

**(R) DISPLACEMENT OF PNEUMATIC SERVICE BRAKE ACTUATORS**

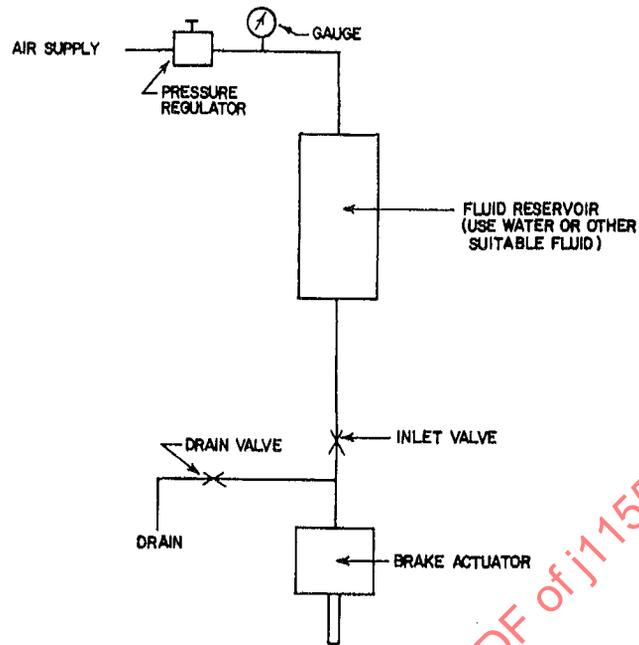
1. **Scope**—This recommended practice specifies a test procedure for determining the volume of pneumatic service brake actuators at any stroke.
2. **References**—There are no referenced publications specified herein.
3. **Test Procedure**
  - 3.1 With the inlet port open, record distance from a reference point on the actuator push rod to a fixed part of the actuator to obtain the zero stroke position.
  - 3.2 Connect the brake actuator to the test apparatus as shown in Fig. 1 with the inlet port in the highest position.
  - 3.3 Close the drain valve, open the inlet valve, and pressurize the fluid reservoir. After the actuator has moved to its maximum stroke position, close the inlet valve, open the drain valve, and return the chamber to its zero stroke position. Repeat this procedure at least three times to insure adequate bleeding.
  - 3.4 Close the drain valve, open the inlet valve, and pressurize the fluid reservoir to  $100 \pm 5$  psi ( $690 \pm 35$  kPa). Allow the actuator to move to the test stroke. Record the distance from the reference point on the actuator push rod to the fixed part of the actuator used in paragraph 2.1. The recorded distance measured minus the recorded distance measured in paragraph 2.1 for zero stroke position is the actuator test stroke. After 30 s, close the inlet valve, open the drain valve, and measure the amount of fluid expelled when the actuator push rod returns to its zero position. This volume is the actuator displacement.
  - 3.5 Close the drain valve and carefully disconnect the actuator from the test apparatus holding the inlet up. Drain and measure the fluid remaining in the actuator.
  - 3.6 The volume measured in paragraph 2.4 plus the volume measured in paragraph 2.5 is the total volume of the actuator. The test stroke may be the maximum stroke for determining maximum volume or any lesser stroke to determine the volume at that test stroke.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

QUESTIONS REGARDING THIS DOCUMENT: (724) 772-8512 FAX: (724) 776-0243  
TO PLACE A DOCUMENT ORDER; (724) 776-4970 FAX: (724) 776-0790  
SAE WEB ADDRESS <http://www.sae.org>

SAE J1155 Revised JAN88



PREPARED BY THE SAE TRUCK AND BUS BRAKE ACTUATOR SUBCOMMITTEE  
OF THE SAE TRUCK AND BUS BRAKE COMMITTEE

SAENORM.COM : Click to view the full PDF of j1155\_198801