Standard Load Cell

A DADCO Standard Load Cell may be used to check the internal pressure of a DADCO Nitrogen Gas Spring and quickly determine if the gas spring is charged to the desired pressure.

Operating Instructions

1. Position the DADCO Standard Load Cell with its counterbored base on top of the gas spring.

2. Place both the load cell and gas spring beneath a DADCO Portable Test Stand *(90.305.3)*, an Arbor press or other press.

3. **Apply the load to the gas spring**, **depressing the gas spring rod only 2 mm** (additional travel may damage the load cell) and read the gauge on the front of the load cell. The gauge reflects the precise pressure inside the spring. Reading should not exceed 2175 psi (150 bar), except when checking pressure of the following: U.0400, SCR.0500, SCR.0800, SCR.1900 and SCR.3200. The gauge should not exceed 2600 psi (180 bar) for these models.

Determining Force

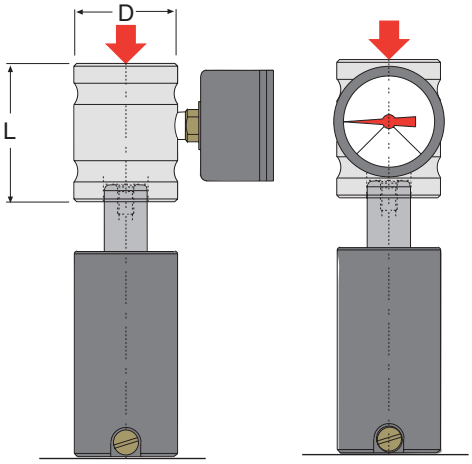
To determine the force (F) that a DADCO Nitrogen Gas Spring will deliver at the start of the stroke, use one of the following formulas:

F (lbs) = A (in²) x P (psi)

U.S. Customary Unit Example:
If testing a L.750 gas spring at 2000 psi, the force would be calculated as follows:
0.761 in² x 2000 psi = 1522 lbs.

F (N) = A (cm²) x P (bar) x 10

Metric Example:
If testing a 90.10.05000 gas spring at 150 bar, the force is calculated as follows:
33.18 cm² x 150 bar x 10 = 49770N or 49.77kN.



Side and front views of an 90.300.0750 load cell in testing position on top of an L.750 gas spring.

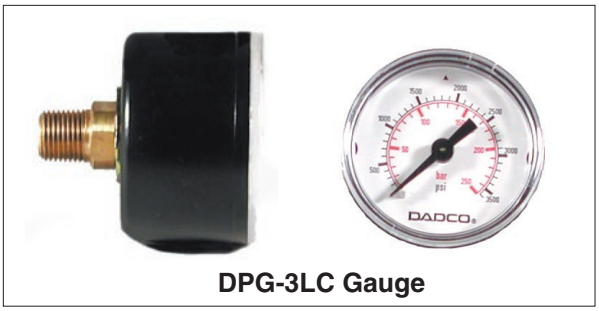
DADCO Gas Spring Model*	DADCO Load Cell	Rod Dia. mm/in	Piston Area (A) cm²/in²	D mm/in	L mm/in
L.300 / LJ.300 / U.0400 *(90.3.00300 / 90.7.00300)*	90.300.0300 *(LC-0300)*	16 *0.63*	1.97 *0.306*	38 *1.50*	51 *2.00*
SCR.0500	90.301.0500	18 *0.71*	2.54 *0.394*	38 *1.50*	51 *2.00*
L.500 / LJ.500 / U.0600 / 90.10.00500 *(90.3.00500 / 90.7.00500)*	90.300.0500 *(LC-0500)*	20 *0.79*	3.14 *0.487*	38 *1.50*	51 *2.00*
L.750 / LJ.750 / U.0800 / SCR.0800 / 90.5B2.00750 / 90.10.00750 *(90.3.00750 / 90.7.00750)*	90.300.0750 *(LC-0750)*	25 *0.98*	4.91 *0.761*	38 *1.50*	51 *2.00*
U.1000 / UX.1000	90.300.1000	28 *1.10*	6.15 *0.954*	43 *1.70*	51 *2.00*
U.1200	90.300.1200	30 *1.18*	7.05 *1.093*	43 *1.70*	51 *2.00*
SCR.1900	90.300.1900	35 *1.38*	9.62 *1.491*	48 *1.90*	51 *2.00*
U.1600 / 90.5B2.01500 / 90.9.01500 / 90.10.01500	90.300.01500	36 *1.42*	10.18 *1.578*	48 *1.90*	51 *2.00*
U.2600 / UX.2600 / SCR.3200	90.300.2600	45 *1.77*	15.90 *2.465*	64 *2.50*	70 *2.75*
90.5B2.03000 / 90.9.03000 / 90.10.03000	90.300.03000	50 *1.97*	19.63 *3.043*	64 *2.50*	70 *2.75*
U.4600 / UX.4600	90.300.4600	60 *2.36*	28.30 *4.390*	83 *3.25*	70 *2.75*
90.5B.05000 / 90.9.05000 / 90.10.05000	90.300.05000	65 *2.56*	33.18 *5.143*	83 *3.25*	70 *2.75*
U.6600 / UX.6600	90.300.6600	75 *2.95*	44.20 *6.860*	95 *3.75*	70 *2.75*
90.5B.07500 / 90.9.07500 / 90.10.07500	90.300.07500	80 *3.15*	50.27 *7.791*	95 *3.75*	70 *2.75*
U.9600 / UX.9600	90.300.9600	90 *3.54*	63.60 *9.870*	120 *4.73*	70 *2.75*
90.10.10000	90.300.10000	95 *3.74*	70.95 *11.000*	120 *4.73*	70 *2.75*
U.20000 / UX.20000	90.300.20000	130 *5.12*	132.73 *20.573*	151.5 *5.97*	70 *2.75*

