

### PURPOSE

The purpose of this technical guideline is to provide instructions on replacing a current vacuum pump with a high flow vacuum pump.

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### PARTS INCLUDED

- High flow vacuum pump kit
- For delivery systems built before 07/2018, purchase of 95-0339, Bottom Drain Sediment Bowl Upgrade is required, to be installed in conjunction with the high flow vacuum

### TOOLS REQUIRED

- Screwdrivers; Phillips and flat head
- Wrench set

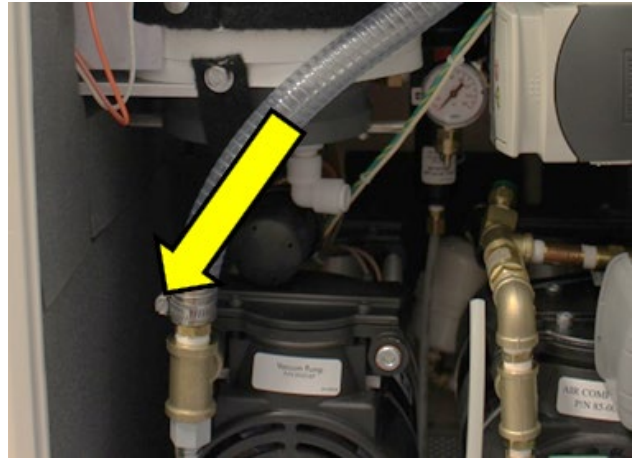
### INSTRUCTIONS

1. Turn off power to the system and unplug from the electrical outlet.
2. Open the back panel of unit using a flat head screwdriver. There are two quick-turn screws on the back of unit. Move suction tube and electrical cord out of the way of back door. (Fig. 1)



**Fig. 1**

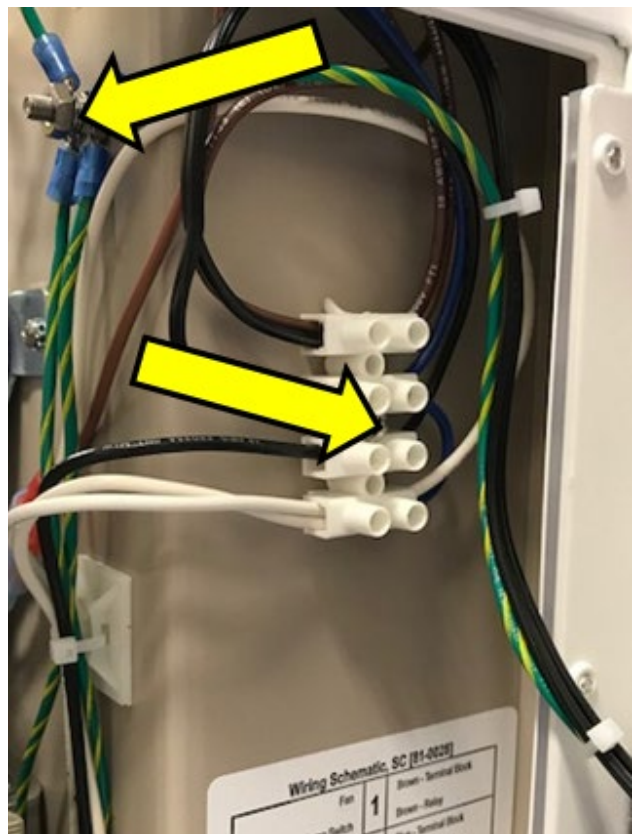
3. Loosen the hose clamp from the hose barb connector on the vacuum pump, and slide the suction hose off of the hose barb.



