



Not Airworthy

by Larry Bothe, MCFI, DPE, 9/2/2008

Examiners often start off the oral portion of a checkride by asking about certificates, documents and airworthiness. That's how the PTS starts out, and these are relatively easy questions so the applicant gets off to a good start. At the same time the examiner is able to determine that the aircraft is legally airworthy and therefore, pending a favorable preflight inspection, able to be flown for the flight portion of the test. But lately I have had a lot of airworthiness issues come up during checkrides. They generally fall into two categories; lack of knowledge on the part of the applicant, and the aircraft presented not being legally airworthy. Let's consider the knowledge part first, which will in turn lead us to the aircraft. Then I'll tell you what upsets me the most about this entire situation.

The typical aircraft that comes to me for a checkride is a 2 or 4-place rental trainer. For these airplanes 5 things have to be accomplished on a timely basis and noted in the maintenance logbooks in order that the airplane be deemed airworthy. They are:

Annual Inspection

100-hour inspection if used in commercial service

Transponder certification

ELT: Inspected/tested annually and the battery be within its stated life

Airworthiness Directives complied with

In addition, the plane can't have any critical safety defects, like cord showing through on the tires. All the required equipment has to work properly. If it doesn't it has to be repaired before further flight. If it can't be repaired at its present location a ferry permit can be obtained from a FSDO to fly the plane to a place where it can be fixed. Any optional equipment that doesn't work has to be placarded inoperative or removed from the aircraft. The pitot/static/altimeter certification is not required unless the plane is to be used for IFR flight OR will fly into airspace in which encoding altimeter responses are required (91.213[b]).

The Practical Test Standards for Private Pilot require that an applicant "exhibit knowledge of the elements related to airworthiness by explaining the required instruments for day and night VFR, procedures and limitations for determining airworthiness of the airplane with inoperative instruments and equipment with and without a Minimum Equipment List, and the requirements and procedures for obtaining a special flight (ferry) permit." The applicant is also supposed to be able to "locate and explain airworthiness directives, compliance records, maintenance and inspection requirements, and appropriate record keeping (maintenance logbooks)."



When I speak with an applicant before a checkride I tell him to be sure to bring the maintenance logbooks. I tell him that I will be asking about airworthiness and suggest that he sit down with his instructor and tab the required entries so he can easily show them to me when I ask. When I do ask during the test I often discover that the applicant has never seen the logbooks before. This comes to light because he can't find the current inspections. The tabs were put in by some other applicant a long time ago and the marked inspections are now outdated. The applicant proceeds to get nervous and frustrated, and things go downhill from there. When I ask the applicant why he didn't do as I suggested I get answers like "we couldn't get the logbooks until this morning", or "my instructor told me the pages were already tabbed." The truth is the instructor just blew his student off when it came to showing/explaining what's in the maintenance logs. Depending on how bad it gets, sometimes the applicant has to go back to the instructor and learn about all the inspections in excruciating detail before he comes back to me for the retest. I hope he gives his instructor heck for the oversight; it will go along with the earful I will have already given the instructor on the phone.

How can we teach this material so it sinks in? When I'm instructing I start by **SHOWING** the student the difference between required and optional equipment. This is easily done by going to a vintage Cub or Champ and letting the student look inside, or maybe sit in it if you know the owner. What the student sees, those few instruments and the safety belts, is the required equipment. All of the other things in the trainer they fly are optional. The student is usually amazed at the simplicity of a Cub or Champ, and they remember. While the student is looking at those required items I explain that the FAA doesn't give the pilot a choice in this matter; required equipment has to be working if the plane is to be flown. If it doesn't work it must be repaired before the plane can leave the ground. The only exception is if a ferry permit is obtained from the FSDO, which would allow the plane to be flown to another location where repairs can be made.

Then we walk over to the trainer. We sit in it and I explain that nearly everything he sees in the panel is optional equipment. Even that radio we always talk on and the transponder we always turn to ALT are optional, along with most of the flight instruments. We review the few required ones, and we look at the weight and balance and equipment list for the trainer to see if it was certified with any required equipment beyond that called out in FAR 91.205. Then I explain that whether or not we fly the plane with any of the optional equipment inoperative is up to the pilot-in-command. But if the PIC elects to fly the plane with an optional item not working it must first be placarded inoperative (INOP), before the flight – not after. I tell my student that a piece of inoperative optional equipment can also be removed from the aircraft instead of placarded INOP, but that is done by a mechanic because it has to be recorded in the maintenance logs and the weight and balance must be changed. Removal is not a pilot activity. I end the lesson by emphasizing the distinct difference between required and optional equipment, and the different procedures to deal with each situation. When it comes time for



the oral part of the checkride the student will make short work of the airworthiness questions.

Back to our theoretical checkride. Now we get to the thing that really upsets me. We are finished with the oral and we go out to the plane to get ready for the flight portion. Preflight completed, we climb in and start the engine. The clock doesn't work, and it's not placarded INOP. What were we just talking about inside? The airplane isn't airworthy. Just because the clock has never worked since the student began his lessons doesn't make it OK. So we stop what we're doing and placard the clock INOP. While taxiing out, I see that the turn coordinator doesn't work either, no placard. The FAA has told me not to conduct a test in any aircraft that is not legally airworthy. Now I'm really upset. Maybe we placard the TC; maybe I just refuse the aircraft. In any case, I'm in a bad mood. I have just been shown that the neither the flight school, the instructor, nor the student gives a darn about airworthiness rules. This situation, all too common, is clearly the fault of you, the instructor, not the student. The student will accept whatever you do. If you don't follow the regulations he will think he doesn't need to either. Do you want the examiner to be angry with you and your student before the flight even gets off the ground? I didn't think so. Don't send unairworthy airplanes out on checkrides.

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