

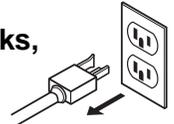
VACUUM MOTOR REPLACEMENT

COBRA, COBRA-H, COBRA-200H & HHP-100
(120V)

In the following steps, refer to the instructions that apply to either “EXTERNAL VAC MOTOR” (exhaust through the side of the machine) or “INTERNAL VAC MOTOR” (exhaust into the manifold) as it applies to your machine.

Refer to the schematic for your machine for identification and locations of motors.

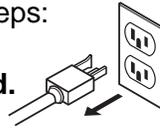
BEFORE BEGINNING REPAIRS: Unplug the machine, empty all water from the tanks, open the latches and prop the tanks up.



VACUUM MOTOR REMOVAL:

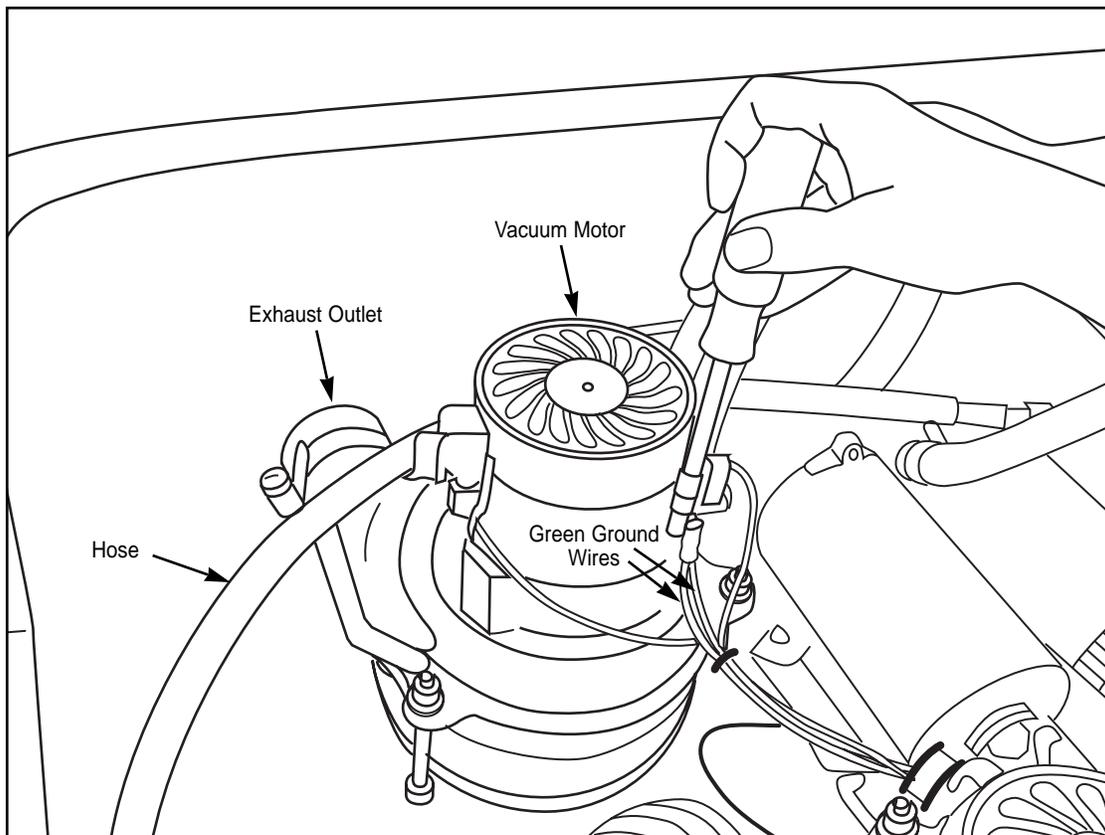
To remove either of the vacuum motors follow these steps:

