

Air Reservoir Capacity Performance Guide—Commercial Vehicles

- 1. Scope**—This SAE Recommended Practice establishes performance guidelines for the capacity of the air reservoir systems used on trucks, towing trucks, truck-tractors, trailers, and converter dollies, with GVWRs over 10 000 lb, designed to be used on the highway in commercial operations.

NOTE—At time of publication, vehicles complying with this document may not comply with the air reservoir requirements of FMVSS 121.

- 1.1 Purpose**—The purpose of this document is to establish a minimum air storage capacity for highway-type commercial vehicles which use compressed air to actuate or transmit actuation power to the foundation brakes. A vehicle's air reservoir capacity is quantified by its ability to provide a brake application pressure which is adequate to stop the vehicle within the emergency brake stopping distances specified in Table II of FMVSS 121, after seven full brake applications with the air compressor disabled.

2. References

- 2.1 Applicable Publications**—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated, the latest revision of SAE publications shall apply.

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

SAE J1911—Test Procedures for Air Reservoir Capacity-Highway Type Vehicles

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

FMVSS 121—Air Brake Systems

- 3. Test Procedure**—Tests to determine the air reservoir capacity of air brake vehicles shall be conducted in accordance with SAE J1911.

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4. Performance Guideline

- 4.1 Trucks**—The brake actuator pressures measured during the eighth brake application shall not be less than 310.05 kPa (45 psi).
- 4.2 Towing Trucks and Truck-Tractors**—The brake actuator and the “0.820 L (50 in³) reservoir” pressures measured during the eighth brake application shall not be less than 310.05 kPa (45 psi).
- 4.3 Trailers and Converter Dollies**—The brake actuator and “0.820 L (50 in³) reservoir” (on towing trailers and converter dollies) pressures measured during the eighth brake application shall not be less than 310.05 kPa (45 psi). In addition, the parking brakes shall not fully or partially automatically apply before completion of the eighth brake application.

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