

# Hoover Commercial 12" & 15" Upright Vacuum

Service Instructions for CH90600V, CH91600V, CH90700V &  
CH91700V



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## Service & Aftermarket Parts

Part Name	CH90600 / CH91600	CH90700 / CH91700
Crevice Tool	440016580	440016580
General Seals	440016586	440016586
Wand Assembly	440016576	440016576
Headlight and Lens	440016590	440016754
Hose Release Button	440016585	440016585
Wand Holder	440016578	440016578
Lid Latches	440016579	440016579
Hose Hook	440016575	440016575
Brush Roll Motor	440016587	440016587
Front and Rear Wheels	440026584	440026584
Lower Hose	440016583	440016583
Top Hose	440016574	440016574
Lid	440016577	440016577
Handle	440016573	440016573
Bin Grate	440016581	440016581
Nozzle End Caps Metal Plate	440016588	440016753
Suction Motor Assembly	440016589	440016589
Detents	440016582	440016582
Upright Switch	440016913	440016913

## Troubleshooting

Indicator	Potential Error	Shutdown Brushroll Motor?	Shutdown Suction Motor?	What should you do?
Headlight Flashing	Battery Under Voltage	Y	Y	Recharge Battery
Headlight Flashing & Brushroll Icon Illuminated	Brush Roll Stall	Y	Y	Turn Unit Off, Check Nozzle For Obstruction
Wrench Icon & Headlight Flashing	Suction Motor Overspeed (Evidence of Clog)	Y	Y	Check Bag, If Full Change Bag, Check the Unit For Clogs, Clean Filter
Headlight Flashing, Wrench Icon	Suction Motor Under Speed	N	Y	Turn the Unit off, Wait 5 Mins, Turn Unit On. If Error Persists, <a href="#">Replace Suction Motor</a>
All Lights on Unit Off, Both Motors Off	Battery Over Temp Error	Y	Y	Turn Unit Off, Check Battery For Error Codes, Place On Charger And Check For Overtemp Error & Wait For Battery To Cool Down
Grinding Noise From Brushroll	Obstruction on Brushroll	N	N	Check Brushroll For Obstruction
	Damage to Brushroll			Remove Brushroll and Check Exterior & Interior Structure for Signs of Damage (Pay Close Attention To Interior Brushroll Fins (Fig. 2))
	Damage to Brushroll Motor			Remove Brushroll And Turn Unit On, Recline Unit And Check Whether Noise Occurs, If Grinding Noise Is Present, Proceed With <a href="#">Replacing The Brushroll Motor</a>
Clicking Noise when Turning Unit On	Damage to Suction Motor	Y	Y	If a clicking noise occurs when turning unit on and the suction motor & brushroll motor do not turn on, this is an indicator that the suction motor is damaged, follow instructions for <a href="#">replacing suction motor</a>

Indicator	Potential Error	Shutdown Brushroll Motor?	Shutdown Suction Motor?	What should you do?
Grinding Noise From Suction Motor	Damage to Suction Motor caused by ingesting debris	N	N	If grinding noise is heard coming from suction motor when unit is on, this is usually a sign of suction motor damage caused by the ingestion of debris. Turn unit off, check that a bag is being used, check the bag for signs of damage, check the dust bin for debris. If debris is found in dust bin, clean dust bin. Proceed with <a href="#">replacing the suction motor</a> .
Brushroll Motor Not Turning On	Failure of upright switch	Y	N	If brushroll motor is not turning on when the unit is reclined and the brushroll stall indicator is not illuminated, check function of upright switch. Follow instructions to remove nozzle top cover. If switch is not functioning, proceed with procedure to <a href="#">replace upright switch</a> .



Brushroll Stall

Battery Level

Wrench Icon

Figure 1 : Error Indicators



*Figure 2: Interior of Brushroll showing undamaged Fins*

# Opening Nozzle Top Cover

**Note:** Before beginning service, ensure the battery is removed from the unit. Then, cycle the power switch to discharge any residual power.

Equipment required: Phillips-head screwdriver

## 1. Remove Brushroll

Detach the brushroll from the nozzle assembly as per the standard removal procedure

## 2. Remove Left Endcap

Using a Phillips-head screwdriver, remove the three screws securing the left endcap.



