

dyson

root⁸ cyclone DC
service manual U.S.A. 07



Issued 01/04

root⁸cyclone™

PATENTED TECHNOLOGY



The first vacuum cleaner that doesn't lose suction

The Dyson Root⁸Cyclone™ technology uses 100,000 G of centrifugal force in the cyclones to filter dust and remove dirt from the airflow efficiently. Because there is nothing to obstruct the airflow, it doesn't clog and lose suction.

The manual has been provided to you on the condition that you, your employees, affiliates, contractors, agents and representatives will keep confidential the contents of the manual, and will not disseminate, distribute, or copy the manual, or otherwise display the manual for any other purpose other than for reference during servicing of vacuums. The manual is provided under limited license, and must be returned to Dyson immediately upon request.

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1.1 Introduction

This manual is the exclusive property of Dyson, Inc. ("Dyson"), and is provided to you for the limited purpose of retailer training and retailer servicing. Servicing of Dyson vacuum cleaners should only be performed by retailers who have received training from Dyson.

1.2 Variants



DC
07 | brushcontrol|hepa0



DC
07 | brushcontrol|hepa0|floor tool



DC
07 | animal



DC
07 | full gear



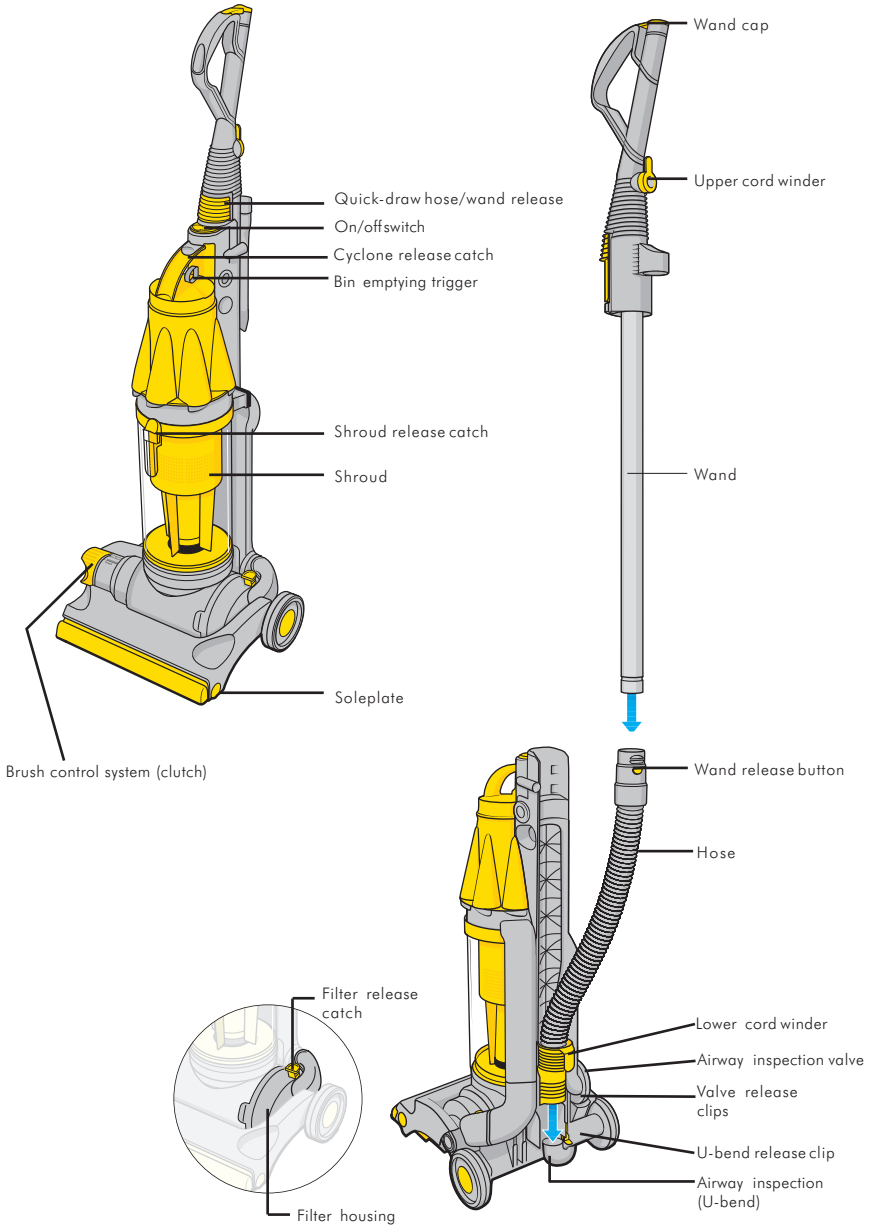
DC
07 | full kit club

The DC07 range uses the most advanced cyclone technology to maintain the highest constant suction. The DC07 has many unique features which include quick and hygienic bin emptying, a fully reversible wand, a new sliding wand cap and a quick-draw hose. The DC07 contains a lifetime pre-motor filter, and a lifetime HEPA post-motor filter that is designed to retain the highest level of microscopic dust particles and allergens.

1.3 Specifications

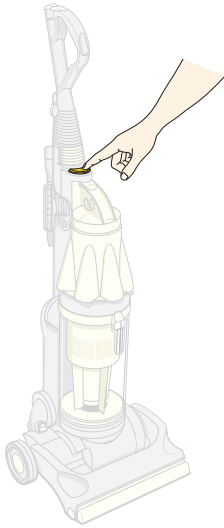
	 [brushcontrol] [hepa]	 [brushcontrol] [hepa] [floor tool]	 animal	 full gear	 full kit club
Roof ⁸ Cyclone™	✓	✓	✓	✓	✓
Airwatts	270	270	270	270	270
Reversible wand	✓	✓	✓	✓	✓
Floor tool	✗ *	✓	✓	✓	✗
Pre filter	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime
Post filter	HEPA	HEPA	HEPA	HEPA	HEPA
Clutch	✓	✓	✓	✓	✓
Main motor	12 Amps	12 Amps	12 Amps	12 Amps	12 Amps
Height	46"	46"	46"	46"	46"
Width	14"	14"	14"	14"	14"
Depth	13 1/2"	13 1/2"	13 1/2"	13 1/2"	13 1/2"
Bin capacity	1 gallon	1 gallon	1 gallon	1 gallon	1 gallon
Power cord length	35 feet	35 feet	35 feet	35 feet	35 feet
Operational weight	19.21 lbs	19.21 lbs	19.21 lbs	19.21 lbs	19.21 lbs
Animal turbo brush	✗ *	✗	✓	✓	✓
Zorb pack & groomer	✗	✗	✓	✓	✗
Hard floor tool	✗	✗	✗	✗	✓
Extended warranty	✗	✗	✗	✓ 3 years	✗

* **DC07 HEPA steel/yellow** variant has a floor tool and Animal turbo brush included

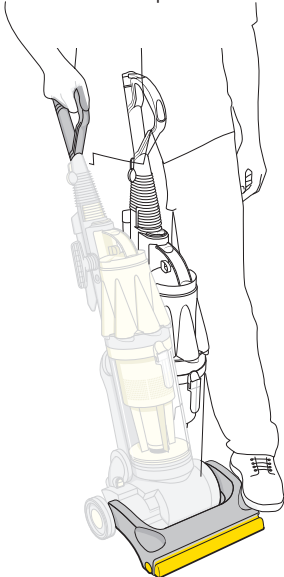
1.4 Assembling DC07

1.5 Using DC07

Plug machine in at an electrical outlet and press the on/off switch.

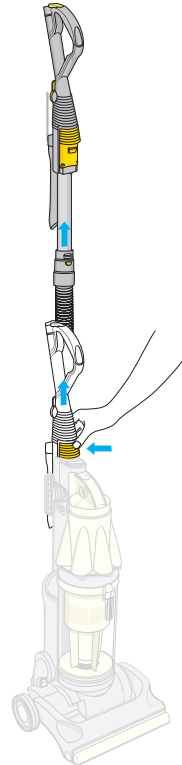


To start vacuuming, push cleaner head down with foot and pull handle towards you.



Ensure the machine is in the upright position before using the tools.

Press the wand release catch to release the wand and hose. Slide back the wand cap to place tools directly onto the wand handle.

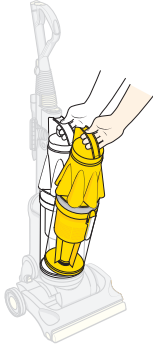


After releasing the wand from the hose, the tools will fit directly onto the hose. The wand can be reversed to fit onto the hose. The tools then fit onto the end of the wand.

1.6 Emptying the Clear bin™

The bin must be emptied when dirt reaches the **MAX** mark.

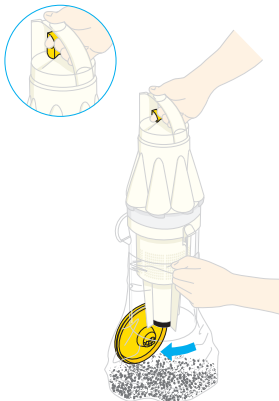
Press the cyclone release catch to remove the bin assembly.



overview

Option 1 (recommended for asthma/allergy sufferers).

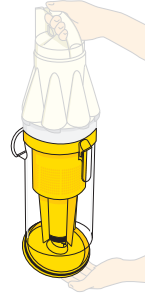
Wipe outside of clear bin with a damp cloth before emptying. Place bin in a bag and pull bin emptying trigger to empty dust into bag. Let dust settle and close bag.



Option 2

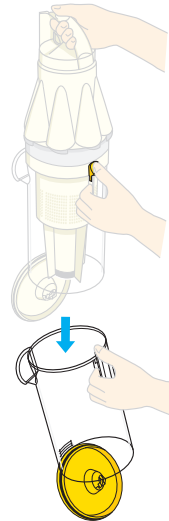
Empty directly into a garbage can.

Ensure bin base is closed securely and replace bin assembly onto machine.



Cleaning the bin and shroud

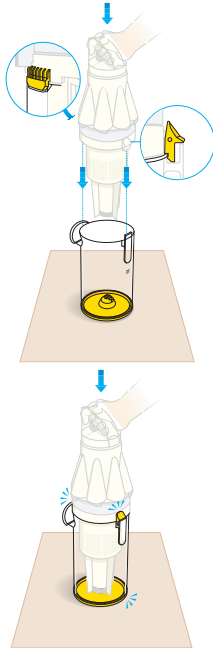
Ensure bin is empty and bin base is open. Press bin release catch to remove the bin.



Clean shroud with cloth or dry brush to remove lint and debris.



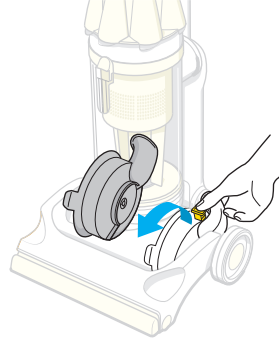
To reassemble the clear bin, place on the floor with the bin base closed. Holding the carry handle, put the cyclone assembly inside the clear bin, line up the front and rear catches and push down to click the catches into place.



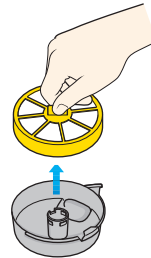
Ensure the clear bin is secure before replacing on the machine.

1.7 Washing the lifetime pre-motor filter

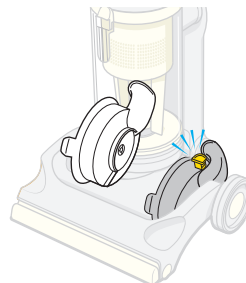
Press filter release catch and remove filter housing from machine.



Remove filter from housing. Wash only the blue foam and yellow cage in cold water until the water runs clear.



Leave in a warm place to dry for approx. 12 hours. Replace filter in housing and click back into machine.

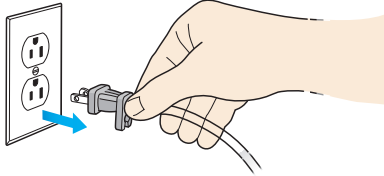


2.1 Electrical safety testing

On completion of all repairs, the product must be tested to ensure that it conforms to safety standards. This is vital to avoid any possibilities of personal injury to the end user.



Caution



Disconnect the machine from the electrical outlet at all times during repair and test. Failure to do so could result in electric shock or personal injury.

