

LifeSeal+® and GoldSeal+™ S-Cam Spring Brakes

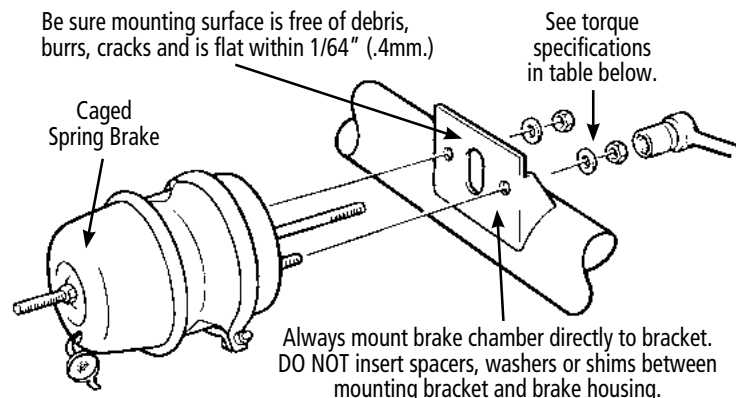
Installation Instructions



⚠ DANGER: A spring brake contains a very powerful compression spring. Failure to comply with all of these instructions may result in forceful release of the piggyback or spring chamber and its contents which could CAUSE DEATH, SEVERE PERSONAL INJURY AND/OR PROPERTY DAMAGE.

A spring brake or combination service/spring brake must be disarmed before disposal or forceful release of the compression spring may occur in the future without warning.

⚠ WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov



S-Cam Spring Brake Chamber Installation Instructions

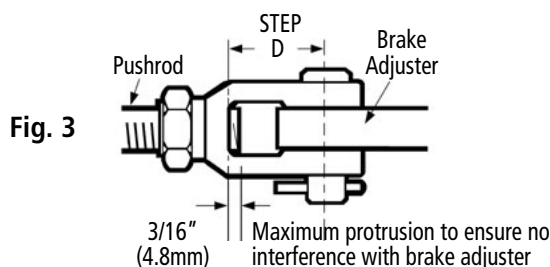
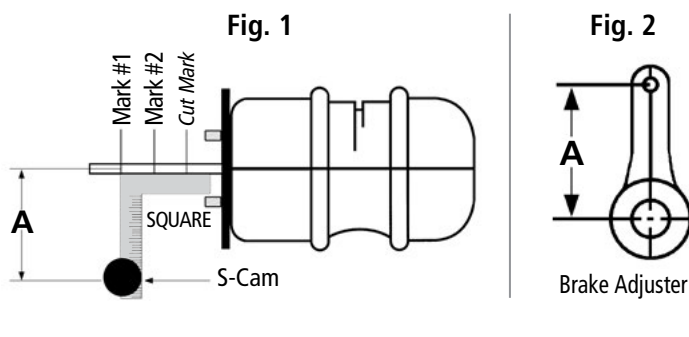
1. When preparing to install spring brake chamber, ensure the unit is fully released (power spring caged) and the service brake pushrod is fully retracted to zero stroke position.
2. Inspect mounting bracket mating surface to assure that it is free from debris, burrs, cracks, weld spatter and is flat within 1/64" (.4mm).
3. Attach chamber to bracket using supplied mounting hardware. Torque to specifications shown below.

Installation Torque Values:

Mounting Hardware	130-150 lb. ft.	(177-203 Nm)
Jam Nut	33-90 lb. ft.	(45-122 Nm)
Port Plug or Reducer	15-20 lb. ft.	(20-27 Nm)
Air Fittings	25-30 lb. ft.	(30-40 Nm)
LifeSeal+ Release Tool Nut	55 lb. ft.	(74 Nm)
GoldSeal+ Release Tool Nut	25-35 lb. ft.	(34-47 Nm)
GoldSeal+ Release Tool Nut (in side pocket)	5-8 lb. ft.	(7-11 Nm)
Carriage Bolt Nuts (for clamps)	20-30 lb. ft.	(27-40 Nm)

4. Measure distance from centerline of the S-Cam to centerline of the pushrod (See Fig. 1 - Dim. A.) Measurement should be equal to length of the brake adjuster being used (See Fig. 2 - Dim. A.)

