

CHAPTER 8. CONDUCT AN INSTRUMENT RATING CERTIFICATION

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE: 1506

3. OBJECTIVE. The objective of this chapter is to provide background to enable the inspector to determine if an applicant is eligible for an instrument rating under Federal Aviation Regulations (FAR) § 61.65. Successful completion of this task results in the issuance of a Temporary Airman Certificate with an instrument rating, a Notice of Disapproval of Application, or a Letter of Discontinuance.

5. GENERAL.

A. Instrument Rating.

(1) The instrument rating requires instruction in very high frequency omni-directional radio range (VOR), automatic direction finder (ADF), and instrument landing system (ILS) approaches. Because ADF and ILS instrument approach facilities may not be available in some areas, certain approved airborne or ground training devices may be used for the simulation of ILS, ADF and VOR approaches during training.

(2) The knowledge test results for an airline transport pilot (ATP) certificate are not acceptable as evidence of aeronautical knowledge for an instrument rating.

B. Limitations. If an applicant holds both a single and multiengine rating on a pilot certificate, but has not demonstrated instrument proficiency in a multiengine aircraft, that airman's certificate must bear a limitation indicating that multiengine flight is permitted in visual flight rules (VFR) conditions only.

7. ESTABLISHING ELIGIBILITY.

A. Graduate of an Approved School. If an applicant graduated from an approved school, the applicant is considered to meet the knowledge and experience requirements of FAR § 61.65. If an applicant graduated from an Federal Aviation Administration (FAA)-approved pilot school within 60 days before application, FAR § 61.71(a) requires the applicant to present an appropriate graduation cer-

tificate. Otherwise, the applicant must meet the requirements of FAR § 61.65.

B. Graduate of an Approved School With Examining Authority. If an applicant graduated from an FAA-approved school with examining authority within 90 days before applying, FAR § 61.71(b) requires the applicant to present an appropriate graduation certificate. Otherwise, the applicant must meet the requirements of FAR § 61.65.

C. Not a Graduate of an Approved School. If an applicant is not a graduate of an FAA-approved school, establish the applicant's flight experience in accordance with FAR § 61.65. Official military pilot flight time records are acceptable toward meeting the requirements of FAR § 61.65.

9. TYPES OF INSTRUMENT RATINGS. An instrument-airplane rating is issued to an applicant who qualifies for an instrument rating in an airplane. An instrument-helicopter rating is issued to an applicant who qualifies for an instrument rating in a helicopter. The holder of an instrument rating who applies for an instrument rating in either category of aircraft is required to meet the pertinent experience requirements and pass the appropriate instrument knowledge examination and practical test. (Refer to FAA Order 8080.1 to determine the appropriate knowledge test.)

11. INSTRUMENTS REQUIRED FOR INSTRUMENT PILOT AIRPLANE RATING PRACTICAL TEST. Although appropriate flight instruments are considered to be those outlined in FAR Part 91 for flight under instrument flight rules (IFR), an applicant may elect to satisfy a portion of the instrument practical test in an airworthy aircraft that does not have all of the instruments required by FAR § 91.205(d), such as a partial panel aircraft with only turn, slip, and airspeed indicators. However, the applicant will need an aircraft equipped in accordance with FAR § 91.205(d) to complete the remaining required tasks for instrument certification. While it may be extremely difficult for the applicant to satisfactorily complete any portion of the instrument practical

test with the limited flight instruments characterized by the partial panel, and while IFR flight plans cannot be filed, it is the applicant's prerogative to attempt the test under these circumstances. Moreover, it must be emphasized to the applicant that performance standards will not be relaxed when an airplane is so equipped.

13. INSTRUMENT FLIGHT INSTRUCTION OR PRACTICAL TESTS INVOLVING SIMULATED INSTRUMENT FLIGHT.

FAR § 91.109(b)(2) requires a third-person observer whenever the safety pilot determines that vision is inadequate. The rule requires that a competent observer who adequately supplements the safety pilot's forward and side vision be in the aircraft during simulated instrument flight when the safety pilot does not have adequate vision forward and to each side of the aircraft. Inspectors should ensure that the subject of adequate vision, as it relates to instrument instruction, is discussed with flight instructors and examiners. It must be made clear that the most diligent and expert scanning by the instructor pilot is imperative, since the instructor pilot is normally the person aboard the aircraft best able to see and avoid other aircraft.

