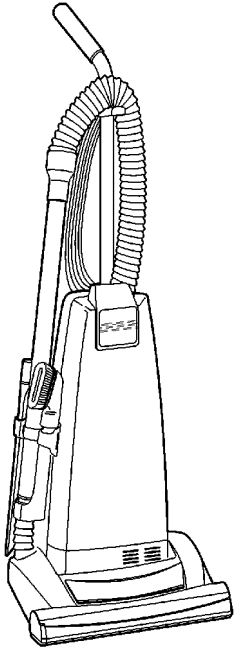


# Service Manual

Vacuum Cleaner

MC-V5210-00



<b>Model</b>	<b>MC-V5210-00</b>
<b>Power Source</b>	AC 120V (60 Hz)
<b>Power Consumption</b>	10.0 Amps
<b>Cord Length</b>	50 Ft.
<b>Motor Protector</b>	Yes
<b>Weight</b>	17.0 lbs.

Specifications are subject to change without notice for further improvement.

## **⚠ WARNING**

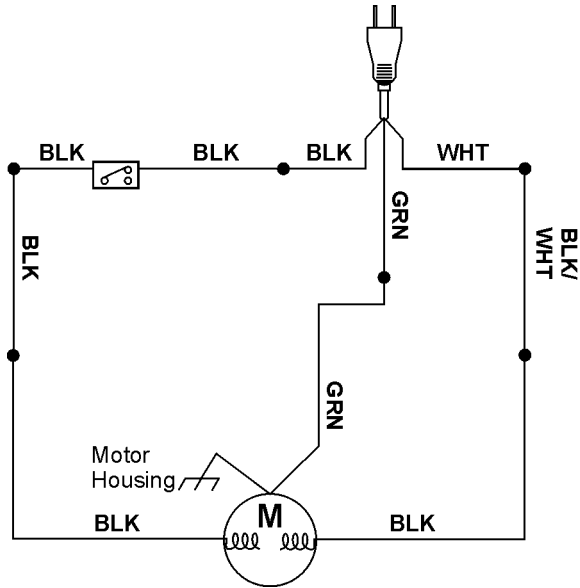
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should 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.

# Panasonic®

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# 1 WIRING DIAGRAM AND DRAWING

