
International Standard



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Agricultural and forestry vehicles — Determination of braking performance

Véhicules agricoles et forestiers — Détermination des performances de freinage

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

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It has been approved by the member bodies of the following countries :

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Agricultural and forestry vehicles — Determination of braking performance

1 Scope and field of application

This International Standard specifies methods of measuring the performance of service brakes, based on measured deceleration and on measured stopping distance, and of parking brakes of agricultural and forestry vehicles.

It is applicable to :

- a) tractors and self-propelled vehicles having a maximum design speed exceeding 6 km/h;

- b) trailed agricultural vehicles designed for use at speeds exceeding 6 km/h, comprising agricultural trailers, towed agricultural machines and implements.

2 Reference

ISO 3965, *Agricultural wheeled tractors. Determination of maximum travel speed.*

Section one : General

3 Definitions

For the purpose of this International Standard, the following definitions apply.

3.1 agricultural tractor : A self-propelled wheeled or track-laying vehicle, more particularly designed to pull, push, carry and operate implements including trailers used for agricultural work (including forestry work). It may be provided with a detachable loading platform.

3.2 self-propelled agricultural vehicle : Any vehicle, other than a tractor, having its own means of propulsion, which is used in agriculture or forestry and which according to its design and the devices fixed to the vehicle is suitable and intended for doing the work.

Such vehicles may be equipped to pull implements and trailers. Additionally, there may be means for receiving the implements and devices required for doing work as well as for intermediate storing of materials which are produced and/or needed during the work.

3.3 agricultural trailer : A transport vehicle used in agriculture or forestry and which, according to its design, is suitable and intended for coupling to an agricultural tractor or to a self-propelled agricultural vehicle.

The term "agricultural trailer" includes agricultural semi-trailers, only part of the mass of which is supported by the axle or axles.

3.4 agricultural machine or implement : A trailed vehicle used in agriculture or forestry and which, according to its design and the devices fixed to the vehicle, is suitable and intended for doing the work.

Additionally, there may be means for receiving the implements and devices required for doing work as well as for intermediate storing of materials which are produced and/or needed during the work.

3.5 unladen mass : Mass of the unladen vehicle.

3.6 unladen vehicle : A vehicle in running order, complete with fuel, coolant and lubricant (where appropriate) and carrying a driver (if applicable) of 75 kg but not attendants, optional accessories or load.

3.7 laden vehicle : Unless otherwise stated, a vehicle so laden as to attain its maximum mass.

3.8 maximum axle load : The technically permissible axle load for each axle stated by the manufacturer. (The sum of the maximum axle loads may be higher than the technically permissible maximum mass of the vehicle)

3.9 maximum mass : The technically permissible maximum mass of the vehicle stated by the manufacturer. (This may be higher than the maximum mass authorized by a national administration)

3.10 braking device : A combination of parts, the function of which is to reduce the speed of a moving vehicle or to bring it to a halt or to keep it stationary if already halted. The braking device consists of the braking device control, the braking device transmission and the brakes themselves.

3.10.1 braking device control : The part of the braking device actuated directly by the driver to supply to the braking device transmission the energy required for operating the brakes.

3.10.2 braking device transmission : The combination of components connecting the braking device control and the brakes.

The transmission may be mechanical, hydraulic, pneumatic, electrical or mixed. If the braking power is derived from, or assisted by, a source of energy independent of, but controlled by, the driver, the reserve of energy in the device is regarded as part of the transmission.

3.10.3 brake : The element of the braking device in which the forces opposed to the motion or tendency to motion are produced.

3.11 service braking device : A device, the function of which is to reduce the speed of a moving vehicle or to bring it to a halt.

3.12 parking braking device : Assembly of parts by means of which the vehicle can be maintained at rest even on a slope and in the absence of the driver.

3.13 retarder : A device, the function of which is either to assist the service braking device or to reduce the speed but not to stop the vehicle.

3.14 over-run (inertia) braking device : A braking device in which the energy needed to produce the braking force is generated by movement of the towed vehicle towards the towing vehicle.

3.15 spring brake : A braking device in which the energy required for braking is supplied by one or more springs acting as an energy accumulator

3.16 brake control input force : The sum of all forces applied by the operator to the braking device control(s), measured at the point of load application, in a line from the point of application through the operator's hip joint for foot pedal controls, or through the arm to shoulder joint for hand operated controls.