15. REQUIRED INSTRUMENT APPROACHES. FAR § 61.65(g) requires an applicant for an instrument rating to pass a practical test on instrument flight procedures. The Instrument Rating Practical Test Standards (PTS) requires the applicant to demonstrate the ability to perform the IFR operations required by FAR § 61.65(c) and (d). At least one of the required approaches must be demonstrated in flight. The inspector conducting the practical test may allow an applicant to perform the instrument approaches not selected for flight demonstration in a ground training device/simulator that meets the requirements of FAR § 141.41(a)(1).

17. USE OF AIRCRAFT NOT APPROVED FOR IFR OPERATIONS UNDER ITS TYPE CERTIFICATE FOR INSTRUMENT TRAINING AND/OR AIRMAN CERTIFICATION TESTING. The following paragraphs are intended to clarify the use of an aircraft not approved for IFR operations under its type certificate for instrument flight training and/or airman certification testing.

A. IFR Training in Visual Meteorological Conditions (VMC). Instrument flight training may be conducted during VMC in any aircraft that meets the equipment requirements of FAR §§ 91.109, 91.205, and, for an airplane operated in controlled airspace under the IFR system, FAR §§ 91.411 and 91.413. An aircraft may be operated on an (IFR) flight plan

under IFR in VMC, provided the pilot-in-command (PIC) is properly certificated to operate the aircraft under IFR. However, if the aircraft is not approved for IFR operations under its type certificate, or if the appropriate instruments and equipment are not installed or are not operative, operations in instrument meteorological conditions (IMC) are prohibited. The PIC of such an aircraft must cancel the IFR flight plan in use and avoid flight into IMC.

B. Type Certificate Data. Appropriate type certificate data will indicate whether the aircraft meets the requirements for IFR operations.

(1) FAR § 91.9(a) prohibits aircraft operations without compliance with the operating limitations for that aircraft prescribed by the certifying authority.

(2) FAR § 91.9(b) prohibits operation of a U.S.-registered aircraft requiring an airplane or rotorcraft flight manual unless it has on board a current and approved airplane or rotorcraft flight manual or approved manual material, markings, and placards containing each operating limitation prescribed for that aircraft.

19. DISTANCE MEASURING EQUIPMENT (DME) ARC APPROACHES. DME arc transition flight paths may be used during approach and departure procedures. While the technique of arc flying is uncomplicated, it may cause considerable concern if an instrument pilot's first exposure to this type approach is encountered during actual IFR conditions. Therefore, the following should be considered.

A. Obstacle Clearance. In addition to difficulties that may be experienced when maintaining the prescribed arc, there is a general misunderstanding that obstacle clearance is provided throughout the entire sector containing the arc at the published arc altitude. For example, the published altitude along a prescribed arc may be 2,500 feet. This provides obstacle clearance of at least 1,000 feet for a 4 mile distance from either side of the centerline of the prescribed course.

B. Departing the Arc. Pilots should be cautioned that obstacle clearance to the final approach fix is not guaranteed if the aircraft departs the arc at other than the prescribed position, even if the published arc altitude is maintained.

C. Information Dissemination. Inspectors should ensure that the subject of flying DME arcs is brought to the attention of examiners, pilot schools, flight instructors, instrument-rated pilots, and air taxi operators to provide an awareness of the need to become familiar with the use of this procedure.

21. USE OF MAKESHIFT AND NON-APPROVED INSTRUMENT APPROACH PROCEDURES FOR TRAINING AND CERTIFICATION. There have been misinterpretations concerning the instrument approach procedures and facilities required for the training and practical testing of instrument rating applicants. Specifically, the misunderstanding concerns whether nonapproved or makeshift approach procedures may be used in lieu of approved FAR Part 97 facilities and procedures during training and practical testing. An example of a makeshift procedure would be the substitution of a published approach for one VOR on a different VOR.