Lift and remove the endcap

## 3. Remove Detent Cap and Spring

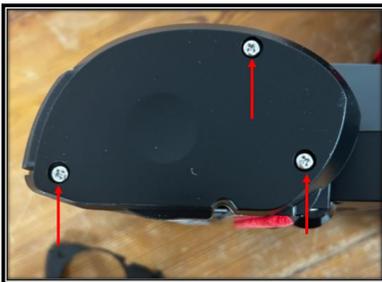
Locate the detent cap and spring on the nozzle base.



Remove both components and set them aside.

## 4. Remove Right Endcap

Using a Phillips-head screwdriver, remove the three screws securing the right endcap.



Lift and remove the endcap.

5. **Access Bottom of Nozzle**

Flip the unit onto its back so the bottom of the nozzle is visible.  
Remove the 12 screws indicated in the reference image.



6. **Remove Top Nozzle Cover**

Tilt the nozzle downward to expose the top cover.  
Carefully flip the top cover forward to remove it.

**Caution:** The LED wiring is connected to the top cover. Handle the wire gently to avoid damage.

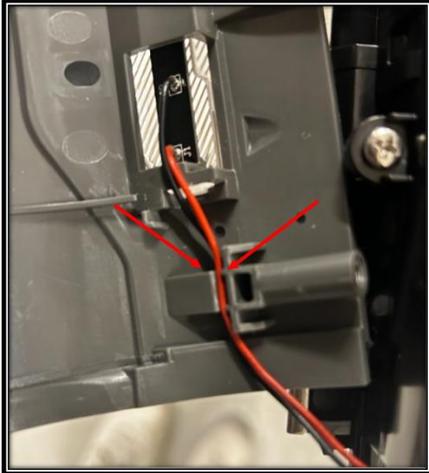
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# Reinstalling Nozzle Top Cover

Equipment Required: Phillips-head screwdriver

## 1. **Secure LED Headlight Wiring**

Ensure the LED headlight wire is properly routed through the wire channel.



Confirm that the wire is not pinched.

Carefully place the top nozzle cover back onto the unit.

## 2. **Reposition the Nozzle Cover**

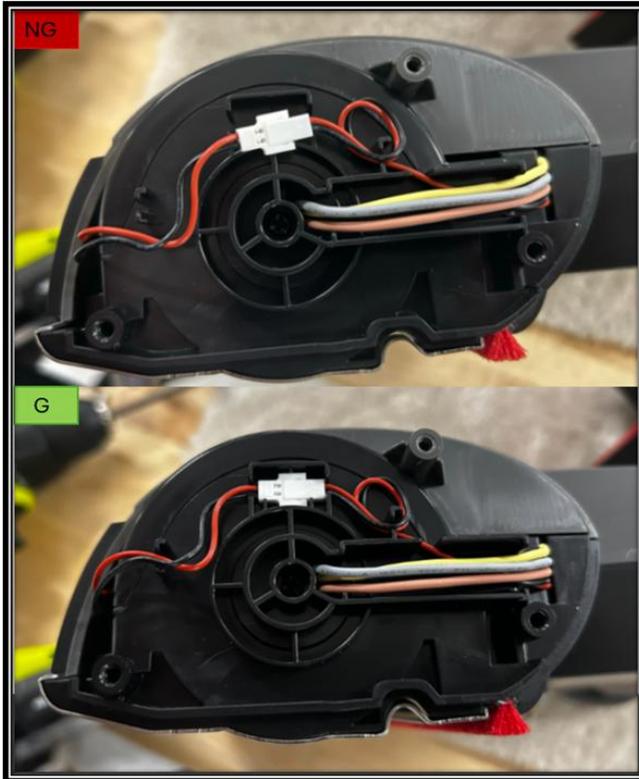
Push the nozzle upward so the base of the unit is visible.

Reinstall the screws in the following order:

- Start with the center screws
- Then install the rear screws
- Finish with the screws over the metal plate

## 3. **Reinstall Right Endcap**

Verify that all wiring is properly retained within its channels.



Position the right endcap and reinstall the three screws.

4. **Install Spring and Brushroll Detent**

Insert the spring and brushroll detent into the nozzle base.

