

Example

Using the ACS for Scenario-Based Evaluation

You have scheduled an applicant for a Private Pilot ASEL practical test. During your initial contact with the applicant (or recommending instructor), you request a copy of the applicant’s airman knowledge test report (AKTR).

Upon reviewing the AKTR, you note that it lists the following Learning Statement Code: PLT377 (Recall Regulations – airworthiness certificates, requirements, responsibilities).

For each Task, the ACS requires you to test at least one Knowledge element, at least one Risk Management element, and all Skill elements. As with the PTS, however, the ACS gives you the discretion to test additional Task elements as necessary.

Using the ACS to develop your Plan of Action (POA) for the practical test, you review the Airworthiness Requirements Task (*see below*). Based on the information in the AKTR, you note that you will definitely need to retest the applicant on Knowledge Task element PA.I.B.K4. This selection satisfies the minimum requirement.

Task	<i>B. Airworthiness Requirements</i>
Reference	14 CFR parts 39, 43, 91; FAA-H-8083-2, FAA-H-8083-25
Objective	To determine that the applicant exhibits satisfactory knowledge, skills and risk management associated with airworthiness requirements, including aircraft certificates.
Knowledge	The applicant demonstrates understanding of:
PA.I.B.K1	1. General airworthiness requirements and compliance for airplanes.
PA.I.B.K1a	a. Certificate location and expiration dates
PA.I.B.K1b	b. Required inspections.
PA.I.B.K1c	c. Inspection requirements
PA.I.B.K2	2. Individuals who can perform maintenance on the aircraft, including A&P and IA roles in aircraft maintenance and inspections.
PA.I.B.K3	3. Pilot-performed preventive maintenance.
PA.I.B.K4	4. Equipment requirements for day and night flight for example: flying with inoperative equipment (approved Minimum Equipment List (MEL), Kinds of Operation Equipment List (KOEL), VFR and placards.
PA.I.B.K5	5. Proving airworthiness (specifics of the aircraft–compliance with Airworthiness Directives (AD) or applicability of Safety Bulletins (SB)).
PA.I.B.K6	6. Obtaining a special flight permit.
PA.I.B.K7	7. Experimental aircraft airworthiness.
PA.I.B.K8	8. Equipment malfunctions.

In accordance with the ACS requirement to test at least one Risk Management element in each Task, you look over the three Risk Management elements for this Task and you select PA.I.B.R1, inoperative equipment.

Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.I.B.R1	1. Inoperative equipment.
PA.I.B.R2	2. Equipment failure during flight.
PA.I.B.R3	3. Discrepancy records or placards.

Next, you review and note the requirement to test all Skill elements.

Skills	The applicant demonstrates the ability to:
PA.I.B.S1	1. Locate aircraft airworthiness information.
PA.I.B.S2	2. Determine the aircraft is airworthy in a scenario given by the evaluator.
PA.I.B.S3	3. Explain conditions where flight can be made with inoperative equipment.
PA.I.B.S4	4. Explain requirements for obtaining and flying with a Special Flight Permit.
PA.I.B.S5	5. Locate and explain operating limitations, placards, instrument markings, POH/AFM, weight and balance data, and equipment list.

In your initial contact with the applicant, you provide an overall scenario for the practical test and ask the applicant to plan accordingly. The scenario for this test:

You are taking your mother, father and grandmother to a wedding in Palm Springs, CA. The flight begins in the afternoon, and you will be returning that night. Your mother weighs 145 pounds, your father weighs 195 pounds and your grandmother weighs 115 pounds. Since it is a day trip, there is no luggage. But your parents are bringing the wedding gift, which is a 50-pound set of dishes.

On the day of the test, you administer the pre-test briefing and determine that the applicant is eligible to take the practical test.

Once the test has begun, you start with Area of Operation I, Task A, Pilot Qualifications. To the greatest possible extent, you frame your questions on the Knowledge and Risk Management elements you have selected for each Task in accordance with the overall scenario of a flight to attend the wedding. The evaluation of each element is complete when the applicant demonstrates a good understanding of airman documents and identification required when exercising private pilot privileges. You use follow-up questions as necessary and, as stated already, you have the discretion to evaluate additional Task elements as needed.

As you move into Task B, you add to the overall scenario as follows:

During your preflight, an FAA aviation safety inspector (ASI) introduces himself and says he wants to conduct a ramp inspection. After checking your pilot and medical certificates, the ASI asks how you determined that the airplane was in an airworthy condition.

This scenario should prompt the applicant to explain aircraft documents required to be on board the aircraft, and possibly the status sheet, demonstrating compliance with required inspections. This explanation allows you to evaluate the first Skills element, and you ask additional questions to assess the applicant's grasp of the others.

