



AEROSPACE STANDARD

AS707™**REV. C**

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Superseding AS707B

(R) Thermal Sensitive Inflation Pressure Release Devices for Tubeless Aircraft Wheels

RATIONALE

This revision to AS707 adds references, and provides grammatical corrections and clarification of the design, interface, and test requirements. It changes terminology from “thermal release devices” to “fuse plugs,” consistent with FAA and government documents.

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1. SCOPE

The focus of this SAE Aerospace Standard (AS) is the integration of thermally actuated pressure release devices, hereafter referred to as fuse plugs, with the wheel and brake assembly. It does not address the manufacturing, quality or acceptance test requirements pertaining to the production of these fuse plugs. It establishes minimum design, installation, qualification, and operational requirements for fuse plugs which are used only in tubeless tire type aircraft braked wheels. Fuse plugs are designed to completely release the contained inflation pressure from a tubeless tire and wheel assembly when brake generated heat causes the tire or wheel to exceed a safe temperature level. The objective is to prevent tire or wheel rupture due to brake generated heat that could cause an unsafe condition for personnel or the aircraft. (Reference: U.S. Department of Transportation FAA Advisory Circular No. 23-17C; Title 14, Code of Federal Regulations (14 CFR) Part 25.735 (j); U.S. Department of Transportation FAA Advisory Circular No. 25.735-1 and U.S. Department of Transportation FAA Advisory Circular No. 25-7C.)

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

ARP597 Wheels and Brakes, Supplementary Criteria for Design Endurance Civil Transport Aircraft

ARP1493 Wheel and Hydraulically Actuated Brake Design and Test Requirements for Military Aircraft

ARP1619 Replacement and Modified Brakes and Wheels

2.1.2 FAA Publications

Available from Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, Tel: 866-835-5322, www.faa.gov.

Technical Standard Order TSO-C26d Aircraft Wheels, Brakes and Wheel/Brake Assemblies for Parts 23, 27 and 29 Aircraft

Technical Standard Order TSO-C135a Transport Airplane Wheels and Wheel and Brake Assemblies Title 14, Code of Federal Regulations (14 CFR) Part 25.731 (d) - Airworthiness Standards: Transport Category Airplanes, Wheels

Title 14, Code of Federal Regulations (14 CFR) Part 25.735 (j) - Airworthiness Standards: Transport Category Airplanes, Brakes and Braking Systems

U.S. Department of Transportation FAA Advisory Circular No. 23-17C - Systems and Equipment Guide for Certification of Part 23 airplanes and Airships

U.S. Department of Transportation FAA Advisory Circular No. 25.735-1 - Brakes and Braking Systems Certification Tests and Analysis

U.S. Department of Transportation FAA Advisory Circular No. 25-7C - Flight Test Guide for Certification of Transport Category Airplanes