AM09

dyson air multiplier

Service manual

SMPR-EN-AM09-03/25-V1

Dyson Service Manual - Version Control

Version History Table

Original launch document version number: SMPR-EN-AM09-03/25-V1
Publication Date: 03/2025

Revised version number	Detailed content of change	Change Author	Publication Date

These repair instructions are intended for professional repairers of local space heaters only. Dyson accepts no liability for any incorrect use of these instructions.

This manual covers the full disassembly and reassembly of the following models:

AM09

Model identifier can be found on the rating plate, that is on the base of the product

Contents

Electrical safety testing

All repairs should be tested in accordance with applicable safety standards and regulations.
Dyson authorised repairers should also follow TSI 0432.

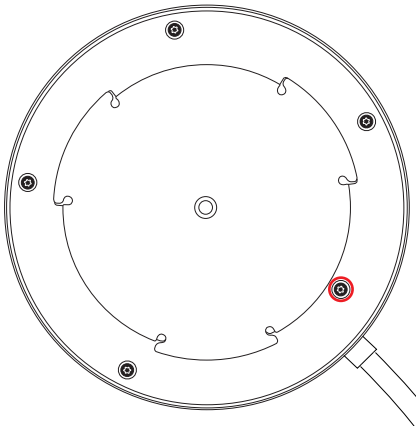
Ensure at all times during the repair and testing of products that owners, children, animals and yourself are not exposed to any Live electrical supply.

The following MANDATORY tests must be adhered to when carrying out a service activity to a Class 2 product:

1. Visual inspection
You must ensure that a full visual inspection of the entire product is completed prior to the service activity.

2. Insulation test
An insulation test/s must be performed upon completion of an 'invasive' service activity.

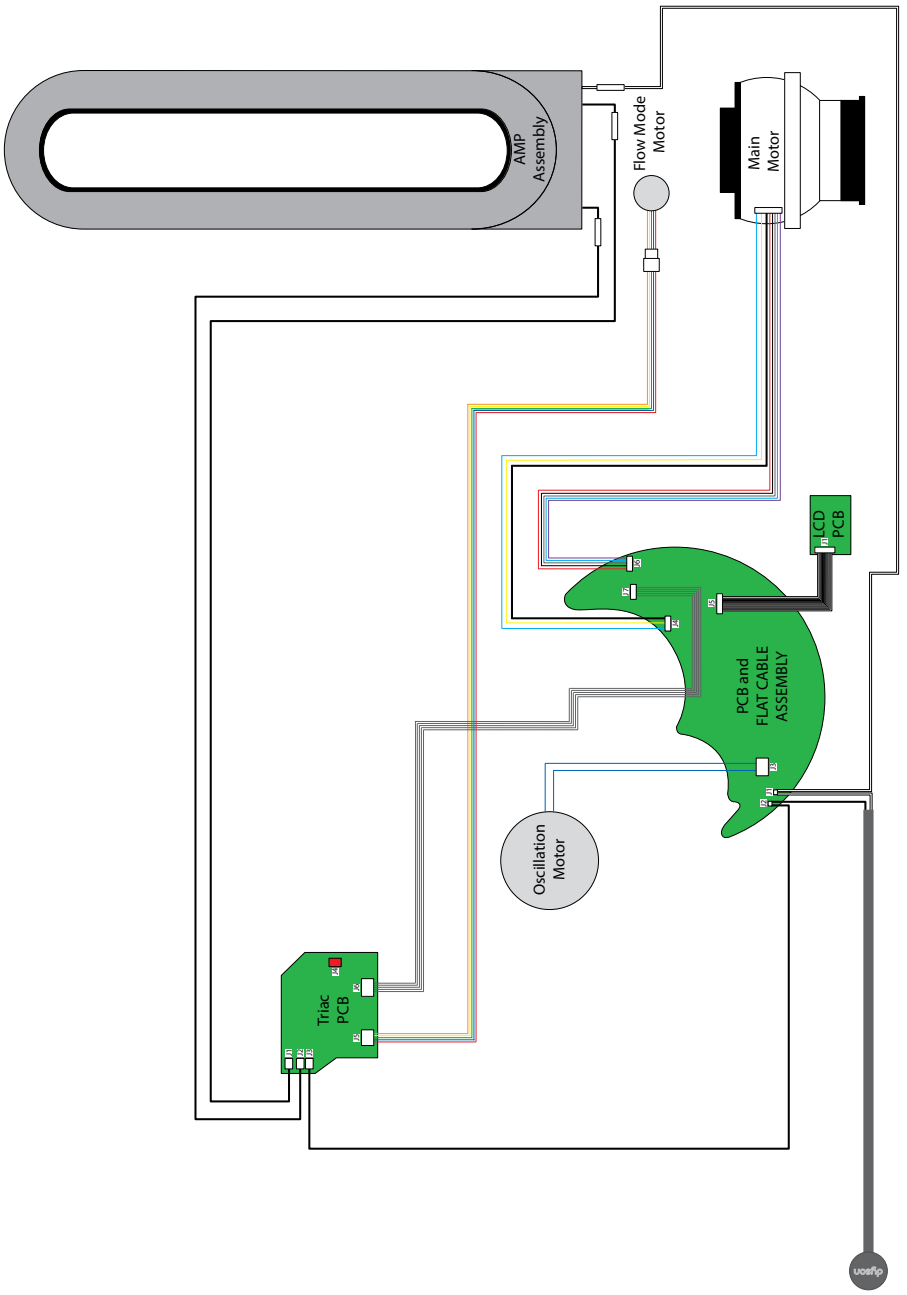
Insulation test points:
Test directly onto the area/s highlighted.



Test results:
A minimum reading of 2MΩ must be achieved.
A reading below 2MΩ is not considered safe and further investigation, rectification and testing must be completed before the product is used.

If you are unable to complete the service activity on a product with an insulation test reading below the minimum requirement, you must inform the owner that it is unsafe to use. Inform the owner of the required actions to resolve the issue.
If the product is left unresolved please indicate on the relevant CRM system that the product is electrically unsafe and attach a 'Warning: product electrical unsafe' sticker in a visible location on the product. If the product plug contains a fuse, then the fuse should also be removed before returning to the owner.

Wiring diagram



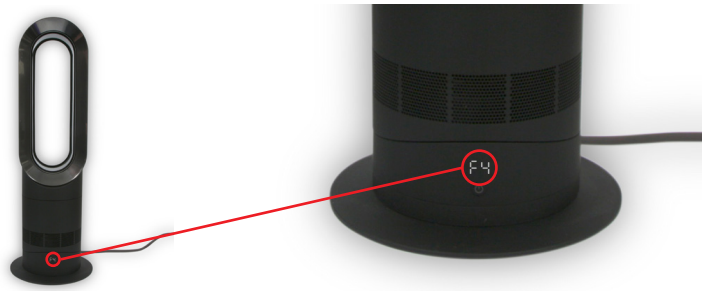
Fault type diagnosis

The UI on the machine may display a 'F`, 'H`, or 'C' fault code. The below table indicates the necessary component to replace, to resolve the fault:

Fault type	Description	Action	Part/assembly affected
F1	PCB and flat cable assembly fault	Hard reset (see page 4), check for visual damage, replace part (page 15)	Main body
F2	Motor fault	Hard reset (see page 4), check for visual damage, replace part (page 47)	Main body
F3	Motor fault	Hard reset (see page 4), check for visual damage, replace part page 47)	Main body
F4	Motor fault	Hard reset (see page 4), check for visual damage, replace part (page 47)	Main body
F5	Triac PCB fault	Hard reset (see page 4), check for visual damage, replace part (page 23)	Main body
F6	Main body fault	Hard reset (see page 4), check for visual damage, replace part (page 15)	Main body
H1	Triac PCB fault	Hard reset (see page 4), check for visual damage, replace part (page 23)	Main body
H2	Triac PCB fault	Hard reset (see page 4), check for visual damage, replace part (page 23)	Main body
H3	Triac PCB fault	Hard reset (see page 4), check for visual damage, replace part (page 23)	Main body
H4	Triac PCB fault	Hard reset (see page 4), check for visual damage, replace part (page 23)	Main body
H5	PCB and flat cable assembly fault/ Triac PCB fault	Hard reset (see page 4), check for visual damage, replace part (page 15/page 23)	Main body
C1	Triac PCB fault/PCB and flat cable assembly fault	Visual damage, replace part (page 15/page 23)	Main body
C2	Triac PCB fault/PCB and flat cable assembly fault	Hard reset (see page 4), check for visual damage, replace part (page 15/page 23)	Main body
Blank (Display not working)	LCD PCB fault	Hard reset (see page 4), check for visual damage, replace part (page 20)	Main body

Hard reset

Carry out the following checks to try to resolve the issue prior to undertaking any repairs to the machine.

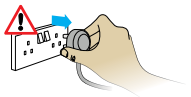


01 The display will show a F, H or C fault and the LED around the power button will flash red. The oscillation, airflow and timer controls will be locked out on the remote. The power button on both the remote and main body will still work.

02 To reset the appliance, turn the power OFF (using either the power button on the remote or the main body), wait 60 seconds and then turn back ON. The fault should have cleared.

03 If the power cycle does not work try a 'hard reset'. Turn the power OFF and unplug the machine, or switch off at the mains socket, for 30 seconds and then turn back ON. In some cases the fault will have cleared. If not carry out the repair as prescribed on page 3.

WARNING:
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.



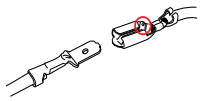
Ensure that at all times during the repair and testing of products that customers, pets, children and you are not exposed to any Live electrical supply.

Where this symbol is shown, ensure ESD (Electro Static Discharge) protection is used.

It is a mandatory requirement that when handling any product during any repair or refurbishment process that the following equipment is worn:

- FPP3 particle filter Face mask
- Safety gloves
- Safety glasses
- Safety shoes

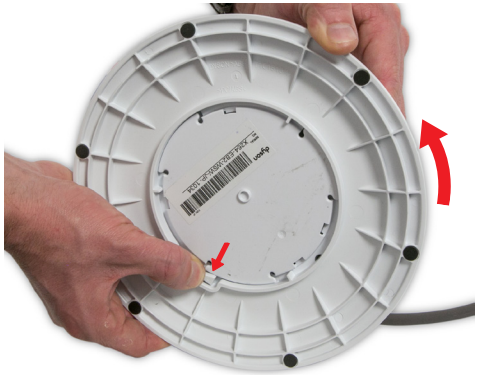
Some female terminal clips used in the product contain a locking mechanism. The release pip will need to be activated before separation from the male terminal can occur.



