

Issued 1972-06
Revised 1995-09

Superseding J293 OCT88

Submitted for recognition as an American National Standard

(R) VEHICLE GRADE PARKING PERFORMANCE REQUIREMENTS

1. **Scope**—This SAE Recommended Practice establishes minimum performance requirements for trucks, buses, truck-tractors, full trailers, and semitrailers with gross vehicle weight ratings greater than 4540 kg (10 000 lb) with regard to:
 - a. Vehicle classification
 - b. Vehicle load
 - c. Percent grade
 - d. Application force
- 1.1 **Purpose**—This document presents on-grade parking performance requirements for new motor vehicles and trailers intended for roadway use.
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 PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J360—Truck and Bus Grade Parking Performance Test Procedure
SAE J1452—Trailer Grade Parking Performance Test Procedure
3. **General Notes**—Performance requirements established for this document are based on test procedures specified in SAE J360 or SAE J1452 for motor vehicles and trailers, respectively.
4. **Requirements**—With maximum application forces of 556 N (125 lbf) for hand-operated or 667 N (150 lbf) for foot-operated systems:
 - 4.1 Truck, bus, trailer, and semitrailer parking brake systems shall be capable of holding the vehicle stationary (to the limit of traction on the braked wheels) for 5 min in both up and down grade directions on a 20% grade.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

QUESTIONS REGARDING THIS DOCUMENT: (724) 772-8512 FAX: (724) 776-0243
TO PLACE A DOCUMENT ORDER; (724) 776-4970 FAX: (724) 776-0790
SAE WEB ADDRESS <http://www.sae.org>

SAE J293 Revised SEP95

- 4.2 Truck-tractor parking brake systems shall be capable of holding the vehicle stationary (to the limit of traction of the braked wheels) for 5 min in both up and down grade directions on either a 20% grade (required for 2-axle tractors) or a 15% grade (required for tractors with more than two axles).
- 4.3 While the parking brake system is applied, the parking brake or brakes shall be held in the applied position with the required effectiveness by energy other than fluid pressure, air pressure, or electric energy. Release of the system shall not be possible from the driver's seat unless energy is available for immediate reapplication to the required effectiveness level.
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.

PREPARED BY THE SAE TRUCK AND BUS BRAKE SYSTEMS SUBCOMMITTEE OF THE
SAE TRUCK AND BUS BRAKE COMMITTEE

SAENORM.COM : Click to view the full PDF of J293 - 199509