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

GB/T 3871.18-2022

**Agricultural tractors - Test procedures - Part 18: Hydraulic
power at tractor/implement interface**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" drafted.

This document is part 18 of GB/T 3871 "Test Procedures for Agricultural Tractors". GB/T 3871 has published the following parts.

- Part 1. General requirements;
- Part 2. Measurement of parameters of the whole machine;
- Part 3. Power take-off shaft power test;
- Part 4. Lifting capacity of rear three-point hitch;
- Part 5. Turning circle and passing circle diameter;
- Part 6. Determination of braking performance of agricultural and forestry vehicles;
- Part 7. The driver's field of vision;
- Part 8. Noise measurement;
- Part 9. Traction power test;
- Part 10. Low temperature starting;
- Part 11. High temperature performance test;
- Part 12. Use test;
- Part 13. Measurement of exhaust smoke;
- Part 14. Partial power output power take-off shaft for non-mechanical transmission;
- Part 15. Centroids;

- Part 16.Determination of shaft power;
- Part 17.Engine air filters;
- Part 18.Hydraulic power at the interface between the tractor and the implement;
- Part 19.Wheeled tractor steering performance;
- Part 20.Turbulence test;
- Part 21.Stability.

This document replaces GB/T 3871.18-2006 "Test Procedures for Agricultural Tractors - Part 18.Hydraulic pressure at the interface between the tractor and the implement power".

Compared with GB/T 3871.18-2006, the main technical differences between this document and GB/T 3871.18-2006 are as follows.

- Changed the standard scope (see Chapter 1, Chapter 1 of the.2006 edition);
- Changed terms and definitions (see Chapter 3, Chapter 3 of the.2006 edition);
- Changed the provisions of "run-in and initial adjustment" (see 5.2, 5.2 of the.2006 edition);
- Changed the test conditions and test procedures for steady state pressure (see 6.1, 6.1 of the.2006 edition);
- Changed the provisions of the effective hydraulic pressure test report (see 6.3, 6.3 of the.2006 edition);
- Changed the test conditions, test procedures and test report provisions of the hydraulic power test (see Chapter 7,.2006 edition of the 7th chapter);
- Changed the test report format (see Appendix A, Appendix A of the.2006 edition).

This document is modified to adopt ISO /OECD789-10.2006 "Test Procedures for Agricultural Tractors - Part 10.Tractor and Implement Connections"

Hydraulic power at the mouth".

The technical differences between this document and ISO /OECD 789-10.2006 and their reasons are as follows.

- Changed the scope (see Chapter 1) to meet industry requirements;
- Changed the definition of the term "agricultural tractor" (see 3.1), keeping the definition of "agricultural tractor" in ISO 12934.2021

consistent;

- Changed the regulation of the speed range when the engine is calibrated at the speed (see 5.2.4), in order to avoid ambiguity;
- Unify the terms (see 6.1.1, 6.1.2.2, 6.3.2, A.4) to avoid ambiguity;
- Added the provisions on the standard flow of tractors of other suspension categories (see 6.1.2.2, 6.1.2.3, 6.1.2.4), and increased the scope of application;
- Changed the test content [see 6.3.1b)] to maintain the consistency of the standard;
- Changed the tractor standard flow output state [see 6.3.2b)], expanded the scope to meet industry requirements;
- Increased the specification range of hydraulic quick-change joints [see 7.1a)] to meet industry requirements;
- Increase the hydraulic power test provisions for hydraulic joint pairs (see 7.2.2), in order to test with the OECD official for agricultural and forestry tractors.

It is consistent with the provisions of CODE2.2018 of the inspection standard rules;

- Changed the title (see A.3, A.4) to clearly express the main content of the test results;
- Delete the hydraulic oil temperature target value (see ISO /OECD789-10.2006 A.3, A.4), expand the tractor structure and configuration

need;

- Refined the content of the test report (see A.3) so as to be consistent with the OECD Official Test Standard Rules for Agricultural and Forestry Tractors CODE2.

Consistent with the provisions of.2018;

- Delete the reference to the OECD rules (see A.3 of ISO /OECD789-10.2006) to harmonize the standard;
- Added a description of the selected test (see A.4), so as to be consistent with the OECD Official Test Standard Rules for Agricultural and Forestry Tractors

The provisions of CODE2.2018 are consistent;

- Added the content of the test report (see A.4) to unify the standard;
- Combine the test items of effective differential pressure (see A.4) to unify the standard;
- Delete the provisions of the standard flow (see ISO /OECD789-10.2006 A.4) to meet the test needs.

The following editorial changes have been made to this document.

- In order to harmonize with existing standards, the name of the standard is changed to

"Agricultural Tractor Test Procedures - Part 18.Interface between tractors and implements" hydraulic power";

--- Deleted part of "Note" in "Terms and Definitions";

--- For terms from ISO 10448:1994, the entry number has been added;

--- Changed the symbol of the maximum sustainable hydraulic power.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The test method is an important means to test the quality of product performance. Different test methods yield different test results.

The purpose of the standard is to achieve a standard, a test, and industry-wide recognition. As the power source of mobile agricultural machinery, tractors work

The environment is harsh and there are many requirements related to personal safety and environmental hygiene, and a series of test methods are needed to determine whether its performance meets the requirements.

Check it out. In this regard, my country has established a complete set of tractor tests by studying and referring to international standards and foreign advanced standards.

method standard. GB/T 3871 aims to establish the test procedures for checking the performance indicators of tractors, and 21 parts have been issued.

--- Part 1.General requirements;

--- Part 2.Measurement of parameters of the whole machine;

--- Part 3.Power take-off shaft power test;

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--- Part 6.Determination of braking performance of agricultural and forestry vehicles;

--- Part 7.The driver's field of vision;

--- Part 8.Noise measurement;

--- Part 9.Traction power test;

--- Part 10.Low temperature starting;

--- Part 11.High temperature performance test;