

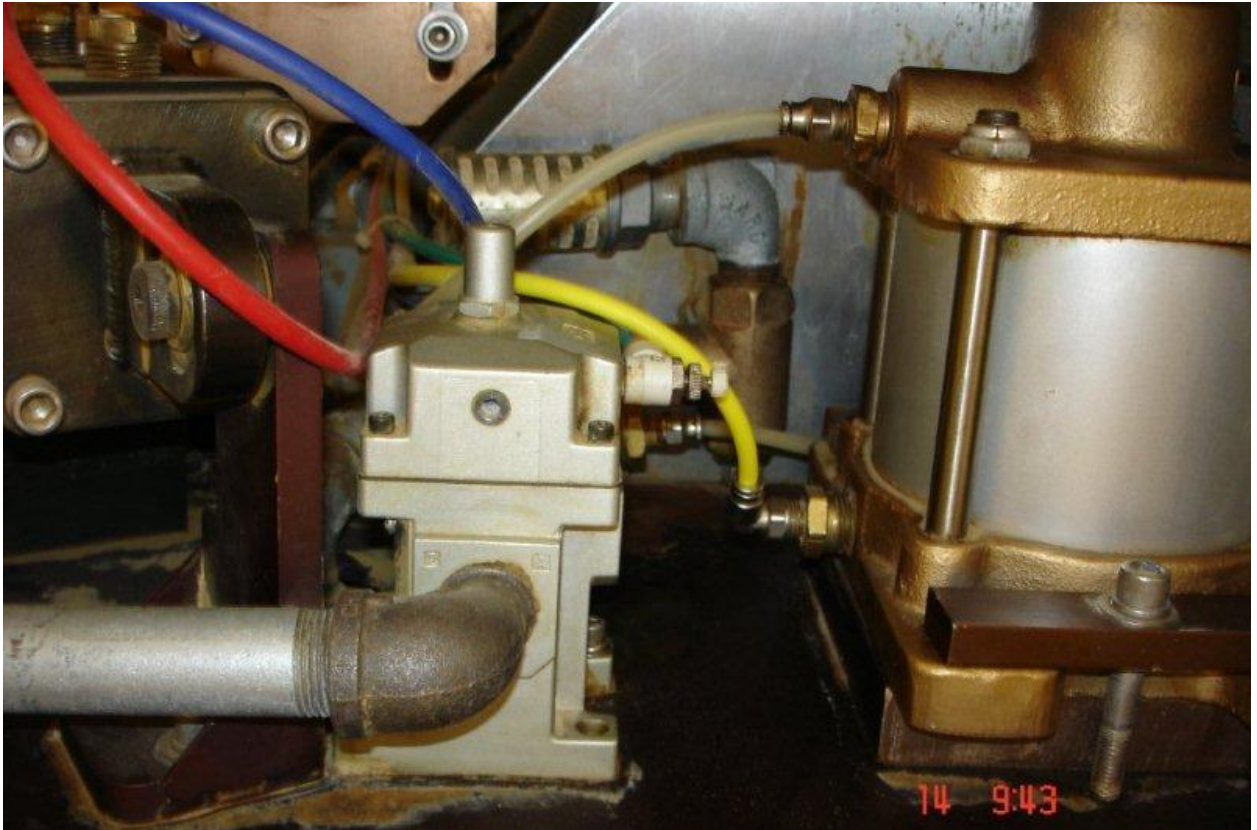


Every six months of operation, you should remove and clean the vacuum system on the Model 10 capsule filler.

Vacuum system components:

