

# AEROSPACE INFORMATION REPORT

**AIR1168™/J3**
**REV. A**

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Superseding AIR1168/3	

(R) SAE Aerospace Applied Thermodynamics Manual  
Aerothermodynamic Systems Engineering and Design

## RATIONALE

Needed to correct errors in document and clarify ground radiation values.

## PREFACE

This document is one of 14 Aerospace Information Reports (AIR) of the Third Edition of the SAE Aerospace Applied Thermodynamics Manual. The manual provides a reference source for thermodynamics, aerodynamics, fluid dynamics, heat transfer, and properties of materials for the aerospace industry. Procedures and equations commonly used for aerospace applications of these technologies are included.

In the Third Edition, no attempt was made to update material from the Second Edition nor were SI units added. However, all identified errata were corrected and incorporated and original figure numbering was retained, insofar as possible.

The SAE AC-9B Subcommittee originally created the SAE Aerospace Applied Thermodynamics Manual and, for the Third Edition, used a new format consisting of AIR1168/1 through AIR1168/10, AIR1168/11 through AIR1168/14 were created by the SAE SC-9 Committee.

The AIRs comprising the Third Edition are shown below. Applicable sections of the Second Edition are shown parenthetically in the third column.

AIR1168/1	Thermodynamics of Incompressible and Compressible Fluid Flow	(1A,1B)
AIR1168/2	Heat and Mass Transfer and Air-Water Mixtures	(1C,1D,1E)
AIR1168/3	Aerothermodynamic Systems Engineering and Design	(3A,3B,3C,3D)
AIR1168/4	Ice, Rain, Fog, and Frost Protection	(3F)
AIR1168/5	Aerothermodynamic Test Instrumentation and Measurement	(3G)
AIR1168/6	Characteristics of Equipment Components, Equipment Cooling System Design, and Temperature Control System Design	(3H,3J,3K)
AIR1168/7	Aerospace Pressurization System Design	(3E)
AIR1168/8	Aircraft Fuel Weight Penalty Due to Air Conditioning	(3I)

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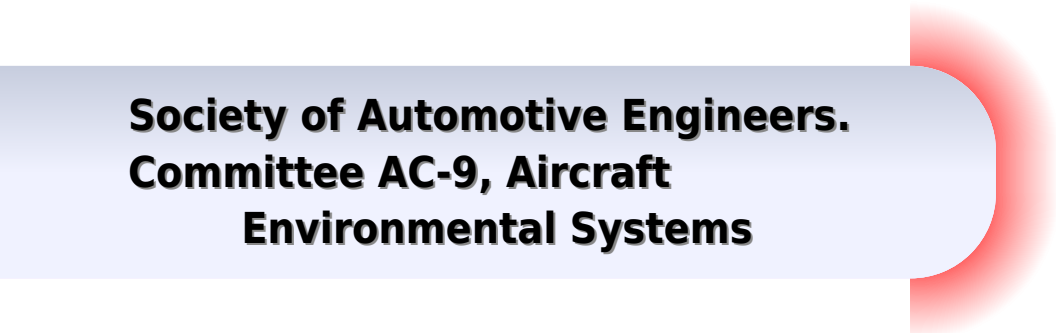
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# Sae Aerospace Applied Thermodynamics Man

**Society of Automotive Engineers.  
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**SAE Aerospace Applied Thermodynamics Manual** Society of Automotive Engineers. Committee AC-9, Aircraft Environmental Systems, 1969     The National union catalog, 1968-1972 ,1973     *The National Union Catalogs*, 1963- ,1964

**Aviation Week & Space Technology** ,1974 Includes a mid December issue called Buyer guide edition     *The SAE Journal* ,1970     **National Union Catalog** ,1968 Includes entries for maps and atlases     **SAE Journal of Automotive Engineering** Society of Automotive Engineers,1970-08     **Handbooks and Tables in Science and Technology** Russell Powell,1994-08-15 The bibliography covers physics chemistry engineering mathematics astronomy biology geology agriculture medicine environment energy equations manufacturing materials measurement carcinogens and pesticides

**S.A.E. Transactions** Society of Automotive Engineers,1980 Beginning in 1985 one section is devoted to a special topic

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