



AEROSPACE RECOMMENDED PRACTICE

ARP8831™

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Aircraft Ground Deicing/Anti-Icing Quality Auditing Checklist

RATIONALE

This document establishes an industry standard checklist for the auditing of the methods and procedures used in aircraft deicing and anti-icing on the ground to support conformance with the industry global standards AS6285, AS6286, and AS6332. The checklist covers the use of SAE AMS1424 and SAE AMS1428 qualified fluids (Types I, II, III, and IV) and non-fluid methods.

ARP8831 underpins AS6332, which was created using the international ISO 9001 quality standard for its structure, and adapting this to be relevant to the aircraft deicing industry. ARP8831 forms a companion part to the three related SAE Aerospace Standards (AS) and should be read in conjunction with AS6285, AS6286, and AS6332. Collectively, AS6285, AS6286, and AS6332 are known to the international community as the “global aircraft ground deicing standards.”

This audit checklist outlines the documentation requirements, inspection areas, and items to be checked as part of both internal and external quality management systems and quality assurance programs. The checklist can be used by deicing service providers, air operators, regulators, and external/third-party audit organizations.

Exposure to weather conditions on the ground conducive to ice formation can cause the accumulation of frost, snow, slush, or ice on aircraft surfaces and components. These contaminants can adversely affect aircraft performance, stability, control, and operation of mechanical devices such as control surfaces, sensors, flaps, and landing gear. If frozen deposits are present, other than those considered in the aircraft certification process, the performance of the aircraft may be compromised.

Regulations governing aircraft operations in icing conditions shall be followed. Specific rules for aircraft are set forth in the United States Code of Federal Regulations (14 CFR), European Union Regulations (EU-OPS), Canadian Aviation Regulations (CAR), and others. Paraphrased, these rules specify that no one may dispatch or takeoff an aircraft with frozen deposits on components of the aircraft that are critical to safe flight. A critical surface or component is one that could adversely affect the mechanical or aerodynamic function of an aircraft. In the event of differences or discrepancies in the requirements set out in this standard and any requirements set out in the domestic regulations applicable to the end user, the domestic regulation requirements shall supersede those set out in this standard.

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TABLE OF CONTENTS

1. SCOPE..... 3

2. REFERENCES..... 3

2.1 Applicable Documents 3

2.1.1 SAE Publications..... 3

2.1.2 ISO Publications..... 3

2.2 Definitions 3

2.3 Abbreviations and Acronyms 4

3. AS6332 GLOBAL AIRCRAFT GROUND DEICING/ANTI-ICING AUDITING CHECKLIST 4

4. NOTES 22

4.1 Revision Indicator..... 22

1. SCOPE

This document establishes an industry standard checklist for the auditing of the methods and procedures used in aircraft deicing and anti-icing on the ground to support conformance with the industry global standards, AS6285, AS6286 and AS6332. The checklist covers the use of SAE AMS1424 and SAE AMS1428 qualified fluids (Types I, II, III, and IV) and non-fluid methods.

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.

AS6285	Aircraft Ground Deicing/Anti-Icing Processes
AS6286	Aircraft Ground Deicing/Anti-Icing Training and Qualification Program
AS6332	Aircraft Ground Deicing/Anti-Icing Quality Management

2.1.2 ISO Publications

Available from International Organization for Standardization, ISO Central Secretariat, 1, ch. de la Voie-Creuse, CP 56, CH-1211 Geneva 20, Switzerland, Tel: +41 22 749 01 11, www.iso.org.

ISO 9000	Quality Management Systems - Fundamentals and Vocabulary
ISO 9001	Quality Management Systems - Requirements

2.2 Definitions

NOTE: Throughout the text of this document, wherever the term “product” occurs, it can also mean “service,” and vice versa.

For the purposes of this document, the following definitions apply:

a. Advisory Word Definitions

The following advisory words are to be used as defined:

MAY: This is used to describe that the practice is encouraged and/or optional.

SHOULD: This means that the practice is recommended or strongly encouraged.

SHALL: This will mean that the practice is mandatory.

b. Words and Phrases Definitions

See all definitions in AS6285, AS6286 and AS6332.

CONFIRM: As used in this document to ensure that the policy is Implemented (I) (Quality Control).

