

INTERNATIONAL STANDARD

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

*Caravanes et remorques légères — Remorques des catégories O₁ et O₂
à freins à inertie — Méthodes d'essai des dispositifs de commande de
freinage sur banc linéaire*



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Foreword

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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 7643 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Sub-Committee SC 4, *Caravans and light trailers*.

This second edition cancels and replaces the first edition (ISO 7643:1983), certain values of which have been altered and references updated.

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

1 Scope

This International Standard specifies test methods for type approval testing of controls on trailers for overrun brakes.¹⁾

The test method is based on the requirements of ECE Regulation No. 13 of the United Nations, *Uniform provisions concerning the approval of vehicles with regard to braking*. It is therefore recommended that reference should be made to this Regulation to assist with the use of this International Standard.

These test methods apply to the type approval of categories O₁ and O₂²⁾ trailers with inertia brakes by testing the control devices on a linear test bench.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

- 1) Only SI units are used in this International Standard.
- 2) Definitions from UN/ECE Regulation No. 13, amendment 05:

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.

ISO/TR 4114:1979, *Road vehicles — Caravans and light trailers — Static load on ball couplings*.

3 Symbols and definitions (see figure 1)

G'_A	is the trailer total weight capable of being braked by the control device, as declared by the manufacturer;
G'_{A_1}	is the minimum total weight capable of being braked;
G'_{A_2}	is the maximum total weight capable of being braked;
S	is the travel of the control, in millimetres;
S'	is the effective travel of the control in millimetres;
S_o	is the loss of travel, applicable to multi-axle trailers only, i.e. travel in millimetres of coupling head when this is actuated to move from 300 mm above to 300 mm below the horizontal, the transmission remaining stationary;
S''	is the spare travel of the master cylinder, measured in millimetres at the coupling head;
i_{H_o}	is the reduction ratio between the travel of the coupling head and the lever travel at the output side of the control device;