1. Plug the machine into an insulation tester, or bond the live and neutral of the plug using the black crocodile clip.
2. Ensure the product switch is in the 'ON' position.
3. Remove the pre-filter housing assembly.
4. Connect the red crocodile clip to a terminal screwdriver. Insert the screwdriver into the motor retainer until there is contact with the motor fan case (Fig.1). Press and hold the test button and note the final reading.
5. Remove the cyclone top/bin assembly.
6. Connect the red probe to the switch housing screw (Fig. 2). Press and hold the test button and note the final reading.

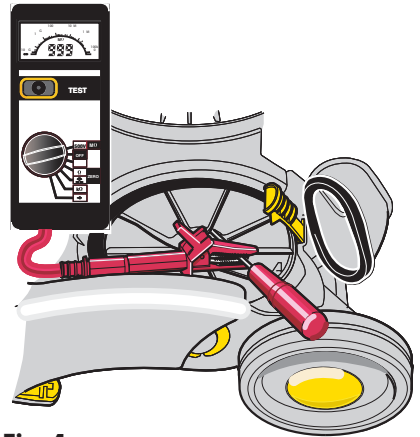


Fig. 1

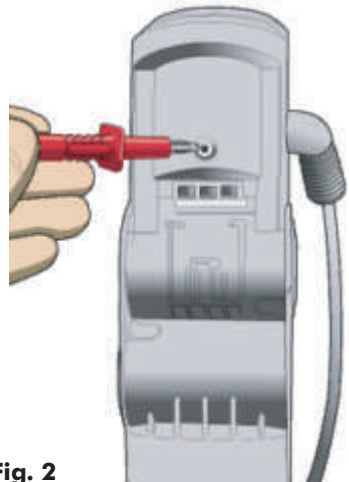
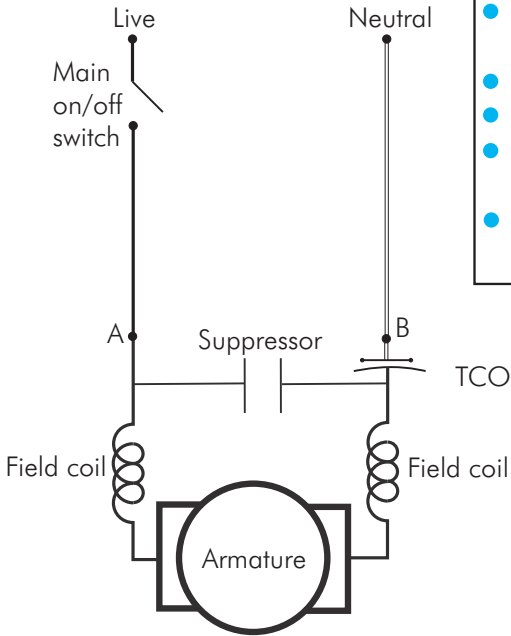


Fig. 2

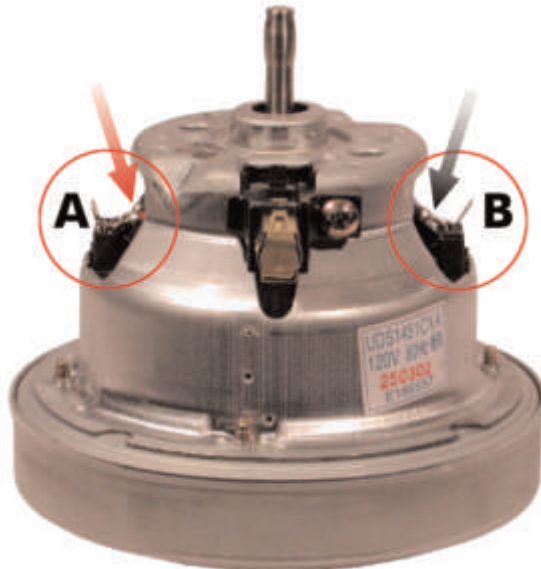
A Dyson minimum insulation resistance of 3 MΩ must be obtained. If this minimum insulation is not reached the product is unsafe. Any unsafe products that are not repaired must be clearly labelled to indicate that the product is unsafe and should not be used. This information must be recorded on the repair sheet.

2.2 Circuit overview

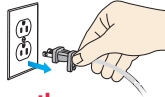


Test resistance

- Live to A = 1Ω max. (switch in the ON position)
- A to B = 3Ω approx.
- Neutral to B = 1Ω max.
- Live to neutral = 3Ω approx. (switch in the ON position).
- Across the mains switch = 1Ω max. (switch in the ON position)



technical data



3.1 General note

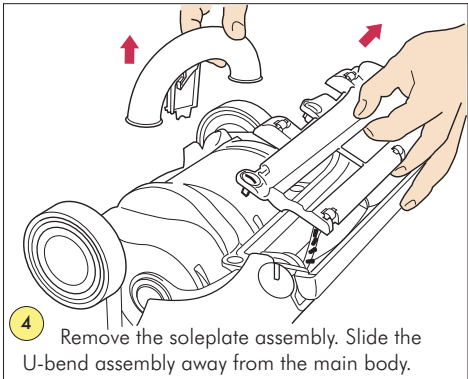
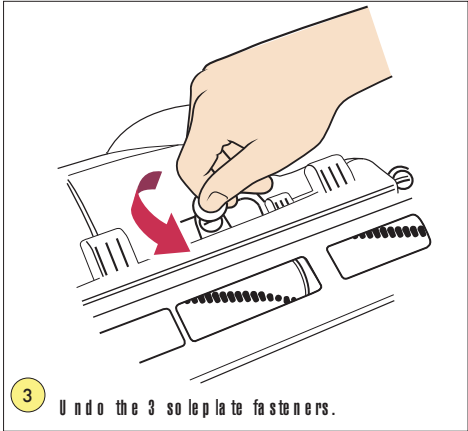
Disconnect the machine from the electrical outlet at all times during repair and test. Failure to do so could result in electric shock or personal injury.

Please ensure that safety goggles are worn at all times whilst servicing Dyson vacuums.

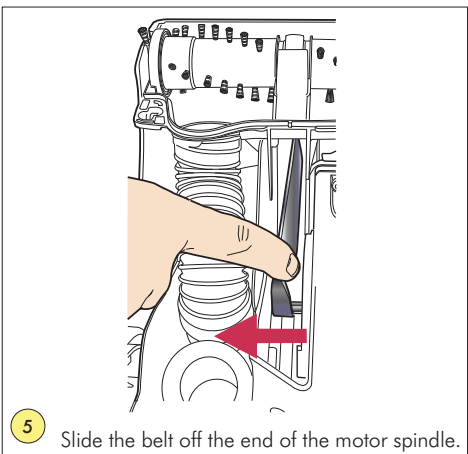
(All references to clutchless variants apply to UK, EURO and ANZ models only).

3.2 Dismantle

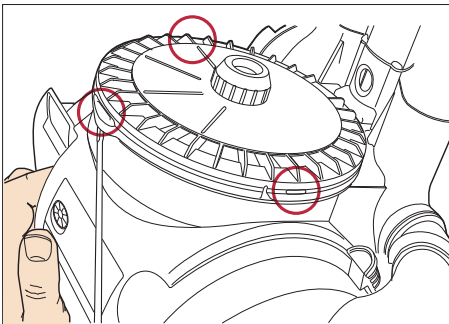
Remove the cyclone and the bin assembly from the main body. Release the wand catch and remove the wand assembly from the hose, then detach the hose from the main body. Remove the pre-filter housing assembly.



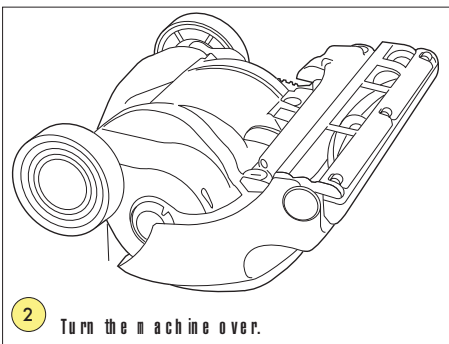
Clutchless variant only

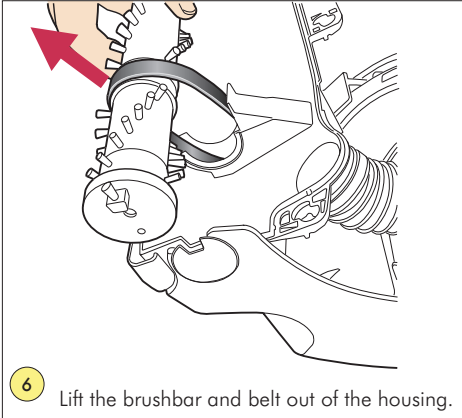


fitting notes

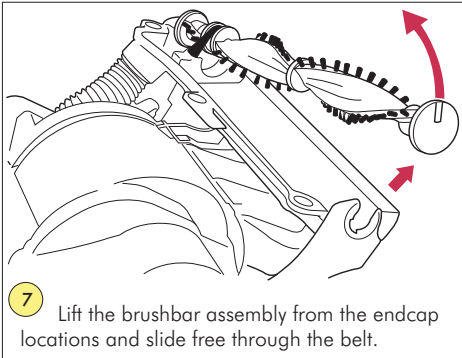


1 Squeeze the release catches to remove the valve pipe assembly. Release the three catches on the post filter lid using a thin, flat bladed screw driver. Remove the post filter lid and post filter.

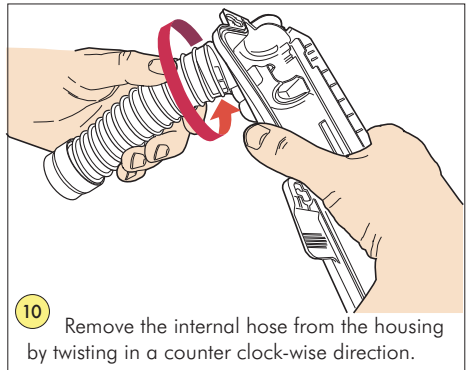
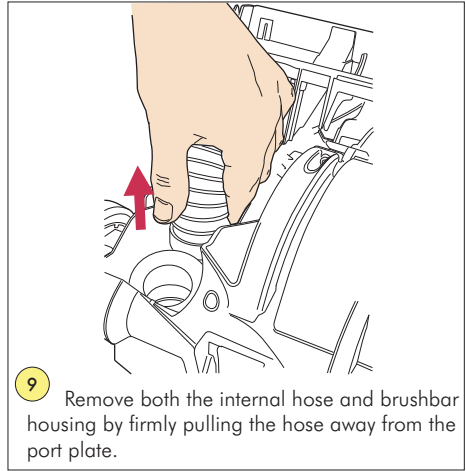
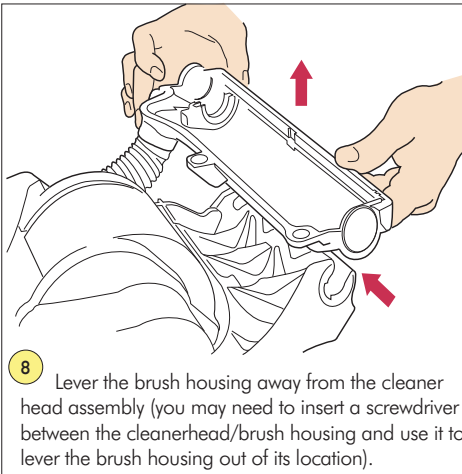




