



**LISA TURNER**  
COMMENTARY / AIRWORTHY

# What Should Be in Your Builder's Log

Documenting Your Project

BY LISA TURNER

**"WHERE'S YOUR BUILDER'S LOG?"** I asked.

"I haven't started one yet," Dave said. "I thought I'd unpack everything first."

I looked around the garage. Open boxes were piled in every corner. The fuselage for the new kit was sitting in slings next to a workbench heavy with tools, books, and papers. There were so many containers and boxes around the aircraft components that it was a maze to navigate. I remained rooted in one spot as I looked out at the conglomeration.

"You know what? I'd say stop unpacking everything and start your log and inventory so that you know what you have and where everything is," I said.

"That's an intriguing concept. My wife mentioned that, too. I end up spending a lot of time looking for things, and starting and stopping jobs, and I forget where I was on them when I begin again. I can't seem to locate anything at the time I need it. I have taken and printed a stack of pictures, but they are scattered everywhere." Dave looked around, waving his hand and shaking his head. "Okay, I'll do it. What goes into a log? Isn't that a lot of extra work?"

"Actually, starting the log isn't much work at all," I said. "As you go, if you keep up with it, it will make your airworthiness inspection much simpler. Make notes. Add pictures. Note items to use in your checklist, tips and tricks, hours spent, and anything else that might help you and the next owner. I'll help you get it started."



**If done right, your log can save you time and aggravation, serve as a marketing tool, become a safety device, and be your best friend when it comes to putting your aircraft manual together.**

## WHAT GOES IN A BUILDER'S LOG?

- A. Tasks and times
- B. Pictures
- C. A&P credit hours
- D. Mistakes
- E. Advice for the manufacturer

Did you answer A and B? Why not all?

Often viewed only as the ticket to airworthiness approval, builder logs are routinely overlooked as a vehicle for information gathering. If done right, your log can save you time and aggravation, serve as a marketing tool, become a safety device, and be your best friend when it comes to putting your aircraft manual together. It can also lead you down the A&P path if that is one of your goals.

## BUILDER'S LOG REQUIREMENTS

When the DAR or FAA inspector arrives at your project to give you an airworthiness certificate, the inspector cares about three things. First, did you build the airplane or participate in a group building the airplane for education and recreation? Second, is the paperwork correct and in order? And lastly, does the aircraft match the paperwork and appear to be built with a reasonable level of safety awareness and workmanship?

Your log will tell the inspector a great deal about how you work and how much you care about detail. A good log will take some of the pressure off the physical inspection of the airplane. But a builder's log can be so much more. Here's how much more.

## THE BASICS

Your inspector will expect a list of tasks completed and pictures showing the work. But don't stop there. A journal, a calendar, a loose-leaf notebook, or a computer or iPad app can serve as the basis for your task logging and your pictures. If you'd like some technology assistance, an online search will turn up builder's log software (see [www.EAA.org/extras](http://www.EAA.org/extras)). If you're handy with spreadsheets, they make excellent logs and you can customize the sections.

## LOG SECTIONS

You don't have to make all of these, but if you do, you'll be really happy when you're trying to answer a question, assemble your aircraft manual, or sell your airplane.

TASK	TIME
SIZE ALUM. L BRACKET FOR PANEL	✓ 1
BLEED BRAKES + ATTACH BRAKE LINES	✓ 2
TRIM LOWER COWLING	✓ 3
TRIM UPPER COWLING	✓ 3
SEND MATCO CYLINDER BACK	✓ 1
GEAR FITTINGS	✓ 4
MAKE SLING FOR FORWARD FUSE	✓ 2
PROP INSTALL - BLOCK	✓ 6
BLOCK - GOLT ON MOUNTS	✓ 5
ENGINE - PLACE ON HOIST	✓ 2

## Work accomplished:

List what you did and how long it took, along with the date. Keeping track of the hours spent will also come in handy if something happens to the airplane as you're working on it. Some aircraft "project insurance" policies will cover labor hours if an event, such as a fire, occurs and you lose the project.

My advice is to include the hours you spend cleaning up and studying plans and manuals — anything having to do with the build.

## Photos:

Post photos of the work in the log and include yourself in many of them. Most cameras have a "selfie" mode where you can place the camera on a tripod with a timer. Or use your smartphone.

## Observations:

List anything unusual about the work that you want to record. Did you think of a better way to do something? Make notes about it. Was a task particularly hard to understand? Make a note. You can't make too many notes.

## Advice for the manufacturer:

Was something particularly tricky or difficult? Send this info to the manufacturer so it can make improvements. This includes improvements to the instructions or plans. Along the same lines as sharing improved processes, having a list of observations for the manufacturer will help it improve the build process overall.

