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

GB 8097-1987

Replacing GB/T 8097-2008

**Equipment for harvesting - Combine harvesters - Test
procedure and performance assessment
(English Translation)**

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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 for standardization documents" Drafting.

This document replaces GB/T 8097-2008 "Harvester Combine Harvester Test Methods" and is consistent with GB/T 8097-2008.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added the terms and definitions of test trip, grain sampling, separation device sampling, and cleaning sampling (see 3.4, 3.5.1, 3.5.2, 3.5.3);
- Added the evaluation requirements for dimensions and performance parameters related to combine harvesters and their functional components (see 5.1);
- Added configuration requirements (see 5.3);
- Added dimensional measurement requirements (see 5.4);
- Added measurement requirements for other components (see 5.5);
- Added other technical feature requirements (see 5.6);
- Added requirements for combine harvesters equipped with systems for automatic adjustment of feeding amount, threshing and cleaning effect (see 7.1);
- Added crop conditions and loss rate requirements for production capacity testing (see 7.2.5~7.2.10);
- Changed the requirements for test machines and comparison machines (see 7.3.2, 7.2 of the 2008 edition);
- Added requirements for combine harvesters equipped with software-controlled automatic adjustment systems (see 7.4.4);

- Added sample receiving device requirements [see 7.5 e) and i)];
- Added sample receiving conditions and procedure requirements (see 7.6.2, 7.6.3, 7.6.4, 7.6.8);
- Added sample processing and analysis requirements (see 7.7.1);
- Added data requirements in the test report [see a), d), e), f), g), n), o) in 7.8.1];
- Added requirements for crop productivity curves with different grass-to-grain ratios (see 7.10.1).

This document is modified to adopt ISO 8210:2021 "Harvester combine harvesters - Test procedures and performance evaluation".

The technical differences between this document and ISO 8210:2021 and the reasons are as follows.

- Replaced ISO 6689-1 (see 5.1, 5.4.4, 5.5.9, 5.6.2, 7.1, 8.3) with the normative reference GB/T 6979.1 to adapt my country's technical conditions increase operability;
- ISO 6689-2 (see 5.1, 5.4.4, 7.1, 8.3) has been replaced by the normative reference GB/T 6979.2 to adapt to my country's technology Conditions, increase operability;
- ISO 789-3 (see 5.4.5, 5.4.6) has been replaced with the normative reference GB/T 3871.5 to adapt to my country's technical conditions, and Increase operability;
- ISO 14396 (see 5.6.1) has been replaced with the normative reference GB/T 21405 to adapt to my country's technical conditions and increase operability Sexuality;
- Replaced ISO 16231-2 (see 5.7.2) with the normative reference GB/T 41603.2 to adapt to my country's technical conditions, and added Operability;
- ISO 5687 (see 5.8) has been replaced by the normative reference GB/T 8094 to adapt to my country's technical conditions and increase operability Sexuality;
- ISO 4254-7 (see 6.3.3.1, 6.3.3.5) has been replaced with the normative reference GB 10395.7 to adapt to the technical requirements of my country parts, increasing operability;
- The normative reference GB/T 8421 replaces ISO 5007, GB/T 16955 replaces ISO 5131 (see 6.3.3.4), Adapt to my country's technical conditions and increase operability;
- Taking into account the actual situation of semi-feed combine harvesters in my country, the sampling conditions and procedure requirements for semi-feed combine harvesters are added (see 7.6.1, 7.6.7).

The following editorial changes were made to this document.

- ISO 500-1 is replaced by the informative reference GB/T 1592.1 (see 5.2.2);
- Replaced ISO 3965 with the informative reference GB/T 20792 (see 5.2.3);

--- ISO 3600 is replaced by the informative reference GB/T 9480 (see 6.3.4);

--- Added Appendix B (informative) test method for header loss;

--- Added Appendix C (informative) Test stroke calculation example.

1 Scope

This document specifies the procedures for field functional testing and production capability testing of combine harvesters.

This document specifies the terminology and methods for testing the important characteristics of a combine harvester. This document covers both functional tests and production capability tests.

The evaluation of controllability and adjustment convenience, work efficiency and general handling characteristics was carried out within one harvest season. The grain loss rate and production capacity the characteristics are measured under specified conditions.

This document applies to the testing of self-propelled, backpack, direct harvesting or pick-up harvesting multi-crop combine harvesters.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 3871.5 Agricultural tractor test procedures Part 5: Turning circle and passing circle diameter (GB/T 3871.5-2022, ISO 789-3:2015, MOD) GB/T 6979.1-2005 Harvesting machinery Combine harvesters and functional components Part 1: Vocabulary (ISO 6689-1:1997, MOD) Note. There is no technical difference between the referenced content of GB/T 6979.1-2005 and the referenced content of ISO 6689-1:1997.

GB/T 6979.2 Harvesting machinery Combine harvesters and functional components Part 2: Evaluation of performance and characteristics defined in the vocabulary (GB/T 6979.2-2005, ISO 6689-2:1997, MOD) GB/T 8094 Harvester Combine Harvesters - Determination of Grain Tank Capacity and Grain Unloading Mechanism Performance (GB/T 8094-2023, ISO 5687:2018, IDT) GB/T 8421 Laboratory measurement of vibration transmitted by the driver's seat of agricultural wheeled tractors (GB/T 8421-2020, ISO 5007:2003, IDT) GB 10395.7 Safety technical requirements for agricultural and forestry tractors and machinery Part 7: Combine harvesters, forage and cotton harvesters (GB 10395.7-2006, ISO 4254-7:1995, MOD) GB/T 16955 Acoustics - Simple method for

measuring noise at the operator's position of agricultural and forestry tractors and machinery (GB/T 16955-1997,eqvISO 5131.1996) GB/T 21405 Determination and measurement of engine power for reciprocating internal combustion engines Additional requirements for exhaust pollutant emission tests (GB/T 21405-2008, ISO 14396:2002, IDT) GB/T 41603.2 Stability evaluation of self-propelled agricultural machinery Part 2: Determination and test procedure for static stability (GB/T 41603.2-2022,ISO 16231-2:2015,IDT)

3 Terms and definitions

The terms and definitions defined in GB/T 6979.1 and GB/T 6979.2 and the following apply to this document.