

ICS 21.220.10

CCS G 42



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

GB/T 11545-2008

Replacing GB/T 11545-1996

Belt drives -- V-belts for the automotive industry -- Fatigue test

带传动 汽车工业用V带 疲劳试验

(English Translation)

Issued on: June 18, 2008

Implemented on: February 1, 2009

Issued by: Standardization Administration of China

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Overview
- 4 Device
- 4.1 Fatigue Testing Machine

Foreword

This revised standard adopts the International Standard ISO 5287:2003 "with the automotive transmission belt fatigue test with a narrow V".

This standard replaces GB/T 11545-1996 "car V belt fatigue testing." this standard and ISO 5287:2003 The main differences are as follows.

According to ISO 5287:2003 re-drafting, listed in Appendix A of this standard reg number and ISO 5287:2003 reg CrossRef List.

Taking into account China's national conditions in the use of ISO 5287:2003, the standard of this made some changes. About the technical differences have been incorporated into the text, in terms of pages and they are involved in a single vertical line identified by the margin. It is given in Appendix B of these technical differences and their reasons List for reference.

For ease of use, this standard also made the following editorial changes.

- a) "this International Standard" be replaced by "this standard";
- b) Remove the preface to international standards.

This standard and GB/T 11545-1996 compared to the main changes are as follows.

- Increasing the length of the test V belt (1996 version 6.1.3, this version 6.1.3);
- The two trials are included in the text, and added AV15, AV17 and AV22 three dimension model and its parameters (1996 edition Appendix A, this edition 4.1.4,4.2.2,6.1.2);
- Changed the test pulley surface roughness and hardness (4.2.1,4.2.3 1996 edition, this version 4.2.3).

The Standard Appendix A and Appendix B are informative.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard tape by the chemical industry Standardization Technical focal point.

This standard was drafted. Zijingang Belt Co., Ltd., Wuxi City in good Rubber Co., Ltd. Health Rui Ma On Shan, Ningbo lush Far East Rubber Co., Ltd., Qingdao Rubber Industry Research Institute.

1 Scope

This standard specifies the test can be used in automotive V belt (hereinafter referred to as V-belt) Resistance Test Method for fatigue properties.

This standard applies to cars with internal combustion engines in ancillary equipment drive V-belt.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to reach an agreement on this standard is Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 11357 pulley material, surface roughness and the balance (GB/T 11357-1989, eqv ISO 254. 1981) GB/T 13352 V belt drive for the automotive industry with its pulley size (GB/T 13352-2008, ISO 2790:2004, MOD)

3 Overview

Under the conditions specified in this standard, with three (or two) fatigue tester fatigue life of V belt. Fatigue life is when the V-belt Number of normal operating hours accrued termination condition is reached.

4.1 Fatigue Testing Machine

Tester should have a solid structure, all members should be able to withstand the stress generated in the test without damage. Tester should include the following section.

4.1.1

a driving wheel and driving it means.

4.1.2

a driven wheel and power consumption and a measuring device connected thereto; it means to have a certain precision measurement, and calibration.

4.1.3

a tension pulley and tensioning device can be applied to the V-belt tension.

On a) three test machine is a tension pulley (see Figure 1);

b) the two test machine is a movable pulley (may be a driving wheel or the driven wheel, see Figure 2).

4.1.4

V with a device for measuring the amount of sliding, measurement accuracy of $\pm 1\%$.

In order to apply a different length, a capstan and (or) the driven wheel (for three test machine also includes a tension pulley) position and adjustable bracket Section and may be fastened (see FIG. 1, FIG. 2).

As can be easily applied to the V-belt tension, the tension pulley and bearing bracket of three test machine should be along the direction of tension Free to slide or rotate. In this case, the line of action of the tension bisects the angle between the V-belt on the tension wheel, the tension wheel and passing through the axis and acting on the plane through the center of the tension pulley groove.

Need driven wheel or capstan two tester should be able to translate in order to meet the provisions of 6.1.3 short V-belt (see Figure 2). fix After the movable unit, the tension will be applied to the V belt.