5. **Reinstall Left Endcap**

Position the left endcap and secure it with the three screws.

6. **Reinstall Brushroll**

Place the brushroll back into the nozzle assembly, ensuring proper alignment and seating.

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# Replacing Wand Holder

Equipment Required: Phillips-head screwdriver.

Service Part No.: 440016578

## 1. Locate the Wand Holder

Identify the wand holder positioned on the back of the vacuum unit.

## 2. Remove the Wand Holder

Using a Phillips-head screwdriver, remove the screw securing the wand holder. Carefully detach the wand holder from the unit.

## 3. Install the New Wand Holder

Align the new wand holder with the mounting location. Using a Phillips-head screwdriver, insert and tighten the screw to secure it in place.

## 4. Verify Installation

Ensure the wand holder is properly seated and securely fastened.



# Replacing Hose Hook

Equipment Required: Phillips-head screwdriver.

Service Part No.: 440016575

## 1. Locate the Hose Hook

Identify the hose hook mounted on the side of the vacuum handle.

## 2. Remove the Existing Hose Hook

Using a Phillips-head screwdriver, remove the two screws securing the hose hook. Carefully detach the hook from the handle.

## 3. Install the New Hose Hook

Position the new hose hook in place. Using a Phillips-head screwdriver, insert and tighten the two screws to secure the hook firmly.

## 4. Verify Installation

Ensure the hose hook is properly aligned and securely fastened. Tug gently to confirm it is stable.



# Replacing Lid Latches

Equipment Required: Phillips-head screwdriver.

Service Part No.: 440016579

1. **Locate the Mounting Screw**

Identify the screw positioned underneath the lid latch assembly.

2. **Remove the Existing Latch Assembly**

Using a Phillips-head screwdriver, remove the screw. The latch assembly and metal latch holder will come off together.

3. **Install the New Latch Assembly**

Position the new latch assembly as shown in the reference photograph.

Use a Phillips-head screwdriver to insert and tighten the screw, securing the latch in place.



# Replacing Lower Hose Assembly

Equipment Required: none.

Service Part No.:440016583

## Remove Lower Hose

### 1. Release the Lower End of the Hose

Push the red latch downward and pull the lower hose to the right to disconnect it from the nozzle.



### 2. Release the Upper End of the Hose

Press inward on the two tabs located at the upper end of the lower hose to release it from the upper housing.



### 3. Remove the Hose Assembly

Carefully pull the lower hose assembly out of the unit. To assemble it back, follow the same instructions in reverse



## Lower Hose Installation

1. **Position the Hose Assembly**

Slide the lower hose assembly into its designated path beneath the upper housing.

2. **Secure the Upper End**

Push the two locking tabs on the upper end of the hose assembly into the unit until they click into place.

3. **Secure the Lower End**

Push the lower end of the hose toward the front of the unit, aligning it with the red latch. The hose will lock into the nozzle when properly seated.



## Replacing Nozzle Endcap – Left

Equipment Required: Phillips-head screwdriver.

Service Part No.: CH90600(v) &CH91600(v) 440016588,

CH90700 & CH91700 440016753

1. **Remove the Brushroll Assembly**

Detach the brushroll from the nozzle as per standard procedure.

2. **Remove the Left Endcap**

Using a Phillips-head screwdriver, remove the three screws securing the left endcap.



Carefully lift and remove the endcap from the unit.

3. **Check Detent Components**

Ensure the brushroll detent cap and spring remain properly seated on the unit.



4. **Install the New Endcap**

Position the new endcap on the unit, ensuring the brushroll detent aligns and seats correctly within the endcap assembly (refer to the photo for guidance).

5. **Secure the Endcap**

Use a Phillips-head screwdriver to reinstall the three screws, ensuring the endcap is firmly attached.