1. Check to be sure the machine is unplugged.



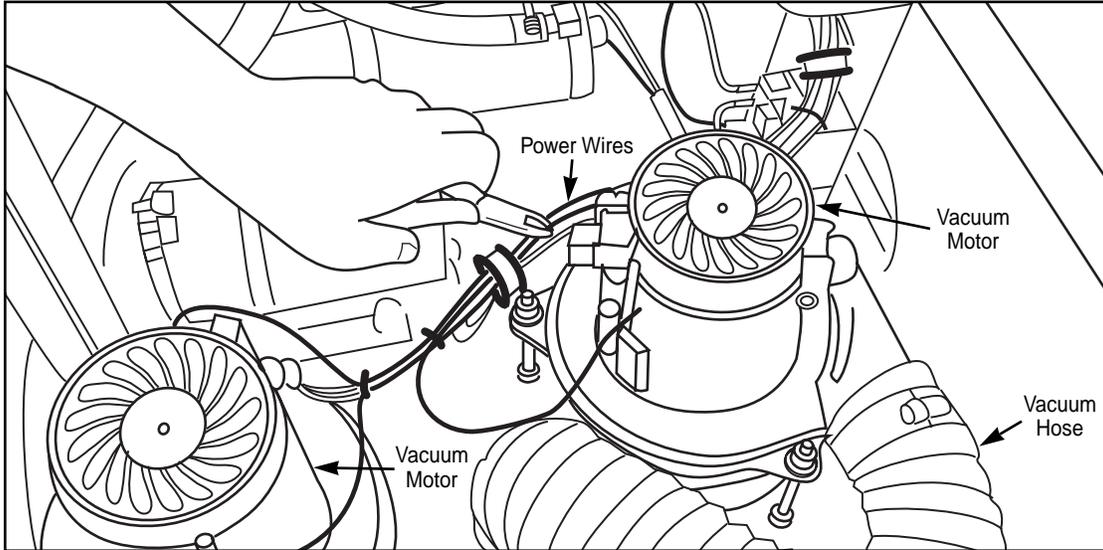
2. Loosen and remove the screw holding the green ground wires to the vacuum. Refer to STEP 2 DIAGRAM below.

STEP 2 DIAGRAM



3. Cut the 2 power wires to the vacuum 3 or 4 inches from the insulated butt connector. Leave enough wire for re-connecting. Note location of wires. If your machine has a circuit board in the vacuum system, it is not necessary to remove the wires from the board. Refer to STEP 3 DIAGRAM below.

STEP 3 DIAGRAM

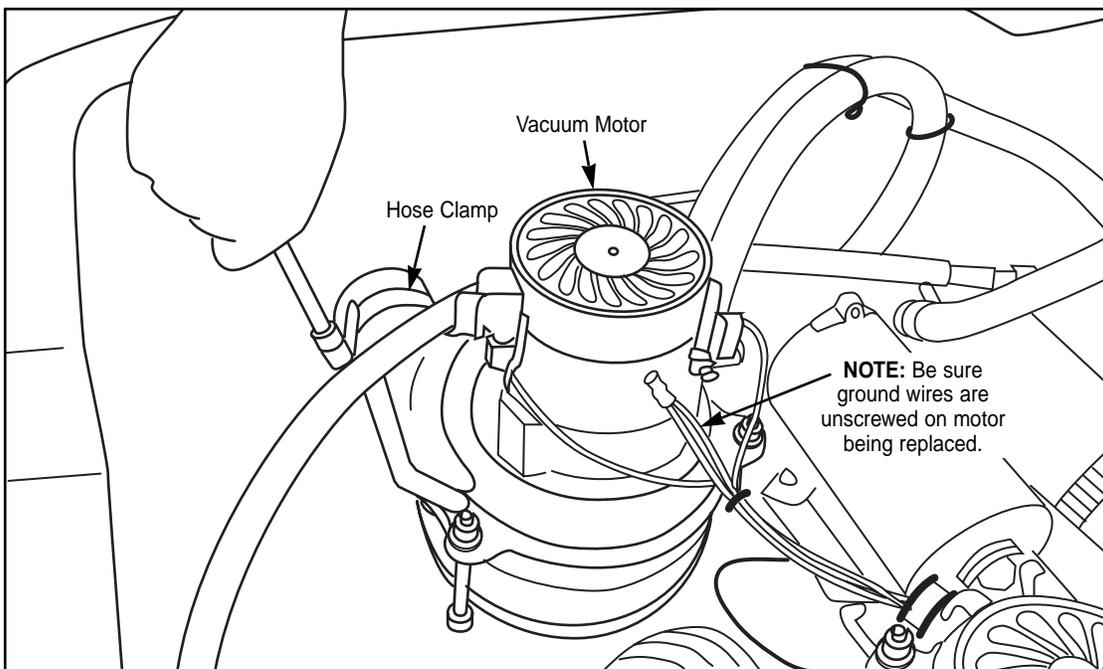


4a. EXTERNAL VAC MOTOR:

OLDER STYLE MACHINES: Cut the tie wraps that hold the insulation to the vac motor exhaust port and exhaust flange in the side of the machine. If your machine has the older style exhaust, we recommend updating with a new style (part #2011 and #156).