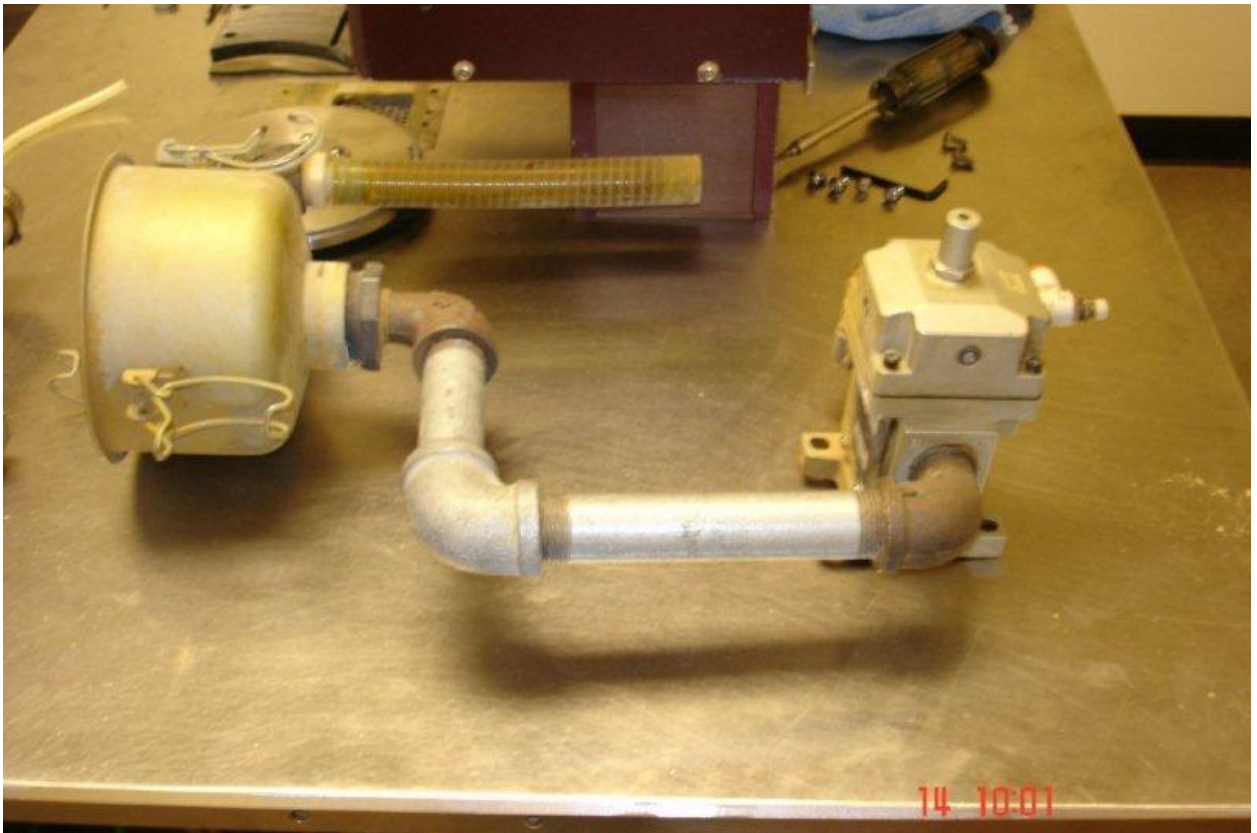
- Becker vacuum pump
- SMC bypass valve
- Vacuum relief valve
- Vacuum relief filter
- Vacuum gauge
- Vacuum canister filter
- Vacuum pump filter

1. Start by removing the two screws that hold down the bypass valve.



2. Remove the air hose on top of the bypass valve.
3. Remove the clamp that holds down the vacuum canister.
4. Loosen all clamps on the vacuum hoses.

5. Remove the vacuum canister and bypass valve, then remove all vacuum hoses and vacuum tee.





- 6.
7. Remove the vacuum tube to the vacuum gauge.



8. Remove the four screws from the vacuum shoe next to the rectifier table; remove the shoe and clean.



9. Remove the two screws that hold the vacuum relief valve (yellow handle) to the panel; once removed, remove the screw that holds the filter assembly to the valve; this will need to be washed and air dried.

