

# Commercial AMEL Initial Practical Test William Baumheuter Pilot Examiner #CE03153 618-337-9846

- I use ACRA to generate the test result documents. If you have ACRA (version 2.03 or newer) it will save us lots of time inputting your data into the computer.
- **Fee for this Exam is \$200.** If you retest with me, it's \$50/hr. (fees are as of March 2002) I don't take personal checks. The test fee is collected in advance of the test.
- There are 3 outcomes to this test. 1. Temporary Airman Certificate issued (probably what you want.) 2. Discontinuance of the test (weather or maintenance problems) 3. Notice of Disapproval (more dual needed!).
- Make sure you have all sign-offs in your logbook, a record of the GROUND TRAINING received, the written test is signed off (unless you got 100%), you have all documents, including picture ID issued by a US or state government agency.
- Make sure the X-C is 300nm 3 points with 250nm between the original and one point PIC or performing duties as PIC
- The test I administer is based entirely on the FAA Commercial Airplane PTS.
- This plan of action is required by the FAA when I give you a flight test to ensure my testing is consistent from one applicant to another.
- I you don't understand a question; please tell me so I can try asking it a different way. If you don't know, just tell me you don't know.
- When we are in the aircraft, I will help you look for traffic, I will ask you to perform various tasks. If you are unsure of what I asked, ask me again. If you aren't ready to do something, tell me. I am also looking for good judgment, like NOT continuing a bad approach, leveling off PRIOR to MDA, etc.
- Transfer of controls is done by verbalizing "I have the controls". I will have to take the controls for Unusual attitudes, of when you put on foggles, etc.(or if traffic requires it).
- Radio communications are your responsibility except for setting up approaches with ATC. Remember YOU are PIC, not me!

## I. PREFLIGHT PREPARATION

### A. Certificates and Documents

Explain privileges and limitations. Give examples of this.  
What documents do you need to have in your possession when flying?  
Which documents must be on board the aircraft when it is operated?  
What is an equipment list used for?

### B. Airworthiness Requirements

Determine current inspection status.  
What AD's apply to this A/C? Explain the compliance record.  
How is a plane with an inoperative piece of equipment operated IAW FAR's? When do you need a "special flight permit"? How do you get one? What is a MEL? Does this A/C have one?  
When does the FAA require an A/C to have a MEL?

### C. Weather Information

Explain the weather for the flight today. Metar, TAF, ASOS/AWOS, ATIS. Competent Go/No-go decision.

### D. Cross-Country Flight Planning

Identify airspace on this trip, Chart markings.  
NOTAM's, AFD, NAV LOG, Appropriate altitudes.  
Simulated flight plan filing.

### E. National Airspace System

VFR Weather Minimums - for all classes of airspace. Airspace classes - their boundaries, pilot certification and airplane equipment requirements for the following— Class A, B, C, D, E, G, Special use

### F. Performance and Limitations

Compute Wt&Bal. Use of Charts, Data.  
What is Accelerate-stop today?  
Why can't you stop in that distance?  
What happens when Wt&Bal limitations are exceeded in a twin?  
Describe effect of atmospheric conditions (hot/cold)(high/low)

### G. Operation of Systems

5 of the following:  
1. Primary flight controls and trim.  
2. Flaps, leading edge devices, and spoilers.  
4. Powerplant and propeller.  
5. Landing gear.  
6. Fuel, oil, and hydraulic.  
7. Electrical. Explain Non-essential bus, Avionics 1, 2, and bus tie breakers.  
8. Avionics.  
9. Pitot-static, vacuum/pressure and associated flight instruments.  
10. Environmental.  
11. Deicing and anti-icing.

### H. Principles of Flight—Engine Inoperative

1. meaning of the term "critical engine."
2. effects of density altitude on the  $V_{MC}$  demonstration.
3. effects of airplane weight and center of gravity on control.
4. effects of angle of bank on  $V_{MC}$ .
5. relationship of  $V_{MC}$  to stall speed.
6. reasons for loss of directional control.
7. indications of loss of directional control.
8. importance of maintaining the proper pitch and bank attitude, and the proper coordination of controls.
9. loss of directional control recovery procedure.
10. engine failure during takeoff including planning, decisions, and single-engine operations.

### K. Aeromedical Factors

4 of the following: a. hypoxia.  
b. hyperventilation.  
c. middle ear and sinus problems.  
d. spatial disorientation.  
e. motion sickness.  
f. carbon monoxide poisoning.  
g. stress and fatigue.  
h. dehydration.

The effects of alcohol, drugs, and over-the-counter medications.  
The effects of excess nitrogen during scuba dives upon a pilot or passenger in flight.

## III. AIRPORT OPERATIONS

### A. Radio Communications and **ATC Light Signals**

(steady green/red, flashing green/red, alternating red/green, flashing white)

### C. Airport, Runway, and Taxiway Signs, Markings, and Lighting

 (identify airport signs and markings, runway incursion avoidance)

### E. Systems and Equipment Malfunctions

5 of the following simulated emergencies—  
How to determine single vacuum pump failure.  
How to determine alternator failure and what action is required?  
Loss of oil pressure, effect on propeller system?  
How to operate landing gear when it won't extend normally.  
How to deal with asymmetric flap extension.  
Door open in flight.  
How to operate emergency exit.

### F. Emergency Equipment and Survival Gear

Explain onboard fire extinguisher storage and use.  
What is the Winter Survival kit; contents?

