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Advisory Circular

Subject: Currency Requirements and Guidance for the Flight Review and Instrument Proficiency Check

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This advisory circular (AC) provides information for certificated pilots and flight instructors to use in complying with the flight review required by Title 14 of the Code of Federal Regulations (14 CFR) part 61, § 61.56 and the recent flight experience requirements of § 61.57. This AC is directed to General Aviation (GA) pilots and flight instructors.

This AC does not apply to training programs or proficiency checks conducted pursuant to 14 CFR part 121 or 135, nor to curriculums approved pursuant to 14 CFR part 142. Full flight simulators (FFS) and flight training devices (FTD) may not be used for logging airman experience or for any training, checking, or qualification credit unless qualified and approved by the Administrator (§ 61.4). Additionally, a flight review cannot be accomplished in an FFS or FTD unless it is used in accordance with an approved course conducted by a training center certificated under part 142 (§ 61.56(i)(1)).

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CHAPTER 1. GENERAL

1.1 Purpose of This Advisory Circular (AC). This AC provides information to assist General Aviation (GA) pilots, flight instructors, and ground instructors in complying with the flight reviews required by Title 14 of the Code of Federal Regulations (14 CFR) part 61, § 61.56 and the instrument proficiency check (IPC)/recent flight experience requirements of § 61.57. Additionally, this AC provides critical information to enhance GA safety.

1.2 Audience. The primary audience for this AC is GA pilots, flight instructors, and ground instructors. The secondary audience includes flight schools, collegiate aeronautical institutions, and stakeholders supporting GA pilot safety and training.

1.3 Where You Can Find This AC. You can find this AC on the Federal Aviation Administration's (FAA) website at http://www.faa.gov/regulations_policies/advisory_circulars.

1.4 What This AC Cancels. AC 61-98C, Currency Requirements and Guidance for the Flight Review and Instrument Proficiency Check, dated November 20, 2015, is canceled.

1.5 Related 14 CFR Sections:

- Section 61.189, Flight Instructor Records.
- Section 61.193, Flight Instructor Privileges.
- Section 61.195, Flight Instructor Limitations and Qualifications.
- Section 61.413, What Are the Privileges of My Flight Instructor Certificate with a Sport Pilot Rating?
- Section 61.415, What Are the Limits of a Flight Instructor Certificate with a Sport Pilot Rating?

1.6 Related Reading Material. Flight instructors and airmen under review should reference practical test standards (PTS) or Airman Certification Standards (ACS) documents appropriate to the certificates and ratings held by the pilot seeking a flight review or IPC prior to the review. You can find additional information in:

1. Aeronautical Information Manual (AIM), official guide to basic flight information and air traffic control (ATC) procedures.
2. FAA Handbooks:
   - FAA-H-8083-3, Airplane Flying Handbook.
   - FAA-H-8083-15, Instrument Flying Handbook.
   - FAA-H-8083-16, Instrument Procedures Handbook.
   - FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge.

3. Information for Operators (InFO) 15012, Logging Instrument Approach Procedures (IAP), September 8, 2015.
4. FAA ACs (current editions):
   - AC 60-28, FAA English Language Standard for an FAA Certificate Issued Under 14 CFR Parts 61, 63, 65, and 107.
   - AC 61-65, Certification: Pilots and Flight and Ground Instructors.
   - AC 61-89, Pilot Certificates: Aircraft Type Ratings (guidance on advanced training criteria, pilot certificates, and aircraft type ratings may also be appropriate if the aircraft being used requires a type rating).
   - AC 61-136, FAA Approval of Aviation Training Devices and Their Use for Training and Experience.
   - AC 91-73, Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations.
5. The FAA, commercial sources, and industry associations such as the Aircraft Owners and Pilots Association (AOPA), the Experimental Aircraft Association (EAA), the General Aviation Manufacturers Association (GAMA), and the Society of Aviation and Flight Educators (SAFE) make many additional sources of media on pilot currency and qualification available.

1.7 Background.

1.7.1 Regulatory Review. In 1997, the FAA initiated a major regulatory review and update of 14 CFR parts 61 and 141 to ensure that these regulations conformed to the then-current technological and operational environment and to address future pilot certification needs. This version of AC 61-98 addresses changes in technology and the operational environment, and their impact on recurrent training and proficiency checks. Edits to this AC, since the original version, have expanded the scope to include recent flight experience and IPCs.

Note: The FAA no longer uses the term "Biennial Flight Review." This term implied that pilots only needed currency training once every 24 calendar-months. The FAA encourages currency training as often as appropriate to a pilot's individual needs. Consequently, the FAA now uses the term "Flight Review."

1.7.2 GA Pilots. The FAA supports initiatives designed to encourage voluntary compliance with existing regulations and to maintain and further improve the GA safety record with a minimum of new regulations. As a result, the FAA has determined that updated advisory guidance is necessary with respect to the currency, proficiency, and qualification needs of GA pilots. The guidance contained in this version of AC 61-98 provides such information and accomplishes the goals of the personal currency program, flight review, and IPC.

1.7.3 Reducing GA Accidents. The FAA added important General Aviation Joint Steering Committee (GAJSC) findings and recommendations to AC 61-98 pertaining to GA accidents (see paragraph 2.1).

1. GA pilots should become aware of this information and apply it to their personal currency program plans of action.
2. Flight instructors should apply this information to their training and evaluation plans of action.

1.8 FAA Aviation English Language Standard (AELS).

1.8.1 FAA Regulatory English Language Eligibility Requirements. AELS directly affects flight safety. Regulations require pilots to meet and maintain English language skill requirements for all grades of pilot certificates issued under part 61. When a flight instructor conducts a flight evaluation and/or flight training event, the flight instructor should identify any pilot who does not meet English language skill requirements and take appropriate action. Finally, all training, checking, or evaluation will be conducted in English. AC 60-28 provides information and guidance regarding English language standards required by part 61.

1.8.2 Flight Instructor Evaluation. The IPC and the flight review are both evaluations of a pilot's ability to conduct a safe flight. Safety-related issues concerning language barriers to communications may arise if a pilot does not meet FAA English language skill standards. A flight instructor should continually evaluate the pilot's English language skills during any flight evaluation or training event that he or she conducts and endorse the individual's training record or logbook in English for the training and endorsement provided.

1.8.3 Flight Instructor Determination. A flight instructor conducting a flight review or IPC should not endorse the evaluation as satisfactorily completed if he or she determines that the pilot under review does not meet FAA English language skill standards. When a pilot has not accomplished a flight review satisfactorily, the evaluating instructor should endorse the pilot's logbook to indicate only the training received (as is the case with any unsuccessful flight review). There is no provision in the regulation for the failure of a flight review; therefore, there should be no logbook endorsement reflecting a failure. In the event the flight review is not successful, due to the flight instructor's doubt that the pilot under review meets FAA English language skill requirements, the flight instructor should provide a logbook entry for training received, advise the pilot of the flight instructor's finding, and notify his or her responsible Flight Standards office for further action. See paragraph 1.8.4 for additional flight instructor actions.

1.8.4 Responsible Flight Standards Office Evaluation. Although the FAA expects flight instructors to be aware of and follow the guidelines provided in AC 60-28, the FAA does not expect flight instructors to be responsible for a conclusive evaluation of an airman's ability to meet the FAA AELS. Only an FAA aviation safety inspector (ASI) can determine if an applicant, student, or certificated pilot meets the FAA regulatory English language eligibility requirements. However, if a flight instructor questions the

ability of the airman under training or evaluation to read, speak, write, and understand the English language at a level that meets FAA English language standards, then that flight instructor must refer the airman to the responsible Flight Standards office for evaluation by an FAA ASI. Thus, the FAA ASI will make the determination. The flight instructor should also provide the airman's contact information to the responsible Flight Standards office.

1.9 Personal Currency Program.

1.9.1 Currency Criteria. Pilots should design a currency program tailored to their individual operating environments and needs, which should emphasize proficiency beyond the minimum currency requirements. In most cases, pilots may integrate currency criteria with normal operations to reduce the need for separate currency flights. For example, pilots could incorporate additional takeoffs and landings, instrument approach procedures (IAP), or specialized takeoffs and landings, such as short or soft field, into a planned flight. In most cases, pilots should consider the need for currency beyond that specified by 14 CFR.

1.9.2 The FAA Safety Team (FAASTeam). The FAA strongly encourages pilots to participate in the FAASTeam's Pilot Proficiency Program (WINGS), which includes numerous forms of training media such as online programs and recommended topics for pilots to review with flight instructors. Additionally, the FAASTeam conducts safety seminars, which are open to the public. You can find the FAASTeam website at https://www.faasafety.gov/.

1.9.3 Aviation Publications and Commercially Developed Materials. Pilots should also explore the wide range of publications and other commercially developed materials available for use in personal currency programs. To ensure staying up to date in regulatory changes and flying techniques, the FAA also encourages pilots to read aviation periodicals on a regular basis.

1.9.4 Additional Sources for Developing a Personal Currency Program. For assistance in developing a personal currency program, pilots may consult a wide variety of sources. These sources include:

- Pilot examiners,
- Pilot schools,
- Individual flight instructors,
- FAASTeam Program Managers, and
- FAASTeam representatives.

Note: For information on local sources, pilots should contact their FAASTeam Program Manager at the responsible Flight Standards office. You can find your responsible FAASTeam Program Manager in the FAASTeam Online Directory at https://faasafety.gov/FAASTApp/directory/default.aspx. You can find your

responsible Flight Standards office at http://www.faa.gov/about/office_org/field_offices/fsdo/. You can find FAASTeam activities, courses, seminars, and webinars, plus other free FAA resources, at http://www.faasafety.gov/.

1.10 Airman Certificate and/or Rating Application.

1.10.1 Revised Airman Application Form. The FAA frequently updates FAA Form 8710-1, Airman Certificate and/or Rating Application, to meet the needs of the airman certification process and the aviation community. Flight instructors, pilots, and stakeholders should note that the latest FAA Form 8710-1 contains enhancements that include a new field for a flight review and another for IPC.

1.10.2 Flight Review and IPC. When a pilot satisfactorily completes a flight review or IPC, the applicant should provide, and the evaluating flight instructor should submit, a completed FAA Form 8710-1 to the Airmen Certification Branch (AFB-720). The FAA does not require FAA Form 8710-1 for a pilot's flight review or IPC; however, the FAA strongly encourages all applicants and flight instructors to follow this recommendation. When submitted, AFB-720 will add the application to the pilot's FAA record. Pilots should ensure that their data is current, because up-to-date records benefit everyone.
For example, a pilot's total flight time and aeronautical experience determines insurance premiums. If a pilot loses his or her logbook, an FAA record is on file and available. Nevertheless, submitting FAA Form 8710-1 for a flight review or IPC is optional.

1.10.3 Preferred Method. The preferred method for submitting an Airman Certificate and/or Rating Application is through the Integrated Airman Certification and/or Rating Application (IACRA) system. IACRA is the web-based certification/rating application that guides the user through the FAA's airman application process. IACRA validates data. It also uses electronic signatures to protect the information's integrity and eliminates paper forms.

- You can find IACRA at https://iacra.faa.gov/IACRA.
- You can find FAA Form 8710-1 at http://www.faa.gov/forms/.

1.11 AC Feedback Form. For your convenience, the AC Feedback Form is the last page of this AC. Note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this AC on the Feedback Form.

CHAPTER 2. REDUCING GENERAL AVIATION ACCIDENTS

2.1 General Aviation (GA) Accidents. The General Aviation Joint Steering Committee (GAJSC) is the primary vehicle for government–industry cooperation, communication, and coordination on GA accident reduction. GAJSC findings reveal common pilot errors, while GAJSC recommendations provide mitigation strategies to reduce GA fatalities. Pilots and flight instructors should apply GAJSC findings and recommendations to their plans of action as they pertain to personal currency programs, pilot proficiency training, flight reviews, and instrument proficiency checks (IPC). For these reasons, the FAA encourages pilots and flight instructors to keep informed on GAJSC findings and recommendations. You can find additional information about the GAJSC online at http://www.gajsc.org/.

2.1.1 Loss of Control (LOC). The GAJSC cites LOC as one of the six most critical and common causes of GA accidents. Further, LOC was the number one cause of GA fatalities from 2001 through 2010. LOC refers to aircraft accidents that result from situations in which a pilot should have maintained (or should have regained) aircraft control, but failed to do so. In some cases, training accidents occurred because the pilots were not in agreement as to who should be manipulating the flight controls. A recommended three-step process of exchange includes a verbal handoff from the pilot flying, verbal acceptance by the pilot taking over, and a verbal and visual confirmation that the exchange has taken place by the pilot relinquishing control. This procedure should be briefed before flight, and include a method to relinquish and take control of the aircraft when normal communications are not possible (e.g., tandem cockpit interphone failure or wind noise). Pilots and flight instructors are encouraged to practice and use aircraft control handoff procedures on every instructional flight. In addition, flight instructors need to maintain diligence while providing instruction. A flight instructor should always be in a position to take over control of the aircraft when doubt exists as to the safe outcome of any maneuver. The FAA reminds pilots and flight instructors to regularly evaluate (and elevate) procedures and skills to avoid, recognize, and recover from emergencies such as LOC.

