

# Aircraft Data Plates

The data plate is a vital component of an aircraft that uniquely identifies it. Therefore there are rules governing what you must do with the data plate when swapping aircraft components.

“Identifying an aircraft by serial number is needed so its maintenance and service history is known,” says Shaun Johnson, CAA’s Manager Aircraft Certification.

“This is extremely important for safety due to service lives of components, or recalls of parts, as well as being able to identify which Airworthiness Directives are applicable to the aircraft.”

Civil Aviation Rule 21.803 *Identification of aircraft, aircraft engines, and propellers* requires any person who manufactures an aircraft or product under a Part 148 certificate to install a data plate that carries the information specified in rule 21.805 *Identification information*. This includes the manufacturer, the model designation, the serial number, and the applicable type certificate.

The Federal Aviation Administration in the United States also has a similar rule and it’s common, if not required,

practice in most other countries that manufacture aircraft. Therefore, all type-certificated aircraft (except some older British aircraft), have such a data plate installed. This data plate is used to identify the aircraft by serial number, and provide evidence that the aircraft conformed to its type certificate at the time of manufacture.

Rule 21.809 *Removal and reinstallation of data plate*, states that no person shall remove or reinstall a data plate without the Director of Civil Aviation’s approval, except where it’s necessary for maintenance, and in accordance with techniques or practices acceptable to the Director.

For example, in some cases when an aircraft is being painted, the data plate may be removed.

In all cases, the data plate must be reinstalled on the aircraft or product from which it was removed. AC21-6 *Identification of products and parts –*

*identification information, provision, and replacement* provides further guidance on this.

Therefore, a data plate installed by a manufacturer remains with the aircraft it was installed on at the time of manufacture for all of its service life. A data plate cannot be installed on another aircraft.

Sometimes the information on the data plate can change. This is often the aircraft model, if it’s converted from one model to another in accordance with acceptable technical data provided by the manufacturer. In most cases, the manufacturer will provide a replacement or supplementary data plate and authorize its marking and installation. They may also authorize the original data plate to be altered.

The aircraft model details may change but the aircraft serial number doesn’t. The serial number is the one piece of data that is unique to the aircraft and remains



*A data plate cannot be installed on another aircraft.*

unchanged throughout its life. However, suffixes or prefixes may be added to indicate a change of model or configuration if the manufacturer specifies this.

So what actually constitutes the individual aircraft or product in question? Could each individual part be replaced during maintenance until not a single original part remains? Is there a minimum part, such as the fuselage the data plate is attached to, which cannot be replaced?

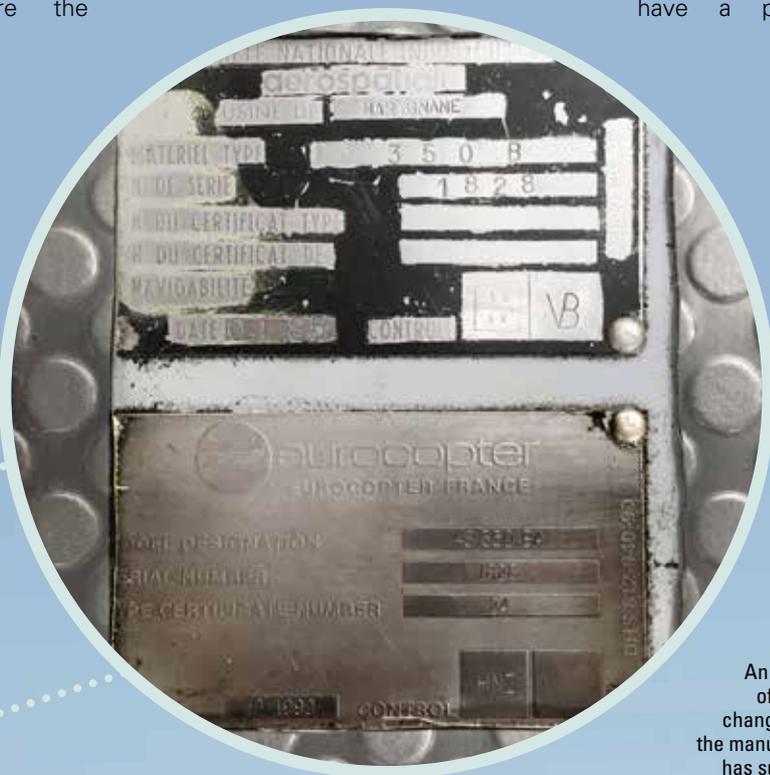
“Generally speaking, the aircraft data plate and the fuselage it’s attached to effectively constitute the basic component of the aircraft,” says Shaun.

“As such, moving data plates from one fuselage to another is not allowed. The only exception is where the

case, the following fundamental continuing airworthiness principles apply:

- » There should always be a complete maintenance history for all work carried out and any components changed, so the complete history of the aircraft and its constituent components can be traced in accordance with rule 43.69(a)(2) *Maintenance records*.
- » All changes of components should be in accordance with acceptable technical data, and as permitted by the type certificate holder in accordance with rule 43.53(3) *Performance of maintenance*.

Sometimes a data plate can be lost, for example, due to corrosion. Most type certificate holders have a process



An example of a model change where the manufacturer has supplied a supplemental data plate.

manufacturer authorizes the replacement of a fuselage as a spare part with its own part number and possibly a component data plate.

“The fuselage in that case, however, would be a very basic structural assembly. To replace the fuselage would require the transfer of a large number of other parts and sub-assemblies that go together to produce a fully completed fuselage. This could only be done with the support of the type certificate holder and conducted in accordance with acceptable technical data,” says Shaun. In either

whereby a replacement data plate can be obtained for genuine situations. The process usually requires a formal application, and a letter of support from the aircraft’s state of registry national airworthiness authority.

If you have any further queries about data plates, please contact the CAA’s Aircraft Certification Unit by emailing [airlines@caa.govt.nz](mailto:airlines@caa.govt.nz).

For further reading, see the article “Data – It’s Called ‘Acceptable’ for a Reason” in the March/April 2016 issue of *Vector*. ■

## Examples of how these rules apply:

During a preflight check, the pilot notices from the marks and holes in the fuselage that the aircraft data plate is missing. The maintenance engineer can see that the rivets have corroded and vibrated away.

The engineer finds out that the aircraft manufacturer specifies a process for applying for a replacement, and fills out the application.

The engineer also applies to the CAA for a letter supporting the application.

An owner seriously damages the nose of a light aircraft after running off the end of the strip. He buys and imports a complete second-hand fuselage which has an existing aircraft data plate. He asks his engineer to replace the fuselage on his aircraft and keep its original identity.

The engineer consults the aircraft manufacturer who advises the fuselage is not a replaceable part. Consequently, the engineer tells the owner that he can rebuild the imported fuselage into a complete aircraft using the other major parts and components from his damaged aircraft, but the aircraft identity would be that of the imported fuselage, with its original data plate. It will need to be registered in the new identity and get a new airworthiness certificate.

An owner discovers during a major check that a helicopter fuselage has extensive corrosion and cannot be cost-effectively repaired.

The maintenance engineer determines that the type certificate holder does allow the fuselage to be replaced.

The engineer obtains a replacement bare fuselage shell and transfers all the components from the written-off fuselage to the new fuselage shell to build up a complete helicopter. The engineer then attaches the aircraft data plate to the completed helicopter, and documents the whole process in the aircraft logbook including the attachment of the data plate.