

**AUTOMOTIVE INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QC/T 1222.1-2025

**Automobile engines - Inspection method for surface treatment
of piston rings - Part 1: Chromium based ceramic composite
coating**

(English Translation)

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Table of Contents

Foreword...	3
1 Scope...	5
2 Normative references...	5
3 Terms and definitions...	6
4 General provisions...	6

Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020

"Directives for standardization - Part 1.Rules for the structure and drafting of standardizing documents".

This document replaces QC/T 266-1999 "Extreme deviation for undeclared tolerance size of automobile parts - General requirements". Compared with QC/T 266-1999, apart from structural adjustments and editorial changes, the main technical changes are as follows.

- Modified the scope of application (see Chapter 1 of this Edition; Chapter 1 of Edition 1999);
- Modified the terms and definitions (see Chapter 3 of this Edition; Chapter 2 of Edition 1999);
- Deleted the content related to "inspection of the limit deviations for dimensions without specified tolerances" (see 3.2 of Edition 1999);
- Deleted the content related to "when using a universal measuring tool with an accuracy of 0.1 mm" (see 3.3 of Edition 1999);
- Deleted the content related to "it shall be noted in the technical requirements column on the part drawings or assembly drawings of automobiles" (see 3.7 of Edition 1999);
- Modified the content related to "the permissible value of wall thickness variation due to single-sided machining for sand-cast parts" (see 4.3 of this Edition; 3.5 of

Edition 1999);

- Modified the content related to "allowing thinning of the wall thickness when drilling holes in protrusions, lugs, flanges, brackets, etc. of castings and forgings"

(see 4.4 of this Edition; 3.6 of Edition 1999);

- Added general tolerance requirements for automotive machined parts, automotive cold-stamped parts, automotive cast parts, automotive steel forging parts, automotive molded plastic parts, and automotive welded parts (see 4.5, 4.6, 4.7, 4.8, 4.9, 4.10 of this Edition);

- Added geometric tolerance requirements (see 4.11 of this Edition).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights.

General principles of general tolerances for automotive parts

1 Scope

This document specifies the general tolerance technical specifications for automotive parts.

This document applies to the general dimensional tolerances required in automotive product parts drawings. It also applies to the general dimensional tolerances required for post-assembly machining of assemblies.

This document does not apply to dimensions that are affected by cumulative tolerances after assembly, reference dimensions, geometric dimensions, dimensions of heat-treated and coated areas, profile dimensions, dimensions of highly elastic spring parts, inter-process dimensions, and coordinate dimensions.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 1184, Geometrical tolerancing. Geometrical tolerance for features without individual tolerance indications

GB/T 1800.1, Geometrical product specifications (GPS) -- ISO code system for tolerances on linear sizes -- Part 1. Basis of tolerances, deviations and fits

GB/T 13916, Unnoted tolerance of shape and position for stamping parts

QC/T 267, Extreme deviation for undeclared tolerance size of automobile machining parts

QC/T 268, Permissible automobile cold stamping variations in dimensions without tolerance indication

QC/T 269, Limit deviation of dimensions of automobile parts without tolerance indicated

QC/T 270, Permissible variations in dimensions without tolerance indication for steel die forgings of automobile made by vertical press forging process

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