

V-SIX MOTOR BRUSH REPLACEMENT

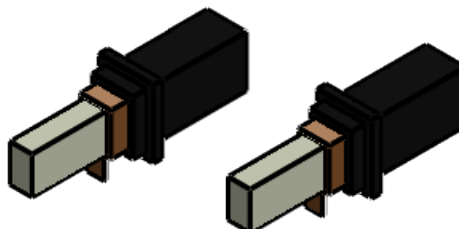
PACKING LIST

1 - Pair of Motor Brushes

Tools Required:

Phillips Head Screwdriver

Flat Head Screwdriver



MOTOR BRUSH REMOVAL

1. To start ensure that the *ON/OFF/REMOTE* switch on the front of the V-Six, as well as the Main Disconnect switch on the back of the V-Six, are both in the *OFF* position. Disconnect the Power Cord from the unit.
2. With power disconnected from the unit, unscrew the 15 Phillips Head screws that secure the Case Lid to the top of the unit. Lift the Case Lid off of the unit, and set the Case Lid and screws aside to remount at the end the install.
3. Next, remove the Cool Air Intake Filter from the Filter Bracket on the back of the V-Six by sliding the filter upwards. Once it has been fully removed from the Filter Bracket, unscrew the two Phillips Head Screws that secure the Filter Bracket and Intake Muffler to the Case. Set the Intake Filter, Filter Bracket, and Intake Muffler aside for use later.
4. With the Case Lid removed and the Intake Muffler out of the way, you will see the two Motor Brushes and two Brush Holder Clips on the top of the Motor Housing (Fig. 1). Place the tip of your Flat Head Screwdriver into one of the openings between the Motor Housing and the Brush Holder Clip (Fig. 2).
5. Once the screwdriver is in position, begin to pry the Brush Holder Clip upwards. This step should not take a lot of effort, so if the Brush Holder Clip is not moving easily, ensure that the screwdriver has enough grip and leverage under the Brush Holder Clip.

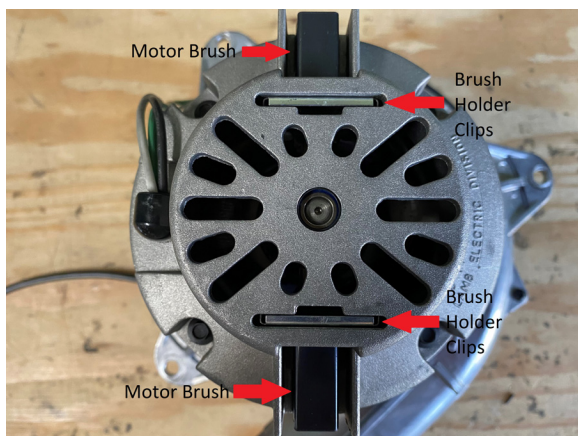


Fig. 1



Fig. 2

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6. Once the Brush Holder Clip is pried up as shown in Figure 3, you can grab it with your hand and remove it from the Motor. Make sure to keep these Clips so that you can properly mount your replacement brushes. Complete these same steps to remove the other Brush Holder Clip from the Motor Housing.
7. With both of the Brush Holder Clips removed, grab one of the Brushes and begin to pull it out of the Motor Housing. You may need to tilt the Brush at an angle to get it completely out of the Motor Housing, but it should slide out easily (Fig. 4).



Fig. 3

a. **NOTE: The Brush shown in Figure 4 is for example only. The Brushes you are replacing will not look like this and should be worn down to the Brush Holder.**

8. Once the Brush is out of the Motor Housing, you will notice a single wire attached to the bottom of the Motor Brush Holder (Fig. 5). Carefully disconnect this wire from the Motor Brush Holder and try to not let the wire fall back into the Motor Housing.
9. Complete these steps for the other worn Motor Brush and properly discard.

