

ICS 65.060.10
CCS T 61



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

GB/T 19407-2025

Replacing GB/T 19407-2003

**Agricultural tractors - Maximum actuating forces required to
operate controls**

农业拖拉机 操纵装置最大操纵力

Issued on: October 31, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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 supersedes GB/T 19407-2003 "Maximum Operating Force of Agricultural Tractor Control Devices" and is consistent with GB/T 19407-2003. Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows:

---The maximum operating force of the steering clutch has been changed (see Table 1, Table 1 in the 2003 edition);

---Added differential lock, gear pedal, shift control, hydraulic output device, electrical control system, and maximum throttle operating force (see... Table 1);

---The steering clutch lever operation force and the power take-off shaft clutch pedal operation force have been removed (see Table 1 in the 2003 edition). 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). This document was drafted by: Weichai Lovol Smart Agriculture Technology Co., Ltd., Jiangsu Coastal Agricultural Machinery Testing Co., Ltd., and Luoyang Tractor Co., Ltd. Lhasa Machinery Research Institute Co., Ltd., Weichai Lovol (Weifang) Agricultural Equipment Co., Ltd., and Zhejiang Academy of Agricultural Sciences Agricultural Equipment Research Institute. The main drafters of this document are. Li Zhengyu, Liu Jinyong, Zhang Jian, Chen Song, Liao Hanping, Guo Hui, Xing Shouchun, Cai Yanbin, Zhao Wenke, Huang Wei, and Ren Ning. Zhou Guiping. This document was first published in 2003, and this is its first revision.

Maximum operating force of agricultural tractor control device

1 Scope

GB/T 19407-2025 is the Chinese national standard covering how hard a driver may have to

push or pull - the limits by control type and by whether it is worked with hand or foot, the measurement conditions, and the distinction between the occasional and the repeated operation. It replaces GB/T 19407-2003, in force from 1 May 2026. It was issued on 31 October 2025 and has been in force since 1 May 2026, replacing GB/T 19407-2003. The document is under the responsibility of the China Machinery Industry Federation. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the maximum operating force for the control devices of agricultural tractors. This document applies to the design and manufacture of agricultural tractor control devices; tractor control devices for other purposes may refer to this document for further information.

2 Normative references

This document has no normative references.

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4. Maximum operating force of the control device The maximum operating force of the control device shall comply with the provisions of Table 1. Table

1 Maximum Operating Force of Control Device The unit is Newton. Control method, control device, maximum control force, remarks
Foot control Service brake 600 thrust Parking brake 600 thrust Main clutch 350 thrust Double-acting clutch 400 thrust Differential lock 300 pressure Throttle

90 Thrust/Pressure Gear shift pedal

90 Thrust/Pressure Manual operation Service brake 400 tension Parking brake 400 pull force Main clutch 100 pull force 200 pull force of power take-off shaft clutch Steering clutch 230 pull force Differential lock 230 traction