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Mechanical and Quality Requirements for Machine Screws			

RATIONALE

Current requirements for Machine Screws are contained in ASME B18.6.3 - Machine Screws, Tapping Screws, and Metallic Drive Screws (Inch Series). SAE J82 contains useful information and may have current users.

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1. **Scope**—This SAE Standard covers the mechanical and quality requirements for two grades of carbon steel, slotted, and recessed, 82 degrees flat countersunk, 82 degrees oval countersunk, pan, fillister, hex, and hex washer head machine screws in sizes No. 4 through 3/4 in for use automotive and related industries. The dimensions of these screws are covered in ASME B18.6.3.
2. **References**
 - 2.1 **Applicable Publications**—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, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J409—Product Analysis—Permissible Variations from Specified Chemical Analysis of a Heat or Cast of Steel
 - 2.1.2 ASME PUBLICATION—Available from ASME, 22 Law Drive, Box 2900, Fairfield, NJ 07007-2900.

ASME B18.6.3
3. **Designations**—The two grades of machine screws are designated Grade 60M and Grade 120M, indicating 60 000 and 120 000 psi minimum tensile strength, respectively.
4. **Materials and Processes**
 - 4.1 **Steel Characteristics**—Machine screws shall be made of steel conforming to the description and chemical composition requirements specified in Table 1 for the applicable grade.