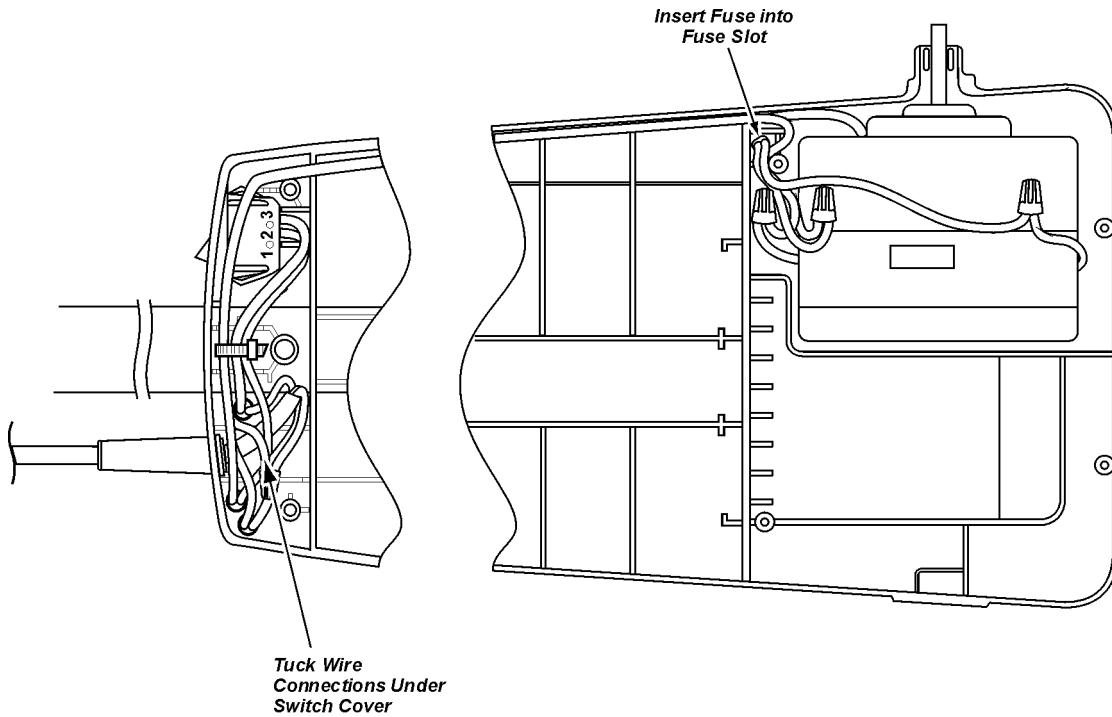
## 1.1. Wiring Diagram



## 1.2. PICTORIAL DIAGRAM

### NOTE:

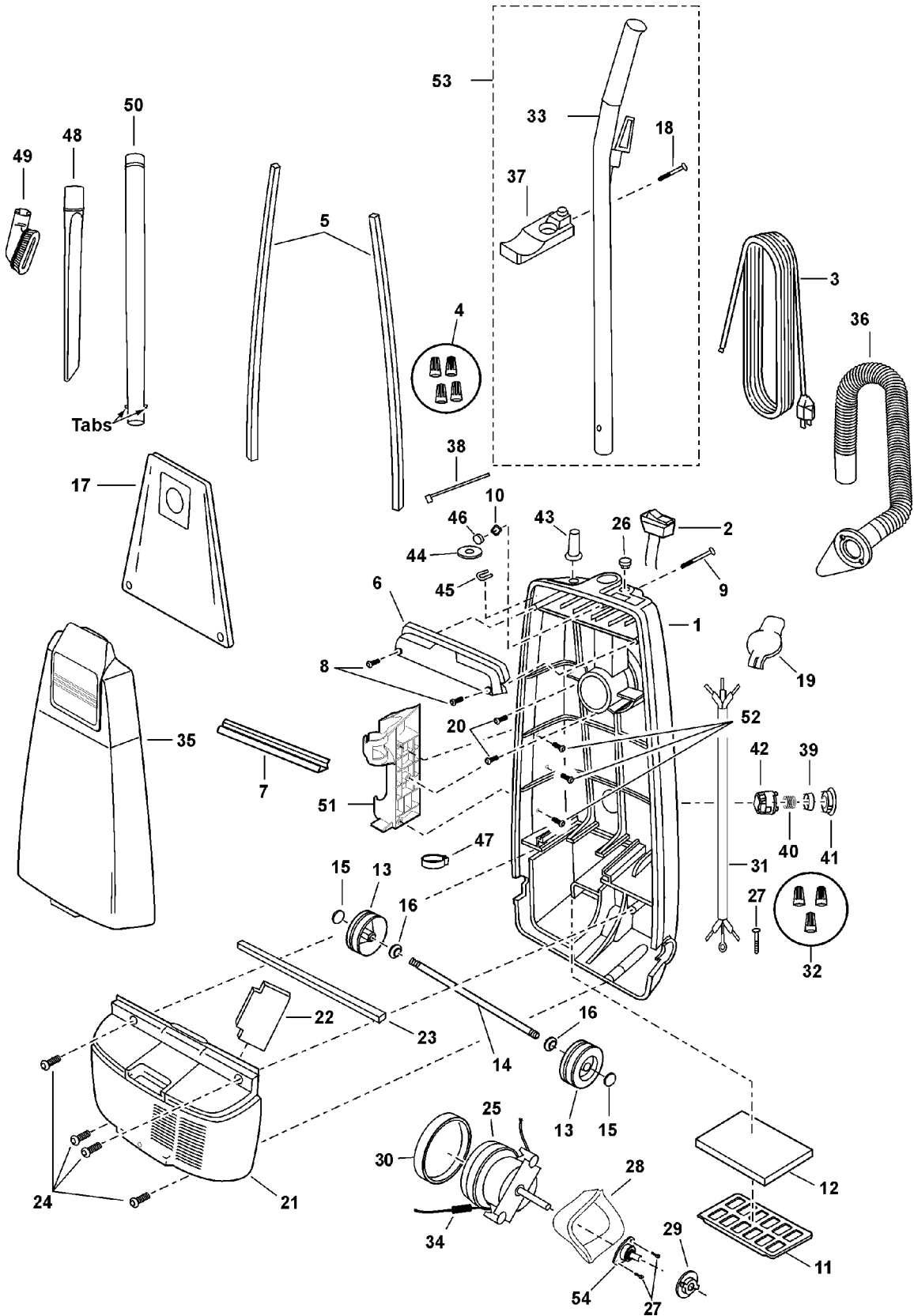
For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.



