

# 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 (worn 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.

