

# **SURFACE VEHICLE RECOMMENDED PRACTICE**

**SAE** J370

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## **BOLT AND CAPSCREW SIZES FOR USE IN CONSTRUCTION AND INDUSTRIAL MACHINERY**

**1. Scope**—This SAE Recommended Practice covers the use of preferred bolt and capscREW sizes, wherever applicable, on construction and industrial machinery to ease serviceability.

**1.1 Purpose**—Designers, in their efforts to determine the proper fastener for heavy equipment, sometimes overlook the practical aspects of serviceability. When a particular component requires frequent service, it is much faster and easier for the serviceman to work with common size, easily distinguished bolts, and capscREWS which require a minimum of tools.

Section 4 lists eight diameters of recommended bolts and capscREWS, some of which can be found in any hardware store, require only standard tools, are easy to distinguish, and at the same time cover proof loads from 1043 kg (2300 lb) on up at convenient intervals.

While some applications may require other sizes and/or fine threaded fasteners for greater clamping forces and/or area restrictions, the convenience of UNC threads in the sizes indicated is preferred wherever possible.

## **2. References**

**2.1 Related Documents**—The following publications are provided for information purposes only and are not a required part of this document. The latest issue of SAE publications shall apply.

**2.1.1 SAE PUBLICATIONS**—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J429—Mechanical and Material Requirements for Externally Threaded Fasteners  
SAE J871—Hi Head Finished Hex Bolts

**2.1.2 ANSI PUBLICATIONS**—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ANSI B18.2.1—Square and Hex Bolts and Screws—Inch Series  
ANSI/ASME B18.2.2—Square and Hex Nuts—Inch Series  
ANSI B18.6.1—Wood Screws (Inch Series)  
ANSI B18.6.2—Slotted Head Cap Screws, Square Head Set Screws, and Slotted Headless Set Screws  
ANSI B18.6.3—Slotted and Recessed Head Machine Screws and Machine Screw Nuts  
ANSI B18.6.4—Screws, Tapping and Metallic Drive, Inch Series, Thread Forming and Cutting

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3. **Threads**—Unified Coarse Thread Series (UNC).

4. **Diameters**—3/8, 1/2, 5/8, 7/8, 1, 1-1/8, 1-1/4.

- a. Diameters above 1-1/4 in to increase in 1/4 in increments
- b. Diameter deviations below 1/2 in decrease in 1/16 in increments

5. **Notes**

5.1 **Marginal Indicia**—The (R) is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. If the symbol is next to the report title, it indicates a complete revision of the report.

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