Aircraft Maintenance Records

by Carol Carpenter

Maintenance records are important. Sure, an aircraft owner is required by the regulations to keep some basic aircraft maintenance records for the airframe, engine, propeller and components, but there are many other very important reasons for keeping good records.

Complete Records Pay Off

First and foremost, logbook records add value to your aircraft. Incomplete or missing records will greatly impact the value and your ability to sell an aircraft. We have seen missing blocks of time or missing logbooks impact the value of a used aircraft as much as 25 to 30 percent. For a $50,000 aircraft that figure is $12,500; double that for a $100,000 aircraft. Hard to believe isn't it? Consider this: we recently assisted in the sale of a Piper Warrior. The aircraft would have been valued at $30,000 with compete records. Without the records the aircraft was on the market three times as long as we would normally see and finally sold for $20,000- a third less its value. The owner was forced to reduce the price significantly in order to move the aircraft.

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Second, logbook records can help you spot recurring problems. This is especially important when more than one person may have worked on an item and may not be aware of its maintenance history. Not only can this help identify a problem or provide a point to begin troubleshooting, but it also may point to a specific solution. In some cases, the fact that work was recently performed in a certain

component may lead technicians to investigate further if a seemingly unrelated problem now occurs. For example, a new radio installation may have inadvertently caused an electrical problem in the same area.

Third, logbook records can protect you against liability. If you do not log it – it did not happen. Logbook records are proof that you are completing inspections and performing routine maintenance. Undocumented maintenance histories have little or no value in tracking problems, proving warranty claims or defending you in court. The records should show what work was performed, when it was done and who did the work.

Additionally, we are communicating to the next owner. The records provide written proof of the labor, parts and outside services and provide the new owner with valuable information on the aircraft's history.

So, you can see how important complete and accurate aircraft records are. The regulations set up the framework for maintenance recording. They dictate what must be recorded, who must record it and when it must be recorded, as well as what records must be transferred to the new owner when the aircraft is sold. The completeness and accuracy of the aircraft's maintenance records is something we can control with very little effort.

Organizing Current Records

Ideally, three logbooks should be used: (1) airframe, (2) engine and (3) propeller. And in the case of a powered parachute or trike- an additional log book for each wing. It is legal to have one logbook with an index for each of the above. I personally prefer to have separate logbooks. Remember, the regulations require that the logbook records be transferred to the new owner. So if all of the records are in one logbook, it becomes one unit. I recently had a new Rotax engine installed on my Quicksilver GT 400. I was able to sell the engine and transfer its log to the new owner and simply start a new log for my new engine and the airframe logbooks remained with the airframe.

I like to use a binder with those handy interior pockets. I use dividers with topics such as Inspection Checklist, Discrepancy Lists, Invoices and Receipts, Safety Directives, Weight and Balance Information, etc. I purchase the covered engine, airframe and propeller logs books and store them in the inside pocket of the binder. This binder becomes my complete aircraft record.

The maintenance records need to be signed so while you may keep a computer back-up copy, the legal entry must be printed out and signed. The person doing the work should be properly iden-

tified. This last point is critical. If an aircraft is involved in an accident where someone is injured or killed, investigators will want to know if the inspection, maintenance or testing was performed by a qualified person. To defend ourselves adequately, we need to record the name of the person who actually performed every task.

Even on experimental aircraft, all the inspections, maintenance and testing should follow the procedures specified by the manufacturer and should be performed at least as often as required by the manufacturer. Accurate maintenance records can help show this was done. Rather than make the records too long and unwieldy, mechanics may choose to refer to a document which list the detailed tasks that were completed: "Replace all spark plug in accordance with the Rotax maintenance manual." We can then go the Rotax manual to see the procedures.

For ELSA aircraft, Part 43 Appendix D offers an inspection checklist. This checklist provides the minimum items required to be completed during your yearly condition inspection. Again, the repairman or A & P may complete the condition inspection and refer to this list when make the logbook entry.

Good maintenance records don't have to be complicated. They do have to be written down and maintained to be of value. The regulations state that aircraft records must contain:

a. description of the work performed on the aircraft, the date the work was completed, the certified mechanic's signature, the kind of FAA certificate and the certificate number of the person approving the aircraft for return to service.

There shall also be records of:

a. The total time in service of the airframe, each engine and each propeller.

b. The current status of life-limited parts of each airframe, engine, propeller, rotor and appliance.

c. The time since the last overhaul of all items installed on the aircraft, which are required to be overhauled on a specified time basis.

d. The identification of the current inspection status of the aircraft, including the time since the last inspection.

e. The current status of applicable Safety bulletins or AD's including, for each, the method of compliance, the number and the revision date. If the safety bulletins involve recurring action, the time and date when the next action is required.

f. A copy of the current major alterations to each airframe, engine, propeller and appliance.

The owner of an aircraft shall also ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service. The logs must be maintained for the life of the aircraft. They are retained by the owner/operator and are transferred with the aircraft when it is sold.

The regulations allow certain records to be discarded when the work is repeated or superseded by other work. I highly recommend that you keep all maintenance records for the life of the aircraft. Remember there are many other very important reasons for creating and maintaining good aircraft records.

Finally, never sign for anything you did not do. Pride yourself in your signature. It can make the difference by removing a contributing factor or link in the chain of events to prevent a safety incident. There is also a specific regulation concerning falsification of aircraft records: FAR 43.12 states, "No person may make or cause to be made intentionally false entry in any record or report. Any reproduction for fraudulent purposes of any record or report any alteration, for fraudulent purpose, of any record or report basis for suspending or revoking licenses or certificates."

Safety is a continuing journey, not a final destination.

- Author Unknown