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InFO

Information for Operators

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An InFO contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety.

Subject: Use of Onboard or Installed Electronic Navigation Equipment on a Private Pilot Airplane Practical Test

Purpose: This InFO serves to notify private pilot applicants, instructors, Title 14 of the Code of Federal Regulations (14 CFR) part 141 pilot schools, Designated Pilot Examiners (DPE), and the public about changes that will be made to the next revision of the Private Pilot-Airplane Airman Certification Standards (ACS), FAA-S-ACS-6. The Federal Aviation Administration (FAA) intends to revise the ACS to allow private pilot single-engine practical tests using airplanes with onboard or installed electronic navigation systems.

Background: ACS Navigation skill element PA.VI.B.S1 from the initial version of the Private Pilot-Airplane ACS, effective on June 15, 2016, requires the applicant be able to "Use an installed electronic navigation system." Since ACS publication, several comments have been received by the FAA from industry and individuals indicating they are no longer able to complete a private pilot practical test using an airplane without an electrical system. Such aircraft were accepted for tests previously conducted when the Private Pilot Practical Test Standards (PTS) were used. This was determined to be an inadvertent change from the PTS, therefore this ACS element will be revised to "Use of an onboard electronic navigation system." During its review the FAA also noted that ACS knowledge element PA.VIII.F.K7 refers to installed navigation equipment and displays. The FAA has determined this ACS element should also be revised to broaden the navigation equipment and displays open to oral questioning. The reference to "installed" will be removed from this knowledge element in the next revision of the ACS.

Discussion: Testing Under the Private Pilot PTS for Airplane, FAA-S-8081-14B—If a private pilot applicant presented a single-engine airplane without an installed electrical system for a practical test, the required level of skill was demonstrated using navigation systems carried onboard. This practice was consistent with 14 CFR part 61, §§ 61.43(a)(1) and 61.45(b)(1)(i). Specifically, Private Pilot PTS, Area of Operation VII (Navigation), Task A (Pilotage and Dead Reckoning), did not require any installed navigation equipment other than a magnetic direction indicator. Task B (Navigation Systems and Radar Services), required the applicant to demonstrate the use of an airborne navigation system. This language was consistent with the allowance in the PTS for use of a handheld transceiver with navigation capabilities or a Class 1 or Class 2 Electronic Flight Bag (EFB). The Private Pilot PTS also covered testing of Basic Instrument Maneuvers in Area of Operation IX. Task F(2) within Area of Operation IX required selection of a frequency and identification of the facility. Task F(3) required the ability to follow verbal instructions and/or navigation systems/facilities for guidance. These tasks could all be demonstrated using onboard equipment.

Use of Onboard Equipment—The FAA notes that the term "identification" has a particular meaning if a Very High Frequency Omni-Directional Range (VOR) or Nondirectional Beacon (NDB) source is used. A Morse Code identifier received as an audio signal is used to confirm the station is usable and that the correct frequency has been tuned. If a portable GPS receiver is used, identification of a facility would be accomplished by selecting or programming particular waypoints as depicted on a chart or screen and then verifying the programming was entered correctly. Therefore, the PTS tasks previously discussed could have been demonstrated adequately either by using an Electronic Flight Bag (EFB), a hand held transceiver with navigation capability, installed navigation equipment, or a combination of these items. The FAA notes that increasingly, private pilots are using portable GPS equipment in a manner that is not covered in Advisory Circular (AC) 91-78, *Use of Class 1 or Class 2 Electronic Flight Bag (EFB)*. That AC discusses the removal of paper charts through the use of an EFB for part 91 operations (other than those operations described in part 91, subparts F and K). While AC 91-78 has minimal information regarding more advanced utilization of EFBs, the Pilot's Handbook of Aeronautical Knowledge, FAA-H-8083-25B, states on page 13-24, "Use of equipment/avionics display—pilots remain responsible for the proper use of an EFB or installed avionics. Pilots should be cognizant that, per the FAA PTSs, they may be evaluated on the use and interpretation of an EFB or installed avionics on the aircraft."

Correlation to Knowledge Testing—The FAA's inventory of private pilot knowledge test questions covers appropriate modern forms of electronic navigation, and every knowledge test question is assigned to a knowledge element within the ACS. Since a missed knowledge test question must be followed up on a practical test, the questioning during the knowledge portion of the practical test cannot be limited to installed navigation equipment. Questioning that correlates to expected pilot knowledge of different electronic navigation systems will increase standardization of practical tests and lead to enhanced applicant knowledge.

Recommended Action: Student pilots, flight instructors, part 141 pilot schools, DPEs, and others should anticipate the next revision of the Private Pilot-Airplane ACS, estimated to be published June 2017, will allow for the use of onboard navigation equipment to meet ACS navigation knowledge and skill assessments. The following actions should continue prior to publication of the revised ACS:

1. Practical test skill element PA.VI.B.S1 may be tested using an airplane without an electrical system or installed electronic navigation system. Onboard electronic navigation systems would be used in this case.
2. Practical test knowledge element PA.VIII.F.K7 includes appropriate electronic navigation systems such as VOR and GPS without regard to installation of these systems in the airplane provided by the applicant.
3. The training should incorporate the limitations of VOR and GPS electronic navigation systems that are used by private pilots.
4. Emphasis should be placed upon combined use and integration of electronic and more traditional forms of navigation and the procedures to be used if there is conflicting information.

Contact: Questions or comments regarding this InFO should be directed to the Airmen Training and Certification and Branch (AFS-810) at (202) 267-1100 or by email to 9-AFS-800-correspondence@faa.gov.