Note: Future updates to this AC may address other causes of GA accidents, including aeronautical decision-making (ADM), weather, controlled flight into terrain (CFIT), and system failure.

2.1.2 Pilot Proficiency. Studies have shown that LOC usually occurs when pilots lack proficiency. Conditions exceeding personal skill limitations can present themselves at any time and can occur unexpectedly. In this event, the pilot should be able to avoid being startled, make appropriate decisions in a timely manner, and be able to exercise skills at a proficiency level he or she may not have maintained or attained since acquired during initial training. This makes personal currency programs and proficiency training essential. Personal currency programs serve to develop and maintain pilot proficiency by promoting attributes such as aeronautical knowledge, aeronautical skill, and ADM. These attributes collectively determine the degree of aeronautical ability a pilot possesses. Highly proficient pilots are better able to avoid or manage an in-flight emergency in a safe and efficient manner. Consequently, the GAJSC recommends that pilots place

emphasis on their specific proficiency needs by including training that may exceed regulatory minimum currency requirements.

2.1.3 Traffic Pattern Operations.

2.1.3.1 LOC accidents often occur while pilots are maneuvering at low altitude and airspeed, such as in an airport traffic pattern. Pilots should adopt, and flight instructors should promote, training programs designed to reduce the risk of GA accidents in traffic pattern operations. Flight instructors should provide training to mitigate the three areas of highest risk involving maneuvering an airplane in an airport traffic pattern. The first area is the risk of a departure stall; the second area is the risk of LOC if attempting to return to the field after an engine failure on takeoff; and the third area is the risk of LOC on the base to final turn.

2.1.3.2 Flight instructors should emphasize training that ensures that pilots of small single-engine airplanes depart in coordinated flight at the best-rate-of-climb speed (V_Y) for normal takeoffs, and maintain this speed to the altitude necessary for a safe return to the airport in the event of an emergency. Flight instructors should train pilots of single-engine airplanes not to return to the field after an engine failure unless altitude and best glide requirements permit. Accordingly, flight instructors should provide training that emphasizes the correct speeds at which light twin-piston aircraft depart the runway. Flight instructors should emphasize that a departure at the best-angle-of-climb speed (V_X) is used for obstacle clearance and short-field takeoff procedures.

2.1.3.3 Flight instructors should also emphasize the risks and potential consequences of climbing out at speeds less or greater than what is required for a particular type of takeoff. Flight instructors should train pilots of single-engine airplanes not to return to the field after an engine failure unless altitude and best glide requirements permit a safe return. Therefore, flight instructors should not routinely train pilots to make a 180-degree turn from a simulated engine failure while climbing. However, this training should occur at a safe altitude. A critical part of conducting this training is for the flight instructor to be fully aware of the need for diligence, the need to perform this maneuver properly, and to avoid any potential for an accelerated stall in the turn. It is essential for a pilot to know the altitude that will be lost in a 180-degree turn, in the specific make and model (M/M) flown, if and when a pilot considers turning back to the departure airport at best glide. During the before-takeoff check, the expected loss of altitude in the turn, plus a sufficient safety factor, should be related to the absolute altitude at which a turnback may be attempted. In addition, the effect of existing winds on the preferred direction of a turnback should be briefed.

2.1.3.4 Flight instructors should also teach pilots to reject an approach and initiate a go-around when the pilot cannot maintain a stabilized approach. The GAJSC recommends that pilots and flight instructors emphasize stabilized approach

and landing proficiency and conduct stabilized approaches as a standard practice. Flight reviews and IPCs should emphasize evaluating a pilot's ADM, departure skills, and ability to establish and maintain a stabilized approach and landing, while applying effective crosswind techniques to avoid the risk of LOC when maneuvering in an airport traffic pattern. Effective scenario-based training, emphasizing ADM, departures, and establishing and maintaining a stabilized approach to a landing, reduces the risk of LOC in an airport traffic pattern. Many of the principles discussed in this paragraph apply to multiengine aircraft, but do not apply to single-engine operations in the multiengine airplane. Flight instructors should emphasize the correct speeds at which light twin-piston aircraft are operated in the traffic pattern and provide training in response to an engine failure in a variety of situations.

2.1.4 Criteria for Stabilized Approaches Conducted in GA Airplanes. Under most circumstances, the airplane should be stabilized by 1,000 feet above airport elevation in instrument meteorological conditions (IMC) and by 500 feet above airport elevation during straight-in approaches in visual meteorological conditions (VMC). Pilots should monitor at least seven major elements that define a stabilized approach in a GA airplane. The FAA considers an approach to touchdown to be stabilized when the airplane meets all of the following criteria, with only minor deviations:

2.1.4.1 **Glidepath.** The airplane is on the correct flightpath. Typically, the glidepath is 3 degrees to the runway touchdown zone (TDZ) (obstructions permitting).

2.1.4.2 **Heading.** The airplane is tracking the extended centerline to the runway with only minor heading/pitch changes necessary to correct for wind or turbulence to maintain alignment. Bank angle should not exceed 15 degrees on final approach.

2.1.4.3 **Airspeed.** The pilot maintains a constant target airspeed within +10/-5 knots indicated airspeed (KIAS), which is usually at, but no lower than, the recommended landing speed specified in the pilot's operating handbook (POH)/Airplane Flight Manual (AFM), approved placards/markings, or 1.3 times the stall speed or minimum steady flight speed at which the airplane is controllable in the landing configuration (V_{SO}), if not specified.

Note: Most small airplanes maintain a speed well in excess of 1.3 times V_{SO} on an instrument approach (pilot's discretion). An airplane with a V_{SO} of 50 knots has a normal approach speed of 65 knots. However, this same airplane may maintain 90 knots (1.8 V_{SO}) while on the final segment of an instrument approach. Pilots generally select an appropriate approach speed for the prevailing weather, aircraft, traffic, and performance conditions, but not less than 1.3 V_{SO}. However, aircraft are usually slowed to a normal landing speed when on the final approach just prior to landing. Refer to the FAA Instrument Flying Handbook (FAA-H-8083-15), Chapter 4, Aerodynamic Factors, page 4-9, paragraph titled Small Airplanes.

2.1.4.4 Configuration. The airplane is in the correct landing configuration with flaps as required, landing gear extended, and the airplane in trim.

2.1.4.5 Rate of Descent. Descent rate is a constant and generally no greater than 500 feet per minute (fpm). If a descent greater than 500 fpm is required due to approach considerations, it should be reduced prior to 300 feet above ground level (AGL) and well before the landing flare and touchdown phase.

2.1.4.6 Power Setting. Power setting is appropriate for the airplane configuration and is not below the minimum power for approach as defined by the POH/AFM.

2.1.4.7 Checklists/Briefings. All briefings and checklists (except the landing checklist) are completed prior to initiating the approach.

Note: For a typical GA piston airplane in a traffic pattern, if the approach becomes unstabilized below 300 feet AGL, the pilot should initiate an immediate go-around.

2.1.5 IMC. Another area where pilots have experienced LOC is while maneuvering in IMC. Vertigo or spatial disorientation has been a significant factor in many aircraft accidents. The common result when a noninstrument-rated pilot inadvertently continues flight into IMC is spatial disorientation of the pilot and LOC. Pilots who are instrument rated, but not instrument proficient, are also susceptible. Recovery from LOC in IMC can be nearly impossible without skills and competency. Additionally, instrument-rated pilots maneuvering in IMC who fail to prioritize pilot workload properly and use Crew Resource Management (CRM) or Single Pilot Resource Management (SRM) may become inattentive or distracted and lose situational awareness (SA), which too often can lead to LOC. The GAJSC determined that pilots and flight instructors need to emphasize effective preflight planning and pilot proficiency to reduce the risk of LOC in IMC.

Note: LOC is not limited to the examples provided above. Other examples of areas where pilots have experienced LOC include environmentally induced aircraft upsets, system malfunction/failure-induced upsets, and exceeding personal skills.

2.2 Manual Flight After Automation Failure. Pilots and aircraft owners have taken advantage of modern avionics and flight automation equipment. “Glass cockpits” are available for virtually every new aircraft, as well as for many legacy and experimental aircraft. Global Positioning Systems (GPS), positioning on a moving map, real-time weather, terrain/traffic awareness, and modern autopilots have made a significant presence in the GA fleet. Pilots also employ handheld equipment not installed in the aircraft much more frequently than in the past. This equipment can make flight operations safer and help avoid LOC situations; however, pilots should be proficient in all automation tools and know the system limitations. The FAA reminds flight instructors conducting flight reviews and IPCs to ensure that a pilot under evaluation is proficient with the automated system and knows what to do if it fails.

2.2.1 Pilot Knowledge. Pilots should learn their aircraft's systems, limits, and recommended procedures before a pilot can fly the aircraft safely. This is especially important for technically advanced aircraft (TAA) equipped with the automated avionics described in paragraph 2.2 or flight automation systems (e.g., flight management system (FMS) or coupled autopilot). The FAA strongly recommends that a pilot receive a thorough evaluation from a qualified instructor with experience in the automation equipped in the specific aircraft M/M flown.

2.2.2 Reliance on Automation. Overreliance on automation or automated flight systems has resulted in accidents. A 2010 National Transportation Safety Board (NTSB) safety study concluded that glass cockpit aircraft (TAA) experience a lower total accident rate, but a higher fatal accident rate, than the same type of aircraft equipped with conventional analog instrumentation. (Refer to http://www.ntsb.gov/safety/safety-studies/Documents/SS1001.pdf.) The NTSB study also reported, "Even before electronic displays became common, anecdotal reports from flight crews, as well as findings from accidents and research, revealed potential problems if pilots relied too heavily on automated systems or if they misunderstood automated system behavior" (page 6). Automation can lull some pilots into complacency. Furthermore, automation bias presented a new breed of accident by creating the potential to erode a complacent pilot's manual flight skills. Automation bias refers to the willingness of the pilot to trust and utilize automated systems while feeling that the automation is more capable than the pilot. This perception may result in passive automation management (commonly referred to as "set and go"). Eroded skills can degrade the pilot's ability to recognize potential system issues and avoid or recover from LOC. The FAA strongly recommends that pilots who fly aircraft with automated flight systems manually control the aircraft at times to maintain manual flying skills. Pilots should actively manage automation by making use of all systems; cross-referencing data provided by the various systems; and monitoring and managing flight progress such as waypoints or checkpoints. Active automation management ensures enhanced SA while providing the opportunity for quick identification of automation failure.

2.2.3 Proficiency in Manual Aircraft Control. Pilots should be proficient in manual aircraft control and should be able to operate the aircraft without the use of the aircraft's automation. Advanced avionics and flight automation offer many levels of automation. Pilots need to understand that no one level of automation is appropriate for all flight situations. If a flight automation system failure occurs, in whole or in part, the pilot should possess the knowledge to address the situation. This may include isolating the defective components and/or manually flying the aircraft. In any event, manual flight may be necessary to ensure positive control of the aircraft while the pilot identifies problems and determines an appropriate course of action. All flight reviews conducted in aircraft equipped with automation should include training in manual aircraft control. In this case, the flight instructor should simulate failures of critical components of automation through safe and practical means. The instructor should never actually render an automated system inoperative, such as turning off switches or disengaging circuit breakers. For example, a flight instructor can simulate an automation failure simply by disengaging an integrated autopilot on an approach. The FAA strongly recommends that

pilots and flight instructors strive for proficiency in manual aircraft control to mitigate the risk of loss of aircraft control.

2.3 Runway Incursion Risks and Avoidance. Runway incursions, like other pilot deviations (PD), are usually due to pilot error. GA pilots are responsible for the largest percent of PDs in our National Airspace System (NAS). PDs occur in flight and on the ground. Airborne deviations include occurrences that result when a pilot does not maintain an assigned heading, altitude, or instrument procedure while conducting flight operations under an air traffic control (ATC) clearance, or when a pilot penetrates airspace requiring an ATC clearance without having received one. Ground deviations include taxiing, taking off or landing without clearance, not maintaining an assigned taxi route, and failing to hold short of an assigned clearance limit.[1] Although pilot airborne and ground deviations are avoidable, GA PDs continue to be the largest cause of runway incursions. Preventing runway incursions is one of the FAA's top priorities.[2] Flight instructors should also provide training to GA pilots to mitigate wrong surface landing incidents. Recently, the FAA Air Traffic Organization (ATO) has advised of an increase in wrong surface landings in the NAS. For more information, please refer to Safety Alert for Operators (SAFO) 17010, Incorrect Airport Surface Approaches and Landings. To understand and mitigate the risk of a runway incursion, GA pilots and flight instructors should become familiar with the following information.

2.3.1 Definition. The FAA formally defines a runway incursion as "any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take off of aircraft."[3] The FAA divides runway incursions into three incident (human error) types:

2.3.1.1 Pilot Deviation (PD). A PD is an action by a pilot that violates FAA regulations, such as taxiing an airplane on a runway or taxiway without authorization from ATC.

2.3.1.2 Operational Incidents (OI). An OI is an action by an air traffic controller that results in either less than the required minimum separation between two or more aircraft, or between an aircraft and obstacles (e.g., vehicles or people); or an aircraft landing or departing on a closed runway.

