



AEROSPACE STANDARD

AS8046™

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Minimum Performance Standard Angle of Attack Equipment

RATIONALE

AS8046 has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE:

This SAE Aerospace Standard (AS) establishes the minimum performance requirements for an angle of attack (AOA) system.

1.1 Purpose:

This document covers two basic AOA Systems. One measures airflow and pressure distribution on the airfoil, and the other measures the angle of airflow with respect to an arbitrary reference line. Each type of system includes, as a minimum, a sensor and a display to the pilot representative of the aircraft's AOA.

1.2 Sensor Category Usage:

Sensor will be categorized for operation in either of the following:

- a. Category A: For use on aircraft certified for flight into known icing conditions.
- b. Category B: For use on aircraft not certified for flight into known icing conditions.

2. REFERENCES:

2.1 U.S. Government Publications:

Available from Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

Federal Aviation Regulation 25.1359 (d) and Appendix F

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Documents
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2.2 Other Documents:

RTCA Document DO-160C, Environmental Conditions and Test Procedures for Airborne Electronic/Electrical Equipment and Instruments (December 1989)

3. GENERAL STANDARDS:

3.1 AOA Signal:

This signal must be representative of the airplane's AOA.

3.2 Interchangeability:

3.2.1 Systems and components which are identified with the same part number shall be completely interchangeable.

3.2.2 If the equipment components require matching for proper operation and to meet the requirements of this document, they shall be identified in a manner which will assure proper matching. Installation instructions issued by the manufacturer shall indicate these matching requirements.

3.2.3 Aircraft Identification: The aircraft type and model number, if applicable, for which the equipment has been calibrated and for which it performs its intended function, shall be clearly marked on the equipment nameplate and in the manufacturer's installation instructions.

3.3 Adjustments:

Adjustments which are not normally adjusted in flight shall not be readily accessible to flight personnel, when the equipment is installed in accordance with the equipment manufacturer's instructions.

3.4 Precipitation:

The sensor shall be designed so that it will continue to function properly and give reliable information during flight through rain of 150 mm/h.

3.5 Drainage:

If required for proper operation, drain holes should be provided for a sensor where necessary and such holes shall not result in any errors exceeding those specified in 4.1.

3.6 Fire Resistance:

Except for small parts (such as knobs, fasteners, seals, grommets, and small electrical parts) that would not contribute significantly to the propagation of a fire, all materials must be self-extinguishing when tested in accordance with the requirements of Federal Aviation Regulation 25.1359 (d) and Appendix F thereto, with the exception that materials tested may be configured in accordance with paragraph (b) of Appendix F or may be configured as used.