



Society of Automotive Engineers, Inc.
400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096

AEROSPACE RECOMMENDED PRACTICE

ARP 1315

Issued May 1975
Revised

LAVATORY INSTALLATION

1. PURPOSE

This Aerospace Recommended Practice (ARP) establishes recommendations, with respect to personnel and airplane safety, for the design of lavatory compartments in airplanes. Consideration should be given to the fact the lavatory compartment is an area in which the passenger is not under direct observation of the flight attendants.

2. DEFINITION

This ARP deals with passenger, crew and airplane safety as specifically applied to a compartment within an airplane passenger cabin for the purpose of providing facilities for washing, waste disposal and toiletry needs. The compartment may include:

- Enclosure (walls, doors, ceiling and floors)
- Cabinets (sink, dispensers and disposals)
- Supply compartments
- Toilet system
- Plumbing (water lines, drain lines, vent lines and oxygen lines)
- Electrical wiring and components
- Accessories

NOTE: This document is not intended to specify design materials or equipment to be used in the accomplishment of the stated objective.

3. DETAIL RECOMMENDATIONS

3.1 References and Applicable Regulations:

3.1.1 The current applicable sections of Federal Aviation Regulations and US Public Health Service requirements should be considered minimum requirements.

3.1.2 The recommendations contained in the following ARPs should be considered:

- 367 Airplane Cabin Pressurization
- 499 Passenger Door Operation
- 503 Emergency Evacuation Illumination
- 577 Emergency Placarding
- 767 Impact Protective Design of Occupant Environment - Transport Aircraft

3.2 General Lavatory Construction:

3.2.1 The material used in the construction of the lavatory compartment and furnishings should meet or exceed the requirements of FAR 25.853.

3.2.2 Magnesium or magnesium alloys should not be used.

SAE Technical Board rules provide that: "All technical reports, including standards approved practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standards or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against infringement of patents."

3.3 Human Factors:

- 3.3.1 Consideration should be given to the placement and operation of passenger-operated equipment to prevent injury.
- 3.3.2 Placement and/or bypassing of vent lines should consider potential passenger injury when using the toilet facilities.
- 3.3.3 The design and architectural shaping of lavatory furnishings and surfaces should provide maximum delethalization and protection to the passenger.
- 3.3.4 Consideration should be given to the use of the facility by handicapped persons (including feeble, poor eyesight, language).
- 3.3.5 Consideration should be given to the use of the facility by persons unfamiliar with the lavatory. Placarding will be used for clarity when necessary.
- 3.3.6 Sharp edges and corners should be avoided, especially in blind areas where servicing is difficult.
- 3.3.7 Oxygen should be readily accessible.
- 3.3.8 Suitable lighting should be provided.

3.4 Lavatory Configuration:

- 3.4.1 Readily visible "No Smoking" signs and ash trays should be provided outside and inside the lavatory. The ash trays should be obvious, accessible and impossible to confuse with doors for disposables. Self-contained ash trays and housings should be designed and located to prevent cigarettes or cigars from falling inside the cabinets or waste containers.
- 3.4.2 The waste disposal door should be so obvious that it is impossible to mistake it for an ash tray and should be placarded against disposal of cigarettes and cigars. The door should be self-closing.
- 3.4.3 Waste receptacles and compartments should be capable of containing a fire and the waste container should be constructed of fire-resistant material.
- 3.4.4 The waste container and chute should be designed to prevent jamming and for easy servicing to facilitate and encourage good housekeeping. Easily opened and closed doors with straightforward access and easily removed waste container should be provided. It should be impossible to install the removable container improperly.
- 3.4.5 Consideration should be given to the overall arrangement of furnishings and equipment to provide adequate separation and protection of electrical wiring and components, plumbing lines, vent lines and oxygen lines from waste disposal areas.
- 3.4.6 Dispenser service doors and stowage compartment doors should be designed to discourage opening and misuse by passengers.
- 3.4.7 There should be no opening that could result in a flue action in the event of a fire within the lavatory compartment or sub-compartments.
- 3.4.8 The floor should be sealed to provide a barrier preventing liquids from dripping or seeping onto compartments or equipment below.