# 2 EXPLODED VIEW AND PARTS LIST

## 2.1. Body

### 2.1.1. Exploded View

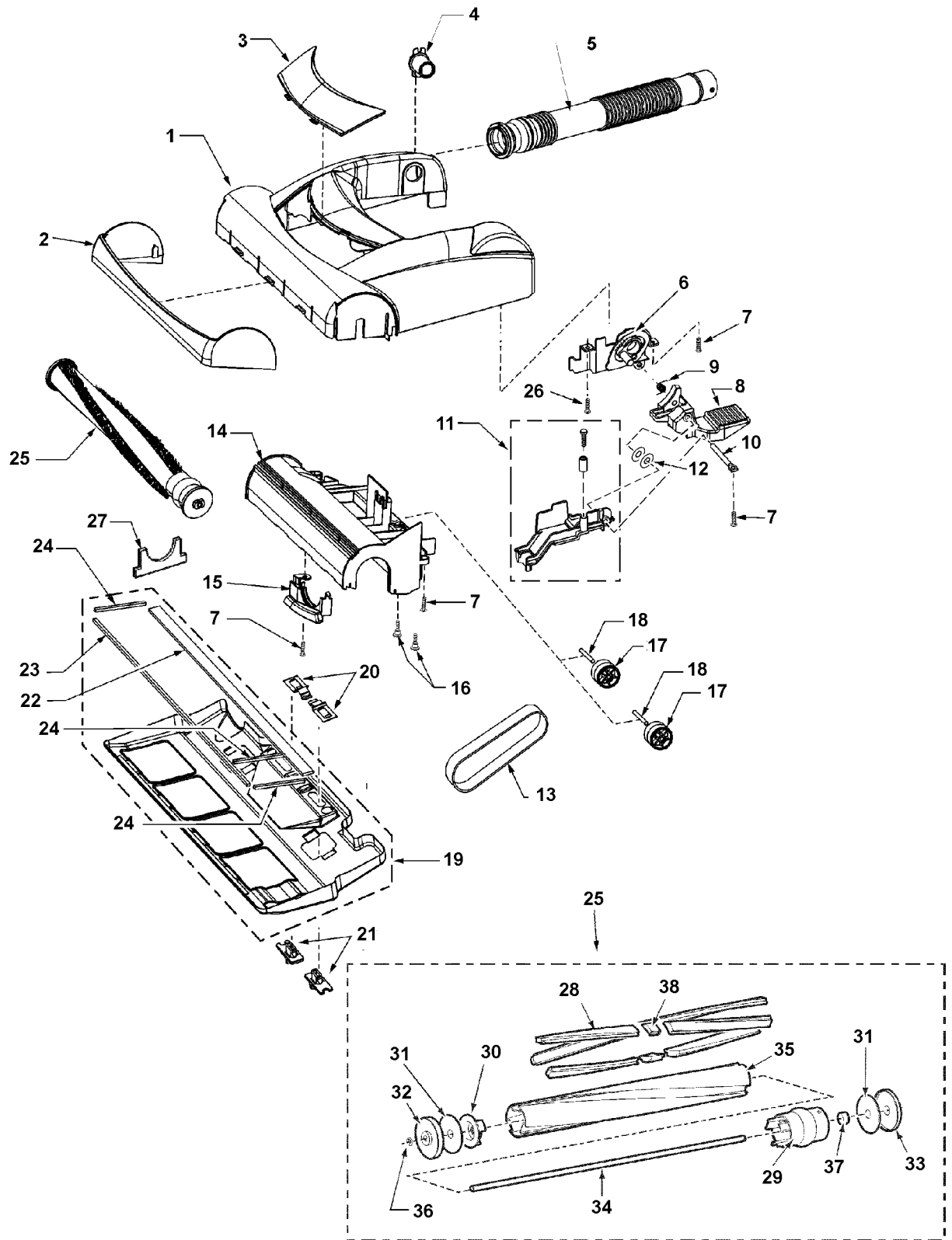


## 2.1.2. Parts List (Body)

Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC88KCUDZV07	Dust Container Machined	1	Includes items 38, 45 and 46
2	AMC98E-V000U	Switch ON/OFF	1	Includes item 38 and 46
3	AC94EAPNZY02	Power Cord	1	Includes items 38, 44 and 46
4	AMC-1CTCE23	Wire Nut	4	Shipped 10 per package
5	AC66KV01V06	Packing Dust Container	2	
6	AC03EV06V06	Switch Cover	1	Includes item 38 and 46
7	AC73KV0ZV06	Packing Switch Cover	1	
8	AXTN4+16BFY	Switch Cover Screw	2	Shipped 10 per package
9	AMC73B-V00	Screw Handle	1	
10	AMP21B-170	Nut Handle Screw	1	
11	AMC32K-V00	Supporter Filter	1	
12	AC37KAAEZ00	HEPA Filter Secondary	1	
13	AMC01C-V00U	Wheel	2	
14	AC16CUSZ00	Roller Shaft	1	
15	AC74SUSZ00	Wheel Stopper	2	Shipped 10 per package
16	AXWG6E115FY	Washer	2	Shipped 10 per package
17	AC16KBYTZ000	Dust Bag	1	
18	AXTN4+45BFY	Screw Hose Holder	1	Shipped 10 per package
19	AC02HYUZV06	Cover Inlet	1	
20	AXTN4+16BFY	Screw Inlet	2	
21	AC99FCUDZV07	Motor Case	1	
22	AMC02L-V00	Packing Rear Cover	1	
23	AC19FJPZV06	Packing Motor Case	1	
24	AXTN4+20BFY	Screw Motor Case	4	Shipped 10 per package
25	AC92FAPNZ00	Fan Motor	1	
26	AC38HAPNZU00	Cover Cap	1	
27	AXYN4+E10FFY	Screw Ground	3	Shipped 10 per package
28	AC99GAMMZ00	Noise Suppressor	1	
29	AC03FAFYZ00	Motor Support Rear	1	
30	AMC02F-E00	Motor Support Front	1	
31	AC37GTEZ0U	Wirecord	1	
32	AMC-1CTCE23	Wire Nut	3	
33	AC64BATNZ00	Handle	1	
34	AC99WARGZ00	Motor Lead Assembly	1	
35	AC60KCMYZU03	Dust Cover	1	
36	AC84PJPZV06	Stretch Hose	1	
37	AC23PJPZV07	Hose Holder	1	
38	AMC596-702	Tie Cable	1	
39	AC69KJMZV06	Motor Protector	1	
40	AC70KJMZ00	Protector Spring Silver	1	
41	AC18MJMZV06	Protector Support	1	
42	AC68KJMZV06	Protector Case	1	
43	AC51E4GZU01	Rubber Protector	1	
44	AXWE10J223FE	Flat Washer	1	Shipped 10 per package
45	AC06WAPNZ00	Cord Retainer	1	
46	AC61LAGMZ00	Packing	1	
47	AC53RJPZV07	Hose Hook	1	
48	AC60RZVFZVU6	Crevice Tool	1	
49	AC88RYUZV06	Dusting Brush	1	
50	AC40PJP1V06	Wand Extension	1	
51	AC70PJPZV07	Wand Holder	1	
52	AXTN4+16BFY	Screw Tool Holder	3	Shipped 10 per package
53	AC95BATNZV07	Handle Assembly	1	Includes items 18, 33, 37
54	AC25SAFYZ00	Motor Flange	1	