You then use a "trigger event" to build on the scenario and continue your evaluation:

The FAA inspector is satisfied. He shakes your hand, and moves to the next airplane. You continue your preflight. You turn the master switch on, turn on all the external lights, and perform a walk-around. You notice that the landing light is inoperative. Now what?

The trigger event allows you to evaluate Knowledge Task element PA.I.B.K4, because it requires the applicant to explain whether it is legal to take the flight with a landing light inoperative, and how to properly defer this item. The applicant may refer to 14 CFR part 91, § 91.213, and the discussion must cover equipment requirements for day/night VFR/IFR flight, along with the proper deferral of inoperative equipment and placard installation.

The applicant should explain that since the flight is not for compensation, he may legally defer it. This point leads to evaluation of the Risk Management element you selected earlier, PA.I.B.R1. Perception of risk depends on many factors, and it is obviously not the same for every pilot. What you are looking for is the applicant's analysis of how the selected Risk Management element affects his or her own situation. In this instance, you might look for the applicant to explain that the risk of conducting a night flight with family on board is higher for a newly certificated pilot. The applicant could mitigate this risk by arranging to have the landing light replaced before departure, or (if repair facilities are available) having it replaced at the destination airport while the family is attending the wedding. Other responses may also be

acceptable – again, the point is for the applicant to demonstrate that he or she has identified, evaluated, and mitigated the risk in the context of the proposed operation.

Using your Plan of Action and the scenario you developed, you have now covered the required ACS Knowledge, Risk Management, and Skill elements for this Task.

You continue to use the wedding trip scenario as you work through the remaining ground and flight portions of the practical test. The wedding trip scenario clearly lends itself to testing Tasks in some Areas of Operation (e.g., Navigation, Landings). As an example of how to extend it to other Areas of Operation, such as Performance Maneuvers, you might use another trigger event:

As you fly toward your destination, you offer to make a slight diversion from your route so your parents can see their house from the air. Your mother is excited to see her house from the air, and she asks if you can descend and circle so she can take pictures.

You can use this trigger to evaluate the applicant on the Ground Reference Maneuvers Task. To evaluate Tasks in the Emergency Operations AOO, use a trigger event such as an electrical or other system malfunction.

If it is not possible or practical to incorporate every Task into the scenario, you may suspend the scenario to perform those maneuvers and then continue.

For more information, refer to 8900.1 Volume 5, Chapter 2, Section 1, Paragraph 5-219 item C.

ACS Plan of Action Scenario Triggers

EVENT	PASSENGER	PILOT/AIRCRAFT	WEATHER
<p>Job Interview Family Emergency Family Illness/Surgery Birth-Child/Grandchild Medical Appointment Wedding</p> <p>Funeral</p> <p>Graduation Family Reunion Concert</p> <p>Vacation Catch Airline Flight Return To College Sporting Event Job Presentation Birthday Party Baptism/Christening Camping Trip Beach Week-End Lunch With Boss Dinner With Boss Engagement Party Surprise Party Christmas Dinner Thanksgiving Dinners Skiing Week-End Rock Climbing Event River Rafting Event Hunting Trip Fishing Trip Fly-In With Friends Aviation Safety Presentation Aviation Conference Flight to Oshkosh for Air Venture Meeting In-laws for First Time College Scholarship Meeting Returning to College Returning for Military Duty</p>	<p>Shows up Late Recently Scuba Diving Brings Extra Luggage Brings Pet Arrives Drinking/ Drunk Lied about Weight-(Exceeds Weight & Balance Limits) Gets Airsick/Throws Up Gets Hypoxic Hyperventilates Ear Block/Sinus Block Afraid</p> <p>Hysterical Needs Restroom Uses Cell Phone in Flight Wants to Land & Get Off the A/C Immediately Wants to Fly Airplane Crying Baby Aboard</p>	<p>FAA Ramp Check A/C Registration Expired Weight and Balance Docs Missing Radio Station License Missing Pilot Medical Expired Photo ID Expired Pilot Certificate at Home A/C Documents-Missing VOR check out of date Autopilot operating manual missing A.D.s not signed off at inspection Pilot has not flown in four months Pilot has not flown in three years Pilot has not carried passengers in three months Pilot left his logbook at home Aircraft is "Out of Annual" Before Return From Cross Country</p> <p>Pilot is Blinded by Passenger Cell Phone Picture Flash on Landing</p>	<p>Turbulence Strong Head Winds Aloft Strong Surface Wind/Crosswind Thunderstorms Lightning Hail Dust Storms Snow Fog Low Visibility Lowering Ceiling Icing Conditions Freezing Rain Weather in Class D goes to 2 SM Operating Above 10,000' MSL Fast Moving Cold Front Approaching Stalled Warm Front High Pressure Area Low Pressure Area Operating in Temperatures 20°C Above Standard Operating in Temperatures 20°C Below Standard High Density Altitude Smoke in the Area</p>

