

ICS 17.040
CCS A 52

JJG

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

JJG 343-2012

Replacing JJG 343-1996

**Verification Regulation of Plain Limit Gauges
(English Translation)**

Issued on: January 1, 1970

Implemented on: January 1, 1970

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine**

Table of Contents

Introduction (II)	
1 Scope (1)	
2. References (1)	
3 Terminology and units of measurement (1)	
3.1 Smooth limit gauge (1)	
4 Overview (1)	
5 Metering performance requirements (2)	
5.1 Measuring surface roughness of the surface (2)	
5.2 Gauge the shape and position error (2)	
5.3 Gauge size (3)	
6 General Requirements (5)	
7 Control of measuring instruments (5)	
7.1 Test conditions (5)	
7.2 Verification Project (6)	
7.3 Verification Methods (6)	
7.4 Verification Results Processing (9)	
7.5 Test cycle (9)	
Appendix A Smooth Uncertainty Evaluation Report plug diameter measurements (10)	
Appendix B Proofing plug diameter measurements Uncertainty Evaluation Report (14)	
Appendix C Gauge code, using rules, size and position tolerance zone (18)	

7.5 Test cycle (9)

Appendix A smooth Uncertainty Evaluation Report plug diameter measurements (10)	
Appendix B proofing plug diameter measurements Uncertainty Evaluation Report (14)	
Appendix C gauge code, using rules, size and position tolerance zone (18)	
Basic tolerance values in Appendix D of the hole and the shaft (19)	
Appendix E-shaped plug full size measuring sample (24)	
Appendix F test certificates/test results in the notice page and format (25)	

Introduction

JJG 343 "smooth limit gauge" prepared to comply JJF1002-2010 "national verification procedures prepared by Regulation the "requirement to JJF1001-2011" common measurement terms and definitions ", JJF1130-2005" geometry measurement the amount of equipment calibration Uncertainty Evaluation Guide ", GB/T 1957-2006" smooth limit gauge technical conditions " GB/T 1800.1-2009 "Geometrical product specifications (GPS) limits and fits - Part 1. Tolerances, partial and the difference with the foundation "as the basis and foundation of JJG 343-1996" smooth limit gauge "subject to revisions. this Alternative procedures JJG 343-1996 "smooth limit gauge", compared with JJG 343-1996 "smooth limit gauge" the main technical changes in addition to editorial changes outside as follows.

- References GB/T 1957-2006 "smooth limit gauge technology" in a given smooth limit gauge Meaning (see 3.1);
- References GB/T 1957-2006 "smooth limit gauge technical conditions" in the smooth limit gauge ruler Inch specification (see Table 2);
- Deletion of the hardness of the technical requirements;
- Full roundness of shape plug gauge, ring gauge roundness, bus straightness, flatness caliper measuring surface, caliper measurement Parallelism is defined as the surface of the unified gauge of form and position errors (see 5.2);
- Revised technical requirements to gauge the shape and position error (see 5.3);
- Added proofing plug technical requirements (see 5.3);
- Increased smooth plug diameter measurements Uncertainty Evaluation Report (see Appendix A);
- Increased proofing plug diameter measurements Uncertainty Evaluation Report (see Appendix B);
- Increasing the gauge of code, using rules, dimensional tolerances and with position (see Appendix C);
- Increasing the numerical aperture of the basic tolerance and shaft (see Appendix D);
- Increasing the calibration certificate and test results in the notice page and format (see Appendix F).

JJG 343-1996 "smooth limit gauge" of previously issued as follows.

- JJG 343-1984 "smooth limit gauge." Smooth limit gauge test procedures

1 Scope

The order applies to basic dimensions of the hole and shaft to 500mm, tolerance grade IT6 level to level IT16 proofreading, workers as smooth limit gauge the initial verification, subsequent verification and the use of checks.

2. References

This procedure references the following documents.

GB/T 1800.1-2009 Geometrical product specifications (GPS) limits and fits - Part 1.
Nominal Poor foundation deviations and fits GB/T 1957-2006 smooth limit gauge the technical conditions for dated references, only the dated edition applies to this procedure; undated reference documents Member, the latest edition (including any amendments) applies to this procedure.

3 terminology and units of measurement JJF1001-2011 "common measurement terms and definitions", GB/T 1957-2006 "smooth limit gauge technology Intraoperative conditions "and as defined in the following terms and definitions apply to this procedure.

3.1 smooth limit gauge plainlimitgauges with a maximum limit size of the hole or shaft or the minimum size limit for the nominal size of a standard measurement surface can reflect control Made the subject hole or shaft boundary conditions of no moment length measuring instruments.

4 Overview

Smooth limit gauge (hereinafter referred to as "gauge") is divided into plug, ring and caliper three categories.

Smooth limit plug gauge is used to test the aperture, the measurement surface of the outer cylinder, sphere and the like. Wherein the plug Having a pore size subject to minimum limit size hole through regulation, having a hole with a maximum limit of detection aperture size Only the rules.

Ring gauge smooth limit gauge for inspection shaft diameter, the measurement surface within a torus. Wherein the diameter of the ring Having a through-axis inspection regulations limit the size of the largest shaft diameter, shaft diameter has been the subject of an axis with a minimum size limit Only the rules.

Caliper is smooth limit gauge for inspection shaft diameter, its surface is measured in two parallel surfaces. Among them, the two measuring surface Pitch having a through-shaft Shaft Inspection Regulations limit the maximum size of the subject having an axis shaft diameter with a minimum size limit Only the rules.

Shafts smooth limit gauge the structure shown in Figure 1. Holes in Figure 2 with a smooth structure limit gauges FIG.