



U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Parts Marking Identification

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AC No: 43-213

Initiated by: AFS-300

Change:

1. PURPOSE. This advisory circular (AC) provides information and guidance on developing procedures for part marking and part re-marking when performing maintenance, alteration, and fabrication, including the fabrication of owner- or operator-produced parts.

2. APPLICABILITY.

a. Audience. This AC provides guidance to all persons performing maintenance, alteration, and fabrication, including the fabrication of owner- or operator-produced parts.

b. Not Mandatory or Regulatory. This guidance is neither mandatory nor regulatory in nature and does not constitute a regulation. It describes acceptable means, but not the only means, for marking and re-marking parts, identifying major repairs, major alterations, and fabrication, including the fabrication of owner- or operator-produced parts. Terms such as “should,” “may,” and “must” are used only in the sense of ensuring applicability of this particular method of compliance. While these guidelines are not mandatory, they are derived from extensive Federal Aviation Administration (FAA) and industry experience in determining successful compliance with the applicable regulations.

c. No Changes to Regulations. This document does not change, create any additional, authorize changes in, or permit deviations from existing regulatory requirements.

3. RELATED REFERENCES. See the current editions of:

- AC 21-25, Approval of Modified Seating Systems Initially Approved Under a Technical Standard Order.
- AC 43-18, Fabrication of Aircraft Parts by Maintenance Personnel.
- FAA Order 8150.1, Technical Standard Order Program.

4. BACKGROUND.

a. Purpose of Part Markings. Maintenance providers have used part markings as a tool in determining that a civil aviation part is eligible for installation on a type-certificated (TC) product. Although regulations do not require markings on all parts, markings have provided a useful method by which a manufacturer may identify a part at the time of production. They have also provided the maintenance industry with a method (e.g., Illustrated Parts Catalogue (IPC))

for identifying and procuring original equipment manufacturer (OEM) parts when performing maintenance or alteration under Title 14 of the Code of Federal Regulations (14 CFR).

b. Location. As a general proposition, part markings do not affect a part's functional performance (unless the marking is improperly applied). Part markings may appear in "the drawings and specifications, and a listing of those drawings and specifications, necessary to define the configuration and the design features of the product..." which are part of the type design as defined under 14 CFR part 21, § 21.31. They are one means, but not the only means, of helping persons establish conformity to the approved design and installation eligibility of a part.

c. Interchangeable Parts. Part markings do not always delineate a specific single design configuration. Many TC/Production Certificate (PC) holders will manufacture and sell parts of different design configurations that bear the same part number, as long as the different parts are interchangeable and meet the functional performance requirements of the type design.

d. Regulatory Requirements.

(1) Title 14 CFR part 45 subpart B, Identification of Aircraft and Related Products, requires identification of certain replacement and modification parts produced for installation on TC products.

(2) The following are the only articles the manufacturer is required to permanently mark *at the time of manufacture*:

- Technical Standard Order (TSO) parts must be marked, per § 21.607(d);
- Parts produced under a Parts Manufacturer Approval (PMA) must be marked, per part 45, § 45.15; and
- Critical parts (such as life-limited parts) subject to an airworthiness limitation (AL) must be marked, per § 45.14.

e. Altering or Restoring Markings. Once a product is in service, maintenance providers routinely remove markings, data plates, etc. and replace them during maintenance and alteration in accordance with acceptable methods, techniques, and practices. Similarly, when markings are obliterated or illegible due to wear or other damage, the FAA permits the identification information to be restored where adequate records, inspections, or other information exists to verify the part's authenticity. Such management and "restoration" of part markings is conducted under 14 CFR part 43 and other applicable regulations when returning an article to its "original or properly altered condition." It is not a violation of the marking requirements of part 21 or 45, because the article is being "maintained" not "manufactured." This has been the case historically even for critical parts subject to an AL. Maintaining continued airworthiness (when an article is maintained and/or altered, and subsequently returned to service) does not include the same regulatory marking requirements as the original manufacturing requirements (when an article must conform to the original design approval holder's (DAH) approved design for a new product).

5. GUIDANCE.

a. Absence of Identification Data.

(1) The FAA provides the following guidance with regard to the absence of identification data on a part (even if the part was required to be marked at the time of production) and the subsequent re-marking of these parts.

(a) Part marking is not essential for determining the continued airworthiness of an in-service article, provided the operator and/or its maintenance provider can determine that it conforms to its approved design and is in condition for safe operation.

(b) Except for § 45.13(b) through (e), there are no regulations (other than life-limited parts) requiring or prohibiting re-marking of a part when it is discovered with a missing or illegible data plate, label, tag, or other identifying marks.

(c) Except for § 45.13(b) through (e), there are no regulations requiring or prohibiting a person performing maintenance on the part from adding identification information.

