

ICS 65.060.80
CCS B 95



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

GB/T 46645-2025

**Portable brush-cutters and grass-trimmers - Cutting attachment
guard strength**

便携式割灌机和割草机 切割附件护罩强度

(English Translation)

Issued on: October 31, 2025

Implemented on: October 31, 2025

Issued by: State Administration for Market Regulation

Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and Definitions
4 Strength requirements for cutting accessory guards
5 Test Procedure

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 is equivalent to ISO 8380:1993 "Strength of guards for cutting attachments of forestry machinery, portable brush cutters and lawn mowers".

This document includes a new chapter on "Terms and Definitions".

The following minimal editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Strength of Protective Covers for Cutting Attachments on Portable Brush Cutters and Lawn Mowers".

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 National Forestry and Grassland Administration.

This document is under the jurisdiction of the National Forestry Machinery Standardization Technical Committee (SAC/TC61).

1 Scope

This document specifies the strength requirements for the cutting accessory guards of portable brush cutters and lawn mowers powered by internal combustion engines, and describes...

Corresponding testing methods were developed to verify its safety in practical use. This ensures the safety of operators, protecting them from projectiles and accidental damage.

Damage from external contact with cutting attachments.

Another aspect of safety is the dimensions when designing cut accessory guards. dimensional requirements are given in ISO 7918.

This document does not apply to lawnmower cutting accessory guards; requirements for lawnmower cutting accessory guards are detailed in ISO 10518.

1) ISO 10518 was abolished in 2006.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 7918 Dimensions of guards for cutting attachments on portable brush cutters and lawn mowers (Forestry machinery-Note. GB/T 46650-2025 Dimensions of guards for cutting attachments on portable brush cutters and lawn mowers (ISO 7918:1995, IDT)

3 Terms and Definitions

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

4 Strength requirements for cutting accessory guards

When tested according to Chapter 5, the cutting accessory guard should not break or crack, and its dimensions before and after the test should conform to the requirements of ISO 7918.

5 Test Procedure

5.1

Before the test, the cutting attachments should be removed. The test should be conducted under conditions where the temperature of the protective cover is $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$. For brush cutter covers, additional conditions should also be met.

The test should be conducted at a temperature of $-25^{\circ}\text{C} \pm 3^{\circ}\text{C}$. Heating or cooling the entire machine is unnecessary. The brush cutter should be mounted on a rotating support.

On the frame, the power unit is placed as close as possible to the suspension point, and the protective cover of the cutting attachment faces downwards (see Figure 1).

5.2

The impact of a steel pendulum striking the cutting accessory guard is performed 50 times at each temperature (see 5.1), with the pendulum suspended at a length of [length missing].

On a simple pendulum with a radius of $700\text{mm} \pm 5\text{mm}$, the pendulum arm should be as light as possible; the weight of the pendulum bob should meet the requirements of 5.2.1 and 5.2.2 when the pendulum bob is raised to the height specified in 5.2.1 and 5.2.2.

At a given temperature, this pendulum system can generate an impact energy of $25\text{J} \pm 0.5\text{J}$; the diameter of the pendulum bob should be approximately 85mm, and the edge of its impact surface should have a maximum radius.

The fillet is 5mm.

5.2.1

The pendulum should be raised to a height of $1000\text{mm} \pm 10\text{mm}$ above the protective cover before falling, so that it impacts the rear edge of the cutting accessory protective cover [see...].