## 2.2. Nozzle Housing

### 2.2.1. Exploded View

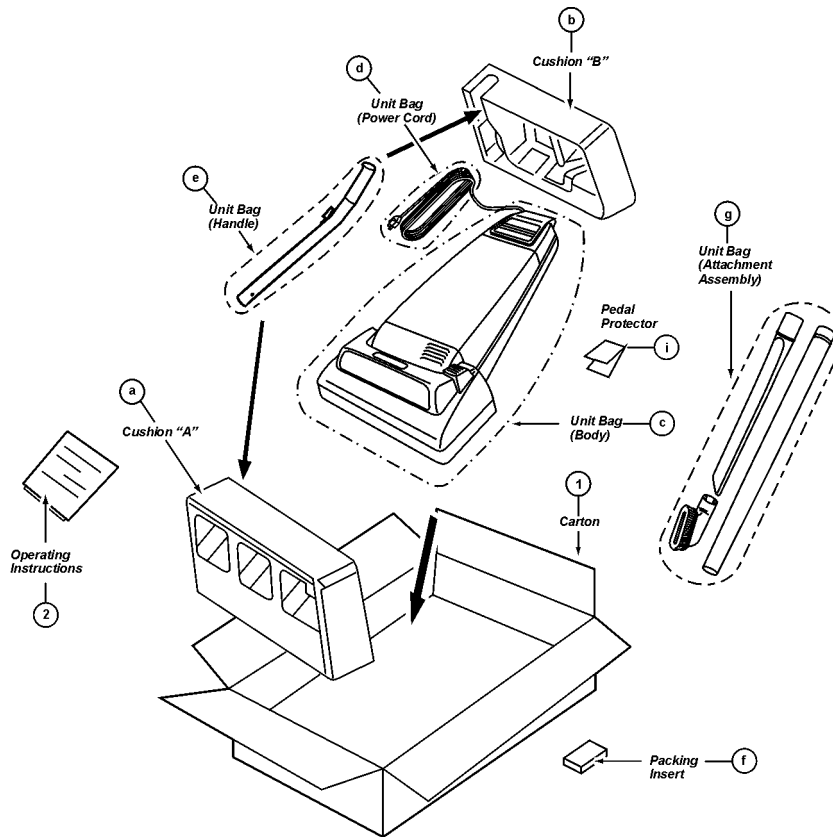


## 2.2.2. Parts List (Nozzle Housing)

Ref. No	Part No.	Part Name & Description	Quantity	Remarks
1	AC01ACUDZUU3	Nozzle Housing	1	
2	AC10ACRSZV07	Furniture Guard	1	
3	AC21HCRSZU03	Window	1	
4	AMC25S-V00	Plastic Shaft	1	
5	AC34PAJDZV06	Nozzle Hose	1	
6	AC43AAFY200	Bracket Assembly	1	
7	AXTN4+16BFY	Screw	4	Shipped 10 per package
8	AC47A2VZV07	Pedal	1	
9	AC58AAFVZ00	Spring (Pedal)	1	
10	AMC51A-2V0	Shaft (Pedal)	1	
11	AC11S2VZW00	Belt Cover Assembly	1	
12	AC62FAVGZ00	Belt Cover Washer	2	Shipped 10 per package
13	AC28SJPZ00	Belt	1	
14	AC02ACRSZW0H	Body (Upper)	1	
15	AC12ACRSZW0H	Cap (Body)	1	
16	AMC68A-V30	Screws	2	Shipped 10 per package
17	AC90QNGZV06	Wheel	2	
18	AC16CNXZ00	Shaft (Wheel)	2	
19	AC91ACRSZ000	Lower Plate Assembly	1	Includes items 29, 30 and 31
20	AMC68N-V30K	Latch (Lower Plate)	2	
21	AC70NYUZ00	Spring (Stop Latch)	2	
22	AC74ACRSZ000	Packing (Lower Plate)	1	
23	AC74ACRSZ000	Packing (Lower Plate)	1	
24	AMC39A-2V0	Packing (Lower Plate)	3	
25	AC92SBVNZ000	Agitator Assembly	1	
26	AXTN4+10BFY	Screw	1	Shipped 10 per package
27	AC82ACRRZV07	Agitator Holder	1	
28	AC85RBFT0000	Brush Set	1	
29	AC29SBVNZ000	Agitator Pulley	1	
30	AC41SBVNZ000	Agitator Holder	1	
