

# Truck and bus – Braking device – Dynamometer test procedures

## 1. Scope

This Standard specifies the test procedures for the dynamometer performance of normally operated service brake devices used in trucks and buses.

## 2. Applicable Publications

The following publication forms a part of this Standard to the extent specified herein. The latest edition of all publications shall apply.

**JIS D0210** General Rules of Brake Test Methods for Automobiles and Motorcycles

## 3. Definitions

Definitions of major terms used herein are specified in **Item 2** of **JIS D0210**.

## 4. Test Conditions

### 4.1 Vehicle Classification

Test vehicles shall be classified in accordance with passenger capacity and total vehicle mass as specified below. The specific vehicle class is shown in brackets ( ) for reference.

Category	Passenger capacity	Total vehicle mass
M2 (Class 1 bus)	10 persons or more	5 tons or less
M3 (Class 2 bus)	10 persons or more	Exceeding 5 tons
N1 (Class 1 truck)	n/a	3.5 tons or less
N2 (Class 2 truck)	n/a	Exceeding 3.5 tons up to 12 tons
N3 (Class 3 truck)	n/a	Exceeding 12 tons

### 4.2 Condition of Brake Parts

The condition of each part of brake devices used in testing shall conform to **Item 4.3** of **JIS D0210** (Condition of Brake Parts).

### 4.3 Inertia

Inertia shall be calculated as specified in **Item 7** of **JIS D0210** (Calculation Equation). Test loads, however, shall be as follows to accommodate specific test procedures and test equipment such as single or dual dynamometers.

- a) Front-and-rear combination tests using a dual dynamometer:  
1/2 of the total vehicle load
- b) Right-left combination tests:  
1/2 of the total vehicle load (single dynamometer) or total vehicle load (dual dynamometer) divided by the ratio of the front and rear wheel braking forces at a braking deceleration of  $4.5 \text{ m/s}^2$  (N1 vehicles) or  $3.0 \text{ m/s}^2$  (N2, N3, M2 and M3 vehicles).

### 4.4 Breaking Torque

Breaking torque shall be calculated as specified in **Item 7** (Calculation Equation) of **JIS D0210** and shall be entered on the test record (Performance Summary Table).

Temperature shall be measured on the fixed side as specified in **Item 6** (Temperature Measurement) of **JIS D0210**.

**Remarks:** Any deviation from the above shall be noted in the test record.