



GOLDER RANCH FIRE DISTRICT

Engineer Practical Check Sheets

Brake Push Rod Throw Measurement

Standards:

FMVSS 121, 49 CFR Part 571 Air Brake Systems

Task/Performance Outcome:

The candidate shall be given the objective of measuring the brake push rod throw on an air brake equipped apparatus. Upon completing this objective, the candidate shall be able to accurately determine if the apparatus brake push rod throw is within proper limits for the brake pod type. If the apparatus brake push rod throw is out of limits the candidate is allowed to perform a six pack adjustment. The candidate is required to accurately measure the brake push rod throw properly and accurately. The candidate must ensure the throw limit does not exceed specifications allowed for all brake pod types on the apparatus.

Required Personal Protective Equipment (PPE):

Class C uniform.

Required Equipment:

- Air brake equipped apparatus

Critical Fail Criteria:

Failure consists of the following:

- Failure to place wheel chocks prior to getting under apparatus
- Failure to accurately measure brake throw on an apparatus
- Failure to ensure slack adjusters are within allowed distance
- Glaring, gross errors, as documented by the evaluator
- An apparent lack of efficiency and comfort with the activity, as documented by the evaluator
- Less than 100% of available points scored

Evolution Details:

The candidate is expected to measure the push rod throw on a given apparatus. The candidate must accurately measure the throw to determine if the throw is within limits for the brake pods equipped on the apparatus.



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Candidate Name:	Date:	
Actions	Points Available	Points Earned
Ensure the apparatus is on a flat level ground in a safe area.	1	
Chock wheels.	1	
Charge air brake to full pressure (125 psi. most vehicles).	1	
Release parking brake. (Allow apparatus to come to rest on the wheel chocks).	1	
Ensure partner understands what they will be doing in the driver's seat	1	
Roll under apparatus on creeper and locate the rear brake pods	1	
If equipped with plastic discs on the rods, slide the disk to the brake pod. (If no plastic disc is on the rod, make a mark on the rod flush with the face of the pod).	1	
Instruct partner to apply hard pressure to the service brake and hold	1	
Measure first brake pod from the face of the brake pod to the plastic disc, or mark with ruler or tape measure. (Ensure the measurement is with in specifications for the pod type).	1	
Measure the second brake pod (Ensure the measurement is with in specifications for the pod type).	1	
Have partner release service brakes	1	
Move and locate the front brake pods. (determine size, type and throw)	1	
If equipped with plastic discs on the rods, slide the disk to the brake pod. (If no plastic disc is on the rod, make a mark on the rod flush with the face of the pod).	1	
Instruct partner to apply hard pressure to the service brake and hold	1	
Measure first brake pod from the face of the brake pod to the plastic disc, or mark with ruler or tape measure. (Ensure the measurement is with in specifications for the pod type).	1	
Measure the second brake pod (Ensure the measurement is with in specifications for the pod type).	1	
Have partner release service brakes and apply the parking brake.	1	
Disc brake calipers with internal push rods, locate plastic tab and determine pad wear level	1	
Total Points (18/18)	18	

Evaluator: _____ Total: _____/

Circle one:

Pass/Fail on points/Fail on critical criteria

Comments _____