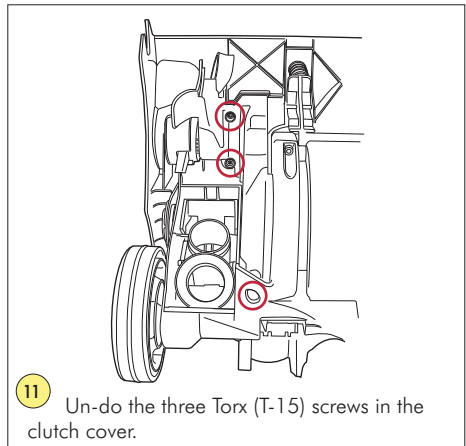
Clutch variants only

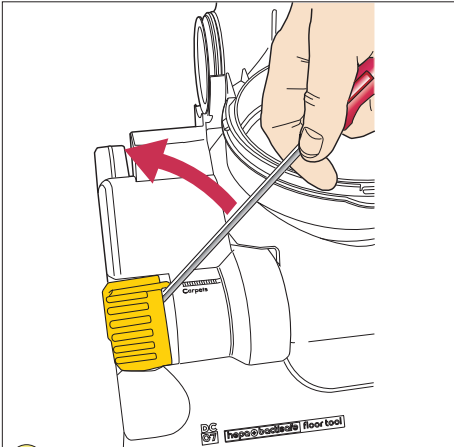
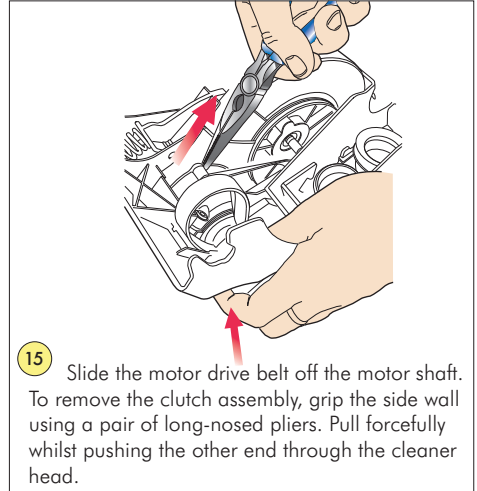
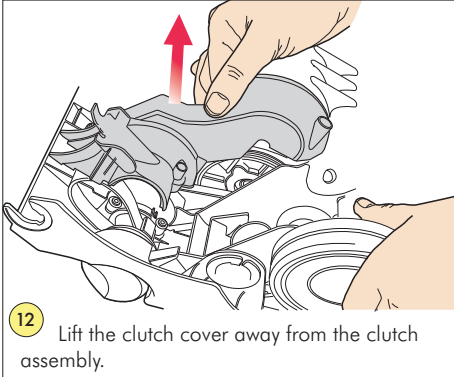


All models

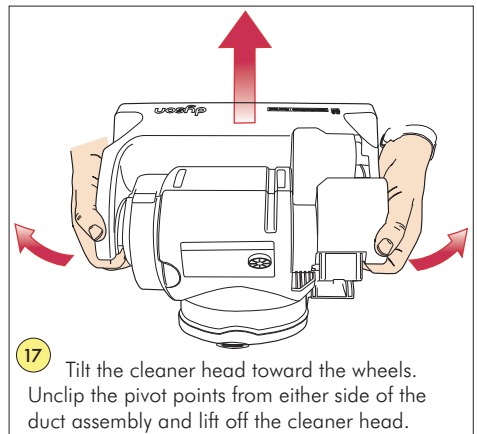
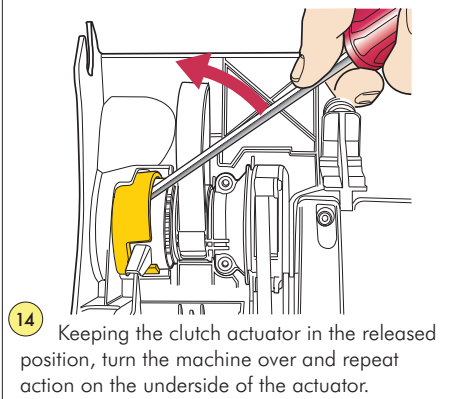
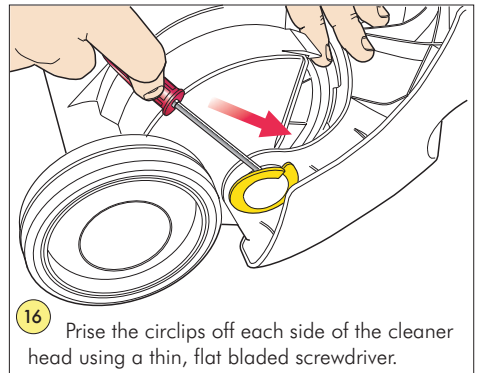


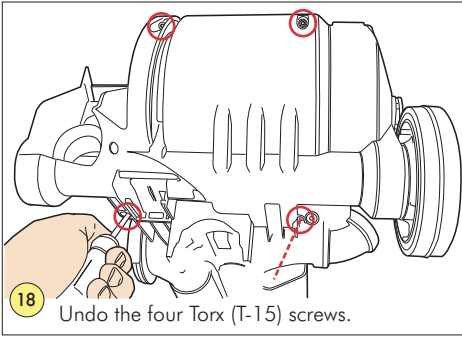
Clutch variants only



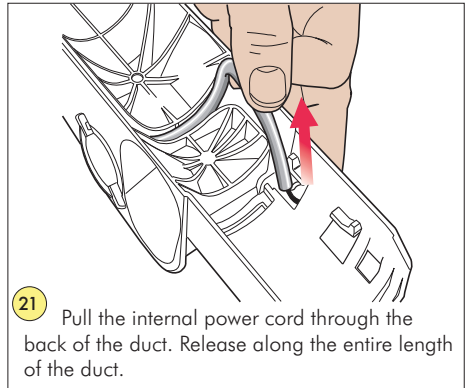


All models

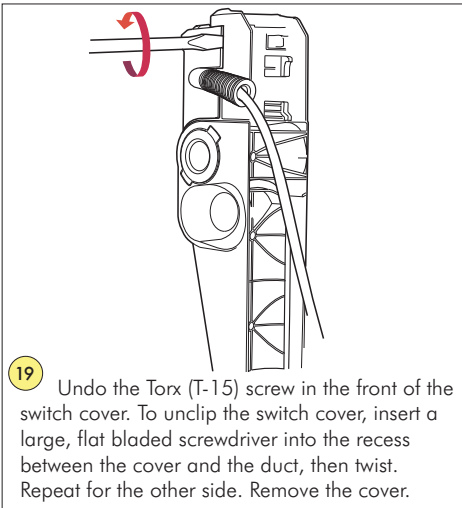




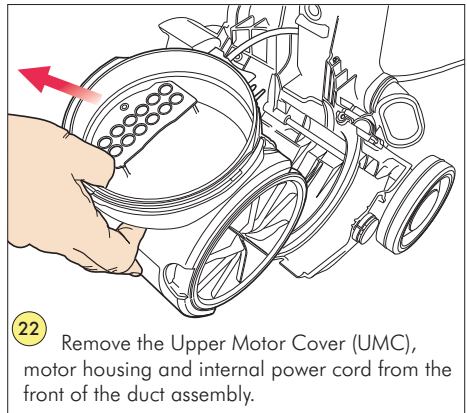
18 Undo the four Torx (T-15) screws.



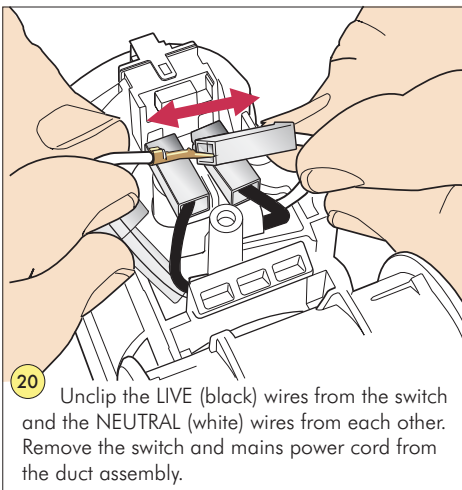
21 Pull the internal power cord through the back of the duct. Release along the entire length of the duct.



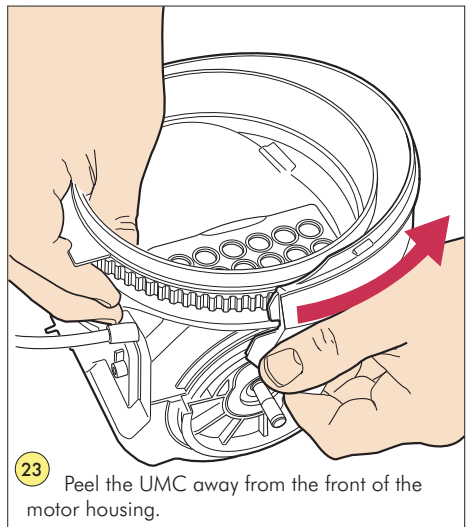
19 Undo the Torx (T-15) screw in the front of the switch cover. To unclip the switch cover, insert a large, flat bladed screwdriver into the recess between the cover and the duct, then twist. Repeat for the other side. Remove the cover.



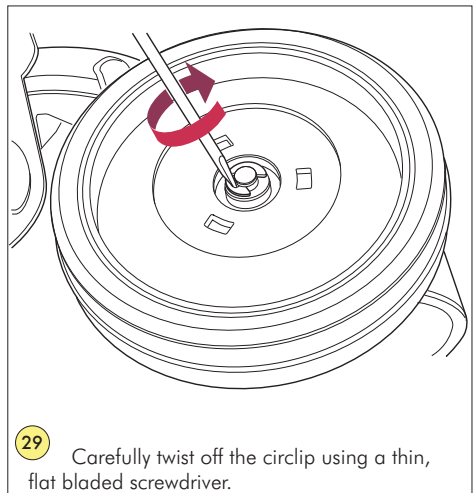
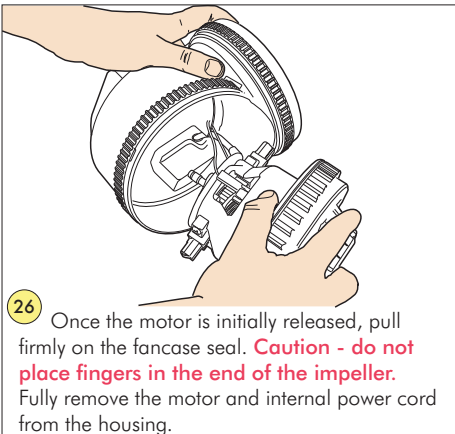
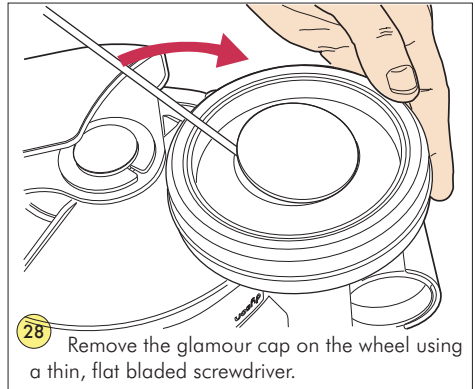
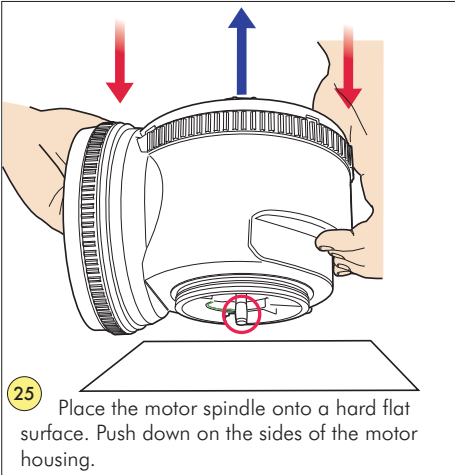
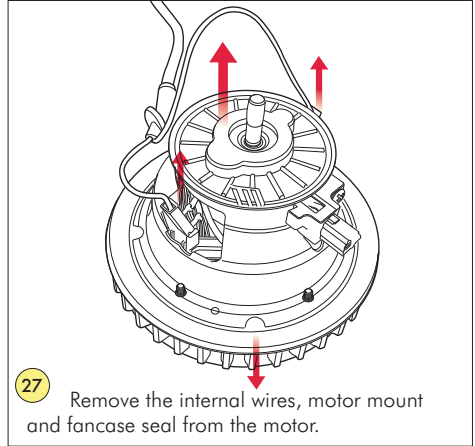
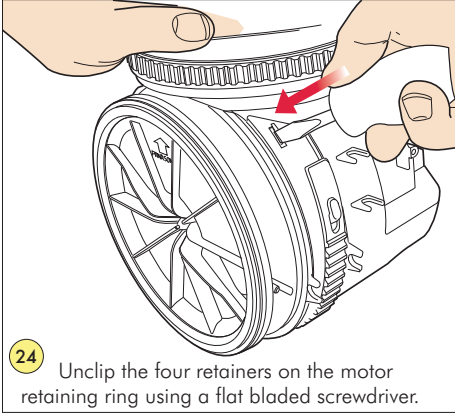
22 Remove the Upper Motor Cover (UMC), motor housing and internal power cord from the front of the duct assembly.

