



AEROSPACE INFORMATION REPORT

AIR1273**REV. B**

Issued 1972-08
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Revised 2015-07

Superseding AIR1273A

Identification and Coding of Fluid and Electrical Piping System Functions

RATIONALE

Reference documents deleted, titles of some documents altered and additional document referenced.

1. SCOPE

This SAE Aerospace Information Report (AIR) establishes a positive identification of the functions and, if applicable, the hazards and direction of flow of pipe, hose, tube, or electrical conduit lines.

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 +1 724-776-4970 (outside USA), www.sae.org.

AS478 Identification Marking Methods

AS33681 Strap, Tiedown, Electrical Components, Identification, Adjustable, Self-Clinching, Plastic, Type II, Class 1

2.1.2 Military and Federal Publications

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-STD-1247 Markings, Functions, and Hazard Designations of Hose, Pipe, and Tube Lines for Aircraft, Missile, and Space Systems

MIL-T-9906 Tape - Aerospace Vehicle Tubing Identification Marker

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Documents

Document Sharing Hub

FED-STD-595 Colors used in Government Procurement

MS21919 Clamp, Loop Type, Cushioned, Support

2.1.3 NAS Publications

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

NAS1411 Band, Marker, Blank (Aluminum and CRES)

2.2 Definition

As referred to herein, lines include any pipe, hose, tube, or duct used to convey liquids or gases. It also includes any conduit used to contain electrical wires or cables. Accessories such as pipe covering are considered as parts of the line.

3. GENERAL

Properly and judiciously applied, line identification can promote safety, expedite training, lessen error in operation, and facilitate servicing. Location, temperature and environmental conditions dictate the proper identification media, if any, that can be applied. However, care must be used to prevent the selection of an identification method that will contribute to an unsafe condition. Use of tapes, tags, or bands in engine compartments or other critical system areas where they may cause trouble, should they become detached, should be avoided.

Certain features of line identification have been subject to International Agreements. In addition, the references at the end of this AIR should be consulted for information on specific applications and limitations of requirements herein specified.

4. DESIGNATION OF FUNCTION

As applicable, the following functions of a line may be identified:

- a. Contained medium (e.g., Oil, Fuel, Propellant, Electric, etc.)
- b. Direction of Flow
- c. Instrument Line
- d. Hazard
- e. Pressure
- f. Fire Control
- g. Temperature (e.g., Cold Lines, flowing medium is below 0 °C (32 °F) and Hot Lines, surface temperature ranges above 74 °C (165 °F))
- h. Electrical characteristics (e.g., Voltage, Polarity, Frequency, etc.)
- i. Supplementary Information (e.g., Drain, Nozzle Open, Flap Up, etc.)