2.3.1.3 Vehicle or Pedestrian Deviations (V/PD). A V/PD is a pedestrian or vehicle entering any portion of the airport movement areas (runways or taxiways) without authorization from ATC.

[1] GAJSC Safety Enhancement Topic, Avoiding Pilot Deviations, September 2014: https://www.faa.gov/news/safety_briefing/2014/media/SE_Topic_09_2014.pdf.
[2] FAA, Reducing Runway Incursions: Guidance for Airports: http://www.faa.gov/airports/airport_safety/call_to_action/.
[3] FAA, Runway Safety: Runway Incursions: https://www.faa.gov/airports/runway_safety/news/runway_incursions/.

2.3.2 Categories. There are four categories of runway incursions:

1. Category A is a serious incident in which the pilot barely avoided a collision.
2. Category B is an incident in which separation decreases and there is a significant potential for collision, which may result in a time-critical evasive response to avoid a collision.
3. Category C is an incident characterized by ample time and/or distance to avoid a collision.
4. Category D is an incident that meets the definition of runway incursion, such as the incorrect presence of a single vehicle, person, or aircraft on the protected area of a surface designated for the landing and take off of aircraft, but with no immediate safety consequences.

2.3.3 Background. PDs were responsible for 63 percent of runway incursions in fiscal year (FY) 2012. GA pilots were responsible for more than 80 percent of the PDs. In addition, OIs accounted for 20 percent of runway incursions and V/PDs accounted for 17 percent that year.[4] For these reasons, the FAA is encouraging GA pilots and flight instructors to become familiar with industry best practices and mitigation procedures to avoid runway incursions.

2.3.4 Causal Factors of Runway Incursions. Detailed investigations of runway incursions over the past decade have identified three major areas (pilot errors) contributing to these events:[5]

1. Failure to comply with ATC instructions.
2. Lack of airport familiarity.
3. Nonconformance with standard operating procedures.

2.3.5 Challenges. Pilot proficiency, preflight planning, taxi procedures, runway confusion, SA, and the use of aircraft lights are all challenges that, if not properly managed, lead to deviations. Adverse weather, technology limitation, and complex airport designs are additional challenges that contribute to PDs such as runway incursions.

2.3.6 Runway Incursion Mitigation/Avoidance. As previously noted**,** runway incursions are generally the result of pilot error. To reduce this risk, pilots should adopt effective mitigation strategies to avoid runway incursions. Flight instructors should offer training that includes runway incursion avoidance strategies. Training and procedures developed in compliance with FAA policies and industry best practices reduce pilot errors and

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[4] FAA Office of the Inspector General Audit Report, Management Limitations May Hinder FAA's Ability to Fully Implement and Assess the Effectiveness of its Runway Safety Initiatives, Report Number: AV-2014-130 September 25, 2014, page 4: https://www.oig.dot.gov/sites/default/files/FAA%20Runway%20Safety%20Program%20Audit%20Report%5E9-25-14.pdf.

[5] FAA Pilot's Handbook of Aeronautic Knowledge 2016, Chapter 14, page 14-31, https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/pilot_handbook.pdf.

runway incursions. To meet this goal, pilots can take (and flight instructors should teach) the following steps:

2.3.6.1 **Step 1: Maintain Proficiency.** Receiving continuing education and training is an essential step that a pilot can take to ensure that he or she is proficient. Each pilot is unique and no pilot is proficient in all situations. Therefore, GA pilots should self-assess their aeronautical ability prior to conducting a flight as pilot in command (PIC). Poor training in any skill set increases the potential for an undesirable outcome. Poor radio communication skills, for example, have caused runway incursions. To reduce this risk, pilots should meet English language skill standards, understand and use correct pilot/controller terminology, and use proper voice cadence when communicating by radio. Lack of familiarity with airport markings can also lead to runway incursions. Some GA pilots tend to ignore signage when the pilot is familiar with an airport. Pilots who operate in the same environment most of the time may find themselves at a new airport and lack familiarity with signage. This places the pilot in a vulnerable position. GA pilots who do not have much experience or recency with ATC or controlled airport operations should work with a flight instructor to develop proficiency. These examples illustrate the need for continuing education and training. Familiarization with airport markings, airport operations, and ATC/pilot terminology are also important areas that a flight instructor should consider when conducting an IPC or flight review. Recurrent training, including a flight to a towered airport with an experienced flight instructor, is a good way to gain proficiency with airport operations and to develop the required skills to avoid runway incursions.

2.3.6.2 **Step 2: Plan Each Flight.** Planning is an essential step that GA pilots can take to avoid pilot errors and runway incursions. Pilots should plan each flight before it takes place, even when flying to a familiar airport. Preflight planning enables the pilot to gain SA and make an informed go/no-go decision. Flight planning should not merely include planning the route of flight; it should also include a review of pertinent airport diagrams. Taking time during the preflight planning process to review airport diagrams is essential. For example, airport diagrams often include “hot spots.” The FAA defines a hot spot as a location on an airport movement area with a history of potential risk of collision or runway incursion. Many airports with a high incidence of runway incursions have identified hot spots where incursions most frequently occur. Pilots can avoid the common errors related to runway incursions by being aware of each hot spot as it relates to the taxiways and runways. Airport hot spots are only one of many considerations in preflight planning. Circumstances change quickly. En route weather conditions or airport movement area closures is vital information. To be prepared, pilots need to review all information concerning the flight, including Notices to Airmen (NOTAM). Pilots should always obtain a standard briefing and review pertinent NOTAMs prior to each flight. Conducting preflight planning

prior to every flight places a pilot in a better position to avoid incidents, accidents, and runway incursions.

2.3.6.3 **Step 3: Use Set Procedures.** GA pilots should develop and adhere to set cockpit procedures based on regulatory requirements and industry best practices. Taking the step to develop and routinely use set procedures complements mandatory actions and reduces the risks of human errors and runway incursions. Pilots should also include the following items in their set cockpit procedures:

2.3.6.3.1 Passenger Briefing. GA pilots should always brief passengers prior to a flight operation. Determining the necessary components for developing or validating an effective passenger briefing begins in the planning stage of a flight. The passenger briefing should contain the pilot's instruction and procedures for minimizing distractions in the cockpit. It should also include all the pertinent elements prescribed by 14 CFR part 91, § 91.107(a)(1) and (2). Many proprietary checklists include the passenger briefing.

2.3.6.3.2 Checklist Usage. GA pilots should use an effective, aircraft-specific checklist as a matter of routine throughout all phases of aircraft operations. Pilots should complete all aircraft pretaxi checklist items prior to taxi.

2.3.6.3.3 Navigation and Communications (NAV/COM) Setup. Communications and navigation aids should be set up prior to taxi. Setting up radios and navigational aids on the roll are distractions; this is the leading cause of "heads down" in the cockpit. This in turn hinders the pilot's ability to see and avoid any conflicts while taxiing.

2.3.6.3.4 Copying Clearances. Most pilots have, or should develop, a shorthand method for copying an instrument flight rules (IFR) clearance. The same is true for a taxi clearance. Pilots should develop a set method to copy any type of taxi clearance. Pilots should write down and read back all clearances to ensure that the pilot establishes and maintains effective communications. As with any clearance, a readback for a taxi clearance is mandatory.

2.3.6.3.5 Sterile Cockpit. A sterile cockpit is another procedural step that pilots should take to reduce the risk of a runway incursion. A sterile cockpit means avoiding all conversations and actions not related to flight during critical phases of aircraft operations such as taxi, takeoff, and landings. A distraction-free cockpit should always include proper taxi procedures and no extraneous conversations or cell phone use.

2.3.6.3.6 Taxi Procedure. GA pilots should use proper taxi procedures to reduce the risk of an incident or accident. Maintaining an appropriate taxi speed is a crucial element of an effective taxi procedure.

2.3.6.4 Step 4: Prevent Taxi Confusion. Pilots can take additional steps to reduce the risk of confusion during ground operations. Taxi confusion most commonly occurs when a pilot is taxiing at an unfamiliar airport. Low-visibility conditions increase the potential for confusion. Pilots have the option to request progressive taxi instructions when taxiing at a controlled airport. Progressive taxi instructions are an excellent mitigation strategy to ensure compliance with taxi clearances. This procedure is especially useful at unfamiliar controlled airports. Receiving progressive taxi instructions is an effective strategy to prevent runway incursions. Pilots should have access to the airport diagram when taxiing. Pilots may use the same diagram that they used during the preflight planning process. Airport diagrams are designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations. Runway confusion occurs when pilots confuse the identity of a runway. This is another example of an error that an effective set operating procedure can prevent. Setting the heading bug to the assigned runway heading, when a runway assignment is given, provides a method to ensure that the pilot identifies the correct runway. Familiarity with airport markings comes into play here, too. Reading all available signs and verifying them with the runway assignment should be part of a pilot's set procedure. The critical part is to include these actions into the set procedure and use the procedure on every flight. A comprehensive and set taxi procedure will help to prevent an unwanted event such as a runway incursion.

2.3.6.5 Step 5: Ensure Situational Awareness (SA). Ensuring SA is another step that begins with preflight planning. Some pilots only think of SA in terms of flight operations. Reframing SA to cover all phases of flight is one more step in reducing pilot errors. While maintaining SA is important in all circumstances, it is particularly important when operating at an airport without an operating control tower. To achieve SA, pilots should be fully aware of their intended taxi route and be able to follow the planned route correctly. To maintain SA, pilots should always adopt a heads-up attitude when taxiing. This industry best practice is also a step to reduce the risk of an inadvertent runway incursion.

2.3.6.6 Step 6: Manage Aircraft Lights. Use of aircraft lights is an additional procedure that GA pilots often overlook. Exterior aircraft lights may be used to make an aircraft operating on the airport surface more conspicuous. Aircraft lights allow others to have some idea of the pilot's intentions. Proper use of aircraft lights should be a defined element in every pilot's set procedures. One example of how this might help prevent runway incursion is that airmen assume that an aircraft's landing light will be on when it is ready to take off. If ATC issues a "line up and wait" (LUAW) clearance and the pilot mistakenly plans to take off, the tower may notice the landing lights on and call for confirmation so that a mishap is avoided.

2.3.7 The FAA Safety Team (FAASTeam). Because GA PDs comprise the greatest percent of all runway incursions, the FAA has increased its outreach efforts through its Flight Standards FAASTeam program. The FAASTeam program provides outreach to GA pilots on topics concerning aviation safety. For example, the FAASTeam addresses local runway safety issues by posting hot spot charts, runway safety bulletins, runway safety event notices, and other materials on its website, https://www.faasafety.gov/. Additionally, the FAASTeam also provides web-based training. Pilots and flight instructors should become familiar with all FAASTeam resources to learn more about runway incursions.

2.3.8 FAA Recommendations. GA runway incursions are too common. Sometimes they result in tragedy. Pilots and flight instructors need to 1) understand the root causes of runway incursions, 2) be aware of industry best practices to mitigate runway incursions, and 3) integrate the steps described above into effective set procedures to avoid runway incursions. In addition, GA pilots should apply this information to their personal currency programs. Flight instructors should apply runway incursion avoidance strategies in their training and pilot evaluation plans of action. You can find additional runway incursion information and mitigation resources at https://www.faa.gov/airports/runway_safety/.

2.4 Flight Instructor Responsibility and Safety Culture. The only contact that many pilots may have with an aviation authority is through their instructors. Flight instructors are professionals who play a vital role in ensuring aviation safety. Consequently, flight instructors are the cornerstone of aviation safety. They mentor pilot safety practices as they mitigate aviation accidents by providing pilot flight training and conducting pilot evaluations. In other words, flight instructors bear a responsibility to produce and sustain the safest pilots possible.

2.4.1 Mentoring Competency. A flight instructor's actions influence the GA safety culture. The FAA expects all flight instructors to adhere to the highest training standards and safety practices. Flight instructors should be fully qualified in every role they perform. For example, and as discussed further in paragraph 4.2.5, the flight instructor should be qualified in each specific aircraft M/M in which they provide instruction. For this reason, flight instructors should consider their personal qualifications prior to accepting any instructional or pilot evaluation role. This is an important consideration for conducting a flight review, IPC, or specialized flight training, such as transition training in a specific TAA. If a flight instructor is not proficient in an aircraft or specialized field of instruction, the flight instructor should always be honest and decline to provide flight training or a pilot evaluation in an unfamiliar aircraft or role. As an alternative, the flight instructor should assist the pilot in finding an experienced flight instructor who is qualified to fill the flight instructor role in the specialized aircraft or field of interest. The FAA's optional Best Practices for Mentoring in Flight Instruction provides additional tips for aviation mentors. You can find this publication at https://www.faa.gov/training_testing/training/media/mentoring_best_practices.pdf.

2.4.2 FAA/Industry Safety Recommendations. Flight instructors are required to be knowledgeable and up-to-date on issues critical to aviation safety. Government/industry safety recommendations help flight instructors meet this responsibility. GAJSC findings and recommendations, NTSB safety reports, and the Aircraft Owners and Pilots Association's (AOPA) Air Safety Institute's Joseph T. Nall Reports all provide critical safety information. Flight instructors should incorporate this information into the training they provide. Utilizing and disseminating this critical information when promoting personal currency programs, providing effective flight reviews, and conducting IPCs helps to build a positive safety culture that can reduce GA accidents.