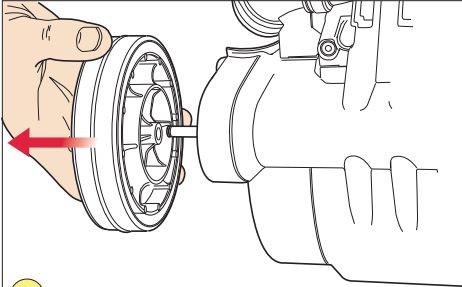


20 Unclip the LIVE (black) wires from the switch and the NEUTRAL (white) wires from each other. Remove the switch and mains power cord from the duct assembly.

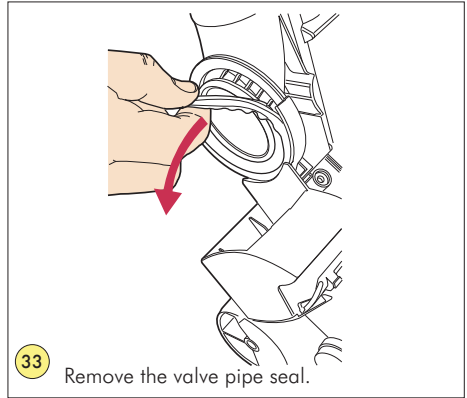


23 Peel the UMC away from the front of the motor housing.

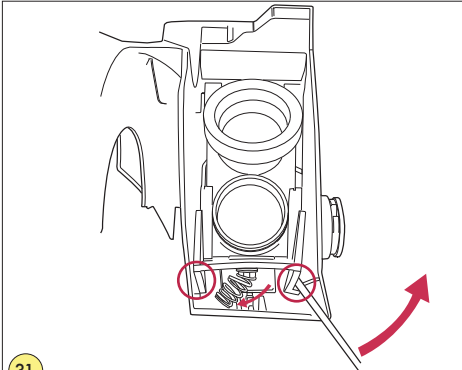




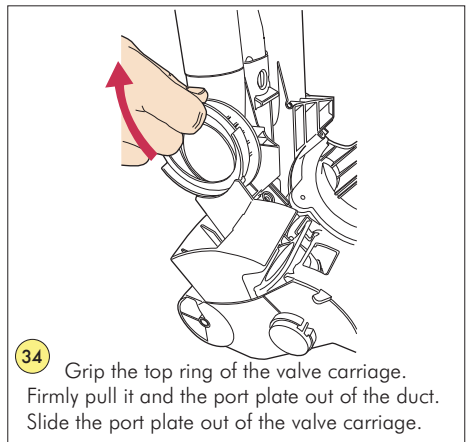
30 Remove the wheel and washer from the end of the axle. The remaining wheel and axle can now be removed from the duct assembly.



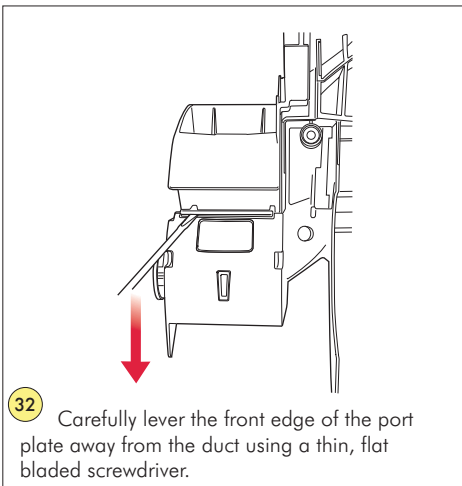
33 Remove the valve pipe seal.



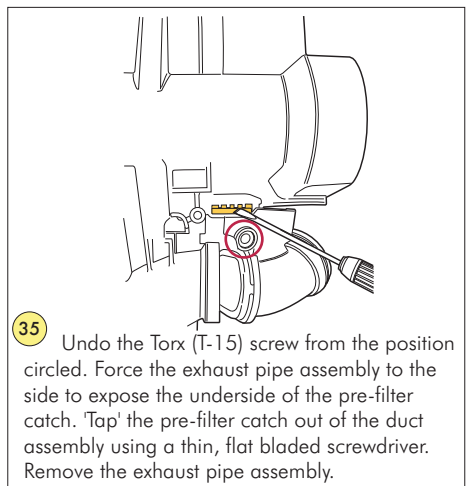
31 Disengage the forward lock spring from the retainer. Prise the forward lock and spring out of the retainers using a thin, flat bladed screwdriver.



34 Grip the top ring of the valve carriage. Firmly pull it and the port plate out of the duct. Slide the port plate out of the valve carriage.

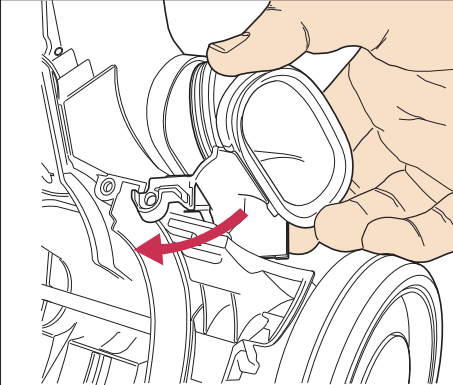


32 Carefully lever the front edge of the port plate away from the duct using a thin, flat bladed screwdriver.

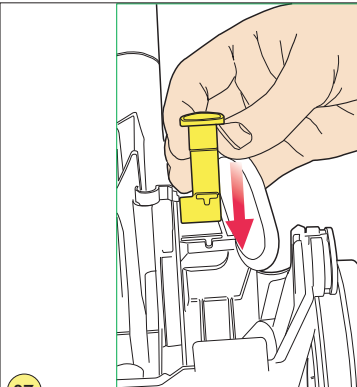


35 Undo the Torx (T-15) screw from the position circled. Force the exhaust pipe assembly to the side to expose the underside of the pre-filter catch. 'Tap' the pre-filter catch out of the duct assembly using a thin, flat bladed screwdriver. Remove the exhaust pipe assembly.

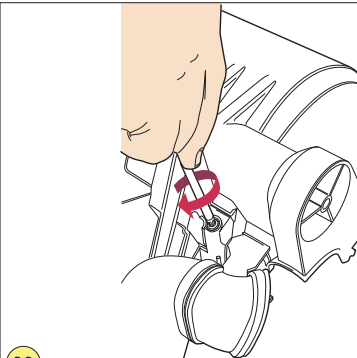
3.3 Assemble



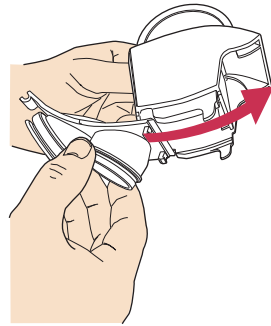
- 36 Slide the exhaust pipe assembly onto the side of the duct.



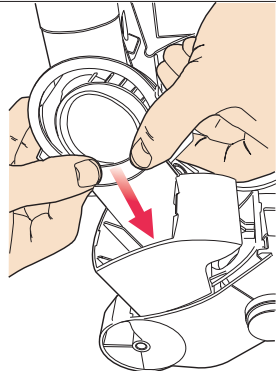
- 37 Refit the pre-filter catch.



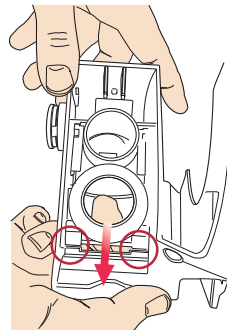
- 38 Re-tighten the Torx (T-15) screw in the rear of the duct.



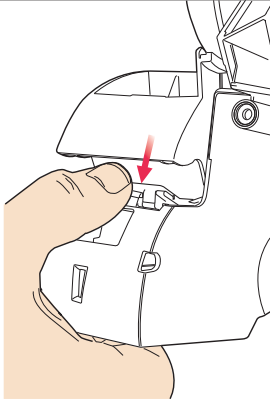
- 39 Slide the port plate into the valve carriage in the direction shown.



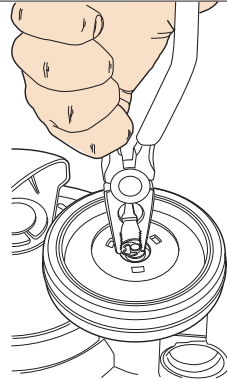
- 40 Position the valve carriage and port plate into the valve carriage housing. Push both parts down firmly, until the top ring clips over the locator on the side of the duct.



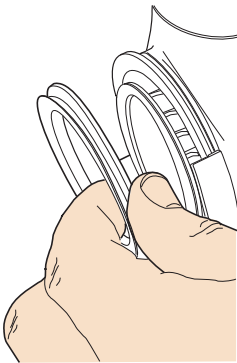
- 41 Turn the machine over and locate the back of the port plate into the retaining points on the duct.



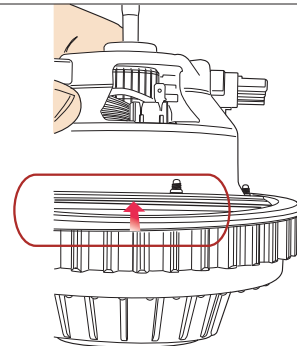
42 Carefully clip the front edge of the port plate into the duct.



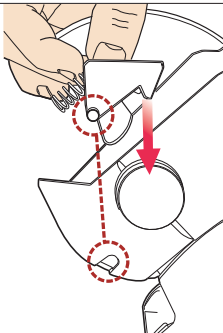
45 Slide the axle into the duct. Refit the washers, wheels, circlips and glamour caps.



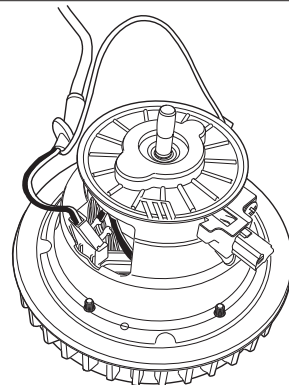
43 Refit the valve pipe seal ensuring the flat surface sits against the side of the duct.



46 Refit the fancase seal ensuring it fits securely over the lip on the top edge of the motor fancase.



44 Turn the machine over. Slide the forward lock and spring into the retainers in the front of the duct.



47 Reconnect the internal power cord to the motor. Refit the motor mount.

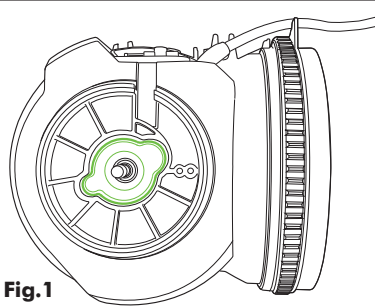
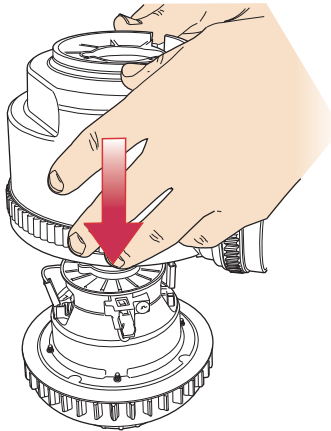
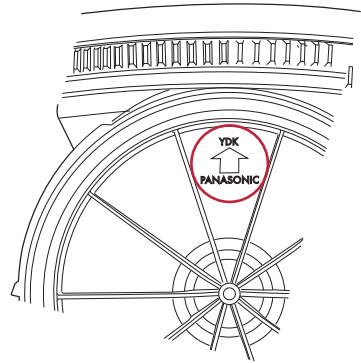


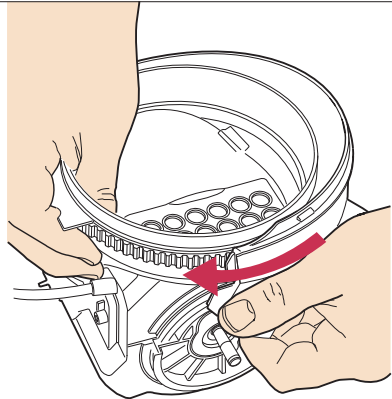
Fig. 1



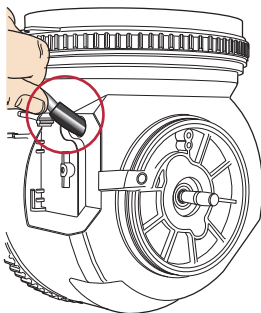
- 48 Feed the end of the internal cord through the hole on the inside of the motor housing. Position the motor housing over the motor (Fig. 1) ensuring it is aligned with the motor mount and the internal wires are positioned under the motor brushes. Lower the housing onto the motor.



