



AEROSPACE RECOMMENDED PRACTICE

ARP5265™**REV. C**

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Superseding ARP5265B

Minimum Operational and Maintenance Responsibilities for Aircraft Tire Usage

RATIONALE

ARP5265 has been updated to Revision C to incorporate technical and editorial changes.

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Documents

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1. SCOPE

This SAE Aerospace Recommended Practice (ARP) sets forth criteria for the installation, inflation, inspection, and maintenance of aircraft tires and the maintenance of the operating environment to ensure the safety of support personnel and the safe operation of the aircraft.

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 +1 724-776-4970 (outside USA), www.sae.org.

ARP5542 Hand Held Aircraft Tire Inflation Pressure Gauges

ARP6137 Tire Pressure Monitoring Systems (TPMS) for Aircraft

ARP6225 Aircraft Tire Inspection – In-Service Removal Criteria

2.1.2 FAA Publications

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

FAA AC20-97B Aircraft Tire Maintenance and Operational Practice

2.1.3 EASA Publications

Available from European Union Aviation Safety Agency, Konrad-Adenauer-Ufer 3, D-50668 Cologne, Germany (for visitors and for mail over 1 kg) and Postfach 10 12 53, D-50452 Cologne, Germany (for mail 1 kg or less); Tel: +49 221 8999 000, www.easa.europa.eu.

CS-25, Amendment 26, 25.733f Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes, Tyres

2.1.4 U. S. Tire Manufacturers Association Publications

Available at www.ustires.org.

U. S. Tire Manufacturers Association Aircraft Tire Service Bulletin, Volume 1, Aircraft Tire Operational Inflation Pressure Criteria

2.2 Definitions

ACCEPTABLE OPERATING PRESSURE RANGE (AOPR): The range of pressure readings relative to the SSP or its associated OSP which are acceptable for aircraft dispatch.

AIRCRAFT: In the sense of this document refers principally to “fixed wing” and non-military fleets. Although rotary winged and military aircraft share many of the care and maintenance practices of the civilian community, certain operational regimes and unique duty cycles may not be covered by this document.

AIRCRAFT MAINTENANCE MANUAL (AMM): The maintenance instructions provided by the airframe manufacturer with each aircraft model.

BEAD: This term may be properly applied to entire zones that are in contact with the rim areas of the wheel, or it may be as specific as the coils of steel wire that provide anchors for the plies.

BIAS TIRE: A pneumatic tire in which the principal reinforcing cords are fabricated parallel to one another in layers called plies. These cords lie at an angle which is substantially less than 90 degrees to the centerline of the tire. Adjacent plies are at alternate angles. Most plies are anchored by the beads.

CASING: The structural part of a tire.

COMPONENT MAINTENANCE MANUAL (CMM): The maintenance instructions provided by the manufacturer with each component.

“COLD” TIRE: A tire for which the temperature of the contained gas has been conditioned to the local ambient for at least 3 hours.

FLATSPOTTING: This term covers two conditions:

1. A localized, accelerated wear condition associated with landings, or skid-throughs resulting from braking or other means.
2. A short lived “out-of-round” condition resulting from a loaded hot tire having not rotated while it cooled to ambient. (Most prevalent on bias nylon tires due to the “plastic memory” of the nylon cords.)

FOREIGN OBJECT DEBRIS (FOD): Objects that are foreign to the operational area of the aircraft that when rolled over cause damage to the tire.

“HOT” TIRE: A tire for which the temperature of the contained gas has risen 25 °F (14 °C) or more above the ambient.

MINIMUM SERVICE PRESSURE (MSP): The minimum gauge pressure reading for the dispatch of a tire.

OPERATIONAL SERVICE PRESSURE (OSP): The expected tire inflation pressure, as read on a pressure gauge, influenced by thermal conditions (ambient or rolling effects) when referenced from the SSP.

RADIAL TIRE: A pneumatic tire in which the ply cords that extend to the beads are laid substantially at 90 degrees to the centerline of the tire. Additional stabilizing is provided by belting in the area of the tread.

RATED PRESSURE: The inflation pressure associated with the maximum static rated load of the tire.

SIDEWALL: The rubber covering and the underlying structure that extends from the beads to the tread.

SPECIFIED SERVICE PRESSURE (SSP): The tire inflation pressure target defined by the airframe manufacturer, specific to an aircraft model and gross weight, as read on a pressure gauge in any ambient temperature. This is always a “cold” pressure value.

SUPPLEMENTAL TYPE CERTIFICATE (STC): A TYPE CERTIFICATE (TC) issued when an applicant has received regulatory approval to modify an aeronautical product from its original design.

TIRE (PNEUMATIC): The term “tire” refers to a complex engineered structure made of rubber and cables (of textiles or steel) providing, thereby, a protective enclosure for the inflating gas. It is resilient, yet dimensionally stable, possessing great strength and a capacity for the transfer of energy.

TREAD: The expendable rubber wearing surface of any pneumatic tire. It contains the groove pattern designed to facilitate water removal from the contact patch and may or may not possess integral fabric materials.