**Fig. 2**

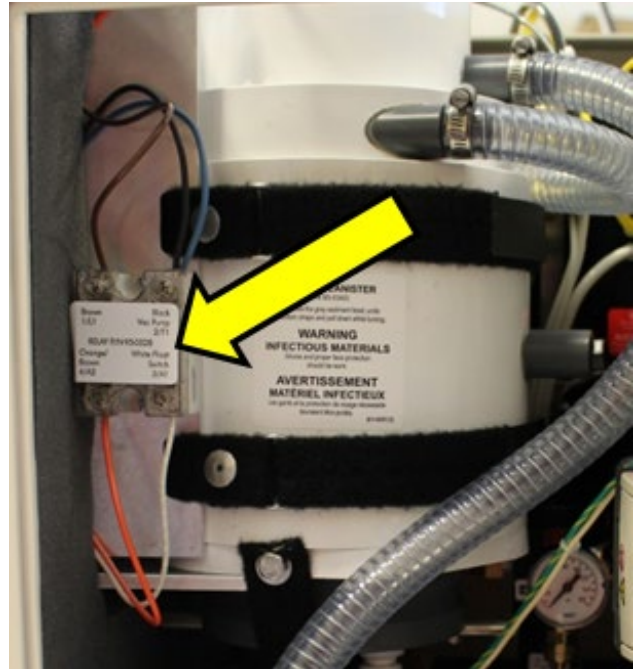
4. Locate the wire terminal block on the right side of the chassis. (Fig. 3)
5. Following the wiring label, disconnect the wire for the vacuum pump.
6. Locate the ground stud, remove the nut and remove the ground wires.

**NOTE:** When replacing the ground wires the ground wire from the pan (top) of the cart needs to be put on first.



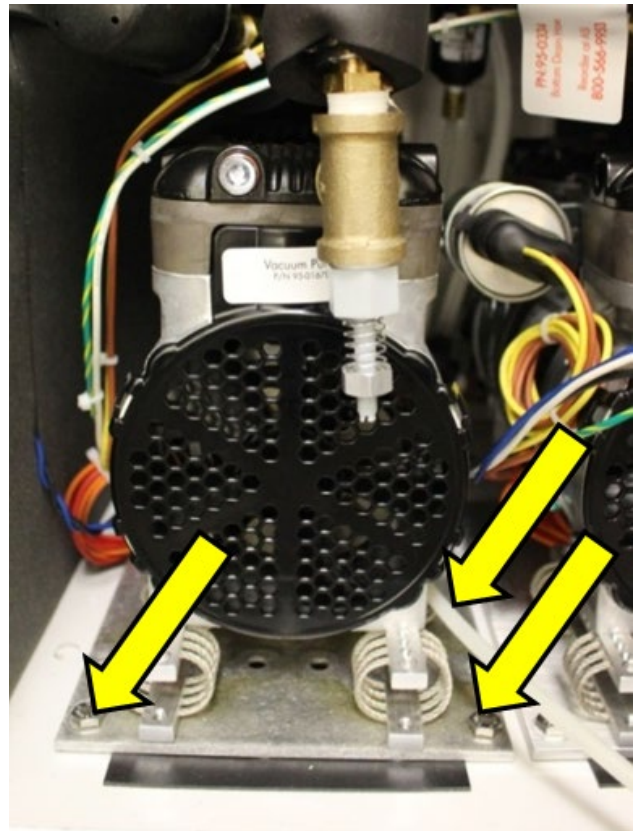
**Fig. 3**

7. Locate the relay on the left side of the chassis. (Fig. 4)
8. For a 115V cart remove the blue and black wires from the top right terminal on the relay.
9. For a 230V or dual voltage cart remove the blue wire from the top right terminal on the relay.



**Fig. 4**

10. Remove the 3-1/4"-20 hex head screws (Fig 5), from the vacuum plate.
11. The vacuum pump assembly should now be able to be pulled from the cart.

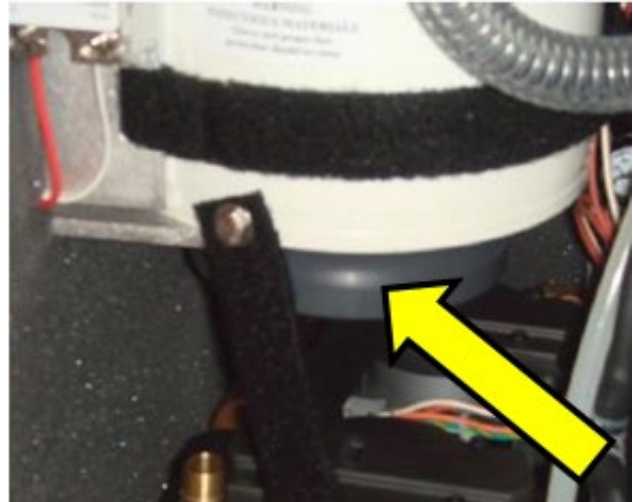


**Fig. 5**

12. **OPTIONAL STEP** for Delivery Systems older than 07/2018:

Follow TG-95-0339 to replace the sediment bowl on the suction canister.

Continue with Step 13 on next page.



