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

GB/T 41677.1-2022

**Tractors and machinery for agriculture and forestry -
Sustainability - Part 1: Principles**

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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 is Part 1 of GB/T 41677 "Sustainability of Agricultural and Forestry Tractors and Machinery". GB/T 41677 has been issued with

Lower part.

--- Part 1. Principles.

This document is equivalent to ISO 17989-1:2015 "Sustainability of agricultural and forestry tractors and machinery - Part 1. Principles".

This document adds a chapter "Normative References".

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

Impacts of human activities on the environment (e.g. acid rain, ozone depletion, air, water and soil pollution, soil compaction, soil erosion

eclipse) and the depletion of limited natural resources are increasingly arousing social concern. Agriculture and forestry production is directly related to resources such as land and water.

With the further improvement of mechanized production, all parties involved in the design, development, distribution and use of agricultural and forestry tractors and machinery not only need to pay attention to the environment

In addition to the impact on the environment, the social responsibility of the manufacturer, the economics of production and use of the machine, and in order to reduce the impact of the machine on the environment

actions that can be taken against negative impacts.

In order to solve these problems, it is necessary to formulate sustainability standards for agricultural and forestry tractors and machinery, and to guide manufacturers and related designers in developing

In the development and design stage, the entire life cycle of the machine, including design, production, distribution, use, and scrapping, is considered, and measures are taken to reduce negative impacts and improve machine quality.

measures to improve the level of sustainable development of agricultural and forestry tractor and machinery industry design, and to achieve sustainable development in terms of environment, resources, economy, and society.

Ongoing balance. The establishment of standards can also provide product buyers and users with a method to compare the influencing factors of similar products.

GB/T 41677 aims to establish sustainable principles and related methods related to agricultural and forestry tractors and machinery, and is intended to consist of multiple parts.

--- Part 1.Principles. The purpose is to establish to assist designers and manufacturers of agricultural and forestry tractors and machinery to incorporate the principles of sustainability,

Guidelines for integrating practices and considerations into their organization and processes.

---Other parts. plans to specify specific product series and methods related to sustainability in the process of designing and using products, which are still under study

Studying.

Agriculture and Forestry Tractors and Machinery Sustainability

Part 1.Principles

1 Scope

This document establishes guidelines to assist designers and manufacturers of agricultural and forestry tractors and machinery in integrating sustainability principles, practices and considerations.

to the guiding principles in its organization and processes. This document applies in particular to equipment for the production of food, fibre, fuel and wood for humans and livestock.

NOTE. This document includes three different levels of application. Principles, Recommendations and Additional Information (Appendix).

This document addresses organizational management and provides guidance for considering aspects of sustainability related to organizational and product life cycles. This part will work

The plant gate is defined as the system boundary (Figure 1).

This document is not intended for registration and certification for contractual or regulatory purposes.

This document does not address occupational health and safety or operator safety aspects of machine design, unless closely related to sustainability.

Designers can find guidance on these issues in other international standards.

Description of index number.

2 Normative references

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

design and development

A set of processes that translate requirements into specified characteristics or specifications for a product, process or system.

Note 1. The terms "design" and "development" are sometimes synonymous, sometimes used to specify the different stages of the overall design and development process.

Note 2 to entry. Design and development attributes may be expressed using qualifiers (for example, product design and development or process design and development).