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Aircraft and space — Industrial data — Product identification and traceability

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*.

This second edition cancels and replaces the first edition (ISO 21849:2006), which has been technically revised.

The main changes are as follows:

— In 5.2, A.8, B.8 and B.15, included an option for use of the enterprise identifier MFR as equal to CAG with 5-character enterprise identifier assigned by the issuing agencies with issuing agency codes (IAC) VFS and KRU.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The accuracy of data collected and exchanged by trading partners can be improved by using automatic identification technologies in lieu of manual key entry. Automatic identification technologies include matrix symbologies, linear bar code and radio frequency identification (RFID) tags (Annex I).

Employment of automatic identification technology provides an accurate, timely and efficient method of data entry and facilitates data transfer and storage for computerized information management systems.

This document defines and establishes a repeatable process and data structure for product identification and traceability that supports life cycle management of a product regardless of ownership and configuration changes (Annex C). Use of the product identification and traceability guidelines described in this document enables repeatable processes for error free data entry, part tracking, dispatch, inventory, maintenance, import/export, detection of unapproved parts and repairs. Most importantly, a repeatable process and data structure allows industry partners to share data efficiently (Annex H). The macro-processes of product data management, asset management, configuration management, reliability and maintenance management, and product performance management are the direct beneficiaries of the product identification and traceability schema defined in this document.

Establishment of a common set of data and well-defined definitions and formats for product identification and traceability provides the base on which to build specific requirements for the exchange of product life cycle information. The specific requirements that the product identification and traceability schema defined in this document fulfils are as follows:

— to provide a unique, permanent identification for the life of the product;

— to provide a schema which meets engineering, operational, and logistics identification and traceability needs;

— to use machine-readable media to obtain accurate and timely data;

— to provide a schema which is independent of marking, symbology and recording media technology; and

— to provide a structure which allows data to be exchanged without the use of data mappers (cross-reference/translation tables), throughout an enterprise and with trading partners, while taking advantage of the World Wide Web.

The focus of this document is industrial products within the aircraft and space sectors. Industrial products have a life cycle measured in years, normally are repairable, and often are upgraded to a new configuration; change of ownership over their life cycle is commonplace. Normally industrial products are not sold in the retail marketplace.

The decision to use automated identification processes should be a cooperative effort by trading partners within an industry and between industries to achieve more timely data input, data accuracy and increased productivity with decreased costs.