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# AUTOMOBILE INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

ICS 43.040

CCS T 31

QC/T 600-2023

Replacing QC/T 600-1999

# Hexagon head bolt and serrated lock washer external teeth assemblies

六角头螺栓和锥形弹性垫圈的组合件

Issued on: December 20, 2023 Implemented on: July 01, 2024

Issued by: Ministry of Industry and Information Technology of the PRC

# Announcement of Ministry of Industry and Information Technology of the People's Republic of China

No.38 of 2023

The Ministry of Industry and Information Technology approved 1276 industry standards, including "CNC laser welding machine tools - Technical specifications" (see Appendix 1). Among them, there are 138 standards in the chemical industry, 5 standards in the petrochemical industry, 73 standards in the ferrous metallurgy industry, 131 standards in the non-ferrous metal industry, 1 standard in the gold industry, 86 standards in the building materials industry, 27 standards in the rare earth industry, 224 standards in the machinery industry, 29 standards in the automobile industry, 8 standards in the shipbuilding industry, 76 standards in the aviation industry, 118 standards in the light industry, 98 standards in the textile industry, 1 standard in the packaging industry, 2 standards in military and civilian products, 1 standard in the electronics industry, 258 standards in the communications industry. It has approved 11 industry standard amendments, including "5G digital cellular mobile communication network - Technical requirements for enhanced mobile broadband terminal equipment for (Phase I)" (see Appendix 2). Among them, there is 1 standard in the ferrous metallurgy industry, 1 standard in the light industry, 9 standards in the communications industry. It has approved the foreign language versions of 29 industry standards, including "Smart city - Technical requirements for electronic fence" (see Appendix 3). Among them, there is 1 standard in the chemical industry, 1 standard in the petrochemical industry, 2 standards in the building materials industry, 25 standards in the communications industry. It has approved 1 non-ferrous metal industry standard sample: "Standard sample of copper, lead and zinc ore" (see Appendix 4). It has approved 117 industry metrology technical specifications, including "Calibration specifications for radar echo simulator" (see Appendix 5). Among them, there are 26 specifications in the petrochemical industry, 7 specifications in the non-ferrous metal industry, 13 specifications in the building materials industry, 17 specifications in the machinery industry, 12 specifications in the light industry, 9 specifications in the textile industry, 12 specifications in the military and civilian products industry, 14 specifications in the electronics industry, 7 specifications in the communications industry. They are now announced. The industry standard amendment list, the foreign language version of the industry standard, the industry standard sample shall be implemented from the date of publication.

The above chemical industry standards (including foreign language versions) are published by Chemical Industry Press; the chemical industry engineering construction standards, automobile industry standards and packaging industry standards are published by Beijing Science and Technology Press; the petrochemical industry standards (including foreign language versions) are published by China Petrochemical Press; the ferrous metallurgy industry standards, non-ferrous metal industry standards

## **Table of Contents**

Foreword	7
1 Scope	8
2 Normative references	8
3 Terms and definitions	9
4 Types and dimensions	9
5 Technical conditions	11
6 Product number	12

#### **Foreword**

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces QC/T 600-1999 "Hexagon head bolt and serrated lock washer external teeth assemblies". Compared with QC/T 600-1999, the main technical changes are as follows:

- DELETE the unrecommended nominal lengths of 22, 28, 32, 38 (see Table 1);
- ADD the technical requirements for permanent deformation and continuous load of conical spring washers (see Table 3)
- CHANGE the technical requirements for elastic test of conical spring washers (see Table 3)
- DELETE Appendix A.

Please note that some contents of this document may involve patents. The issuing agency of this document does not assume the responsibility for identifying patents.

This document was proposed by AND shall be under the jurisdiction of the National Technical Committee for Automobile Standardization (SAC/TC 114).

Drafting organization of this document: Ningbo Geely Automobile Research and Development Co., Ltd.

The main drafters of this document: Yang Zhiqing, Cao Lingling.

This standard replaces the standard previously issued as follows:

- It was first published in 1999 as QC/T 600-1999;
- This is the first revision.

# Hexagon head bolt and serrated lock washer external teeth assemblies

## 1 Scope

This document specifies the types and dimensions, technical conditions and numbers of the hexagon head bolt and serrated lock washer external teeth assemblies.

This document is applicable to the hexagon head bolt and serrated lock washer external teeth assemblies, which have thread specifications of  $M5 \sim M12$  and bolt mechanical property grade of 8.8.

#### 2 Normative references

The contents of the following documents constitute the essential terms of this document through normative references in the text. Among them, for the referenced documents with dates, only the versions corresponding to the dates are applicable to this document; for the referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 2 Fasteners - Ends of parts with external thread

GB/T 90.1 Fasteners - Acceptance inspection

GB/T 90.2 Fasteners - Marking and packaging

GB/T 94.4 Specifications for spring washers - Conical spring washers

GB/T 196 General purpose metric screw threads - Basic dimensions

GB/T 197 General purpose metric screw threads - Tolerances

GB/T 3098.1 Mechanical properties of fasteners - Bolts, screws and studs

GB/T 3103.1 Tolerances for fasteners - Bolts, screws, studs and nuts

GB/T 5779.1 Fasteners - Surface discontinuities - Bolts, screws and studs for general requirements

QC/T 326 Coding rules for automotive standardized parts

QC/T 625 Metallic coatings and conversion coatings for automobile

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