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

GB/T 3871.7-2025

Replacing GB/T 3871.7-2006

**Agricultural tractors - Test procedures - Part 7: Operator's field
of vision to the front**

农业拖拉机 试验规程 第7部分：驾驶员前视野
(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 7 of GB/T 3871 "Test Procedures for Agricultural Tractors". GB/T 3871 has already published the following parts.

- Part 1: General Requirements;
- Part 2: Measurement of Overall Machine Parameters;
- Part 3: Power Take-Off Shaft Power Test;
- Part 4: Lifting Capacity of Rear Tri-Point Suspension System;
- Part 5: Turning Circle and Through Circle Diameter;
- Part 6: Determination of Braking Performance of Agricultural and Forestry Vehicles;
- Part 7: Driver's Forward Visibility;
- Part 8: Noise Measurement;
- Part 9: Traction Power Test;
- Part 10: Low Temperature Start-up;
- Part 11: High-Temperature Performance Testing;
- Part 12: Usage Testing;
- Part 13: Exhaust Smoke Measurement;
- Part 14: Non-mechanical power output shaft;
- Part 15: Center of Mass;

- Part 16: Shaft Power Measurement;
- Part 17: Engine Air Filter;
- Part 18: Hydraulic Power at the Tractor-Implement Interface;
- Part 19: Steering Performance of Wheeled Tractors;
- Part 20: Bump Test;
- Part 21: Stability.

This document supersedes GB/T 3871.7-2006 "Test Procedures for Agricultural Tractors Part 7: Driver's Visibility". This document is consistent with...

Compared with GB/T 3871.7-2006, apart from structural adjustments and editorial changes, the main technical changes are as follows.

- a) The standard range has been changed to "driver's forward field of vision" (see Chapter 1, Chapter 1 of the 2006 edition);
- b) Terms and definitions have been changed (see Chapter 3, Chapter 3 of the 2006 edition);
- c) The requirements for viewpoint location have been changed (see 4.2, Chapter 5 of the 2006 edition);
- d) General requirements and acceptance criteria were added (see 5.1 and 5.3), and the term "Test Procedure" was changed to "Test Specification" (see 5.2, 2006).

Version 6.4);

- e) The requirements for test sites, test equipment, and tractors in the practical testing methods have been removed (see 6.1, 6.2, and 6.3 of the 2006 edition);

In addition to the experimental procedures for the posterior and superior visual field angles (see 6.4.1 and 6.4.2 in the 2006 edition), the field of view was expanded.

Verification (see 5.2.1);

- f) The mathematical calculation method for occlusion shadows in binocular vision has been modified (see 5.2.2, Chapter 7 of the 2006 edition);
- g) Additional testing and equivalent procedures have been added (see 5.2.3 and 5.2.4);
- h) The test report requirements have been revised, and the field of view angle has been removed (see Chapter 6, Chapter 8 of the 2006 edition);
- i) The requirements for the summary table of visual field measurement results have been changed (see Appendix A, Appendix A of the 2006 edition).

This document is modified to adopt ISO 5721-1:2013 "General requirements, test

procedures and acceptance criteria for driver's visibility of agricultural tractors".

Part 1: Forward Visual Field.

Compared with ISO 5721-1:2013, this document has undergone the following structural adjustments.

a) The order of terms in Chapter 3 has been adjusted; 3.2, 3.3, 3.4, 3.5, and 3.9 now correspond to 3.1.1, 3.2, 3.3, 3.4, 3.5, and 3.9 in ISO 5721-1:2013, respectively.

3.1.2, 3.2, 3.4, 3.8;

b) The order of Figures 1 and 2 has been adjusted. Figures 1 and 2 correspond to Figures 2 and 1 in ISO 5721-1:2013, respectively.

The technical differences between this document and ISO 5721-1:2013, and the reasons therefor, are as follows.

a) Added normative reference GB/T 6960.1 (see Chapter 3) to improve the standard's usability;

b) Change the terms and definitions of "forward field of view (top) sector" and "forward field of view (ground) sector" to "forward field of view sector" (see 3.6) Meets the requirements for using this document;

c) The terminology and definition of "viewpoint location" have been added (see 3.8) to meet the requirements of this document;

d) ISO 5353 (see 4.2) has been replaced with the normatively referenced GB/T 6236, increasing operability;

e) ISO 5006 (see 5.1.5) has been replaced with the normatively referenced GB/T 16937 to adapt to my country's technical conditions and increase operability.

Acting.

The following editorial changes have been made to this document.

---The standard name has been changed;

---A test report format has been added (see Appendix A).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Tractor Standardization Technical Committee (SAC/TC140).

Introduction

Testing methods are an important means of verifying the performance of products. Different testing methods yield different test results, and it is essential to develop testing method standards.

The goal of this standard is to achieve a single standard, a single inspection, and industry-wide acceptance. Tractors, as the power source for mobile agricultural machinery, operate in harsh environments.

Furthermore, since there are many requirements regarding personal safety and environmental hygiene, a series of testing methods are needed to verify whether its performance meets the requirements.

In this regard, my country has established a complete set of tractor testing methods by studying and referencing international standards and advanced foreign standards.

The standard GB/T 3871 aims to establish test procedures for verifying the performance indicators of tractors, and is proposed to consist of 22 parts.

---Part 1: General Requirements. The purpose is to standardize the general requirements and procedures for acceptance, break-in, and testing of agricultural tractor prototypes.

Report writing format.

---Part 2: Measurement of Overall Machine Parameters. The purpose is to standardize the test procedures for measuring the overall machine parameters of agricultural tractors.

---Part 3: Power Take-Off Shaft Power Test. The purpose is to standardize the test procedure for the effective power of the power take-off shaft in agricultural tractors.

---Part 4: Lifting Capacity of Rear Three-Point Suspension System. The purpose is to standardize the lower suspension point of the three-point suspension system on agricultural tractors.

Test procedures for maximum lifting force, maximum lifting force on the frame, lifting time and static settlement.

---Part 5: Steering Circle and Through Circle Diameter. The purpose is to standardize the measurement of the steering circle and through circle diameters for agricultural wheeled tractors.

program.

---Part 6: Determination of Braking Performance of Agricultural and Forestry Vehicles. The purpose is to standardize the braking performance of agricultural tractors, self-propelled agricultural vehicles, and trailers.

Test procedures for braking performance of traction agricultural machinery.