CHAPTER 3. RECENT FLIGHT EXPERIENCE

3.1 Recent General Experience. Title 14 CFR Part 61, § 61.57(a), General Experience, and (b), Night Takeoff and Landing Experience, specify the minimum requirements for recent flight experience, specifically takeoffs and landings, in each category and class of aircraft in order to act as pilot in command (PIC) of an aircraft carrying passengers.

3.1.1 Requirements Specified in § 61.57(a) and (b). Pilots should regard these requirements as minimums that should be modified to address factors such as overall pilot experience, different operating environments, complexity of the facilities used, and variations in makes and models (M/M) of aircraft within specific categories and classes. For example, a pilot may meet recent flight experience in a given M/M of aircraft but may have operated only in light or moderate wind conditions at airports with long runways. The pilot should consider acquiring additional takeoff and landing experience in stronger wind conditions or at airports with short runways before acting as PIC of an aircraft carrying passengers in similar conditions. Under some circumstances, the change in the customary operating environment may be great enough that the pilot should seek flight instruction before attempting solo operations.

3.1.2 Night Currency Requirements. Night currency requirements deserve additional consideration. The night experience of most pilots represents only a small portion of their total flight time. The impact of marginal weather conditions on night operations is so significant that pilots should evaluate their own need for both increased proficiency and additional planning when contemplating flights under marginal conditions at night.

3.1.3 Obtaining Currency for Each Make and Model (M/M). Special considerations apply when pilots operate aircraft M/Ms they do not customarily fly. Analysis of accident data has shown that accident rates increase for pilots with little or no time in aircraft type flown. Section 61.31 specifies additional requirements that apply to operating aircraft (e.g., tailwheel, complex, high-performance, turbine, or large aircraft) that may require a type rating, specific training endorsement, authorization, and/or additional experience requirements for that aircraft or operation. For non-high-performance small aircraft, the basic currency requirements of § 61.57(a) and (b) apply only to category and class. For example, a pilot who meets the requirements in a Cessna 152 would also meet the requirements in a Cessna 172. However, the FAA recommends that pilots attain currency in each separate M/M before conducting passenger-carrying operations. This currency should include familiarity with the pilot's operating handbook (POH), the Airplane Flight Manual (AFM), and/or any other available information on that aircraft. The FAA recommends that all pilots obtain a comprehensive checkout in each M/M aircraft from an appropriately rated flight instructor. Airmen are encouraged to search for aircraft "clubs" for information and familiarization on specific M/Ms. AC 90-109, Transition to Unfamiliar Aircraft, provides additional information and guidance pertaining to transition to experimental and/or unfamiliar airplanes.

Note: Considerations regarding basic currency apply not only to single-engine land airplanes but to other categories and classes of aircraft, including multiengine aircraft, seaplanes, gliders, helicopters, gyroplanes, and free balloons.

3.2 Recent Instrument Flight Rules (IFR) Experience. When conducted in accordance with § 61.57(c) and as qualified and approved by the Administrator, pilots may perform the six required approaches, holding procedures and tasks, and intercepting and tracking courses through the use of navigational electronic systems (all aircraft except gliders) in an FAA-qualified full flight simulator (FFS) or flight training device (FTD). Furthermore, this instrument experience must be accomplished in a program approved by the Administrator (§ 61.4). An FAA-approved Aviation Training Device (ATD) may be used (refer to AC 61-136, FAA Approval of Aviation Training Devices and Their Use for Training and Experience) to accomplish instrument currency as specified in the FAA letter of authorization (LOA) provided for each ATD model.

CHAPTER 4. FLIGHT REVIEW

4.1 Intent and Structure of the Flight Review.

4.1.1 Intent of Flight Review. The purpose of the flight review required by 14 CFR part 61, § 61.56 is to provide for a regular evaluation of pilot skills and aeronautical knowledge. Consequently, a flight review is a routine evaluation of a pilot's ability to conduct safe flight. In effect, it is a proficiency-based exercise in which the airman is required to demonstrate the safe exercise of the privileges of his or her pilot certificate. The flight instructor should be aware that the flight review is not a test or checkride, but rather a training event in which proficiency is evaluated. Section 61.56 states that the review must consist of a minimum of 1 hour of ground training and a minimum of 1 hour of flight training, except as provided for in § 61.56(b), (d), and (e). However, all flight instructors should fully understand that § 61.56(a)(2) requires the instructor to conduct "a review of those maneuvers and procedures that, at the discretion of the person giving the review, are necessary for the pilot to demonstrate the safe exercise of the privileges of the pilot certificate." If the pilot does not demonstrate the proficiency to conduct safe flight, then more training is required. For this reason, the FAA reminds flight instructors that a flight review may require more than 1 hour of ground training and 1 hour of flight training. Since satisfactory completion of a flight review is based on pilot proficiency, it is up to the instructional service provider to determine what type of instruction is required and how much additional training time, if any, is required to ensure that the pilot has the necessary knowledge and skills to conduct safe flight operations. While flight instructors are encouraged to manage the expectations of the pilot under review and discuss the outline of the flight review with the pilot, it is the flight instructor that ultimately determines the total training time required for a flight review.

4.1.2 Structure of Flight Review. For the reasons previously discussed, a flight instructor should not develop a flight review plan of action based on regulatory minimums. Instead, a flight instructor should develop a plan based on achieving a flight proficiency and knowledge level that meets regulatory requirements. Section 61.56 states that a flight review must include a review of the current general operating and flight rules of 14 CFR part 91. It also states that a person conducting the review has the discretion to determine the maneuvers and procedures necessary for the pilot under review to demonstrate "safe exercise of the privileges of the pilot certificate." With the increasing complexity of the aviation operating environment, flight instructors are encouraged to structure the flight review and develop a plan of action that is specific to the needs of the pilot under review. The FAA has provided the following recommended guidance in this section to help flight instructors develop a plan of action for an effective flight review.

Note: The Private Pilot Airman Certification Standards (ACS) (FAA-S-ACS-6) and the Commercial Pilot ACS (FAA-S-ACS-7) have replaced the corresponding practical test standards (PTS) for airplane applicants. Applicants in other categories should continue to use the current version of the appropriate PTS. Instructors should always check the FAA website's Airman Testing page to ensure use of the most current versions of the ACS/PTS at https://www.faa.gov/training_testing/testing/.

4.1.2.1 Accomplishing a Flight Review. Under § 61.56(c) no person may act as pilot in command (PIC) of an aircraft, except as provided in § 61.56(d), (e), and (g), unless within the preceding 24 calendar-months that person has accomplished a satisfactory flight review in an aircraft for which that pilot is appropriately rated. An authorized instructor or other person approved by the Administrator must conduct the flight review.

4.1.2.2 Completing the FAA Pilot Proficiency Program (WINGS) (One or More Phases). Under § 61.56(e), a person who has satisfactorily completed one or more phases of the FAA-sponsored WINGS within the preceding 24 calendar-months does not need to accomplish the flight review requirements of this section. AC 61-91, WINGS—Pilot Proficiency Program, describes how flight instructors should encourage pilots to participate in WINGS.

4.1.2.3 Completing Proficiency Checks and Ratings.

4.1.2.3.1 Pilots and flight instructors should be aware that, under § 61.56(d), there is no requirement for pilots who have completed certain proficiency checks and ratings within the preceding 24 calendar-months to accomplish a separate flight review. These accomplishments include satisfactory completion of pilot proficiency checks conducted by the FAA, an approved pilot check airman, a Designated Pilot Examiner (DPE), or one of the U.S. Armed Forces for a pilot certificate, rating, or operating privilege.

Note: Effective November 15, 2013, a change to § 61.56(d) permits an airman who passes a practical test for issuance of a flight instructor certificate, a practical test for the addition of a rating to a flight instructor certificate, a practical test for renewal of a flight instructor certificate, or a practical test for the reinstatement of a flight instructor certificate, to meet the 24-calendar-month flight review requirements. Refer to Federal Register (FR) Docket No. FAA-2013-0780, Amdt. No. 61-131 at https://www.gpo.gov/fdsys/pkg/FR-2013-09-16/pdf/2013-22485.pdf.

4.1.2.3.2 However, the FAA recommends that pilots consider also accomplishing a review under some of the following circumstances. For example, a pilot with an Airplane Single-Engine Land (ASEL) rating may have recently obtained a glider rating, but may still wish to consider obtaining a flight review in a single-engine airplane if the appropriate 24-calendar-month period has nearly expired. When approached by pilots seeking advice on such matters, flight instructors should consider the factors described in the following paragraphs.

4.2 Pre-Review Considerations. Before undertaking the review, the flight instructor should interview the pilot to determine the nature of his or her flying and operating requirements. Elements to consider should include, but not be limited to, the following areas:

4.2.1 Type of Equipment Flown.

4.2.1.1 Section 61.56(c)(1) states that to act as a PIC, a pilot must accomplish a flight review in an aircraft for which that pilot is rated. A pilot might hold multiple ratings. In such cases, the pilot may take a flight review in any one of the aircraft for which he or she holds a rating or operating privilege, and he or she will have met the regulatory requirement for all aircraft for which he or she holds a certificate and/or rating. For example, a pilot who holds a private pilot certificate with an ASEL rating and a commercial balloon certificate may take a flight review in either aircraft and will have met the requirements of the rule for both. However, a pilot may not take a flight review in an aircraft for which he or she does not hold a rating or operating privilege. For example, that same ASEL-rated pilot may not take a flight review in a Multiengine Land (MEL) airplane if he or she does not hold an MEL airplane rating. A pilot who holds only a sport pilot certificate may only take a flight review in a light-sport aircraft for which he or she holds an operational privilege. For example, a sport pilot who holds airplane privileges could not take the flight review in a Cessna 172, because that airplane is not a light-sport airplane and he or she does not hold operating privileges for that airplane.

4.2.1.2 The reviewed maneuvers and procedures will vary depending on the category, class, and make and model (M/M) of the aircraft used. For example, a review in a light multiengine aircraft will be different from one conducted in a small, two-seat tailwheel aircraft that utilizes limited instrumentation. The flight instructor may wish to recommend that the pilot complete the review in the aircraft most commonly flown, or in a more complex M/M if he or she regularly flies several aircraft. The flight instructor may also wish to recommend that the pilot take a review in more than one category/class of aircraft under certain circumstances. For example, a pilot with ASEL and glider ratings may have flown only gliders in the last 2 years but is also contemplating flying single-engine airplanes in the near future. If a pilot who requests a review only in the glider approaches a flight instructor, the flight instructor may wish to recommend an additional review by a qualified person in a single-engine airplane before the pilot acts as PIC of a single-engine airplane.

4.2.2 Nature of Flight Operations. The flight instructor should consider the type of flying usually done by the pilot before establishing a plan of action for conducting the review. For example, a pilot conducting long-distance flights between busy terminal areas may need a different review than a pilot who usually flies in the local area from the same airport. The flight instructor should consider the need for an indepth review of certain subjects or procedures if the type of flight operations is likely to change, or if other

extenuating circumstances exist. For example, a pilot who normally conducts only local flight operations may plan to begin flying to a location with Class B Airspace. Another pilot may only operate a two-seat aircraft without radio but will operate in close proximity to Class B Airspace. In both cases, the flight instructor should include Class B Airspace operating requirements and procedures in the flight review. This review should also include pertinent revisions to operational regulations to ensure that the pilot has full knowledge of these changes.

4.2.3 Amount and Recency of Flight Experience. The flight instructor should review the pilot's logbook to determine total flight time, time in type, and recency of experience in order to evaluate the need for particular maneuvers and procedures in the review. For example, a pilot who has not flown in several years may require an extensive review of basic maneuvers from the PTS or ACS appropriate to that pilot's certificate level. The same pilot may also require a more extensive review of part 91, including changes in airspace and other requirements. Another pilot who is transitioning to a newer, faster, or technically advanced aircraft (TAA) should receive more emphasis on knowledge of aircraft systems and performance, or in cross-country procedures appropriate to a faster airplane. Regardless of flight experience, the flight instructor should ensure that the review plan of action includes all areas in which he or she determines the pilot should receive training in order to operate safely. In some cases, the flight instructor may wish to recommend that the pilot accomplish a complete refresher program.

4.2.4 Agreement on the Conduct of the Review. After completing the above analysis, the flight instructor should review these considerations with the pilot and reach an understanding regarding how he or she will conduct the review. The flight instructor should also review the criteria for satisfactory completion of the review with the pilot. The flight instructor may wish to provide the pilot with reading materials or recommend publications for study before actually undertaking the flight review. For example, the FAA Safety Team (FAASTeam) provides many free online "Wings Courses for Pilots," which includes a free online flight review preparation course, ALC-25, Flight Review Prep Guide. You can find this course at https://www.faasafety.gov/gslac/ALC/course_catalog.aspx.

