

Dated Data

What happens when an aircraft or its component parts are no longer supported by the type certificate holder or manufacturer? New Zealand's ageing fleet of aircraft means that's becoming an increasing issue, particularly with reference to instrumentation.



Whether you're a Maintenance Controller, Part 66 licensed engineer, authorised certifying engineer within a Part 145 certificated organisation, or a pilot performing maintenance under Part 43 Appendix A, work done using inaccurate, or out of date, maintenance data can result in unsafe conditions.

"For maintenance organisations operating component overhaul shops, 'dated data' can be a major issue," says Hawker Pacific NZ's Quality and Safety Manager, Robert Feasey, "and may ultimately lead to a requirement to remove the equipment from their capability list."

CAA Air Transport Inspector (Airworthiness), Austin Healey, says it can also put the certifier at risk when they sign off maintenance using incorrect procedures.

Austin says nobody goes to work with the intention of performing an unsafe act, but offers the examples below, where the currency of data is in doubt:

» The manufacturer no longer supports a particular component, has ceased trading, or has been incorporated into another organisation. Flight instruments fitted into older aircraft are particularly susceptible to that.

» The primary product is unsupported because it no longer qualifies for a type certificate (TC) – the orphan. That could be because the person or organisation holding the TC has ceased to exist or is no longer providing support for their products, such as is often the case for older aircraft.

» The continued use of the 'handy' hard copy of a manual that's labelled 'Uncontrolled' on the spine, even though there's a current version available via the computer terminal sitting next to it.

Austin says if an engineer already has the data on hand there are some simple things that can be done.

"You can maintain a valid subscription to receive revisions, or periodically contact the manufacturer to check for any changes to the document you hold. If you're performing maintenance for an operator, make sure you get written confirmation from the Maintenance Controller that the data supplied or referenced is current."

If you can't contact the original equipment manufacturer, try the holder of the primary product type or Supplemental Type Certificate (STC) holder for advice.



It might seem obvious that a vintage aircraft, such as this De Havilland Dominie, could have dated data, but many other aircraft could be affected because of changes to the manufacturer of the aircraft, or a component.

They're responsible for providing instructions for the continued airworthiness of their product.

In the case where the STC holder is no longer in business, the national aviation authority (NAA) of the country that issued the STC may have accepted responsibility for all airworthiness support for the product.

The Type Certificate Data Sheet lists the contact details of the current Type Certificate Holder. The owner of a Supplemental Type Certificate can normally be identified by visiting the appropriate NAA web site.

In some cases, rather than tracking down repair data, it's more economical to replace an instrument either with another original item, or installing an alternative, using an acceptable STC.

"That will likely become increasingly more cost effective as Part 145 shops find themselves unable to support the units due to a lack of acceptable data," Robert Feasey says.

For aircraft that no longer have a supported type certificate, you need to contact the custodian of the extant airframe design data, manufacturing drawings, and repair schemes for the aircraft. Ideally, that would be an organisation with a Type Responsibility Agreement – usually with the NAA for the State of Design.

Alternatively, type clubs often have a wealth of expertise and advice on maintenance techniques, as well as access to manufacturers' data.

There are also pilot supplier organisations providing replacement manuals for popular older models.

In the absence of a manufacturer's repair or maintenance instructions, Part 21 Appendix D identifies other acceptable technical data. They include FAA AC43.13-1B detailing methods, techniques, and practices for the inspection and repair of non-pressurised areas of civil aircraft.

CAA AC43-14 also provides acceptable technical data for avionics modifications on unpressurised aircraft of less than 5700 kg MCTOW / <10 passenger seats, provided the work is not classified as a major modification.

As for that 'handy' hard copy of a manual labelled 'Uncontrolled' on the spine – Austin Healey says it's time to move on.

"So flash up that computer screen to get current information, and remove the obsolete documentation so that it can't, any longer, potentially contribute to an unsafe condition." ■