## IX. HIGH ALTITUDE OPERATIONS

### A. Supplemental Oxygen (Use AC61-107 & FAR91)

Explain supplemental oxygen requirements for flight crew and passengers when operating non-pressurized airplanes FAR91. How is "aviators" breathing oxygen identified?  
What are the differences between "aviators' breathing oxygen" and other types?  
Describe the operational characteristics of continuous flow, demand, and pressure-demand oxygen systems.

### B. Pressurization (Use AC61-107)

Explain:  
a. fundamental concept of cabin pressurization.  
b. supplemental oxygen requirements when operating airplanes with pressurized cabins.  
c. physiological hazards associated with high altitude flight and decompression.

### VII D. Spin Awareness

1. Aerodynamic factors related to spins.
2. Flight situations where unintentional spins may occur.
3. Procedures for recovery from unintentional spins.

**Pre-Flight Briefing: You are PIC, How to simulate engine failures, We will be feathering an engine at altitude, how we will transfer controls, rundown of the sequence of tasks.**

**II. PREFLIGHT PROCEDURES**

- A.** Preflight Inspection (use checklist, how to detect defect of items inspected)
- B.** Cockpit Management (checklist, Briefing, Loose items)
- C.** Engine Starting (explain use of external power, hot/cold start)
- D.** Taxiing (brake check, flight controls, brake usage, markings, atc clearances)
- F.** Before Takeoff Check (positioning, pre-takeoff review, runway incursion avoidance)
- III B.** Traffic Patterns (wake turbulence, wind shear,  $\pm 100\text{ft}$ , 10 kias)

**IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS**

- A.** Normal and Crosswind Takeoff and Climb (flight controls, centerline,  $V_Y \pm 5$  kias, wind drift, checklist )
- B.** Normal and Crosswind Approach and Landing (stabilized,  $\pm 5$  kias, touchdown near stall, 200ft, centerline, checklist )
- C.** Short-Field Takeoff and Maximum Performance Climb (best position, brakes, flight controls, centerline, speed+5-0kias, gear up after 50 ft., wind drift, checklist )
- D.** Short-Field Approach and Landing (stabilized,  $\pm 5$  kias, touchdown ~minimum control speed, 100ft, no float, centerline, max brakes, checklist)
- I.** Go-Around/Rejected Landing (max power, pitch for  $V_Y \pm 5$  kias flaps, gear, sidestep, checklist)

**VI. NAVIGATION**

- A.** Pilotage and Dead Reckoning (fly to each point,  $\pm 2\text{nm}$ , 3 minutes e.t.a. until a destination estimate is made)
- B.** Navigation Systems and Radar Services (track a radial, fly a heading, altitude)
- C.** Diversion (estimate of heading, groundspeed e.t.a. and fuel burn to alternate)
- D.** Lost Procedures (identify prominent landmarks, use navigation system to fix position)

**VII. SLOW FLIGHT AND STALLS**

- A.** Maneuvering During Slow Flight (>4000 feet, **MCA**, I pick config, heading,  $\pm 10^\circ$ ; airspeed +5/-0 kias, bank,  $\pm 5^\circ$ )
- B.** Power-Off Stalls (>4000 feet, stabilized descent, full power, pitch for recovery, min loss of altitude, flaps, gear at positive rate,  $V_X$  before final flaps, heading,  $\pm 10^\circ$ )
- C.** Power-On Stalls (>4000 feet, gear down, <65%, pitch for stall, heading,  $\pm 5^\circ$  full power, bank,  $\pm 10^\circ$  min., pitch for recovery, min. loss altitude)

**V. PERFORMANCE MANEUVER**

- Steep Turns** (clear area,  $<V_A-10$ , 2 360° turns, 50°bank  $\pm 5^\circ$ ,  $\pm 10$  kias, rollout  $\pm 10^\circ$ )

**VIII. EMERGENCY OPERATIONS**

- A.** Emergency Descent (close throttles, bank, gear down, do not exceed 140 KIAS (PA-44) maintain positive g's, checklist)
- B.** Engine Failure during Takeoff before  $V_{mc}$  (Simulated) (less than 25 kias, centerline, brakes)
- C.** Engine Failure After Lift-Off (Simulated) (not less than 200ft AGL, shutdown,  $V_{YSE} \pm 5$  kias, heading  $\pm 10^\circ$ , engine temps, return for landing, secure engine, checklist)
- D.** Approach and Landing with an Inoperative Engine (Simulated) (stabilized approach, airspeed  $\pm 5$  kias, land with simulated feathered propeller first 1/3 runway, centerline, checklist)

**X. MULTIENGINE OPERATIONS**

- A.** Maneuvering with One Engine Inoperative (>4000 feet, full shutdown, coordinated flight, restart,  $\pm 100\text{ft}$ , heading  $\pm 10^\circ$ , checklists)
- B.**  $V_{mc}$  Demonstration (from ~95kias, raise nose 1kt per second, recover @ full rudder, stall warn, buffet, 20°heading, airspeed  $\pm 5$  kias during recovery)

- C.** Engine Failure During Flight (by Reference to Instruments) (simulated feather,  $\pm 100$  feet, bank  $\pm 5^\circ$ , checklists)
- D.** Instrument Approach—One Engine Inoperative (by Reference to Instruments) (altitude  $\pm 100\text{ft}$ , airspeed  $\pm 10$  kias if possible, heading  $\pm 10^\circ$ ,  $\frac{3}{4}$  scale ILS/VOR, 10° RMI/ADF, C/W circling criteria if circling)

**XI. POSTFLIGHT PROCEDURES**

- A.** After Landing, Parking, and Securing (maintain centerlines, observe hold lines, park A/C, shut down w/checklist, secure A/C)

**Debrief and Files**