

MIL-STD-112A
CHANGE NOTICE 1

MILITARY STANDARD**GAGES, RING, PLAIN,****GO****TO ALL ACTIVITIES:**

1. The following pages of this standard have been revised and supersede the pages listed:

<i>New page</i>	<i>Date</i>	<i>Superseded page</i>	<i>Date</i>
1	6 February 1957	1	8 December 1955
2	6 February 1957	2	8 December 1955
4	6 February 1957	4	8 December 1955
5	6 February 1957	5	8 December 1955
6	6 February 1957	6	8 December 1955
7	6 February 1957	7	8 December 1955

2. The following is a cumulative list of earlier changes: None.
3. Retain this cover page and insert before table of contents of this standard.

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1. SCOPE

1.1 This standard covers the pertinent design data and stock numbers for American Gage Design Standard, go plain ring gages for the inspection of the maximum limits of external diameters that range in size from 0.059 to 2.510 inches inclusive in increments of 0.001 and 0.03125 inches. The class of gage required is listed in accordance with the total component tolerance.

1.1.1 This standard also covers the pertinent design data and stock numbers for the applicable American Gage Design Standard plain plug acceptance check gages for go plain ring gages up to and including 0.250 inch in size, except that acceptance check stock numbers are not provided above 0.125 inch in size for total component tolerance of 0.008 and above.

1.2 The stock numbers listed in this standard have been approved by the Cataloging Division, Office of the Assistant Secretary of Defense as Federal Stock Numbers (FSN). See 3. Definitions.

2. REFERENCED DOCUMENTS

2.1 The following standards, specifications, and publications of latest issue form a part of this standard:

STANDARDS

MIL-STD-10, Surface Roughness, Waviness, and Lay

(Application for copies should be addressed to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

SPECIFICATIONS

MIL-G-10944, Gages, Dimensional Control

(Copies of specifications should be obtained from the procuring activity or as directed by the contracting officer.)

OTHER PUBLICATIONS

U.S. Department of Commerce, Commercial Standard CS8, Gage Blanks

(Application for copies should be addressed to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

3.4 DEFINITIONS

3.1 The Federal stock number (FSN) consists of the applicable seven digit Federal item identification number designated in table I as "FIIN—Gage Stock No." prefixed by the Federal supply classification (FSC), "5220." The Federal stock number shall be utilized in all instances and specified thus: 4 digits, hyphen, 3 digits, hyphen, 4 digits (Example: 5220-748-9311).

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4. GENERAL REQUIREMENTS

4.1 Table I, Tabulation of Design and Identification Data.

4.1.1 Stock numbers for each go plain ring gage and related acceptance check plug gage are listed in ascending numerical sequence in columns B and C respectively.

4.1.2 Column A lists the proper reference to the applicable figure for each stock number.

4.1.3 Column D lists the maximum component dimension and when applied to the total component tolerance in column E provides the data required for selecting the applicable stock number in column B or C.

4.1.3.1 When the total component tolerance is not listed the stock number applicable to the next smaller listed total component tolerance for the maximum component dimension shall be used.

4.1.4 Columns F to H inclusive list the design data for each stock number and, when applied to the figure referenced in column A, provide the data required for manufacture and inspection.

4.1.5 Columns B to D inclusive list the identi-

fication data for each stock number and, when applied to the figure referenced in column A, provide the information for proper marking of the gages.

4.1.6 Design data, etc. not specifically covered in this standard shall conform to the latest issue of the documents referenced in paragraph 2 above.

4.1.7 Wear limit check plug stock numbers for go plain ring gages are provided in Standard Mil-Std-110, Gages, Plug, Plain Cylindrical (Go). (Apply the stock number in column B as listed for the master as shown in column E, corresponding to the applicable component dimension in column D.)

5. DETAIL REQUIREMENTS

5.1 Manufacture and Inspection.

5.1.1 General

5.1.1.1 All gaging members shall be identified with the manufacturer's name or trade-mark.

5.1.1.2 All gages shall be marked as specified in figures 1 to 4 inclusive, whichever is applicable. All marking shall be permanent and legible and of suitable height commensurate with the size of the gage.

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5.1.1.3 The surface roughness value denoted on the gaging surface of figures 1 to 4 inclusive, and listed in Column H of table I is the maximum acceptable roughness of these surfaces. These values correspond to the meter indications of surface roughness measuring instruments, which from their method of operation show readings in accordance with the standard values prescribed in Standard Mil-Std-10.

