

## 9.4 Rubber Flange Sleeve Replacement

### Safety



Use lockout / tagout procedures prior to starting work.

VST recommends replacing the Rubber Flange Sleeve every time Maintenance is performed on the GREEN MACHINE even if the Rubber Flange Sleeve does not look damaged or worn.

**NOTE: The Rubber Flange Sleeve replacement is done with the vacuum pump motor assembly still attached to the GREEN MACHINE base.**

### 9.4.1 Removing the Rubber Flange Sleeve

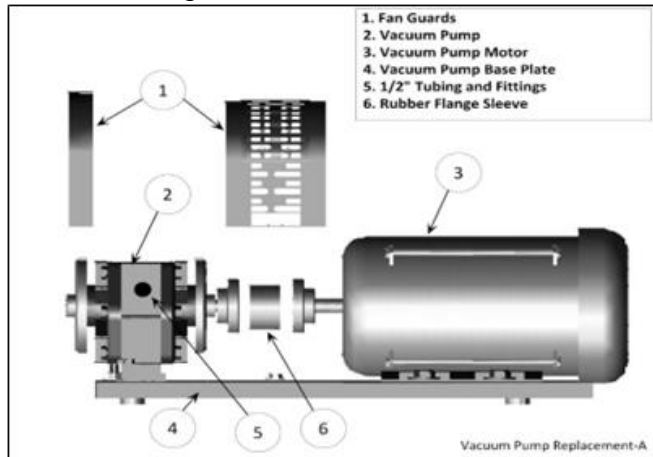
See Figure 9-7.

1. Turn off the GREEN MACHINE breaker in the main electrical distribution panel.
2. Follow lockout & tagout procedures prior to starting work.
3. Unscrew the 8 cover screws and remove the cover from the GREEN MACHINE.
4. Remove the two tubes attached to the pump. **CAUTION:** The fittings are a Parker 45° flare, use caution not to damage the 45° flare fittings or threads after removal.



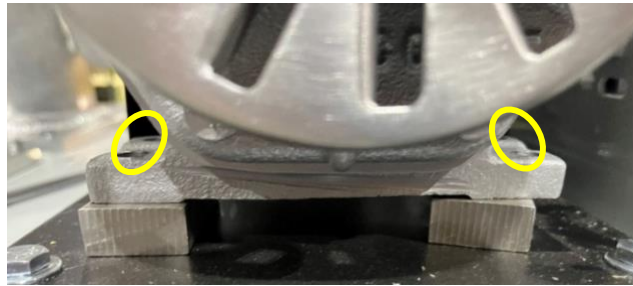
Figure 9-6: Two tubes removed from vacuum pump

5. Remove the fan guards



**Figure 9-7: Vacuum Pump Assembly and Components**

6. Remove the 4 vacuum pump bolts. Keep the shims and 4 bolts for reuse.



**Figure 9-8: Vacuum Pump Mounting Bolts**

7. Slide the pump away from the motor so the rubber flange sleeve can be removed.

#### 9.4.2 Replacing the Rubber Flange Sleeve

1. Insert a new rubber flange sleeve and slide the pump back to its original position.
  - Make sure the motor-side drive coupling is snug (not tight) against the rubber flange sleeve.
2. Replace any shims that moved while moving the pump.
3. Re-install and tighten the 4 pump mounting bolts to the base plate. Make sure the Motor Shaft and Vacuum Pump shafts are in alignment.
4. Re-install the fan guard over the coupling flanges, and the side fan guard.
5. Reinstall the two tubes to the vacuum pump.
 

**CAUTION:** Do not use any thread sealing compound when assembling the 45° flare nuts. When tightening the 45° flare nuts: Clamp the tube flare between the nut and nose body of the tube, then screw the nut on the fitting finger tight. Tighten the nut with a wrench an additional ¼ turn for a metal-to-metal seal. Over tightening the nut will damage the tube flare and will not create a proper seal.
6. Put the cover on the GREEN MACHINE and screw on the 8 cover screws.
7. Remove the lock(s) and tags from the lockout/tagout and turn the GREEN MACHINE breaker back on at the main electrical distribution panel.
8. After the work is completed, return to the Main Screen on the VST Control Panel. The GREEN MACHINE is now operational.