



The Leader In Advanced Systems Integration

Advanced Dental Systems® & Advanced Endodontic Systems®  
www.asimedical.net | (303) 766-3646

## Technical Guideline

### Install Vacuum Rebuild Kit

TG-95-0068

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#### PARTS INCLUDED

- Vacuum Rebuilt Kit

#### TOOLS REQUIRED

- Flat head screwdriver
- Phillips screwdriver
- 5/32" Allen wrench
- 7/16" nut driver/socket



**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 electro-mechanical dental equipment and who understands the complexities and risks of working within the device and observes proper safety precautions.



**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 – 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.

#### INSTRUCTIONS

Refer to the exploded view in operation manual during the repair if further information is needed.

1. Unplug ASI unit from main power.
2. Open door located on the back of the unit using a flat head screw driver to access the vacuum.
3. Disconnect electrical wires to pump.
4. Untighten hose clamp using flat head screwdriver from 5/8" ID polyspring tubing. Remove from brass barb.
5. Locate the three (3) locking hex head bolts on the bottom of the metal plate holding the vacuum. There are two in the front and one in the center on the left side. Remove them using a 7/16" wrench or socket.  
For units with slide mounts, remove (6) Allen screws, pull vacuum pump out with slides attached.

6. Once you have removed bolts, carefully lift and slide the vacuum with plate towards you and remove from the chassis. You may need to rock back and forth to remove.

**NOTE:** Mark the orientation of the ports so cover will be reinstalled correctly.

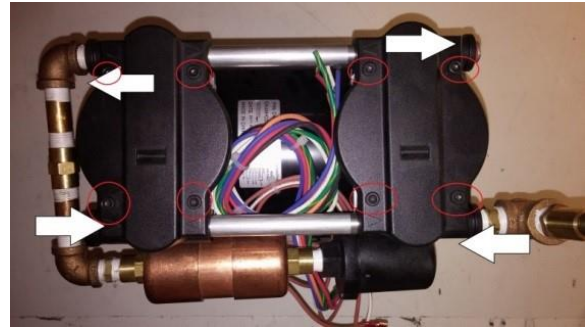


Fig. 1

White arrows indicate direction of air flow; red circles indicate location of Allen screws.

7. Remove eight (8) cap screws from the head of the pump assembly using a 5/32" Allen wrench (see Fig. 1). Note orientation of valve plates. Remove valve plates (Fig. 2); then remove head assembly (Fig. 3).



Fig. 2



Fig. 3

8. Remove retainer screws using 5/32" Allen wrench (Fig. 4). Pull cylinder, retainer plate away from piston. Remove retainer plate and piston cup from cylinder.



Fig. 4

Red circles show retainer screws



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- Place retainer plate on new piston cup.

**NOTE:** Clean retainer plates with water-based solvent. Take care not to scratch valve seats.



Fig. 5

- Set piston cup and retainer plate in new cylinder (Fig. 6).

**TIP:** Equally displace pressure into cylinder using both thumbs. Cup will align as it goes into position and down the metal cylinder. *The cup may misalign if equal pressure is not applied.*



Fig. 6

- Reinstall retainer plates onto piston rod. Apply a thread locking compound (Loctite® 222) to retainer screws. Torque screws to 34-38 in. lbs. using 5/32" Allen wrench.

**TIP:** Once retainer plates are mounted to the piston rods, press down on one side to manually cycle will ensure cups are seated correctly.

- Install leaf valves using crescent wrench or nut driver. Line up smaller valve retainer and square when tightening leaf valve. Check that the orientation with the ports is correct (Fig. 7).



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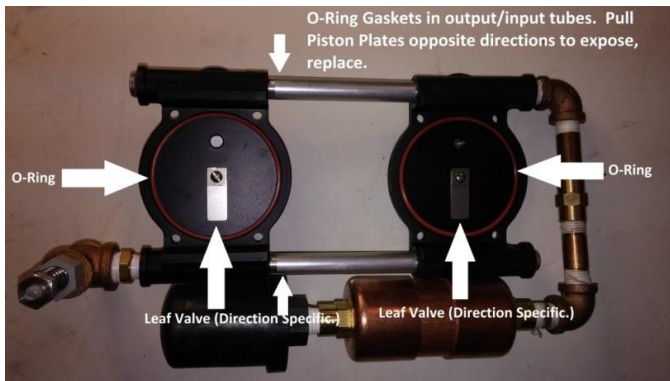


Fig. 7

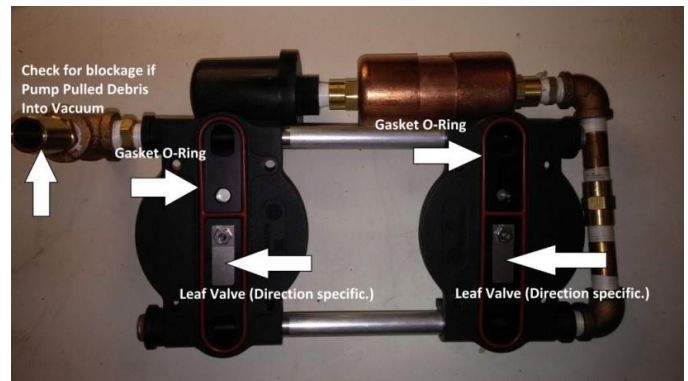


Fig. 8

13. Apply a thread locking compound (Loctite® 222) to retainer screws. Torque screws to 10-13 in. lbs. using 5/32" Allen wrench.
14. Install cylinder O-ring in the bottom of valve plates. Remove old cylinder O-rings (Fig. 7). Remove old gasket O-ring. Install new. Remove the four (4) tube O-rings. Install new.
15. Reinstall head assembly over valve plate. Check that the orientations of valve plates with the ports are correct.
16. Torque screws to 50 in. lbs. using 5/32" Allen wrench.  
**TIP:** Reconnect electrical wires to vacuum, polyspring tubing to brass, and test for proper function. If the pump was not rebuilt correctly or another issue is present, this will save service time of pulling vacuum out of the unit. Factory vacuum pressure is 12 inHg.
17. Reinstall vacuum into unit reversing steps 6-3.

If pump still does not produce proper vacuum or pressure, contact ASI Customer Support.