5.1.1.4 Sharp edges shall not be permitted.

5.1.1.5 Gaging surfaces shall be lapped free of amorphous metal.

5.1.2 *Go plain ring gage*

5.1.2.1 American Gage Design Standard (AGD) plain ring gages shall be of hardened tool steel or other wear resistant material suitable for the intended purpose, as defined in specification MIL-G-10944. (See figures 1, 3, and 4 for hardness requirements.

5.1.2.2 Go plain ring gages shall be finished from AGD plain ring gage blanks.

5.1.3 *Plain plug acceptance check gage*

5.1.3.1 American Gage Design Standard (AGD) wire type gaging members shall be of hardened tool steel or other wear resistant material suitable for the intended purpose, as defined in specification MIL-G-10944. (See figure 2 for hardness requirement.)

5.1.3.2 Plain plug acceptance check gages shall be finished from AGD plain plug gage blanks of the wire type design.

5.1.3.3 Gage handles shall be as designated in Commercial Standard CS8. The handles shall be of steel or aluminum alloy.

5.2 *Procurement.*

5.2.1 The tabulated design data, manufacturing, and inspection specifications in this standard are applicable for procurement purposes.

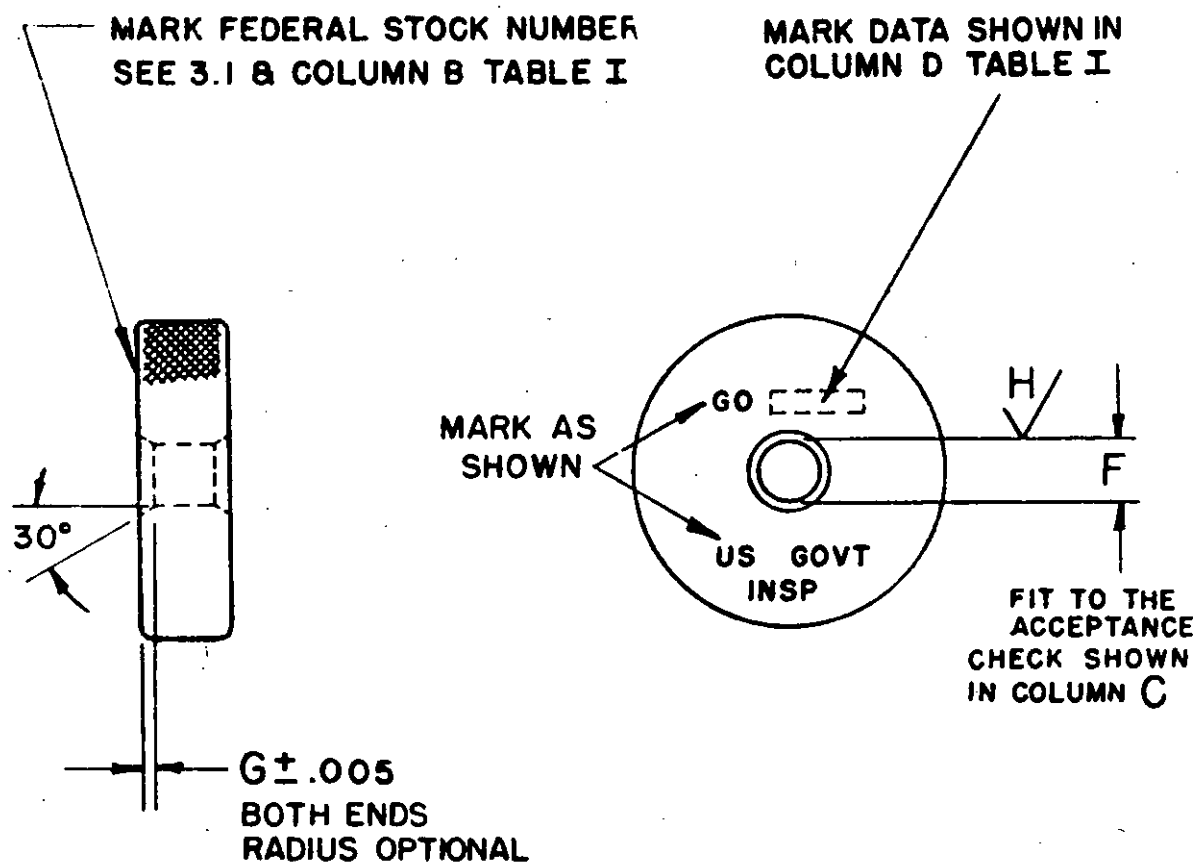
5.2.1.1 Procurement documents shall specify the following:

- (a) Title, number, and date of this standard.
- (b) Gages required (quantity and stock number).
- (c) Place of delivery for acceptance inspection or place of delivery if acceptance inspection is to be at contractor's plant.