A. Regulatory Requirement. FAR § 61.65(c)(3) and (d)(3) provide that an applicant for the instrument practical test (airplane or helicopter) must have received instrument flight instruction and have been found competent in instrument approaches to published minimums using the VOR, ADF, and ILS systems. FAR § 61.65(g) of that section states that the practical test must include instrument flight procedures selected by the inspector conducting the test to determine the applicant's ability to perform competently the IFR operations for which instruction is required by FAR § 61.65(c) or (d). From the above it is noted that the terms "published minimums" and "VOR, "ADF, and "ILS systems" are used. Since makeshift approaches are not a part of any system, the use of a makeshift approach would not meet the intent of the regulatory requirement and is not authorized.

B. Information Dissemination. Supervising inspectors should ensure that all examiners, pilot schools, and instructor personnel are informed that the regulations do not permit the use of approach procedures other than those outlined in FAR § 91.175(a) for the purpose of meeting the requirements of FAR § 61.65(c)(3), and (g).

23. PARTIAL PANEL SKILLS AND EARLY DETECTION OF INSTRUMENT FAILURE. Aircraft accidents have occurred during IFR operations in IMC when the failure or malfunction of certain instruments or equipment and the pilot's lack of competency in instrument partial panel skills may have contributed to the pilot's loss of control and the resulting accident.

A. Partial Panel Skills. Since many of the single- and twin-engine aircraft operated in IMC are not equipped with dual, independent, gyroscopic heading or attitude indicators, it is imperative that the pilot maintain proficiency in partial panel instrument skills. In addition, the pilot should have an adequate knowledge of the proper functioning of all gyroscopic instrumentation, pressure/vacuum systems, and associated electronic equipment to preclude operating in IMC with inoperative instruments or equipment.

B. Certification Standards. Current certification standards as outlined in the PTS and pertinent rules of FAR Part 61 describe the level of instrument competency that should be achieved during pilot training and which must be demonstrated during certification testing.

C. Inspector Responsibilities. Each inspector should take the necessary action to ensure the following:

(1) the matter of partial panel skills is brought to the attention of all flight and ground instructors and designated pilot examiners within the Flight Standards District Office's (FSDO) jurisdiction;

(2) FAR Part 141 approved instrument or instrument-related ground or flight school training course outlines (TCO) are reviewed and revised as necessary to ensure proper emphasis on the subject areas described herein;

(3) inspectors and pilot examiners should emphasize pilot competency in partial panel instrument skills during the training and testing of airmen in simulated emergency operations, particularly in aircraft that do not have redundant or dual, independently powered flight instrumentation systems;

(4) inspectors and pilot examiners should emphasize the early detection of malfunction or failure of either pressure/vacuum or electronic flight instruments or systems, particularly when the failure or malfunction would endanger the safety of the aircraft; and

(5) flight instructors and pilot examiners conducting instrument competency checks under FAR § 61.57(e)(2) should ensure that the pilot performing the instrument competency check demonstrates an accepted level of competency in partial panel skills.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of FAR Part 61 (Subpart B) and FAA policies, and qualification as an aviation safety inspector (ASI) (operations).

B. Coordination. This task may require coordination with the airworthiness unit and with the Airman Records Section of AFS-760, Airmen Certification Branch.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- FAR Parts 1, 61, 91, 97, 141, and 187 (Appendix A, Fees)
- FAA-S-8081-4, Instrument Rating Practical Test Standards
- Advisory Circular (AC) 61-27, Instrument Flying Handbook
- PTRS Procedures Manual (PPM)

B. Forms.

- FAA Form 8000-36, Program Tracking and Reporting Subsystem Data Sheet
- FAA Form 8060-4, Temporary Airman Certificate (figure 8-2)
- FAA Form 8710-1, Airman Certificate and/or Rating Application (figure 8-3)
- FAA Form 8060-5, Notice of Disapproval (figure 8-4)