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# Replacing Nozzle Endcap - Right

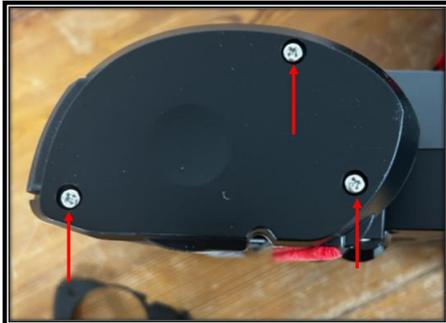
Equipment Required: Phillips-head screwdriver

Service Part No.: CH90600(v) &CH91600(v) 440016588,

CH90700 & CH91700 440016753

## 1. Remove the Existing Endcap

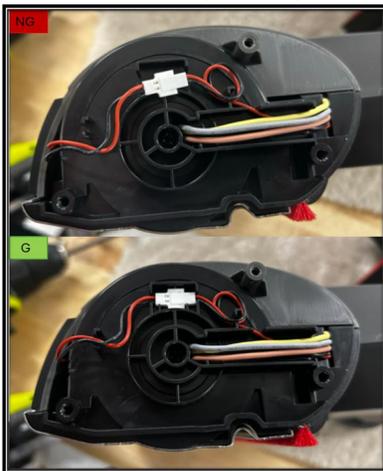
Using a Phillips-head screwdriver, remove the three screws securing the right endcap.



Carefully lift and remove the endcap from the unit.

## 2. Verify Wire Routing

Ensure all wiring remains properly routed and retained within its designated channels to prevent pinching during reassembly.



Refer to the provided photo for correct wire placement.

## 3. Install the New Endcap

Position the new endcap onto the unit, ensuring proper alignment.

Use a Phillips-head screwdriver to reinstall the three screws and secure the endcap.

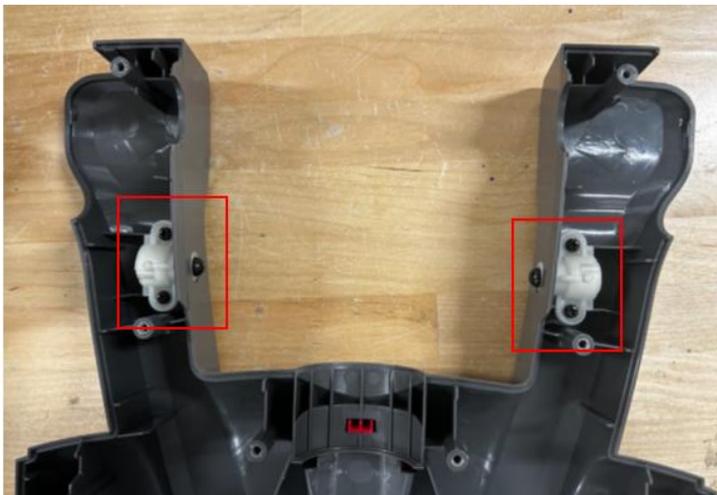
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# Replacing Detents

Equipment Required: Phillips-head screwdriver.

Service Part No.: 440016582

1. **Remove the Nozzle Cover**  
Follow the standard instructions to remove the [top nozzle cover from the unit](#).
2. **Locate the Detents**  
The detents are housed within the top nozzle cover.
3. **Remove the Existing Detents**  
Using a Phillips-head screwdriver, remove the two screws securing the detents. Carefully lift and remove the detents from their position.
4. **Install the New Detents**  
Position the new detents in place.  
Use a Phillips-head screwdriver to secure them with the two screws.
5. **Reinstall the Nozzle Cover**  
Follow the standard reassembly instructions to [reinstall the top nozzle cover](#).



# Replacing Headlight and Lens Assembly

Equipment Required: Phillips-head screwdriver, Flathead Screwdriver.

Service Part No.: CH90600(v) & CH91600(v) 440016590.

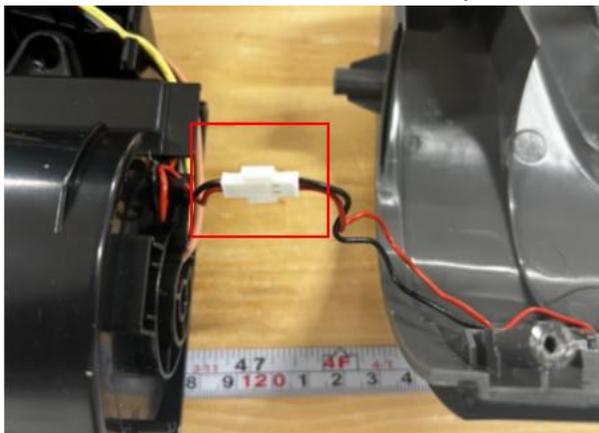
CH90700V & CH91700V 440016754

1. **Remove the Nozzle Cover**

Follow the standard procedure to remove the [top nozzle cover from the unit](#).