5.2.1.2 When specified, the acceptance check plug gages may be procured without handles. The wire type gaging member shall be identified with a tag or label marked with the stock number and any other pertinent identification data as specified. The tag or label shall be such that it can be removed without damage to the member.

5.2.1.3 **Caution:** Although all items listed in this standard are included in the Federal Catalog system as items of supply, it is not intended that all items be procured and stock. Procurement and supply shall be confined to those items for which actual requirements exist.

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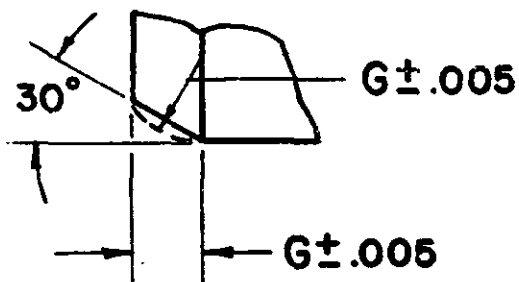
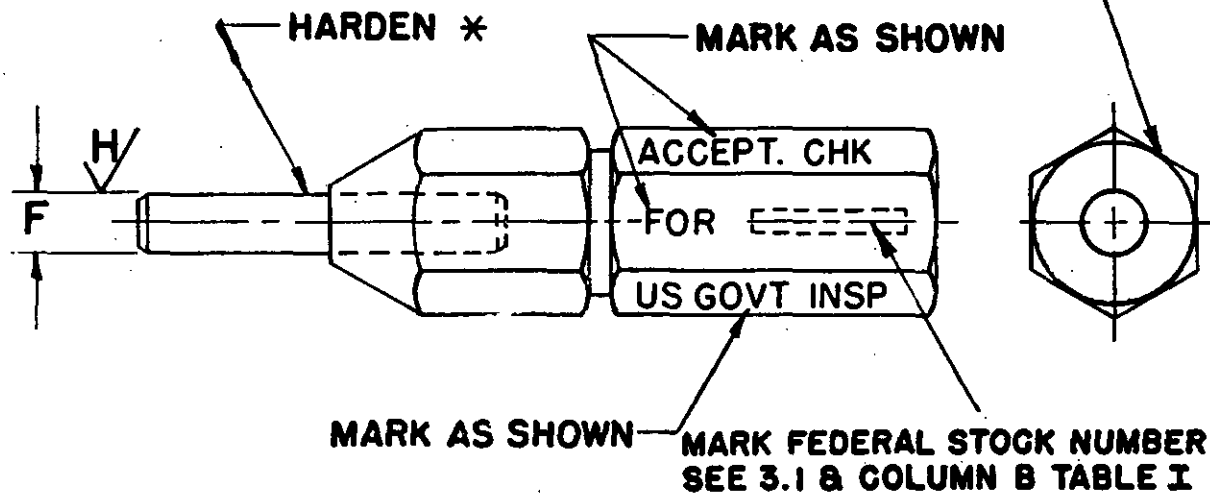
HARDNESS: ROCKWELL OR EQUIVALENT
C63 TO C66

