

∅ VEHICLE GRADE PARKING PERFORMANCE REQUIREMENTS

1. PURPOSE:

This SAE Recommended Practice presents on-grade parking performance requirements for new motor vehicles and trailers intended for roadway use.

2. SCOPE:

This practice establishes minimum performance requirements for trucks, buses, truck-tractors, full trailers and semitrailers with gross vehicle weight ratings greater than 10 000 lb (4500 kg) with regard to:

2.1 Vehicle classification

2.2 Vehicle load

2.3 Percent grade

2.4 Application force

3. GENERAL NOTES:

Performance requirements established for this recommended practice are based on test procedures specified in SAE J360 or SAE J1452 for motor vehicles and trailers, respectively.

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4. REQUIREMENTS:

With maximum application forces of 125 lb (556 N) for hand-operated or 150 lb (667 N) 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.
- 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.

The phi (\emptyset) symbol is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. If the symbol is next to the report title, it indicates a complete revision of the report.

RATIONALE:

SAE J293 - Vehicle Grade Parking Performance Requirements
SAE J360 - Truck and Bus Grade Parking Performance Test Procedure
SAE J1452 - Trailer Grade Parking Performance Test Procedure

Proposed revisions to these standards respond to both the need for periodic updating (SAE J293 and J360 were last changed in June, 1972, and November, 1971 respectively) and the assignment of responsibility for these standards to the Truck and Bus Council. Thus, being no longer shared with passenger car/light truck/travel trailer vehicles governed by the Motor Vehicle Council, these standards are applicable only to vehicles with Gross Vehicle Weight ratings over 10 000 pounds.

The draft standards presented here are the harmonized results of Brake Systems Subcommittee and Brake Committee ballots over the past 22 months.

RELATIONSHIP OF SAE STANDARD TO ISO STANDARD:

Not applicable.

REFERENCE SECTION:

SAE J360, Motor Vehicle Grade Parking Performance Test Code
SAE J1452 JUN85, Trailer Grade Parking Performance Test Procedure

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