

# Nuts, Bolts, and Electrons

## Practical Test Standards Revised for Aircraft Mechanics

The requirements and testing standards to become a certificated aircraft mechanic have come a long way since the Department of Commerce's Aeronautics Branch issued its first aircraft mechanics license to Frank Gardner on July 1, 1927. Over the years, updates have been made to the certification process to keep pace with changes in complexity and design, especially with the advent of turbine engine technology.

In addition to curriculum and test question changes, another document that continues to evolve is the Practical Test Standards, or PTS. This guide provides a blueprint of the standards and expectations for both the examiner and applicant to follow during an FAA oral and practical exam. Separate PTS guides are produced for each of the three practical tests required for an A&P certificate: Airframe, Powerplant, and General.

The most recent updates to the Mechanic PTS were published in June 2003, with a few corrections added later on in 2004. Then, in December 2010, a consortium of FAA, academia, and industry personnel set out to find ways in which the testing standards could be improved and made more user-friendly for both examiners and applicants. Everyone from FAA safety inspectors and Designated Maintenance Examiners (DMEs), to officials from universities and professional maintenance organizations contributed efforts to improve the quality of PTS.

As a result, a revised PTS is currently under final review and is expected to be published later this summer. Among the planned changes is the removal of the core competency requirements for each subject area. With the current (2003) PTS, applicants have three objectives for each subject of the practical exam, the second of which is always the required core competency element. The new PTS streamlines the objectives down to just two; one determines an applicant's knowledge and understanding of a given subject, while the other validates their hands-on skill level.

Another change was the clarification of the performance standards used by the FAA and the examiners. "While this change may not seem obvious to

a test-taker, it is nonetheless critical to improving the integrity and consistency of the overall testing process," says Barry Watson, an Airworthiness Inspector with the FAA's Regulatory Support Division in Oklahoma City, Okla. "Having more clearly defined performance standards helps the FAA and the DMEs feel more confident that nothing is missed because of confusion or any misunderstandings of the requirements."

One other change you'll notice is the addition of a new subject area critical to aviation safety: maintenance human factors. Applicants can expect to be tested on the ability to recognize and mitigate certain human factors challenges, such as fatigue or complacency. To learn more about maintenance human factors, see chapter 14 of the revised AMT Handbook at [www.faa.gov/library/manuals/aircraft/media/AMT\\_Handbook\\_Addendum\\_Human\\_Factors.pdf](http://www.faa.gov/library/manuals/aircraft/media/AMT_Handbook_Addendum_Human_Factors.pdf).

Other ongoing efforts in concert with the PTS changes are updates to FAA Order 8900.2, which provides guidance for FAA inspectors and DMEs when conducting a mechanic practical test, and Advisory Circular (AC) 65-2D, *Airframe and Powerplant Mechanics Certification Guide*. The AC contains details about certificate requirements, application procedures, and what subject areas an applicant can expect to see during the oral and practical exam. Revisions to the AC mainly reflect updates to regulation references and forms, and the advent of computer-based testing procedures for the written exam.

"These changes, together with the PTS updates, should provide both applicants and examiners with a clearer picture of practical test expectations and requirements," says Watson. "All members who have participated in these revisions are confident that we now have a much improved process that will better serve the AMT testing effort."

If you have any questions or comments regarding the new PTS, please email them to: [AFS630Comments@faa.gov](mailto:AFS630Comments@faa.gov).

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