31	AC44KBVNZ000	Washer	2	
32	AC96DBVNZ000	End Cap (Right)	1	
33	AC97DBVNZ000	End Cap (Left)	1	
34	AC57RBNZ000	Agitator Shaft	1	
35	AC56RBYZ000	Brush Holder	1	
36	AC23FBVNZ000	E-Clip	1	Shipped 10 per package
37	AC74SBVNZ000	Spacer	1	
38	AC34SBYYZ000	Spacer (Brushes)	3	

## 2.3. Packing Material

### 2.3.1. Exploded View



### 2.3.2. Parts List

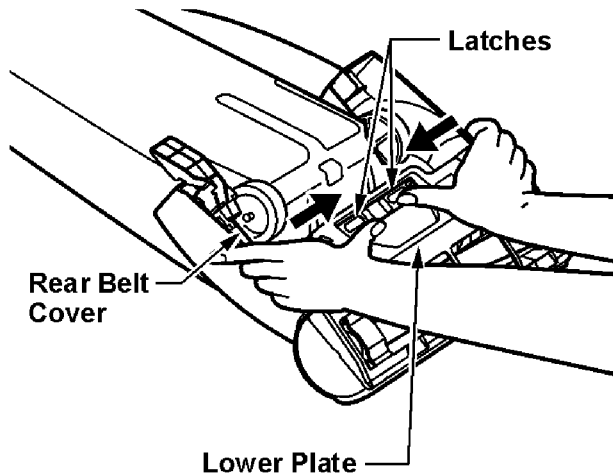
Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC61ZCCAZ000	Packaging Assembly	1	Includes 1 and items a-g
2	AC01ZCUDZ000	Operating Instructions	1	

# 3 REPLACEMENT INSTRUCTIONS

## 3.1. Lower Plate Replacement

### 3.1.1. Removal

1. Before servicing any parts, disconnect vacuum from electrical outlet.
2. Place paper under nozzle whenever lower plate is removed to protect floor.
3. Place handle in upright position and turn vacuum over to expose lower plate.



4. Release lower plate by pressing two (2) latches inward.
5. Remove lower plate and remove any residue that may exist in belt area.

### 3.1.2. Installation

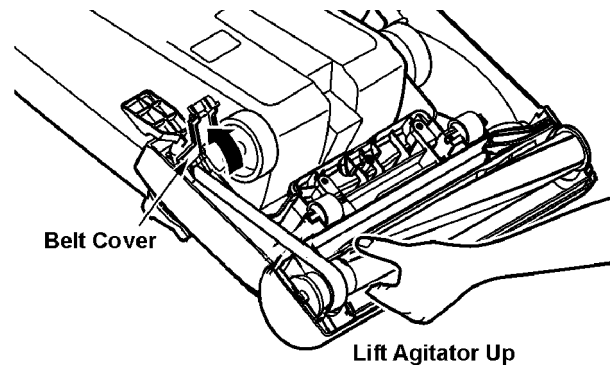
1. Close the rear belt cover.
2. Hook the front of the lower plate into the slots on the front of the nozzle housing. Press the lower plate down into place.
3. Fasten the lower plate by pushing the two (2) latches outward.

