
Two-wheeled mopeds — Antilock braking systems (ABS) — Tests and measurement methods

*Cyclomoteurs à deux roues — Dispositifs antiblocage (ABS) — Essais et
méthodes de mesure*



Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12366 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 23, *Mopeds*.

Annex A of this International Standard is for information only.

Two-wheeled mopeds — Antilock braking systems (ABS) — Tests and measurement methods

1 Scope

This International Standard specifies tests and measurement methods for solo mopeds (defined in ISO 3833) equipped with one or more antilock, and one or more independent, braking systems. Its purpose is to establish uniform worldwide test procedures for such systems.

This International Standard sets out procedures for the following types of straight-line braking tests:

- utilization-of-adhesion test;
- wheel-lock check test;
- tests with ABS failed;
- complementary tests that could assist in the assessment and development of braking systems.

NOTE Reference is made in this International Standard to L-category vehicles, generally referring to solo mopeds (L1), drawn from Regulation No. 78 and the Consolidated Resolution on the Construction of Vehicles (R.E.3) of the United Nations Economic Commission for Europe (UN-ECE). The values given in this International Standard enclosed by square brackets are from the same regulation (02 series of amendments), and are included for information.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3779, *Road vehicles — Vehicle identification number (VIN) — Content and structure*

ISO 6726, *Mopeds and motorcycles with two wheels — Masses — Vocabulary*

ISO 7116, *Mopeds — Measurement of maximum speed*

ISO 8709:1995, *Mopeds — Brakes and braking devices — Tests and measurement methods*

3 Terms and definitions

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

3.1

category L1

two-wheeled vehicle with engine capacity not exceeding 50 cm³ and design speed not exceeding 50 km/h

3.2

antilock system

component of service braking system which automatically controls the slip ratio, in the direction of wheel rotation, on one or both of the moped's wheels during braking

3.3

sensor

component designed to identify and transmit to the controller conditions of rotation of the wheels or other dynamic conditions of the moped

3.4

controller

component designed to evaluate and operate on data transmitted by a sensor and transmit signals to the modulator

3.5

modulator

component designed to vary braking force in accordance with the signal received from the controller

3.6

outrigger

equipment intended to limit the moped roll angle to a pre-set value

3.7

wheel lock

condition that occurs when there is a slip ratio of 1,00

NOTE In practice, wheel lock is judged to have occurred when moped speed exceeds 15 km/h while wheel speed falls below 5 km/h.

3.8

braking system

combination of parts (excluding engine) consisting of control, transmission(s) and brake(s) which progressively reduce or otherwise control the speed of a moving moped, halt it, and keep it stationary if already stopped

3.9

control

part operated directly by the rider to supply to the transmission the energy required for braking or controlling the moped

3.10

transmission

combination of components providing the functional link between the control and the brake

3.11

brake

part of the braking system in which the forces opposing the movement of the moped are developed

3.12

independent braking system

system acting on only one wheel