All screws used are Torx unless otherwise stated.

Wire colours may vary between territories.

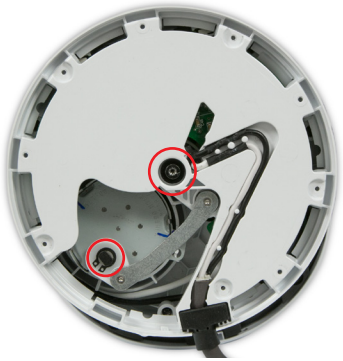
Recommended tools to repair:
Torx T-15 screwdriver (magnetic if possible)
Torx T-8 screwdriver (magnetic if possible)
Thin flat bladed screwdriver
Long nosed pliers x2
Wire snips
Circlip pliers
Scalpel knife (US and Canda only)
Heat gun (US and Canda only)



01 Push the lock and twist off the Base assembly.

02 Remove the five 6mm T-8 screws. Lift off the Base cap.

03 Remove the Glass cloth tape.
Important: keep this safe as you will need to refit it later.

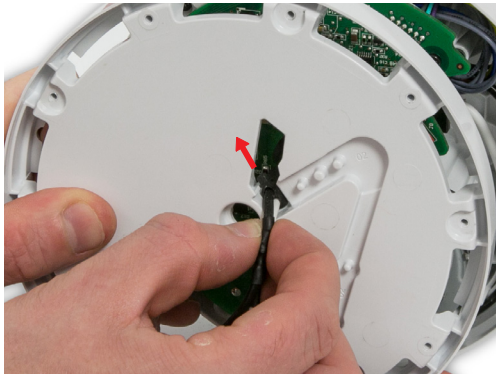


04 Remove the 30mm T-15 screw and captive washer.
Carefully remove the Circlip.

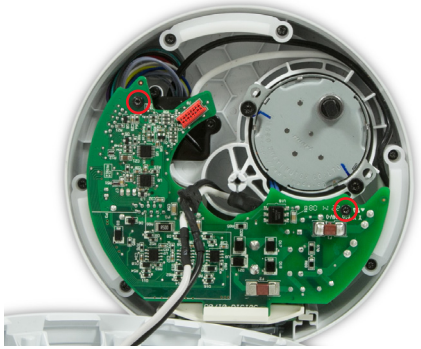
05 Lever the Oscillation Cam from the Oscillation motor.

06 Loosen the six T-8 screws by six or seven turns (it may be necessary to orientate the base to allow access to the screws).
Remove the Base plate from the Main body.

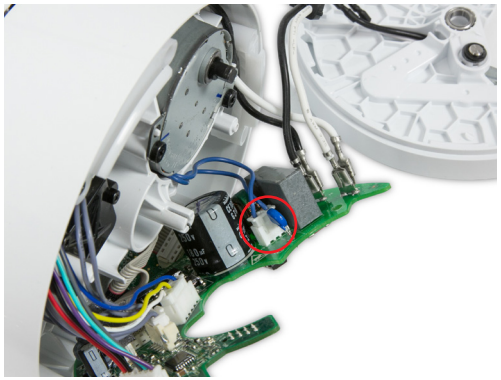
07 Release the Powercord assembly from the retainers in the Base plate.



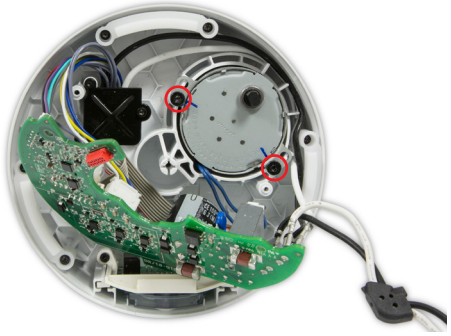
08 Release the grommet from the centre of the Base plate.



09 Remove the two 6mm T-8 screws.
Carefully release the PCB and flat cable assembly from the holder.

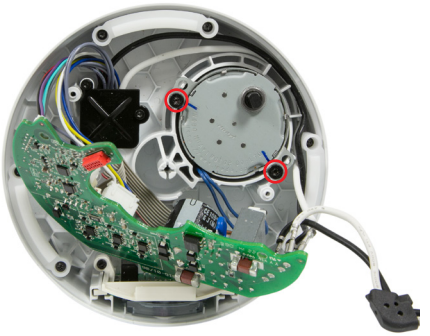


10 Disconnect the Oscillation motor from the PCB and flat cable assembly.

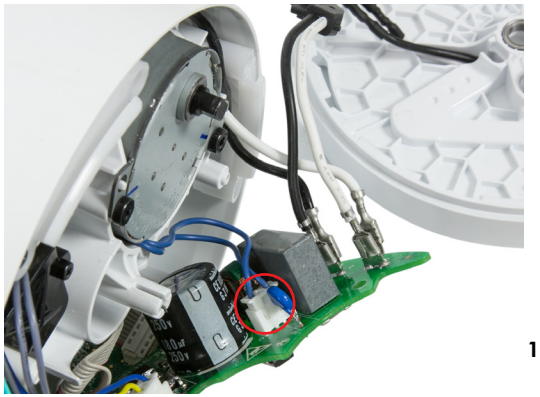


11 Remove the two 12mm T-15 screws.

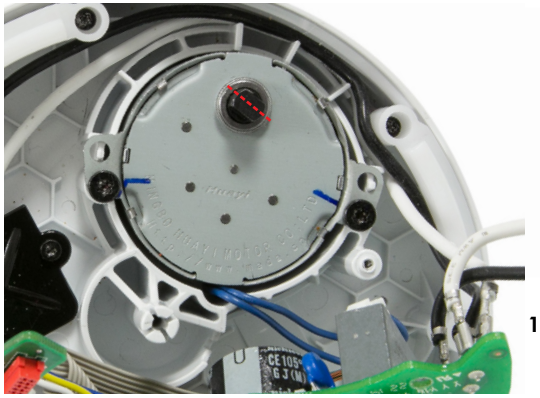
12 Remove the Oscillation motor assembly.

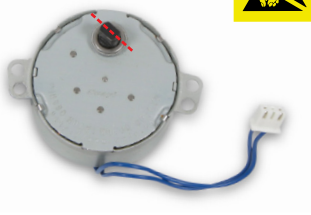


13 Fit the new Oscillation motor and the two 12mm T-15 screws.

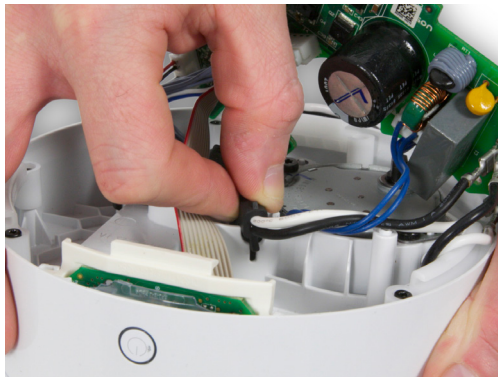


14 Connect the Oscillation Loom. Dress the wires neatly as shown.

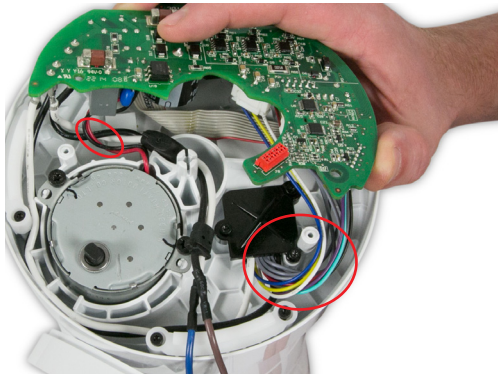




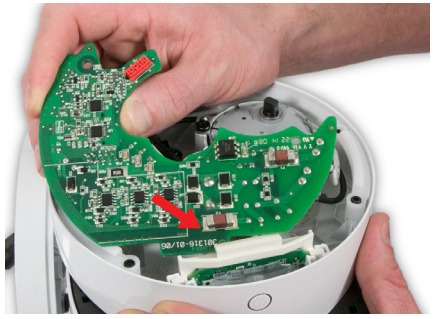
15 Ensure the Oscillation Motor Cam Link is orientated in the same position as the previous one.

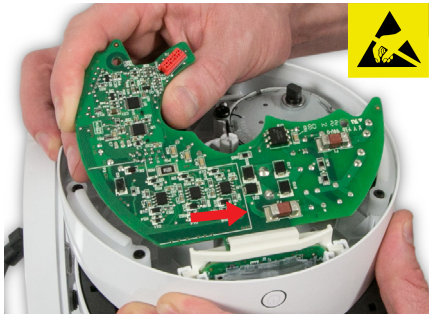


16 **Important:** locate the detail on the grommet into the location in the centre of the Lower Body Housing.

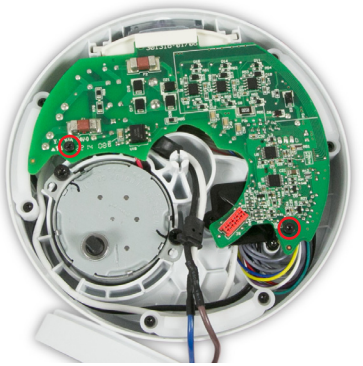


17 Ensure all wires are positioned as shown.

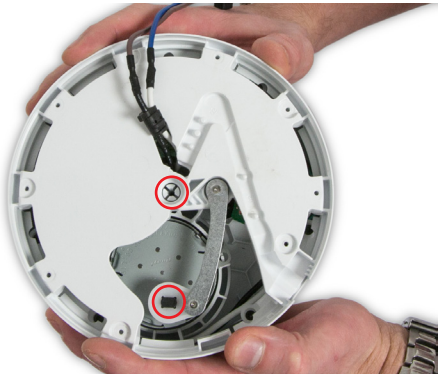




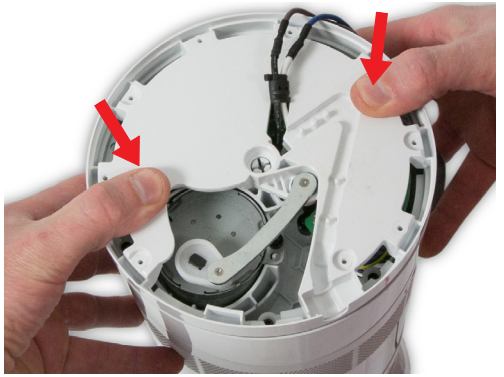
18 **Important:** locate the flat end of the PCB and flat cable assembly into the holder. Slide the PCB along until it is centralised. Lower the PCB onto the screw bosses.



