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Air Brake Valve Input-Output Characteristic Requirements

RATIONALE

Updates to this document include the following changes.

1.a. Added explanation to the crack pressure.
1.1 Changed operating pressure from 120 psi to 135 psi to agree with SAE J1410.
4.1.1 Deleted tolerance for pressure range from 6.9 to 27.6 kPa. Changed greater than 27.6 kPa to greater than 6.9 kPa.

1. SCOPE

This SAE Recommended Practice establishes minimum tolerance requirements for pilot operated and mechanically actuated modulating type valves, and through type valves used in the service brake control system when tested in accordance with the test procedure outlined in SAE J1859. This document applies to the nominal input-output characteristics as specified by vehicle original equipment manufacturer and labeled by the valve manufacturer as outlined in SAE J1860. The tolerance requirements will include:

a. Crack (opening) pressure or force. Crack pressure may be measured at the initial output pressure or as the pressure differential before output pressure exceeds 14 kPa (2 psi). Crack force may be measured at initial output pressure or before output pressure exceeds 14 kPa (2 psi).

b. Pressure differential (input-output)

1.1 Purpose

This document establishes uniform tolerance requirements for specified nominal input-output characteristics of pneumatic valves designed to operate at 931 kPa (135 psi) nominal pressure in commercial air braked vehicles. This serves as a supplement to SAE J1410.

2. REFERENCES

2.1 Applicable Publications

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

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