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

GB/T 1149.15-2017

**Internal combustion engines -- Piston rings -- Part 15:
Coil-spring-loaded oil control rings of narrow width made of
cast iron**

(English Translation)

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Foreword

GB/T 1149 "internal combustion engine piston ring" is divided into 16 parts.

- Part 1. General rules;
- Part 2. Terms;
- Part 3. Material specification;
- Part 4. Quality requirements;
- Part 5. Test methods;
- Part 6. Cast iron scratch ring;
- Part 7. Rectangular cast iron ring;
- Part 8. Rectangular steel ring;
- Part 9. Trapezoidal cast iron ring;
- Part 10. Trapezoidal steel ring;
- Part 11. Wedge cast iron ring;
- Part 12. Wedge ring;
- Part 13. Oil rings;
- Part 14. Spiral stay spring oil ring;
- Part 15. Thin cast iron spiral ring spring oil ring;
- Part 16. Steel strip combined oil ring.

This section GB/T 1149 Part 15.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method is equivalent to using ISO 6626-2:2013 "Internal combustion engine piston ring Part 2. Thin cast iron coil spring oil ring".

The documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

--- GB/T 1149.1-2008 Internal combustion engine piston rings Part 1. General Rules (ISO 6621-4:2003, IDT) this part is proposed by China Machinery Industry Federation.

This part of the National Internal Combustion Engine Standardization Technical Committee (SAC/TC177) centralized.

This part of the drafting unit. Shanghai Internal Combustion Engine Research Institute, Shijiazhuang King Kong Kaiyuan Power Technology Co., Ltd., Yizheng Yashike Double-ring

Piston Ring Ltd., Anqing Di Bogeci Piston Ring Co., Ltd., Fujian East Asia Machinery Co., Ltd., Zhejiang Ankang Automotive Components Co., Ltd.

1 Scope

GB/T 1149 provisions of this part of the piston ring type DSF-C, SSF, GSF, DSF, SSF-L, DSF-NG and DSF-CNP the basic characteristics of the thin cast iron coil spring oil rings.

This section applies to cylinder diameter 60mm ~ 110mm for road vehicles and other uses of reciprocating internal combustion engine for thin castings Iron spiral ring spring oil ring.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 1149.3-2010 Internal combustion engine piston rings Part 3. Material specification (ISO 6621-3:2000, IDT) GB/T 1149.4-2008 Internal combustion engine piston rings - Part 4. Quality requirements (ISO 6621-5:2005, IDT) GB/T 1149.5-2008 Internal combustion engine piston rings Part 5. Test methods (ISO 6621-2:2003, IDT) ISO 6621-4 Internal combustion engine piston rings Part 4. General rules (Internal combustion engines-Piston rings-Part 4: General specifications)

3 Overview

Spiral stay spring oil ring type shown in Figure 1 ~ Figure 8, the common features and dimensions shown in Table 1 ~ Table 2 and Figure 9 ~ Figure 11, the basic characteristics, see

Figure 12 ~ Figure 16, the basic contact pressure level is shown in Table 3, the size and elasticity of the coil stay spring oil ring in Table 4 ~ Table 9.

This section specifies the general features and size of the oil ring contains a very wide range of variable, the designer should be based on the working conditions of the oil ring select.

The designer should consider the technical requirements specified in ISO 6621-4 and GB/T 1149.3.

Spiral support ring oil ring cast iron ring recommended GB/T 1149.3 provisions of the level of 10 materials, there are special requirements of the optional Grade 20 to 50 material.

Oil ring surface structure and the corresponding support spring groove design, according to the recommendations of different manufacturers, the choice of ordinary type or chrome type.

4.1.1 General characteristics and dimensions

Features and dimensions are shown in Figure 1 and Table 4 ~ Table 9.