**NOTE: For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.**

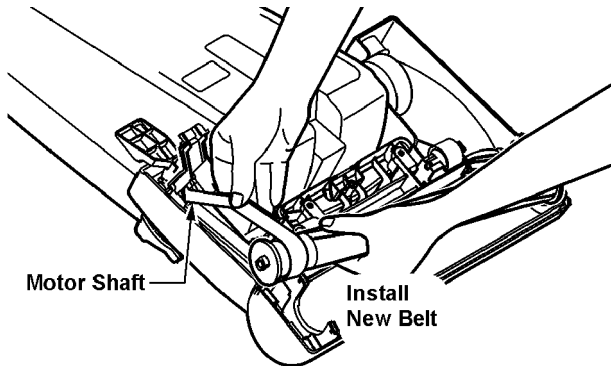
## 3.2. Belt Replacement

### 3.2.1. Removal

1. Remove lower plate.
2. Lift rear belt cover and remove agitator holder.



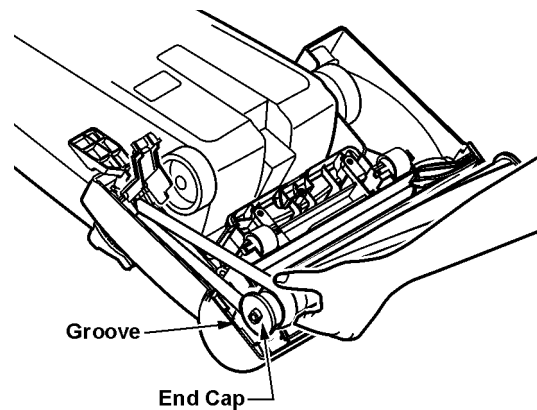
3. Remove agitator by carefully lifting out.
4. Remove worn or broken belt.



5. Clean agitator.

### 3.2.2. Installation

1. Loop new belt (Panasonic Type UB8 only) around motor shaft and agitator pulley; see illustration for correct belt routing.



2. Reinstall agitator back into nozzle housing grooves.
3. Close rear belt cover and reinstall agitator holder.
4. After reinstalling the agitator, turn it by hand to make sure that belt is not twisted or pinched and that all rotating parts turn freely.
5. Reinstall lower plate.



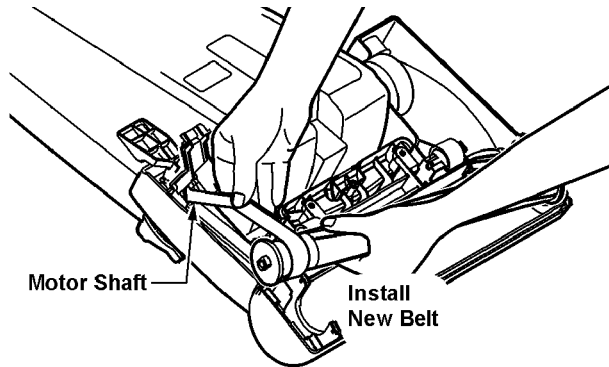
### 3.3. Agitator Assembly Replacement

#### 3.3.1. Removal

1. The brushes are replaceable separately. When the brushes need replacing, the agitator assembly will have to be removed.
2. Remove the lower plate as outlined in the LOWER PLATE REPLACEMENT section.
3. Remove the agitator assembly as outlined in the BELT REPLACEMENT section.

#### 3.3.2. Installation

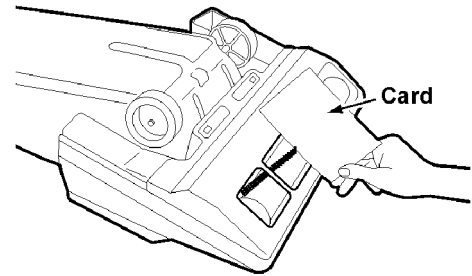
1. Place the belt around the motor shaft.



2. Start the new agitator assembly back into the nozzle housing by placing the side opposite the belt partially into the slot. The small tabs should be aligned with the nozzle and the other against the lower plate. This will hold the agitator in place and leave both hands free to place enough tension on the belt to allow that side of the agitator to return to the nozzle housing slot.
3. Place the belt around the agitator pulley on the agitator assembly.
4. Use both hands to pull the belt tight, slide the agitator assembly firmly into the slots on each end of the nozzle housing.
5. Rotate the agitator assembly by hand to insure nothing rubs and to check for correct assembly.
6. Replace the lower plate as outlined in the LOWER PLATE REMOVAL/INSTALLATION section.

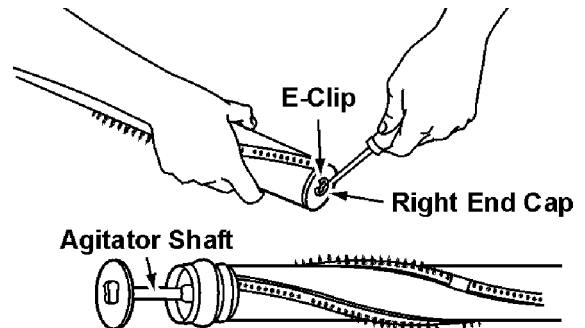
### 3.4. Brush Replacement

1. The agitator brushes should be replaced when the brushes are worn. Brushes should be checked by holding a card across the lower plate. If the bristles on the agitator assembly do not touch the card you should replace all the brushes for best cleaning results.

