

Roller Brake Testers and Vertical Load Measuring in ISO 21069-1

Marián Rybianský, Peter Ondrejka
(TESTEK, a.s., Slovakia)

Roller Brake Tester in the Directive 2014/45/EU

L 127/120

EN

Official Journal of the European Union

29.4.2014

ANNEX III

MINIMUM REQUIREMENTS CONCERNING ROADWORTHINESS FACILITIES AND TEST EQUIPMENT

I. Facilities and equipment

Roadworthiness tests undertaken in accordance with the recommended methods specified in Annex I shall be carried out by using appropriate facilities and equipment. This may include, where applicable, the use of mobile test units. The test equipment that is necessary will depend on the vehicle categories to be tested, as described in Table I. Facilities and equipment shall comply with the following minimum requirements:

...

- (3) For testing any vehicle, a roller brake tester capable of measuring, displaying and recording the braking forces and the air pressure in air brake systems in accordance with Annex A to standard ISO 21069-1 on the technical requirements of roller brake tester or equivalent standards;

Sections of the normative Annex A of ISO 21069-1

Technical requirements of roller brake tester

- A.1 Technical features
- A.2 Measurement systems, ranges and resolutions
- A.3 Accuracy of measuring devices
 - A.3.1 Braking force
 - A.3.2 Vertical load
 - A.3.3 Compressed air pressure
- A.4 Data collection

The only reference of „vertical load“ measuring in the Annex A is connected with accuracy

Annex A of ISO 21069-1

The A.1 (Technical features) would be more than appropriate to contain requirements for any obligatory feature of roller brake testers but there is no reference about the load measuring.

Only in the A.3 (Accuracy of measuring devices) the tolerances for the vertical load measuring are defined:

A.3 Accuracy of measuring devices

...

A.3.2 Vertical load

At below 10 000 N, the vertical force shall be measured with a tolerance ± 300 N; at above 10 000 N, it shall be ± 3 % of the measured value.

...

Main part of ISO 21069-1

5.2 Preparation of vehicle and roller brake tester

...

5.2.3 Additional instrumentation may be used to measure the static axle loading without the rollers running.

...

ISO 21069-1 admits the use of the weighting device, but not as obligatory roller brake tester equipment, only as an option; there is no other reference of vertical load measuring in the main part of the standard.

Conclusion

The requirement of Annex III, Article I (3) of 2014/45/EU that the test facility is to be equipped with

“a roller brake tester capable of measuring, displaying and recording the braking forces and the air pressure in air brake systems in accordance with Annex A to standard ISO 21069-1”

does not necessarily mean that the roller brake tester should be capable of measuring axle loads.

The weighting device is mentioned in the standard ISO 21069-1, but not as obligatory roller brake tester equipment, only as an option.



International
Motor Vehicle
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Committee

www.citainsp.org

Rue du Commerce 123 - 1000 Brussels, Belgium

secretariat@citainsp.org

+32 (0) 2 469 06 70

