Installation of individual Fluid Pumps in PLC Controlled IVS Shampoo Combos
(Does not apply to Single Board Controlled Combos)

1. Ensure electrical power is safely removed from the Vacuum and locked out to prevent accidental energizing of the unit while it is being serviced.
2. Remove the chassis from the vacuum. Set the Chassis aside in a protected location.
3. Disconnect all wires from the terminal strip located next to the compressor and the green earth ground for the compressor. Remove and discard the terminal strip.
4. Disconnect all tubes from the pump and compressor and valves.
5. Remove and discard the complete three head pump assembly & motor.
6. Remove and discard all of the valves and the valve mounting bracket.
7. Remove the compressor and set it aside. Collect and save the nuts that secure the compressor to the vacuum.
8. Remove and discard the pick up tube sets going to the tanks.
9. Disconnect the wires from the beeper horn. The VPL harness connects the valves, the pump, the dome lights, and beeper horn to the controls chassis and is routed through the left rear corner of the top shelf.
10. Refer to the attached hole location drawing and drill the new holes as indicated. Remove all metal chips and deburr the holes.

![Diagram of hole locations]
11. Install the new pick up tube sets routing them just like the previous pick up tubes. (Note the lack of return tubes)
12. Install the pumps as indicated using (2) #8-32x1/2” Screws and KEPS Nuts per pump to mount the pumps in the new holes.

13. Mount the compressor as shown re-using the hardware saved earlier.

14. Wire Compressor, Heater & Dome Lights as shown using the VPL Harness. Connect the pumps to the VPL harness using the Motor Control Relay Block connecting as shown.
Secure the Motor Control Relay Block to the Front Dome Light Mount with the two 8” (20 cm) wire ties provided.
15. Connect Pick Up Tube Sets provided and Delivery Hose Tubes to Pumps and Compressor as shown.

- Pump #1 draws from the Yellow Tank and is controlled by the Top Fragrance Selection Button on the Middle Door
- Pump #2 draws from the Gray Tank and is controlled by the Middle Fragrance Selection Button on the Middle Door
- Pump #3 draws from the Red Tank and is controlled by the Button Fragrance Selection Button on the Middle Door.

16. Reinstall the Controls Chassis in the upper cabinet. Connect all disconnected harnesses.

17. Restore electrical power to the vacuum.

18. Test for leaks and normal operation by priming the fragrance gun in the normal manner. The Compressor will run and blow air out of the spray gun whenever any fragrance is selected. It is not controlled by the trigger switch.

**NOTE:** It may be necessary to disconnect the tube going to the compressor in order to prime the pumps.
**Trouble Shooting**

Look for leaks or lack of delivery at the spray gun. If the unit does not deliver fragrance from the spray gun, begin by making sure the pump is drawing from the tank.

If a pump does not draw from the tank...
- Make sure the Pick Up Strainer is fully immersed in the fragrance in the tank and that it is not clogged by debris that may be in the bottom of the tank.
- Check for pinched Pick up Tube.
- Check for a faulty or incorrect connection to the pump.
- Check that the pump output is not stopped – disconnect the delivery hose tube from the pump output.

If the pump draws from the tank, but does not spray...
- Confirm that the compressor runs and delivers air to the spray gun.
- Check for a pinched delivery hose tube or clog in the spray gun by connecting output tube of the Pump to the output of the compressor. When any fragrance is selected, air should be delivered through the spray gun. If not, there is an obstruction in the delivery hose line or the spray gun.

19. Reinstall the dome and return the vacuum to service.