NOTE: If Fig. 1 - Dim. A and Fig. 2 - Dim. A are not identical, the chamber mounting bracket is either; bent and must be straightened or replaced, chamber has been mounted improperly in the bracket, or length of the adjuster installed is incorrect. Make any necessary corrections before proceeding further.



Pushrod Cutting Procedure Threaded Pushrod Version Only

- 5a. Measure and record the length of the clevis to be used. Measurement should be taken from the center of the clevis pin hole to the bottom of the yoke assembly (See Fig. 3.)
- 6a. Using a square, mark the pushrod at the 90° setting (See Fig. 1 - Mark #1.) From this mark, subtract the measurement recorded in #5 (clevis length.) Make a second mark on the pushrod (towards the chamber bracket) (See Fig. 1 - Mark #2.)

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- 7a. From Mark #2, measure toward the chamber bracket the distance listed in Table A, Column D for the brake chamber type being installed. Mark the pushrod at this point and cut it using a suitable tool. Deburr the cut.

Col. A Chamber Type	Col. B Avail. Stroke	Col. C "Maximum" Readjustable Stroke	Col. D Set-Up
09	1 3/4"	1 3/8"	1 3/8"
12	1 3/4"	1 3/8"	1 3/8"
16	2 1/4"	1 3/4"	1 3/8"
20	2 1/4"	1 3/4"	1 3/8"
20 Long Stroke	2 1/2"	2"	1 1/2"
24	2 1/4"	1 3/4"	1 3/8"
24 Long Stroke	2 1/2"	2"	1 1/2"
24 X-Long Stroke	3"	2 1/2"	1 3/4"
30	2 1/2"	2"	1 1/2"
30 Long Stroke	3"	2 1/2"	1 3/4"
36	3"	2 1/4"	1 3/4"

- 8a. Thread the clevis jam nut onto the pushrod. Thread the clevis onto the pushrod until the end of the pushrod appears inside the clevis ears.
- 9a. Use the brake adjuster hex clockwise to draw adjuster into the clevis until the pin holes align. DO NOT physically pull pushrod out to align the pin holes.
- 10a. Apply anti-seize to the clevis pin. Insert pin through the aligned holes. Secure with a new cotter pin (See Fig. 3.)
- 11a. Torque the clevis jam nut to specifications in the Installation Torque Value Chart shown in Step 3.

Welded Clevis Version Only

Follow Steps 1-4, Follow Steps 5a-7a, then proceed as follows.

- 5b. Use the brake adjuster hex clockwise to draw adjuster into the clevis until the pin holes align. DO NOT physically pull pushrod out to align the pin holes.
- 6b. Apply anti-seize to the clevis pin. Insert pin through the aligned holes. Secure with a new cotter pin (See Fig. 3.)

Attach Airlines

Connect Service and Emergency airlines to the proper air ports. Torque to specifications in the Installation Torque Value Chart shown in Step 3.

Uncage spring brake chamber. Go to Haldex.com and search for Literature #L31171 for uncaging instructions. DO NOT use impact tools on caging nut.

Final Adjustment and Verification

- A. Tighten the brake adjuster until either shoe makes initial contact with the drum.
- B. Back off brake adjuster 1/2 turn.
- C. Release spring brake chamber by applying 80-130 PSI at Emergency port. Verify that there is no interference present and that the pushrod is fully retracted into the actuator.
- D. Apply 90-100 PSI air pressure at Service port. Check that the stroke is within limits (Table A above, Column C.)
- E. The angle between the pushrod and the centerline of the brake adjuster need not be exactly 90° with the brake applied. The angle can be anywhere between 85° - 110° for proper brake performance. Go to Haldex.com and search for Literature L55340W for further details.