19 Fit the two 10mm T-8 screws.

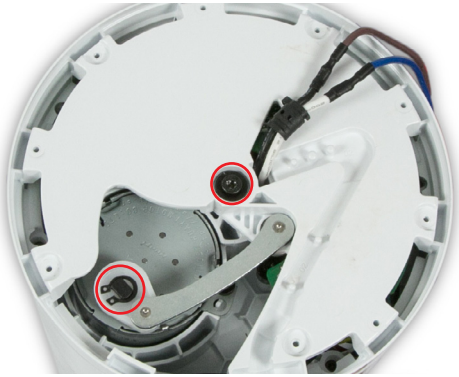


20 Locate the Base plate onto the Main body. Position the Cam onto the Oscillation Motor. Position the centre of the Base plate onto the central screw boss.

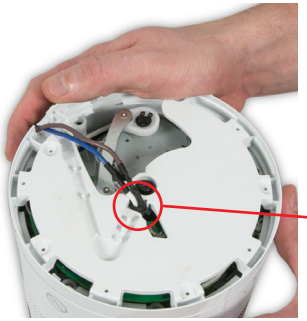


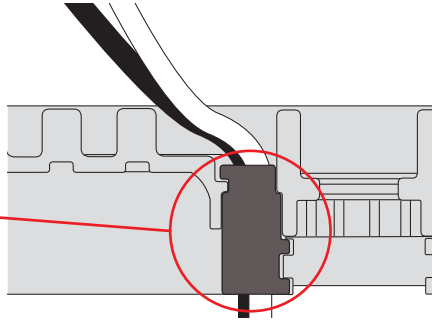
21 Clip the Base plate onto the three runners.

22 Tighten the six T-8 screws.

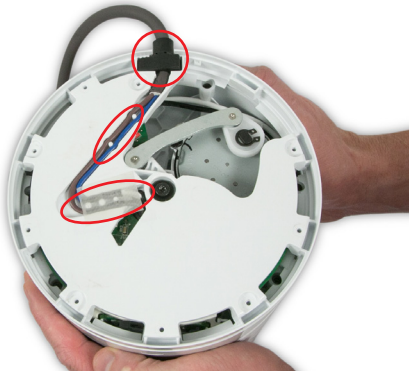


23 Carefully fit the Circlip.
Fit the 30mm T-20 central screw and captive washer.





24 Secure the smaller Powercord grommet into the retainer in the centre of the Base plate.
Important: the grommet MUST be situated as shown.



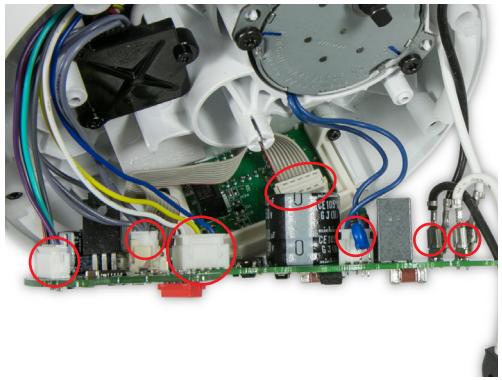
25 Fit the Live and Neutral wires into the retainers provided in the Base plate.
Secure the remaining grommet into the Base plate.
Important: re-fit the Glass cloth tape.

26 Locate the Base cap and fit the five 6mm T-8 screws.

27 Clip in the Foot plate.

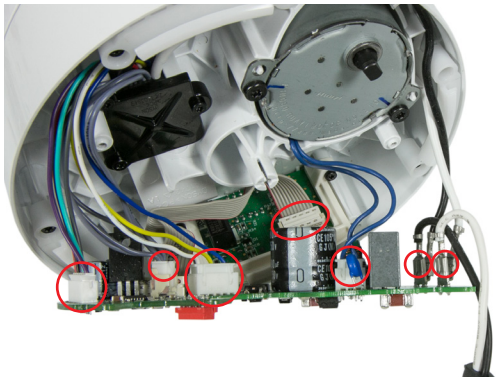
PCB and flat cable assembly - removal

The following parts should be removed as previously shown:
Oscillation motor, steps 01 - 09 (pages 06 - 08).



28 Carefully release all connectors from the PCB and flat cable assembly. Remove the PCB.

PCB and flat cable assembly - fitting

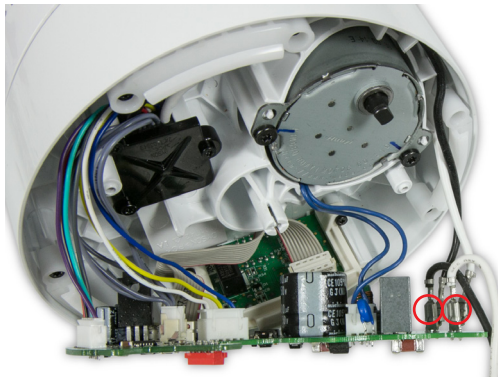


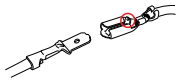
29 Connect all looms to the PCB and flat cable assembly.

After fitting the PCB and flat cable assembly, fit the remainder of the parts as detailed in steps 16 - 27 (pages 11 - 14).

Powercord - removal

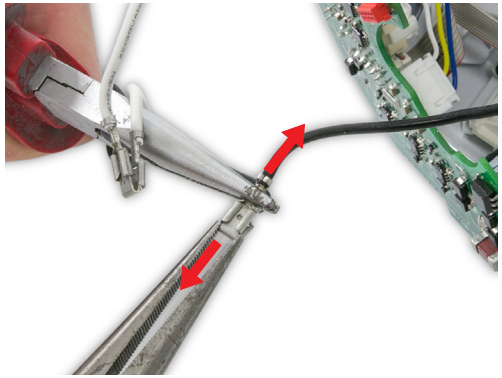
The following parts should be removed as previously shown:
Oscillation motor removal section steps 01 - 09 (pages 06 - 08).





30 Carefully disconnect the Live and Neutral wires from the PCB and flat cable assembly.

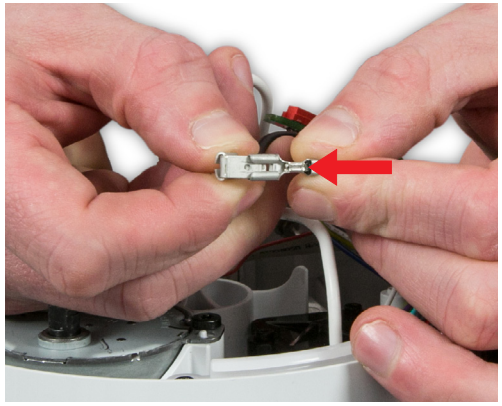
31 Carefully release the wires from the retainers.

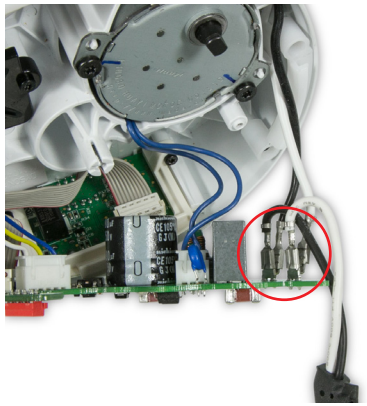


32 Using two pairs of long nosed pliers very carefully separate the Live and Neutral wires from the 'Piggyback' terminals.

33 Feed the Powercord wires through the Base plate assembly.

34 Feed the new Powercord assembly through the Base plate.

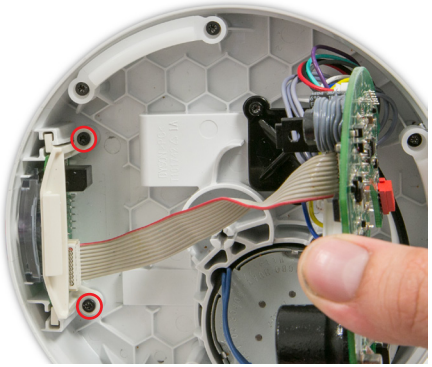




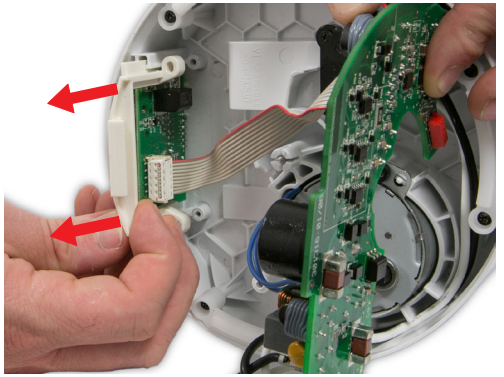
35 Connect the Live and Neutral wires to the corresponding 'Piggyback' terminals.
Connect the terminals to the PCB and flat cable assembly.

After fitting the Powercord assembly, fit the remainder of the parts as detailed in steps 16 - 27 (pages 11 - 14).

The following parts should be removed as previously shown:
Base plate steps 01 - 09 (pages 06 - 08).

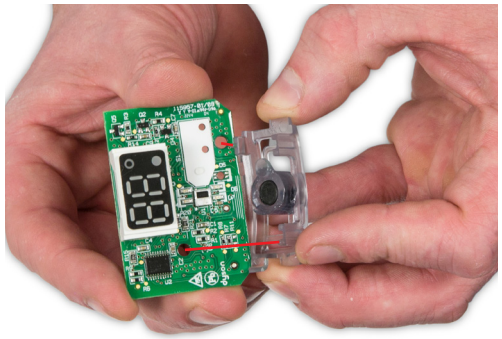


36 Carefully lift the PCB and flat cable assembly out of the way. Remove the two 10mm T-8 screws in the LCD and PCB holder.



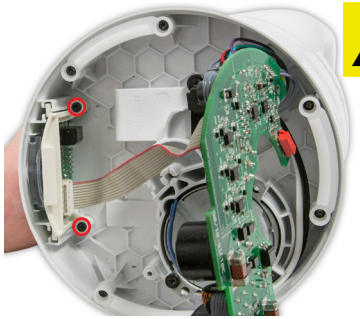
37 Slide the holder from the Main body. Remove the Power button and LCD & PCB assembly.
If the reason for the repair is to replace the Flat cable this can be done at this point.

