



400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096

AEROSPACE
STANDARD

AS 666B

Superseding AS 666A

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CAVITY DESIGN AND O-RING SELECTION FOR STATIC SEAL
USE IN AIRCRAFT TUBELESS TIRE WHEELS

1. **PURPOSE:** This Aerospace Standard (AS) establishes design practices for aircraft tubeless tire wheel static seals.
2. **SCOPE:** This AS applies to the cavity design and the selection of O-rings for tubeless tire wheels.
3. **O-RING CAVITY DESIGN:**
 - 3.1 For use with 0.103 cross-section diameter O-ring, See Figure 1, page 3.
 - 3.2 For use with 0.139 cross-section diameter O-ring, See Figure 1, page 3.
 - 3.3 For use with 0.210 cross-section diameter O-ring, See Figure 1, page 3.
 - 3.4 For use with 0.275 cross-section diameter O-ring, See Figure 1, page 3.
 - 3.5 O-ring contact surfaces shall not exceed a maximum roughness of 63 RHR.

CAUTION

Care should be taken to prevent excessive and/or rough paint on O-ring contact surfaces which will prevent sealing.

- 3.6 Refer to MIL-P-5514 for static seal cavity design for use with demountable flange wheels.

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4. O-RING SELECTION:

- 4.1 Material from MIL-P-25732 or MIL-P-5516 is recommended for use in this type seal.
- 4.2 O-ring stretch should be limited to 3 to 8 percent of nominal ID in the installed position.
- 4.3 See AS 568 for O-ring sizes and corresponding dash number.

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