

k. Knowledge Test

The term "knowledge test" would replace "written test." The FAA believes the term "knowledge test" is a more inclusive term, referring to either tests administered with pencil and paper or by computer on the aeronautical knowledge areas in part 61.

l. Practical Test

The term "practical test" would include both oral and flight testing or testing in an approved flight simulator or flight training device on the approved areas of operation for an airman certificate, rating, or authorization.

m. Supervised Pilot-in-Command (PIC) Time

The term "supervised PIC time" would mean aeronautical experience flight time in an aircraft that applies to either a student pilot or pilot who is not rated in the aircraft, but is under the supervision and authorization to conduct the flight from an authorized flight instructor. The purpose for this proposal is to permit student pilots and pilots who are not rated in the aircraft, to log PIC time when the sole manipulator of the controls. This will be a change to the FAA's existing policy on who can log PIC time. In the past, the logging of PIC time in § 61.51 required the person to be a rated pilot, the sole manipulator of the controls, and be rated in the aircraft. Furthermore, depending on the crew complement specifications set forth in the aircraft's flight manual, the flight instructor may be onboard the aircraft in an assigned crewmember position. The flight instructor is expected to perform essential crew member functions, evaluate the person's ability to act as a PIC, and as always perform essential safety-related functions in the case of emergencies.

n. Training Time

A definition of the term "training time" would mean training received: (1) In actual flight from an authorized flight instructor; (2) on the ground from an authorized ground or flight instructor; or (3) in a flight simulator or flight training device from an authorized ground or flight instructor.

2. Areas of Operation

The FAA proposes a significant change in the regulatory descriptions of the procedures and maneuvers required of applicants for the various pilot certificates and ratings. Under the proposed new concept, the FAR would specify general areas of operation to be covered in flight training and practical tests for pilot and flight instructor

certificates and ratings and in training and testing for ground instructors. Many specific flight proficiency requirements currently in the FAR would be deleted. The specific tasks for the training and practical tests would be listed in the standards for each practical test for each certificate and rating. The purpose of this approach is to permit greater flexibility in updating the training and testing maneuvers and procedures required of pilot and flight instructor applicants.

For example, under current § 61.107 an applicant for a private pilot certificate with an airplane category and single-engine class rating must receive training on "emergency operations, including simulated aircraft and equipment malfunctions." The proposed areas of operation for the same applicant would require training on "emergency operations;" however, the tasks for the required training and practical test for an airplane category and single-engine class rating would include a task for emergency approach and landing (simulated) and a task for system and equipment malfunctions.

For convenience, the areas of operation for each category and, in some cases, for each class of aircraft under each certificate or rating would be listed separately. This would result in a certain amount of redundancy because many areas of operation would be common to more than one category and class of aircraft. However, the FAA proposes this method of listing areas of operation to avoid requiring users to consult more than one list to identify the areas pertinent to their individual situation.

In conjunction with using general terms to refer to maneuvers, the term "slow flight" would be used in place of previously used terms such as "minimum controllable airspeed" and the more recent term, "flight at slow airspeeds with realistic distractions." The FAA is not proposing a change in the concept; the details of the maneuvers and procedures will continue to be established through the appropriate practical test standards.

The use of areas of operation is consistent with public response to the issue addressed in the Notice of Hearings of whether the specific tasks or requirements in the Practical Test Standards (PTS) should be included in the FAR. The FAA believes the PTS should remain separate from the regulations to maintain the flexibility needed for revising and updating the PTS. Some commenters suggested listing specific areas of operation rather than specific pilot operations in the regulations regarding pilot operations.

The use of areas of operation would permit the practical test requirements, and hence, specific training requirements, to keep pace with technological change. For example, the current rule lists pilot operation procedures for equipment that is no longer common and does not include procedures for newer equipment (e.g., Electronic Flight Instrument System (EFIS), LORAN-C).

3. New Aircraft Category, Classes

This proposal would establish a new aircraft category for pilot certification—the powered-lift. The FAA also proposes to establish two aircraft classes within the glider category: powered glider and nonpowered glider.

a. Powered-Lift

The FAA anticipates that one of the most significant future developments in the NAS will be the introduction of a new category of aircraft, the powered-lift, into civil application. According to the FAA's Interim Airworthiness Criteria Powered-Lift Transport Category Aircraft (Department of Transportation, Federal Aviation Administration, Southwest Region, July 1988), powered-lifts resemble airplanes and rotorcraft in many respects. The document addresses airworthiness standards for multiengine turbine transport category aircraft that use power for lift, propulsion, and control.

Powered-lift aircraft have vertical take-off and landing and hovering capability like helicopters, but they also may fly at higher airspeeds like airplanes. The low airspeed capability may be provided by either aircraft configuration changes (tilt-wing, tilt-rotor, tilt-propeller), thrust vectoring, direct-lift engines, or other powered-lift concepts.

Powered-lift aircraft will require a new set of pilot knowledge, skills, and abilities. Therefore, the FAA proposes to create a new powered-lift aircraft category rating in § 61.5 for certification of private, commercial, and airline transport pilots, and for flight instructor and ground instructor certificates. The FAA also proposes to create a corresponding instrument rating for powered-lift aircraft. The FAA does not propose to extend recreational pilot certification in proposed subpart D to include the powered-lift category rating.

The FAA has considered various approaches to pilot certification for powered-lift aircraft. For example, the FAA considered whether powered-lift should be a separate category, with or without class ratings, such as tilt-rotor, tilt-wing, ducted fan, and vectored thrust. Another approach considered