C. Job Aids.

- Sample letters and figures

5. PROCEDURES.

A. Schedule Appointment. Advise the applicant to bring the following documents to the appointment:

- (1) a properly completed FAA Form 8710-1;
- (2) an airman certificate;

(3) an Airman Medical Certificate (FAA Form 8500-9) and Statement of Demonstrated Ability (SODA), if applicable;

(4) an airman knowledge test report, AC Form 8080-2;

(5) a school graduation certificate (if required by FAR § 61.71);

(6) personal logbooks or other records substantiating the flight experience shown on the application form;

(7) the aircraft maintenance records;

(8) the aircraft airworthiness certificate;

(9) the aircraft registration;

(10) a view limiting device;

(11) the aircraft flight manual; and

(12) the Federal Communications Commission (FCC) aircraft station license documents, if applicable.

B. Applicant Arrives for Appointment.

(1) Collect the documents listed above.

(2) Open PTRS file.

C. Review Application.

(1) In Section I, ensure that the applicant has checked the box labeled "Instrument."

(2) Check the application for accuracy, using the instructions on the form attachment.

(3) Check to make sure the flight instructor has signed the reverse side of the application no more than 60 days before the application.

D. Verify Applicant's Identity. Inspect acceptable forms of identification to establish the applicant's identity. (See volume 2, chapter 1, section 4, paragraph 5 of this handbook.) Compare the identification with the personal information provided on FAA Form 8710-1.

(1) If the applicant's identity can be verified, proceed with issuing the certificate.

(2) If the applicant's identity cannot be verified because of lack of identification or inadequate identification, explain what types of identification are acceptable. Instruct the applicant to return with appropriate identification to reapply.

(3) If the applicant's identity appears to be different from the information supplied on FAA Form 8710-1, or it appears that an attempt at falsification has been made, do not continue this task. (See volume 2, chapter 182 of this handbook.)

E. Establish Eligibility.

(1) Determine if the applicant meets the specific eligibility, knowledge, and experience requirements for an instrument rating certification (FAR § 61.65).

(a) Verify that the applicant for an instrument rating holds either a private or a commercial pilot certificate with an aircraft rating appropriate to the instrument rating sought or an ATP certificate limited to VFR.

(b) Verify that the applicant for an instrument rating is able to read, speak, and understand the English language.

(c) If the applicant is not a graduate of an approved school, have the applicant establish flight experience in accordance with FAR § 61.65 in an acceptable logbook or other reliable record that conforms to FAR § 61.51 requirements.

(d) Check the record of flight time in Section III of the application to determine if the applicant has at least the minimum flight experience required for the rating sought (FAR § 61.65(e)).

(e) Verify that the applicant is credited with no more than 20 hours of instrument instruction in an instrument ground trainer acceptable to the Administrator that effectively duplicates the procedures or maneuvers necessary for the category of aircraft involved. Check that this 20 hours of instrument ground trainer time (if acceptable as instrument time under FAR § 61.65(e)(2)) has been logged specifically as instrument ground trainer instruction received.

(f) Verify that the ground trainer time, including Levels A through D simulators, is certified by an authorized instructor. Credit all allowed instrument ground trainer time toward total pilot time.

(g) Inspect the applicant's medical certificate to make sure it is at least a valid third class medical certificate and it does not bear any limitation making a special medical flight test necessary for the issuance of the instrument rating. Graduates of approved pilot schools must show a valid second class medical certificate. (If a special medical flight test is necessary, see volume 2, chapter 27 of this handbook.)

(h) If the applicant holds an instrument rating and is applying for an instrument rating in another category of aircraft, check to see if the applicant meets the experience requirements of FAR § 61.65 and that the applicant has passed the appropriate instrument knowledge examination.

(i) Check FAA Form 8710-1 to determine if the applicant has failed the Instrument Rating Practical

Test within the past 30 days (first failure only). If so, check the form for the required certificated flight instructor's signature verifying that the applicant has received additional instruction since the failure.

