



AEROSPACE RECOMMENDED PRACTICE

ARP711™

REV. C

Issued 1991-09
Revised 2018-08

Superseding ARP711B

(R) Illuminated Signs

RATIONALE

This document is being revised to update references and terminology, use of "NO SMOKING" instruction if the act of smoking is prohibited at all times, recommended sign symbology and graphics, sign control options, readability, and light sources.

1. SCOPE

This SAE Aerospace Recommended Practice (ARP) covers the general design and performance characteristics of illuminated information signs for service in the passenger compartment of passenger transport aircraft. Relating to regulations, this ARP covers regulations that have been harmonized with the Federal Aviation Administration (FAA) and European Aviation Safety Agency (EASA); if there are any differences, the applicant should review the appropriate regulations.

"Illuminated information signs" are lighted signs used to inform occupants of the passenger compartment. Signs may use symbols or letters to convey messages.

This ARP does not apply to "EXIT" signs, which are the subject of ARP503.

2. 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.

SAE Technical Standards Board 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 © 2018 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, 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)

SAE values your input. To provide feedback
on this Technical Report, please visit

SAE WEB ADDRESS:

This is a preview. Click here to purchase the full publication.

11C

2.1 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.

ARP503 Emergency Evacuation Illumination

ARP577 Emergency, Instruction and Information Placards – Internal and External

ARP6161 Flight Compartment Glare

ARP6253 LEDs and Aircraft Applications

SAE J264 Vision Glossary

2.2 AIA Publications

Available from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928, Tel: +1 703-358-1000, www.aia-aerospace.org.

AIA 82-29 Standards for Symbolology and Graphic Signage Aboard Commercial Aircraft

2.3 FAR Publications

Available from Federal Aviation Regulations, <https://www.faa.gov>.

Title 14 Code of Federal Regulations, Part 25, Airworthiness Standards: Transport Category Airplanes, Amendments 25-1 through 25-142.

Title 14 Code of Federal Regulations, Part 25, AC25-17A, "Transport Airplane Cabin Interiors Crashworthiness Handbook."

Title 14 Code of Federal Regulations, Part 29, Airworthiness Standards: Transport Category Rotocraft, Amendments 29-1 through 29-55.

2.4 Other Documents

RTCA/DO-160 "Environmental Conditions and Test Procedures for Airborne Equipment", 1150 18th NW, Suite 910, Washington, DC 20036, Tel: +1 202-833-9339, www.rtca.org

Color Usage Research Lab, NASA Ames Research Center - Luminance Contrast: see website below
http://colorusage.arc.nasa.gov/luminance_cont.php.

ISO 3864-1, Graphical symbols - Safety colours and safety signs - Part 1: Design principles for safety signs and safety markings, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, +41 22-749-01-11, www.iso.org.

ANSI Z535.2, Environmental and Facility Safety Signs, 1899 L Street, NW, 11th Floor, Washington, DC 20036, +1 202-293-8020, www.ansi.org.

European Aviation Safety Agency, Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes CS-25, Amendments 17, Ottoplatz, 1, D-50679 Cologne, Germany, +49 221-8999-000, www.easa.europa.eu.

3. SPECIFIC RECOMMENDATIONS

CFR 25.791(a), CFR 25.791(b), and CFR 29.853(c)(2) state requirements for passenger information signs. Illuminated information signs are classified into three categories.

a. Illuminated translucent characters (letter or symbol) on a non-illuminated or opaque background

- b. Non-illuminated or opaque characters on an illuminated background
- c. Illuminated translucent characters on an illuminated translucent background

3.1 Sign Symbology and Graphics

Passenger compartments should be provided with "NO SMOKING" and "FASTEN SEAT BELT" signs that are legible to each person seated in the cabin. "RETURN TO CABIN" or "RETURN TO SEAT" and "NO SMOKING" signs should be provided in each lavatory. If smoking is to be prohibited at all times, the "NO SMOKING" sign can be replaced with a placard. Signs reading "LAVATORIES-VACANT-OCCUPIED" should be installed and visible to respective passenger areas. If deemed value added, other signs should be provided as necessary to communicate messages that change over time.

3.1.1 Directional Arrow Color

Although the tradition in the past was to use red arrows to depict direction or action in safety signs, existing usage and standards recommend using green arrows. The meaning of the color red is more aligned with either prohibition or fire; whereas the color green is more aligned with safety instructions and safe conditions (refer to ISO 3864-1 and ANSI Z535.2). Caution: Mixed usage of red and green arrows on illuminated signs within the same passenger compartment will likely be prohibited by regulatory agencies.

Common examples of sign graphics are shown below (refer to AIA 82-29 for additional examples).

3.1.2 Fasten Seat Belt

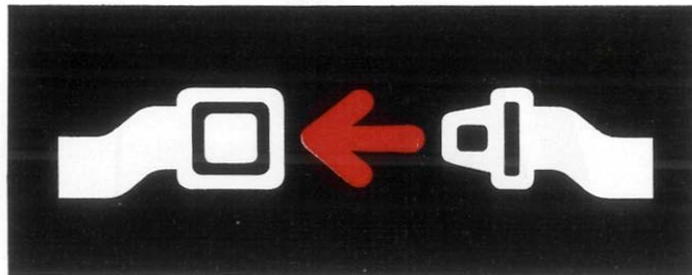


Figure 1 - Fasten seat belt (red arrow)

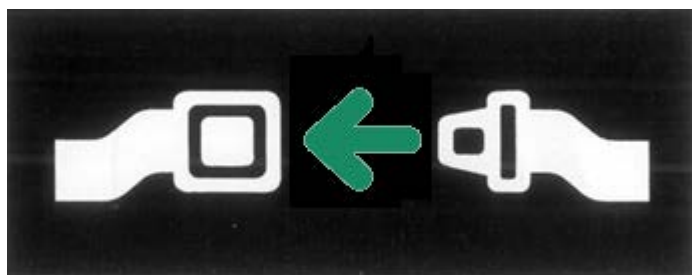


Figure 2 - Fasten seat belt (green arrow)