

MGM Brakes

A Division of Indian Head Industries, Inc.

TECHNICAL BULLETIN

SUBJECT: Procedure For Determining Correct Push Rod Length – Field Replacement.

This procedure will explain how to determine the correct push rod length when the old unit is unavailable or there is concern the push rod length was incorrectly established during a previous installation.

To determine the correct push rod length of any brake to be installed, the spring brake must be fully released (caged) and the service chamber push rod must be completely retracted to zero (0) stroke.

⚠ WARNING: IF VEHICLE IS EQUIPPED WITH 3-INCH LONG STROKE CHAMBERS FITTED WITH “WELDED” YOKES, DO NOT USE THE FOLLOWING PROCEDURE TO DETERMINE ROD LENGTH FOR REPLACEMENT CHAMBERS. REFER TO MGM TECHNICAL BULLETIN 03-002 FOR FIELD REPLACEMENT GUIDELINES AND MGM PRODUCT BULLETIN 03-003 FOR RECOMMENDED REPLACEMENT UNIT PART NUMBERS.

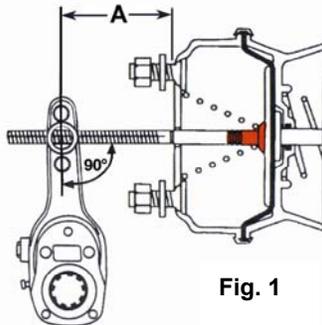


Fig. 1

Step 1 - Chock, or block, the wheels to prevent vehicle from moving.

Step 2 - Mount new chamber in the bracket with push rod extending past the slack adjuster. Tighten nuts to recommended torque value. Thread yoke jam nut onto push rod.

Step 3 - With the slack adjuster parallel to the bottom of the chamber, or 90° to the push rod as shown in Fig. 1, measure the dimension, “A”, from the bottom of the NPC (mounting base) to the center-line of the hole in the slack adjuster and mark the rod.

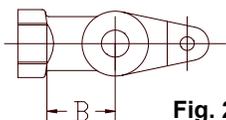


Fig. 2

NOTE: If 90° angle cannot be achieved, the chamber may have been improperly mounted, the bracket may be bent, or the length of the adjuster may be incorrect. Make necessary corrections before continuing.

Step 4 - Once Step 2 has been completed, remove new chamber from mounting bracket.

Step 5 - Now, measure the length of the clevis, “B”, to be used, as shown in Fig. 2. This measurement should be taken from the centerline of the main clevis pin to the bottom of the yoke throat. Subtract this measurement from the mark placed on the rod during Step 3 and mark the rod.

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(Continued)**

Step 6 - Subtract the set-up stroke, see chart, from the mark established during Step 5 and again mark the rod. This will determine the proper length of the push rod prior to installation of the yoke, and will assure a push rod to slack adjuster angle greater than 90° with the chamber at zero (0) stroke.

EXAMPLE: If the “A” dimension on a type 30 installation measured 5-inches and the yoke measurement, “B”, equaled 1-1/4-inches, a mark would be placed on the rod 1-1/4-inches closer to the chamber mounting base from mark “A”. Then, using the chart below to determine the set-up stroke, which, in this example, would be 1-1/2-inches, the rod would again be marked 1-1/2-inches inside mark “B”. This would establish the rod length (X-dimension), minus the yoke, at 2-1/4-inches. With the yoke installed the “Y”-dimension would be set at 3-1/2-inches. (5-inches – 1-1/4-inches – 1-1/2-inches = 2-1/4-inches + 1-1/4-inches = 3-1/2-inches)

Step 7 - Thread the yoke jam nut past the mark made in Step 6, aligning the bottom edge of the nut with the mark. Use a hacksaw to cut the push rod on the mark. After cutting the rod, turn the jam nut off the rod to clean up the threads.

Step 8 - Finally, thread the jam nut and yoke on the rod and tighten the jam nut to the manufacturer’s recommended torque value. To insure the cut end of the rod does not interfere with the brake adjuster, no more than 3/16th of an inch of thread should protrude from the yoke.

Step 9 - Install chamber in bracket, connect slack adjuster and adjust the brakes.



WARNING: SEVERAL AUTOMATIC SLACK ADJUSTER MANUFACTURERS PROVIDE TEMPLATES TO BE USED WHEN ADJUSTING THE BRAKES. BE SURE TO USE THE CORRECT TEMPLATE. USE OF THE WRONG TEMPLATE WILL RESULT IN THE ADJUSTER OPERATING INCORRECTLY. UNDER ADJUSTMENT CAN RESULT IN INCREASED STOPPING DISTANCES AND OVER ADJUSTMENT CAN CAUSE THE LININGS TO DRAG. SERIOUS PERSONAL INJURY AND DAMAGE TO COMPONENTS MAY RESULT.

STROKE VALUES CHART

CHAMBER TYPE	RATED STROKE	MAXIMUM STROKE	ADJUSTMENT LIMIT	SET-UP STROKE**	
9	1-3/4"		1-3/8"	1-3/8"	
12	1-3/4"	SHOULD BE AS SHORT AS POSSIBLE WITHOUT LINING TO DRUM CONTACT (BRAKES DRAGGING)	1-3/8"	1-3/8"	
16	2-1/4"		1-3/4"	1-3/8"	
16L	2-1/2"		2.0"	1-3/8"	
20	2-1/4"		1-3/4"	1-3/8"	
20L	2-1/2"		2.0"	1-3/8"	
24	2-1/4"		1-3/4"	1-3/8"	
24L	2-1/2"		2.0"	1-1/2"	
24L3	3.00"		2-1/2"	1-1/2"	
30	2-1/2"		2.0"	1-1/2"	
30L3	3.00"		2-1/2"	1-1/2"	
36	3.00"			2-1/4"	1-1/2"

** Typical Set-Up Stroke Values