



AEROSPACE INFORMATION REPORT

AIR4367™

REV. B

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Superseding AIR4367A

(R) Aircraft Inflight Ice Detectors and Icing Rate Measuring Instruments

RATIONALE

AIR4367 needed updates to incorporate new technologies and to align with the significant updates to AS5498.

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1. SCOPE

This document provides information regarding ice detector technology and design. The SAE document AS5498 provides detailed information regarding the requirements, specifications, qualification, and certification of icing detection systems. This document is not meant to replace AS5498, but to enhance it by considering unique aspects of sensing technology and, in particular, those that may not be certificated at the time of this revision. To that end, an effort has been made not to duplicate information contained in AS5498. Icing rate information is included where applicable. The primary application is associated with ice forming on the leading edges of airfoils and inlets while the aircraft is in flight. Information related to detection of ice over cold fuel tanks and icing at low-velocity operation is included. The material is primarily applicable to fixed-wing aircraft. Unique requirements for engine inlets and rotorcraft are also provided.

1.1 Purpose

The purpose of this document is to provide information regarding various in situ icing sensing technologies and issues a user of these technologies should consider regarding the method of operation, performance, design, verification, and installation of aircraft ice detectors and icing rate indicators. The intent is not to duplicate AS5498, but to supplement it in areas that may not have been deemed appropriate for such a standards document. More details on requirements and installed performance considerations are provided in AS5498.

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.

Many of the referenced documents are available online.

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.

AIR1168/4 SAE Aerospace Applied Thermodynamics Manual, Ice, Rain, Fog, and Frost Protection

AR5624 Aircraft Inflight Icing Terminology

AS5498 Minimum Operational Performance Specification for In-flight Icing Detection Systems

2.1.2 U.S. Department of Transportation, Federal Aviation Administration (FAA) Publications

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

Title 14 of the US Code of Federal Regulations, Part 23 Airworthiness Standards: Normal Category Airplanes (14 CFR Part 23).

Title 14 of the US Code of Federal Regulations, Part 25 Airworthiness Standards: Transport Category Airplanes (14 CFR Part 25).

Title 14 of the US Code of Federal Regulations, Part 27 Airworthiness Standards: Normal Category Rotorcraft (14 CFR Part 27).

Title 14 of the US Code of Federal Regulations, Part 29 Airworthiness Standards: Transport Category Rotorcraft (14 CFR Part 29).