38 Carefully disconnect the Flat cable from the LCD & PCB assembly.

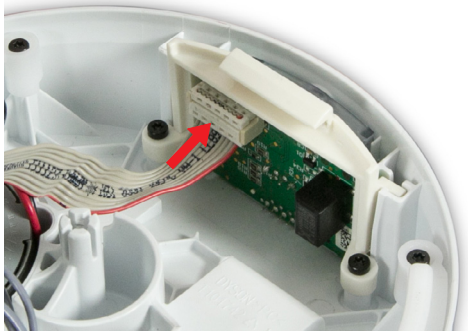


39 Position the Power Button onto the new LCD & PCB assembly as shown.

40 Locate the two assemblies into the Lower Body Housing.



41 Slide the LCD & PCB holder into the channels in the Lower Body Housing. Fit the two 10mm T-8 screws.



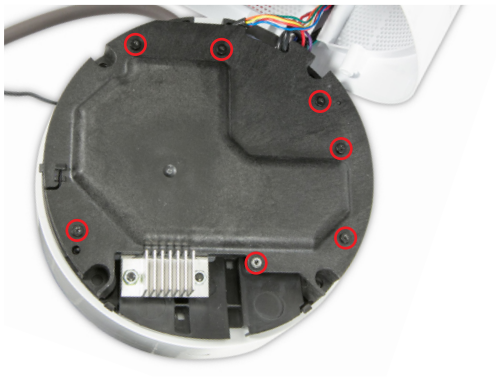
42 Connect the Flat cable from the Main PCB.

After fitting the LCD and PCB assembly, fit the remainder of the parts as detailed in steps 16 - 27 (pages 11 - 14).

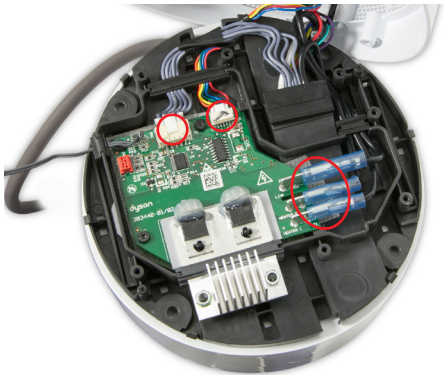
43 Remove the four 12mm T-10 screws from the front and rear of the Tilt Plate.

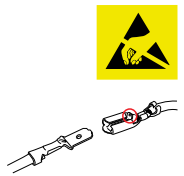
44 Carefully lift the Tilt Plate and Lower Housing away from the Main Body.
Warning: the two assemblies will be held together with wiring looms.

45 Carefully release the Thermo sensor wire.

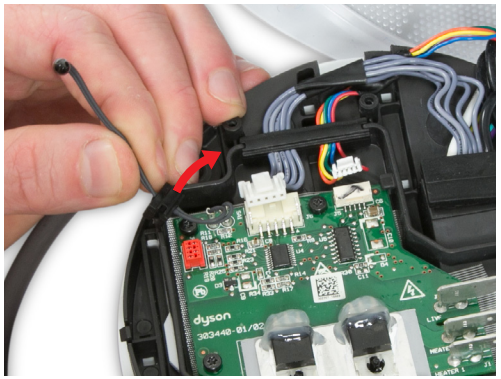


46 Remove the seven 12mm T-8 screws from the Triac PCB cover.
Remove the cover.

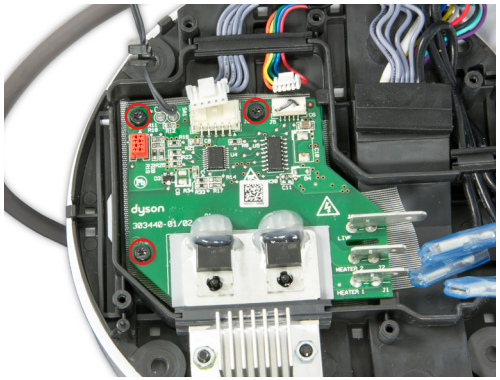




47 Carefully release the highlighted connectors.



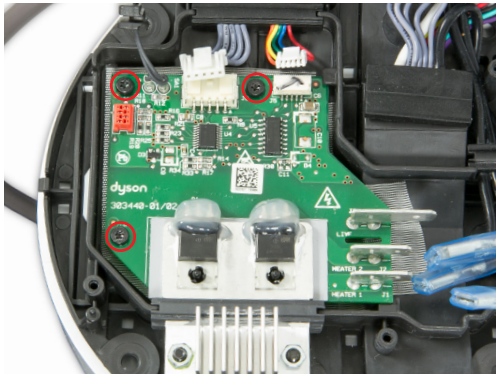
48 Carefully release the Thermo sensor grommet from the Tilt Plate.



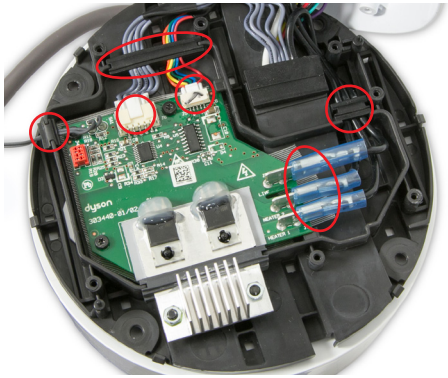
49 Remove the three 6mm T-8 screws.

50 Remove the Triac PCB from the Tilt Plate as shown.

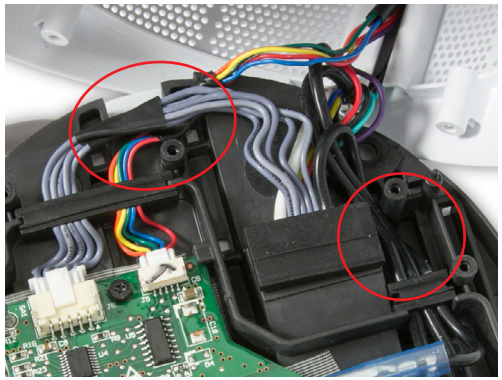
51 Locate the new Triac PCB assembly into the Tilt Plate.



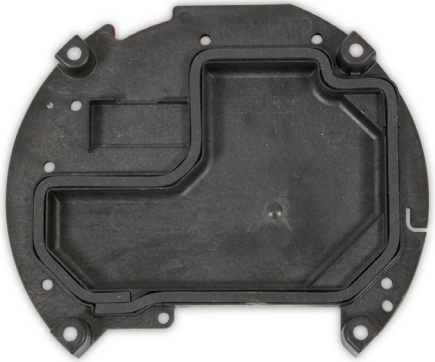
52 Fit the three 6mm T-8 screws.



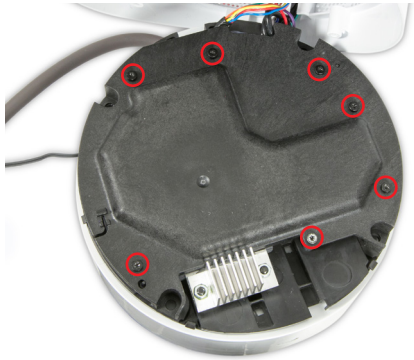
53 Connect all the wires and grommets to the Triac PCB.
Important: ensure all grommets are adequately seated.



54 **Important:** to minimise the risk of trapping, ensure all looms are dressed as shown.



55 Ensure the foam seal is still located correctly in the Triac PCB cover.



56 Place the PCB cover over the PCB and fit the seven 12mm T-8 screws.

57 Retain the Thermo Sensor into the PCB cover.

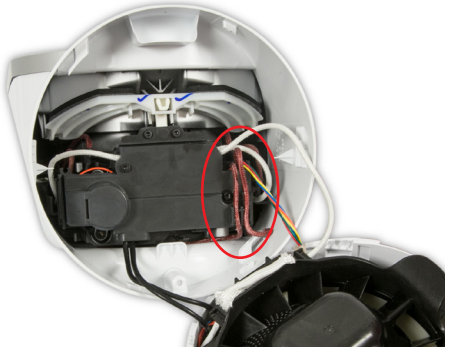
58 Locate the Lower Body Housing. **Important:** ensure all wires are away from any potential trap areas and the looms are safely retained in the channel in the Main body.

59 Fit the four 12mm T-10 screws.

60 Carefully remove the Glamour Cap from the rear of the Amp assembly.

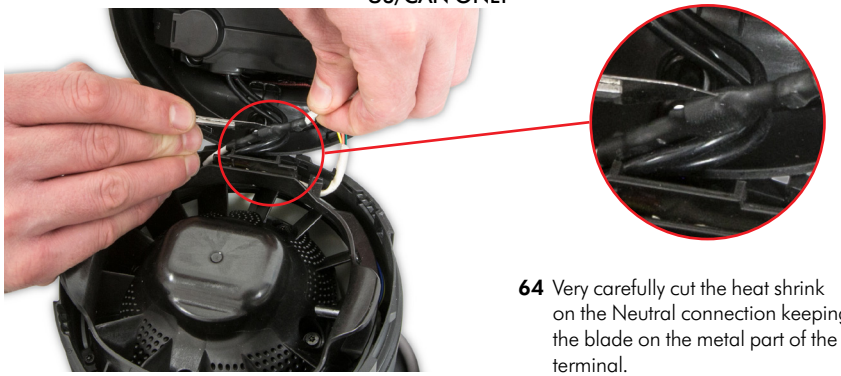
61 Remove the 10mm T-8 screw.

62 Gently twist the Amp assembly anti-clockwise and carefully release the Amp from the Main Body.
Important: the two assemblies will still be connected with wiring looms.



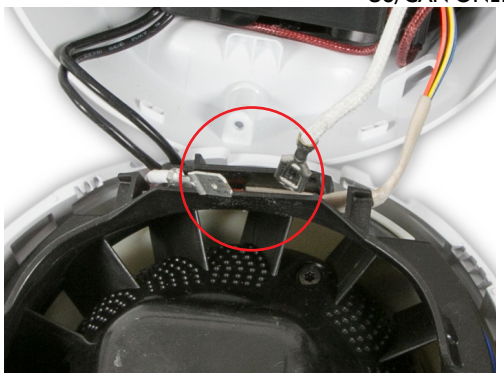
63 Release the wires from the retainer in the cover.