FIGURE 1. *Go plain ring gage.*

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MARK FEDERAL STOCK NUMBER
SEE 3.1 & COLUMN C TABLE I



ENLARGED VIEW
CHAMFER OR RADIUS ON
BOTH ENDS OF WIRE

* HARDEN: ROCKWELL OR EQUIVALENT

C55 TO C60 FOR DIA UP TO AND INCL .10

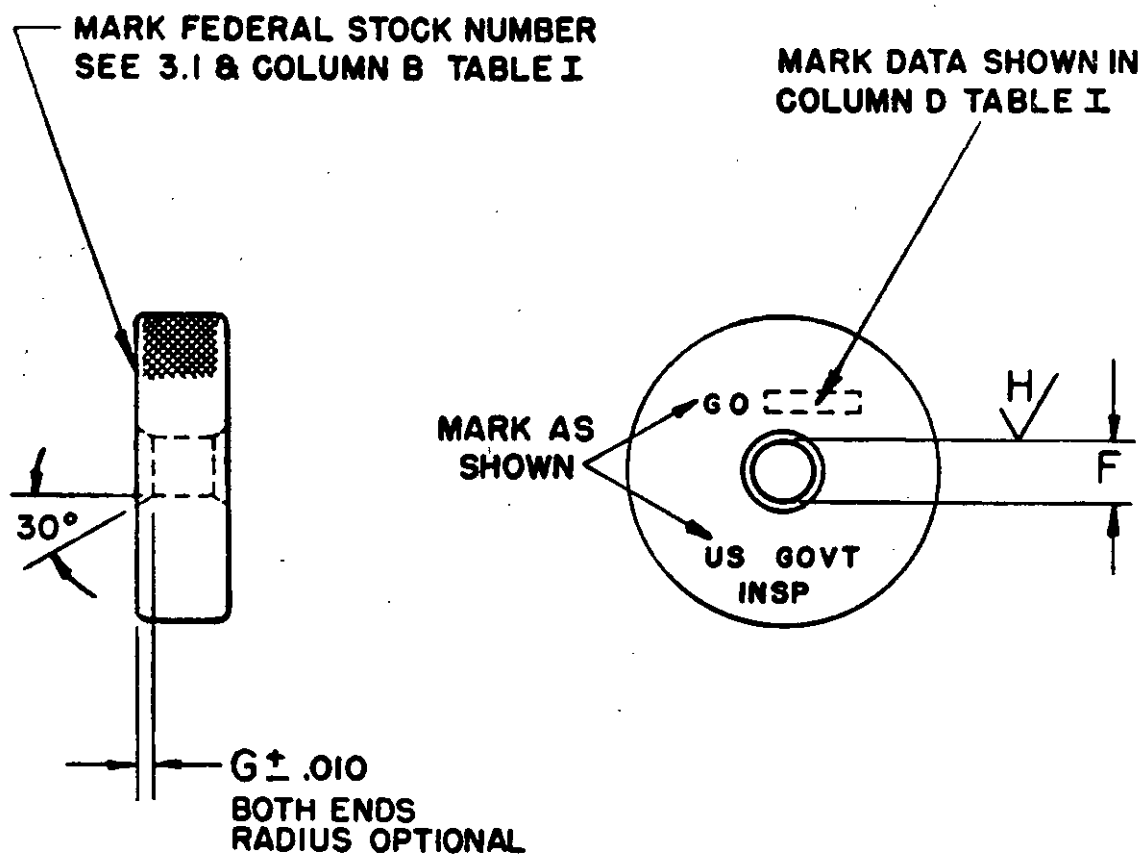
C60 TO C63 FOR DIA ABOVE .10 TO AND INCL .20

C63 TO C66 FOR DIA ABOVE .20

FIGURE 2. Plain plug acceptance check gage (wire type).

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HARDNESS: ROCKWELL OR EQUIVALENT
C63 TO C66

