

Service Tools

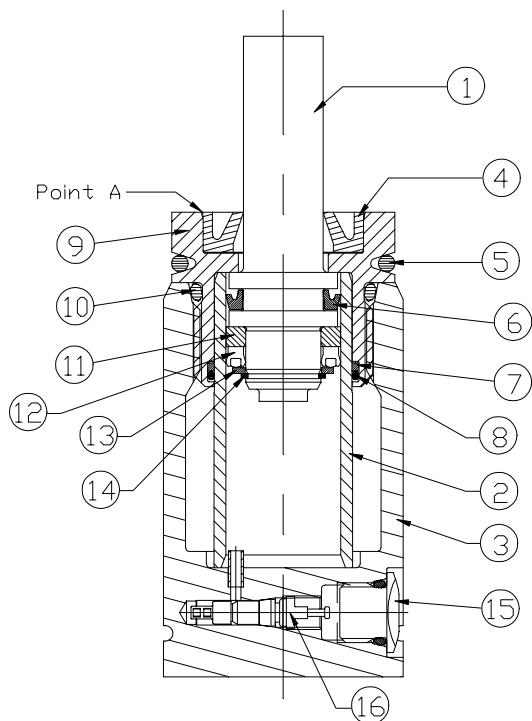
Model	Seal Kit P/N	Socket Wrench	Service Gauge Assembly*	Service Fitting	Torque Fixture
TNK 400	56-072-7000	SW-TNK 400	MGA-3000	11-770-0705 MTY	56-TNK-1500

*The MGA-3000 replaces SGA-400 however does not include the service fitting 11-770-0705 MTY.



Warnings

- Failure to exhaust all gas pressure prior to disassembly could result in serious injury.
- The maximum charging pressure is 138 bar (2000 psi).
- Never clamp the tank directly in a vise. Clamp only



on the adapter block.

Figure A

Discharging self-contained springs

- Remove the charge port plug (15).
- Close the bleed down valve on the MGA-3000 service gauge assembly. Thread the 11-770-0705 MTY service fitting into the charge port. Attach the MGA-3000 to the 11-770-0705 MTY to depress the valve (16). Slowly open the bleed down valve to discharge the nitrogen.

- To verify all pressure has been exhausted, manually depress the piston rod (1) into the tank by striking the top of the rod with a rubber mallet.

Charging self-contained springs

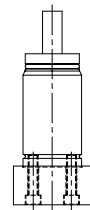
- Close the bleed down valve on the MGA-3000 service gauge assembly. Thread the 11-770-0705 MTY service fitting into the charge port. Attach the MGA-3000 to the 11-770-0705 MTY.
- Open the valve on the nitrogen bottle and slowly charge the spring to the desired pressure.
- Close the valve to the nitrogen bottle. Disconnect the service gauge assembly and unscrew the service fitting from the spring.
- Thread the charge port plug (15) into the port.

Verification of assembly (Leak test)

- Charge the gas spring to at least 35bar (500 psi). Refer to charging instructions.
- Pour lightweight oil on the rod scraper (4). If bubbles appear, nitrogen is leaking past the seal (12) or o-ring (8). **Note:** It may take several minutes for a small leak to be seen. If a leak is found, the spring would need to be discharged, disassembled, and inspected. A scratch on the inner diameter of the sleeve (2), seal (12), piston rod seal surface (1), or o-ring grooves could be the cause.

Disassembly

- Verify all pressure has been exhausted from the spring by following the discharging instructions.
- Attach the torque fixture to the spring. Clamping on the torque fixture, clamp the assembly in a vise. Using the socket wrench, unscrew the rod cap (9) from the tank (3).



Service Instructions for Tanker Gas Springs (TNK 3, 5.5 & 9)

Figure B

- Remove the piston rod (1) from the rod cap (9) and sleeve (2).

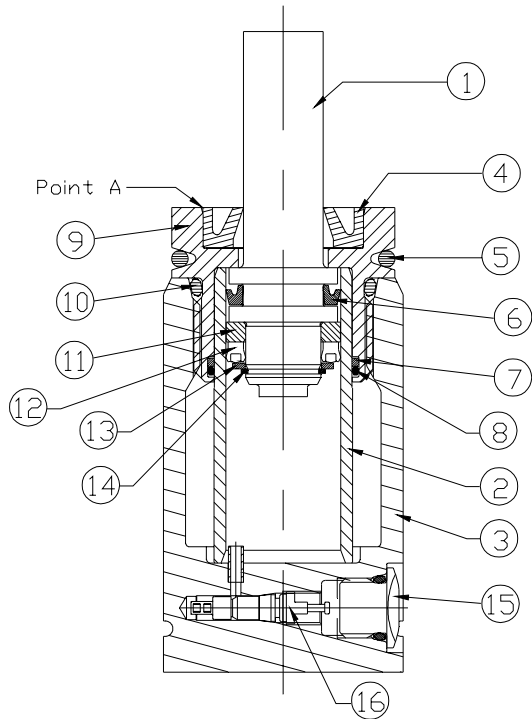


Figure A (repeated)

- Remove the inner sleeve (2) from the rod cap (9). Be careful not to scratch the inner surface of the sleeve or distort the sleeve (2).
- Remove the seal retainer ring (14). The washer (13), seal (12), and piston bearing (11) can now be removed. **Note:** If using a screwdriver to pry the seal off the piston, be careful not to scratch the piston.
- Remove the bore scraper (6) from the piston rod (1). **Note:** The bore scraper is a design upgrade and replaces the felt wiper.
- Insert the end of a flat blade screwdriver between the rod cap (9) and the rod scraper (4) at point (A). Strike the screwdriver towards the center of the cylinder to deform the rod scraper (4). The scraper can then be pried out. **Note:** A new scraper will be supplied in the seal kit.
- Save the tank (3), sleeve (2), rod cap (9), valve (16), port plug (15), and piston rod (1). All other parts are included in the seal kit and can be discarded.

Inspection

- Clean the tank (3), sleeve (2), rod cap (9), port plug (15) and piston rod (1).
- Visually inspect all components. The inner diameter of the sleeve, the surface of the piston where the seal rests, the o-ring groove in the rod cap, and the surface of the sleeve where the o-ring (8) rests are critical. Any scratches or dents will lead to premature leakage. If defects exist, replace the parts.

Assembly

- The seal kit contains Nitro-Dyne® Tanker® Lube XP-072. A small amount is used as assembly oil; the remaining is poured into the tank.
- Press the rod scraper (4) into the rod cap (9).
- Lightly lubricate o-rings (5, 10 & 8) and back-up ring (7) and assemble onto the rod cap.
- Gently push the sleeve (2) into the rod cap (9).
- Insert the bore scraper (6) onto the piston rod (1) so the open end faces the rod (Refer to Figure A). **Note:** The bore scraper is a design upgrade and replaces the felt wiper.
- Lightly lubricate the piston rod (1) and all components you will install on the piston. Insert the piston bearing (11), seal (12), washer (13), and retainer ring (14).
- Lightly oil the inner diameter of the sleeve (2) and the outside diameter of the seal (12). Press the piston rod (1) into the sleeve and rod cap assembly.
- Pour the remaining XP-072 lubricant into the tank (3).
- Thread the rod cap (9), with piston (1) and sleeve (2) attached, into the tank (3). Tighten by hand until the rod cap contacts the tank. Attach the adapter block to the spring. Clamping onto the adapter block, clamp the assembly in a vise. Using the socket wrench, tighten to 75 lb-ft.

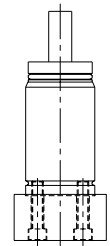


Figure B