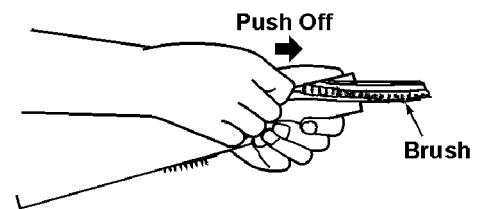


#### 3.4.1. Removal

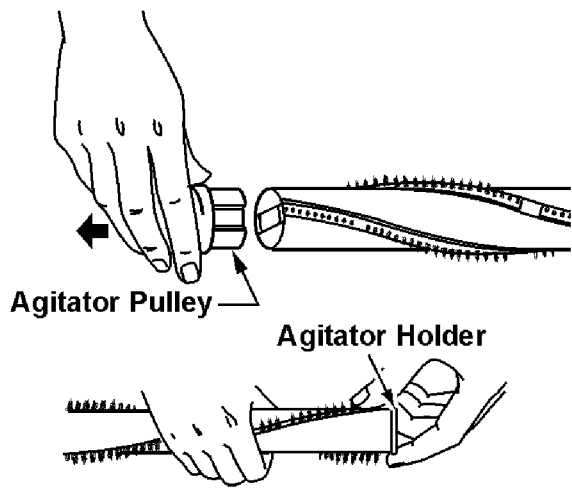
1. Remove the lower plate as outlined in the LOWER PLATE REPLACEMENT section.
2. Remove the agitator assembly as outlined in the BELT REPLACEMENT section.
3. The agitator assembly may now be disassembled and the brushes replaced.
4. Carefully remove the E-clip from the agitator shaft, do not misplace. Remove the right brush support. Pull the agitator shaft out of the opposite end of the.



5. Pull or pry out the agitator pulley and agitator holder.



6. Push each brush out of the agitator.

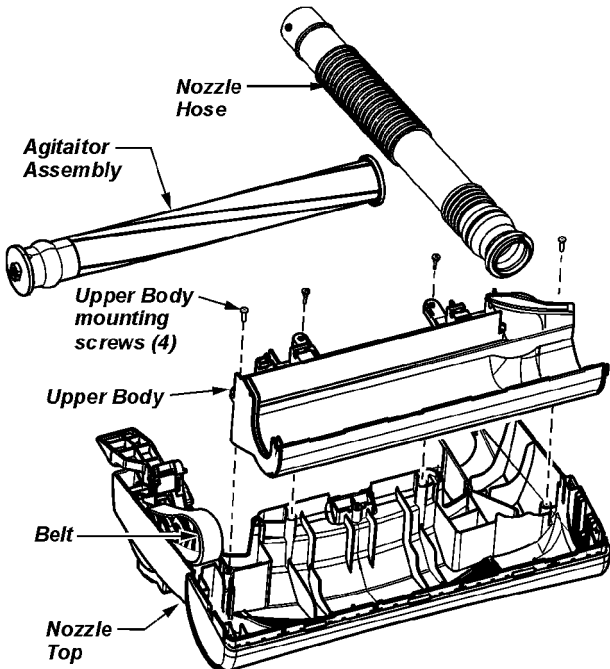


7. Install new brushes by reversing procedure.
8. Reinstall agitator holder and agitator pulley completely.
9. Reinstall the agitator shaft, end cap and E-clip.
10. Position belt over agitator pulley on the agitator.
11. Reinstall agitator and lower plate.

### 3.5. Nozzle Housing Replacement

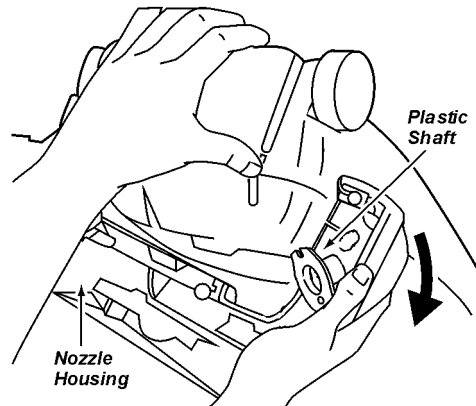
#### 3.5.1. Removal

1. Remove the lower plate as outlined in the LOWER PLATE REMOVAL/INSTALLATION section.
2. Remove agitator assembly as outlined in the respective sections.
3. Remove upper body by removing four (4) screws.



4. Remove nozzle hose from upper body.
5. Carefully turn vacuum over. Remove motor case by removing four (4) screws.

6. Lift up on the nozzle housing, plastic shaft side first.

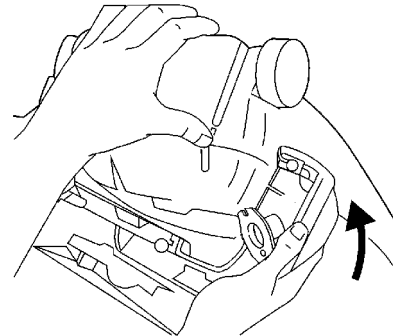


7. The nozzle housing can now be easily rotated from the motor shaft.

**NOTE:** If the motor case cover is removed, DO NOT turn vacuum over as the motor may fall out.

#### 3.5.2. Installation

1. Fit the nozzle from the motor shaft side first, and rotate it into place on the dust container as illustrated.



2. Slide the plastic shaft through the nozzle housing and into the dust container. Make sure that the slot on the bottom of the plastic shaft is down and fitted onto the projection.
3. Re-install the motor case. Be careful not to over tighten the four (4) motor case screws.
4. Carefully turn vacuum cleaner over.
5. Install belt, agitator assembly, and the lower plate according to the respective instructions.