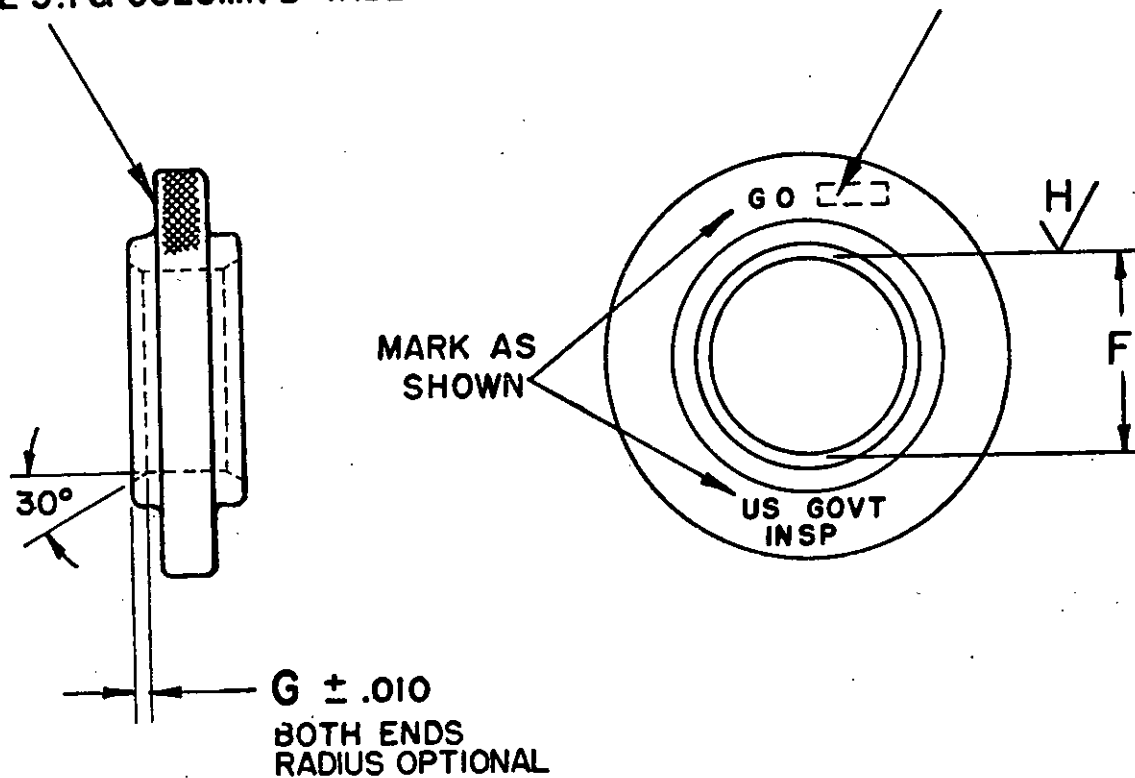
FIGURE 3. Go plain ring gage.

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**MARK FEDERAL STOCK NUMBER
SEE 3.1 & COLUMN B TABLE I**

**MARK DATA SHOWN IN
COLUMN D TABLE I**



**HARDNESS: ROCKWELL OR EQUIVALENT
C63 TO C66**

FIGURE 4. Go plain ring gage (flange type).

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TABLE I. Tabulation of Design and Identification Data

Figure No.	MARKING ON GO GAGE			TOTAL COMPONENT TOLERANCE	RING GAGE DIMENSIONS		Finish
	Fin-Gage Stock No.		Maximum component dimension		Diameter	Chamfer	
	Ring gage	Acceptance check					
A	B	C	D	E	F	G	H
1	7480000		.059	.0005	.05900	.008	4
2		7480001	.059	CHECK	.05900 - .00004	.008	4
1	7480004		.059	.002	.05890	.008	4
2		7480005	.059	CHECK	.05890 - .00007	.008	4
1	7480006		.059	.004 AND UP	.05880	.008	8
2		7480007	.059	CHECK	.05880 - .00010	.008	8
1	7480010		.060	.0005	.06000	.008	4
2		7480011	.060	CHECK	.06000 - .00004	.008	4
1	7480014		.060	.002	.05990	.008	4
2		7480015	.060	CHECK	.05990 - .00007	.008	4
1	7480016		.060	.004 AND UP	.05980	.008	8
2		7480017	.060	CHECK	.05980 - .00010	.008	8
1	7480022		.061	.0005	.06100	.008	4
2		7480023	.061	CHECK	.06100 - .00004	.008	4
1	7480026		.061	.002	.06090	.008	4
2		7480027	.061	CHECK	.06090 - .00007	.008	4
1	7480028		.061	.004 AND UP	.06080	.008	8
2		7480029	.061	CHECK	.06080 - .00010	.008	8
1	7480034		.062	.0005	.06200	.008	4
2		7480035	.062	CHECK	.06200 - .00004	.008	4
1	7480038		.062	.002	.06190	.008	4
2		7480039	.062	CHECK	.06190 - .00007	.008	4
1	7480040		.062	.004 AND UP	.06180	.008	8
2		7480041	.062	CHECK	.06180 - .00010	.008	8
1	7480046		.0625	.0005 AND UP	.06250	.008	4
2		7480047	.0625	CHECK	.06250 - .00004	.008	4
1	7480048		.063	.0005	.06300	.008	4
2		7480049	.063	CHECK	.06300 - .00004	.008	4