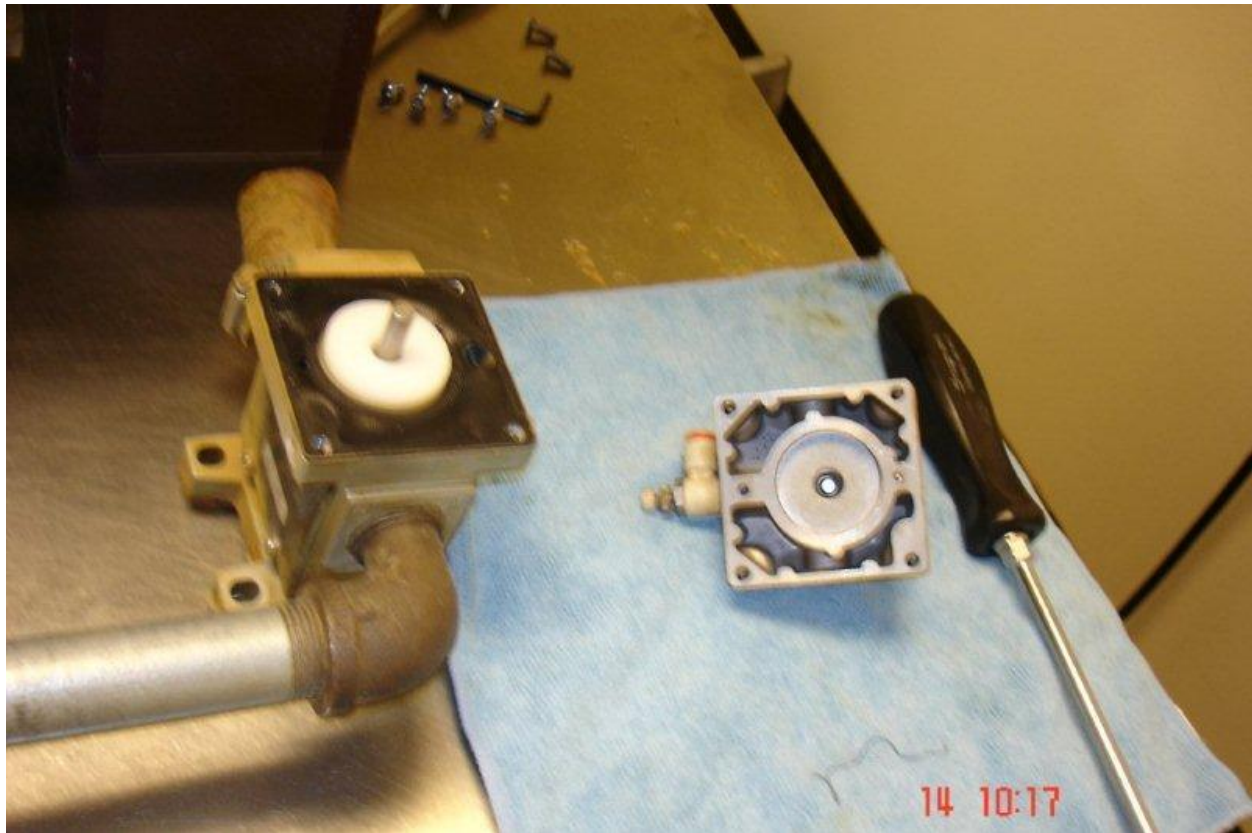




(Parts dis-assembled)



10. Disassemble the bypass valve by removing the four screws that hold the top on. Gently tap on the top and remove; note the position of the gasket. Remove white Delrin<sup>®</sup> donut and clear washer from top of valve.





11. Remove the piston from cylinder. If the piston is frozen in the cylinder, turn the valve upside down and you will see a white Delrin<sup>®</sup> piece protruding through the bottom. Using a punch, drive the piston and cylinder out of the valve.



12. Carefully remove the piston from the cylinder; you may have to soak the parts and then lubricate to do so.
13. Remove the four O-rings from the cylinder, then clean and dry all parts.



14. The piston should move freely inside the cylinder; if not, use a fine emery cloth to sand the piston and the inside of the cylinder until parts move freely.