**NOTE:** For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.

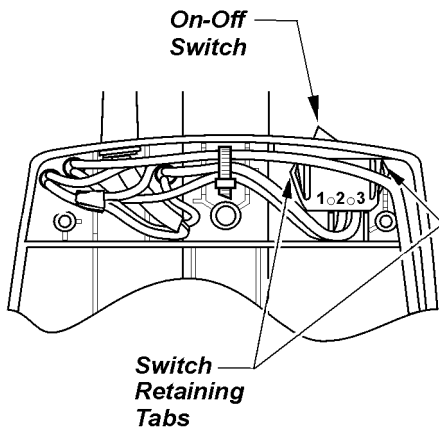
### 3.6. Power Cord / On-Off Switch Replacement

#### 3.6.1. Removal

1. Remove the dust cover and switch cover to expose the electrical connections of the power cord, on-off switch and wire cord.
2. Remove the flat washer and cord retainer. Remove the wire connections, and wire tie, if present.
3. Remove the on-off switch (for on-off switch replacement) by depressing the retaining tabs while pushing up and out of the dust container at the same time.
4. Pull the power cord out of the dust container (for power cord replacement).

#### 3.6.2. Installation

1. Insert the new power cord (power cord replacement only) into the dust container as far as necessary in order to secure the power cord. The proper location is approximately one and one eighth inches/thirty millimeters (1 1/8"/30 mm) of new power cord outer jacket extending past the cord retainer. Attach wires with wire connectors according to the wiring diagram in the front of this manual.
2. For switch replacement only, insert the new ON/OFF switch facing toward you, into the dust container until secured by the retaining tabs. Use a wire tie in the location illustrated taking care not to overtighten it. Tuck the wire connectors back into the dust container as illustrated in the close-up view.



3. Ensure that the insulator packing is installed correctly.
4. Replace the switch cover, the two (2) switch cover screws, and the dust cover. Care should be taken not to pinch wires and make sure that the switch cover goes on easily and stays flat. If there is resistance to the switch cover lying flat and in place, stop, remove the cover and make sure that no wires are being pinched. **DO NOT USE A POWER SCREWDRIVER TO SECURE THE COVER.**

**NOTE:** For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.

### 3.7. Thermal Overload Replacement

#### 3.7.1. Removal

1. Remove motor, as shown in motor replacement section.
2. Remove wire nut from the lead wire that contains the thermal protector. Remove old thermal protector and replace with new thermal protector. Reconnect wire nut to thermal overload. Replace lead wire containing protector wires back into the groove.

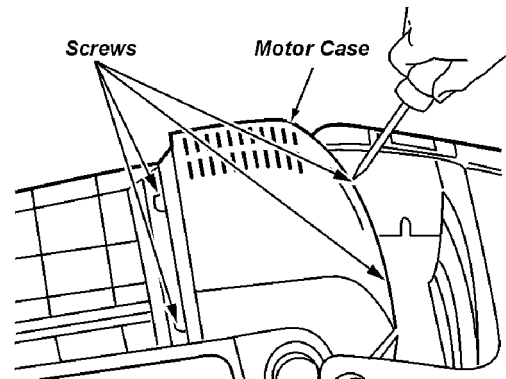
#### 3.7.2. Installation

1. Place the motor back into the dust container, following the instructions given in the motor replacement section.

### 3.8. Motor Replacement

#### 3.8.1. Removal

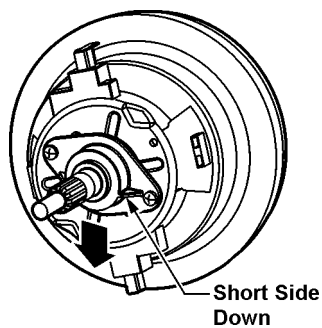
1. Remove the dust cover by grasping the top near the on-off switch and pulling sharply out toward you.



2. Remove the lower plate, agitator assembly, belt, the plastic shaft, and the nozzle housing as instructed in the respective removal sections.
3. Turn the vacuum over to the front side.
4. Remove the four (4) screws from the motor case and then remove the motor case.
5. Disconnect the motor leads and remove the motor. Remove the motor support rubber (rear), noise suppressor, flange and the motor support rubber (front). Place these items on the new motor.

### 3.8.2. Installation

1. Place the motor back into the dust compartment with motor flange positioned as illustrated.



2. Rewire per the Pictorial Diagram.
3. Replace the motor case and the four (4) screws.
4. Turn the vacuum back over and replace the plastic shaft, nozzle housing, belt, agitator assembly, and lower plate according to the respective installation instructions.