



AEROSPACE RECOMMENDED PRACTICE

ARP1315™

REV. E

Issued 1975-05

Revised 2013-10

Reaffirmed 2024-11

Superseding ARP1315D

Safety Considerations for Airplane Lavatories

RATIONALE

This technical report is updated to address security considerations for the installation of chemical oxygen generators and for toilets in airplane lavatories.

ARP1315E has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE

This SAE Aerospace Recommended Practice (ARP) establishes safety recommendations for lavatories in transport category airplanes.

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

AIR512 Aircraft Cabin Illumination

ARP4001 Lavatory Smoke Detectors

ARP4740 Safety Considerations - Smoking in Lavatories of Transport Aircraft

AS8056 Minimum Design and Performance of Airplane Galley In-Flight Carts, Containers, and Associated Components

SAE Executive Standards Committee Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2024 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, or used for text and data mining, AI training, or similar technologies, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org

SAE WEB ADDRESS: <http://www.sae.org>

For more information on this standard, visit
<https://www.sae.org/standards/content/ARP1315E/>

2.1.2 ASHRAE Publications

Available from ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329, Tel: 800-527-4723 (U.S. and Canada only) or 404-636-8400, www.ashrae.org.

ANSI/ASHRAE Standard 62.1 Ventilation for Acceptable Indoor Air Quality

2.1.3 A4A Publications

Available from Airlines for America (A4A), 1301 Pennsylvania Avenue, NW, Suite 1100, Washington, DC 20004, Tel: 202-626-4000, www.airlines.org.

Suggested Guidelines for Accessible Lavatories in Twin Aisle Aircraft

2.1.4 Code of Federal Regulations (CFR)

Available from the United States Government Printing Office, 732 North Capitol Street, NW, Washington, DC 20401, Tel: 202-512-0000, www.gpoaccess.gov.

14 CFR Part 1 Definition and Abbreviations

14 CFR Part 21 Certification Procedures for Products and Parts

14 CFR Part 25 Airworthiness Standards: Transport Category Airplanes

14 CFR Part 382 Non-discrimination on the Basis of Disability in Air Travel

21 CFR Part 1250 Interstate Conveyance Sanitation

2.1.5 FAA Publications

Available from Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, Tel: 866-835-5322, www.faa.gov or <http://rgl.faa.gov/>.

AC 20-168 Certification Guidance for Installation of Non-Essential, Non-Required Aircraft Cabin Systems & Equipment (CS&E)

AC 25-9 Smoke Detection, Penetration, Evacuation Tests, and related Flight Manual Emergency Procedures

AC 25-10 Guidance for Installation of Miscellaneous, Non-required Electrical Equipment

AC 25-17 Transport Airplane Cabin Interiors Crashworthiness Handbook

AC 25.795-8 Interior Design to Facilitate Searches

AC 25.1701-1 Certification of Electrical Wiring Interconnect Systems on Transport Category Airplanes

AC 43.13-1 Acceptable Methods, Techniques, and Practices, Aircraft Inspection and Repair

AC 43.13-2 Acceptable Methods, Techniques, and Practices, Aircraft Alterations

PS-ANM-25-04 Chemical Oxygen Generator Installations, dated 12/21/2011

2.1.6 NASA Publications

Available at <http://msis.jsc.nasa.gov/>.

NASA-STD-3000 Man-Systems Integration Standards

2.1.7 FDA Publications

Available at <http://www.fda.gov/ICECI/Inspections/InspectionGuides/ucm095485.htm>

Attachment 3 to Guide to Inspections of Interstate Carriers and Support Facilities

2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Aerospace Standard.

2.2.1 EASA Publications

Available from European Aviation Safety Agency, Postfach 10 12 53, D-50452 Koeln, Germany, Tel: +49-221-8999-000, www.easa.eu.int.

CS-25 Certification Specification for Large Aeroplanes

2.3 Definitions

2.3.1 LAVATORY

A compartment within an airplane passenger cabin that provides facilities for washing, trash disposal, and toiletry needs. The compartment may include furnishings such as:

- a. Curtains
- b. Enclosure (walls, doors, ceiling, and floors)
- c. Cabinets (sink, dispensers, and disposals)
- d. Supply compartments
- e. Toilet system
- f. Plumbing (water lines, drain lines, vent lines, and oxygen lines)
- g. Electrical wiring and components
- h. Amenities (e.g., paper towels, sanitary napkins, cologne, etc.)
- i. Lighting, call system, and public address system
- j. Oxygen supply provisions
- k. Fresh air outlet
- l. Safety equipment needed to ensure safety of occupant and equipment
- m. Smoke detector
- n. Waste compartment fire extinguisher
- o. Assist means (handles/hand holds)

2.3.2 NATIONAL AVIATION AUTHORITY

A State's civil aviation authority (e.g., FAA, Transport Canada Civil Aviation (TCCA), European Aviation Safety Agency (EASA)).

2.3.3 Mandating and Recommending Words

SHALL: indicates a mandatory criterion

SHOULD: indicates a criterion for which an alternative, including noncompliance, may be applied if it is documented and justified.

2.3.4 RoHS (Restriction of Hazard Substances)

Regulations such as those in the European Union and China that restrict the use of certain hazardous substances.

2.3.5 REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances)

Regulations in the European Union with the aim to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.

3. DETAIL RECOMMENDATIONS

3.1 General

3.1.1 The current applicable sections of National Aviation Authority regulations shall be considered minimum requirements.

3.1.2 In addition to the sanitary construction requirements of 21 CFR 1250, lavatories should meet Attachment 3 "Guidelines for Sanitary Construction of Aircraft Galleys and Galley Components" in FDA document "Interstate Carriers and Support Facilities - Guidelines" in comparable subject areas such as potable water, waste receptacles, cleaning, etc.

3.1.3 Lavatories shall be designed in accordance with the provisions of Volume 1, Section 6.3 (Mechanical Hazards) of NASA STD-3000 to avoid safety problems with burrs, edges, corners and protrusions.

3.1.4 Handholds shall be provided for use during turbulence. The handhold(s) should meet the "Assistive Equipment Dimensions" criteria in ATA publication, "Suggested Guidelines for Accessible Lavatories in Twin Aisle Aircraft" (2.1.3) except it should be positioned horizontally between 35 inches (89 cm) and 50 inches (127 cm) above the floor and useable in both seated and standing positions.

3.1.5 At least one lavatory per airplane should be designed for use by disabled/extra care passengers (14 CFR Part 382) and the design shall be implemented in accordance with "Suggested Guidelines for Accessible Lavatories in Twin Aisle Aircraft". The handhold system in this lavatory shall meet the criteria in "Suggested Guidelines for Accessible Lavatories in Twin Aisle Aircraft" and 3.1.4 to accommodate both the typical passenger and the extra care/disabled passenger.

3.1.6 Lavatories shall be designed for ease of use, especially by passengers unfamiliar with the lavatory. Placards shall be used for clarity of necessary information. Symbolic placards are recommended and when used shall be implemented in accordance with AC 25-17.

3.1.7 In addition to the "No Smoking in Lavatory" placards required by 14 CFR 25.791(d), a placard on the inside of the lavatory shall advise occupants that smoking is not allowed because of its potential fire danger. This placard should be rendered in accordance with ARP4740.

3.1.8 Illumination levels within the lavatory shall, at minimum, meet the values provided in AIR512.