

Revision 3

8 March 2023

## Identification of products and parts - Identification information, provision, and replacement

### General

Civil Aviation Authority ACs contain information about standards, practices and procedures that the Authority has found to be an acceptable means of compliance with the associated rule.

Consideration will be given to other methods of compliance which may be presented to the Authority. When new standards, practices or procedures are found to be acceptable they will be added to the appropriate AC.

### Purpose

This AC describes an acceptable means of compliance with Part 21 Subpart Q. Each reference to a number in this AC, such as 21.15, is a reference to a specific rule within Part 21. This material is intended for a product manufacturing organisation, or a person performing maintenance, in completing or replacing product identification markings.

### Focus

~~This material is intended for a product manufacturing organisation, or a person performing maintenance, in completing or replacing product identification markings.~~

### Related Rules

This AC relates specifically to Part 21 Subpart Q, *Identification of Products and Parts*.

### Change Notice

Revision 3:

- clarifies standards for data plates, serial numbers and other identification plates
- clarifies that Part 21 Subpart Q, *Identification of Products and Parts*, applies to Part 148 Manufacturing Organisations producing a type-certificated product

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- corrects typos and other minor errors and clarifies requirements for Special Category aircraft, and
- formats this AC in line with current ACs, and
- adds a Version History.
- ~~2 re-numbers this AC from AC 21-80A to AC 21-6 as part of a project to standardise the numbering of all ACs.~~
- **Version History**
- History Log

Revision No.	Effective Date	Summary of Changes
0	6 August 1995	Initial issue
1	25 December 1997	Renumbered as AC21-80a
2	27 April 2007	Renumbered as AC21-06 as part of a project to standardise the numbering of ACs.
3	8 March 2023	<p>Clarifies standards for data plates, serial numbers and other identification plates</p> <p>Clarifies that Part 21 Subpart Q, <i>Identification of Products and Parts</i>, applies to Part 148 Manufacturing Organisations producing a type-certificated product</p> <p>Corrects typos and other minor errors and clarifies requirements for Special Category aircraft</p> <p>Formats this AC in line with current ACs</p> <p>Adds a Version History</p>

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## Identification of Products and Parts

**Note:** To assist readers with cross referencing, the numbering of the paragraphs contained within this circular corresponds generally with the numbering of Part 21 Subpart Q.

### General

Identification is required on certain products and parts used in the aviation industry to enable - This identification provides for traceability of the product or part, and confidence in the product's or part's fitness for use.

Identification information is required on:

- aircraft, aircraft engines, and propellers
- critical parts, and
- certain replacement and modification parts.

In accordance with (IAW) particular, rules 21.191(6), and the equivalent provisions under 21.193 through 21.201, require aircraft need to be identified in accordance with IAW Part 21, Subpart Q before they can be issued with a standard or, restricted or special experimental category airworthiness certificate.

### Rule 21.803 – Identification of aircraft, aircraft engines, and propellers

#### General

Part 21 Subpart Q, *Identification of Products and Parts*, applies to Part 148 Manufacturing Organisations producing a type-certificated product (aircraft, engine or propeller). It also applies to anyone producing critical parts or replacement parts. Identification of products and parts is essential for continuing airworthiness purposes.

The identification information is to be marked:

- on a fireproof plate attached to the product, or
- directly on the part by an acceptable fireproof marking method.

Acceptable fireproof marking methods include:

- etching
- stamping
- engraving.

The identification should be easily accessible but protected from normal operating damage and the possibility of loss during an accident.

If the plate is covered under certain conditions, or enclosed in any manner, its accessibility would be considered acceptable if it can be revealed without the use of tools.

**Note:** The aircraft manufacturer data plate under rule 21.803 is separate to the aircraft identification plate required under rule 47.119. The manufacturer data plate could serve both purposes, however, if it also contains the aircraft nationality and registration marks.

## Aircraft identification

~~For~~An aircraft's fireproof plate ~~the location~~ may be located either:

- at an accessible location near an entrance, ~~or~~
- externally on the fuselage.

An accessible location near an entrance may be either external or internal. ~~Internally,~~ If internal, the location of the plate would be considered acceptable if it is legible to a person at or within the entrance to the aircraft.

For an aircraft with more than one entrance, the appropriate entrance for the plate to be placed would be the one most used by the flight and servicing crews.

If the fireproof plate is located externally on the fuselage, it should be mounted near the tail surfaces and be legible to a person on the ground. (It is an FAA requirement that all N-registered aircraft have an identification plate on the rear fuselage.)

## Modular turbine engine identification

~~With the advent of the turbine engine modular concept,~~ Separate sections of the turbine engine, or modules, are devoted to particular functions. A typical engine consists of a compressor module, combustion module, turbine module, and exhaust module. Maintenance on modular engines is normally accomplished by replacing entire modules. These modules are approved as a part of the complete engine type design, and not independently approved.

Aircraft engine manufacturers will identify each complete engine by the means specified in rule 21.803, normally by affixing an engine data plate to one of the modules. The engine data plate does not identify the individual module but rather, the assembly of modules that make up the complete engine. A particular module, therefore, serves only as a vehicle on which to affix the engine data plate.

~~For the purpose of good~~ equipment management, there is a ~~owners~~ need to maintain a continuous history on the basic engine, its modules, and any non-modular components such as fuel lines and accessories. This history is required notwithstanding that even if every module or component has ~~may have~~ been replaced any number of times. The history of an engine, including its modular and non-modular components, is tracked by the engine serial number on the data plate and corresponding historical and modification records.

The replacement of a module to which ~~where~~ the engine data plate is attached, **without** moving the data plate, results in a loss of identity for the engine ~~and thus~~. This loss of identity should be avoided.

