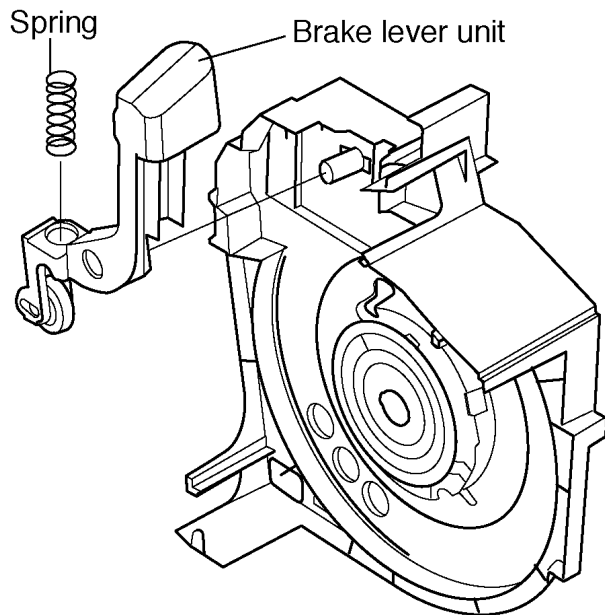
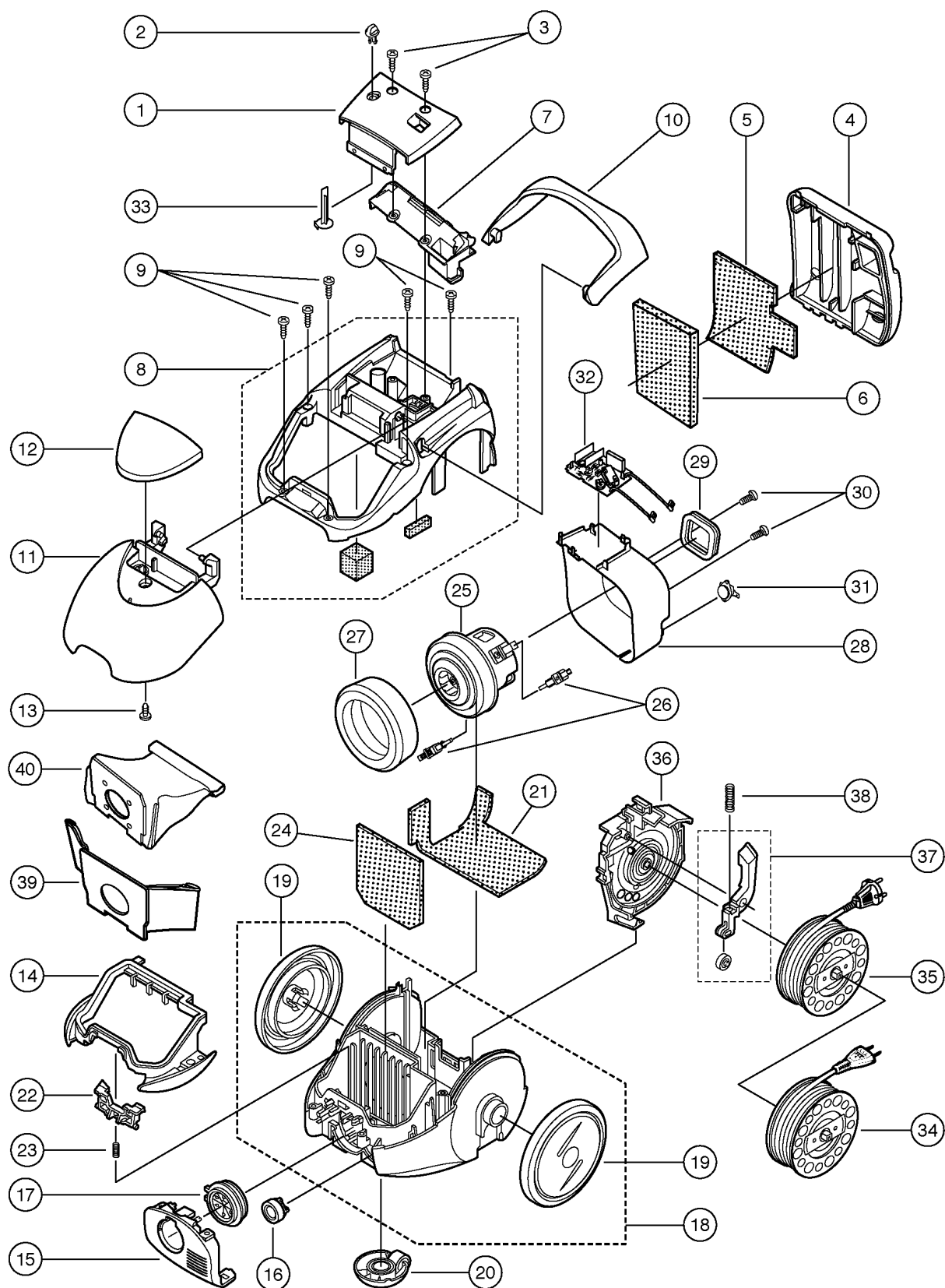