## YOUR RESTORATION LOG

A note to those of you who are restoring an airplane rather than building a kit.

A restorer's log will act in the same way for your restoration as the builder's log will for a kit. Before beginning your restoration, look through the checklist of items I've provided in the article and decide which ones will make sense for you. Modifications, materials used, and paint colors will be helpful later on, and in the same way that a builder log will help a resale, the restorer's log will help a restored aircraft sale.

### Information about the airplane:

Here you can place the three-view drawings, specifications, and anything else you'll need later for your inspection.

### Mistakes:

Why would you want to admit making mistakes? Because describing what went wrong might help someone else in the future. If the manufacturer gets enough feedback on where builders got off track, it may be able to avert it in future kits, or at least warn future builders that a particular task is error-prone.

### Tips and tricks:

Did you find a better way to do something? Why not share it with the builder group and the manufacturer? If it's a fantastic innovation, be sure to write down the detail. It might lead to something, like an invention.

### Purchases and inventory:

Keep a record of what you bought, when you bought it, who you bought it from, and what it cost. Put the documentation, instructions, receipts, and other items that came with the components in a notebook for cross-reference.

### Technical counselor visits:

Keep advice, notes, pictures, and paperwork from the TC visits.

### Modifications:

Almost every builder will make modifications to the kit at some point. This is not a problem as long as you get advice from the

manufacturer first and include the specific details in your log. This will be especially important when the next owner wants to know what you did and why you did it.

### Field hours for your A&P:

A detailed and documented builder log will provide the documentation for field hours toward your A&P certificate.

### Impress your friends:

You will routinely get the question, "How many hours do you have now?" This doesn't mean flying hours, it means building hours. Later, when the aircraft is flying, you'll get the same question in a different form: "How long did it take you?"

### A marketing tool for a future sale:

If you decide to sell your airplane, a detailed and organized builder's log will be impressive to a buyer and to the person doing the prebuy inspection.

### A guide for a future owner:

The next owner of your airplane will thank you for a detailed builder's log when deciding to make modifications or needing to know more about the materials and procedures you used.

### Your aircraft manual:

Your builder's log feeds directly into your aircraft manual, beefing up the checklists you already have. I tend toward less is better until it comes to fuel and checklists. I'd like to talk you into more checklists — assembling a really good checklist — by picking off the best section notes of your builder's log.

### Start early, update often:

Start your log as soon as you know the kit is coming. In addition to keeping it online, if that is your preference, I'd also assemble it in notebook sections. This gives you an easy method of arranging all the paperwork you'll accumulate. This collection of information will do more to help you save time, answer questions, and stay safe than any other part of your build program. The first time you're looking for something and realize exactly where it is — in your log notebooks — you'll be glad you set it up.

## LISA TURNER

I returned to Dave's project a month later. I was amazed to see all of the boxes unpacked and everything neatly arranged on shelves. Small parts were labeled and hanging on a pegboard. There was plenty of clear space around the fuselage, which now had some bulkheads installed. Clear plastic lined the floor and the workbench. Dave's logs were open on the bench.

"Wow! Very nice," I said.

"I was hoping to impress you! I have to admit that my family had a hand in it."

"I'm impressed. And involving the family is a great idea."

"I've already tested the log system. I had to find the paperwork to send something back, and it was right there in the log. Then I found a mistake in the construction plans, and I made a note that went to the manufacturer. And I've already started a detailed checklist for first and subsequent flights with items that I never would have thought of if I hadn't come across it in the build."

"That's the whole idea," I said. *EAA*

---

**Lisa Turner**, EAA Lifetime 509911, is a manufacturing engineer, A&P, technical counselor, flight advisor, and former designated airworthiness representative. She built and flew a Pulsar XP and Kolb Mark III, and is currently restoring a Waco UPF-7 with her husband. Lisa is a member of the EAA Homebuilt Aircraft Council and Women in Aviation International.

## Are You Ready for Your Dream to Take Flight?

Free copies for a  
limited time. Go to  
[DreamTakeFlight.com](http://DreamTakeFlight.com)

*Flying Adventures!*

Get your copy today

Flying adventures come  
alive on audio!



## DREAM TAKE FLIGHT AUDIOBOOK

Free copies of the *Dream Take Flight* audiobook are available while supplies last. Go to [www.DreamTakeFlight.com](http://www.DreamTakeFlight.com).

### READER WARNING:

*Exhilarating flying adventures in this book may cause you to want to build an airplane in your garage.*