NEWER STYLE MACHINES: Loosen the hose clamp that secures the vacuum motor exhaust port to the exhaust flange in the side of the machine. Pull the flange out of the way, from the outside of the machine. Refer to STEP 4a DIAGRAM below.

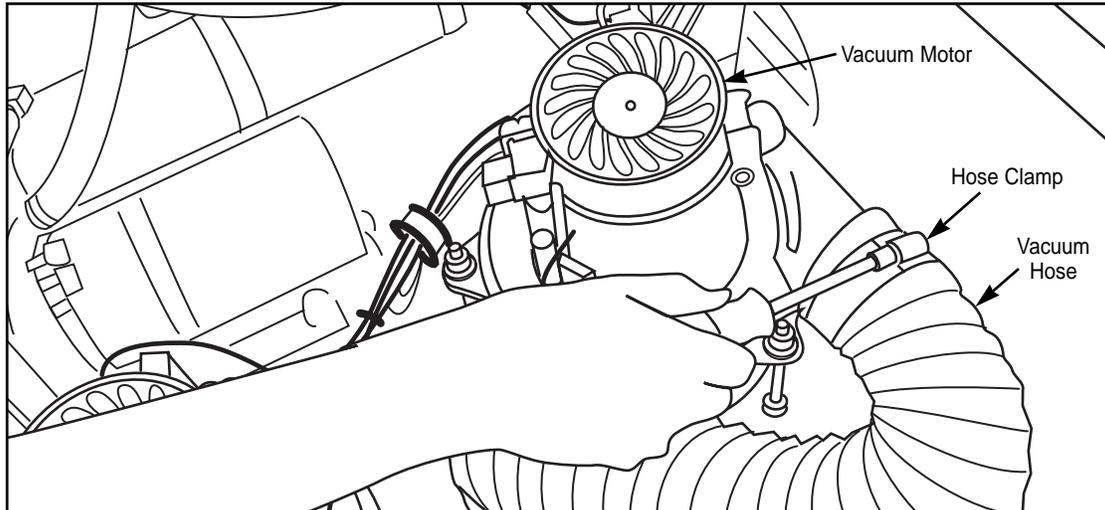
STEP 4a DIAGRAM



4b. INTERNAL VAC MOTOR:

Loosen the hose clamp and pull the vacuum hose off the vac motor exhaust port. Leave the hose attached to the manifold. Refer to STEP 4b DIAGRAM below.

STEP 4b DIAGRAM



5. Remove the 3 nuts which hold the motor to the mounting bolts.
6. Gently pull the vacuum off the mounting bolts. Avoid pulling on the solution hose(s) or wires. Replace the vacuum gasket, if damaged, with part #2013.

VACUUM MOTOR INSTALLATION:

To install a new vacuum motor follow these steps:

1. Align the vacuum motor over the 3 mounting bolts and gently slide the motor down.
2. **EXTERNAL VAC MOTOR:**
 - (A) Align the exhaust port of the vacuum motor to the exhaust port hole in the side of the base. Be sure to align correctly.
 - (B) Tighten the 3 mounting nuts in a rotational pattern until the vacuum gasket just begins to compress. **Do not over-tighten!**
 - (C) Slide the exhaust flange into the base so that it fits over the exhaust port on the motor. Tighten the flange with the hose clamp. This will prevent exhaust from leaking into the base area.

INTERNAL VAC MOTOR:

- (A) Tighten the mounting nuts in a rotational pattern until the vacuum gasket begins to compress. **Do not over-tighten!**
 - (B) Push the vacuum hose onto the exhaust port on the vacuum and tighten the hose clamp. Make a tight seal so that the vacuum lift is not reduced and the exhaust air does not blow into the base of the machine. **Do not over-tighten.**
3. Fasten the green ground wires to the vacuum.
 4. Strip the insulation from the ends of the wires as necessary and connect the power wires from the vacuum to the matching wires. Do not leave any wires exposed. Refer to the wiring diagram for your machine.