(2) When identification data is no longer visible, the operator or maintenance provider must determine, through other means, the article's identity and airworthiness status. Frequently, airworthiness can be established by other means, including, but not limited to:

- Maintenance records (these may be sufficient to determine the part's identity and airworthiness status),
- Visual and/or other types of inspection methods (e.g., dimensional inspection, operational or functional checks, nondestructive testing, etc.),
- Reference to an IPC and/or manufacturer's, owner's, or operator's maintenance manual/component maintenance manual (CMM),
- Knowledge that the article received an appropriate incoming inspection and remains within the control of the same owner, operator, or maintenance provider, etc.

b. Removing Identification Data. Even if not prohibited by § 45.13(b) through (e), the FAA recommends *against* removing original identification data, even if it is illegible. Instead, we recommend adding information, as further described below.

6. ACTION. For questions concerning replacing identification information on parts not covered by § 45.13(b) through (e), persons performing maintenance or alteration should refer to the following.

a. Air Carriers. (Operators utilizing an approved maintenance program.)

(1) If an air carrier is continuing in service or maintaining the part, the individual performing the maintenance must follow the operator's approved maintenance program and the applicable sections of its manual.

(2) The FAA recommends that air carriers query DAHs and Production Approval Holders (PAH) regarding re-identification of articles and/or to develop replacement part marking procedures to facilitate the proper identification of articles eligible to be continued in service and installed on their aircraft.

b. Other Operators.

(1) In accordance with current legal rulings, operators that do not have their own FAA-approved maintenance programs may still determine that an article is in an airworthy condition in the absence of identification data. This would normally require an inspection by a person authorized to perform maintenance or preventive maintenance under § 43.3.

(2) If the owner or operator elects to re-identify a part or to have additional identification information added to its parts during maintenance, it should accomplish this in accordance with the manufacturer's manual or the maintenance provider's procedures.

c. Maintenance Providers.

(1) Maintenance providers performing work for an air carrier or commercial operator under 14 CFR part 145, § 145.205 must follow the operator's parts identification procedures. If there are no instructions, the maintenance provider should request written guidance from the operator. The operator may authorize the maintenance provider to use the maintenance provider's identification procedures, but the operator should clearly communicate this.

(2) The FAA recommends that maintenance providers contact the DAH or PAH to obtain re-identification information. Unless contrary to § 145.205, obtaining a new data plate, label, or tag from the manufacturer and following its instructions (maintenance manual/CMM/IPC) is an acceptable method for re-marking/re-identifying the part.

(3) Maintenance providers may develop their own written procedures for evaluating identification information and determining whether and how to reapply illegible or missing data or adding identification information. This includes identification markings that may be removed during a maintenance process (e.g., grinding, machining, cleaning, etc.). The procedures should include:

- A receiving inspection procedure which notes the part's identification, or that the identification is missing and/or illegible;

- A method for ensuring that the article is what it purports to be;
- A method for applying the re-identification or additional information in a manner that will not impact airworthiness; and
- The method the maintenance provider will use to document the part's identification information.

(4) Maintenance providers, including owners and operators, fabricating aircraft parts to be consumed during maintenance and alteration should clearly identify those articles with an additional permanent and legible marking.

(a) The marking should include the following:

- The name, trademark, or symbol of the FAA certificate holder (fabricator) under whose control the fabrication occurred;
- A unique part number that clearly distinguishes the fabricated part; and
- The original manufacturer's part number, if removed as a result of the fabrication.

(b) Critical parts should be marked in accordance with § 45.14. This provides traceability for subsequent operators and maintenance providers to the source of the fabricated part.

NOTE: In cases where it is impractical to mark a fabricated part, or where doing so would compromise airworthiness, the marking information should be included in the maintenance records for the part.

NOTE: A certificate holder who desires to sell his or her fabricated parts separately (i.e., outside the course of performing maintenance or an alteration) must obtain a PMA (refer to part 21).

(5) Due to the limited duration of maintenance record retention requirements, the FAA encourages maintenance providers that independently develop major repairs and major alterations (i.e., those not contained in the manufacturer's maintenance manual, instructions for continued airworthiness (ICA), or other manufacturer's service information) to provide a unique marking such as the name, trademark, designator, or symbol of the FAA certificate holder to parts that have undergone this work. This information would provide subsequent maintenance providers with an indication that the part may require special handling to ensure continued airworthiness (such as the use of inspection criteria developed by the person who performed the major repair or major alteration).

7. SUMMARY. Maintenance providers have used part markings and identification labels to assist in determining installation eligibility for a part, assembly, or product. Although the regulatory requirements for part marking are limited, as discussed above, it is desirable to re-identify parts in situations where the original identification markings have been removed or

are no longer legible due to normal wear or maintenance procedures. The FAA is providing the guidance in this AC in an effort to standardize part identification marking and remarking procedures.

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