

ICS 53.100
CCS P 97



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21152-2018

Replacing GB/T 21152-2007

**Earth-moving machinery -- Wheeled or high-speed
rubber-tracked machines -- Performance requirements and test
procedures for brake systems**

Issued on: December 28, 2018

Implemented on: July 1, 2019

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 21152-2007 "Performance requirements and test methods for earth-moving machinery tire-type machine brake systems". this

Compared with GB/T 21152-2007, the main technical changes except the editorial modification are as follows.

- Increased the scope of the standard (see Chapter 1);
- Added some reference documents (see Chapter 2);
- Added some terms (see Chapter 3);
- Increased general requirements (see Chapter 4);
- Added Appendix A (informative appendix);
- Added Appendix B (informative appendix).

This standard uses the redrafting method to modify the use of ISO 3450.2011 "earth mechanical wheel or high speed rubber tracked machine brake

System performance requirements and test methods. The technical differences between this standard and ISO 3450.2011 have been incorporated into the text and are in it.

The outer margins of the terms involved are marked with a vertical single line. The main differences are as follows.

- Chapter 3 contains three reference documents "ISO 6165, ISO 7133 and ISO 8811". Because these three files are not standardized

Sexual references, move them to the reference.

- Chapter 4 Suspension Section was modified to "Note. The requirements of this clause apply to all machines within the scope of this standard. All brake systems

Design, build and install to minimize contamination. "Because this article is a suspended

section and does not contain requirements.

---4.1.1 was changed from "All machines should be equipped with service brake system, auxiliary brake system and parking brake system" to "machine should be configured

The service brake system and the parking brake system can be installed with an auxiliary brake system. According to the expected use of the machine, all driving, loading

Each braking system shall be effective under load, acceleration, off-road and ramp conditions. "Because it is consistent with GB 25684.1.

---4.1.4 removed "The brake system for single-wheel roller and combination roller should be applied to all wheels and rollers.

"Because this requirement does not meet the product technology level of the domestic market.

The documents of our country that have a consistent correspondence with the international documents referenced in this standard are as follows.

---GB/T 8595-2008 Earthmoving machinery driver's operating device (ISO 10968.2004, IDT)

---GB/T 10913-2005 Earth moving machine speed measurement (ISO 6014. 1986, MOD)

---GB/T 21153-2007 Earthwork mechanical dimensions, performance and parameters of the unit and measurement accuracy (ISO 9248..1992,

MOD)

---GB/T 21154-2014 Earthmoving machinery and its working equipment and components quality measurement method (ISO 6016.2008,

IDT)

---GB/T 34353-2017 Earthmoving machinery application electronic machine control system (MCS) functional safety performance

Guidelines and tests (ISO 15998.2008, IDT)

This standard was proposed by the China Machinery Industry Federation.

This standard is under the jurisdiction of the National Earthmoving Machinery Standardization Technical Committee (SAC/TC334).

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1 Scope

This standard specifies the service brake system, auxiliary brake system and parking brake system for wheeled and high-speed rubber crawler earthmoving machinery.

Minimum performance requirements and test methods for a uniform assessment of these brake systems.

This standard applies to the following earth moving machinery that is working on the site or on the mine or on the road.

- Self-rubber tire type earthmoving machinery as defined in ISO 6165;
- Self-rolling rollers and backfill compactors as defined by ISO 6165 and ISO 8811;
- Scraper defined by ISO 7133;
- Remote wheeled or rubber tracked machine as defined by ISO 6165;
- Derived machinery for rubber tire type earthmoving machinery;
- Rubber crawler earthmoving machinery with a maximum speed of not less than 20km/h.

This standard does not apply to earth-moving machinery for walking control (see ISO 17063) or for driving speeds less than 20 km/h (see ISO 10265)

Steel or rubber crawler earthmoving machinery. Underground mining special machinery is not within the scope of this standard, but this standard passes some

Modifications and additions of braking performance, general provisions can be applied to these machines (see Appendix A).

Note. At the time of publication of this standard, there is no international standard for special machinery for underground mining.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 6014 Earth-moving machinery-Determination of groundspeed

ISO 6016 Earthmoving machine and its working equipment and components quality measurement method (Earth-movingmachinery-

Methodsofmeasuringthemasessofwholemachines,theirequipmentandcomponents)

Units and measurement accuracy of ISO 9248 earthmoving machine dimensions,

performance and parameters (Earth-moving machinery-Units

For dimensions, performance and capacities, and their measurement accuracies)

ISO 10968 Earth-moving machinery-Operator's controls

ISO 15998 Machine Control System (MCS) for earthmoving machinery applications -
Performance criteria and tests for functional safety

(Earth-moving machinery-Machine-control systems (MCS) using electronic components - Perfor
m-

ance criteria and tests for functional safety)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Brake system brakesystem (braking system)

A combination of all components that brake and/or park the machine. Including the
operating mechanism, brake transmission, brakes, such as equipment limit

Speedometer is also included.