

 AEROSPACE RECOMMENDED PRACTICE	ARP1315		REV. D
	Issued	1975-05	
	Revised	2006-09	
Superseding ARP1315C			
(R) Safety Considerations for Airplane Lavatories			

RATIONALE

This ARP was reviewed as part of the 5 year document re-affirmation process and determined to be out of date. This revision, which focuses on safety, brings the ARP in line with current standards,

1. SCOPE

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

1.1 Mandating and Recommendation Phrases

“Shall”: The word “shall” indicates a mandatory criterion.

“Should”: The word “should” indicates a criterion for which an alternative, including non compliance, may be applied if it is documented and justified.

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
ARP577	Emergency Placarding - Internal and External
AIR1815	Safe Carriage of Impaired and Disabled Passengers

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ARP4001	Lavatory Smoke Detectors
ARP4120	Foldable On-Board Wheelchairs for Passengers with Disabilities
ARP4387	Cabin Accommodations for Passengers with Disabilities - Transport Category Aircraft
AS8056	Minimum Design and Performance of Airplane Galley In-Flight Carts, Containers and Associated Components
CAESAR	3-D Anthropometric Database

2.1.2 Code of Federal Regulations (CFR) and Federal Aviation Administration (FAA) Publications

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

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 25-16	Electrical Fault and Fire Prevention and Protection
AC 25-17	Transport Airplane Cabin Interiors Crashworthiness Handbook
AC 43.13-1	Acceptable Methods, Techniques, and Practices, Aircraft Inspection and Repair
AC 43.13-2	Acceptable Methods, Techniques, and Practices, Aircraft Alterations
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

2.1.3 U.S. Food and Drug Administration (FDA) Publications

Available at www.fda.gov/ora/inspect_ref/igs/icsf.html.

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

2.1.4 National Aeronautics and Space Administration (NASA) Publications

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

NASA-STD-3000	Man-Systems Integration Standards
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2.1.5 American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Publications

Available from ASHRAE, Inc., 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

2.1.6 Suggested Guidelines for Accessible Lavatories in Twin Aisle Aircraft

Available at <http://airconsumer.ost.dot.gov/pubs.htm>.

2.2 Definitions

2.2.1 LAVATORY

A lavatory is 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)

2.2.2 NATIONAL AVIATION AUTHORITY

A State's civil aviation authority.

3. DETAIL RECOMMENDATIONS

3.1 General

- 3.1.1 The current applicable sections of National Aviation Authority regulations and U.S. Food and Drug Administration (FDA) 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 Equipment" to FDA document "Guide to Inspections of Interstate Carriers and Support Facilities" 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 2.1.6 except it should be positioned horizontally between 35 and 50 inches 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 and the design shall be implemented in accordance with 2.1.6. The handhold system in this lavatory shall meet 2.1.6 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 AC25-17.
- 3.1.7 In addition to the "No Smoking in Lavatory" placards required by 14CFR25.791 (d), a placard on the inside of the lavatory shall advise occupants that smoking is not allowed because of its potential fire danger.
- 3.1.8 Illumination levels within the lavatory shall, at minimum, meet the values provided in AIR512.
- 3.1.9 The ashtray required by 14CFR25.853 (g) shall be constructed of fire resistant (reference 14CFR1.1) materials and have a lid to enclose smoking materials.
- 3.1.10 To meet the fire containment requirements of 14 CFR 25.853, waste receptacles shall be tested per AC 25-17. The waste receptacle flap shall be clearly identified, readily distinguishable from an ashtray, self-closing, and not have finger "through holes". The "No Cigarette Disposal" marking required by 14 CFR 25.791(c) should be engraved (or equivalent) on the waste flap itself. Bonded placards shall not be used. The waste flap marking should be rendered per AS8056.
- 3.1.11 The waste container and chute shall direct waste into the bin and be designed to prevent jamming during normal use. Easily opened and closed doors with straightforward access and an easily removable waste container shall be provided. It shall be impossible to install the removable container improperly. Compartment door latching shall be positive and indicate the latch engaged position.
- 3.1.12 Electrical wire, plumbing lines, and other systems shall not be routed within the waste receptacle area of the waste compartment. It is acceptable to route these systems behind the waste receptacle in the back of the waste compartment, provided the waste receptacle area is separated from the systems with a compartment panel or equivalent fire resistant shrouding. Removal of access panels shall not be required for cleaning waste receptacles.