

# INTERNATIONAL STANDARD



# 3323

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

## Aircraft — Hydraulic components — Marking to indicate fluid for which component is approved

*Aéronefs — Organes hydrauliques — Marquage indiquant le fluide pour lequel les organes sont approuvés*

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## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3323 was drawn up by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, and was circulated to the Member Bodies in December 1975.

It has been approved by the Member Bodies of the following countries :

|                |             |                       |
|----------------|-------------|-----------------------|
| Austria        | Germany     | South Africa, Rep. of |
| Belgium        | Italy       | United Kingdom        |
| Canada         | Japan       | U.S.S.R.              |
| Czechoslovakia | Netherlands | Yugoslavia            |
| France         | Romania     |                       |

No Member Body expressed disapproval of the document.

# Aircraft — Hydraulic components — Marking to indicate fluid for which component is approved

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard establishes a scheme for the marking of components (other than pipelines, hoses and fittings) used in aircraft hydraulic systems, so that the correct type of fluid to be used is readily apparent during any assembly or testing operations in workshops. The marking is not intended to serve any purpose when a component is installed in an aircraft.

## 2 SCHEME

2.1 Except as permitted in 2.3, a component which is to be fitted in an aircraft hydraulic system shall indicate the type of hydraulic fluid for which it is approved by means of a coloured plate (see the table), clearly marked with the name of that type of fluid (see the table). Optionally, the name and/or specification number of the particular hydraulic fluid may also be marked on the plate. An example of a typical plate is shown in figure 1.

2.2 The identification plate shall be secured to the component in such a manner that it is readily visible and will not become detached under normal conditions of use.

2.3 Where the size of a component permits the use of a manufacturer's nameplate, the identification plate may be incorporated on it.

2.4 The colour of the identification plate shall be appropriate to the type of fluid for which the component is approved, as shown in the table. The colours shall have the colorimetric values given in the table.

## 3 MATERIALS

It is essential that the materials used for plates and pigments be durable and resistant to the effects of the appropriate hydraulic fluids and of the environmental conditions of use, for example anodized metal or coloured plastics.

## 4 DIMENSIONS

4.1 The dimensions of the identification plate shall be at the option of the manufacturer or user of the component, commensurate with the dimensions of the hydraulic component. Preferred dimensions are shown in figure 2.

4.2 The size of the lettering shall be as large as practicable commensurate with the size of the plate.

TABLE — Types of hydraulic fluid, identification colours and colorimetric values

| Type of hydraulic fluid | Identification colour | Chromaticity co-ordinates and luminance factor under CIE* Standard illuminant B |         |           |
|-------------------------|-----------------------|---------------------------------------------------------------------------------|---------|-----------|
|                         |                       | Value x                                                                         | Value y | $\beta$ % |
| Mineral base            | Yellow                | 0,483                                                                           | 0,488   | 62,3      |
| Chlorinated silicone    | Orange                | 0,620                                                                           | 0,356   | 16,2      |
| Phosphate ester base    | Violet                | 0,337                                                                           | 0,242   | 6,5       |
| Castor base             | Green                 | 0,366                                                                           | 0,510   | 14,3      |
| Silicate ester base     | Black                 | 0,348                                                                           | 0,352   | 1,0       |

\* Commission Internationale pour l'Éclairage (International Commission on Illumination).