

# VP1000 Vane & Rotor Service & Replacement Guide

**Caution**  **Disconnect power before beginning service.**

1. The work area **must** be clean and have sufficient lighting.
2. Disconnect the vapor piping connected to the **IN** and **OUT** ports of the VP1000 cover assembly.
3. Remove the four Allen head screws and lock washers that secure the pump cover assembly to the pump housing and remove the cover carefully.

**Caution**  **Use a spill cloth when removing the cover, as there may be some gasoline inside the pump cavity.**

4. Carefully turn the rotor assembly by hand until the shaft key notch is at the 12 o'clock position. (See Figure 1)
5. Remove the rotor, vanes and shaft key from the pump housing.

**Note:** Place your hand or a container under the rotor while removing. Do not use any sharp objects that would scratch the surfaces of the pump cavity, pump shaft, rotor, or vanes.

6. Rotate the shaft by hand. If the shaft does not rotate freely, the entire vacuum pump needs replacement (p/n VP1000-5).
7. If the rotor and vanes are cracked, chipped, excessively worn or excessively dirty, the rotor and vanes should be replaced because cleaning will not remedy these conditions (p/n VP1000VRC or VP1000VRC-P).
8. If there is no visible damage, use a lint-free cloth with isopropyl alcohol to clean the rotor and vanes.
9. Using a lint-free cloth with isopropyl alcohol, thoroughly clean: the inside of the pump ring and rear of the pump cavity, the rotor shaft, and the inside of the pump cover.
10. Reposition the shaft (if necessary) so that the shaft key notch is in the 12 o'clock position. Install the cleaned original or new shaft key onto the shaft.
11. Carefully install the cleaned original or new rotor onto the shaft followed by the cleaned original or new vanes into the rotor.

**Note:** The rotor assembly should slide on to the shaft easily, without excessive force. (Rotors and vanes are reversible)

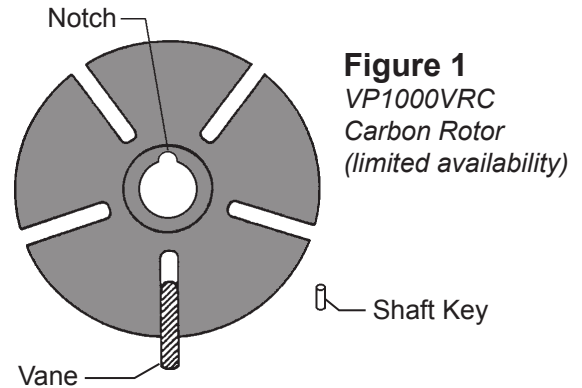
12. Lightly lubricate and install the new O-Ring for the pump housing.

**Note:** Do not allow any lubricant to get inside the pump housing.

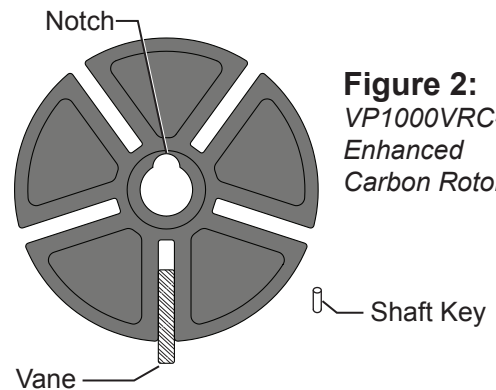
13. Install the pump cover using the four Allen head screws and lock washers removed in step 3 and cross tighten.

**Note:** Use caution when sliding the pump cover over the O-Ring seal to prevent cutting or tearing.

14. Re-connect the vapor piping to the **IN** and **OUT** ports of the pump cover assembly that was removed in Step 2.
15. Re-apply power. Test for normal operation. (See VP1000 Vacuum Performance Test Procedure)



**Figure 1**  
VP1000VRC  
Carbon Rotor  
(limited availability)



**Figure 2:**  
VP1000VRC-P  
Enhanced  
Carbon Rotor