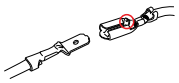
US/CAN ONLY



64 Very carefully cut the heat shrink on the Neutral connection keeping the blade on the metal part of the terminal.

US/CAN ONLY



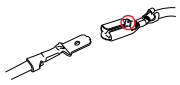


65 Carefully disconnect the Neutral terminals.

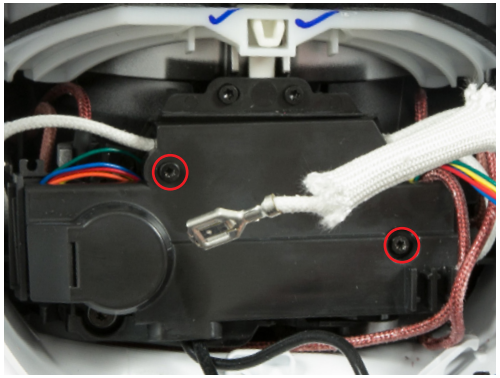
ALL OTHER TERRITORIES

66 Remove the Neutral wires from the holder in the Motor bucket assembly. Slide the Insulating sleeve away from the neutral terminals.

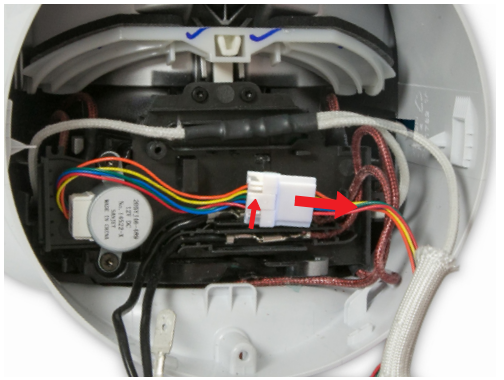
ALL OTHER TERRITORIES



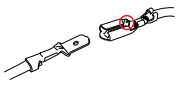
67 Carefully disconnect the the Neutral wires.
Keep the Insulating sleeve safe as you will need this for re-fitting.



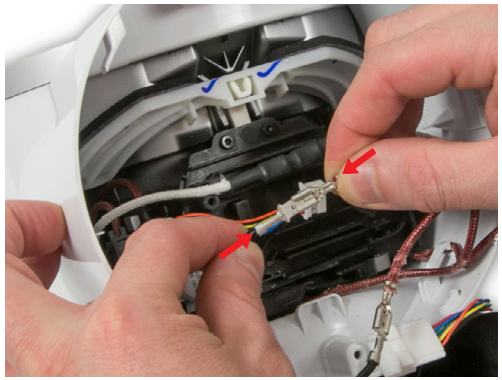
68 Remove the two T-8 screws in the cover.
Remove the cover.



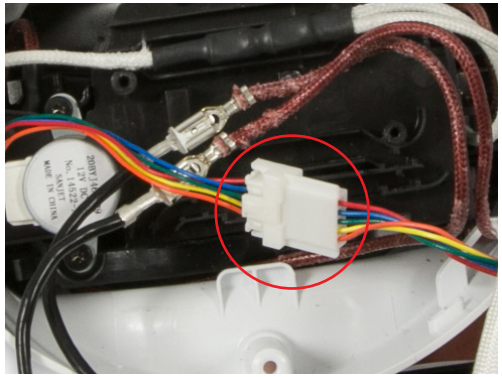
69 Depress the button on the connector and separate the Flow Mode Motor harness.



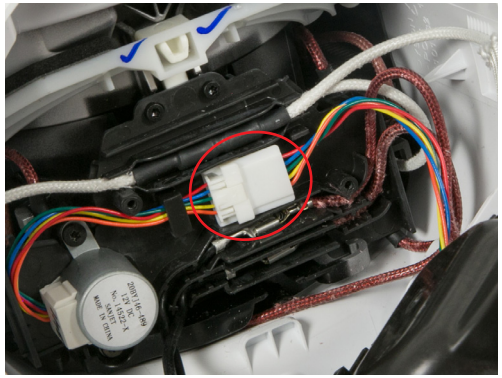
70 Carefully disconnect the two heater wires.



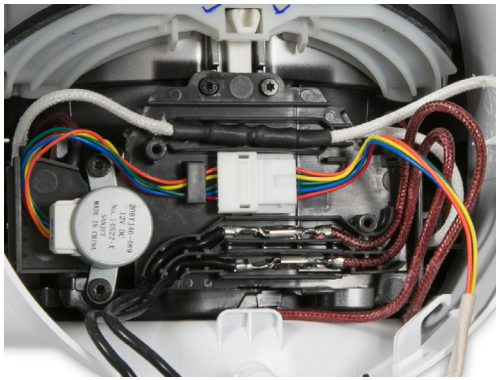
71 Connect the black heater wires.



72 Connect the Flow Mode Motor harness.

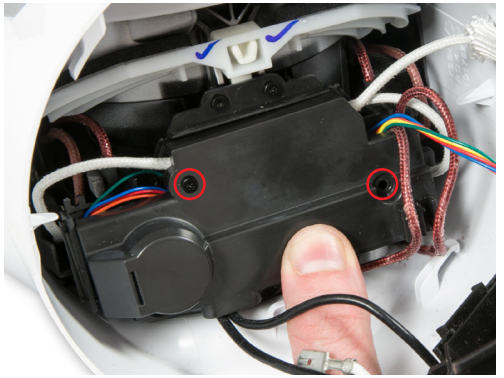


73 Neatly dress the wires into the retainers provided within the terminal holder.



74 **Important:** ensure all wires are dressed correctly and away from any potential trap areas.

75 Carefully locate the ledge on the cover into the gap in the terminal plate.
Important: it is crucial that there are no wires trapped between the cover and the plate.

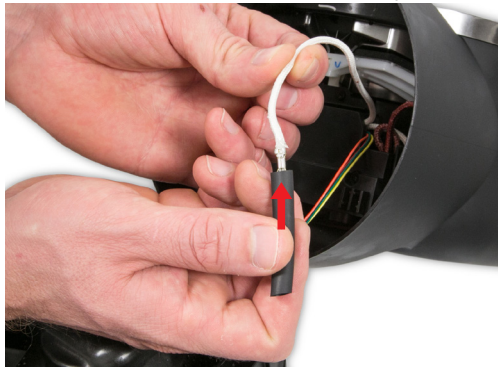


76 Securely hold the cover down whilst fitting the two T-8 screws.

US/CAN ONLY

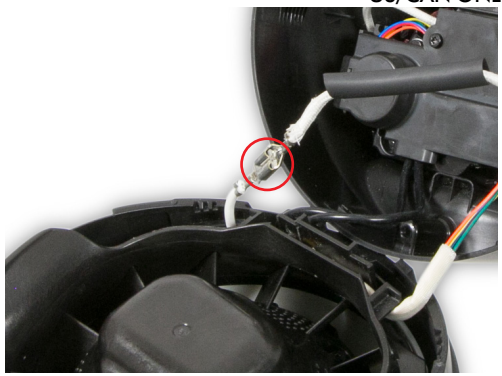
77 Cut a length of heat shrink 40mm in length.

US/CAN ONLY



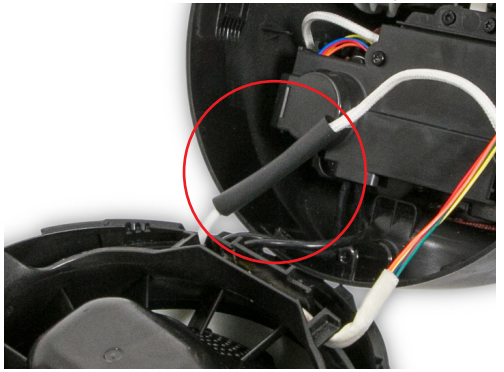
78 Slide the heat shrink over the Amp side of the Neutral wire.

US/CAN ONLY



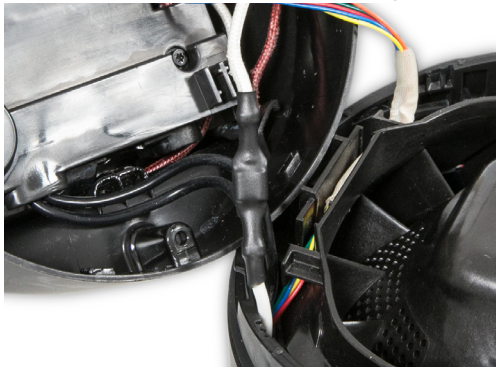
79 Connect the two Neutral wires together.

US/CAN ONLY



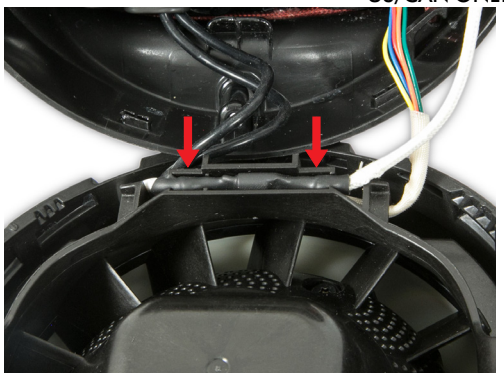
80 Position the heat shrink over the Neutral connectors.

US/CAN ONLY



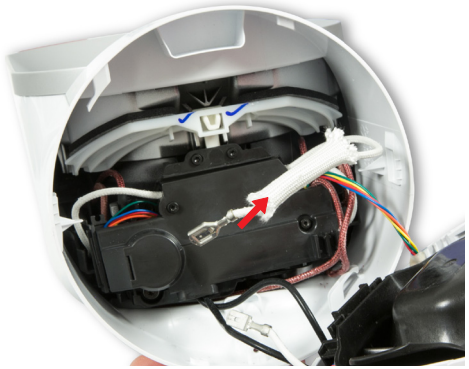
81 Carefully using a heat gun ensure the heat shrink entirely wraps the connectors.

US/CAN ONLY



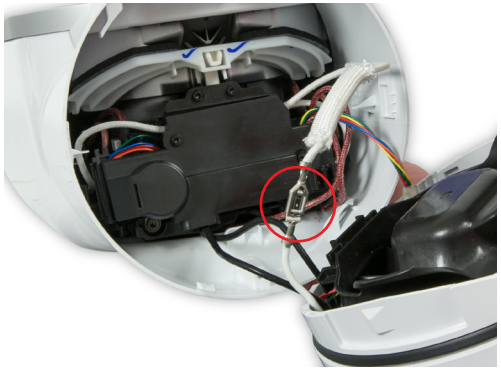
82 Locate the neutral connectors into the retainers provided in the Main body.

ALL OTHER TERRITORIES



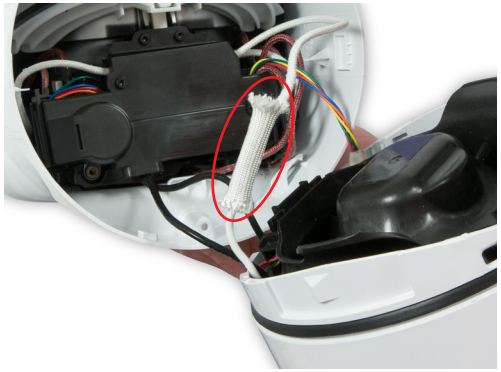
83 Slide the Glass cloth sleeve over the Amp side of the Neutral wire.