The engine data plate ~~serves at all times as~~ is always the control for establishing and maintaining the engine's approval status. The data plate installed by the engine manufacturer should, therefore, remain with the particular engine throughout its useful life.

## Propellers, propeller blades and hubs identification

For ease of identification, the markings required on propellers and propeller blades and hubs should be placed in an area where they would be legible without disassembly of the propeller.

## **Rule 21.805 – Identification information**

### **Minimum identification information**

The product manufacturer's name, the model designation and the serial number are the minimum identification information that will be required.

#### ***Manufacturer's name***

The manufacturer's name on the data plate may be:

- a corporation
- a company
- a partnership
- an association, or
- an individual, including an amateur builder.

#### ***Model designation***

Many aircraft have popular names that are sometimes incorrectly used considered as the model designation. Examples are:

- Cessna Skymaster (correct model designation T337G)
- Piper Tomahawk (correct model designation PA-38-112).

The correct model designation should be used on the data plate.

#### ***Serial number***

The serial number should be the number supplied by the manufacturer. ~~but~~ For an amateur-built aircraft it should be the serial number assigned by the airframe kit or plans manufacturer. For an original design by a builder the serial number can be as nominated by the builder, provided it is unique. ~~may be whatever the builder wishes provided it is unique~~

### **Identification information variations**

The identification required on products identified in Part 21 Subpart Q varies according to:

- the country of origin of the product, or
- the category of airworthiness certificate applied to the aircraft.

#### ***Country of origin variations***

Part 21 Subpart Q applies directly to those products produced in New Zealand by a Part 148-certificated aircraft manufacturing organisation under Part 148.

Imported products and parts should carry identification information in accordance with IAW the regulations of the country of manufacture which is. This identification information should:

- be comparable to that required by Part 21 Subpart Q, and
- be marked by a fireproof method such as those specified in Part 21 Subpart Q.

## ***Airworthiness certificate category variations***

### **Standard and restricted categories**

For the issue of a standard or restricted category airworthiness certificates IAW Part 21 Subpart H, *Airworthiness Certificates*, requires aircraft, engines, and propellers need to be identified by the means specified in Part 21 Subpart Q.

### **Experimental airworthiness certificates**

For the To issue of an experimental airworthiness certificate the aircraft must be identified by the means specified in Part 21 Subpart Q, but does not require all of the information that is prescribed for a standard or restricted category (type-certificated) aircraft.

The identification of an aircraft to be issued with an experimental airworthiness certificate need only include:

- the manufacturer's name
- the model designation
- the manufacturer's serial number.

For simplicity, the nationality and registration marking is considered acceptable to the CAA as the manufacturer's serial number.

### **Ex-military aircraft**

When issuing For the issue of an experimental airworthiness certificate to an ex-military aircraft it is will be acceptable for the identification information to vary slightly. The military designations assigned to the aircraft at the time of production may be used as the manufacturer's name, the model designation, and the manufacturer's serial number.

If the original data plate is missing, a replacement plate may be accepted if there is substantial documentary evidence that the identity to be used is that of the aircraft being certificated.

In some cases an ex-military aircraft may not have a data plate as such, but it should be possible to establish the aircraft's identity clearly by logbook records.

## **Rule 21.807 – Removal, alteration, and replacement of identification information**

This rule covers the removal, alteration and replacement of the identification *information*. It should not be confused with the removal and re-installation of the data *plate* which is covered by rule 21.809.

### **Standard and restricted category products**

The identification attached to products should contain the original production information. The manufacturer must be contacted if this information is to be removed, altered or replaced.

If a new or modified data plate is required, a written submission should be made to the CAA containing the specific circumstances and the proposed action. The CAA will then check the product records and provide a suitable endorsement to the manufacturer. The manufacturer will approve the modification or re-issue a new data plate.

A maintenance logbook entry should be made with reference to the CAA's endorsement and manufacturer's approvals.

## Experimental airworthiness certificated aircraft

An aircraft issued with an experimental airworthiness certificate does not require an original data plate, but the data plate used should contain the minimum information as detailed in this AC.

### Rule 21.809 – Removal and reinstallation of data plate

Persons performing maintenance in accordance with IAW Part 43 may remove the data plate containing the information prescribed in 21.805 when necessary needed during maintenance.

The requirements in this rule apply to all aircraft operated IAW in accordance with New Zealand rules.

The removal of a data plate would be considered necessary during certain maintenance operations, including:

- caustic cleaning
- paint removal
- sandblasting, or
- when the structure to which where the data plate is fastened has to be repaired or replaced for maintenance purposes.

**Note:** Replacing or repairing structure to which where the data plate is attached generally refers to localised replacements and not complete replacement of the next highest assembly.

The product data plate removed during maintenance operations must be reinstalled on the same product and in the same location.

Methods, techniques and practices acceptable to the Director should be used when a product's data plate is to be replaced. This will include accepted product maintenance manual procedures.

### Rule 21.811 – Identification of critical parts

The identification of critical parts should include the part number and serial number of the part. If identification numbers are to be used, they should be equivalent to the part and serial number and enable unique identification of the part.

### Rule 21.813 – Identification of replacement and modification materials, parts, and appliances

For parts manufactured in accordance with IAW a New Zealand Technical Standard Order authorisation or a New Zealand Parts Manufacturing Approval, the manufacturer is required to include specific information on the items produced by them.

If a replacement or modification item is manufactured for a person to install on their own product that item must be identified clearly to ensure the item can be:

- can be clearly identified separately from otherwise acceptable items, and
- can be related directly to its manufacturing data.

The requirements for these items were put in place to should ensure that they do not enter the normal parts market.