fig17

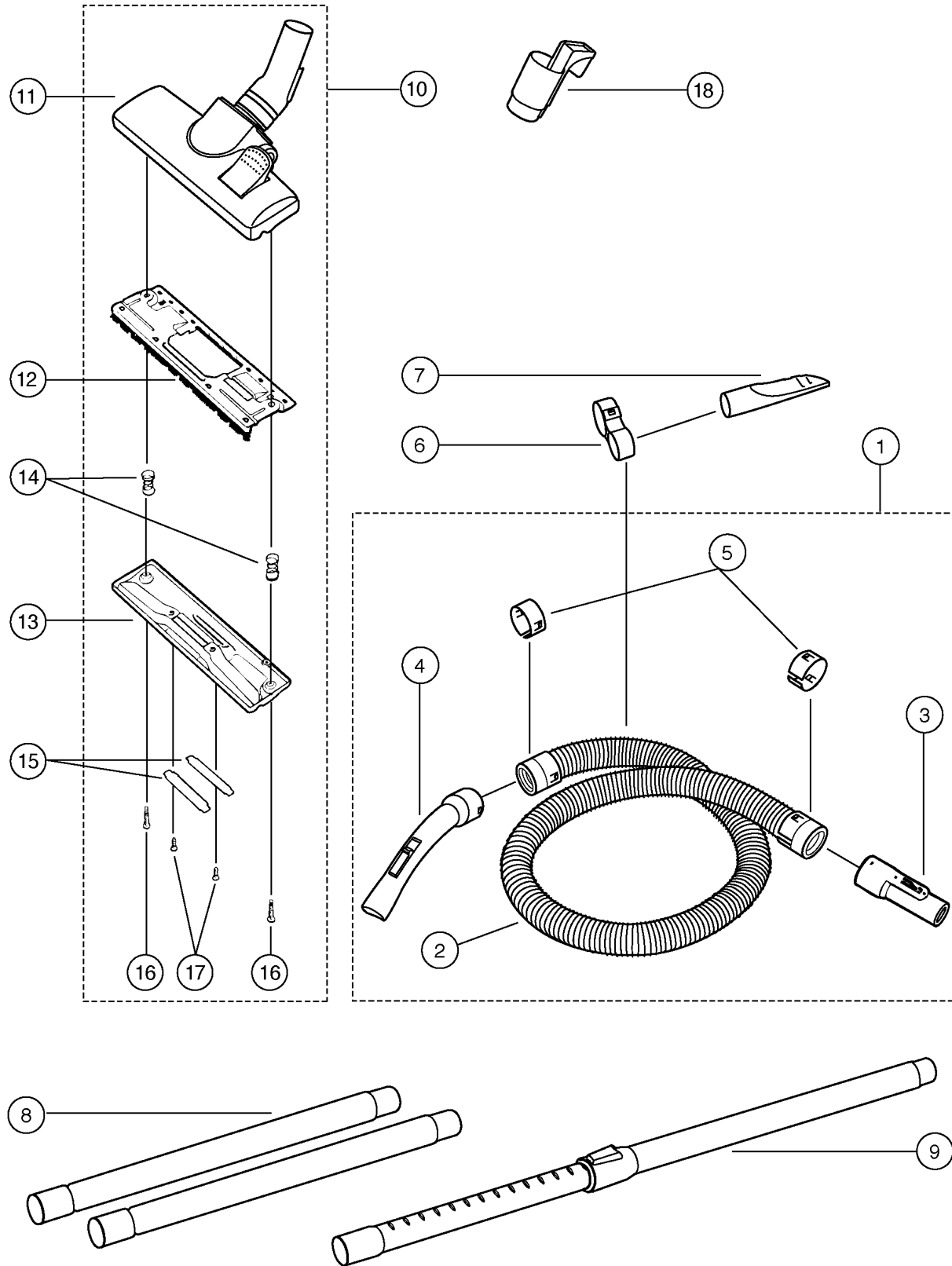
## 4 EXPLODED VIEW (BODY UNIT)



