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

**GB/T 1243-2024**

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**Short-pitch transmission precision roller and bush chains,  
attachments and associated chain sprockets  
(English Translation)**

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## Table of Contents

|                                                   |    |
|---------------------------------------------------|----|
| Foreword...                                       | 4  |
| Introduction...                                   | 6  |
| 1 Scope...                                        | 7  |
| 2 Normative references...                         | 7  |
| 3 Chains...                                       | 7  |
| 3.1 Terminology of chains and their components... | 7  |
| 3.2 Marking...                                    | 9  |
| 3.3 Dimensions...                                 | 9  |
| 3.4 Performance requirements...                   | 11 |
| 3.5 Marking...                                    | 17 |
| 3.6 Transition chain links...                     | 17 |
| 4 Attachments...                                  | 17 |
| 4.1 Terminology...                                | 17 |
| 4.2 General...                                    | 21 |
| 4.3 Marking...                                    | 21 |
| 4.4 Dimensions...                                 | 21 |
| 4.5 Manufacturing...                              | 21 |
| 4.6 Marking...                                    | 22 |
| 5 Sprockets...                                    | 22 |
| 5.1 Overview...                                   | 22 |
| 5.2 Terminology...                                | 22 |
| 5.3 Sprocket diameter size...                     | 23 |
| 5.4 Tooth groove shape...                         | 25 |
| 5.5 Tooth height and tooth top circle diameter... | 26 |
| 5.6 Profile tooth profile...                      | 26 |
| 5.7 Radial runout...                              | 27 |
| 5.8 Axial runout (oscillation)...                 | 28 |
| 5.9 Pitch accuracy of gear teeth...               | 28 |
| 5.10 Number of teeth...                           | 28 |

## 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 GB/T 1243-2006 "Short-pitch transmission precision roller and bush chains, attachments and associated chain sprockets". Compared with GB/T 1243-2006, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- CHANGE the ISO chain number of the A series chain in GB/T 1243-2006 from "04C, 06C, 08A, 085, 10A, 12A, 16A, 20A, 24A, 28A, 32A, 36A, 40A, 48A" to the chain number "25, 35, 40, 41, 50, 60, 80, 100, 120, 140, 160, 180, 200, 240", which is consistent with the ANSI series chain (see Table 1; Table 1 of the 2006 edition);
- CHANGE the footnote a of Figure 3b) from "Chain channel height (h<sub>1</sub>) is the rotational clearance between the transition link plate and the straight link plate at the connection" to "Chain channel height (h<sub>1</sub>) is the minimum channel height that allows the assembled chain to pass through" [see Figure 3b; Figure 3b of the 2006 edition];
- CHANGE that "Chains manufactured in accordance with this standard shall be pre-tensioned; the applied pre-tension load shall be equal to 30% of the minimum tensile strength value specified in Tables 1 and 2" into that "Chains manufactured in accordance with this document shall be pre-tensioned; the applied pre-tension load shall not be less than 30% of the minimum tensile strength value specified in Tables 1 and 2" (see 3.4.3; 3.4.3 of the 2006 edition);
- ADD the ANSI extra heavy series (HE series) chains (see Table 2).

This document is equivalent to ISO 606.2015 "Short-pitch transmission precision roller and bush chains, attachments and associated chain sprockets".

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 the China Machinery Industry Federation.

This document shall be under the jurisdiction of the National Chain Transmission Standardization Technical Committee (SAC/TC 164).

Drafting organizations of this document. Chain Transmission Research Institute of Jilin University, Hangzhou Donghua Chain Group Co., Ltd., Zhejiang Hengjiu Transmission Technology Co., Ltd., Jiangsu Shuangling Chain Transmission Co., Ltd., Zhejiang Short-pitch transmission precision roller and bush chains, attachments and associated chain sprockets

## 1 Scope

This document specifies the technical requirements for short pitch precision roller and bush chains and sprockets, which are suitable for mechanical transmission and similar applications, including dimensions, tolerances, length measurements, pre-tensioning, minimum tensile strength, minimum dynamic load strength.

Although Chapter 5 applies to sprockets for bicycles and motorcycles, this document does not apply to bicycle and motorcycle chains, which are specified in ISO 9633 and ISO 10190, respectively.

## 2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, for referenced documents with dates, only the version corresponding to that date applies to this document; for referenced documents without dates, the latest version (including all amendments) applies to this document.

ISO 286-2 Geometrical product specifications (GPS) - ISO code system for tolerance on linear sizes - Part 2. Tables of standard tolerance classes and limit deviations for holes and shafts

**Note:** GB/T 1800.2-2020 Geometrical product specifications (GPS) - ISO code system for tolerances on linear sizes - Part 2. Tables of standard tolerance classes and limit deviations

for holes and shafts (ISO 286-2:2010, MOD)

ISO 15654 Fatigue test method for transmission precision roller chains and leaf chains

### **3.1 Terminology of chains and their components**

The terminology of chains and their components is shown in Figures 1 and 2. The illustrations do not define the actual shape of the chain plates.

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