ALL OTHER TERRITORIES



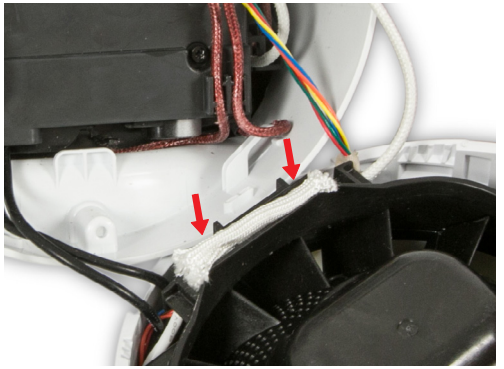
84 Connect the two Neutral wires.

ALL OTHER TERRITORIES

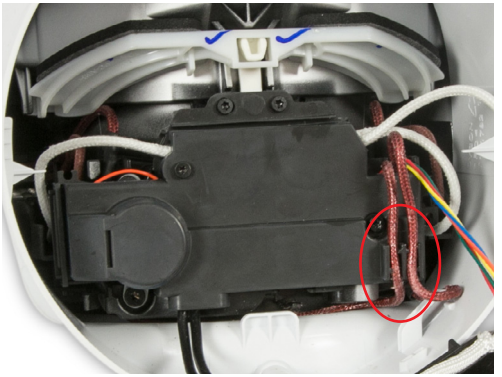


85 Position the Glass cloth sleeve entirely over the connections.

ALL OTHER TERRITORIES



86 Securely locate the Glass cloth tape into the retainer provided.



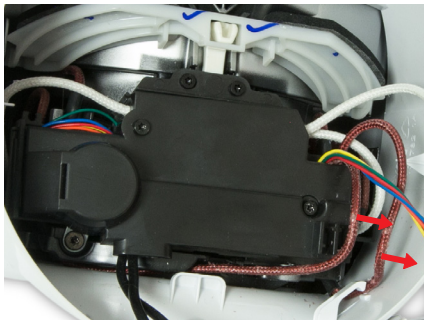
87 Dress the wires into the retainers in the terminal cover.

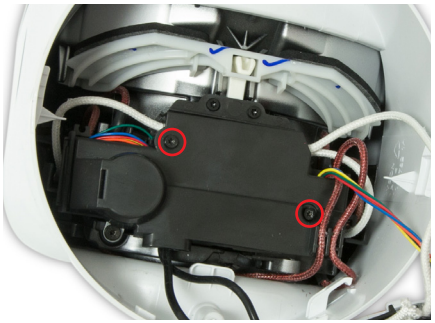
88 Position the Amp assembly onto the main body.
Twist clockwise and lock into place.

89 Fit the T-8 screw.
Fit the Glamour cap.

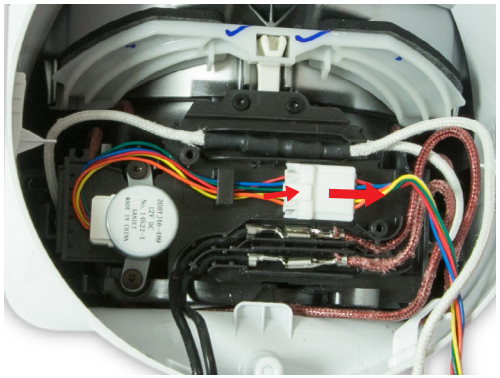
Flow mode motor and Flow focus flap assembly - removal

The following parts should be removed as previously shown:
Amp assembly steps 60 - 63 (page 29 - 30).

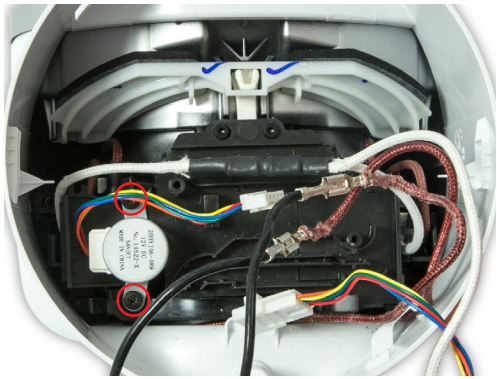




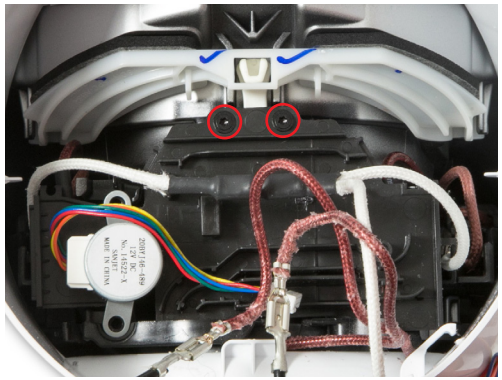
90 Release the wires from the terminal cover. Remove the two T-8 screws in the terminal cover.
Lift off the cover.



91 Depress the button on the connector and separate the Flow Mode Motor harness.
Carefully release all wires from the wiring plate.

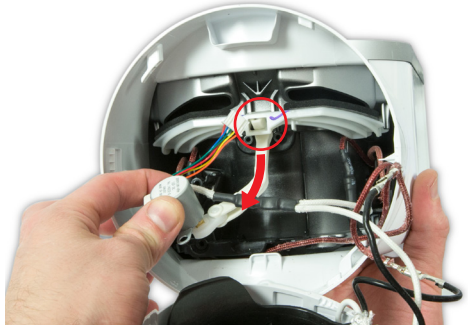


92 Remove the two T-10 screws holding the Flow Mode Motor.

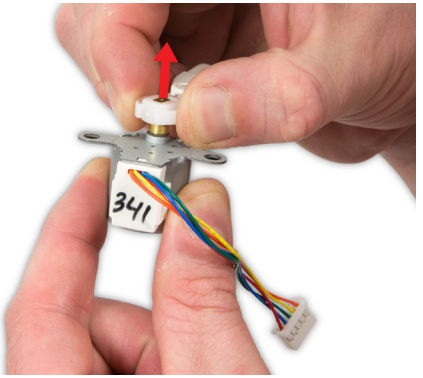


93 Remove the two T-10 screws holding the wiring plate to the Amp.

94 Release the Flow Mode Motor from the wiring plate.
Remove the plate.



95 Release the Motor Lever Arm from the Flow Focus Flap Service Assembly.

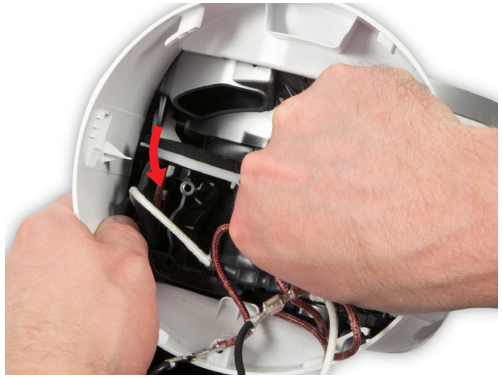


96 If the reason for the repair is to replace the Flow Mode Motor or any of the components attached to it you will need to remove these.
Pull the Motor Lever Arm from the motor.
If the reason for the repair is to replace the Flow Focus Flap Service assembly go to step 98.

97 Release the Link Arm from the Motor Lever Arm.

For Flow Mode Motor, Motor Lever Arm or Link Arm fitting instructions go step 102 (page 44).

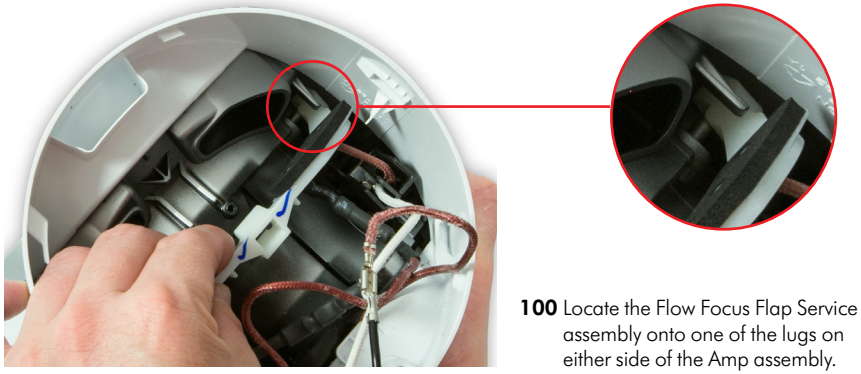
98 Release one side of the Flow Focus Flap Service assembly.



99 Repeat with the opposite side.

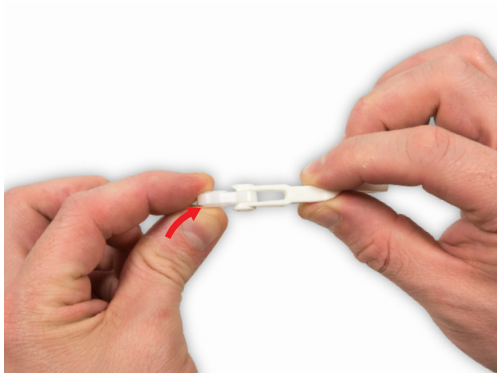
Flow mode motor and Flow focus flap assembly - fitting

If the reason for the repair is to replace the Flow Mode Motor or any of the components attached to it go to step 102.

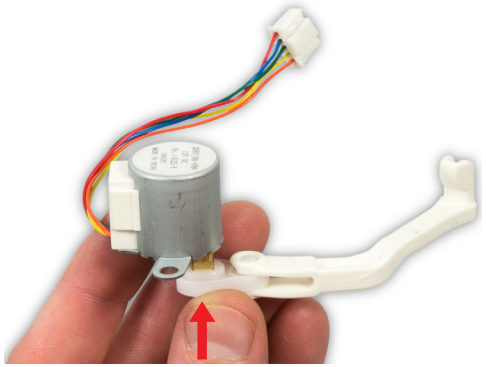


100 Locate the Flow Focus Flap Service assembly onto one of the lugs on either side of the Amp assembly.

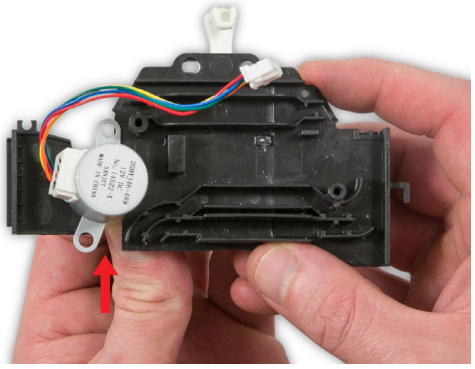
101 Locate the other side and test the movement of the flow focus flap assembly.