4.2.5 Instructor Qualifications. Instructors should also consider their own experience and qualifications in a given M/M aircraft prior to giving a review in that model. The flight instructor conducting a flight review must hold a category, class, and (if appropriate) type rating on his or her pilot certificate. Also, the instructor must have a category and class rating on his or her flight instructor certificate or a sport instructor privilege in his or her logbook appropriate to the aircraft in which he or she conducts the review. To conduct a flight review in a multiengine airplane, the instructor must hold an airplane multiengine rating on his or her pilot and flight instructor certificate. For aircraft in which the flight instructor is not current or with which he or she is not familiar, he or she should obtain recent flight experience or sufficient knowledge of aircraft limitations, characteristics, and performance before conducting the review. In any case, the flight instructor must observe the rating limitations of § 61.195.

4.3 Planning and Recording the Review. In addition to considering the information in this chapter and Appendices D through F of this AC, a flight instructor may elect to use the FAA's online guidance, Conducting an Effective Flight Review, available at https://www.faa.gov/pilots/training to prepare, conduct, and document the flight review. After reaching an agreement on how the flight instructor will conduct the review, he or she should prepare a plan of action for completing the review. The plan of action should include a list of regulatory subjects that the flight instructor will cover, the maneuvers and procedures that the pilot will need to accomplish, the anticipated sequence in which the segments will occur, and the location where the flight instructor will perform the review. You can find a suggested flight review plan of action format in Appendix D. Although not required by § 61.189, the flight instructor may wish to retain this plan of action (job aid) for an appropriate period as a record of the scope and content of the flight review. Additionally, the flight instructor may wish to submit an FAA Form 8710-1, Airman Certificate and/or Rating Application, to AFB-720. When submitted, AFB-720 will add the application to the pilot's record (see paragraph 1.10.2).

4.3.1 Review of Part 91 Operating and Flight Rules. The flight instructor should tailor the review of general operating and flight rules to the needs of the pilot under review. The objective is to ensure that the pilot can comply with all regulatory requirements and operate safely in various types of airspace under an appropriate range of weather conditions. As a result, the flight instructor should conduct a review that is broad enough to meet this objective, yet provide a more comprehensive review in those areas in which the pilot's knowledge is weaker. In the latter instance, the flight instructor may wish to employ a variety of references/sources, such as the Aeronautical Information Manual (AIM), to ensure that the pilot's knowledge meets current standards.

4.3.2 Pilot Deviations (PD). The occurrence of incidents and PDs has emphasized the need to ensure that all pilots receive adequate briefing on PD avoidance awareness. PDs are broadly categorized as airborne or ground. Airborne PDs include altitude and heading deviations and airspace violations. Ground PDs include runway incursions and any other unauthorized operation in the movement areas of an airport (see paragraph 2.3 for more information). Pilots should be familiar with all types of airspace, ground operating procedures, and best practices to avoid potential PDs. The flight review may be the only regular proficiency and recurrency training experienced by some pilots. Therefore, flight instructors should place appropriate emphasis on this part of the review.

4.3.3 Automation Competency. Occurrences of incidents and accidents due to a pilot's lack of proficiency with aircraft automation have emphasized the need to ensure that all pilots are fully competent with the automated systems equipped in the aircraft flown. Automation competency is the pilot's ability to understand and operate a given aircraft's automated systems. The flight instructor should consider the type of automation the pilot regularly uses before establishing the plan of action for conducting his or her flight review. When conducting the check in an aircraft with automation, the instructor should evaluate the pilot's automation competency. Pilots transitioning to TAA should receive specialized transition training from a qualified flight instructor with experience with the specific equipment used.

4.3.4 Angle of Attack (AOA) Systems. The FAA, along with the General Aviation Joint Steering Committee (GAJSC), is promoting AOA systems as one of the many safety initiatives aimed at reducing the General Aviation (GA) accident rate. AOA indicators will specifically target loss of control (LOC) accidents. LOC is the number one root cause of fatalities in GA. More than 25 percent of GA fatal accidents occur during the maneuvering phase of flight. Of those accidents, half involve stall/spin scenarios. Technology such as AOA indicators can have a tremendous impact on reversing this trend and are increasingly affordable for GA airplanes. During the flight review, if the airplane is equipped with an AOA indicator, the flight instructor should evaluate its use and correct interpretation of cues gained by referencing the AOA indicator by the pilot receiving the flight review. If the airplane is not equipped with an AOA indicator, the flight instructor should emphasize the importance of this item and evaluate the pilot's general knowledge of aerodynamic principles relating to AOA.

4.3.5 Review of Maneuvers and Procedures.

4.3.5.1 The maneuvers and procedures covered during the review are those that, in the opinion of the flight instructor conducting the review, are necessary for the pilot to perform to demonstrate that he or she can safely exercise the privileges of his or her pilot certificate. Accordingly, the flight instructor should evaluate the pilot's skills and knowledge to the extent necessary to ensure that he or she can safely operate within regulatory requirements throughout a wide range of conditions. The flight instructor should always include abnormal and emergency procedures applicable to the aircraft flown in the flight review. For a satisfactory flight review, the pilot should be able to perform all maneuvers in accordance with the ACS or PTS, as applicable, for the pilot certificate that he or she holds. Therefore, the FAA encourages the use of ACS/PTS during flight reviews.

4.3.5.2 The flight instructor may wish to prepare a preliminary plan of action for the flight review based on an interview or other assessment of the pilot's qualifications and skills. See Appendix D for suggested interview questions. Appendix D provides a sample flight instructor flight review checklist. The flight instructor should outline a sequence of maneuvers to the pilot taking the review. For example, this may include a cross-country flight to another airport with maneuvers accomplished while en route. It could also include a period of simulated instrument flight time. The flight instructor should request that the pilot conduct whatever preflight preparation is necessary to complete the planned flight. This preparation should include all items required in part 91, § 91.103, such as checking weather, calculating required runway lengths, calculating Weight and Balance (W&B), completing a flight log, filing a flight plan, and conducting the preflight inspection.

4.3.5.3 Before beginning the flight portion of the review, the flight instructor should discuss various operational areas with the pilot. This oral review should include, but not be limited to, areas such as aircraft systems, speeds, performance, meteorological and other hazards (e.g., wind shear and wake

turbulence), operations in controlled airspace, and abnormal and emergency procedures. The emphasis during this discussion should be on practical knowledge of recommended procedures and regulatory requirements.

4.3.5.4 Regardless of the pilot's experience, the flight instructor should review at least those maneuvers considered critical to safe flight, such as:

- Takeoffs;
- Stabilized approaches to landings;
- Slow flight;
- Stall recognition, stalls, and stall recovery;
- Spin recognition and avoidance;
- Recovery from unusual attitudes; and
- Operating the aircraft by sole reference to instruments under actual or simulated conditions.

4.3.5.5 Based on his or her in-flight assessment of the pilot's skills, the flight instructor may wish to add other maneuvers from the PTS/ACS appropriate to the pilot's grade of certificate. Appendix D includes a recommended job aid (flight review checklist), including a list of suggested maneuvers. The FAA does not intend this list to be all-inclusive, nor does it limit a flight instructor's discretion in selecting other appropriate maneuvers and procedures. To the greatest possible extent, the flight instructor should organize and sequence the selected maneuvers in a realistic scenario appropriate to the kind of flying normally done by the pilot.

4.3.5.6 The role of the flight instructor during the review is to provide an evaluation. However, the instructor is not limited to this role and may provide specific instruction to an airman on any areas the instructor notes as being weak. This additional instruction does not preclude the pilot's successful completion of the review as long as the deficiencies are corrected. If the additional instruction does not correct the deficiencies, and/or it becomes apparent to the instructor that additional flights will be necessary, the flight instructor should discuss the situation with the pilot and proceed accordingly.

4.4 Postreview Considerations. Upon completion of the review, the flight instructor should complete the summary and evaluation portion of the flight review checklist (if used) and debrief the pilot. Whether or not the review was satisfactory, the flight instructor should provide the pilot with a comprehensive analysis of his or her performance, including suggestions for improving any weak areas. FAA-H-8083-9, Aviation Instructor's Handbook, chapter 5, provides specific suggestions for conducting the postflight evaluation discussion as a "collaborative critique."

4.4.1 Unsatisfactory Completion of the Review. The FAA does not intend the flight review to be a checkride. If the review is not satisfactory, the flight instructor should log the flight as "dual instruction given" and not as a "failure." If the pilot does not perform well enough for the flight instructor to endorse him or her for satisfactory completion of the flight review, the instructor should use the applicable ACS or PTS as the objective standard to discuss areas needing improvement, as well as areas where the pilot performed well. In this case, the flight instructor should offer a practical course of action—ground training, flight training, or both—to help the pilot under review to return to proficiency standards. The flight instructor should then recommend additional training in the areas of the review that were unsatisfactory. A pilot who does not receive an endorsement for a satisfactory flight review may continue to exercise the privileges of his or her certificate, provided that a period of 24 calendar-months has not elapsed since the pilot completed at least one of the requirements that satisfies the flight review event as specified in § 61.56. However, a pilot may not act as PIC of an aircraft if that pilot's flight review has elapsed.

4.4.2 Satisfactory Completion of the Review. When the applicant has successfully completed the review, the flight instructor should endorse the pilot's logbook to certify that the pilot has satisfactorily accomplished the flight review. The flight instructor should make the endorsement for a satisfactory review in accordance with AC 61-65, Certification: Pilots and Flight and Ground Instructors. The flight and ground time must also be logged in the pilot's logbook in accordance with § 61.51(a)(1).

CHAPTER 5. INSTRUMENT PROFICIENCY CHECK

5.1 Structuring an Instrument Proficiency Check (IPC). Title 14 CFR part 61, § 61.57(d) outlines the requirements for an IPC. This chapter provides guidance on the conduct of e IPC. In addition, flight instructors may wish to use the FAA's optional online guidance document, available at https://www.faa.gov/pilots/training/ ("Instrument Proficiency Check (IPC) Guidance"), to structure, conduct, and document the IPC. Appendix J provides an optional IPC checklist as an instructor job aid resource for conducting an IPC. FAA Instrument Rating Practical Test Standards (PTS) or Instrument Rating—Airplane Airman Certification Standards (ACS), as applicable, outline the required maneuvers conducted in an IPC (see paragraph 5.3).

Note: The Instrument Rating Airplane ACS (FAA-S-ACS-8) has replaced Instrument Rating—Airplane, Helicopter, and Powered Lift PTS (FAA-S-8081-4E) for airplane applicants. Helicopter and powered-lift applicants should continue to use FAA-S-8081-4E. Instructors should always check the FAA website's Airman Testing page to ensure use of the most current versions of the ACS/PTS at https://www.faa.gov/training_testing/testing/.

5.1.1 Instructor Requirements to Conduct an IPC. The flight instructor must hold an instrument rating on his or her pilot certificate and flight instructor certificate that is appropriate to the category and class of aircraft used for the IPC. For example, an IPC conducted in a multiengine airplane requires a flight instructor who holds both multiengine and instrument ratings on his or her pilot and flight instructor certificate. The basis for flight instructor privileges and limitations is found in §§ 61.193 and 61.195. The flight instructor should also meet currency requirements for his or her pilot and flight instructor certificate.

Note: In addition to having the appropriate instructor ratings, the flight instructor should consider other factors relating to his or her ability to conduct an IPC. These include the factors discussed for the flight review, as well as the instructor's own instrument currency.

5.1.2 Conducting an IPC. A flight instructor may conduct all or part (as specified in FAA-S-ACS-8 (Airplanes Only) or FAA-S-8081-4, Instrument Rating Practical Test Standards for Helicopter and Powered Lift) of the IPC in an FAA-approved full flight simulator (FFS), flight training device (FTD), or Aviation Training Device (ATD) as appropriate. If the IPC is accomplished in an FFS or FTD qualified under 14 CFR part 60, that IPC checking program must receive approval by the FAA Administrator (§ 61.4). Guidance on what IPC instrument tasks can be accomplished in an FFS, FTD, or ATD is located in the current instrument PTS or ACS, as appropriate.

Note: Advanced aviation training devices (AATD) and basic aviation training devices (BATD) collectively make up the two categories of FAA-approved ATDs. Only AATDs may be used for the IPC. The flight instructor should review the ATD letter of authorization (LOA) for the specific credit allowances provided for that training device model.

5.1.3 Precheck Considerations. The flight instructor should structure an IPC in a manner similar to that of the flight review, tailoring the check to the needs of the pilot.

5.1.3.1 The flight instructor and pilot should discuss the operating conditions under which the flight instructor will conduct the check. If the flight instructor conducts the check in an aircraft, the check may be under visual flight rules (VFR) or instrument flight rules (IFR) in simulated instrument conditions, or it may be under IFR in actual instrument conditions. If the flight instructor conducts the check under IFR, or while under VFR conditions simulating instrument meteorological conditions (IMC) with a view-limiting device, it is the flight instructor's responsibility to constantly remain vigilant to other aircraft throughout all phases of the flight.

5.1.3.2 The Pilot's Instrument Experience Summary in Appendix G is available to help the flight instructor structure an appropriate ground review for the IPC. A table in FAA-S-8081-4 lists the maneuvers required for successful completion of the IPC.

5.1.3.3 As with the flight review, the flight instructor should develop a plan of action that uses realistic scenarios to organize and sequence the required tasks and maneuvers. Appendix H contains a sample plan of action for conducting the proficiency check. The flight instructor should also discuss crewmember roles and responsibilities with the pilot.