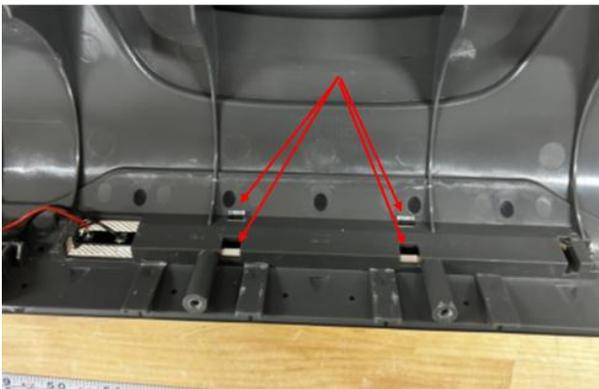
2. **Disconnect the Headlamp Connector**

Locate and disconnect the headlamp connector.



3. **Release the Headlamp Lens Tabs**

Using a flathead screwdriver, gently disengage the lens tabs from the nozzle cover.



4. **Remove the Headlamp Lens**

Carefully lift and remove the lens from the nozzle cover.

5. **Remove the Headlamp Strip**

Detach the headlamp strip from its mounting location.

6. **Install the New Headlamp Strip**

Position the new strip in place and ensure it is properly seated.

7. **Install the Headlamp Lens**

Align and press the lens into position until the tabs click securely.

8. **Reconnect the Headlamp Connector**

Reattach the connector to the headlamp strip.

9. **Reinstall the Nozzle Cover**

Follow the standard reassembly instructions to [reinstall the top nozzle cover](#).



# Replacing Hose Release Button

Equipment Required: Flathead Screwdriver

Service Part No.: 440016585

1. Use a Flathead screwdriver to pry the button from the nozzle cover
2. Remove the spring
3. Place the new spring over the cross feature.
4. Press the new button into position.



# Replacing Brushroll Motor

Equipment Required: Phillips-head screwdriver.

Service Part No.: 440016587

## 1. Disassemble Nozzle Assembly

Follow the standard procedure to remove the [top nozzle cover from the unit](#).

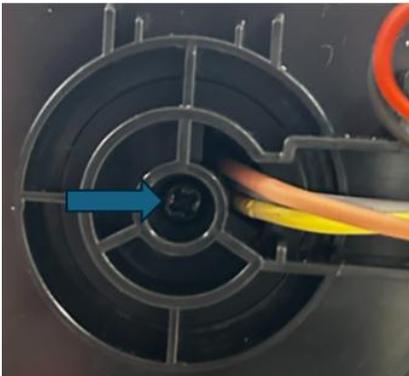
## 2. Disconnect Electrical Connectors

Locate and disconnect the three inline connectors (yellow, pink, and gray) that run from the nozzle PCBA to the brushroll motor.



## 3. Remove Brushroll Motor Mounting Screw

Using a Phillips-head screwdriver, remove the screw securing the brushroll motor in place.



## 4. Extract Brushroll Motor Assembly

Carefully pull the brushroll motor assembly through the brushroll chamber to remove it from the unit.

## 5. Install New Brushroll Motor

Thread the three wires from the new motor through the designated slot. Position the motor securely within the chamber.

## 6. Secure Motor with Screw

Reinstall the mounting screw and tighten it fully. Press on the motor to ensure it is firmly seated. If any movement is detected, further tighten the screw.

7. **Reconnect Wiring**

Route the three wires into their designated positions and reconnect them to the corresponding inline connectors.

8. **Secure Connectors and Wires**

Seat the connectors into their holders and tuck the wires neatly into the channel to prevent pinching during reassembly. (Fig. 23)



9. **Test Motor Functionality**

Install the battery and power on the unit to verify that the brushroll motor is operating correctly.

10. **Troubleshooting (if motor does not function)**

- a. Remove the battery.
- b. Cycle the power switch to discharge the unit.
- c. Check that all inline connectors are fully seated.
- d. Reinstall the battery and retest.

