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

GB/T 18516-2017

Replacing GB/T 18516-2001

**Portable chain saws - Measurement of cutting rate and fuel
consumption - Engineering method**

便携式油锯 锯切效率和燃油消耗率试验方法 工程法

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 18516-2001 "Oil Saw Sawing Test Method Engineering Method", compared with GB/T 18516-2001, except Editorial changes to the main technical changes are as follows:

--- modified the standard name, from the original "saws sawing test method engineering method" modified to "portable saws sawing efficiency And fuel consumption rate test method engineering method ", while modifying its English name; - modified the "normative reference document" (see Chapter 2,.2001, Chapter 2); - Added terms and definitions (see Chapter 3);

--- modified the "test conditions" in some of the terms, an increase of test conditions on the test environment temperature, humidity and atmospheric pressure to The requirements for the test timber were modified and the partial adjustments were made to the sections (see 4.1.1.44,.2001) 3); - modified the terms of the "test method" to modify the preheating time of the pre-test machine (see

4.5 to 4.80,.2001) Chapter 4);

--- modified part of the "test report" in the content, delete the saw chain file grinding conditions, saw chain tension and lubrication of the content (See Chapter 5, Chapter 5 of.2001); Figure 1, Figure A.1, Figure A.2, and Figure B.1 adds the indicative description (see 4.3.3, Appendix A, Appendix B,.2001, 3.2.3, 3.3, 5.3); - Put the "Sawing Machine Example" in the Appendix A (see Appendix A,.2001, Edition 3.3);

--- "Oil Saw Sawing Efficiency and Sawing Fuel Consumption Rate Data Sheet", "Measurement Results Curve" into the normative Appendix B (see attached Record B,.2001 edition 5.2, 5.3). This standard is proposed by the State Forestry Administration. This standard is nationalized by the National Forestry Machinery Standardization Technical Committee (SAC/TC61). This standard is responsible for drafting units. Zhejiang Zhongjie

Technology Co., Ltd. This standard participates in the drafting unit. Yongkang Putian Garden Machinery Co., Ltd., Zhejiang Pineer Electromechanical Co., Ltd., Zhejiang Zhongma Garden Machine Co., Ltd., Shandong Huasheng Zhongtian Machinery Group Co., Ltd., Zhejiang Saasa Tools Manufacturing Co., Ltd., Zhejiang Eagle Garden Machinery Co., Ltd., Zhejiang White Horse Industrial Co., Ltd., Zhejiang Sanfeng Industrial Co., Ltd., Andrei Steele Power Tools (Qingdao) Limited, Fu Shihua (Changzhou) Machinery Manufacturing Co., Ltd., Jiangmen Italian Marco Outdoor Power Equipment Co., Ltd. The main drafters of this standard. Yang Haiyue, Xia Hongmao, Tang Enchang, Zhu Daoqing, Lai Youzheng, Zhang Maolei, Ye Fangzheng, Chen Zenghui, Yang Chuanwu, Yang Feng, Liu Hongtao, Quan Chengzhen, Li Dazheng. This standard was first released in November.2001, this time for the first revision.

This standard specifies the use of special testing machine in the laboratory to determine the portable chain saw (hereinafter referred to as the chain saw) sawing efficiency and sawing fuel consumption Consumption rate of the method, the test accuracy depends mainly on the testing machine and test instrument accuracy, by the operator of human factors less affected. Determination of chain saws Sawing efficiency and sawing fuel consumption of another method is LY/T 1198-1996 "saws sawing test method simple method" rules Set the manual operation plus stopwatch timing method. Manual operation by the impact of human factors, the test accuracy is low. But LY/T 1198 regulations The test method is simple and can be used for outdoor or forest field testing. Portable saw blade sawing efficiency and fuel consumption rate Test method engineering method

1 Scope

GB/T 18516-2017 is the Chinese national standard on portable chain saws - measurement of cutting rate and fuel consumption - engineering method, in the field of agriculture. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 12 May 2017 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2017. Classification: ICS 65.060.80, CCS B96. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the use of special testing machine to measure the efficiency of sawing saws and sawing fuel consumption rate of the method. This standard applies to the use of standard test cases when the oil saw.

1.2 Ty 0.6 (1) Where. α_{ha}

--- environmental parameters; p_y - total pressure in kPa (kPa); ϕ_{iy}

--- relative humidity; ψ_y

--- test environment saturated steam pressure, the unit is kPa (kPa); T_y - the absolute temperature of the air in the test environment, in Kelvin (K). When measuring, the allowable error of ambient temperature is $\pm 2K$, the allowable error of atmospheric pressure is $\pm 0.1kPa$, and the allowable error of relative humidity is $\pm 3\%$ (absolute).

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document. GB/T 5849 Blockboard

GB/T 17657 Test method for physical and chemical properties of wood - based panels and decorative panels

GB/T 18960 Forestry Machinery Portable Oil Saw Vocabulary

3 Terms and definitions

The following definitions and definitions as defined in GB/T 18960 apply to this document.

3.1 Into the effortless downward force used in sawing The test system applies the lower pressure on the test piece by the chain saw.

4 Test conditions

4.1 Test environment conditions When the environmental parameter α_{ha} satisfies the condition of $0.93 \leq \alpha_{ha} \leq 1.07$, it is considered that the test is effective. The environmental parameter α_{ha} is calculated according to formula (1) $\alpha_{ha} = p_y / \phi_{iy} \psi_y$

4.2 Test Saw

4.2.1 Test saws should be fully assembled, according to the standard production, the inspection of qualified products.