5.1.4 Agreement on the Conduct of the IPC. After completing the above analysis, the flight instructor should review these considerations with the pilot and reach an understanding regarding how he or she will conduct the IPC. The flight instructor should also review the criteria for satisfactory completion with the pilot under review. The flight instructor may wish to provide the pilot with reading materials or recommend publications for study before actually undertaking the IPC. For example, the FAA Safety Team (FAASTeam) provides many free online "Wings Courses for Pilots," which includes a free online IPC preparation course, ALC-38, Instrument Proficiency Check Review Guide. You can find this course at https://www.faasafety.gov/gslac/ALC/course_catalog.aspx.

5.2 IPC Knowledge Portion.

5.2.1 Determining the Pilot's IFR Knowledge. The flight instructor determines whether the pilot has adequate knowledge and understanding of 14 CFR part 91, especially Subpart B, Flight Rules; Subpart C, Equipment, Instrument, and Certificate Requirements; and Subpart E, Maintenance, Preventive Maintenance, and Alterations. Additionally, the flight instructor determines that the pilot has adequate knowledge and understanding of the following areas:

1. Instrument en route and approach chart interpretation, including Standard Instrument Departures (SID), Obstacle Departure Procedures (ODP), Standard Terminal Arrival Routes (STAR), and Area Navigation (RNAV)/Global

Positioning System (GPS)/wide area augmentation system (WAAS) procedures.

2. Obtaining and analyzing weather information, including knowledge of hazardous weather phenomena, such as icing and convective activity.
3. Preflight planning, including aircraft performance, Notices to Airmen (NOTAM) information (including temporary flight restrictions (TFR)), fuel requirements, alternate requirements, and use of appropriate FAA publications such as the Airport/Facility Directory (A/FD).
4. Aircraft systems related to IFR operations, including appropriate operating methods, limitations, and emergency procedures due to equipment failure.
5. Aircraft flight instruments and navigation equipment, including characteristics, limitations, operating techniques, and emergency procedures due to malfunction or failure, such as lost communications and automation failure procedures.
6. Determining the airworthiness of the aircraft for instrument flight, including required inspections and documents.
7. Air traffic control (ATC) procedures pertinent to flight under IFR, with emphasis on elements of ATC clearances and pilot/controller responsibilities.
8. A general working knowledge of aerodynamic principles relating to angle of attack (AOA) and the purpose, operation, and limitations of AOA indicators (if installed).

5.2.2 Evaluation of the Pilot's Instrument Flight Proficiency. Following the discussion of the above subjects, the flight instructor should ask the pilot to prepare for the skill portion of the IPC by completing the necessary flight planning, obtaining current weather data, filing a flight plan, and conducting the preflight inspection. In order to fully evaluate the pilot's skills under normal operating conditions, the flight instructor may wish to have the pilot conduct a short IFR cross-country flight with at least part of the flight conducted "in the system" under IFR.

5.3 IPC Skill Portion. The maneuvers and procedures selected for the IPC must include those listed in the Rating Task Table in FAA-S-ACS-8 or FAA-S-8081-4, as applicable. The flight instructor conducting the IPC has the discretion to require any other maneuver(s) necessary to determine that the pilot can safely operate under IFR in a broad range of conditions appropriate to the aircraft flown and the ATC environment selected. The flight instructor should emphasize proper adherence to ATC clearances. Regardless of the maneuvers and procedures selected, the flight instructor should ensure that the pilot demonstrates satisfactory basic attitude instrument flying skills. For checks conducted in an airplane but not under actual instrument weather conditions, the flight instructor should employ an appropriate view-limiting device to simulate instrument conditions. As an aid to the flight instructor, Appendix J contains a sample flight instructor IPC checklist for conducting the IPC.

5.4 Post-IPC Considerations and Recordkeeping. Upon completion of the proficiency check, the flight instructor may wish to complete the summary and evaluation portion of the checklist and debrief the pilot on the results of the check. Regardless of the determination, the flight instructor should provide the pilot with a comprehensive analysis of his or her performance, including suggestions for improving any weak areas. Chapter 5 of the Aviation Instructor's Handbook (FAA-H-8083-9) provides specific suggestions for conducting the postflight evaluation discussion as a "collaborative critique."

5.4.1 Unsatisfactory Performance. As with the flight review, the flight instructor should not endorse the pilot's logbook to reflect an unsatisfactory IPC. Rather, the flight instructor should log the session as "dual instruction given."

5.4.2 Satisfactory Performance. The endorsement for a satisfactory proficiency check should be in accordance with AC 61-65, Certification: Pilots and Flight and Ground Instructors. You can find a suggested IPC plan of action format in Appendix J. Although not required by § 61.189, the flight instructor may wish to retain this plan of action (job aid) for an appropriate period as a record of the scope and content of the IPC. Additionally, the flight instructor may wish to submit an FAA Form 8710-1, Airman Certificate and/or Rating Application, to AFB-720. When submitted, AFB-720 will add the application to the pilot's record (see paragraph 1.10.2).

APPENDIX A. RESOURCES

A.1 FAA Documents (current editions).

1. Advisory Circulars (AC): http://www.faa.gov/regulations_policies/advisory_circulars/:
   - AC 60-28, FAA English Language Standard for an FAA Certificate Issued Under 14 CFR Parts 61, 63, 65, and 107.
   - AC 61-65, Certification: Pilots and Flight and Ground Instructors.
   - AC 61-89, Pilot Certificates: Aircraft Type Ratings.
   - AC 61-91, WINGS—Pilot Proficiency Program.
   - AC 61-136, FAA Approval of Aviation Training Devices and Their Use for Training and Experience.
   - AC 90-109, Transition to Unfamiliar Aircraft (provides additional information and guidance pertaining to transition to experimental or unfamiliar aircraft).
   - AC 91-73, Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations.
2. Aeronautical Information Manual (AIM): https://www.faa.gov/air_traffic/publications/media/aim_basic_chg_1_dtd_3-29-18.pdf.
3. Airman Certification Standards (ACS): http://www.faa.gov/training_testing/testing/acs/.
4. Airman Testing: https://www.faa.gov/training_testing/testing/.
5. Best Practices for Mentoring in Flight Instruction: https://www.faa.gov/training_testing/training/media/mentoring_best_practices.pdf.
6. Conducting an Effective Flight Review: http://www.faa.gov/pilots/training/media/flight_review.pdf.
7. FAA/Industry Training Standards (FITS) Personal and Weather Risk Assessment Guide: http://www.faa.gov/training_testing/training/fits/guidance.
8. *FAA Safety Briefing*, January/February 2018: https://www.faa.gov/news/safety_briefing/2018/media/JanFeb2018.pdf.
9. *FAA Safety Briefing* Archive: https://www.faa.gov/news/safety_briefing/archive/.
10. General Aviation (GA) Safety Enhancement (SE) Topic Fact Sheets: https://www.faa.gov/news/safety_briefing/topic_archive/.
11. Good N.I.G.H.T, *FAA Safety Briefing*, November/December 2015: https://www.faa.gov/news/safety_briefing/2015/media/NovDec2015.pdf.

12. Handbooks and Manuals (FAA): http://www.faa.gov/regulations_policies/handbooks_manuals/:
    - Aviation Instructor's Handbook (FAA-H-8083-9).
    - Handbook(s) appropriate for the category of aircraft being operated (e.g., Airplane Flying Handbook (FAA-H-8083-3)).
13. Information for Operators (InFO) (FAA): http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/:
    - InFO 14010, Installation, Training, and Use of Non-required/Supplemental Angle-of-Attack (AOA) Based Systems for General Aviation (GA) Airplanes, July 25, 2014.
    - InFO 15012, Logging Instrument Approach Procedures (IAP), September 8, 2015.
14. Instrument Proficiency Check (IPC) Guidance: https://www.faa.gov/pilots/training/media/IPC_Guidance.pdf.
15. New Technologies for Pilots, Planes, and 'Ports, *FAA Safety Briefing*, May/June 2016: https://www.faa.gov/news/safety_briefing/2016/media/MayJun2016.pdf.
16. New Technology in Aviation, *FAA Safety Briefing*, January/February 2014: https://www.faa.gov/news/safety_briefing/2014/media/JanFeb2014.pdf.
17. Online resources for flight instructors, FAA Safety Team (FAASTeam): http://www.faasafety.gov.
18. PAVEing the Way to Safety, *FAA Safety Briefing*, January/February 2017: https://www.faa.gov/news/safety_briefing/2017/media/JanFeb2017.pdf.
19. Personal Minimums Worksheet, *FAA Safety Briefing*, March/April 2015: https://www.faa.gov/news/safety_briefing/2015/media/Personal-Minimums.pdf.
20. Practical Test Standards (PTS): http://www.faa.gov/training_testing/testing/test_standards/.
21. Risk Management and System Safety Modules: http://www.faa.gov/training_testing/training/fits/training/flight_instructor.
22. Teaching Technology: Instilling the Right Aptitudes and Attitudes for Safety, *FAA Safety Briefing*, September/October 2017: https://www.faa.gov/news/safety_briefing/2017/media/SepOct2017.pdf.
23. Tips for Teaching Practical Risk Management: https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/media/1.0-Practical-Risk-Management.pdf.
24. Weather Forces, Sources, and Resources, *FAA Safety Briefing*, March/April 2015: https://www.faa.gov/news/safety_briefing/2015/media/MarApr2015.pdf.

A.2 Industry and Professional Associations.

1. Aircraft Owners and Pilots Association (AOPA): http://www.aopa.org.
   - AOPA Tools for Certificated Flight Instructors: https://www.aopa.org/training-and-safety/cfis.
2. Aviation Weather Center: https://www.aviationweather.gov/adds/.
3. Experimental Aircraft Association (EAA): http://eaa.org/.
4. FlightService: https://www.1800wxbrief.com/Website/#!/.
5. General Aviation Manufacturers Association (GAMA): http://www.gama.aero/.
6. National Association of Flight Instructors (NAFI): http://www.nafinet.org/.
7. Society of Aviation and Flight Educators (SAFE): http://www.safepilots.org.

APPENDIX B. SAMPLE AIRPLANE PILOT'S PROFICIENCY PRACTICE PLAN

Pilot's Name: _____ **Date:** _____

Flight Rules (Visual Flight Rules (VFR)) Flight Profile – Every 4–6 Weeks:

- ☐ Preflight (include the 3-P Risk Management Process (RMP: Perceive hazards, Process risk level, and Perform risk management).) (Refer to the 3-P Risk Management Process at https://www.faasafety.gov/files/gslac/courses/content/28/200/3P%20Risk%20Management%20Process.pdf.)
- ☐ Normal taxi.
- ☐ Takeoff.
- ☐ Departure to practice area.

- ☐ **CHAPS (before each maneuver):**
  - ☐ Clear the area.
  - ☐ Heading established and noted.
  - ☐ Altitude established (at least 3,000 feet above ground level (AGL)).
  - ☐ Position near a suitable emergency landing area.
  - ☐ Set power and aircraft configuration.
- ☐ Steep turns (both directions), altitude within 100 feet and airspeed within 10 knots.
- ☐ Power-off stalls (approach to landing) and recovery.
- ☐ Power-on stalls (takeoff/departure) and recovery.
- ☐ Ground reference maneuvers (600 feet to 1000 feet AGL).
- ☐ Pattern practice:
  - ☐ Normal landing (full flaps).
  - ☐ Short-field takeoff and landing over a 50-foot obstacle.
  - ☐ Soft-field takeoff and landing.
- ☐ Slow flight.
- ☐ Discretional maneuver. _____
- ☐ Discretional maneuver. _____

- ☐ Secure the aircraft.
- ☐ Review your performance.
- ☐ Schedule next proficiency flight.

