STEMCO CREWSON™

AUTOMATIC BRAKE ADJUSTER FIELD INSPECTION

WARNING

No Automatic Brake Adjuster can compensate for braking system deficiencies. The brake system should be in good operating condition and be well maintained. Excessive push rod stroke or tight running brakes indicates that there is a problem with the foundation brake components, the ABA installation, or the ABA. The proper way of checking an ABA to see if it is working within specs is to measure the push rod stroke. The only time the ABA should be manually adjusted is during installation or at reline. Constant manual adjustment of the ABA is a dangerous practice and may lead to reduced internal component life, or have other more serious consequences. The STEMCO Crewson ABA unit must be installed with a STEMCO Crewson clevis and template.

If the Push Rod Power Stroke is correct, the Automatic Brake Adjuster is operating properly and no other tests are necessary. The remaining tests only apply if the Power Stroke is above the maximum spec listed below.

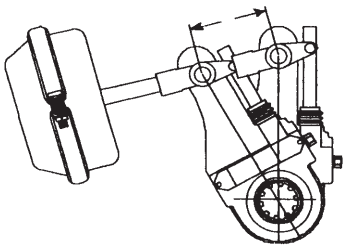
AUTOMATIC BRAKE ADJUSTER ON THE VEHICLE:

Push Rod Power Stroke

Measure the power stroke (the difference between when the brake is off and when it is fully applied) at 90 PSI application pressure.

■ **This distance must be less than or equal to the maximum in the chart below.**

Chamber Types	Adjusted Stroke
9, 12	less than or equal to 1-3/8"
16, 20, 24	less than or equal to 1-3/4"
30	less than or equal to 2"
36	less than or equal to 2-1/4"
LONG STROKE CHAMBERS	
16, 20	less than or equal to 2"
24 (3 in max.)	less than or equal to 2-1/2"
30	less than or equal to 2-1/2"

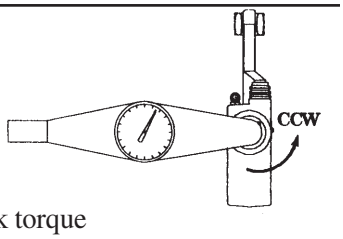


Free Stroke

Free stroke is the distance the slack arm moves in order to make the brake shoes contact the drum. Move the slack arm with a small pry bar and measure the movement distance. This distance should be 3/8" to 5/8".

If free stroke is greater than 5/8", check the foundation brake components. Repair and replace as needed.

Back Torque



This procedure should only be used if:

A) The foundation brake system has no deficiencies

B) The Push Rod Power Stroke exceeds the specified values

With the automatic brake adjuster correctly installed on the vehicle or trailer axle back torque (CCW Rotation of Hex Shaft) can be measured. Using an inch/pound type torque wrench turn the hex adjusting shaft CCW very slowly. Back torque will increase to a peak value, then return to zero as the clutch teeth disengage.

****NOTE:**** Do not turn the hex adjusting shaft more than 5 "clicks" (ratchet teeth) while taking readings. If the back torque reading is below 120 inch pounds (10 FT-LBS) and the Push Rod Power Stroke is beyond the specified limits, replace the Automatic Brake Adjuster. If the Back Torque exceeds 400 inch pounds (33 FT-LBS), replace the Automatic Brake Adjuster.

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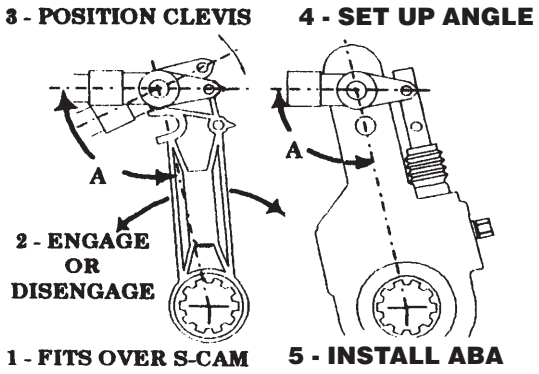
AUTOMATIC BRAKE ADJUSTER REMOVED FROM VEHICLE:

STEMCO Crewson Automatic Brake Adjusters are fully lubricated at the factory. A grease fitting is provided for normal maintenance.

STEMCO Crewson Automatic Brake Adjusters can not be disassembled in the field. Tampering with the units' factory settings will void the warranty.

Verify Automatic Brake Adjuster Set Up

1. Select the correct template for spline size and armhole locations.
2. Fit Installation Template over S-Cam and put 1/2" pin to clevis.
3. Swing Template to engage 1/2" pin.
4. Screw clevis CW or CCW on Push Rod until 1/4" holes in clevis and template line up.
5. Template now indicates correct set up angle "A".
6. Remove template and 1/2" pin. Install ABA on S-Cam and turn the Hex nut CW until 1/2" and 1/4" holes line up with the clevis.
7. Install and secure clevis pins. Turn nut CW until shoes contact drum.
8. Back off Hex nut 1/2 turn CCW to complete setup.

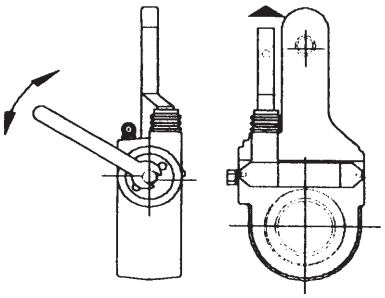


Actuation Rod Movement

The Actuation Rod will move as a slight force is used to turn the Adjusting Shaft Hex. 1/4 turn will cause full movement of the Actuation Rod. Full movement of the Actuation Rod is about 1/2".

- CW movement of the Adjusting Shaft Hex will move the Actuation Rod into the Slack Body.
- CCW movement of the Adjusting Shaft Hex will move the Actuation Rod out of the Slack Body.

Replace Automatic Brake Adjuster if Actuation Rod does not move.

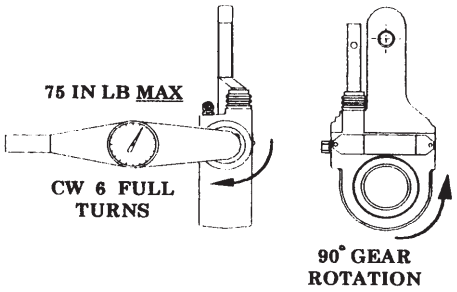


Gear Movement & Front Torque

Using a torque wrench, rotate Adjusting Hex Nut through 6 full revolution. Front Torque will increase to a peak value then return to zero several times on each revolution.

- The spline should rotate about 90 degrees.
- The Front (CW) Torque should be less than 100 in. lbs.

Replace Automatic Brake Adjuster if spline does not rotate or if torque readings are greater than 100 in lbs.

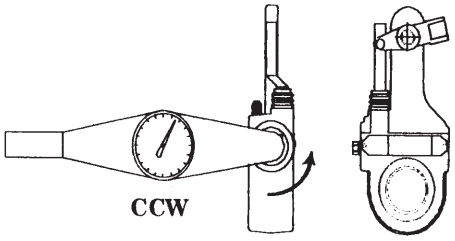


Back Torque

This procedure should only be used if:

A) The foundation brake system has no deficiencies
B) The Push Rod Power Stroke exceeds the specified values

With the **Automatic Brake Adjuster correctly installed on the vehicle or trailer axle** back torque (CCW Rotation of Hex Shaft) can be measured. Using an inch pound type torque wrench turn the hex adjusting shaft CCW very slowly. Back torque will increase to a peak value, then return to zero as the clutch teeth disengage.



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