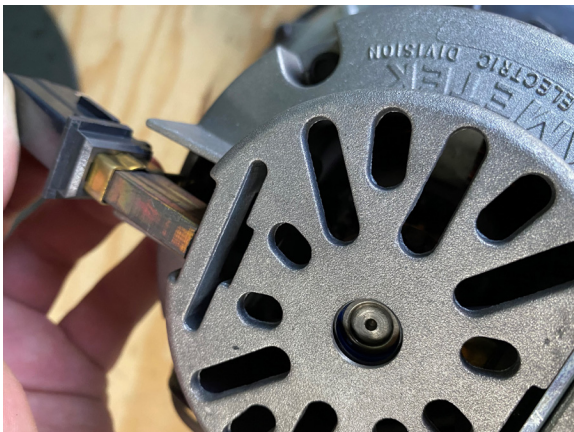


Fig. 4

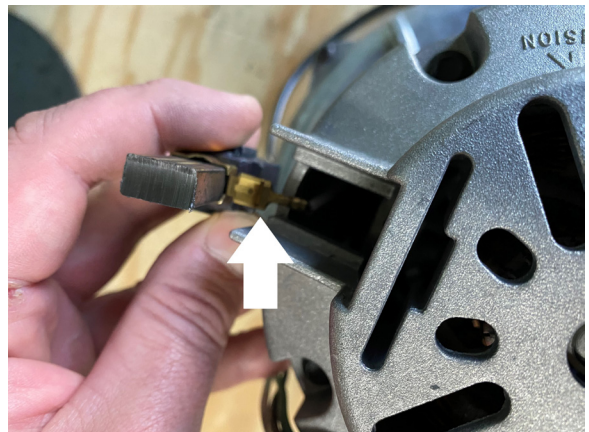


Fig. 5

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MOTOR BRUSH INSTALLATION

1. With both used Motor Brushes removed from the Motor Housing, remove the new Motor Replacement Brushes from all packaging.
2. Start with one of the Motor Replacement Brushes and connect the single wire coming from inside the Motor Housing to the gold tab on the bottom of the Brush Holder as seen in Figure 5.
 - a. **Note: It does not matter which side of the Motor Housing the Replacement Brushes are mounted.**
3. Once the wire has been connected to the Brush Holder, begin inserting the Replacement Brush into the Motor Housing with the connected wire oriented down. You may need to tilt or wiggle the Replacement Brush until it is fully inserted into the Motor Housing. The Back of the Brush Holder should be flush with the Motor Housing (Fig. 1).
4. Continue to hold the Replacement Brush in position and begin to slide in the Brush Holder Clip into the top of the Motor Housing. Ensure that the flanges of the Brush Holder Clip are facing towards the center of the motor.
5. Push the Brush Holder Clips down into the Motor Housing until flush with the top of the Motor. For extra measure, use the tip of your Flat Head screwdriver to press the Brush Holder Clip to ensure that it is fully seated. The Replacement Brush should now remain in place.
6. Complete these same steps for the other Replacement Brush.
7. Before closing the Case, carefully plug in the Power Cord into the back of the V-Six, flip the Main Disconnect Switch into the *ON* position, then flip the *ON/OFF/REMOTE* switch on the front of the V-Six into the *ON* position. The motor should begin to run.
 - a. **If the Motor does not run, flip both switches back to the OFF position and disconnect the unit from power. Revisit installation steps 1-5 to ensure that the Replacement Brushes have been properly installed.**
8. If the Motor ran during the test, flip both switches into the *OFF* position and disconnect the unit from power. Remount the Inlet Filter Bracket by screwing the two Phillips Head screws through the mounting holes in the Filter Bracket, through the rear of the Case, and into the Inlet Muffler. Tighten until snug.
9. Slide the Inlet Cooling Air Filter downwards into the Filter Bracket on the rear of the Case, then remount the Case Lid to the top of the Case. The rounded corners of the Case Lid should be at the front of the unit. Secure the Case Lid to the Case with the 15 Phillips Head Screws removed previously. Your unit is ready for use again.

V-SIX REPLACEMENT PARTS

The brush life on a new Motor should last from 800-1000 hours depending on use. After the first replacement of brushes, the life expectancy will range from 480-600 hours, and 320-400 hours after the second replacement set. Vaniman recommends that the Motor be replaced after the second brush replacement, if not after the first brush replacement.

HEPA Filter Cartridge - **PN: 96017**

V-Six Motor Assembly - **PN: 97107**