



Article written by David Wyndham for AvBuyer

What's The Value of Digitized Maintenance Records?

There are many advantages to having an aircraft's maintenance records in digital form, even if only as a back up, explains David Wyndham.

Traditionally aircraft maintenance records have been kept in paper form. In the US, the Federal Aviation Regulations (FARs) specify what information must be kept, and they stipulate who the authority must be to verify that the work has been done in accordance with the regulations and maintenance requirements.

All civil aviation authorities specify similar standards and requirements, so having detailed and accurate records is essential to verifying the airworthiness of an aircraft.

- For the airframe and attached components, the logbooks are a 'cradle-to-grave' record of the aircraft's life.
- For the engines, there is typically one logbook for each engine. Many overhaul facilities will retire the engine logbook at overhaul when they certify the engine as being returned to a like-new status. A new logbook then accompanies the overhauled engine.

These records are a legal verification as to the airworthiness status of the aircraft, engines, and all installed components. The very best-maintained aircraft, if missing its maintenance logbooks, is not legally airworthy, and cannot be operated until its maintenance status is re-verified.

Most operators keep their maintenance logbooks in a secure location, such as a locked firesafe. However, they cannot always be kept there – when the aircraft is getting ready for a major maintenance event, a modification, a repair, or an alteration, the records would typically be placed aboard the aircraft, since they need to accompany it to the maintenance facility.

The Need for Back-up Maintenance Records

Some operators do not secure their logbooks as well as they should, and there have been cases of logbooks being lost between leaving for maintenance and returning to its home base. Essentially, you need a backup...





The FAA has said that a simple photocopy or scan is inadequate to replace the original logs. If the aircraft is relatively young and has been maintained by a single facility that keeps perfect records, it could be possible to have that facility recreate and sign-off all the work they did.

For older aircraft, however, you may not be able to find the aviation technician who did the original work, or the facility may not keep records indefinitely. The bottom line is that a lack of complete and proper maintenance records has a significant impact on an aircraft's value.

According to Barb Spoor, Asset Insight's Executive Vice President & Senior ASA-Accredited Appraiser, and John Spoor, Chairman of Asset Insight, depending on the make and model of the aircraft, the loss of value could be anywhere between 10% and 50% of the full aircraft's value.

In one instance, a high-performance single-engine piston aircraft lost 45% of its value by having missing records. A business jet may see 10-20% loss in value,

which is a significant sum. In the most extreme case, Barb and John Spoor explain, that aircraft could be at salvage value if there are no records, and you are unable to recreate the missing records and establish legal airworthiness.

To help alleviate the worry to your operation, the availability of electronic records is a relatively inexpensive and effective way to have a backup (or primary) copy. However, while a lot of people think that their electronic maintenance tracking records will suffice for the FAA as a full back-up copy of the logs, this is not entirely correct.

Maintenance Tracking vs Maintenance Record Keeping

According to Stuart Illian, Co-founder and President of Bluetail Inc., many maintenance tracking companies "basically do content creation". He explains that they generate work cards, track life limited parts and calendar items, and forecast maintenance – but a records company like Bluetail is





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more of a content curator, providing a “back to birth’ history of the aircraft”.

The FAA has specific guidance on what qualifies for digitized maintenance records, and addresses digital signatures, electronic records and manuals, security, compliance, and verification (as found in FAA Advisory Circular AC 120-78A).

Companies which provide electronic maintenance records need to be compliant with all of these requirements if they are to provide a suitable legal digitized record back-up in the event of the original documents being damaged, lost or stolen.

More than a Back-Up

In addition to creating a fail-safe record copy, digitized maintenance records can also pay-off in other areas. The aircraft's owner or director of maintenance can use tags, keywords, descriptions and Optical Character Recognition (OCR) technology in order to find things faster with advanced search functionality.

Third parties can also be allowed safe and secure access to the maintenance records. Prior to starting a major maintenance event, repair, or overhaul, a maintenance facility can be given secure access to the maintenance records without needing to ship the paper logbooks.

At the time of an aircraft's sale, the broker gets a full copy of the records for their review. And, when performing a pre-purchase inspection, the buyer can also access the records to verify the maintenance status of the aircraft.

Setting up a legal digital maintenance record can take anywhere from a few days to a few weeks, depending on the number of records to include. The costs start at a few dollars per day, and in return the aircraft owner has peace of mind. Viewed in this way, digital maintenance records could essentially be seen as “aircraft records insurance”, protecting the maintenance records, and the future value, of the aircraft. ■



DAVID WYNDHAM

is the Founder of David Wyndham + Associates, LLC. He is a highly respected industry veteran having built up more than 36 years of aviation experience, including as president and co-founder of Conklin & de Decker. He is also Vice President, Asset Insight Consulting Services. <https://www.linkedin.com/in/davidwyndham/>

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