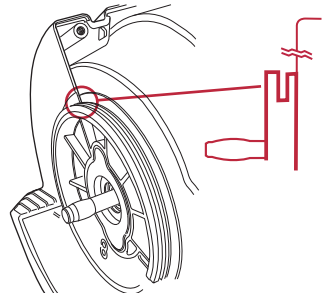
- 50 Position the motor retaining ring on to the side of the motor housing (arrow pointing to the top). Firmly press into place.



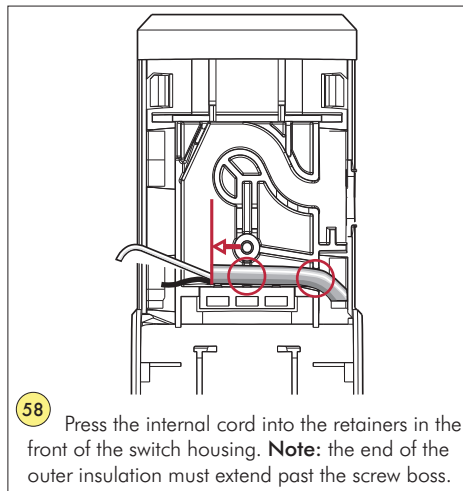
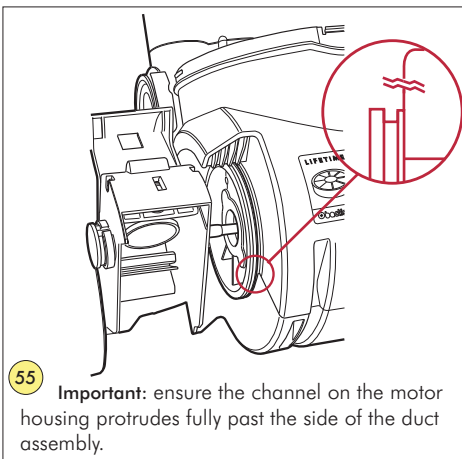
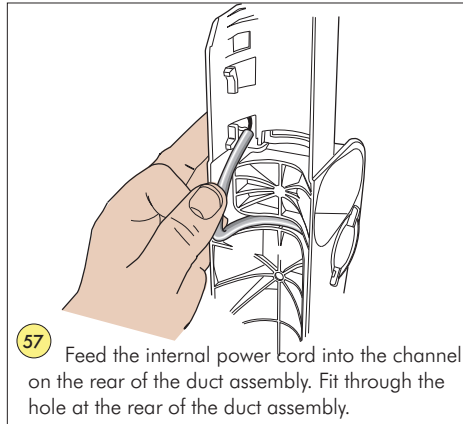
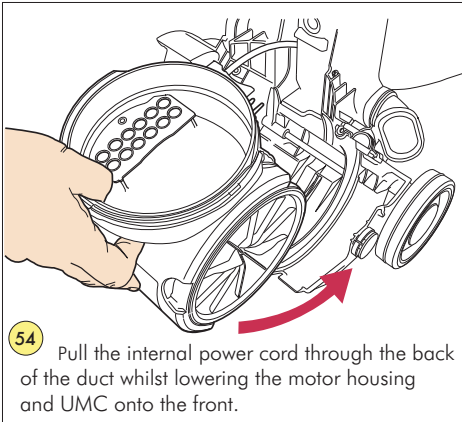
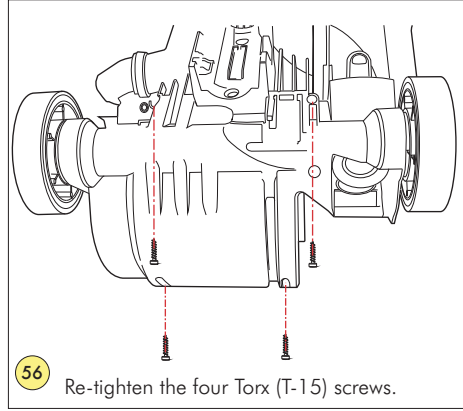
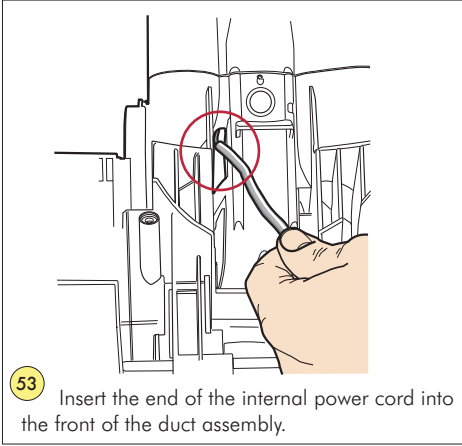
- 51 Refit the UMC onto the front of the motor housing.

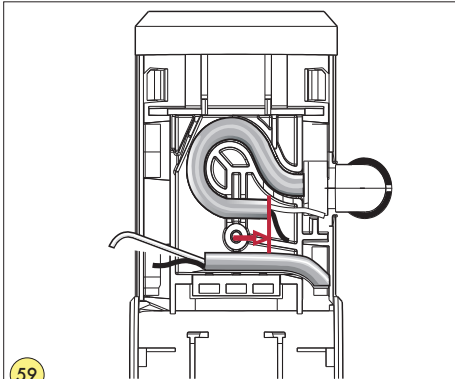


- 49 **Important:** ensure the internal cord grommet is protruding fully from the rear of the motor housing.

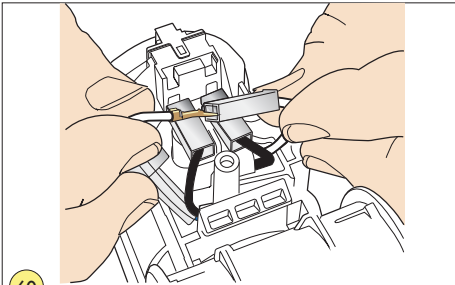


- 52 **Important:** ensure the channel on the side of the motor housing is protruding past the side of the UMC.

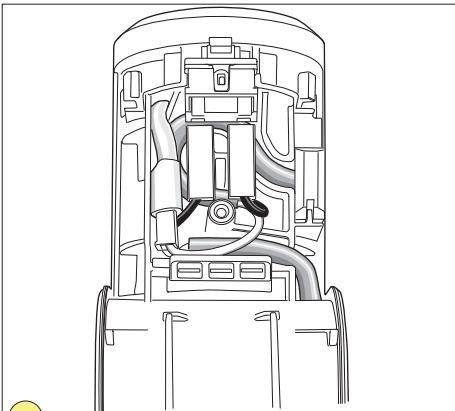




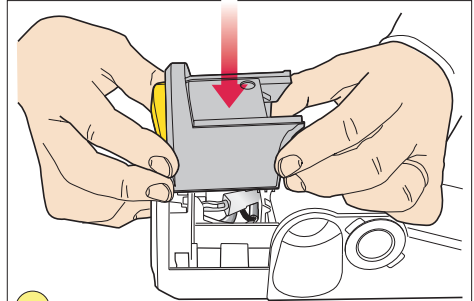
- 59 Fit the main power cord into the switch housing, ensuring the end of the outer insulation extends past the screw boss. Slide the cord protector into the side of the switch housing.



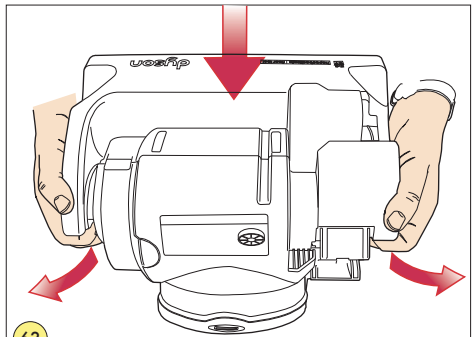
- 60 Connect the two LIVE (black) wires to the switch. Slide the switch into the housing. Connect the two NEUTRAL (white) wires together.



- 61 Tuck the NEUTRAL wires into the side of housing.

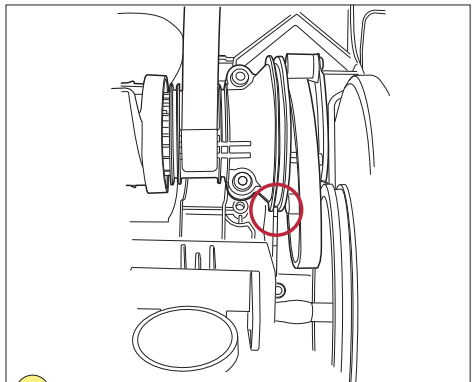


- 62 Carefully slide the switch cover onto the switch housing. Re-tighten the Torx (T-15) screw.

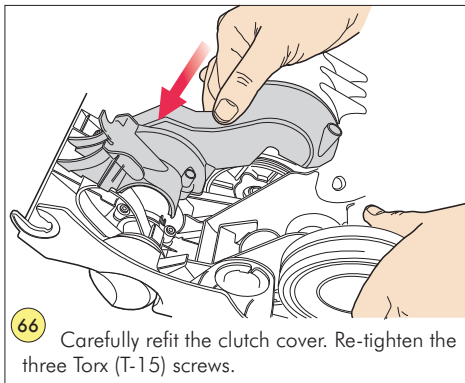
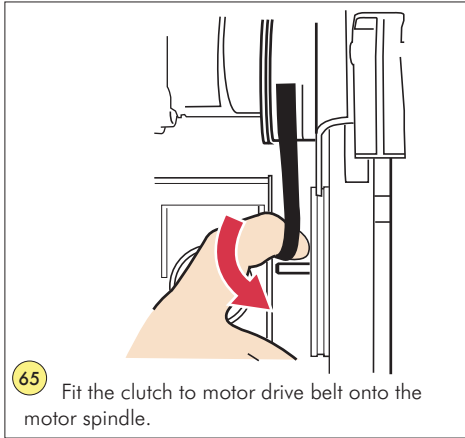


- 63 Align the cleaner head with the channel on the side of the motor housing. Splay the sides of the cleaner over the pivot points on the duct an clip into place. Refit the cleaner head circlips.

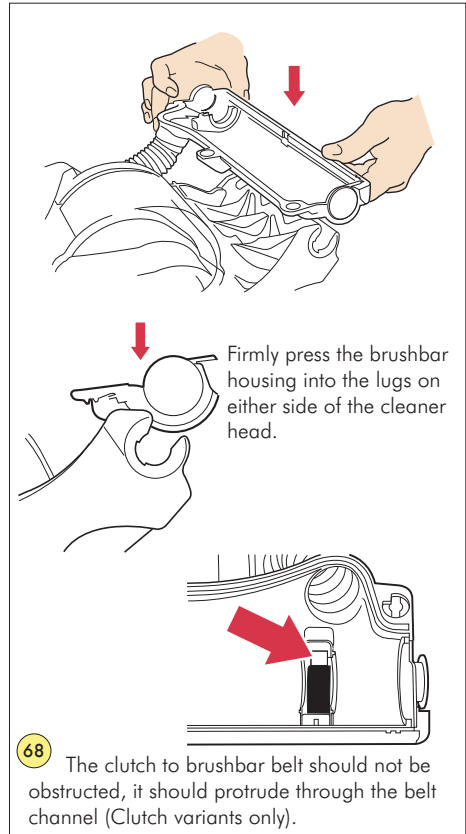
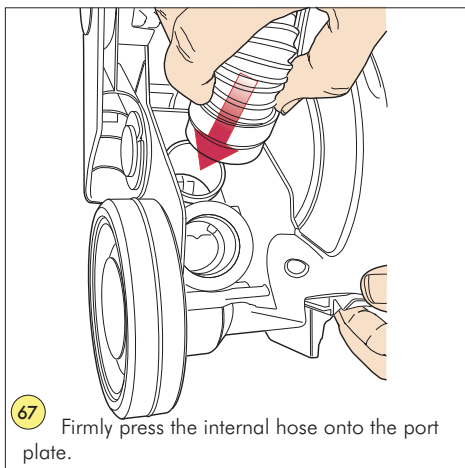
Clutch variants only



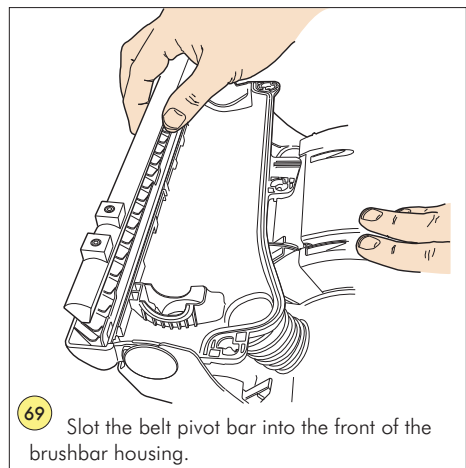
- 64 Place the rear of the clutch assembly on to the cleaner head where circled. Firmly press into position. Refit the clutch actuator.