(j) Determine if the applicant graduated from an FAA-approved commercial/ instrument pilot certification course or instrument rating test course within the preceding 60 days. If so, have the applicant present the appropriate graduation certificate required by FAR § 61.71. Otherwise, the applicant must meet the requirements of FAR § 61.65.

(k) Request and examine one of the following documents as acceptable evidence of having passed the knowledge test:

- i. an airman knowledge test report;
- ii. a test report from a knowledge test examining facility; or
- iii. a test report from an authorized computerized knowledge test facility.

(2) Check the reverse side of the FAA Form 8710-1 for the instructor's signature in the recommendation section. Verify that the applicant has received instrument instruction in the last 60 days from a certificated instrument flight instructor.

(3) The inspector conducting the practical test, or an airworthiness inspector, should review the applicant's aircraft maintenance records, aircraft logbooks, airworthiness certificate, and aircraft registration to determine if the aircraft is airworthy and suitable for this practical test. After review, return the documents to the applicant.

F. Discrepancies. If a discrepancy that cannot be immediately corrected exists in any of the documents, return the application and all submitted documents to the applicant. Inform the applicant of the reasons for ineligibility, and explain how the applicant may correct the discrepancies.

G. Conduct Practical Test. After determining that the applicant is eligible and meets all prerequisites for the instrument rating, conduct the practical test.

(1) Use the procedures and maneuvers outlined in the Instrument Rating PTS, FAA-S-8081-4, for the appropriate category and class of aircraft.

(2) An applicant for retesting should normally receive credit for those pilot operations successfully completed on the previous practical examination(s). However, an inspector will re-examine the applicant on all pilot operations required for a pilot certificate or rating after more than 60 days have elapsed, or when the inspector has reason to doubt an applicant's

competency in any areas for which credit has previously been given.

(3) If the practical test is not completed for reasons other than proficiency (knowledge and/or skill), issue the applicant a Letter of Discontinuance (figure 8-1). Return the application and any submitted documents to the applicant. Close PTRS.

H. Unsatisfactory Performance. If an applicant's practical test performance is not satisfactory, terminate the practical test and inform the applicant of the reasons.

(1) Give credit for operations that were passed.

(2) Prepare in duplicate FAA Form 8060-5 (figure 8-4). In addition to the instructions in volume 2, chapter 1, section 6 of this handbook for completing FAA Form 8060-5:

(a) if specific areas of operation need to be repeated, record them on the form;

(b) indicate the number of practical test failures by the applicant for this certificate or rating on the form; and

(c) forward the certification file to AFS-760.

(3) Return all submitted documents not forwarded to AFS-760 to the applicant.

I. Satisfactory Performance. Issue FAA Form 8060-4, Temporary Airman Certificate, including all of the applicant's previous ratings and the appropriate instrument rating to the applicant.

(1) Prepare the certificate in duplicate as per volume 2, chapter 1, section 5 of this handbook (figure 8-2).

(2) Indicate the appropriate instrument rating on the certificate:

(a) "INSTRUMENT - HELICOPTER" for applicants who have met the requirements in a helicopter; or

(b) "INSTRUMENT - AIRPLANE" for applicants who met the requirements in an airplane.

(3) If an instrument rating is added to a certificate using a single-engine airplane, and the applicant has a multi-engine rating (land or sea), enter a VFR limitation for those multiengine privileges.

(4) If the pilot certificate is issued in a foreign country, see FAR § 61.13(a) and FAR Part 187, Appendix A.

(5) Complete the inspector certification section and sign the reverse side of FAA Form 8710-1.

(6) Forward the completed file to AFS-760.

(7) Return all submitted documents not forwarded to AFS-760 to the applicant.

J. Program Tracking and Reporting Subsystem. Complete FAA Form 8000-36 in accordance with the PPM.

7. TASK OUTCOMES. Completion of this task results in the issuance of one of the following:

A. *Temporary Airman Certificate*

B. *Notice of Disapproval*

C. *Letter of Discontinuance*

9. FUTURE ACTIVITIES.

A. Pilot may return for another grade of airman certificate.

B. Pilot may return for an additional category or class rating.

FIGURE 8-1
LETTER OF DISCONTINUANCE

FAA Letterhead

[date]

[*applicant's name and address*]

Dear [*applicant name*]:

On this date you successfully completed pilot operation 1 - ground phase for a [*indicate grade*] certificate with an [*indicate category*] category and [*indicate class*] class rating. The practical test was discontinued because of [*indicate reason*].