## 5 PARTS LIST (BODY UNIT)

Ref. No.	Part No.	Part Name & Description	Remarks
1	AMC8M01V1039	Control panel	MC-E601
1	AMC8M01V3039	Control panel	MC-E603
2	AMC8E17V1039	Potentiometer button	
3	XTN4+18B	Tapping screw	
4	AMC8T07V10Z5	Exhaust cover	MC-E601 / Blue color
4	AMC8T07V1079	Exhaust cover	MC-E603 / Red color
5	AMC8T10V3000	Exhaust felt	MC-E603 Only
6	AMC8T09V1000	Rear filter	
7	AMC8T06V1039	Rear cover	
8	AMC8C97V10Z5	Upper body ass'y	MC-E601 / Blue color
8	AMC8C97V1079	Upper body ass'y	MC-E603 / Red color
9	XTN4+18B	Tapping screw	
10	AMC8T57V10Z5	Handle	MC-E601 / Blue color
10	AMC8T57V1079	Handle	MC-E603 / Red color
11	AMC8T01V10Z5	Dust cover	MC-E601 / Blue color
11	AMC8T01V1079	Dust cover	MC-E603 / Red color
12	AMC8I17V1039	Indicator cover	
13	XTN4+18B	Tapping screw	
14	AMC8T04V10G0	Dust cover seal	
15	AMC8T11V10G0	Suction inlet	
16	AMC8I97V1000	Valve unit	
17	AMC850KQA000	Dust bag seal	
18	AMC8C99V10G0	Lower body ass'y	
19	AMC8R01V10G0	Wheel	
20	AMC8R99V10G0	Caster	
21	AMC8T49V3000	Lower body felt	MC-E603 Only
22	AMC823KLE000	Paper bag clamp	
23	AMC8F30E1000	Paper bag clamp spring	
24	AMC8F03V1000	Central filter	
25	AMC81SD03H50	Motor SDS-1303 HS	
26	AMC982000911	Carbon brush	
27	AMC802FNL000	Front motor support	
28	AMC8E10V1000	Motor cover	
29	AMC8E09V1000	Rear motor support	
30	XTN4+10E	Tapping screw (Taptite)	
31	AMC8E1401200	Thermal cut-out	
32	AMC8E91V1000	Power control unit	
33	AMC8E21V1000	Potentiometer button supplement	
34	AMC8P88V1000	Cord reel unit	Applied to Italy Switzerland and Portugal.
35	AMC8P97V1000	Cord reel unit	Applied to East European countries & West countries except above.
36	AMC8P91V1000	Cord reel support unit	
37	AMC8P96V1039	Brake lever unit	
38	AMC8P22V1000	Brake lever spring	
39	AMC-S5EP	Paper bag pack of 5/u.	Type C-13
40	AMC899KGU000	Re-usable cloth bag	Optional