102 Clip the Motor Lever Arm onto the Link Arm.



103 Slide the Link Arm onto the Flow Mode Motor.
Important: orientate as shown.

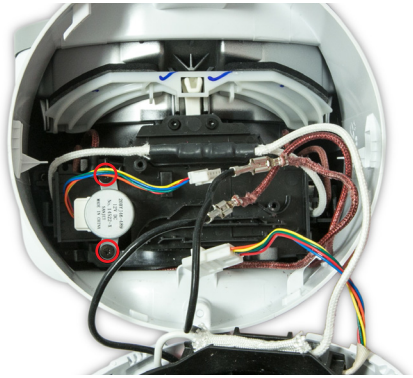


104 Slide the Flow Mode Motor into the wiring plate as shown.

105 Position the end of the Motor Lever Arm into the hole in the Flow Focus Flap Service assembly.

106 Ensure all wires are clear and position the wiring plate over the screw bosses.

107 Fit the two 10mm T-8 screws with captive washers in the wiring plate.

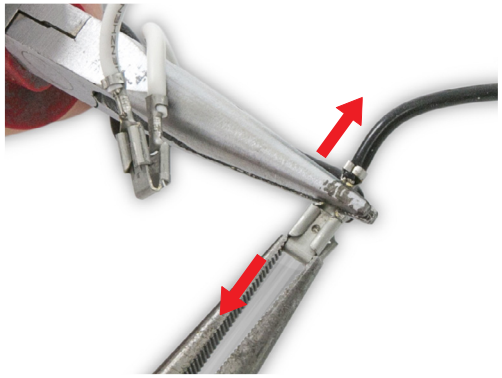


108 Fit the two 10mm T-10 screws into the Flow Mode Motor.

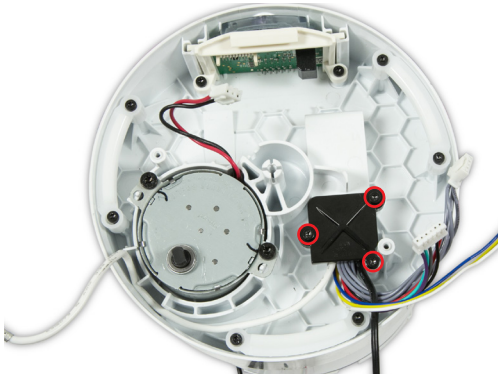
After fitting the screws follow steps 72 - 76 and either 82 or 86 - 89.

Main motor and bucket assembly - removal

Before continuing the following parts need to be removed as previously shown.
Amp assembly - removal page 29 - 32, Oscillation motor pages 06 - 08 steps 01 - 09 and the PCB and flat cable assembly - removal page 15.



109 Using two pairs of long nosed pliers very carefully separate the Live and Neutral wires from the 'Piggyback' terminals.



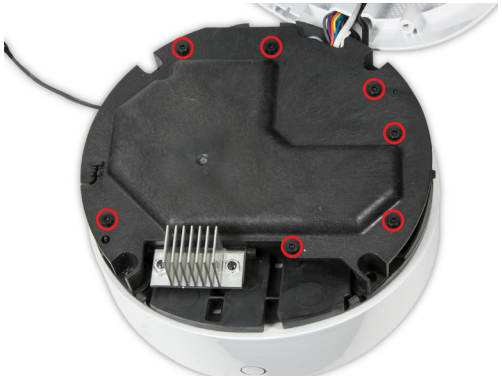
110 Remove the three T-8 screws holding the grommet cover. Remove the cover.

111 Release the grommets from the Lower body.

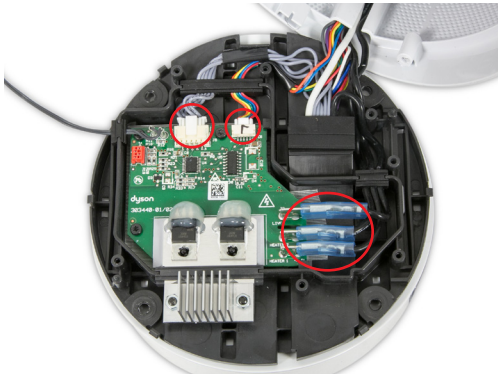
112 Remove the four 12mm T-10 screws.

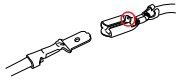
113 Carefully lift the Tilt Plate and Lower Housing away from the Main Body. **Warning:** the two assemblies will be held together with wiring looms.

114 Carefully release the Thermo Sensor wire.

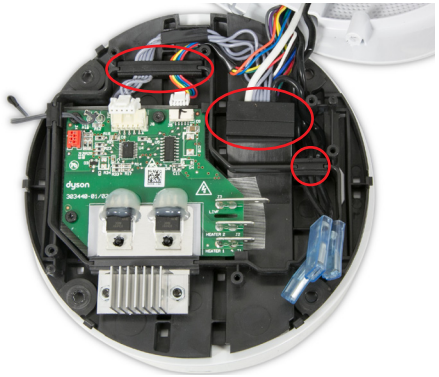


115 Remove the seven 12mm T-8 screws from the Triac PCB cover. Remove the cover.

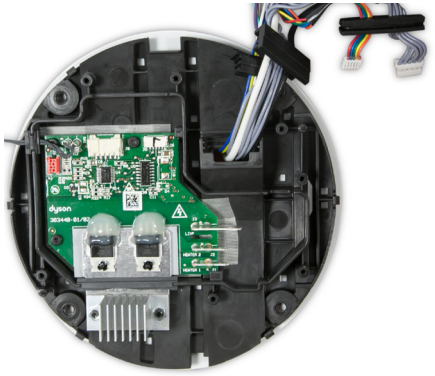




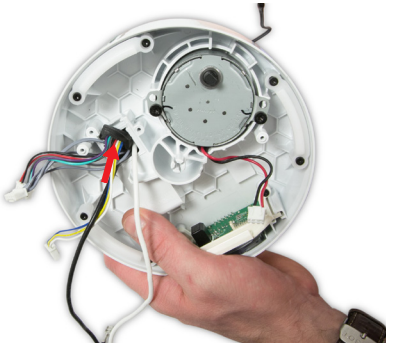
116 Release the highlighted connectors.

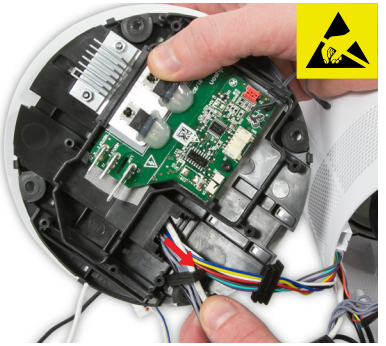


117 Release the grommets from the Tilt Plate.



118 Ensure the Tilt Plate is positioned in the centre of the Lower Body Housing.



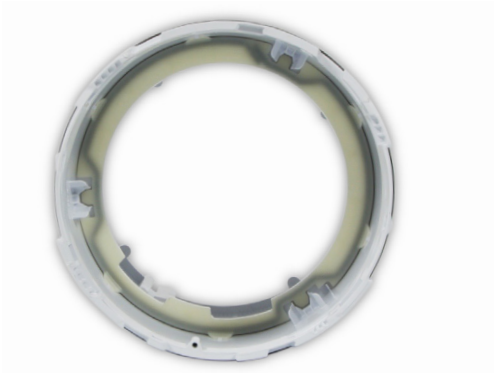


119 Carefully pull the two looms through the Lower Body Housing and Tilt Plate.

120 Release the Looms from the channel in the Main Body Housing.

121 Lift the Motor and Bucket assembly away from the Main Body Housing.

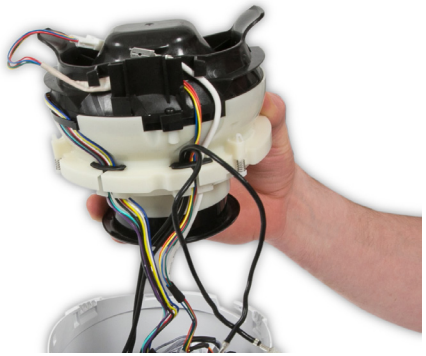
122 Check the Motor Bucket Foam seal for any damage
If the Motor Bucket Foam Seal does not need replacing go to step 130.



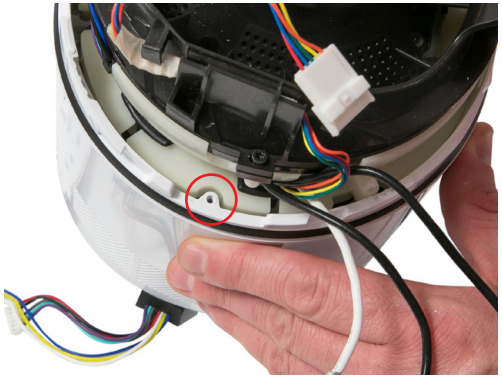
123 If the Seal needs replacing remove it from the shelf inside the Main Body. Ensure any glue residue is removed.

124 Place the Seal in the groove in the Motor Bucket.

125 Peel the backing tape off the Foam Seal.



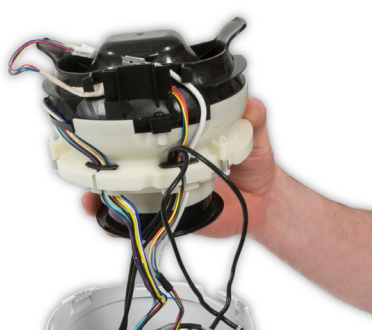
126 Feed the wiring looms through the Main Body.



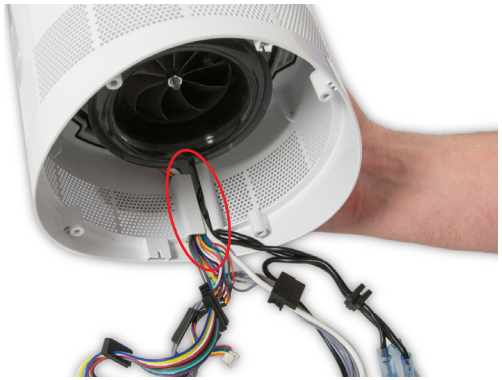
127 Ensure the Motor and Bucket assembly is lined up with the details on the Main Body shelf.

