

to windshear per year. However, the NRC report noted that low-altitude windshear may have been a factor in additional accidents that were described as weather-caused or weather-related. According to the report, "The rarity and lack of a reliable statistical data base on windshear-related accidents, shear encounters, or even the frequency of occurrence of potentially hazardous wind shears does not diminish the importance or severity of the safety problem. The potentially catastrophic consequences of an encounter during takeoff or approach and landing require that wind shear always be taken into account as a primary safety consideration when weather conditions are such that strong wind shears may be present. The widespread lack of appreciation among pilots, traffic controllers, and aircraft operations personnel of the seriousness of the possible safety hazards has exacerbated the problem."⁴

Currently, FAA written examination questions on windshear are primarily limited to weather theory questions focusing on the definition of windshear and the effect of windshears on aircraft during final approach. This proposal would broaden windshear training to include at least the following elements: Windshear weather, particularly microbursts, and clues that indicate its presence; effects of windshear on aircraft; windshear recognition from the cockpit and avoidance techniques; necessary precautions and standard operating techniques when windshear is suspected; and recovery techniques to be used in inadvertent windshear encounters.

Several sources of information are available for this proposed ground training requirement, and if the proposal is adopted, the FAA plans to issue a new advisory circular addressing avoidance for general aviation. In Advisory Circular 00-54, the FAA stresses the need to learn to recognize signs of windshear and avoid encountering the condition. Other reference material, such as AC 61-23B, "Pilot's Handbook of Aeronautical Knowledge," and AC 00-6A, "Aviation Weather," have basic discussions of windshear.

Although part 61 currently does not specifically require windshear avoidance training for the ATP certificate, part 121 contains windshear requirements for air carrier flight crewmembers. Beginning January 1, 1991, part 121 air carrier flight crewmembers were required to receive ground training in recognizing and

avoiding severe weather and escaping severe weather, in case of inadvertent encounters, including low-altitude windshear (§§ 121.404 and 121.419). Flight training in windshear avoidance maneuvers and procedures also is required by §§ 121.424 and 121.427. Pilots working in part 135 (air taxi and commercial operators) operations are required to receive sufficient ground training in meteorology to ensure a practical knowledge of weather phenomena, including the principals of frontal systems, icing, fog, thunderstorms, windshear, and, if appropriate, high altitude weather situations (§ 135.345). As previously mentioned, the prescribed knowledge in § 61.153 regarding weather for ATP candidates does not specifically state windshear avoidance training. Therefore, the FAA, to avoid any misunderstanding, proposes to add a knowledge requirement on windshear avoidance to § 61.153.

31. Aeronautical Experience Requirements

The FAA proposes to revise the minimum flight training hours of aeronautical experience and minimum solo flight hours of aeronautical experience that are required for the recreational and private pilot certificates and ratings under parts 61 and 141. Additional flexibility, under certain conditions, is proposed for pilot schools operating under part 141.

Under parts 61 and 141, the FAA proposes to revise the amounts of required dual and solo hours for the recreational and private pilot certificates and ratings. In part, this is based on information from the Sierra Academy of Aeronautics, a part 141 pilot school. In addition, the FAA believes that solo flight time is often not used constructively in training programs. Therefore, the FAA is proposing to permit the instructor and student to tailor the dual and solo training time requirements toward the individual student's needs. For example, a student who is seeking a private pilot certificate, and who has previous aviation experience and takes readily to the training may be able to complete training for a private pilot certificate with only the minimum 40 hours of flight time that includes at least 20 hours of flight training time from an authorized flight instructor and 20 hours of supervised PIC flight time. However, a student pilot who does not have previous aviation experience or who trains infrequently may need more time than the minimum 40 hours of flight time, 20 hours of flight training time from an authorized flight

instructor, and 5 hours of supervised PIC flight time. The student pilot and flight instructor may need to tailor the training to require 35 hours of flight training time from an authorized flight instructor and 5 hours of supervised PIC flight time.

Under proposed § 61.113, "Airship rating: Aeronautical experience," the requirement for 5 hours of PIC flight training while under the supervision of an authorized flight instructor is not intended to mean the instructor must be present in the aircraft. For example, if the airship required a SIC, the SIC could be a qualified pilot who was not necessarily an instructor, as long as the flight instructor provided flight supervision.

Finally, the proposed aeronautical experience requirements would place greater emphasis on experience in category and class of aircraft.

32. Instrument Rating

The FAA proposes several significant changes in the requirements to obtain an instrument rating. The FAA proposes to eliminate the requirement for a minimum of 125 hours of total flight time experience before a person may apply for an instrument rating. The FAA believes that this requirement should be eliminated to encourage more pilots to seek an instrument rating. This parallels current ICAO standards, which do not prescribe minimum pilot flight experience as a prerequisite for an instrument rating. The FAA believes that safety benefits were realized when the requirement was reduced to 125 hours and that allowing pilots to become eligible for the instrument rating as soon as possible will produce further benefits. The proposal would also delete the requirement for the minimum of 50 hours of cross-country flight time to more closely align the instrument rating eligibility requirements with ICAO standards.

In 1985, the FAA issued Amendment No. 61-75 (50 FR 19290: May 7, 1985) which reduced the total flight experience requirements for the issuance of an instrument rating. At that time, the FAA stated that the amendment was in response to recognized current training technology and that the FAA supported the concept of training to prescribed standards for an instrument rating. The FAA stated in the amendment that it recognized many pilots delay starting instrument training until they have accumulated 150 to 160 hours of flight time. The FAA estimated that it would take a pilot 3 to 4 years to accumulate 150 to 160 hours of flight time. During the development of Amendment No. 61-75, the FAA

⁴Ibid's, p. 130.