

IT'S TIME FOR THE CHECKRIDE – ARE YOU READY?

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Your FAA Examiner, or Designated Pilot Examiner (DPE), will probably spend 1-2 hours asking you to explain certain subjects applicable to the certification/rating that you seek. DON'T take this lightly. The following provides a list of subject material that you should be able to discuss in depth. Ensure you can at least discuss as thoroughly as below. Remember, it's ok to use acronyms and to write them out on a piece of paper and explain each in the oral portion of the check ride.

POSITIVE AIRCRAFT CONTROL: You have control of the aircraft at all times and if passing controls to another you verify who has control through the 3 step positive exchange of flight controls process. No matter what happens you fly the plane first! Aviation, Navigate, Communicate.

POSITIVE EXCHANGE OF FLIGHT CONTROLS: This is a 3 step procedure. The person initiating the change of controls states either "I HAVE THE AIRCRAFT" or "YOU HAVE THE AIRCRAFT", followed by the person either relinquishing control or receiving controls acknowledges such and then followed by the initiator of such once again.

PRIVILEGES AS A PRIVATE PILOT: Your examiner will undoubtedly ask you what you can fly and how you can fly with your new certification. So you should know the following:

1. You cannot fly for compensation.
2. You can share the expenses for a flight with others onboard as long as you pay at least your fair share.
3. You can fly a single engine, fixed gear airplane as long as the horse power is 200 or less.
4. You'll need endorsements for the following on top of your private pilot certification. If the examiner gives you an example of an aircraft to see if you can fly it and you don't know the aircraft, simply tell him you're not familiar with it.
 - a. High Performance (182's, Bonanza's, Cirrus). Anything over 200 hp.
 - b. Complex. Anything with retractable gear will usually fall into this but the exact definition of a complex aircraft is constant speed prop, retractable gear and flaps.
 - c. Tailwheel. Aircraft that don't have tricycle gear have a tail wheel.

STALL SPIN/AWARENESS: You should be able to identify what causes a stall. Specifically, the angle of attack is reached where air no longer flows over the wings properly to create lift. The spin is simply a stall where one wing stalls before the other. Recovery from a spin should be explained as the acronym PARE. These procedures should be performed procedurally and not simultaneously for best results.

Power idle

Ailerons neutral

Rudder opposite the spin

Elevator down

COLLISION AVOIDANCE: Explain that collision avoidance is every pilots responsibility regardless of whether they are on radar with ATC (tower or an airport or flight following or IFR flight plan). See and avoid. The only time a pilot is relieved of this is when he has zero visibility in IMC. Explain right of way rules.

WAKE TURBULENCE AVOIDANCE: Explain that the best way to alleviate this problem is by creating a time gap between aircraft thus allowing the vortexes to dissipate. Explain that a big, slow and clean configured aircraft creates the most dangerous wake turbulence. Explain that as the pilot you can tell the tower you are going to hold for more time if you believe it's needed before taking off behind a large aircraft. Three (3) minutes is preferable on large planes. Explain that if you're landing behind a big plane and time has not elapsed sufficiently for the wake turbulence to dissipate that you should stay above the aircraft's glide path and you should land beyond its touchdown point. If taking off behind a large aircraft rotate prior to their rotation point. Remember the soup bowl.

LAHSO: Land and Hold Short Operations (LAHSO) are often in effect where 2 runways intersect. LAHSO operations are only in effect at airports with an operating control tower. If in effect, you will be notified immediately upon contact for landing that such is in effect and the distance for landing. If you cannot land and stop in that distance you must refuse the clearance immediately with ATC. Student pilots can accept a LAHSO.

RUNWAY INCURSION AVOIDANCE: This is a hot topic with the FAA. Be able to recite all of the following to the examiner.

- 1) Always have a taxi diagram in front of you
- 2) Always read back all instructions
- 3) Never stop on a runway
- 4) Exercise sterile cockpit
- 5) Request progressive taxi at airports that you are unfamiliar
- 6) If instructed to Line Up and Wait on a runway turn all your lights on and line up off centerline so that you can be seen easier.

CFIT: Controlled Flight Into Terrain. This normally occurs by VFR pilots flying into IMC conditions. Don't do it. You can avoid it by setting minimums for yourself and sticking to them. As an example, I'm not going to fly unless the ceiling is at least 3000 AGL and it is not forecast to come down lower.

CHECKLIST USAGE: Explain that every pilot, no matter how good they are, are human and thus subject to mistakes. Checklists help us ensure we are not skipping an item that could result in an accident or dangerous situation.

CHARTS: If you have not already done so, download the Aeronautical Chart User's Guide. It's free in PDF format and can be found on Cherokee Flight's website under Resources. Read it all for your checkride, i.e. VFR or IFR. Know every single thing on the chart.

ADM and Risk Management.

Aeronautical Decision Making. It's the process of using every available asset available to make a decision. Know these and be able to explain it all. DECIDE – Explain it as defined below.

