



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 2620A

Superseding AMS 2620

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PRESSURE TESTING, HYDRAULIC 1000 psi (6900 kPa)

1. **SCOPE:** This specification provides requirements and procedures for hydraulic-pressure leak testing of parts.
2. **APPLICABLE DOCUMENTS:** None.
3. **TECHNICAL REQUIREMENTS:**
 - 3.1 **Equipment:**
 - 3.1.1 **Fixtures:** Test fixtures shall not seal off areas of possible leakage or create excessive stresses on parts.
 - 3.1.2 **Gaskets:** Suitable gasket material shall be used with plugs or blanking plates to prevent damage to finished surfaces.
 - 3.1.3 **Valves:** Bleeder valves shall be provided to release entrapped air.
 - 3.1.4 **Gauges:** Pressure gauges shall have sufficient dial divisions to permit monitoring of pressure specified.
 - 3.1.5 **Drying Oven:** A circulating-air oven is required for drying corrodible parts.
 - 3.2 **Test Media:** Either water, hydraulic fluids, or suitable petroleum-base test fluids shall be used.
 - 3.3 **Preparation:**
 - 3.3.1 **Cleaning:** The part shall be thoroughly cleaned and dried before testing, so that any leaks will be visible. Loose particles, machine shop chips, oils, and other foreign materials shall be removed before pressure testing.
 - 3.3.2 **Processes:** The part or subassembly shall be tested following all machining, forming, straightening, welding, brazing, anodizing, etc, and prior to application of protective finishes such as paint, plating, coating, or surface finishes that may mask or blank off areas of possible leakage.
 - 3.3.3 **Chemical Films:** Chemical film protective finishes on aluminum may be applied either before or after pressure testing.
 - 3.3.4 **Impregnation:** Impregnation of castings shall not be permitted except as authorized by purchaser and then only to correct general seepage leaks. Impregnants shall not be used to correct poor foundry techniques, visible holes, or excessive porosity. Impregnation shall be conducted after all heat treatment, brazing, and welding have been completed.
 - 3.3.5 **Preliminary Tests:** Tests may be performed at any stage of manufacture in order to establish in-process integrity.
 - 3.3.6 **Material Removal:** Sand blasting, pickling, or any other operation which may remove metal from surfaces shall be done before final pressure tests.

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