## 6 EXPLODED VIEW (ATTACHMENTS)



## 7 PARTS LIST (ATTACHMENTS)

Ref. No.	Part No.	Part Name & Description	Remarks
1	AMC8A92V3034	Hose unit	
2	AMC8A01K0034	Hose	
3	AMC8A9325034	Connecting pipe unit	
4	AMC8A94P1034	Curved tube unit	
5	AMC8A1125034	Hose holder	
6	AMC8A73T1034	Accessory support	
7	AMC8A13P1034	Crevice nozzle	
8	AMC8A85E1034	Extension wand (Plastic)	
9	AMC8A85P3100	Telescopic wand	
10	AMC8A99T1034	Floor nozzle	
11	AMC8A90T1034	Floor nozzle cover	
12	AMC8A89D1000	Floor nozzle brush	
13	AMC8A39D1000	Floor nozzle base plate	
14	AMC8A36D1000	Floor nozzle spring	
15	AMC8A41D1000	Floor nozzle linen retake	
16	XTN35+25BFY	Floor nozzle screw	
17	XTN35+14BFY	Floor nozzle screw	
18	AMC8C25V1034	Floor nozzle hook	Only for plastic extension wand
18	AMC8C25V3034	Floor nozzle hook	Only for metallic wand

## 8 TROUBLE SHOOTING GUIDE

CONDITION	CHECKPOINT	METHOD OF INSPECTION	CAUSE / REMEDY
Motor fails to rotate. (no noise is heard at all).	Power cord connection	Check power cord continuity between plug pins and contact base.	If there is no continuity, replace the power cord.
	Motor continuity	Check motor continuity between carbon brush holder tabs.	If there is no continuity, replace the motor.
	Carbon brushes	Check if there is gap between carbon brush and commutator.	If there is gap between carbon brush and commutator, replace both carbon brushes.
	ON/OFF Switch	Check continuity across switch connections.	If there is no continuity, replace power control circuit.
	Thermal cut-out	Check continuity across thermal cut-out tabs.	If there is no continuity, replace thermal cut-out.
	Triac	Check if the triac is in open circuit.	If it is in open circuit, replace power control circuit.
	Power control circuit	Check if the diac is in open circuit.	If it is in open circuit, replace power control circuit.
	Rotating potentiometer (VR2)	Check if the potentiometer is in open circuit.	If it is in open circuit, replace power control circuit.
Motor runs but does not suction.	Trimmer potentiometer (VR1)	Place the rotating potentiometer at min. power and check if the potentiometer (VR1) is adjusted at 450W.	If it is adjusted at 450W and the motor doesn't work, replace power control circuit.
	Hose or Suction inlet	Check if there is any blockage in the hose or suction inlet.	If there is any blockage, remove it.
Noise or vibration.	Dust bag / Central filter	Check if dust bag is full or dust accumulated in central filter.	If the paper bag is full, replace it. If the central filter is dirty, clean or replace it.
	Motor fan	Check dust accumulated in motor fan (it could happen if the vacuum cleaner has been used with a broken bag or without central filter).	If there is dust accumulated in 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).	Rotating potentiometer	Check if the potentiometer is short-circuited.	If it is short-circuited, power control circuit.
	Power control circuit	Check if the power control circuit is short-circuited.	If it is short-circuited, replace it.
Motor runs irregularly.	Rotating potentiometer	Check possible bad contact of the rotating potentiometer PCB tracks.	If there is bad contact, replace power control circuit.



# 10 PACKING LIST

Ref. No.	Part No.	Part Name & Description	Remarks
1	AMC8Z01V1000	Carton box	MC-E601
1	AMC8Z01V3000	Carton box	MC-E603
2	AMC8Z02V1000	Cushion A	
3	AMC8Z03V1000	Cushion B	
4	AMC8Z18V1000	Cushion C	
5	AMC8Z07V1010	Operating instructions	Spanish, English, Portuguese, Italian, Finish and Greek
5	AMC8Z07V1070	Operating instructions	German, Dutch, French, Swedish, Norwegian and Danish.
5	AMC8Z07V1020	Operating instructions	Russian