

INTERNATIONAL STANDARD

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Caravans and light trailers — Trailers of categories O₁ and O₂ with overrun brakes — Inertia bench test methods for brakes

*Caravanes et remorques légères — Remorques des catégories O₁ et O₂
à freins à inertie — Méthodes d'essai des freins sur banc à masse
d'inertie*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7642 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

This second edition cancels and replaces the first edition (ISO 7642:1983), of which certain values have been altered, the previous clause 8 deleted and references updated.

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Caravans and light trailers — Trailers of categories O₁ and O₂ with overrun brakes — Inertia bench test methods for brakes

1 Scope

This International Standard specifies test methods for type approval testing of the overrun brakes on trailers. It should therefore be used in connection with the pertinent regulation.¹⁾

NOTES

1 In order to understand fully the requirements of this International Standard and to ensure that the test procedures are correctly applied, it is recommended that the regulation is studied before application of this International Standard.

2 Only SI units are used in this International Standard.

These test methods apply to the type approval of categories O₁ and O₂¹⁾ trailers with inertia brakes by testing on an inertia dynamometer. They relate to mechanically and hydraulically operated braking systems.

2 Symbols and definitions

2.1 For all brakes

N_1	is the theoretical rotational frequency calculated for tests with cold brakes, in reciprocal minutes;
N'_1	is the actual rotational frequency measured during the tests with cold brakes, in reciprocal minutes;
N_2	is the theoretical rotational frequency calculated for the heating of the brakes, in reciprocal minutes;

N'_2 is the actual rotational frequency measured during the heating of the brakes, in reciprocal minutes.

2.2 For mechanical brakes

P_0	is the force of the brake, in newtons;
P_1	is the force applied on the brake control lever, in newtons, to obtain a braking torque Mt_1 ;
P_2	is the force applied on the brake, in newtons, to obtain a braking torque Mt_4 with cold brakes;
P_3	is the force applied on the brake, in newtons, for the strength test: $P_3 = 1,8P_1$

2.3 For hydraulic brakes

p_0	is the input pressure in the brake cylinder, in kilopascals;
p_1	is the pressure applied in the brake cylinder, in kilopascals, to obtain a braking torque Mt_1 ;
p_2	is the pressure applied in the brake cylinder, in kilopascals, to obtain a braking torque Mt_4 with cold brakes;
p_3	is the pressure applied in the brake cylinder, in kilopascals, for the strength test: $p_3 = 1,8p_1$
T	is the time, in seconds.

1) Definitions from UN/ECE Regulation No. 13, incorporating the 05 series of amendments:

Category O₁: Single-axle trailers, other than semi-trailers, with a maximum mass not exceeding 0,75 t.

Category O₂: Trailers with a maximum mass not exceeding 3,5 t other than trailers of category O₁.