



# SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J293

REV.  
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## (R) Truck And Bus 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 the following 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

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### **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, truck-tractor, 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.
- 4.2** While the parking brake system is applied, the parking brake or brakes shall be held in the applied position with the required effectiveness by a mechanical means. 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.

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