

DEDICATED TO HELPING BUSINESS ACHIEVE ITS HIGHEST GOALS.



Do You Know the Definition of Airworthy? How do you Know?

Thursday May 4, 2017 | 0815 - 0930

PRESENTED BY:

Timothy Shaver AFS-300

Rayner Hutchinson AAR CORP

**MAINTENANCE
CONFERENCE**

May 2-4, 2017 | West Palm Beach, FL

Introduction

Every day we make “airworthiness” determinations of airframes, powerplants, appliances and propellers.

Do you know why this determination is so critical to the success of the next flight, your department and/or your aviation career?

Do you understand the regulatory definition of airworthiness?

If you don’t understand this concept or are not able to apply the definition, you should not be making airworthiness decisions or maintenance record entries!

Sources: enter sources here

Who is in the Room?

- How many Certificated Mechanics? Inspection Authorization?
- Pilots? Engineers? Lawyers?
- Experience Levels? >10yrs >20yrs >30yr

Sources: enter sources here

Questions?

- Would your peers consider you a “professional”?
- Has anyone in the room ever approved something for return to service?
- How about after a major alteration or repair?
- Anybody know what standards one needed to meet before making that approval?

Sources: enter sources here

Airworthy, of course!

- What's that mean?
- Where do you find the regulatory definition?
- Where else can you find it?
- Do you know what it means?
- How does it apply to aircraft?
- Is it different for pilots or mechanics?
- How about the FAA?

Sources: enter sources here

Airworthy, of course! – (cont)

- Is it different for parts?
- How?
- Why?
- Have you ever gotten any of this wrong?
- What do you do to stay current with the regulations and guidance?

Sources: enter sources here

Definition of Airworthy

FAA Order 8130.2H, Chap 2, Sec 1

Definition of the Term “Airworthy” for U.S. Type-Certificated Aircraft.

The FAA must find that an aircraft is airworthy before issuing an airworthiness certificate.

Two conditions must be met for an aircraft to be considered “airworthy.” Title 49 of the United States Code (49 U.S.C.) 44704 and Title 14 of the Code of Federal Regulations (14 CFR) part 21, Certification Procedures for Products and Parts, state the conditions necessary for issuance of an airworthiness certificate:

Sources: enter sources here

Definition of Airworthy (cont)

a. The aircraft must conform to its type design. For the purpose of airworthiness, conformity to the type design is considered attained when the aircraft configuration and the engine, propeller, and articles installed are consistent with the drawings, specifications, and other data that are part of the type certificate (TC). This includes any supplemental type certificate (STC) and repairs and alterations incorporated into the aircraft.

b. The aircraft must be in a condition for safe operation. This refers to the condition of the aircraft relative to wear and deterioration, for example, skin corrosion, window delamination/crazing, fluid leaks, and tire wear.

Note 1: If either of these conditions are not met, the aircraft is not considered airworthy.

Sources: enter sources here

References for the Definition

- 14 CFR Part §3.5(a) (first published 17OCT2007)
- FAA Advisory Circular 43.13-1B, Appendix Glossary
- FAA Order 8130.2H, Chap 2, Sec 1
- FAA Order 8900.1, Vol 1, Chap 1, Sec 2, Chg 0

Sources: enter sources here

Eligibility for Recurrent Airworthiness

- What's a Recurrent Airworthiness Certification?
- Prerequisite is: original airworthiness
- How can I tell?
- Easy for an Aircraft, FAA Form 8100-2
 - What are the “terms and conditions”?
- How does it work for an article?

Sources: enter sources here

UNITED STATES OF AMERICA
 DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION
STANDARD AIRWORTHINESS CERTIFICATE

1 NATIONALITY AND REGISTRATION MARKS	2 MANUFACTURER AND MODEL	3 AIRCRAFT SERIAL NUMBER	4 CATEGORY
5 AUTHORITY AND BASIS FOR ISSUANCE This airworthiness certificate is issued pursuant to 49 U.S.C. § 44704 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein Exceptions:			
6 TERMS AND CONDITIONS Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the FAA, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.			
DATE OF ISSUANCE	FAA REPRESENTATIVE	DESIGNATION NUMBER	
Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.			

FAA Form 8100-2 (04-11) Supersedes Previous Edition

Sources: enter sources here

Performance Rules

- 14 CFR Part §43.13
- At least equal to (not better than)
- Current manufacturer's maintenance instructions
- Special tools/equipment
- Air carrier requirements

Sources: enter sources here

Approval for Return to Service

- 14 CFR Part §43.5
- Record Entries – 14 CFR Parts §43.9 or §43.11 as appropriate
- FAA Form 337 if required
- Update Ops Limits or Flight Data – 14 CFR Part §91.9

Sources: enter sources here

Receiving Inspection – Parts Documentation

AC 20-154, Chg 1

- ID – Count – Damage
- Traceable to a production approval holder (PAH)
 - What about “standard” parts?
- Airworthy
- FAA Form 8130-3
- Why do we say “8130”?
 - Come on!?! There’s 8 of them!
- What about a “Certificate of Conformance”

Sources: enter sources here

A&P Privileges and Limitations

- 14 CFR Part §65.81
- Perform, Supervise or Approve for Return to Service
 - Maintenance
 - Preventive Maintenance
 - Alterations
- Excluding
 - Major repair/alteration of propellers
 - Any repair/alteration of an instrument
 - Any task he/she has not satisfactorily performed at an earlier date

Sources: enter sources here

Questions – Action Items

- Questions
- Action Items

Sources: enter sources here

Thank You for Your Commitment to Airworthiness

- Timothy Shaver – AFS-300
 - Tim.Shaver@faa.gov
 - (202) 267-1704
- Rayner Hutchinson – AAR CORP
 - Rayner.Hutchinson@aarcorp.com
 - (630) 227-2026





National Business Aviation Association 1200 G Street NW, Suite 1100 Washington, DC 20005 (202) 783-9000 www.nbaa.org