



SURFACE VEHICLE RECOMMENDED PRACTICE

J1476™

MAY2024

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Parking Brake Structural Integrity Test Procedure
Vehicles Over 4500 kg (10 000 lb)
GVWR - Truck and Bus

RATIONALE

Document was reviewed and information within it is pertinent to current product and methods used for structural integrity.

SAE J1476 has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE

This SAE Recommended Practice establishes a method of evaluating the structural integrity of the parking brake system of all new trucks, buses, and combination vehicles designed for roadway use in the following classifications: TRACTOR, TRAILER, TRUCK, AND BUS: over 4500 kg (10 000 lb) GVWR.

1.1 Purpose

The main purpose of the document is to evaluate the structural integrity of a vehicle's parking brake system. However, other areas, such as suspension and drivetrain system, may also be evaluated during the test, provided that the criteria and procedure detailed as follows are not modified in any way.

1.2 Types of Parking Brake Systems to be Evaluated

1.2.1 Manually Applied—Mechanically Held

1.2.2 Power Released—Mechanically Held

1.2.3 Power Applied—Mechanically Held

2. REFERENCES

2.1 Applicable Publications

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest version of SAE publications shall apply.

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https://www.sae.org/standards/content/J1476_202405/

Documents

Standard Sharing Hub

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

SAE J293	Truck and Bus Grade Parking Performance Requirements
SAE J360	Truck and Bus Grade Parking Performance Test Procedure
SAE J1729	Parking Brake Drawbar Pull Test Procedure—Truck and Bus
SAE J2115	Air Brake Performance and Wear Test Code Commercial Vehicle Inertia Dynamometer
SAE J2503	Drawbar Pull Performance Criteria

3. EQUIPMENT (WHERE APPLICABLE)

3.1 Brake apply device (optional, but recommended to reduce variations in apply efforts)

3.2 Air pressure gages

3.3 Hydraulic pressure gages

3.4 Tire pressure gage

3.5 Torque wrench

3.6 Direct reading brake lining temperature instrument

3.7 Parking brake apply force transducer

3.8 Recording or readout device for transducers

3.9 Heavy-duty winch or powered vehicle to pull test vehicle

3.10 Calibrated load cell 0 to 88 964 N (0 to 20 000 lb)

3.11 Suitable hook-up method for pulling test vehicle

3.12 Dolly for trailer testing

3.13 Trailer air-brake charging system

3.14 Wheel alignment equipment

4. TEST PREPARATION (WHERE APPLICABLE)

4.1 Calibrate instrumentation as required.

4.2 Install new brake lining, drums and/or rotors, and brake assemblies to the manufacturer's specifications, except all brake fasteners applied to all components affected by reactive forces shall be at minimum specified torque. Record all torque values. Record pertinent brake parameters and specifications. Mark or scribe all mating surfaces for checking relative movement.

4.3 Install and locate thermocouples per SAE J2115 (where appropriate, one per brake).