**Note:** *Once functionality is confirmed, remove the battery and cycle the power switch to discharge the unit.*

11. Follow the instructions to [reinstall the nozzle top cover](#)

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# Replacing Metal Base Plate

Equipment Required: Phillips-head screwdriver.

Service Part No.: CH90600(v) &CH91600(v) 440016588,

CH90700 & CH91700 440016753

1. **Remove the Nozzle Top Cover**

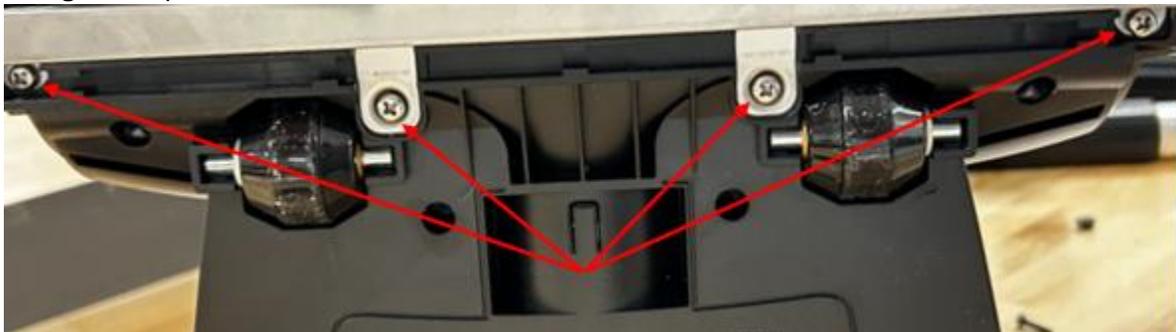
Follow the standard disassembly instructions to [remove the top nozzle cover](#).

2. **Remove the Scatterguard**

Slide the scatterguard to the right and lift it off the unit.

3. **Remove Base Screws**

Using a Phillips-head screwdriver, remove the four screws from the base of the unit.



4. **Detach the ESD Wire**

Remove the screw securing the ESD wire to the metal plate using a Phillips-head screwdriver.



5. **Remove the Metal Plate and Tie Bars**

Pull the metal plate off the unit. The tie bars will come off along with the plate.

6. **Install New Tie Bars**

Position the new tie bars over the securing features on the base.

7. **Install the Metal Plate**

Hook the metal plate over the front lip of the brushroll chamber first, then lower it into position.

8. **Reconnect the ESD Wire**

Attach the ESD wire to the metal plate using the retaining screw and a Phillips-head screwdriver.

9. **Reinstall Base Screws**

Secure the metal plate by reinstalling the four screws on the base of the unit.

10. **Reinstall the Scatterguard**

Slide the scatterguard back into place.

11. **Reinstall the Nozzle Top Cover**

Follow the standard reassembly instructions to [reinstall the top nozzle cover](#).

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# Replacing Front Wheels

Equipment Required: Flathead screwdriver

Service Part No.: 440026584

## Replacing Front Wheels

### 1. **Locate the Front Wheels**

Identify the front wheels positioned on the base of the vacuum unit.

### 2. **Remove the Old Wheels**

Using a flathead screwdriver, gently pry each wheel out of its housing. Apply steady pressure to avoid damaging surrounding components.

### 3. **Install New Wheels**

Align the new wheels with the mounting points and press them firmly into position until fully seated.

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# Replacing Rear Wheels

Equipment Required: Phillips Head Screwdriver, Flathead Screwdriver, Hammer

Service Part No.: 440026584

## 1. Remove Base Screws

Using a Phillips-head screwdriver, remove the two screws from the base of the unit.



## 2. Remove Old Wheels

Use a flathead screwdriver to pry each wheel off.

Leverage the brass insert of the wheel for controlled removal to avoid damaging surrounding components.





3. **Install New Wheels**

Align the replacement wheels with the mounting points.

Use a hammer to tap each wheel into place until fully seated gently.

4. **Reinstall Base Screws**

Secure the wheels by reinstalling the two screws on the base of the unit.

