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Assembly Instructions for 3000 PSI Bottom Repairable Bladder Accumulators

After thoroughly cleaning the metallic parts with organic solvent, check for any damage. Replace the parts if necessary. Inspect the shell for any damage or foreign particles. Thoroughly clean the shell as required. Lubricate the shell with the system fluid that is compatible with bladder rubber compound.



1) Squeeze the bladder as shown to release any air trapped inside the bladder.



2) Install the gas valve adaptor into the valve stem. Torque it to 90 In-Lbs(10 Nm).



3) For smaller size bladders when there is no gas valve present, install the valve core using the valve core tools and torque it to 4 In-Lbs (0.45 Nm).



4) Lubricate the bladder with the system fluid. Attach a bladder pull rod to the gas valve shroud thread and pull the bladder gently into the shell.



5) Install the Name plate and jam nut on to the valve stem. Hand tighten the jam nut.



6) Insert the fluid port body followed by the Anti-extrusion ring into the shell.



7) Slide the Anti extrusion ring on the port body. Pull the port out until the Anti-extrusion ring is seated into the shell opening.



8) Using the charging assembly, fill slowly nitrogen pressure up to 25 psi (1.7 bar) to properly position the port and the anti-extrusion into the opening.



9) Use the rubber mallet to position the port by gently tapping if necessary.



10) Install the Teflon back up followed by the O-ring and rubber back-up.



11) Install the spacer and locknut. Tighten the locknut using the spanner wrench.



12) Install the bleeder plug and tighten it with the wrench.



13) Turn the shell around its axis to allow uniform lubrication of the bladder.



14) Follow the instructions and fill the accumulator with desired nitrogen precharge pressure at a slow rate. Using soap water check the gas valve for any leaks. Tighten the core or the gas valve to stop the leak. Replace the core or the gas valve is necessary.



15) Replace the valve seal cap.



16) Replace the protective cap and hand tighten. Tighten the lock nut and the jam nut.

Recommended torque values after precharging:

Lock Nut 240 Ft-Lbs +/- 10 Ft-Lbs
Jam Nut 50 Ft-Lbs +/- 5 Ft-Lbs

Accumulator Storage

If accumulator is stored for future use after assembling, we recommended to fill the accumulator with a low precharge of 25 psi(1.7 bar) to allow the poppet valve to close and always cover the fluid port with a dust cap to prevent any foreign material entering into the accumulator. Store in a cool dry place if possible. The protective cap must be securely tightened to prevent any damage to the gas valve.

If the accumulator is stored for an extended period of time, before putting in service, release all precharge pressure, pour small quantity of oil through the fluid port into the accumulator and rotate the accumulator to allow the fluid to circulate and lubricate the bladder. This process is very important when water based or low viscosity fluids are used. Follow the precharge instructions to fill the accumulator to the desired precharge pressure.

If the accumulator is stored for longer than 5 years, we recommend to replace the bladder and seals.

Servi Fluid Power does not authorize the use of non-approved parts or automotive type valve cores or gas valves. Only use Servi Fluid Power approved parts.