ACS Plan of Action Scenario Triggers

<p>AIRPORT OPERATIONS Taxi into taxiway light and damage prop Get Lost on Airport During Taxi Rotating Beacon is ON in Day Time Rotating Beacon is Green/White/White Rotating Beacon is White and Yellow ATC Gives an Unclear Instruction Told to Land and Hold Short on Runway Landing After B757 Departing After B757 Landing/Departing Near Operating Helicopter Wind Shear on Landing Taxiing into a Hotspot Area Operations at a Non-Towered Airport Communications at a Non-Towered Airport NORDO Aircraft Operations</p> <p>OTHER TFR in area Flight into NOAA marine area on Coast Flight into Wilderness area Flight into Special Use Airspace VFR Flight Into and Out of ADIZ Interception by Military Aircraft Lost Com with ATC – VFR Lost Com with ATC – IFR Trip into SFAR Area</p>	<p>MECHANICAL Large Nick In Prop Blade Engine Failure On Take Off Engine Failure Below 1,000' Door Opens On Take-Off Door Opens In Flight Window Opens On Take-Off Window Opens In Flight Brakes Fail on Take-off Glass Panel Fails Audio Panel Fails Pilot Seat Slips On Take Off Engine-Carb Ice Engine Fire On Ground Engine Fire In Flight Electrical Fire In Flight Gear Won't Extend Gear Won't Retract No Gear Lights Navigation (Position) Light Inoperative Cord Showing On Tire RAIM NOT AVAILABLE Message Elevator Trim Fails Auto Pilot Fails Glass Panel Fails Audio Panel Fails Pilot Seat Slides Back On Take Off Engine-Carb Ice Engine Fire On Ground Landing Light is Burned Out ELT is inoperative Low Fuel Alternator Belt Breaks Ammeter Discharging Low Voltage Light - On Dual Alternator Failure</p>	<p>MECHANICAL CONT'D Mags Runs Rough-Ground Mag Runs Rough-Flight Engine Runs Rough-Ground Engine Runs Rough-In Flight Low Oil Pressure Low Oil Temp High Oil Pressure High Oil Temp High CHT Oil On Cowling Oil On Window Attitude Indicator Tumbles Low Vacuum Gauge Portable Oxygen Bottle Low Radio Inoperative Landing Light Inoperative Battery Dead – Engine Won't Start Heading Indicator Spins</p>	<p>INSTRUMENT OPERATIONS Ways of Coping with Loss of Situational Awareness in Low Visibility</p> <p>Both VORS fail the VOT test</p> <p>Alternate Airport has only RNAV IAPs</p> <p>GPS Database Out of Date Alternate Airport has Nonstandard Minimums</p> <p>Full ILS Needle Deflection Occurs Just Inside the Outer Marker</p> <p>Thick Fog is Present At Your Destination Upon Arrival</p> <p>Lost-Com Occurs During an Icing Encounter</p> <p>The Wind Aloft is Much Stronger Than Forecast and Changes Some of the Factors of the IFR Flight</p> <p>Explain how the I M SAFE Checklist applies to IFR Flight</p> <p>Explain How the PAVE Checklist Applies to IFR Flight</p> <p><i>RAIM NOT AVAILABLE</i> Message Received Outside Outer Marker</p> <p><i>RAIM NOT AVAILABLE</i> Message Received Inside Outer Marker</p>
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Sample Evaluator's Checklist for FAA Practical Test

FAA Practical Test Appointment

Date of Test _____ Location: _____
 Applicant Name _____
 Address _____
 Telephone _____
 Email _____
 School (Part 141?) _____
 Instructor Name _____
 Instructor Telephone _____
 Practical Test Type _____
 Retest? _____ If yes, Notice of Disapproval _____
 Aircraft Make/Model/Equipment _____ Registration _____

Documentation

- Class and date of medical, if applicable (current?)
- Foreign student requirements; TSA; Letter of Verification of Authenticity
- Valid knowledge test results. Deficiencies reviewed?
- Aircraft - certificates, maintenance records, logbooks, and equipment
- IACRA Application (8710-1) completed and signed by instructor (if required)
- Special considerations - drug convictions, medical deficiencies
- Identification - photo/signature ID (current)
- Flight time records and requirements (mark required times and cross-countries)
- Required endorsements

Airman Certification Standards

- Familiar with the ACS?
- Which one/date do you have?