# Replacing Suction Motor Assembly

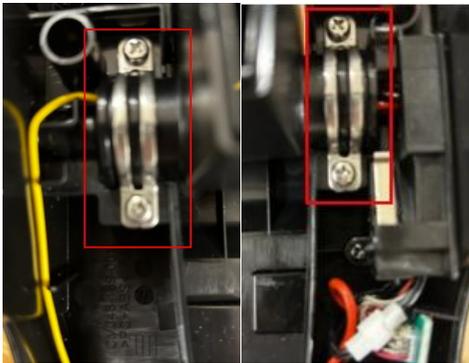
Equipment Required: Phillips-head screwdriver, Flathead screwdriver

Service Part No.: 440016589

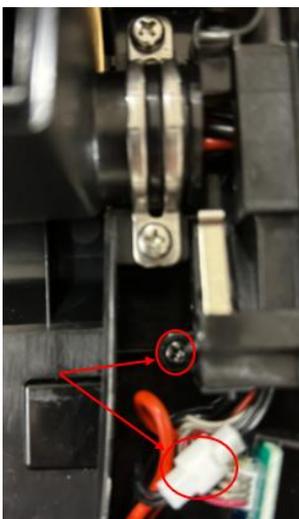
**Note:** Before beginning service, ensure the battery is removed from the unit. Then, cycle the power switch to discharge any residual power.

## Disassembly

1. Remove Upper Hose and Wand from Unit
2. Remove Filter from unit
3. Remove the screw and nut from the handle; then remove the handle.
4. Remove the crevice tool.
5. Remove the lower hose.
6. Follow instructions to [remove the nozzle top cover](#).
7. Remove pivot clamps from both left and right sides.



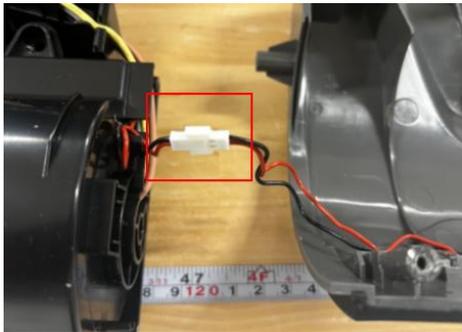
8. Remove the upright switch and disconnect its inline connector.



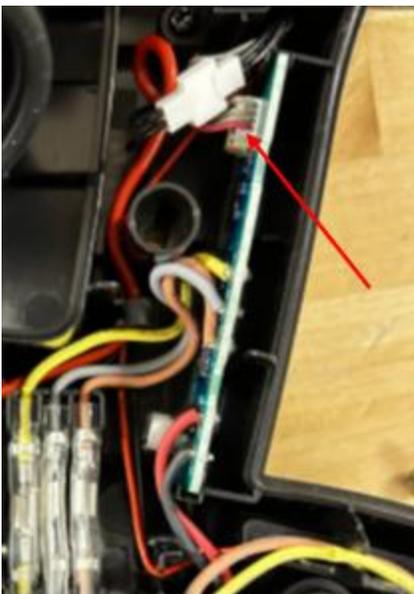
9. Disconnect the red and black inline connectors.



10. Disconnect the headlamp inline connector.



11. Disconnect the connector from the nozzle PCBA.



12. Disconnect the nozzle from the upright assembly, the ESD wire will still be connected; ensure the wire remains undamaged.
13. Remove 15 screws from the back spine.



14. Use a flathead screwdriver to pry off the back spine.
15. Slide battery rails off.
16. Remove 8 screws from the battery rails.