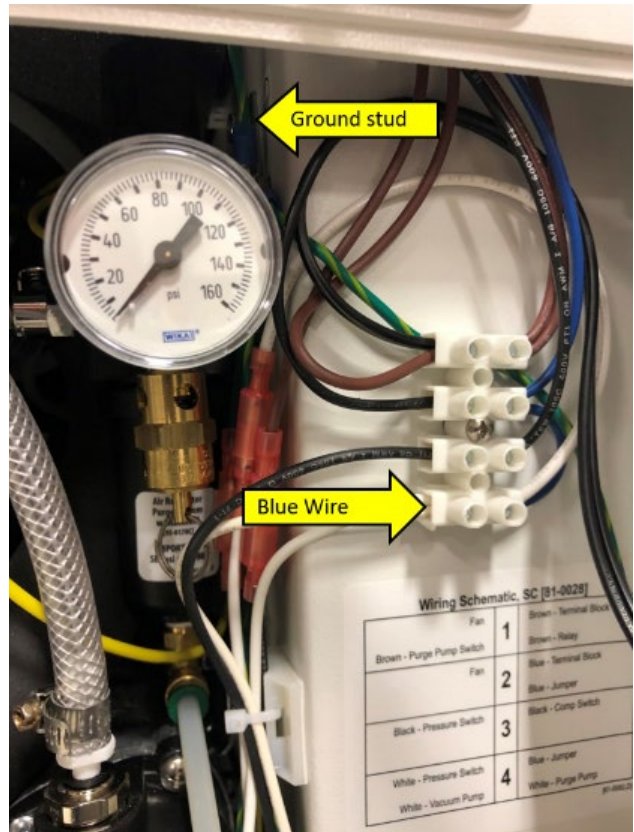
**Fig. 6**

13. Following the reverse order, install the high flow vacuum pump.
  - a. Secure the vacuum plate (Fig. 5) to the base of the cart using the three (3) 1/4"-20 hex head screws.
  - b. Route the brown wire to the top right terminal on the relay. (Fig 7A)
 

Route blue wire to terminal strip port labeled "White Vacuum Pump". (Fig. 7B)
  - c. Attach ground wire to ground stud (Fig. 7B), the wiring terminal and ground stud (Fig. 3), and reconnect all of the wiring.
  - d. Secure the suction hose to the hose barb connector on the vacuum and tight the hose clamp. (Fig. 2)
  - e. Close the back panel and turn on the cart to verify the vacuum pump is running. (Fig. 1)



**Fig. 7A**



**Fig. 7B**

**WARNINGS/CAUTIONS**

**WARNING!** Only qualified personnel should service or repair this device. This device should only be serviced/repared by a qualified service technician who is proficient in the repair of electromechanical dental equipment and who understands the complexities and risks of working within the device and observes proper safety precautions.



**WARNING – Compressed Air.** The compressed air system that operates this unit is under pressure. Compressed air can propel dust or loose particles and can cause bodily injury or damage. Always turn the system off and bleed off air pressure before attaching or removing air lines or accessories or servicing this unit. All air lines should be periodically inspected and replaced if worn or damaged. If an outside compressed air supply is used to power this unit, the air supply must be regulated to 80 psi or below. Excessive air pressure could cause certain components to rupture.



**WARNING – Electrical Voltage.** This system is powered by high voltage electricity. Like any other electrically powered device, if it is not used properly, it can cause electrical shock. Always plug the power cord into an electrical outlet with adequate fuse protection and proper grounding. In the event of a short circuit, grounding reduces the risk of shock by providing an escape wire for the electric current. Improper grounding of the unit can result in a risk of electric shock. Always unplug the unit before doing any service or repair to the unit.



**WARNING – Presence of Heavy Metals/Amalgam.** This cart may be equipped with optional suction instruments. As part of dental procedures, particles of amalgam may be suctioned into the dental suction handpieces and collected within the system and trap filter.



**WARNING – Infectious Materials.** Infectious disease workplace safety protocols to safeguard against cross contamination of infectious disease should always be observed. When maintaining the suction system or emptying the contents of the suction waste container, safe precautions and practices including the wearing of face mask, eye protection and gloves are to be followed.



**CAUTION!** The irrigation system may contain chemicals that are caustic or corrosive. Always verify with the operator of the system to determine which chemicals they are using within the system. Always follow workplace safety protocols when doing maintenance or service of the system including the wearing of face mask, eye protection and gloves for proper protection of exposed skin, breathing and eyes.