Practical Test Flight Planning

- Assign cross-country plan - location, time of departure (night?)
- Weight and balance computations
- Aircraft performance computations
- Flight planning facilities and weather briefing
- Review technology utilization (Advisory Circular) and information technology

Administrative

- Fee schedule and fee policy (must notify of fees before accepting application)
- Ask for FTN for IACRA (to review knowledge test report for Plan of Action)
- How to contact me

Establish Eligibility

- ❑ Welcome and make introductions
- ❑ Facilities overview
 - ❑ Privacy, Exits
 - ❑ Restrooms
 - ❑ Water, snacks
 - ❑ Telephones off
- ❑ Confirm type of practical test and if a retest
- ❑ Qualify the applicant
 - ❑ Application (8710-1)
 - ❑ Photo/signature Identification (Note type on 8710-1 and return)
 - ❑ Airman Certificate
 - ❑ Medical (note date and limitations)
 - ❑ Foreign License and Letter of Verification of Authenticity (if applicable)
 - ❑ Knowledge test results and review endorsement (if needed)
 - ❑ Pilot logbook and/or training records
 - ❑ Verify flight times and endorsements
 - ❑ Applicant signs IACRA 8710
- ❑ Qualify the aircraft
 - ❑ Review maintenance records per Order 8900.2
 - ❑ Instrument or ATP current NavData
 - ❑ Inoperative equipment

Pre-Test Briefing

- ❑ Current navigational charts and/or current NavData on Electronic Flight Bag
- ❑ Advise applicant that
 - ❑ The test will be done in accordance with the FAA ACS(s) and FAA Order 8900.2
 - ❑ Also will use Plan of Action (describe what it is)
 - ❑ Will be taking notes during test for debriefing
 - ❑ Note that perfection is not the standard
 - ❑ Oral questioning will be continued throughout all portions of the test
- ❑ Three possible outcomes
 - ❑ Temporary certificate
 - ❑ Letter of discontinuance
 - ❑ Conditions leading to letter of discontinuance
 - ❑ Notice of disapproval
 - ❑ Conditions leading to disapproval
- ❑ Any questions before we begin the test?
- ❑ Announce "test has begun"

Pre-Flight Briefing

- ❑ Brief flight profile (overall scenario)
 - ❑ If in FSTD, it will be real-time as if in aircraft
- ❑ Applicant remains PIC under 14 CFR Part 61.47 during entire flight (discuss actual instrument conditions)
- ❑ Simulated emergencies
 - ❑ DPE action/announcement
 - ❑ Engine failure - takeoff and landing
 - ❑ Other emergencies
 - ❑ Feathering
- ❑ Actual emergencies
 - ❑ Engine failure
 - ❑ Other emergencies
- ❑ Transfer of controls (brief me how it will be done)
- ❑ Collision avoidance (air and ground)
 - ❑ Looking for reported and *unreported* traffic
 - ❑ Clearing prior to maneuvering
 - ❑ Primary responsibility
- ❑ Preflight duties
 - ❑ Weight and balance
 - ❑ Performance
 - ❑ First flight of day
 - ❑ VFR/IFR requirements
 - ❑ Aircraft systems
 - ❑ MEL
- ❑ Oral questions will continue throughout the test
- ❑ Focus on normal operations
- ❑ Exercise PIC authority *at all times*
- ❑ Testing with POA will continue IAW ACS (s)
- ❑ Will continue to take notes
- ❑ Continue/discontinue if task is unsatisfactory
- ❑ Any questions? Are you ready for the flight evaluation?
- ❑ Return aircraft documents to the aircraft
- ❑ Observe entire pre-flight preparation and pre-flight inspection (refer to overall scenario and/or scenario triggers for topic questions)

Post-Test Briefing (Debriefing)

- ❑ Ensure that applicant is debriefed in private. (Encourage the recommending instructor to be present)
- ❑ Reaffirm the outcome of the test
- ❑ Use notes taken to debrief performance (Highlight areas that were above standard)
- ❑ Satisfactory practical test outcome
 - ❑ Complete paperwork
 - ❑ Have the airman sign the temporary certificate
 - ❑ Advise that temporary is valid for 120 days
 - ❑ What to do if certificate is not received
 - ❑ Offer to sign airman's logbook
- ❑ Unsatisfactory practical test outcome
 - ❑ Allow the applicant time alone while paperwork is completed
 - ❑ Use the ACS to explain reasons for disapproval
 - ❑ Advise the applicant of timeframe to retest and to keep the Notice of Disapproval
 - ❑ Return the knowledge test to the airman (if applicable)
 - ❑ Offer to sign the airman's logbook (not required)
- ❑ Letter of Discontinuance
 - ❑ Review items that need to be completed
 - ❑ Return the knowledge test to the airman (if applicable)
 - ❑ Advise timeframe to retest and to keep Letter of Discontinuance
 - ❑ Offer to sign the airman's logbook