*For DADCO Super Compact Nitrogen Gas Spring Models 01000 – 18300 order Super Compact Load Cells, 98.300.model.

97B119G

Rebuild (Gauge Replacement) Instructions

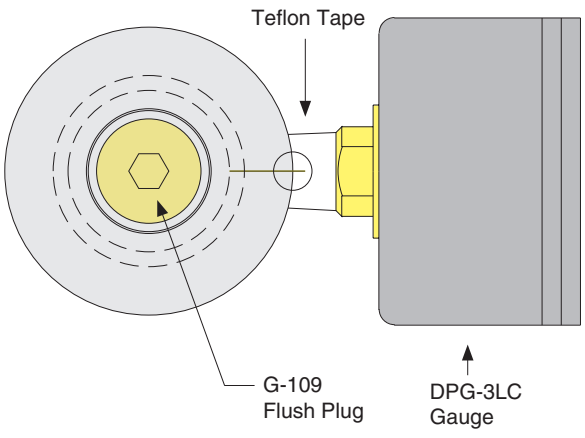
Order the appropriate replacement gauge. For questions on which gauge to order reference DADCO's Gauge Bulletin #B00128D.



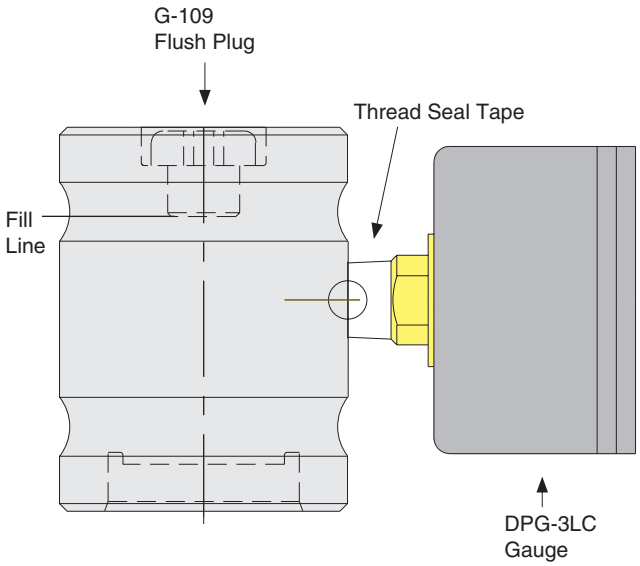
DPG-3LC Gauge

1. Remove the Flush Plug *(G-109)* and set aside for reassembly (Fig. 1).
2. Empty the oil out of the body and wipe with a lint-free cloth.
3. Unthread the old gauge and discard.
4. Apply thread seal tape to the new gauge thread. Ensure that the tape does not cover the access hole.
5. Thread the gauge onto the body (lettering should be right-side-up).
6. Fill the body with oil up to the base of the flush plug, note the fill line (Fig. 2).
7. Install the Flush Plug *(G-109)*, and watch for needle movement on the gauge, if movement occurs, stop and remove a small quantity of oil with an eye dropper. Repeat this step until the flush plug is installed with no needle movement.
8. Test the new gauge by using it on the appropriate spring with a known pressure, see Operating Instructions on reverse.

Figures



Overhead View
Fig. 1



Side View
Fig. 2

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