17. Remove the cover from the battery rail.

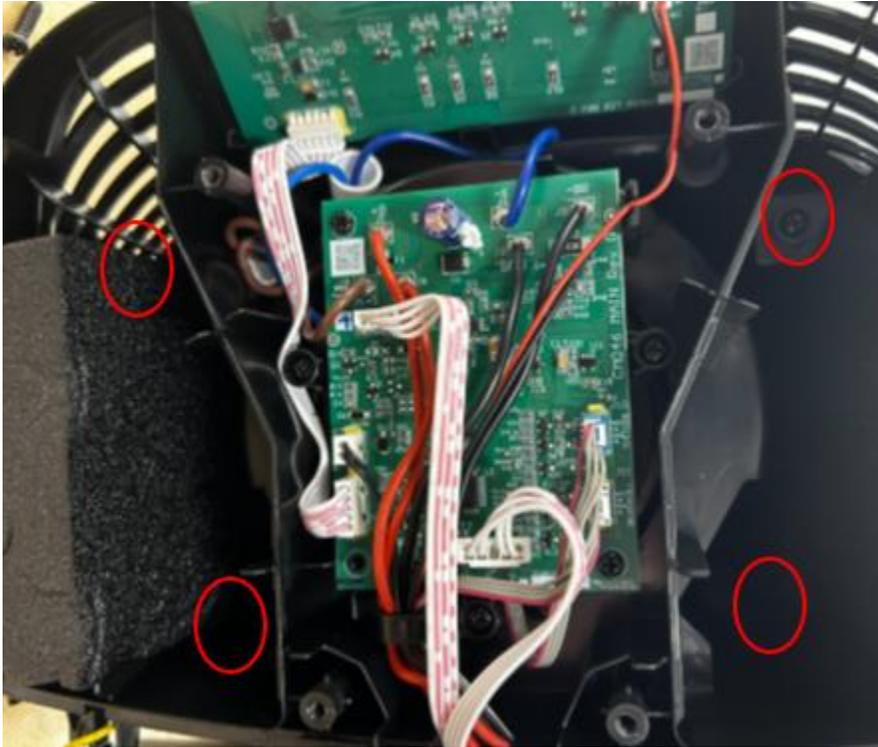


18. Disconnect the black and red battery wires.

19. Remove 8 screws from the base of the motor housing.



20. Remove the motor housing base plate.
21. Remove sound foam
22. Remove 4 screws securing the motor housing to the dirt bin assembly.



23. Disconnect power and communication connectors from the main PCBA.



24. Unhook wires from the back of the motor housing assembly.
25. Remove wires through pivot area
26. Remove the motor housing assembly.

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## Installation

23. Remove 8 screws from the replacement motor housing assembly base plate.
  24. Remove sound foam
  25. Install the motor housing assembly onto the dirt bin.
  26. Secure with 4 screws.
  27. Connect power and communication connectors to the main PCBA.
  28. Install sound foam
  29. Reconnect the black and red battery wires into battery rail. By feeding them through the opening in the battery cover, then reinstall on rail. (+Red -Black)
  30. Install the battery rail cover.
  31. Reassemble battery rails using 8 screws.
  32. Route all wiring through the back slot of the motor housing.
  33. Install the motor housing base plate.
  34. Secure with 8 screws using a Phillips-head screwdriver.
  35. Ensure handle wiring is routed through its retaining clips.
  36. Position the handle holder and verify ESD wire placement.
  37. Slide battery rails back into the stowed position.
  38. Route headlamp, upright switch, and inline connector wires through the pivot area.
  39. Reattach the back spine using 15 screws: press around the spine to engage clips.
  40. Set backspine pivot into nozzle assembly
  41. Route the headlamp wire to the right endcap area and connect the inline connector.
  42. Connect red and black inline connectors and seat them into holders.
  43. Connect the upright switch to the inline connector.
  44. Connect the nozzle PCBA connector.
  45. Ensure all wiring in the nozzle assembly is fully seated and free from twists or pinch points.
  46. Install the upright switch and screw, ensuring wires beneath are not pinched.
  47. Install pivot clamps and screws using a Phillips-head screwdriver.
  48. Follow instructions to [reinstall the nozzle top cover](#).
  49. Reinstall the handle.
  50. Reinstall filter
  51. Reinstall lower hose
  52. Reinstall upper hose
  53. Install crevice tool
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# Replacing Upright Switch

Equipment Required: Phillips-head screwdriver.

Service Part No.:440016913

**Note:** *Before beginning service, ensure the battery is removed from the unit. Then, cycle the power switch to discharge any residual power.*

1. Follow instructions to remove [the top cover of the nozzle assembly](#)
2. Locate the upright switch, & remove the securing screw using a Phillips-head screwdriver
3. Disconnect the inline connector for the switch.
4. Connect the replacement switch assembly.
5. Install the switch using a Phillips-head screwdriver to tighten the screw.
6. Follow instructions to [reassemble the nozzle top cover](#)

