INTERNATIONAL ISO

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First edition
1993-05-15

Machinery for forestry — Wheeled special machines — Vocabulary, performance test methods and criteria for brake systems

Matériel forestier — Machines spéciales à roues — Vocabulaire, méthodes d'essai et critères de performance des dispositifs de freinage

Reference number
ISO 11169:1993(E)

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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 11169 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Sub-Committee SC 15, *Machinery for forestry*.

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Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

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Machinery for forestry — Wheeled special machines — Vocabulary, performance test methods and criteria for brake systems

1 Scope

This International Standard lays down the vocabulary and specifies performance test methods and criteria to enable uniform assessment of the service, secondary and parking brake systems of wheeled specially designed forestry machines.

This International Standard applies to self-propelled, rubber-tyred special forestry machines defined in ISO 6814 [1] as skidders, forwarders and the various feller-buncher combination machines.

2 Definitions

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

2.1 brake systems: All the components which combine together to stop and/or hold the machine. Such systems include the control(s), means of power transmission, the brake(s) and all parts connecting the brake to the wheel and tyre.

2.1.1 service brake system: Primary system used for stopping and holding the machine.

2.1.2 secondary brake system: System used for stopping the machine in the event of any single failure in the service brake system.

2.1.3 parking brake system: System used to hold a stopped machine in a stationary position.

2.1.4 brake system components: (See 2.1.4.1, 2.1.4.2, 2.1.4.3 and 2.1.4.4.)

2.1.4.1 control(s): Component(s) directly activated by the operator to cause a force to be transmitted to the brake(s).

2.1.4.2 brake actuation system: All of the components between the control(s) and the brake(s) which connect them functionally.

2.1.4.3 brake(s): Components which directly apply a force to oppose movement of the machine. Brakes may, for example, be of friction, electrical or fluid types.

2.1.4.4 retarder: Energy-absorption device normally used to control machine speed while descending gradients.

2.2 common component: Component that performs a function in two or more brake systems.

2.3 machine mass: Mass of the machine which includes the heaviest combination of manufacturer-approved equipment (i.e. winch, dozer, felling head, grapple, etc.) and components (i.e. cab, protective structures, etc.), an operator of 75 kg and full fuel, lubricating, hydraulic and cooling systems.

The mass of forwarders includes the manufacturer's rated payload.

2.4 stopping distance, s: Distance travelled by the machine from the point on the test course at which the machine brake control is initially actuated to the point where the machine comes to a complete halt.

2.5 mean deceleration, a: Average rate of change of the velocity of the machine from the instant the brake control is initially actuated until the machine comes to a complete halt.

The mean deceleration, a, in metres per second squared, may be determined from the equation:

$$a = \frac{v^2}{2s}$$