If application is made by [*indicate date 60 days from date of letter*], this letter may be used to show the following portions of the practical test which have been completed satisfactorily.

[*Indicate pilot operations completed on the test*]

After [*indicate expiration date*] you must repeat the entire practical test. This letter does not extend the expiration date as shown on the knowledge test results, medical certificate, or required endorsements.

Sincerely,

[*signed by inspector conducting practical test*]

FIGURE 8-2
 FAA FORM 8060-4 - INSTRUMENT RATING

I. UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION ii. TEMPORARY AIRMAN CERTIFICATE		III. CERTIFICATE NO. 123456789					
THIS CERTIFIES THAT IV. JAMES RONALD DOE V. 321 EVERMORE STREET OREISEE, UT 80222							
DATE OF BIRTH	HEIGHT	WEIGHT	HAIR	EYES	SEX	NATIONALITY	VI.
03-17-63	72 IN.	160	BROWN	BLUE	M	USA	
IX. has been found to be properly qualified and is hereby authorized in accordance with the conditions of issuance on the reverse of this certificate to exercise the privileges of <p style="text-align: center;">COMMERCIAL PILOT</p>							
RATINGS AND LIMITATIONS XII. ROTORCRAFT - HELICOPTER AND GYROPLANE INSTRUMENT HELICOPTER							
XIII. THIS IS <input type="checkbox"/> AN ORIGINAL ISSUANCE <input checked="" type="checkbox"/> A REISSUANCE OF THIS GRADE OF CERTIFICATE							
				DATE OF SUPERSEDED AIRMAN CERTIFICATE 05-05-89			
BY DIRECTION OF THE ADMINISTRATOR						EXAMINER'S DESIGNATION NO. OR INSPECTOR'S REG. NO. ANM FSDO 07	
X. DATE OF ISSUANCE 08-14-95		X. SIGNATURE OF EXAMINER OR INSPECTOR <i>Wesley Crusher</i> WESLEY CRUSHER				DATE DESIGNATION EXPIRES --	

VII. AIRMAN'S SIGNATURE
James Ronald Doe

FAA Form 8060-4 (8-79) USE PREVIOUS EDITION

FIGURE 8-4
 FAA FORM 8060-5- INSTRUMENT RATING

UNITED STATES OF AMERICA
 DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION

NOTICE OF DISAPPROVAL OF APPLICATION

NOTE

**PRESENT THIS FORM
 UPON APPLICATION
 FOR REEXAMINATION**

NAME AND ADDRESS OF APPLICANT

JAMES ROBERT DUNN
 321 EVERMORE STREET
 OREISEE, UT 80202

**CERTIFICATE OR RATING
 SOUGHT**

INSTRUMENT
 HELICOPTER

On the date shown, you failed the examination indicated below:

FLIGHT ORAL PRACTICAL

AIRCRAFT USED (Make and Model)

BELL 206

FLY. TIME RECORDED IN LOGBOOK

PILOT-IN-COMM. OR SOLO	INSTRUMENT	DUAL
1600	200	250

UPON REAPPLICATION YOU WILL BE REEXAMINED ON THE FOLLOWING:

- VI. INSTRUMENT APPROACH PROCEDURES
- TASK B. NDB INSTRUMENT APPROACH PROCEDURE

(FIRST FAILURE)

I have personally tested this applicant and deem his performance unsatisfactory for the issuance of the certificate or rating sought.

DATE OF EXAMINATION	SIGNATURE OF EXAMINER OR INSPECTOR	DESIGNATION OR OFFICE NO.
12-12-94	<i>John I. Hightower</i> JOHN I. HIGHTOWER	ANM FSDO 07

FAA Form 8060-5 (8-88)