



Brake Adjustment

During the inspection, if the number of “out of adjustment” brake is equal to or greater than 20 percent of the brakes on the vehicle or combination (truck and trailer combined), CVSA (Commercial Vehicle Safety Alliance) inspectors will instantly place the vehicle or truck-trailer combo “Out-of-Service”.

Out of Service 20% Guide

Number of Axles	Number of Brakes	20%	Number of Brakes required for Out-of-Service
6	12	2.4	2.5
5	10	2.0	2.0
4	8	1.6	2.0
3	6	1.2	1.5
2	4	0.8	1.0

(Table A)

Under the 20% out-of-service rule, when “out of adjustment” brake on your vehicle exceeded less than 1/4-inch beyond the readjustment limit will count as 1/2 brake and if any brake exceeded 1/4-inch or more beyond the readjustment limit will count as one (1) brake.

Brake Adjustment

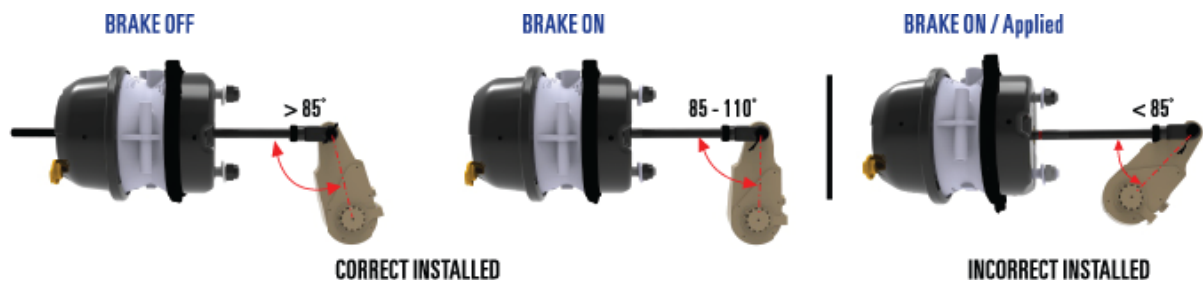
Passenger's Side	1-1/2"	1-1/2"	1-1/4"	2"	2"
Axle	1 (Steer Axle)	2 (Drive Axle)	3 (Drive Axle)	4 (Trailer Axle)	5 (Trailer Axle)
Driver's Side	1-1/2"	1-3/4"	2-1/8"	2-1/8"	2-1/4"
	Type 24	Type 30			

(Table B)

For example (Table B), Axles 1 and 2 brakes are within the recommended readjustment limit. Axles 3 and 4 on the driver's side are 1/8th inch over the recommended readjustment limit for type 30 chamber. Applying to 20% rule, each will count as 1/2 brake for a total of one (1) full brake. Axles 5 brake on the driver's side is 1/2 inch beyond the recommended readjustment limit and counts as one (1) full brake.

Therefore, on this five (5) axles vehicle, total number of the “out of adjustment” brake is two (2) when applying to “out-of-service” under the 20% rule.

NOTE: A brake found at the adjustment limit is not in violation.



Recommended Readjustment Stroke

Type	Effective Area	Diaphragm O.D.		Rated Stroke of Chamber		Maximum Stroke with Brakes Adjusted	"MVMA" Recommended Readjustment Stroke	
	square Inches	Inches	mm	Inches	mm		Inches	mm
20	20	6.50	165	2.50	64	To prevent dragging brakes adjustment should be as short as possible without lining to drum contact.	2.00	51
24	24	7.00	175	2.50	64		2.00	51
24L	24	7.00	175	3.00	76		2.50	64
30	30	8.00	200	2.50	64		2.00	51
30L	30	8.00	200	3.00	76		2.50	64
36	36	9.00	230	3.00	76		2.25	57

SOURCE: MVMA (Motor Vehicle Manufacturers Association)

Note: The push-rod must remain perpendicular to the bottom surface of the non-pressure chamber (NPC) within $\pm 3^\circ$ zero to full stroke.