



AEROSPACE MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

485 Lexington Ave., New York, N. Y. 10017

AMS 7207D

Superseding AMS 7207C

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SPRING PINS, TUBULAR Corrosion and Moderate Heat Resistant Steel

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **TYPE:** Tubular shaped pins having a full-length longitudinal slot to permit flexure when inserted in a hole.
3. **APPLICATION:** Primarily to provide a pin with sufficient flexure to remain tight against the inner surface of a hole into which it has been inserted, after adjusting itself to the hole tolerances, and requiring corrosion resistance and oxidation resistance up to 700 F (371 C).
4. **MATERIAL:** Unless otherwise specified, shall be steel strip in accordance with the latest issue of AMS 5506 except that carbon content may be as low as 0.22%.

5. **TECHNICAL REQUIREMENTS:**

- 5.1 **Shear Strength:** Shall be not lower than the value specified below when tested in holes of the respective size shown.

| Nominal Pin Diameter Inch | Hole Diameter Inch | Double Shear Strength lb. min |
|------------------------------|-----------------------|----------------------------------|
| 0.062 | 0.064 - 0.065 | 425 |
| 0.078 | 0.080 - 0.081 | 650 |
| 0.094 | 0.096 - 0.097 | 1,000 |
| 0.125 | 0.128 - 0.129 | 2,100 |
| 0.156 | 0.159 - 0.160 | 3,000 |
| 0.188 | 0.191 - 0.192 | 4,400 |
| 0.219 | 0.223 - 0.224 | 5,700 |
| 0.250 | 0.255 - 0.256 | 7,700 |
| 0.312 | 0.317 - 0.318 | 11,500 |
| 0.375 | 0.381 - 0.382 | 17,600 |
| 0.438 | 0.444 - 0.445 | 20,000 |
| 0.500 | 0.509 - 0.510 | 25,800 |

- 5.1.1 For intermediate sizes, the minimum hole diameter and minimum double shear strength may be determined by interpolation in the above table; the maximum hole diameter shall be 0.001 in. greater than the minimum.
- 5.1.2 **Procedure:** The shear plane shall be at least 1 pin diameter away from each end of the pin. The pin slot shall be located approximately 90 deg to the line of application of force. Pins too short to test in double shear shall be tested by placing two pins in single shear simultaneously. The clearance between loading member and supporting member shall be not greater than 0.005 inch. The pin supports and bushing for applying load shall each have hardness not lower than Rockwell C 58 or equivalent.
- 5.2 **Hardness:** Shall be Rockwell Superficial 15-N 83 - 87 or equivalent when determined on a prepared flat surface on the pin OD.