

Understanding Owner/Mechanic Roles and Responsibilities

Although pilots and aircraft owners rely on mechanics to maintain and inspect their aircraft, the owner or operator is ultimately responsible for airworthiness. Pilots and owners should be proactive in their approach to maintenance, understand airworthiness responsibilities, and know the value of proper maintenance documentation and effective communication with their mechanics and repair shops.

Airworthiness is Your Responsibility

Who is responsible for the airworthiness of an aircraft? It is tempting to say it's the mechanic who worked on the airplane, but in fact, 14 CFR section 91.403(a) says the owner/operator is primarily responsible for maintaining the aircraft in an airworthy condition to include Airworthiness Directive (AD) compliance.

However, many pilots and owners are unaware of their airworthiness responsibilities. They think that airworthiness issues are the mechanic's problem. They also have a misconception that all mechanics are created equal, no matter what they charge for their services. The reality is that maintainers are required to meet the 14 CFR section 43.13 performance rules, but that level of work and safety should never be taken for granted.

Even though maintenance and inspection of an aircraft is your responsibility, it's also a team effort between you and your mechanic. Be proactive in your approach to maintenance. Carefully evaluate the

maintenance facilities, personnel, and equipment used for maintenance and inspection.

Ask: Does he/she have adequate training for your aircraft type or installed equipment? Do they have the right skills to properly repair and/or maintain your aircraft if it's newer/high tech or made of composite materials? An open dialogue with your mechanic and repair shop will help you develop familiarity and trust that your aircraft is in the right hands.

What You Should See

Your mechanic's attention to detail will give you a good indication of how professional they are, and if their safety culture is positive.

You Should See:

- **A Clean, Neat, Organized Shop Area.** This is an excellent indicator of organizational skills and professionalism.
- **Proper Storage of Materials and Parts.** Although not required by regulation, check to see if tools are shadowed to inventory equipment after maintenance.
- **Adequate Lighting.** If the shop is not well lit, potential problems could be missed.
- **Adequate Tooling and Equipment.** Ask if they have the proper, calibrated tools to do the job.

- **Current, Relevant, and Approved Data.** Ask your mechanic if they have the current manual for your specific make and model of aircraft and all of the approved data.

What Your Mechanic Must Do

At the annual/100 hour inspection, mechanics must determine whether the aircraft meets all applicable airworthiness requirements by using:

- A checklist
- Type Certificate Data Sheets (TCDS)
- Supplemental Type Certificates (STC)
- Airworthiness Certificates (parts 21, 43, and 91)
- Manufacturers Airworthiness Limitations
- Approved parts and materials

Mechanics are also required to run the aircraft.

What Your Mechanic Must Write

After maintenance, your logbook must contain a proper description of the work performed. Always check the logbooks after maintenance. It is your responsibility to ensure that mechanics make the proper entries. Discuss all issues found during any inspection or repair, especially major repairs or alterations. Ask: What was touched, repaired, or replaced?

For inspections, mechanics are required to include all of the following:

1. Type of Inspection/Certification Statement

DATE	AIRCRAFT MAINTENANCE RECORD DESCRIPTION OF WORK PERFORMED	SIGNATURE
01/21/99	Total Time 1743.8 Hours	
	I certify that this aircraft has been inspected in accordance with (insert type) inspection and was determined to be in airworthy condition.	
		<i>Ima B. Good</i>
		Ima B. Good A&P 123456789

2. Inspection date
3. Aircraft total time in service (not necessarily tach time)

4. Signature, certificate number, type of certificate held by the person approving/disapproving return to service.

Mechanics Who Go Above the Minimum

The point of good logbook entries is to prove the mechanic did a good job and covered all the bases. This means the more information, the better. For example, did your mechanic enter:

- The approved data.
- Approval documents for parts installed.
- Part/serial numbers for components removed and installed.
- Pertinent ADs, whether applicable or not, should still be entered to show the mechanic did not ignore the AD but found it inapplicable.
- Any other comments (never too much information).

What You Should Know

- It's the owner/operator's responsibility to keep up with the AD status on their aircraft.
- If your mechanic discovers a discrepancy and you choose not to repair it, then your mechanic should sign it off on the log book as unairworthy.
- Parts Manufacturer Approval (PMA) parts are not original manufacturer's parts, but they have FAA approval for installation on certain models of aircraft.
- Not all lubricants and sealers are the same. Ask your mechanic if he/she has the right materials for your aircraft type.

Professional mechanics do not cut corners. They will have all the current publications, the approved data and parts, and make more than minimum logbook entries.

Resources:

Safety Enhancement Fact Sheet — Mechanics for Pilots

www.faa.gov/news/safety_briefing/2019/media/SE_Topic_19-05.pdf

"Get to Know Your Mechanic," FAA Safety Briefing, May/June 2020

medium.com/faa/get-to-know-your-mechanic-e41b1d2b37df

