



## **SAFETYGRAM**

May 2015

“Inspector, I’m certain it was not like that on preflight, it must have happened during this flight.”

Airworthiness. It has been a while since I wrote you about it, but a recent discussion indicated it was a good topic for us all to give some thought. We talk about being airworthy all of the time, but where is it defined? Normally you can find FAA definitions in 14 CFR 1 ‘Definitions and Abbreviations’ but not airworthiness. Maybe it is defined in part 43 – closer, 43.16 is ‘airworthiness limitations’ – oh yeah, it’s in part 91! Nope, 91.7 is ‘civil aircraft airworthiness’ and 91.409 is ‘inspections,’ contributing to how to keep airworthiness. Guess we just have to know it when we see it.

Well, not exactly. Only place I now to find it quickly is on an FAA Form 8100-2, the Standard Airworthiness Certificate. Next time you preflight give it a look – but make sure you put it back or the aircraft won’t be airworthy! Block 5 is ‘Authority and Basis for Issuance’ and states in part, ‘...the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation...’ So, there we have it – the aircraft must *conform* to type design certificate and be in *condition for safe operation* – and if one or both of these conditions are not met, the aircraft is not considered airworthy. (You can also find this in Part 21.183 (a), (b), (d), and (e) – look at [faa.gov](http://faa.gov) to find because part 21 is not included in the FAR/AIM books.)

Isn’t determining airworthiness an A&P responsibility and not me as a pilot? Yes and no. Yes, the A&P (or A&P with IA) determines airworthiness by maintaining the aircraft using guidance found in part 43, manufacturer’s procedures and manuals, etc. And no, because as PIC you have the ultimate responsibility (part 91.3) for determining airworthiness (and the most riding on it – your safety!). Still not convinced? If you hold any FAA Airplane Pilot Certification (recreation, sport, private, or commercial) the PTS for that certification task B under the preflight preparation area of operation is ‘Airworthiness Requirements’ and the objective is to ‘To determine that the applicant exhibits satisfactory knowledge of the elements related to airworthiness requirements...’ (if you hold ATP it is buried way down in preflight procedures, preflight inspection item 8 ‘determines if the airplane is airworthy and safe for flight...’). You obviously know airworthiness, because you demonstrated it in order to possess that certification!

So, how do I determine if the aircraft I am going to fly is airworthy? Look at the aircraft status and discrepancies. Review records of inspections (100 hour, annual, etc) to make sure none are due before signing it out. Then accomplish a thorough preflight inspection utilizing the POH or

checklist for the aircraft. If you find anything that exceeds your expertise in determining airworthiness you have three options: reject the aircraft; have a qualified individual correct (and document correction) the perceived discrepancy; seek advice/counsel of a trusted individual as to the condition/conformity of the aircraft – but remember YOU ultimately have to decide, and are responsible for determining if the aircraft is airworthy.

I am confident you are familiar with part 91.205 ‘Powered civil aircraft with standard category U.S. airworthiness certificates: Instrument and equipment requirements.’ It outlines required instruments and equipment by type of operation (VFR-day, VFR-night, IFR, etc) – and that ‘those instruments and items of equipment are in operable condition.’ Of course VFR-day is the minimum required items and each higher operation builds on those items, the first 10 are: (1) Airspeed indicator; (2) Altimeter; (3) Magnetic direction indicator; (4) Tachometer for each engine; (5) Oil pressure gauge for each engine using pressure system; (6) Temperature gauge for each liquid-cooled engine; (7) Oil temperature gauge for each air-cooled engine; (8) Manifold pressure gauge for each altitude engine; (9) Fuel gauge indicating the quantity of fuel in each tank; (10) Landing gear position indicator, if the aircraft has a retractable landing gear. *You know that if any of these are inoperative, regardless of type of flight, the aircraft is not airworthy.*

Part 91.213 ‘Inoperative instruments and equipment’ outlines conditions under which an aircraft may be operated with known discrepancies. You should know what it states – and remember its bottom line, ‘determination is made by a pilot, who is certificated and appropriately rated under part 61 of this chapter, or by a person, who is certificated and appropriately rated to perform maintenance on the aircraft, that the inoperative instrument or equipment does not constitute a hazard to the aircraft. An aircraft with inoperative instruments or equipment as provided in paragraph (d) of this section is considered to be in a properly altered condition acceptable to the Administrator.’ So that brings us back to Airworthy... *conforms* and in *condition for safe operation*.

You know what airworthy means, accept and fly only airworthy aircraft. You bear the responsibility when an FAA inspector asks about operation of a non-airworthy aircraft. If asked hopefully you will be able to truthfully use the opening line of this safety gram. Your safety, and the safety of your passengers, depends upon you making the right call.

**FLY SAFELY!**

