



Ceramic Plunger  
Sidewinder Pump Models 44, 64, 84  
Handling, Installation, Start-up, & Operating Instructions

1. This is a solid ceramic plunger. It is very brittle and **must** be handled with extreme care before & during use in a Sidewinder Pump.
2. When installing:
  - a) Be sure the Pump Chamber (Item #24) is separated from the Mounting Tube (Item #12).
  - b) Disassemble powerhead assembly by removing the six-Powerhead Tie Bolt Nuts (Item #4D) from the six-Powerhead Tie Bolts (Item #4C).
  - c) Remove the Powerhead Cap (Item #4A) from the Powerhead Cylinder (Item #4B). The two parts are sealed together by an o-ring and may require some prying to separate.
  - d) The Powerhead Cylinder (Item #4B), the Mounting Flange (Item #10), and the Mounting Tube (Item #12) should remain assembled.
  - e) With the Powerhead Cylinder (Item #4B) assembled with the Mounting Flange (Item #10) and Mounting Tube (Item #12), the old Piston-Plunger Assembly (Item #16) removed and the Powerhead Cap (Item #4A) removed, install the new Ceramic Piston-Plunger Assembly (Item #16), plunger first, into the Mounting Tube (Item #12). **Do not forget** to place the Return Spring (Item #11) around the ceramic plunger portion of the Piston-Plunger Assembly (Item #16).
  - f) Replace the Powerhead Cap (Item #4A) and secure with the six-Powerhead Tie Bolts and Nuts (Items #4C & 4D).
  - g) Replace the Pump Chamber (Item #24) onto the Mounting Tube (Item #12) being careful as the Plunger Seal (Item #18) in the Pump Chamber (Item #24) is placed around the extended ceramic portion of the Piston-Plunger Assembly (Item #16).
  - h) Pump Chamber (Item #24) and Mounting Tube (Item #12) are to be threaded together **hand tight only**.
3. When starting pump into operation:
  - a) Open the Bleeder Valve (Item #20) to prime pump.
  - b) Make sure the Control Knob (Item #31) is screwed in all the way to insure that the pump is off.
  - c) Back off on the air/gas supply regulator to 0 PSI.
  - d) Slowly bring the supply pressure up to 10 PSI (regardless of fluid injection pressure).
  - e) Slowly begin to unscrew the Control Knob (Item #31) until the pump begins to stroke at a rate of 1 stroke every 3-4 seconds.
  - f) Allow the pump to run in this condition until the injection lines fill and pump stalls against the injection pressure. (When pump stalls, the Control Valve will continue to shift and in fact speed up slightly, but the Piston Plunger Assembly (Item #16) will no longer be moving up and down. This can be confirmed by removing the Vent (Item #13A) on the Mounting Tube (Item #12) and observing. If the Control Valve blows a continuous stream of air instead of cycling, increase the air/gas supply pressure slightly. After raising the air/gas supply pressure slightly the Control Valve continues to blow a continuous stream of air/gas it will be necessary to place a solid object over the exhaust port, interrupting the flow of air/gas for one second to reset the Control Valve.
  - g) Once the pump stalls, slowly increase the air/gas supply regulator pressure until movement of the Piston Plunger Assembly begins. **Do not use more air/gas supply pressure than needed to cycle the pump.** Too much air/gas supply pressure will cause the Piston Plunger Assembly to slam down which can break the ceramic plunger portion of the assembly.

Increase or decrease pump volume by using either or both the Control Knob (Item #31) and the Stroke Adjuster (Item #1).