APPENDIX C. SAMPLE PILOT'S PERSONAL AERONAUTICAL GOALS

Pilot's Name: _____ **Date:** _____

Training Goals

_____ Certificate Level (Private, Commercial, Airline Transport Pilot (ATP))
_____ Ratings (Instrument, Multiengine Land (MEL), Airplane Single-Engine Sea (ASES), Airplane Multiengine Sea (AMES), Rotorcraft, Glider, etc.)
_____ Endorsements (high performance, complex, tailwheel, high altitude, etc.)
_____ Phase in Pilot Proficiency Program (WINGS)
_____ Instructor Qualifications (flight instructor, instrument flight instructor, multiengine flight instructor, advanced ground instructor (AGI), basic ground instructor (BGI), instrument ground instructor (IGI))

Other: _____

Proficiency Goals

Lower personal minimums to:
_____ Ceiling
_____ Visibility
_____ Winds
_____ Precision approach minimums
_____ Non-precision approach minimums

Fly at least:
_____ Times per month
_____ Hours per month
_____ Hours per year
_____ Cross-country flights per year
_____ Night hours per month

Make a cross-country trip to: _____

Other: _____

Aeronautical Training Plan of Action

_____
_____
_____
_____

APPENDIX D. SAMPLE FLIGHT INSTRUCTOR'S FLIGHT REVIEW CHECKLIST

Step 1: Preflight Review Actions

- ☐ Scheduling
- ☐ Set expectations of pilot under review
- ☐ Pilot's aeronautical history
- ☐ Title 14 of the Code of Federal Regulations (14 CFR) part 91 review assignment
- ☐ Cross-country flight plan assignment

Step 2: Ground Discussion

- ☐ FAA Aviation English Language Standard (AELS) requirement
- ☐ Regulatory review
- ☐ Cross-country flight plan review
- ☐ Risk management (RM) and personal minimums

Step 3: Conducting the Flight

- ☐ Physical aircraft (basic skills)
- ☐ Takeoffs and stabilized approaches to landings
- ☐ Slow flight
- ☐ Stalls and recovery/spin recognition and avoidance
- ☐ Recovery from unusual attitudes
- ☐ Simulated loss of power/engine
- ☐ Operating the aircraft by sole reference to instruments under actual or simulated conditions
- ☐ Aeronautical decision-making (ADM)
- ☐ Automation system failures

Step 4: Postflight Discussion

- ☐ Replay, reflect, reconstruct, redirect
- ☐ Questions

Step 5: Aeronautical Health Maintenance and Improvement Plan

- ☐ Personal minimums worksheet
- ☐ Personal proficiency practice plan
- ☐ Training plan (if desired)
- ☐ Resources list

Sample Pilot's Aeronautical History for Flight Review

Pilot: _____
Flight Instructor: _____
Address: _____
Phone(s): _____
Email: _____

Pilot Certificate(s):

_____ Private
_____ Commercial
_____ Air Transport Pilot (ATP)
_____ Flight instructor

Ratings (not necessarily inclusive):

_____ Instrument
_____ Airplane Single-Engine Pilot (ASEL)
_____ Multiengine Land (MEL)
_____ Lighter than air (LTA)
_____ Rotorcraft
_____ (Other)

Experience (pilot):

_____ Total time
_____ Last 6 months
_____ Average hours/month
_____ Time since last flight review
_____ Since last instrument proficiency check (IPC)

Experience (aircraft):

Aircraft type(s) you fly _____
Aircraft used most often _____
_____ Total time
_____ Last 6 months
_____ Average hours/month

Experience (flight environment):

Since your last flight review, approximately how many hours have you logged in:

_____ Day visual flight rules (VFR)
_____ Day instrument flight rules (IFR)
_____ Instrument meteorological conditions (IMC)
_____ Night VFR
_____ Night IFR
_____ Mountainous/Overwater
_____ Towered
_____ Nontowered

Type of Flying (external factors):

What percentage of your flying is for:

_____ Pleasure
_____ Business
_____ Local
_____ Cross-country

Personal Skills Assessment:

Strengths as a pilot? _____
_____
Areas for improvement? _____
_____
Aviation goals? _____
_____

APPENDIX E. REGULATORY REVIEW GUIDE

SIDE 1

PILOT

- ☐ **Experience:** Recent Flight Experience (14 CFR part 61, § 61.57).
- ☐ **Responsibility:**
  - ☐ Authority (14 CFR part 91, § 91.3).
  - ☐ Flightcrew Members at Station (§ 91.105).
  - ☐ Preflight Action (§ 91.103).
  - ☐ Safety Belts (§ 91.107).
  - ☐ Air Traffic Control (ATC) Instructions (§ 91.123).
- ☐ **Cautions:**
  - ☐ Careless or Reckless Operation (§ 91.13).
  - ☐ Dropping Objects (§ 91.15).
  - ☐ Alcohol or Drugs (§ 91.17).
  - ☐ Supplemental Oxygen (§ 91.211).
  - ☐ Fitness for Flight (Aeronautical Information Manual (AIM) chapter 8, section 1).

AIRCRAFT

- ☐ **Airworthiness:**
  - ☐ Basic (§ 91.7).
  - ☐ Flight Manual, Markings, and Placards (§ 91.9).
  - ☐ Certifications Required (§ 91.203).
  - ☐ Instrument and Equipment Requirements (§ 91.205):
    - ☐ Emergency Locator Transmitter (ELT) (§ 91.207).
    - ☐ Position Lights (§ 91.209).
    - ☐ Inoperative Instruments and Equipment (§ 91.213).
    - ☐ Transponder Requirements (§ 91.215).
- ☐ **Maintenance:**
  - ☐ Responsibility (§ 91.403).
  - ☐ Maintenance Required (§ 91.405).
  - ☐ Operation after Maintenance (§ 91.407).
  - ☐ Maintenance Records (§ 91.417).
- ☐ **Inspections:**
  - ☐ Annual, Airworthiness Directives (AD), 100 Hours (§ 91.409).
  - ☐ Altimeter and Pitot Static System (§ 91.411).
  - ☐ Very High Frequency Omni-Directional Range (VOR) Check (§ 91.171).
  - ☐ Transponder (§ 91.413).
  - ☐ ELT (§ 91.207).

SIDE 2

- ☐ **Airports:**
  - ☐ Markings (AIM chapter 2, section 3).
  - ☐ Operations (AIM chapter 4, section 3; §§ 91.125 and 91.126).
  - ☐ Traffic Patterns (§ 91.126).
- ☐ **Airspace:**
  - ☐ Altimeter Settings (AIM chapter 7, section 2; § 91.121).
  - ☐ Minimum Safe Altitudes (§§ 91.119 and 91.177).
  - ☐ Cruising Altitudes (AIM chapter 3, section 1, paragraph 3-1-5; §§ 91.159 and 91.179).
  - ☐ Speed Limits (§ 91.117).
  - ☐ Right-of-Way (§ 91.113).
  - ☐ Formation (§ 91.111).
  - ☐ Types of Airspace (AIM chapter 3):
    - ☐ Controlled Airspace (AIM chapter 3, section 2; §§ 91.129, 91.130, 91.131, and 91.135).
    - ☐ Class G Airspace (AIM chapter 3, section 3).
    - ☐ Special Use (AIM chapter 3, section 4; §§ 91.133, 91.137, 91.141, 91.143, and 91.145).
  - ☐ Emergency Air Traffic Rules (AIM chapter 5, section 6; § 91.139).
- ☐ **Air Traffic Control and Procedures:**
  - ☐ Services (AIM chapter 4, section 1).
  - ☐ Radio Communications (AIM chapter 4, section 2; Pilot/Controller Glossary).
  - ☐ Clearances (AIM chapter 4, section 4).
  - ☐ Procedures (AIM chapter 5).
- ☐ **Weather:**
  - ☐ Meteorology (AIM chapter 7, section 1).
  - ☐ Wake Turbulence (AIM chapter 7, section 3).

EXTERNAL PRESSURE

- ☐ Personal Minimums Worksheet.
- ☐ Risk Management (RM) (3-P model).
- ☐ Practical Test Standards (PTS)/Airman Certification Standards (ACS), as appropriate.

APPENDIX F. SAMPLE FLIGHT REVIEW CHECKLIST

SIDE 1

References

Selected portions of 14 CFR part 61, § 61.56

(a) A flight review consists of a minimum of 1 hour of flight training and 1 hour of ground training. The review must include:

(1) A review of the current general operating and flight rules of part 91 of this chapter; and
(2) A review of those maneuvers and procedures that, at the discretion of the person giving the review, are necessary for the pilot to demonstrate the safe exercise of the privileges of the pilot certificate.

(c) Except as provided in paragraphs (d), (e), and (g) of this section, no person may act as pilot in command of an aircraft unless, since the beginning of the 24th calendar month before the month in which that pilot acts as pilot in command, that person has—

(1) Accomplished a flight review given in an aircraft for which that pilot is rated by an authorized instructor and
(2) A logbook endorsed from an authorized instructor who gave the review certifying that the person has satisfactorily completed the review.

(d) A person who has, within the period specified in paragraph (c) of this section, passed any of the following need not accomplish the flight review required by this section:

(1) A pilot proficiency check or practical test conducted by an examiner, an approved pilot check airman, or a U.S. Armed Force, for a pilot certificate, rating, or operating privilege.
(2) A practical test conducted by an examiner for the issuance of a flight instructor certificate, an additional rating on a flight instructor certificate, renewal of a flight instructor certificate, or reinstatement of a flight instructor certificate.

(e) A person who has, within the period specified in paragraph (c) of this section, satisfactorily accomplished one or more phases of an FAA-sponsored pilot proficiency award program need not accomplish the flight review required by this section.

Advisory Circular (AC) 61-65, Certification: Pilots and Flight and Ground Instructors

Completion of a Flight Review: §§ 61.56(a) and (c).

I certify that [First name, MI, Last name], [pilot certificate], [certificate number], has satisfactorily completed a flight review of § 61.56(a) on [date].

/s/ [date] J. J. Jones 987654321CFI Exp. 12-31-19

NOTE: No logbook entry reflecting unsatisfactory performance on a flight review is required.

Flight Review Checklist

Step 1: Preparation

- ☐ Pilot's Aeronautical History
- ☐ Set Expectations for Pilot Under Review
- ☐ 14 CFR Part 91 Review Assignment
- ☐ Cross-Country Flight Plan Assignment

Step 2: Ground Review

- ☐ FAA Aviation English Language Standard (AELS) Requirement
- ☐ Regulatory Review
- ☐ Cross-Country Flight Plan Review
- ☐ Weather & Weather Decision Making
- ☐ Risk Management and Personal Minimums
- ☐ General Aviation (GA) Security Issues

Step 3: Flight Activities

- ☐ Physical Airplane (basic skills)
- ☐ Mental Airplane Automaton and Aircraft (systems knowledge)
- ☐ Takeoffs and Stabilized Approaches to Landings
- ☐ Slow Flight
- ☐ Stalls and Recovery/Spin Recognition/Avoidance
- ☐ Recovery from Unusual Attitudes
- ☐ Simulated Loss of Power/Engine
- ☐ Operating the Aircraft by Sole Reference to Instruments Under Actual or Simulated Conditions
- ☐ Aeronautical Decision Making (ADM)
- ☐ Automation System
- ☐ Automation System Failures

Step 4: Postflight Discussion

- ☐ Replay, Reflect, Reconstruction, Redirect
- ☐ Questions

Step 5: Aeronautical Health Maintenance and Improvement Plan

- ☐ Personal Minimums Worksheet
- ☐ Personal Proficiency Practice Plan
- ☐ Training Plan (if desired)

For aviation safety information and online resources, visit www.faasafety.gov.

SIDE 2

Ground Review

PILOT:
- ☐ **Experience:**
  - ☐ Recent Flight Experience (§ 61.57)
- ☐ **Responsibility:**
  - ☐ Authority (§ 91.3)
  - ☐ Air Traffic Control (ATC) Instructions (§ 91.123)
  - ☐ Preflight Action (§ 91.103)
  - ☐ Safety Belts (§ 91.107)
  - ☐ Flightcrew at Station (§ 91.105)
- ☐ **Cautions:**
  - ☐ Careless or Reckless Operation (§ 91.13)
  - ☐ Dropping Objects (§ 91.15)
  - ☐ Alcohol or Drugs (§ 91.17)
  - ☐ Supplemental Oxygen (§ 91.211)
  - ☐ Fitness for Flight (Aeronautical Information Manual (AIM) chapter 8, section 1)

AIRCRAFT:
- ☐ **Airworthiness:**
  - ☐ Basic (§ 91.7)
  - ☐ Flight Manual, Markings, Placards (§ 91.9)
  - ☐ Certification Required (§ 91.203)
  - ☐ Instrument and Equipment Requirements (§ 91.205)
    - ☐ Emergency Locator Transmitter (ELT) (§ 91.207)
    - ☐ Position Lights (§ 91.209)
    - ☐ Transponder Requirements (§ 91.215)
    - ☐ Inoperative Instruments and Equipment (§ 91.213)
- ☐ **Maintenance:**
  - ☐ Responsibility (§ 91.403)
  - ☐ Maintenance Required (§ 91.405)
  - ☐ Maintenance Records (§ 91.417)
  - ☐ Operation After Maintenance (§ 91.407)
- ☐ **Inspections:**
  - ☐ Annual, Airworthiness Directives, 100-Hour (§ 91.409)
  - ☐ Altimeter and Pitot Static System (§ 91.411)
  - ☐ Very High Frequency Omni-Directional Range (VOR) Check (§ 91.171)
  - ☐ Transponder (§ 91.413)
  - ☐ ELT (§ 91.207)

ENVIRONMENT:
- ☐ **Airports:**
  - ☐ Markings (AIM chapter 2, section 3)
  - ☐ Operations (AIM chapter 4, section 3; §§ 91.125 and 91.126)
  - ☐ Traffic Patterns (§ 91.126)
- ☐ **Airspace:**
  - ☐ Altimeter Settings (§ 91.121; AIM chapter 7, section 2)
  - ☐ Minimum Safe Altitudes (§§ 91.119 and 91.177)
  - ☐ Cruising Altitudes (§§ 91.159 and 91.179; AIM paragraph 3-1-5)
  - ☐ Speed Limits (§ 91.117)
  - ☐ Right-of-Way (§ 91.113)
  - ☐ Formation (§ 91.111)
  - ☐ Types of Airspace (AIM chapter 3):
    - ☐ Controlled Airspace (AIM chapter 3, section 2; §§ 91.129, 91.130, 91.131, and 91.135)
    - ☐ Class G Airspace (AIM chapter 3, section 3)
    - ☐ Special Use (AIM chapter 3, section 4; §§ 91.133, 91.137, 91.141, 91.143, and 91.145)
  - ☐ Emergency Air Traffic Rules (§ 91.139; AIM chapter 5, section 6)
- ☐ **ATC and Procedures:**
  - ☐ Services (AIM chapter 4, section 1)
  - ☐ Radio Communications (AIM chapter 4, section 2 and Pilot Controller Glossary)
  - ☐ Clearances (AIM chapter 4, section 4)
  - ☐ Procedures (AIM chapter 5)
- ☐ **Weather:**
  - ☐ Meteorology (AIM chapter 7, section 1)
  - ☐ Wake Turbulence (AIM chapter 7, section 3)