VERIFY: As used in this document to ensure there is a Documented (D) policy/procedure (Quality Assurance).

2.3 Abbreviations and Acronyms

NOTE: For the purposes of this document, the abbreviations, terms, and definitions given in AS6285 apply.

AS aerospace standard

OEM original equipment manufacturer

QA quality assurance

QAP quality assurance program

QC quality control

QMS quality management system

SMS safety management system

3. AS6332 GLOBAL AIRCRAFT GROUND DEICING/ANTI-ICING AUDITING CHECKLIST

This audit checklist is to be used in conjunction with AS6285, AS6286, and AS6332. Collectively, AS6285, AS6286, and AS6332 are known as the “global aircraft ground deicing standards.”

The “global aircraft ground deicing standards” do not supersede national regulatory requirements. Local regulations are always primary and must be legally adhered to by air operators and service providers. Examples of local regulations governing operations in icing conditions include the United States Code of Federal Regulations (14 CFR), European Union Regulations (EU-OPS), Canadian Aviation Regulations (CAR), and others.

This audit checklist outlines the documentation requirements, inspection areas, and items to be checked as part of both internal and external quality management systems and quality assurance programs. The checklist can be used by deicing service providers, air operators, regulators, and external/third-party audit organizations.

SAE AS6332™
Global Aircraft Ground Deicing/Anti-Icing Audit Checklist Cover Sheet

Station Name:				Completion Date: (YYYY-MM-DD)	
Official Company Name:					
Type of Check:	☐ Initial	☐ Annual	☐ Follow-up	☐ On-site ☐ Remote ☐ Desktop	☐ Other (specify)
Type of Company:	☐ Ground Handling/Deicing Service Provider	☐ Airport	☐ Airline	☐ Airline Maintenance	☐ Other (specify)

**Documents**

Document Sharing Hub

Findings (Questions are color-coded to reflect the level of importance):

Level 1 Major nonconformance (MajNC)	Level 2 Minor nonconformance (MinNC)	Level 3 Opportunity for improvement (OFI)	No findings

NOTE: Any identified Opportunities for Improvement or Best Practice notes may be listed in Section 9.4.

Repeated Findings: ☐ Yes ☐ No

Restrictions: ☐ Yes ☐ No (specify if yes)

Corrective measures required prior to deicing/anti-icing operation: ☐ Yes ☐ No

Follow-up audit required prior to deicing/anti-icing operation: ☐ Yes ☐ No

Terms of Agreement:

☐ By checking this box and signing below, I, _____ auditor from _____ do hereby certify on this date _____ that this audit reflects a sample of the inspected parties overall program.

A. COMPANY CONTACT AND HANDLING INFORMATION

Primary contact:

Official Company Name:		
Responsible Manager:		
Department:		
Email:		
Phone (office, mobile)	Office:	Mobile:
Address (street):		
Address (postal code, city):	Postcode:	City, State:
Country:		

Local station contact (if different from above):

Same as above? ☐Yes☐No (note below any differences from above)

Contact Person:		
Department:		
Email:		
Phone (office, mobile)	Office:	Mobile:
Address (street):		
Address (postal code, city):	Postcode:	City, State:
Country:		

What air operators do you have contracts with and/or typically provide services to?

Air Operator ICAO 3LD	Air Operator Name	Primary	Secondary/Backup	Supply deicing only, PDAC only, or both

Note: PDAC is Post-Deicing/Anti-icing Check

B. STATION FLUIDS AND VEHICLE LISTING**B.1 Station Fluids**

List all deicing/anti-icing fluids likely to be used on the aircraft by the handling company. It is up to the individual airline to approve the listed fluid(s).

Fluid Information:

Deicing/Anti-icing Fluids	Fluid Type				Concentration/Dilution
Fluid Manufacturer and Name	I	II	III	IV	(100%, 75%, 50%, Other)
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	

B.2 Station Vehicles

List all vehicles used on the aircraft by the handling company. It is up to the individual airline to approve the listed vehicles.

Vehicle Information:

Manufacturer	Model	Total Number of Vehicles of this Model	Maximum Nozzle Operating Height	Proportional/Auto Mix System (Y/N)