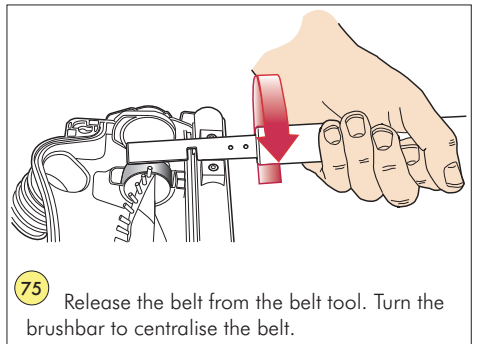
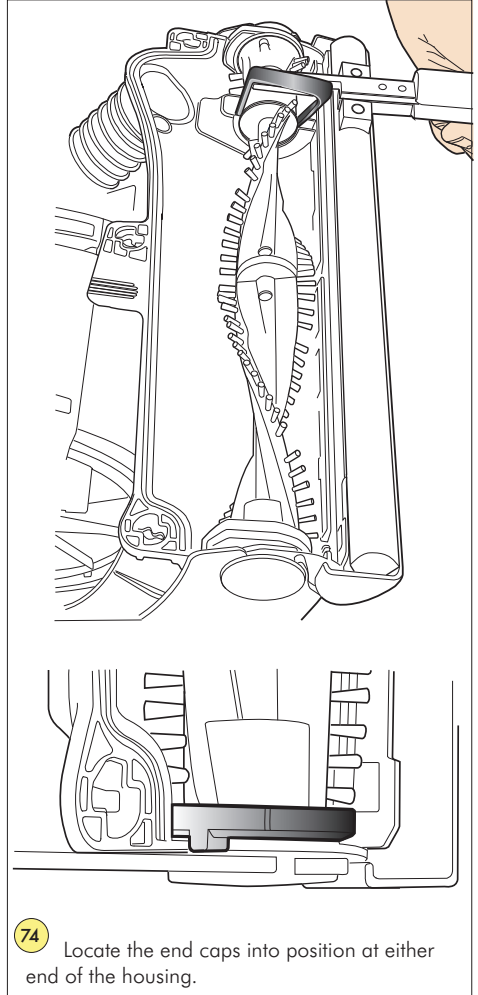
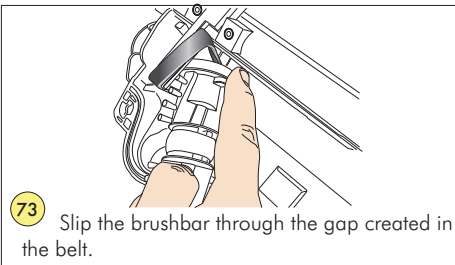
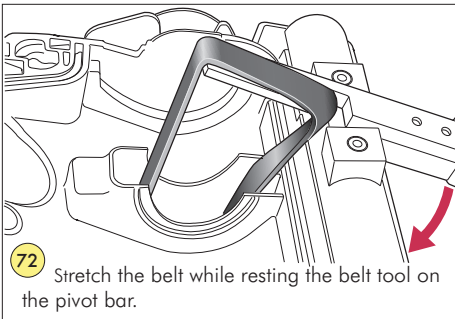
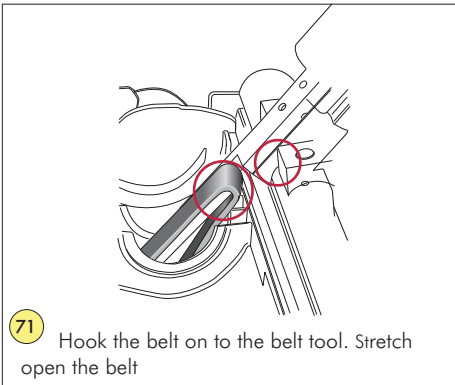
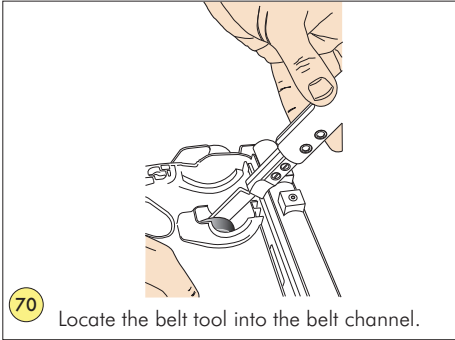


All models



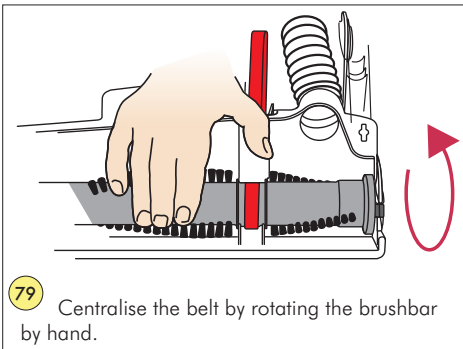
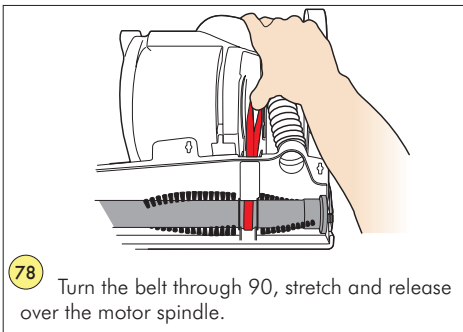
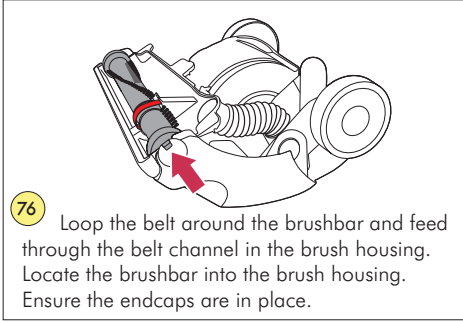
Fitting the belt (clutch variants)



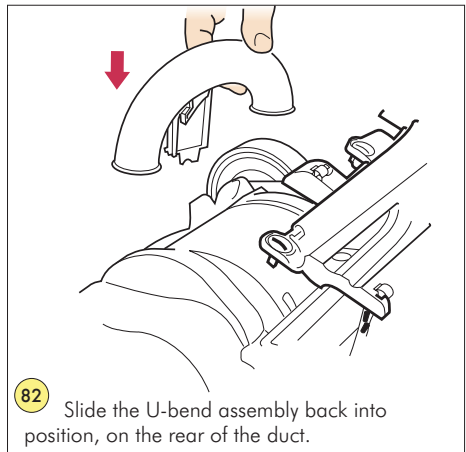
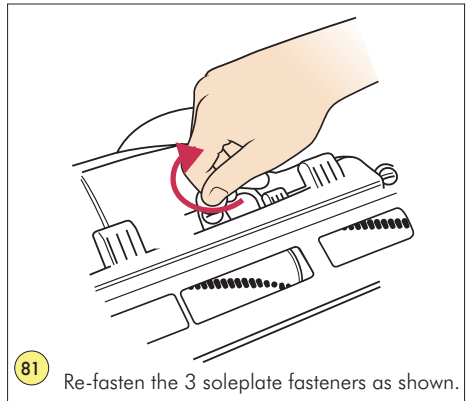
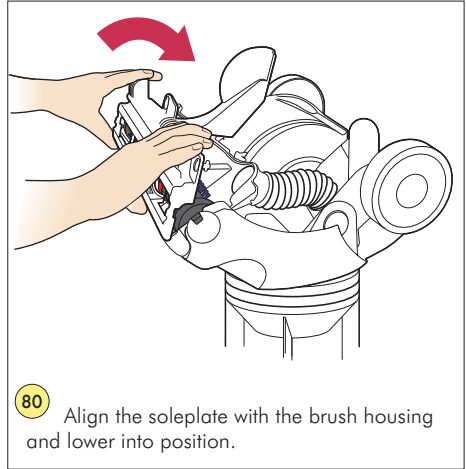


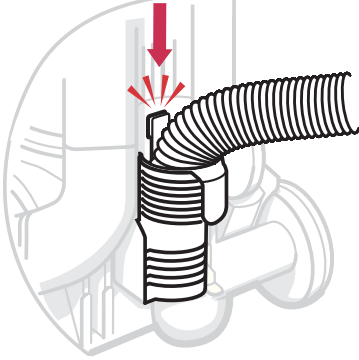
fitting notes

Fitting the belt (clutchless variant)

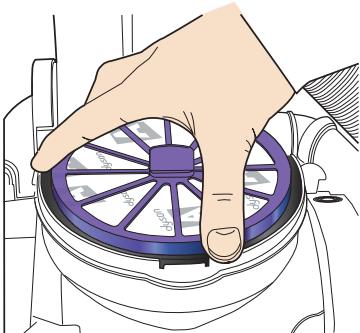


All models

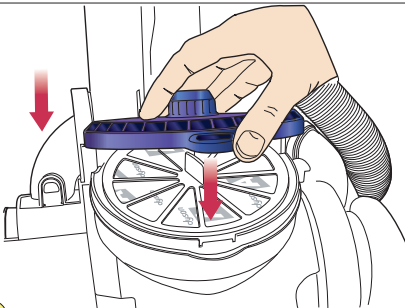




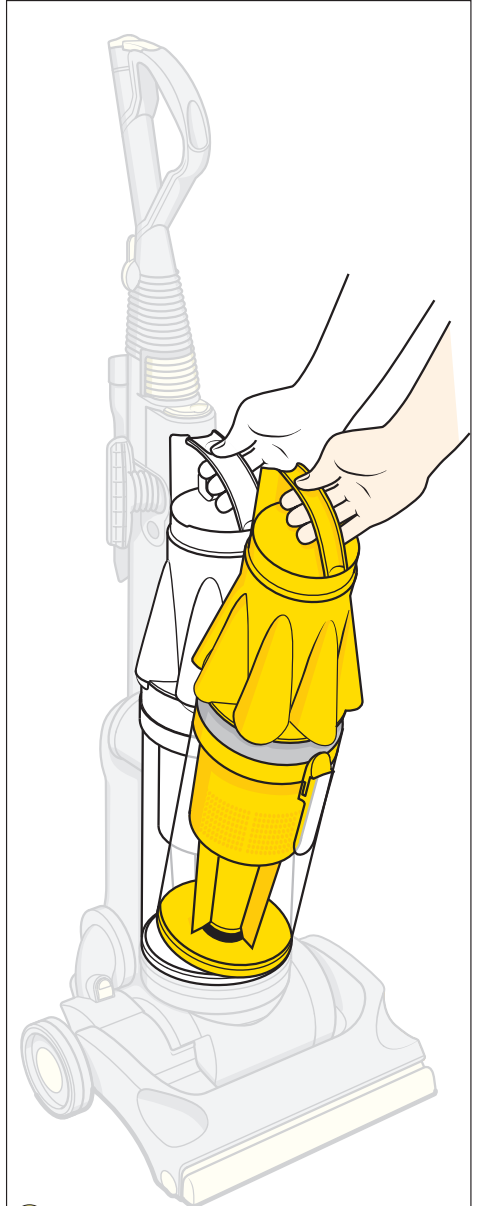
- 83 Slide the hose assembly into the duct ensuring that it 'clicks' into location.



- 84 Refit the post filter into the top of motor housing.



