



AEROSPACE RECOMMENDED PRACTICE

ARP4712™**REV. A**

Issued 1992-09
Revised 2015-12
Reaffirmed 2021-09

Superseding ARP4712

(R) Hand-Held Cabin Fire Extinguishers
Transport Aircraft

RATIONALE

This revision changes the scope and purpose of this Aerospace Recommended Practice (ARP) by removing all design related requirements for hand-held fire extinguishers and adding recommendations for their installation in transport category airplanes and for crew member training.

1. SCOPE

This SAE Aerospace Recommended Practice (ARP) establishes general criteria for the installation (e.g., type, location, accessibility, stowage) and crew member training needed for hand-held fire extinguishers.

1.1 Purpose

To ensure that the appropriate types of portable hand-held fire extinguishers are readily accessible in the areas they are likely to be needed and to ensure crew members have adequate training in the use of hand-held fire extinguishers and the proper techniques for fighting on-board fires. The intent is also to promote expedient access to emergency equipment by encouraging standardization.

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.

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Documents

Document Sharing Hub

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.

AS245	Water Solution Type Hand Fire Extinguisher
ARP577	Emergency Placarding - Internal and External
ARP997	Installation and Stowage Provisions for Emergency Equipment in the Transport Aircraft Passenger Cabin
AS6271	Halocarbon Clean Agent Hand-Held Fire Extinguisher

2.1.2 Code of Federal Regulations (CFR)

Available from the United States Government Printing Office, 732 North Capitol Street, NW, Washington, DC 20401, Tel: 202-512-1800, www.gpoaccess.gov.

14 CFR 23 Airworthiness Standards: Normal, Utility, Acrobatic, and Commuter Category Airplanes

14 CFR 25 Airworthiness Standards: Transport Category Airplanes

14 CFR 27 Airworthiness Standards: Normal Category Rotorcraft

14 CFR 29 Airworthiness Standards: Transport Category Rotorcraft

14 CFR 91 Airworthiness Standards: General Operating and Flight Rules

14 CFR 121 Airworthiness Standards: Operating Requirements: Domestic, Flag, and Supplemental Operations

14 CFR 135 Airworthiness Standards: Operating Requirements: Commuter and On-Demand Operations and Rules Governing Persons on Board Such Aircraft

2.1.3 EASA Publications

Available from European Aviation Safety Agency, Ottoplatz, 1, D-50679 Cologne, Germany, Tel: +49 221 8999 000, www.easa.europa.eu.

CS-23	Certification Specification for Normal, Utility, Aerobatic and Commuter Aeroplanes
CS-25	Certification Specification for Large Aeroplanes
CS-27	Certification Specification for Small Rotorcraft
CS-29	Certification Specification for Large Rotorcraft

2.1.4 FAA Publications

Available from Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, Tel: 866-835-5322, www.faa.gov.

Advisory Circular 20-42D, Hand Fire Extinguishers for Use in Aircraft

Advisory Circular 25-17A, Transport Airplane Cabin Interiors Crashworthiness Handbook

Safety Alert for Operators, SAFO 09013, Dated June 23, 2009, Subject: Fighting Fires Caused By Lithium Type Batteries in Portable Electronic Devices. http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

2.2 Related Publications

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

2.2.1 FAA Publications

Available from Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, Tel: 866-835-5322, www.faa.gov.

Advisory Circular 120-80 In-Flight Fires

TSO C-19 Portable Water-Solution Type Hand Fire Extinguisher

2.3 Definitions

2.3.1 CLASS A FIRE: A fire involving combustible solid materials (e.g., wood, textiles, curtains, furniture, and plastics, etc.), usually organic in nature (contains compounds of carbon), which generally produce glowing embers.

2.3.2 CLASS B FIRE: A fire involving flammable liquids, oils, solvents, gases.

2.3.3 CLASS C FIRE: A fire involving energized electrical equipment.

2.4 Mandating and Recommendation Phrases

2.4.1 SHALL: Indicates a mandatory criterion.

2.4.2 SHOULD: Indicates a criterion for which an alternative, including non-compliance, may be applied if it is documented and justified.

3. GENERAL RECOMMENDATIONS

3.1 The installation of hand-held fire extinguishers in an aircraft shall be approved by the FAA and/or other governing Civil Aviation Authority (e.g., EASA, Transport Canada). Note: FAA Advisory Circular AC 20-42D identifies that any fire extinguisher approved by Underwriter's Laboratory (UL), Factory Mutual (FM), or the United States Coast Guard (USCG) is approved for aircraft use. Fire extinguishers qualified to a Technical Standard Order (TSO) are also approved for aircraft use (e.g., water fire extinguishers qualified to TSO-C19).

3.2 Acceptable fire extinguishing agents for internal aircraft use include:

a. Water

b. Halon 1211

c. Halocarbon Clean Agent (Halon 1211 replacement)

NOTE: Carbon Dioxide, Dry Chemical and Specialized Dry Powder extinguishing agents are not recommended for internal aircraft use (reference FAA AC 20-42D).

3.3 Halocarbon Clean Agent hand-held fire extinguishers shall be qualified to AS6271.

3.4 All hand-held fire extinguishers installed in an aircraft shall be qualified to operate in the expected operating temperature range of the aircraft.

3.5 The effects of agent toxicity, aircraft ventilation, agent stratification and hypoxia should be considered when selecting the fire extinguisher types and sizes (reference FAA AC 20-42D).