SAE International™

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SURFACE VEHICLE RECOMMENDED PRACTICE

Submitted for recognition as an American National Standard

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(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 ± 5 psi (690 ± 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.

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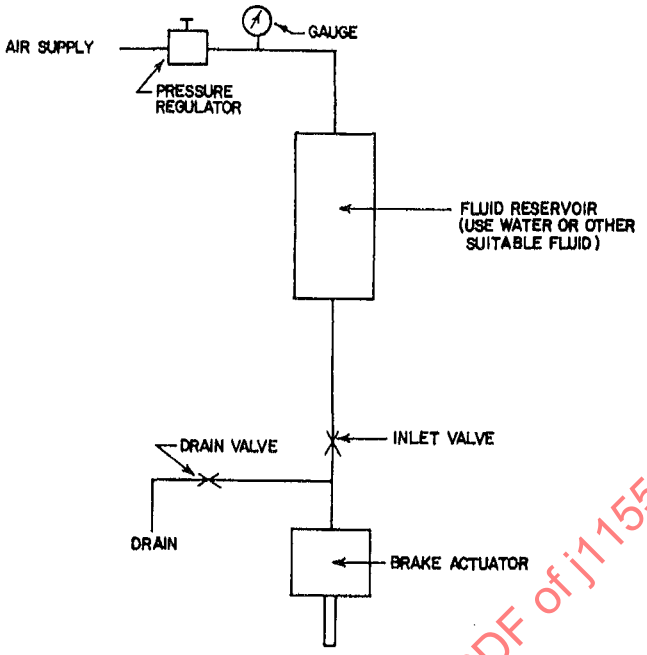

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