128 Firmly press the Motor and Bucket assembly into the Main body to ensure the Seal is firmly stuck.

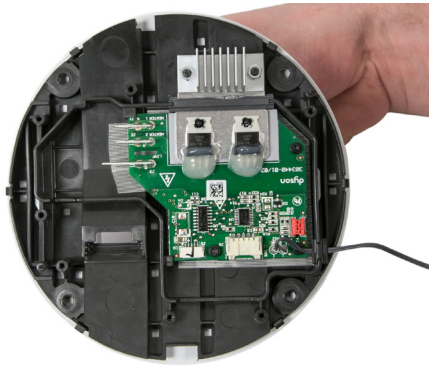
129 Lift the Motor and Bucket assembly out of the Main Body and check to ensure the Seal is seated correctly.



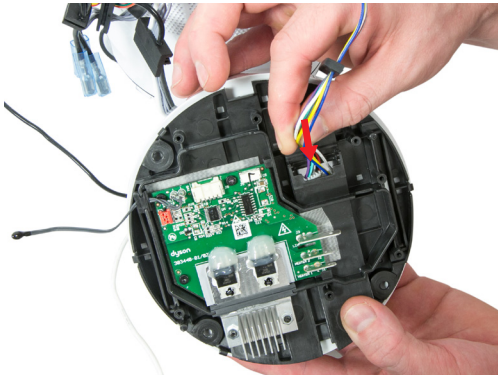
130 Feed the wiring looms through the Main Body.
Ensure the Motor and Bucket assembly is lined up with the details on the Main Body shelf.



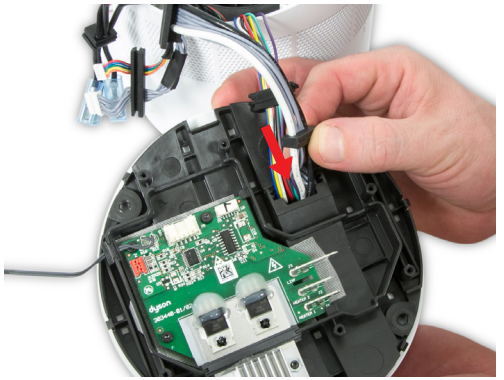
131 Locate the Looms into the channel in the side of the Main Body.



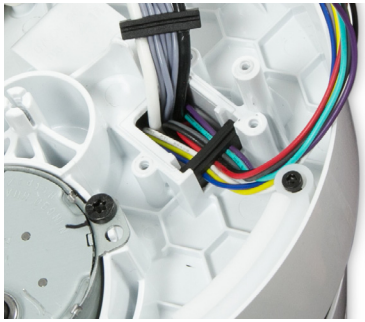
132 Keep the Tilt Plate in the centre of the Lower Body Housing.

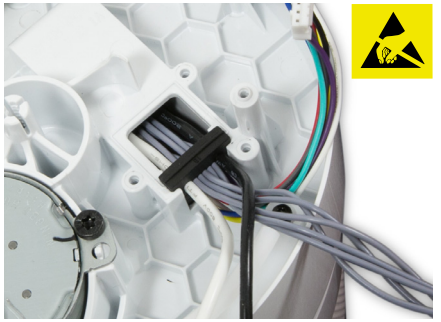


133 Carefully feed the two main Looms through the hole in the Tilt Plate one at a time.
Ensure they are guided freely into the Lower body housing.

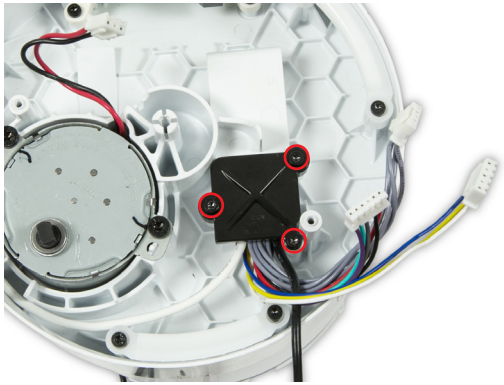


134 Feed the grommet attached to the Live and Neutral wires through the retainers in the Tilt Plate first, then feed the second loom through.

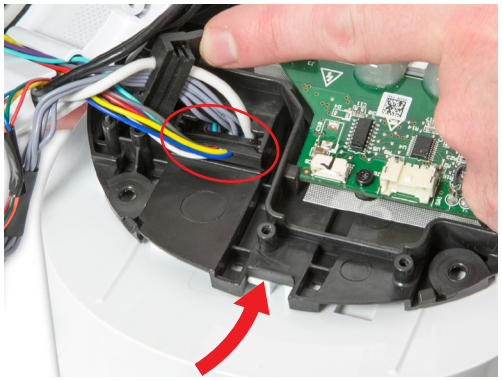




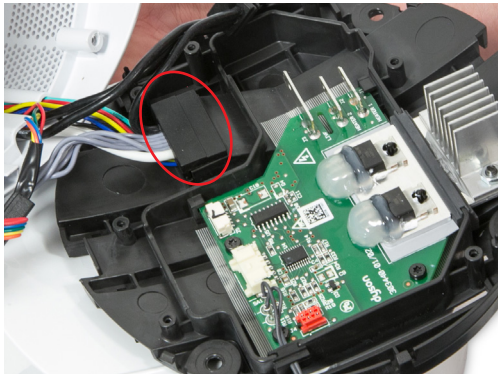
135 Slide the Motor loom grommet into the retaining details and push to position as shown.
Repeat with the Power loom grommet ensuring the details on the grommets mate together.



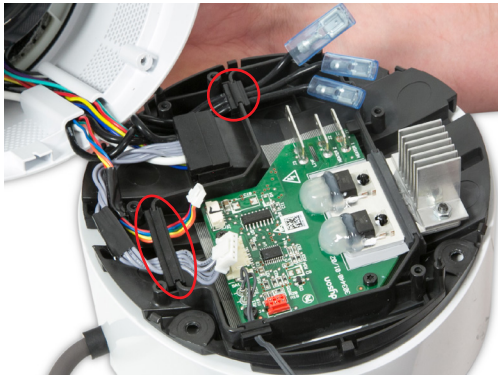
136 Position the cover and fit the three 12mm T-8 screws.



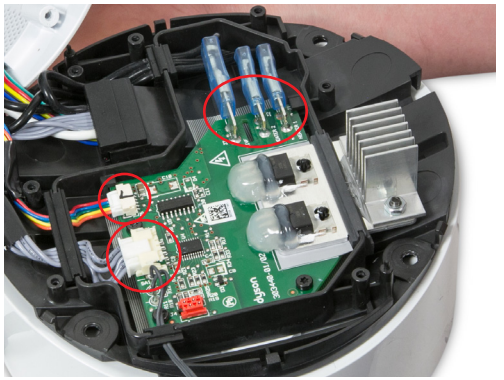
137 Slide the Tilt plate towards the front of the Lower body housing.
Locate the smaller grommet into the retainer details in the Tilt plate.

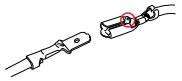


138 Firmly seat the larger grommet on top.



139 Secure the highlighted grommets into the Tilt plate.

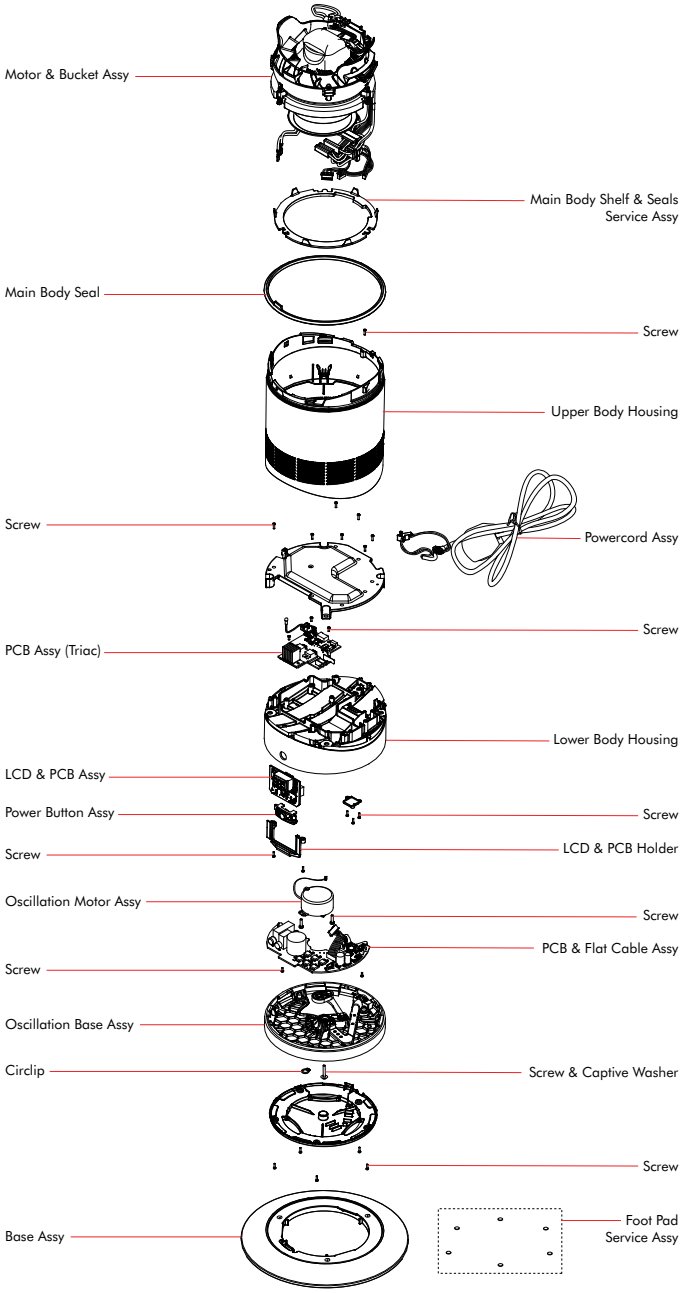




140 Connect the looms to the Triac PCB assembly.

After connecting the looms to the Triac PCB continue by fitting the following parts as previously shown:
Triac PCB assembly pages 27 - 28
PCB and flat cable assembly page 16
Powercord assembly page 19
Amp assembly page 33

Parts diagram
Main body assembly



Parts diagram
Amp assembly