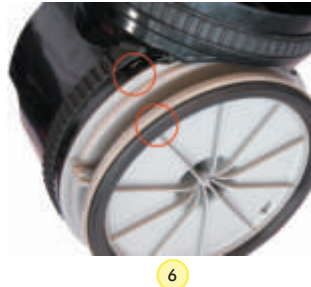
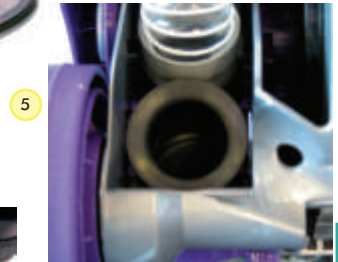
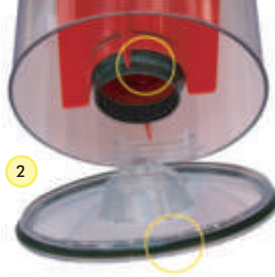
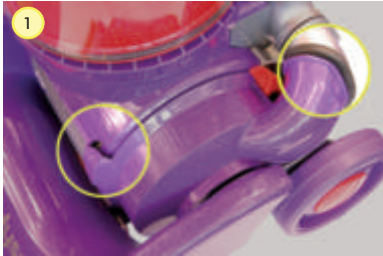
- 85 Refit the post filter lid ensuring that the locator fits underneath the retainer on the rear, and the release catches clip into each of the three retainers. Refit the valve pipe assembly onto the side of the duct.



- 86 Slide the wand assembly into the hose assembly and clip into the duct. Refit the cyclone top/bin assembly onto the post filter lid. Refit the pre-filter into the pre-filter housing. Refit the pre-filter housing onto the side of the duct.

Symptom: Loss of suction/pick up

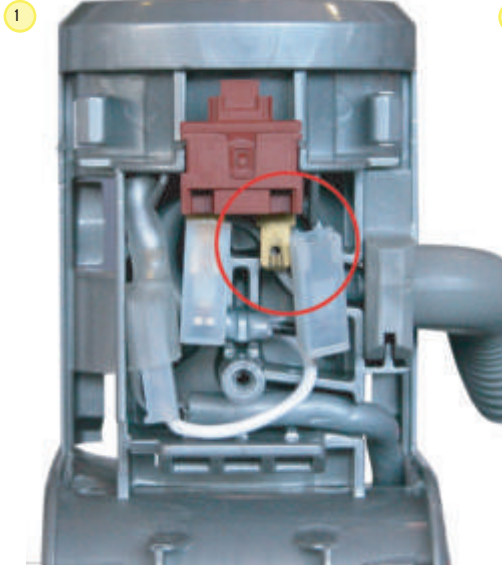
Possible cause	Image No.	Action
Displaced/missing seals	1	Check pre-filter housing and exhaust pre-filter seal are fitted correctly
Blocked pre-filter	2	Inspect pre-filter for blockages. If the filter is blocked with large debris, check Fine Dust Collector (FDC) seals and bin base seal
Displaced/missing seals	3	Check exhaust, entry and bin seal are fitted correctly
Airway blockage	4	Check valve carriage and duct for blockages. Check valve carriage seal is fitted correctly
Displaced/missing seals	5	Check port plate seal is fitted correctly
Airway blockage	6	Check U-bend, hose and wand handle for blockages
		Check internal hose and brush housing for blockages
Displaced/missing seals	7	Check pre-filter seal and motor retaining ring are fitted correctly
		Check if customer is using clutch assembly in the 'Carpets' position (clutch variants only)
Brushbar not rotating	8	Check clutch and belt
Motor failure	9	Check motor



diagnostic

Symptom : No power

Possible cause	Image No.	Action
Open circuit across mains power cord	0	Visual check of mains cord and plug. Test resistance, (1Ω max.)
Switch failure	1	Check connections on switch. Test actuation and resistance, (1Ω max.)
Open circuit across internal power cord	0	Visual check of internal cord. Test resistance, (1Ω max.)
Poor connection to motor	2	Check connections to motor. Test resistance, (1Ω max.)
Open circuit across motor	3	Test resistance, (3Ω approx.) Check motor (terminal clips, soldered connections, brushes, windings, thermal cut-out)



diagnostic

Symptom: Continual Ratchet Noise

Possible cause	Image No.	Action
Debris build-up	1	Check for any debris build-up around brushbar
	2	Check for debris build-up in brushbar endcaps
Clutch failure	3	Change clutch
Jammed brushbar		Check fit of brushbar (end-caps seated correctly, belt trapped under soleplate)
		Check for bearing failure-does brushbar turn?

Symptom: Noisy

Possible cause	Image No.	Action
Air leakage		Check all seals and airways-see 'Loss of suction/pick up' page
Brushbar noise	1	Check brushbar-warped, wrapped in threads
Continual ratcheting		See section above
Motor failure	4	Check motor: loose impeller/nut/case, foreign objects in impeller, motor failure etc
Large object in bin		Empty bin

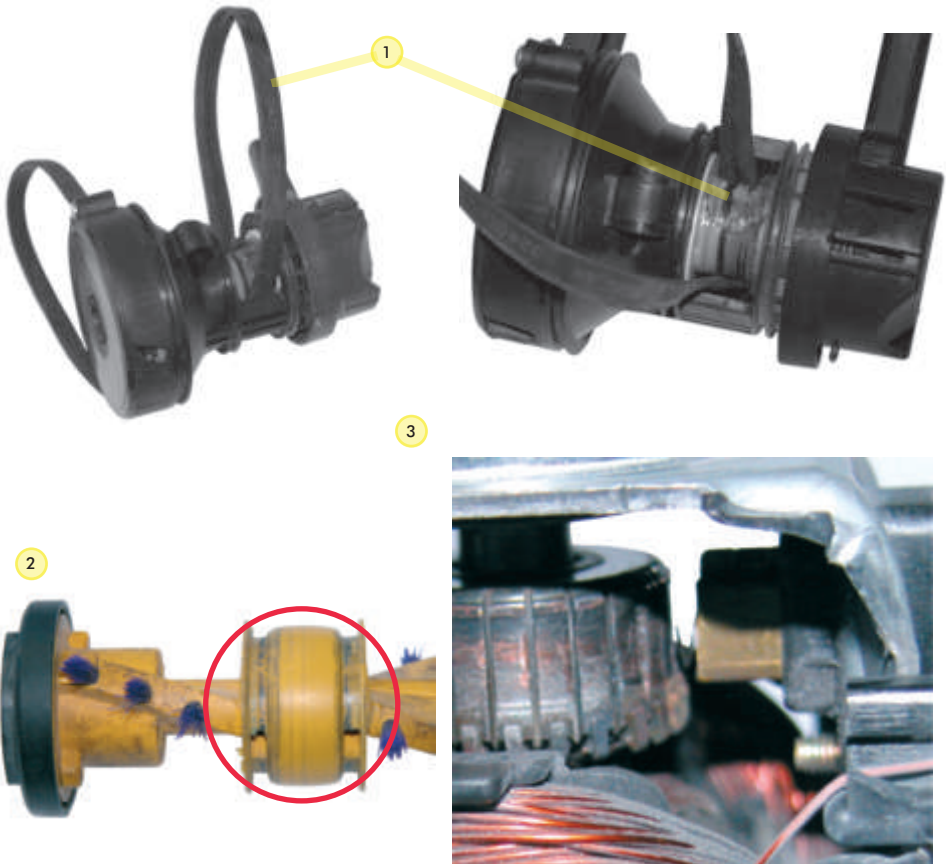


Symptom: Burning smell

Possible cause	Image No.	Action
Broken/worn belt	1	Check belt (worn, snapped, trapped under soleplate, faulty clutch)
Worn brushbar	2	Check brushbar for obstructions, wear, seized end-caps, incorrect fit
Motor failure	3	Check post filter for carbon build up. Check motor (commutator, windings, brushes, carbon build-up)

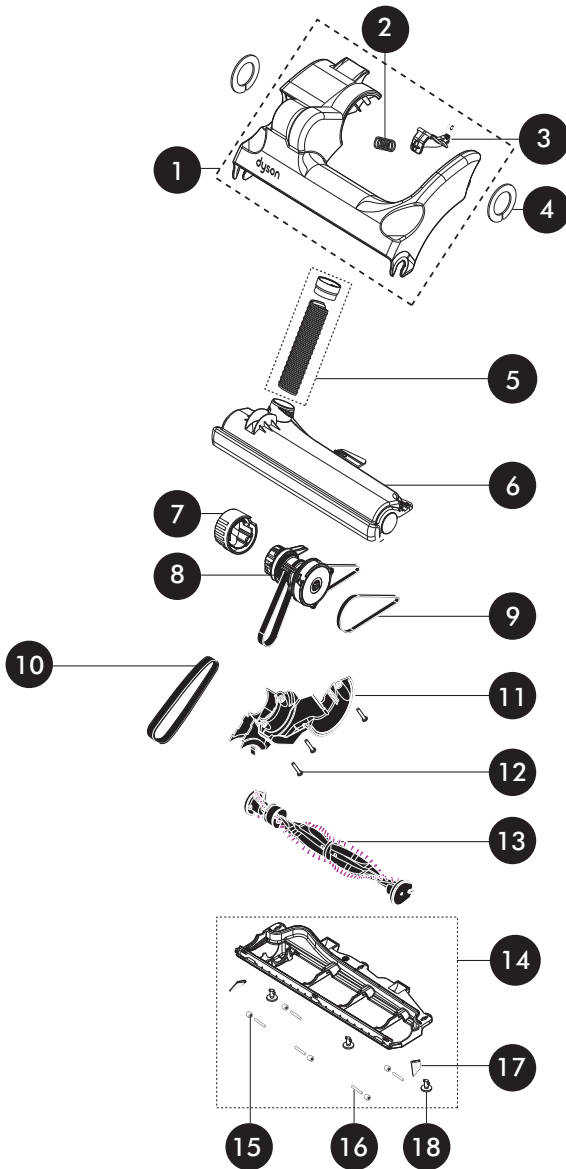
Symptom: Thermal cut-out activating

Possible cause	Image No.	Action
Restricted airflow	1	Check for blockages-see 'Loss of suction/pick up' page
Motor failure	3	Check motor (commutator, windings, carbon build-up, excess heat)