15. To reassemble, set the housing on a flat surface and drop in the Delrin<sup>®</sup> cup and clear washer.
16. Reinstall O-rings on the cylinder with very light lubricant



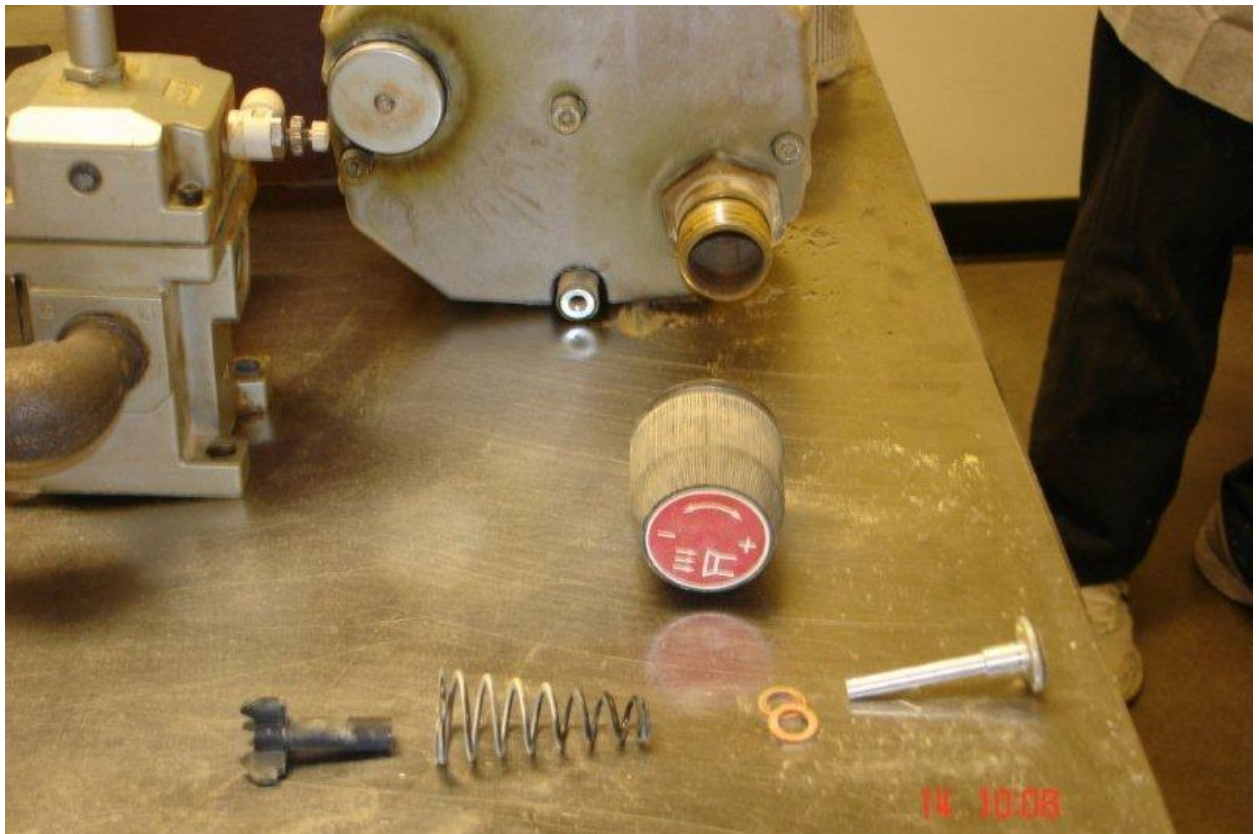


17. Push the cylinder down into the valve until it seats, then drop the spring down into the center and install the piston.
  
18. Check to make sure the piston moves freely. Note: Do not lubricate, as this will attract powder, causing stickiness.
  
19. Reinstall gasket, white Delrin<sup>®</sup> donut, and clear washer into the top of the valve and screw down. Now that all the hoses and fittings have been cleaned and dried, reinstall parts on the machine.

20. On the Becker vacuum pump remove the cover to access the filter. Remove the filter and clean/or replace.



21. Remove the black relief valve. Clean and dry the valve components and then reinstall into the housing.





22. Reinstall the pump cover and filter. Clean or replace the canister filter, make sure the three rubber seals are in the canister.
23. Run the vacuum system and check operation: Turn vacuum system on and test the vacuum bypass switch.





24. With the vacuum system on and bypass switch open, put something across the slot on the vacuum shoe to block it. Vacuum gauge should go to 21 or 22..
  
25. Have a second person go to the black relief valve on the vacuum pump and open it until you read 19 on the gauge.
  
26. With the vacuum slot still blocked, open the yellow relief handle and you should see the vacuum drop to about 12.
  
27. Vacuum system is now ready for operation.