INSTRUCTIONS MANUAL

Precharge Maintenance Instructions for 5000 PSI Top & Bottom Repairable Bladder Accumulators

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.

Information

Servi Fluid Power recommends regular maintenance of precharge pressure for optimum performance of accumulators in the hydraulic system. Incorrect or loss of precharge pressure will reduce the performance of the accumulator as well as potentially damage the bladder.

Our charging & gauging kits will allow this maintenance process easy to follow. Servi always recommends DRY NITROGEN to precharge the accumulator. Do not use Oxygen or Shop air to avoid any risk of explosion. Typically accumulators are precharged with minimal pressure of 25 psi(1.7 bar) for shipping purpose only unless otherwise specified on the purchase order. Before putting into operation, accumulators must be precharged to the required pressure. This precharge pressure varies by application. Consult Servi Fluid Power for any technical assistance in determining the precharge pressure if unsure. Incorrect precharge pressure can reduce the life expectancy of the bladder and or lead to a potential bladder failure in addition to reduced performance. Precharge pressure must not drop below 25% of the maximum system operating pressure including any pressure spikes. Servi recommends to use a pressure regulator valve on the nitrogen gas bottle to avoid any over pressurization of accumulator above its rated pressure. It is also important to ensure the bladder is thoroughly lubricated inside the accumulator with system fluid before precharging. This lubrication process is very important especially if the accumulator has been stored for a long time before commissioning or if the system fluid is water based and could have dried up over a period of time. Ensure lubrication fluid is compatible with bladder compound to avoid damage to bladder or premature failure.

Our general recommendations for nitrogen precharge varies by application and are as follows.

- **Energy Storage** – 90% of the minimum system operating pressure.
- **Shock Absorption** – 60%-75% of the normal working pressure.
- **Pulsation Dampening** – 60%-80% of the normal working pressure

Checking Precharge Pressure

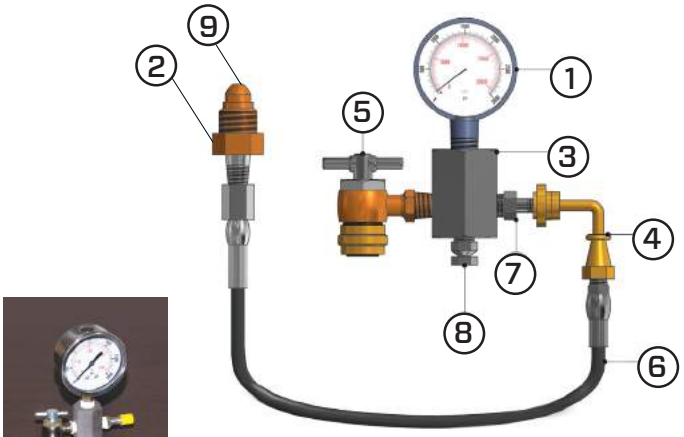
Before checking precharge pressure, ensure the hydraulic pressure has been released completely to get an accurate reading of gas pressure in the accumulator. When a new accumulator is installed, check the precharge pressure within first week of operation. Subsequent checks must be conducted every 6 months at a minimum. High cycling and high temperature applications may require precharge maintenance every 3 months or less.

Charging & gauging kits are designed to fit on a commercially available nitrogen bottles. Charging instructions are provided with charging kit for safe operation.

Recommended Accessories

Part #	Description
CKT-0050	C&G kit - Bottom & Top Repairable – 5000 PSI

Item #	Description	Part Number
1	Gauge -5000 PSI	CKT-0050
2	Gland Nut - CGA 580	CK-008
3	Manifold	CK-002
4	Swivel Connector	CK-004
5	Air Chuck	CK-005
6	Hose Assy - 5000 PSI	CK-007
7	Tank Valve	CK-010
8	Bleeder Valve	CK-011
9	Gland - CGA 580	CK-009



C&G Kit P/N: CKM-0050

C&G Kit P/N: CKT-0050

Hose Assembly P/N: CK-014

Gas Valve
P/N: GV5K-S01

Tank Valve
P/N: CK-010

Air Chuck
P/N: CK-005

Bleed Valve
P/N: CK-011

Precharge Maintenance Instructions for 5000 PSI Bottom Repairable Bladder Accumulators

CAUTION: Always wear safety glasses before conducting any precharge maintenance to avoid risk of eye injury. Maintenance to be preformed by trained personal only.

1) Remove the protective and seal caps.

2) Relieve any nitrogen pressure by opening the valve adapter by holding the bottom hex nut and turning the top hex nut.

3) Close the bleed valve completely before Installing the C&G manifold kit on the gas valve.

4) Screw in the air chuck to the gas valve and hand tighten sufficiently to prevent any leakage. Attach the C&G hose to the Regulator on the Nitrogen cylinder (not shown).

5) Install the swivel connector on the Tank valve. Open the regulator valve to allow nitrogen gas fill into accumulator at a slow rate until desired pressure is reached. Close the regulator and allow the pressure to stabilize. Adjust the Pressure if necessary.

6) Close the valve adaptor by holding the bottom hex nut and turning the top hex nut clockwise to close completely.

7) Bleed any excess nitrogen by opening the bleed valve.
Remove the C&G manifold from the gas valve. Check any potential leaks from the gas valve with soap water.
If there is a leak, tighten the top hex.
Replace the valve adaptor if necessary.

8) Replace the valve seal cap and protective cap.

Precharge Maintenance Instructions for 5000 PSI Top Repairable Bladder Accumulators

1) Replace the valve seal cap and protective cap.

2) Relieve any nitrogen pressure by opening the valve adapter by holding the bottom hex nut and turning the top hex nut.

3) Close the bleed valve completely before Installing the C&G manifold kit on the gas valve.

4) Screw in the air chuck to the gas valve and hand tighten sufficiently to prevent any leakage. Attach the C&G hose to the Regulator on the Nitrogen cylinder (not shown).

5) Install the swivel connector on the Tank valve. Open the regulator valve to allow nitrogen gas fill into accumulator at a slow rate until desired pressure is reached. Close the regulator and allow the pressure to stabilize. Adjust the Pressure if necessary.

6) Close the valve adaptor by holding the bottom hex nut and turning the top hex nut clockwise to close completely.

7) Bleed any excess nitrogen by opening the bleed valve.
Remove the C&G manifold from the gas valve. Check any potential leaks from the gas valve with soap water.
If there is a leak, tighten the top hex.
Replace the valve adaptor if necessary.

8) Replace the valve seal cap and protective cap.

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