

(R) BRAKE FORCE DISTRIBUTION PERFORMANCE GUIDE—COMMERCIAL VEHICLES

Foreword—This Document has not changed other than to put it into the new SAE Technical Standards Board Format.

The performance guidelines specified in this SAE Recommended Practice represent the accumulation of information available from investigations of the brake system performance of air-braked towing, truck-tractors, truck-trailers, converter dollies, and combinations of these types of vehicles. Because these guidelines are based on data limited by voluntary submissions of equipment and information and testing was limited to specific conditions, they may not necessarily represent optimum performance for all vehicles under all operating conditions. Therefore, the values specified in this document are target values; all targets are mean values except for the one minimum value specified.

1. Scope—This SAE Recommended Practice establishes performance guidelines for the threshold pressure and brake force output of the brakes on the axles of air-braked towing trucks, truck-tractors, truck-trailers, and converter dollies with GVWRs over 10 000 lb designed to be used on the highway in combination with other air-braked vehicles of this type in commercial operations.

1.1 Purpose—The purpose of this document is to establish target threshold pressures and brake force outputs with reference to brake application pressures as measured at the rear control line gladhand of truck-tractors and towing trucks, the front control line gladhand of non-towing trailers, and the front and rear control line gladhand of towing trailers and dollies.

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.

2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J1505—Brake Force Distribution Test Code—Commercial Vehicles

2.1.2 FMVSS PUBLICATION—Available from the Superintendent of Documents, U. S. Government Printing Office, Mail Stop: SSOP, Washington, DC 20402-9320.

FMVSS 102—Air Brake Systems

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3. Test Procedure—Tests to determine the brake force output of vehicles to be used in combinations and the brake force distribution of combination vehicles shall be conducted in accordance with SAE J1505. The brakes of newly manufactured vehicles built to be used in combinations shall be burnished prior to testing according to the burnish procedure specified in Section 6.1.8.1 FMVSS 121.

4. Performance Guidelines

4.1 Newly Manufactured Vehicles Used in Tractor/Trailer or Truck/Trailer Combinations

4.2 Threshold Pressure (Average of the brake apply and release pressures measured as specified in 6.3 of SAE J1505)—41 kPa (6 psi)

4.3 Brake Force Output at 276 kPa (40 psi) as specified in 7.5 of J1505

4.3.1 TRACTOR OR TOWING TRUCK STEER AXLES—0.20 x GAWR (Minimum)

4.3.2 Single axles with GAWRs of 7260 to 9070 kg (16 000 to 20 000 lb)—20 460 N (4600 lb)

4.3.3 Axles of an "axle system" whose GAWR divided by the number of axles is from 7260 to 9070 kg (16 000 to 20 000 lb)—20 460 N (4600 lb).

5. Notes

5.1 Marginal Indicia—The change bar (I) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

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