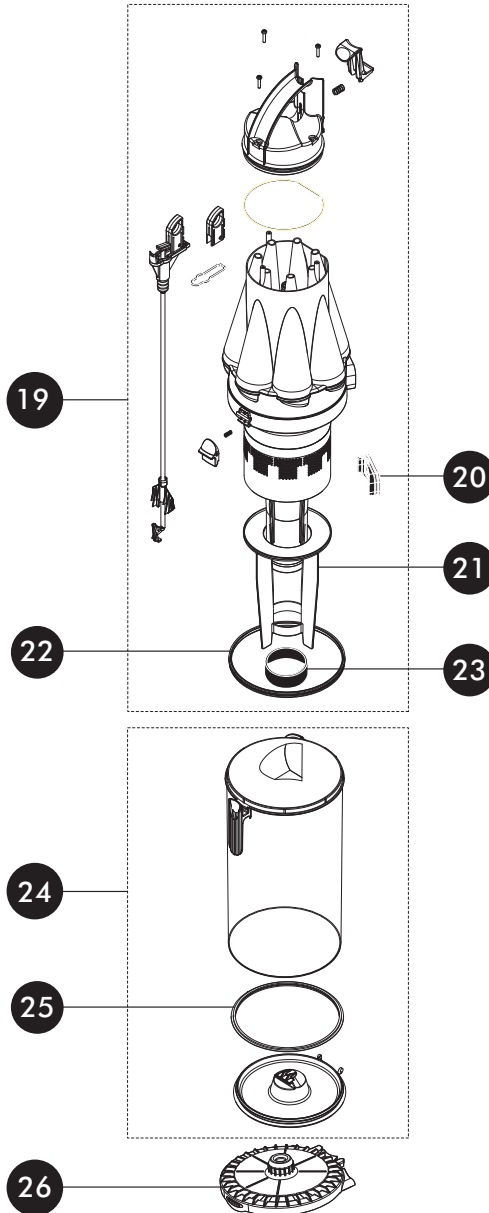
diagnostic

5.1 Cleaner head assembly



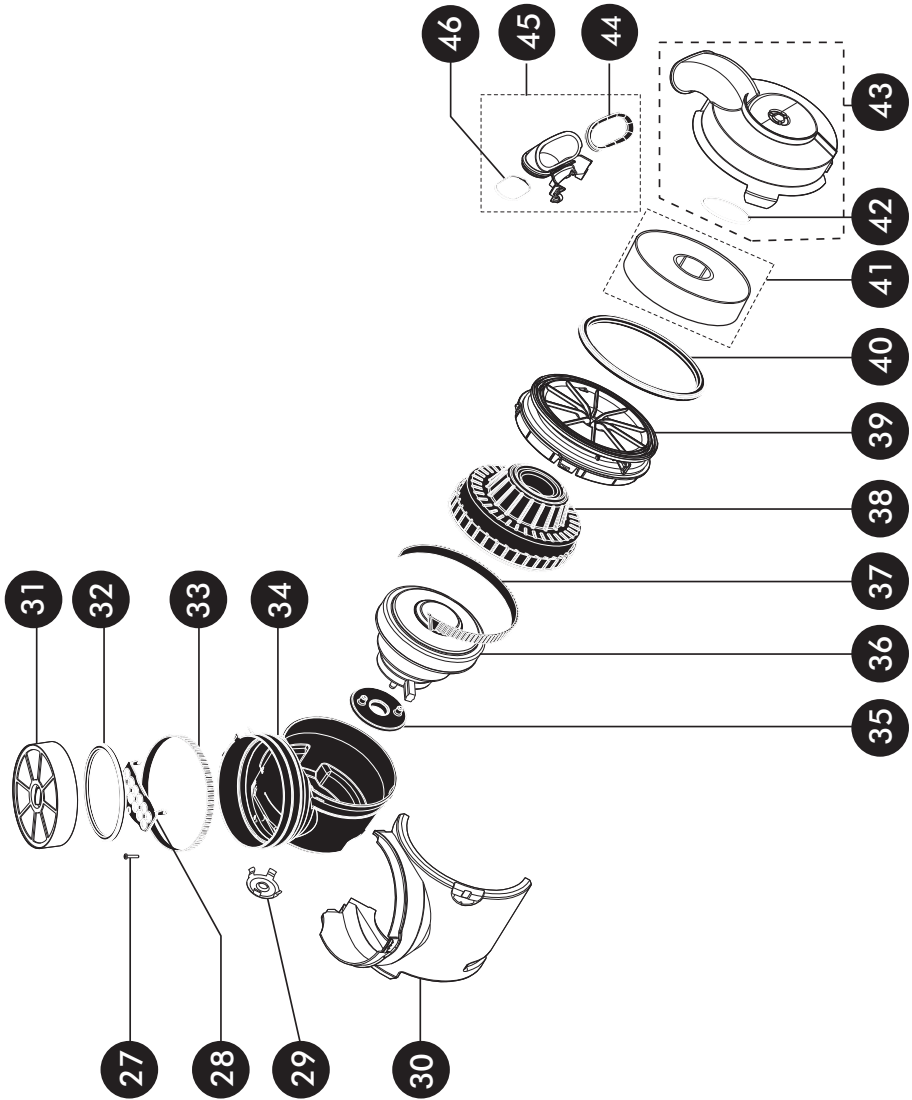
ITEM	DESCRIPTION
1	CLEANER HEAD ASSEMBLY
2	UPRIGHT LOCK SPRING
3	UPRIGHT LOCK
4	CLEANER HEAD PIVOT CIRCLIPS
5	INTERNAL HOSE ASSEMBLY
6	BRUSH HOUSING
7	OUTER CLUTCH ACTUATOR
8	CLUTCH ASSEMBLY
9	CLUTCH TO MOTOR BELT
10	BELT
11	CLUTCH COVER ASSEMBLY
12	TORX SCREWS
13	BRUSH BAR ASSEMBLY
14	SOLEPLATE ASSEMBLY
15	SOLEPLATE WHEEL
16	SOLEPLATE AXLE
17	SOLEPLATE BRISTLES
18	SOLEPLATE FASTENERS

5.2 Cyclone top and bin assembly



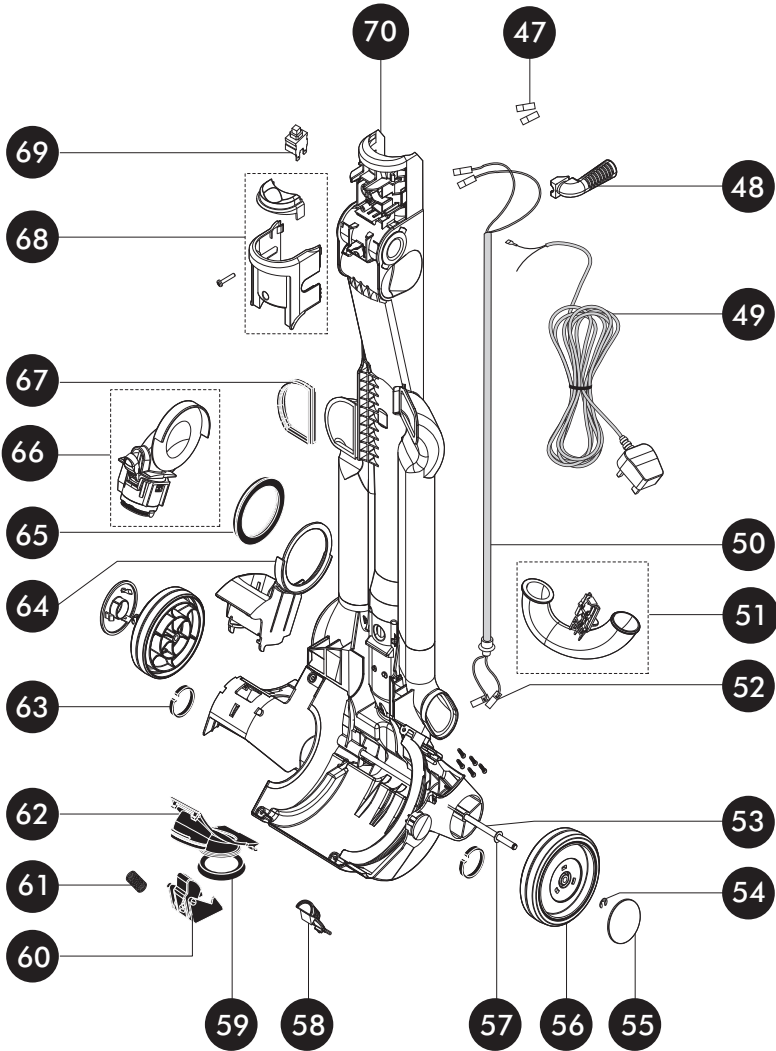
ITEM	DESCRIPTION
19	CYCLONE ASSEMBLY
20	EXHAUST SEAL
21	BIN BAFFLE
22	BIN SEAL
23	FINE DUST COLLECTOR SEAL
24	BIN ASSEMBLY
25	BIN BASE SEAL
26	POST FILTER LID

5.3 Motor housing



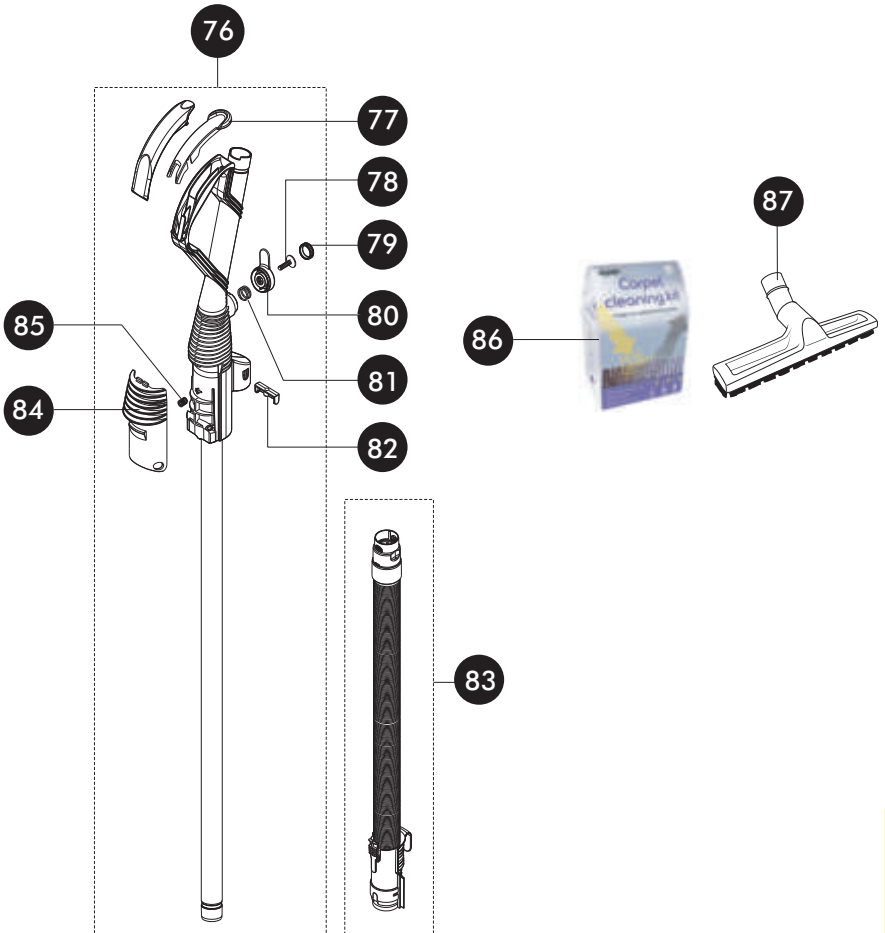
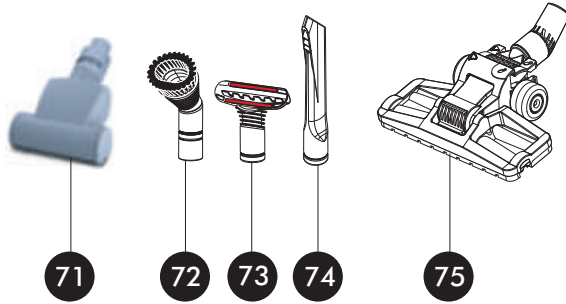
ITEM	DESCRIPTION
27	DIFFUSER SCREW
28	DIFFUSER
29	BELT GUARD
30	UPPER MOTOR COVER
31	HEPA POST FILTER
32	HEPA FILTER SEAL
33	TOP HOUSING MOUNT
34	MOTOR HOUSING
35	PANASONIC MOTOR BEARING MOUNT
36	PANASONIC MOTOR
37	PANASONIC MOTOR HOUSING MOUNT
38	PANASONIC MOTOR FANCASE SEAL
39	MOTOR RETAINER
40	FILTER SEAL
41	PRE - FILTER ASSEMBLY
42	PRE - FILTER HOUSING SEAL
43	PRE - FILTER HOUSING ASSEMBLY
44	EXHAUST PRE-FILTER SEAL
45	EXHAUST PIPE ASSEMBLY
46	EXHAUST PIPE SEAL

5.4 Main body



ITEM	DESCRIPTION
47	SPADE CONNECTOR BOOT
48	CABLE PROTECTOR
49	PLUG POWER CORD
50	INTERNAL POWER CORD
51	U BEND ASSEMBLY
52	TERMINAL BOOT
53	WHEEL AXLE
54	WHEEL E-CLIPS
55	GLAMOUR CAP
56	REAR WHEEL
57	WHEEL WASHER
58	PRE-FILTER CATCH
59	PORT PLATE SEAL
60	FORWARD LOCK
61	FORWARD LOCK SPRING
62	PORT PLATE
63	BEARING CLIPS
64	VALVE CARRIAGE
65	VALVE CARRIAGE SEAL
66	VALVE PIPE ASSEMBLY
67	ENTRY SEAL
68	SWITCH PLATE ASSEMBLY
69	SWITCH
70	DUCT/LOWER MOTOR COVER ASSEMBLY

5.5 Hose wandhandle & accessories



ITEM	DESCRIPTION
71	MINI TURBO TOOL
72	BRUSH TOOL
73	STAIR TOOL
74	CREVICE TOOL
75	FLOOR TOOL
76	WAND HANDLE ASSEMBLY
77	WAND CAP
78	CABLE WINDER SCREW
79	CABLE WINDER CAP
80	CABLE WINDER
81	CABLE WINDER SPRING
82	WAND HANDLE TOOL CLIP
83	HOSE ASSEMBLY
84	WAND CATCH
85	WAND RELEASE CATCH SPRING
86	CLEANING KIT
87	HARD FLOOR TOOL