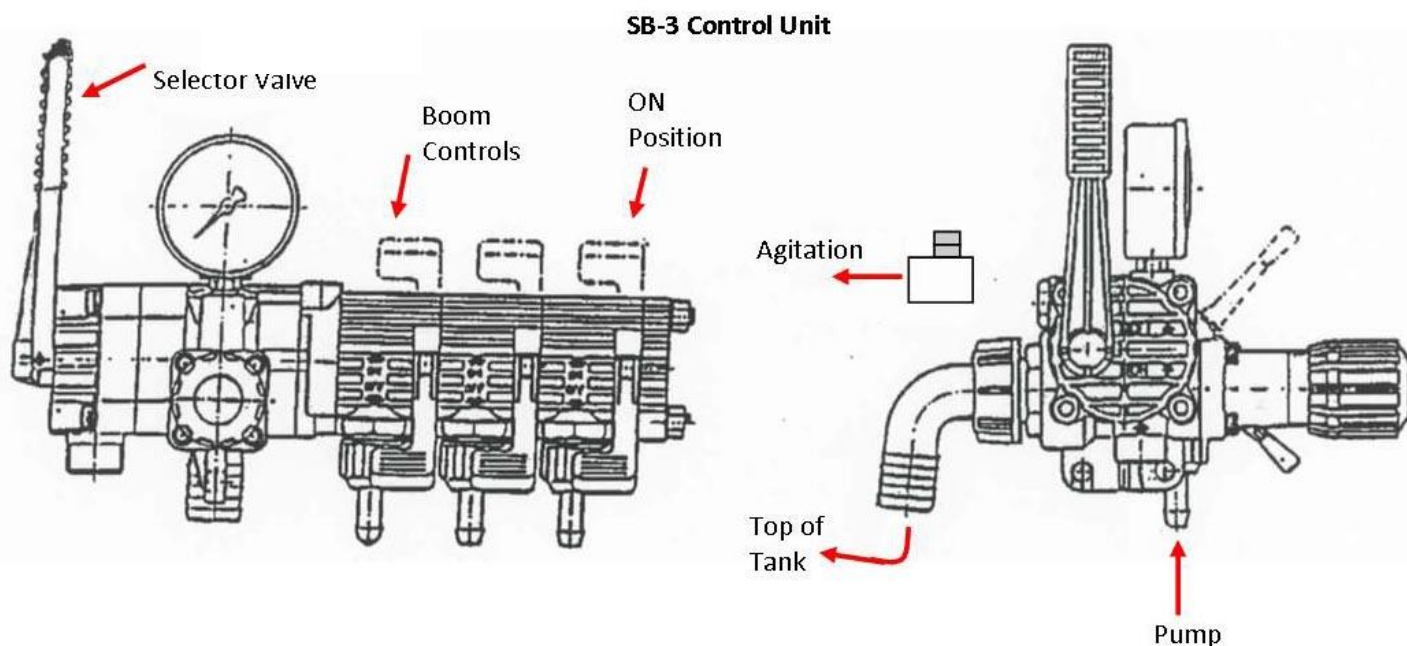


# Diaphragm Sprayer Operation

This unit is designed for operation using liquids as additives to a carrier such as water or liquid nitrogen (cannot use brass fittings with liquid nitrogen). The unit is designed to use agitation at the start of the application and turn agitation off while spraying to stabilize the pressure and volume. Agitation should be run for 3 minute after filling and then turned off. Do Not Use additives that contain suspended solids: they will clog strainers! Less agitation while spraying.



## SB-3 Control Unit Specifications

Construction: Liquid Handling Parts—Anodized aluminum  
 Glass filled nylon  
 Stainless Steel

Length: 12.8"  
 Width: 10.2"  
 Height: 9.0"

Standard Ports: 3/4" Hose barb inlet  
 3 3/4" Hose barb outlet  
 1" Hose barb bypass

Optional Ports: 3/4" Female NPT inlet  
 3/4" Hose barb outlet

Maximum Flow: 35 GPM (varies by pump)  
 Maximum Pressure: 300 psi

## Operating Instructions

The SB-3 Control Unit features a manual dump valve lever (selector lever), green pressure control knob, glycerin pressure gauge, 3 on-off discharge ports, and agitation port.

1. Before operating or re-operating pump, move the dump selector lever to the UP or ON position, so the pump will start at zero pressure. **FAILURE TO DO SO WILL VOID PUMP WARRANTY!** Set air psi diaphragm 10% to 20%OF spraying pressure.
2. Turn green pressure adjustment knob counterclockwise to relieve spring tension. Note Step 2 applies only to initial start-up and is not necessary in daily operation of pump. Always set slightly above spray pressure.
3. Start unit and let run until air is evacuated from system, when only liquid is expelled from the bypass line.
4. Agitation – Run with valve OPEN, agitation OPEN & booms OFF. Test psi by moving selector lever to OFF position (down) – Dump turned OFF. Set green adjustment nozzle to have some pressure above spray pressure but never higher than the lowest rated psi part. Run for 3 minutes. Caution: Excessive pressure will damage parts!
5. Turn boom outlet handles to the ON (Up) position and slowly close agitation adjustment knob clockwise until desired operating pressure is achieved with agitation and 10%-20% air pressure set on diaphragm. Range of agitation (run at no more than lowest psi item in ON position)
6. Turn OFF- move dump selector (lever up), then turn OFF booms only when finished spraying.
7. Restart spraying. Watch for spike in psi. Move selector lever down-off, boom levers up. Check pressure for rate per acre speed, nozzle size and spacing. Adjust with agitation valve clockwise to increase psi, counterclockwise to decrease psi.
8. Shutting off individual booms will increase pressure and can cause unit to go over recommended maximum which will damage pump. Turn green adjustment with agitation – turn OFF section – readjust.

**IMPORTANT NOTE:** Protect your pump from freezing. If freezing conditions exist or are expected, flush pump with a 50/50 mixture of antifreeze & water.