EXTERNAL PRESSURE:
- ☐ Personal Minimums Worksheet
- ☐ Risk Management (3-P model)
- ☐ Practical Test Standards (PTS)/Airman Certification Standards (ACS)

Suggested Flight Activities

Note: Structure the flight portion as an out-and-back visual flight rules (VFR) cross-country (XC), with one leg focused on XC procedures (including diversion and lost procedures) and the other leg focused on airwork ("physical airplane" skills). Suggested activities include:

AREA OF OPERATION (from Private Pilot PTS/ACS)
- ☐ **Preflight Preparation**
  - ☐ Weather Information
  - ☐ Cross-Country Flight Planning
  - ☐ Performance and Limitations
  - ☐ Operation of Systems
- ☐ **Preflight Procedures**
  - ☐ Preflight Inspections
  - ☐ Cockpit Management
  - ☐ Before Takeoff Check
- ☐ **Airport Operations**
  - ☐ Radio Communications
  - ☐ Airport, Runway, Taxiway Signs, Markings, and Lighting
- ☐ **Takeoffs, Landings, and Go-Arounds**
  - ☐ Normal and Crosswind Takeoff/Climb
  - ☐ Normal and Crosswind Approach/Landing
  - ☐ Soft-Field Takeoff and Climb
  - ☐ Soft-Field Approach and Landing
  - ☐ Short-Field Takeoff
  - ☐ Short-Field Approach
  - ☐ Go-Around Rejected Landing
- ☐ **Performance Maneuver**
  - ☐ Steep Turns
- ☐ **Navigation**
  - ☐ Pilotage and Dead Reckoning
  - ☐ Navigation Systems and Radar Services
  - ☐ Diversion
  - ☐ Lost Procedures
- ☐ **Slow Flight and Stalls**
  - ☐ Maneuvering During Slow Flight
  - ☐ Power-Off Stalls
  - ☐ Power-On Stalls
  - ☐ Spin Awareness
- ☐ **Basic Instrument Maneuvers**
  - ☐ Straight and Level Flight
  - ☐ Turns to Headings
  - ☐ Recovery from Unusual Flight Attitudes
  - ☐ Radio Communications/Navigation Systems
- ☐ **Emergency Operations**
  - ☐ Emergency Approach and Landing
  - ☐ Systems and Equipment Malfunctions
  - ☐ Automation Failure: Failure of Autopilot and Avionics
- ☐ **Postflight Procedures**
  - ☐ After Landing, Parking, Securing

APPENDIX G. SAMPLE PILOT'S INSTRUMENT EXPERIENCE SUMMARY

Pilot's Name: _____ **Flight Instructor:** _____

Address: _____

Phone(s): _____ **Email:** _____

Type of Pilot Certificate(s):

_____ Private
_____ Commercial
_____ Airline Transport Pilot (ATP)
_____ Flight Instructor

Rating(s):

_____ Instrument
_____ Multiengine
_____ Rotorcraft
_____ Glider
_____ Lighter-than-air (LTA)

Experience (pilot):

_____ Total time
_____ Last 6 months
_____ Average hours/month
_____ Time logged since last instrument proficiency check (IPC)

Experience (aircraft):

Aircraft type(s) you fly _____

Aircraft used most often _____

For this aircraft: Total time _____ Last 6 months _____ Average hours/month _____

Experience (flight environment): Approximately how many hours logged in:

_____ Day visual flight rules (VFR)
_____ Day instrument flight rules (IFR)
_____ Instrument meteorological conditions (IMC)
_____ Night VFR
_____ Night IFR
_____ Approaches
_____ Approaches to minimums
_____ Approaches in last 6 months

Type of Flying (external factors): What percentage of your flying is for:

_____ Pleasure
_____ Business
_____ Local
_____ Cross-country

Personal Skills Assessment:

Strengths as a pilot? _____

Areas for improvement? _____

Aviation goals? _____

_____

APPENDIX H. SAMPLE INSTRUMENT TRAINING AND PROFICIENCY PLAN

Pilot's Name: _____ **Flight Instructor:** _____

Date: _____ **Review Date:** _____

Instrument Training Goals

_____ Certificate Level (Private, Commercial, Airline Transport Pilot (ATP))

_____ Ratings (Instrument, Multiengine Land (MEL), Airplane Single-Engine Sea (ASES), Airplane Multiengine Sea (AMES))

_____ Phase in Pilot Proficiency Program (WINGS)

_____ Instructor Qualifications (flight instructor, instrument flight instructor, multiengine flight instructor, advanced ground instructor (AGI), basic ground instructor (BGI), instrument ground instructor (IGI))

Other:_____

Instrument Proficiency Goals

Lower personal minimums to:

_____ Ceiling

_____ Visibility

_____ Winds

_____ Precision approach minimums

_____ Nonprecision approach minimums

Fly instrument flight rules (IFR)/instrument meteorological conditions (IMC) at least:

_____ Times per month

_____ Hours per month

_____ Hours per year

_____ Cross-country flights per year

_____ Night hours per month

Make an IFR/IMC cross-country trip to:_____

Other:_____

_____

Aeronautical Training Plan of Action

_____

_____

_____

_____

APPENDIX J. SAMPLE FLIGHT INSTRUCTOR'S INSTRUMENT PROFICIENCY CHECK CHECKLIST

SIDE 1

References

Title 14 of the Code of Federal Regulations (14 CFR) Part 61, § 61.57(d)—Instrument Proficiency Check.

Except as provided in paragraph (e) of this section, a person who has failed to meet the instrument experience requirements of paragraph (c) for more than six calendar months may reestablish instrument currency only by completing an instrument proficiency check.
The instrument proficiency check must consist of the areas of operation and instrument tasks required in the instrument rating practical test standards.
(1) The instrument proficiency check must be–
(i) In an aircraft that is appropriate to the aircraft category;
(ii) For other than a glider, in a flight simulator or flight training device that is representative of the aircraft category; or
(iii) For a glider, in a single-engine airplane or a glider.
(2) The instrument proficiency check must be given by—
(i) An examiner;
(ii) A person authorized by the U.S. Armed Forces to conduct instrument flight tests, provided the person being tested is a member of the U.S. Armed Forces;
(iii) A company check pilot who is authorized to conduct instrument flight tests under part 121, 125, or 135 of this chapter or subpart K of part 91 of this chapter, and provided that both the check pilot and the pilot being tested are employees of that operator or fractional ownership program manager, as applicable;
(iv) An authorized instructor; or
(v) A person approved by the Administrator to conduct instrument practical tests.

Advisory Circular (AC) 61-65, Certification: Pilots and Flight and Ground Instructors

Completion of an Instrument Proficiency Check: § 61.57(d).

I certify that [First name, MI, Last name], [pilot certificate], [certificate number], has satisfactorily completed the instrument proficiency check of § 61.57(d) in a (list make and model of aircraft) on [date].
/s/ [date] J. J. Jones 987654321CFI Exp. 12-31-19

NOTE: No logbook entry reflecting unsatisfactory performance on an instrument proficiency check is required.

Checklist for IPC

Step 1: Preparation

- ☐ Set Expectations for Pilot Under Review
- ☐ Regulatory Review
- ☐ Cross-Country Flight Plan Assignment

Step 2: Ground Review

- ☐ FAA Aviation English Language Standard (AELS) Requirement
- ☐ Preflight
- ☐ Taxi, Takeoff, Departure
- ☐ En Route
- ☐ Arrival and Approach
- ☐ Missed Approach

Step 3: Flight Activities

- ☐ Aircraft Control by Reverence to Flight Instruments
- ☐ Systems and Procedures
- ☐ Aeronautical Decision Making (ADM)
- ☐ Stabilized Approaches and Landing

Step 4: Postflight Discussion

- ☐ Replay, Reflect, Reconstruction, Redirect
- ☐ Questions

Step 5: Aeronautical Health Maintenance and Improvement Plan

- ☐ Personal Minimums Worksheet
- ☐ Personal Proficiency Practice Plan
- ☐ Training Plan (if desired)

For aviation safety information and online resources, visit www.faasafety.gov.

SIDE 2

Ground Review

PILOT:

- ☐ Recency of Experience (§ 61.57)
- ☐ Pilot-in-Command (PIC) Responsibilities and Authority (14 CFR part 91, § 91.3)
- ☐ Preflight Actions (§ 91.103)
- ☐ Medical Facts for Pilots (Aeronautical Information Manual (AIM) chapter 8)

AIRCRAFT:

- ☐ Fuel Requirements (§ 91.167)
- ☐ Equipment Check (Very High Frequency Omni-Directional Range (VOR)) (§ 91.171)
- ☐ Instrument Flight Rules (IFR) Two-Way Radio Communications Failure (§ 91.185)
- ☐ Malfunction Reports (§ 91.187)
- ☐ Required Instruments and Equipment (§ 91.205)
- ☐ Emergency Locator Transmitter (ELT) (§ 91.207)
- ☐ Aircraft Lights (§ 91.209)
- ☐ Inoperative Instruments and Equipment (§ 91.213)
- ☐ Altimeter and Pitot-Static System Tests (§ 91.411)
- ☐ Air Traffic Control (ATC) Transponder Tests (§ 91.413)

ENVIRONMENT:

- ☐ ATC Instructions (§ 91.123)
- ☐ IFR Flight Plan (§ 91.169)
- ☐ ATC Clearance and Flight Plan (§ 91.173)
- ☐ Takeoff (TO) and Landing (LDG) in IFR (§ 91.175)
- ☐ Minimum IFR Altitudes (§ 91.177)
- ☐ IFR Cruising Altitudes (§ 91.179)
- ☐ Course to be Flown (§ 91.181)
- ☐ IFR Two-Way Communications (§ 91.183)
- ☐ Navigation Aids (AIM chapter 1)
- ☐ ATC (AIM chapter 4)
- ☐ Air Traffic Procedures (AIM chapter 5)

EXTERNAL PRESSURE:

- ☐ IFR Two-Way Radio Communications Failure (§ 91.185)
- ☐ Emergency Procedures (AIM chapter 6)
- ☐ National Security and Interception Procedures (AIM chapter 5, section 6)

Suggested Flight Activities

Note: Structure the flight portion as an out-and-back IFR cross-country (XC), with one leg focused on XC procedures (including missed approach and diversion procedures) and the other leg focused on airwork (aircraft control). Suggested activities include:

AREA OF OPERATION

- ☐ **Preflight Preparation**
  - ☐ Weather Information
  - ☐ Cross-Country Flight Planning
- ☐ **Preflight Procedures**
  - ☐ Aircraft Systems Related to IFR Operations
  - ☐ Aircraft Flight Instruments and Navigation Equipment
  - ☐ Instrument Cockpit Check
- ☐ **ATC Clearances and Procedures**
  - ☐ ATC Clearances
  - ☐ Compliance with Departure, En Route, and Arrival Procedures and Clearances
  - ☐ Holding Procedures
- ☐ **Flight by Reference to Instruments**
  - ☐ Basic Instrument Flight Maneuvers
  - ☐ Recovery from Unusual Flight Attitudes
- ☐ **Navigation Systems**
  - ☐ Intercepting/Tracking Navigational Systems and Distance Measuring Equipment (DME) Arcs
- ☐ **Instrument Approach Procedures**
  - ☐ Nonprecision Approach (NPA)
  - ☐ Precision Approach (PA)
  - ☐ Missed Approach
  - ☐ Circling Approach
  - ☐ Landing from a Straight-in or Circling Approach
- ☐ **Emergency Operations**
  - ☐ Loss of Communications
  - ☐ One Engine Inoperative During Straight and Level Flight and Turns (Multiengine Airplane)
  - ☐ One Engine Inoperative—Instrument Approach (Multiengine Airplane)
  - ☐ Loss of Primary Flight Instrument Indicators
  - ☐ Automation Failure: Failure of Autopilot and Avionics
- ☐ **Postflight Procedures**
  - ☐ Checking Instruments and Equipment

Advisory Circular Feedback Form

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by contacting the General Aviation and Commercial Division (AFS-800) or the Flight Standards Directives Management Officer at 9-AWA-AFS-140-Directives@faa.gov.

Subject: AC 61-98D, Currency Requirements and Guidance for the Flight Review and Instrument Proficiency Check

Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____

_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____

_____

☐ Other comments:

_____

_____

☐ I would like to discuss the above. Please contact me.

Submitted by: _____ Date: _____