

S-Cam Brake Inspection Checklist



TOOLS YOU NEED TO INSPECT YOUR BRAKES:

- Blocks/chocks to place in front of and behind the drive axle wheels
- Chalk or soapstone to mark the pushrods/or use the external brake stroke indicators on the vehicle
- Measuring tool to determine pushrod stroke and brake lining thickness
- Brake application device (to apply brakes) or a second person to assist

BEFORE YOU INSPECT:

- Park on a level surface
- Block/chock the tractor/truck drive axle wheels (block/chock the trailer wheels if the trailer is not coupled to a power unit)
- Release spring (parking) brakes
- Ensure the air pressure is between 90-100 psi (620-690 kPa)
- Turn off the engine and remove keys from ignition
- Check each brake to confirm the pushrod is in the normal released position

INSPECT FOR:

- Chafing or rubbing air lines against other air lines and/or other components
- Air lines that are worn to the extent that the diameter of the hose has been reduced
- Damaged, broken or missing components (such as brake chamber bracket, clevis pin, slack adjuster, cam shaft, etc.)
- Brake pads or linings – S-Cam drum brake pad: measured at the center, must be at least 1/4 inch (6.4 mm) | Air disc brake, must be at least 1/8 inch (3.2 mm)
- Pads or linings that are cracked or contaminated
- Excessive up/down and sideways movement on the camshaft (missing bushings)
- Rust on the drum due to inoperative brake or external drum cracks
- Rusted (holes) in the brake chamber
- Audible air leaks in the emergency side of the brake system

TO MEASURE THE PUSHROD STROKE:

- Ensure the spring (parking) brakes are still fully released
- Check the air pressure gauge to ensure the air pressure is 90-100 psi (620-690 kPa)
- Determine the size and type of the brake chamber and whether it is long or short stroke
- Mark the pushrod at the location that the pushrod exits the brake chamber
- Using the brake application device or another person, apply a full service brake application
- Listen for audible air leaks in the service side of the brake system
- Measure the distance from the mark/brake indicator back to the face of the brake chamber
- Confirm stroke is within regulatory requirements for the brake chamber size and type

S-CAM BRAKE ADJUSTMENT CHART:

Type		Outside Diameter	Brake Adjustment Limit
6	A	4 1/2" (114 mm)	1 1/4" (31.8 mm)
9	B	5 1/4" (133 mm)	1 3/8" (34.9 mm)
12	B	5 11/16" (145 mm)	1 3/8" (34.9 mm)
12 Long Stroke	D	5 11/16" (145 mm)	1 3/4" (44.5 mm)
16	D	6 3/8" (162 mm)	1 3/4" (44.5 mm)
16 Long Stroke	E	6 3/8" (162 mm)	2" (50.8 mm)
20	D	6 25/32" (172 mm)	1 3/4" (44.5 mm)
20 Long Stroke (2 1/2" Rated Stroke)	E	6 25/32" (172 mm)	2" (50.8 mm)
20 Long Stroke (3" Rated Stroke)	F	6 25/32" (172 mm)	2 1/2" (63.5 mm)
24	D	7 7/32" (184 mm)	1 3/4" (44.5 mm)
24 Long Stroke (2 1/2" Rated Stroke)	E	7 7/32" (184 mm)	2" (50.8 mm)
24 Long Stroke (3" Rated Stroke)	F	7 7/32" (184 mm)	2 1/2" (63.5 mm)
30	E	8 3/32" (206 mm)	2" (50.8 mm)
36		9" (229 mm)	2 1/4" (57.2 mm)

NOTE: Rated stroke is indicated on a tag and is only used to identify chamber size.

If your vehicle's brakes are out of adjustment, do not adjust. The National Transportation Safety Board warns that adjusting automatic slack adjusters is not recommended. Have your brakes checked and repaired by a trained brake technician before getting back on the road.

