



SURFACE VEHICLE STANDARD	J58	FEB2015
	Issued	1972-09
	Revised	2015-02
Superseding J58 MAY1998		
(R) Flanged 12-Point Screws		

RATIONALE

Change in 3.1 regarding dimensions applying to unplated and uncoated product made for clarity.

Combined and modified Section 3.3.3 and Section 3.3.4, to incorporate two-ring gage acceptability for screw heads, similar to metric 12 Point Flange Screw Standards. Modified Figure 1 and Table 1 accordingly. Added Table 1A.

Added section 3.3.5 as specification lacked requirements for head position.

Section 3.4, Figure 1, and Table 1: changed method of dimensioning fillet for ease of interpretation. The values for E_a were calculated from the previous dimensioning method ($E_{min} + 2 * M_{min}$, etc.) so that the part requirements have not physically changed. Only the dimensioning method has changed. Language in section 3.4 made similar to ASME B18.2.7.1M (hex flange screws) for fillet form.

Section 3.4 2nd paragraph modified as this standard does not cover reduced body diameters.

Revised 3.7 to clarify thread dimensional requirements and include constant pitch thread series as a purchaser option. Also made 2A the default uncoated/unplated thread class if not otherwise specified.

Modified section 3.11 to better title the gage method as straightness inspection only. Eliminated Appendix A in favor of straightness gaging per ASME B18.2.9, which better reflects industry practice. Straightness tolerances were listed per previous Appendix A requirements and added graduated requirements for longer screws.

Changes to 3.12 made to reference other industry standards for additional material options. Added cautionary statement regarding hydrogen embrittlement and specifications exceeding HRC 39 hardness.

Added discontinuity and decarburization requirements to section 3.14 to better define workmanship.

1. SCOPE

Included in this SAE Standard are the detailed general and dimensional specifications applicable to flanged 12-point screws recognized as SAE Standard and intended for general use in automotive and other ground-based vehicles and industrial equipment.

The inclusion of dimensional data in this standard is not intended to imply that all of the products described are stock production sizes. Consumers should consult manufacturers concerning availability of product.

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2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Publication

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

SAE J429 Mechanical and Material Requirements for Externally Threaded Fasteners

2.1.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM F468 Nonferrous Bolts, Hex Cap Screws, and Studs for General Use

ASTM F593 Stainless Steel Bolts, Hex Cap Screws, and Studs

ASTM F1941 Electrodeposited Coatings on Threaded Fasteners (Unified Inch Screw Threads (UN/UNR))

ASTM A574 Alloy Steel Socket-Head Cap Screws

3. GENERAL SPECIFICATIONS

(See Figure 1.)

3.1 Dimensions

All dimensions in this document are in inches unless otherwise stated and apply to unplated and uncoated product unless otherwise specified.

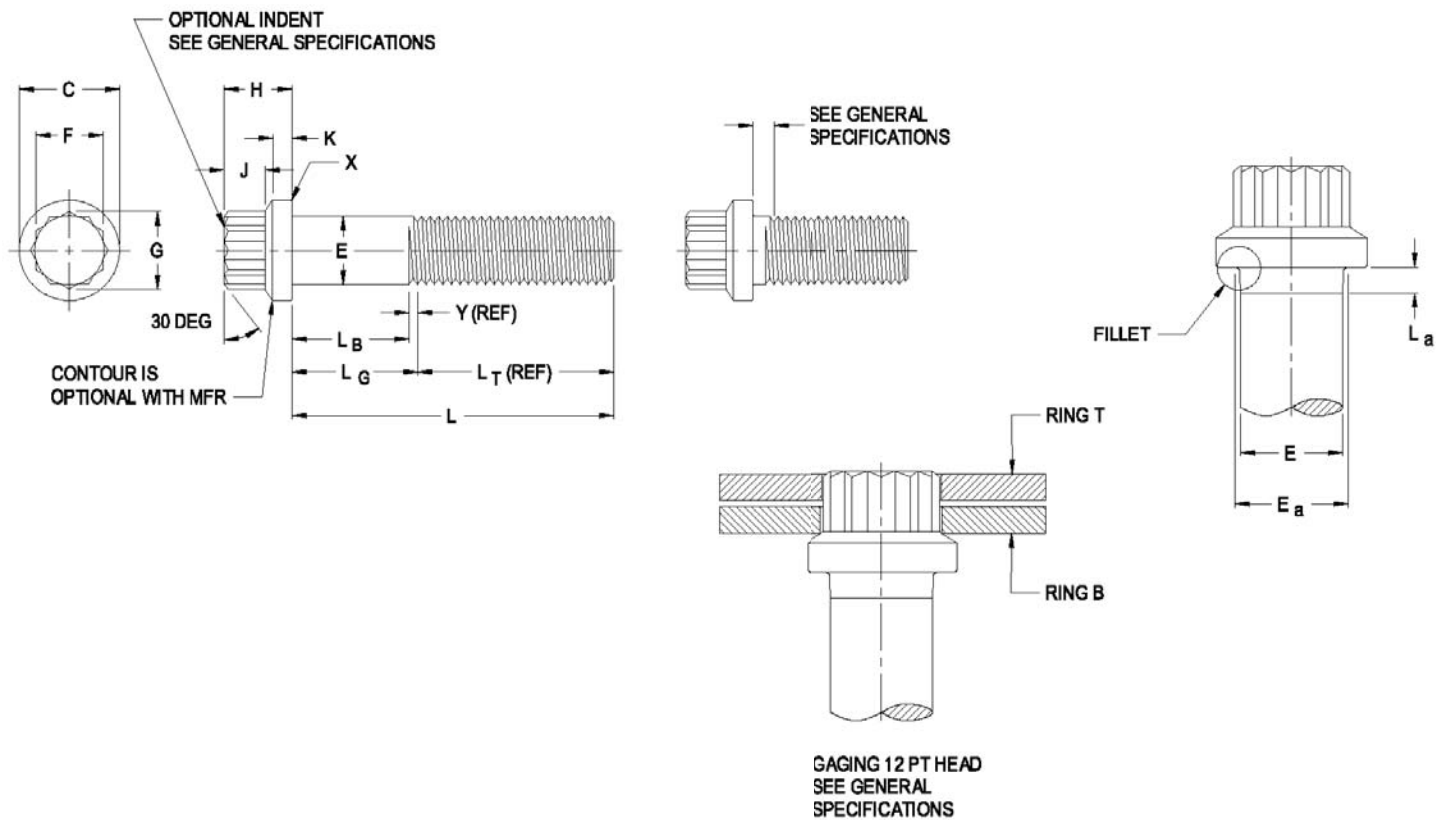


FIGURE 1 - DIMENSIONS OF FLANGED 12-POINT SCREWS AND HEAD GAGING RINGS

3.2 Options

Options, where specified, shall be at the discretion of the manufacturer unless otherwise agreed by manufacturer and purchaser.

3.3 Heads

3.3.1 Head Height

The head height shall be measured, parallel to the axis of screw, from the top of the head to the bearing surface of the flange.

3.3.2 Top of Head

The top of head may be full form or indented at the option of the manufacturer. If full form, the top of head shall be chamfered or rounded with the diameter of chamfer circle or start of rounding being equal to the specified maximum width across flats within a tolerance of -15% . If the top of head is indented, the periphery may be rounded.

3.3.3 Corner Fill and Wrenching Height

Head acceptability shall be determined using the two rings as described in Table 1A. Ring B shall be placed on the screw head followed by Ring T. The wrenching height is acceptable if ring T does not contact ring B after both rings are in place on the head. The rings shall be machined and ground to avoid any break edge on the ID.