Detect change (i.e. engine RPM loss)

Estimate the need for action (I've got carb freezing and I need to clear it)

Choose the outcome (I want to restore power)

Identify the actions (turn on carb heat)

Do the actions (turn it on)

Evaluate the systems for change

Risk Management. Mitigating risk is a big deal. As a pilot you should do everything possible to assess and eliminate risk prior to ever moving the aircraft. We love acronyms in aviation. Why? Because it helps us remember things we may otherwise forget. Same here. So we use PAVE and acronyms within it.

Pilot- Use IMSAFE (see Note 1 below)

Aircraft – Use AVIATE (see note 2 below) and of course perform a thorough preflight

En**V**ironment – Obtain and evaluate weather (METARS, TAFS, Area Forecasts), Notams, A/FD, TFRs, SUA

External – pressures from family, work, etc

Note 1

Illness (the last thing we want to do is get behind the controls of an aircraft if you're sick)

Medications (many drugs are not allowed by the FAA and this includes over the counter)

Stress (our lives are busy and without even thinking we can become stressed out)

Alcohol (8hrs bottle to throttle, .04 is flying under the influence and highly punishable)

Fatigue (get enough sleep – if you're always tired see a doctor)

Eating and drinking (don't go hungry and don't allow yourself to get dehydrated)

Note 2 – AVIATE – required inspections

Annual – every 12 mths (IA must sign) *

VOR – every 30 days (5 ways to verify it – see Note 3 below)

100 hr – every 100 hrs when used commercially, tach or hobbs time (A&P or IA)

Altimeter – Pitot-static check every 24 mths (required for IFR only) *

Transponder – every 24 months *

ELT – every 12 mths, normally done with annual *

*Extends until the end of the month in which due

DANGEROUS ATTITUDES: Be able to describe the different attitudes and the proper antidote for each.

Name	Description	Antidote
Antiauthority	"Don't tell me..."	Follow the rules; they're usually right.
Impulsivity	"Do something quickly!"	Not so fast-Think first!
Invulnerability	"It won't happen to me...."	It could happen to me!
Macho	"I can do it."	Taking chances is foolish.
Resignation	"What's the use?"	I'm not helpless.

WIRE STRIKE AVOIDANCE: Explain that towers have wires from the top that extend outward at a considerable distance at the ground so the tower is not the only thing to be voided. Additionally, when looking for an off airport emergency landing site look for poles as you may not be able to see the wires until very close to the ground after already having committed.

AIRSPACE: While knowing airspace is given if you know your charts it is worth reemphasizing. Some of the places where pilots get tripped up are overlying or underlying airspace. If the examiner points to a spot, such as the SW sector of LZU's class D or the eastern sector of Greenville Downtown GMU's class D, you should be able to address the airspace all the way up to class A. Normally, if it's not B, C or D and it's above 1200, or 700 in the cases of airports with approaches, it is class E. Also note that towered airports that do not have an operating control tower 24 hours a day normally revert to class G when the tower is closed. Always check the A/FD to be sure.

TEMPORARY FLIGHT RESTRICTIONS (TFR'S): Explain that these are implemented by the FAA when deemed necessary for safety. These are activated at a specific time and for a specific radius and up to a specific altitude. Examples of such are for VIP's and sports events. They are not identified on charts. The Flight Service Station can provide information on such and is also available on electronic systems such as Foreflight or Garmin Pilot.

SPECIAL USE AIRSPACE: Ensure you can identify on charts **MOA's, Restricted Airspace, Prohibited Airspace, Warning Areas, Alert Areas and National Security Areas.** Be able to discuss each and how they apply to you as a pilot, i.e. when you can or cannot enter such and how to determine such.

AVIATION SECURITY: Have 1-866-427-3287 General Aviation Security Hotline in your phone. Explain if you see somebody on the airport doing something that seems inappropriate, or suspect in nature, you would call the airport police, local police or the hotline.

SINGLE PILOT RESOURCE MANAGEMENT: Explain that this is simply ensuring you are using cockpit management to have things where you need them. It's also doing things as you have the time so that

everything doesn't start happening at the same time. As an example, you'd want to get the AWOS or ATIS at your destination airport as soon as you can so that you're not trying to decide what runway to use and how you're going to approach at the last moment.

CLOUD CLEARANCES/VISIBILITY: You should know the various cloud clearances/visibility. FAR §91.155. The old 3 152's applies to E below 10k, class D and class C. It's the one you absolutely need to know by heart. This of course is 3sm vis, 1000 ft above, 500 ft below and 2000 ft horizontally.

Airspace	Flight visibility	Distance from Clouds
Class A	N/A	Not Applicable.
Class B	3 sm	Clear of Clouds.
Class C	3 sm	500 feet below, 1,000 feet above, 2,000 feet horizontal.
Class D	3 sm	500 feet below, 1,000 feet above, 2,000 feet horizontal.
Class E		
< 10,000 MSL	3 sm	500 feet below, 1,000 feet above, 2,000 feet horizontal.
=>10,000 MSL	5 sm	1,000 feet below, 1,000 feet above, 1 sm horizontal.
Class G		
<1,200 AGL		
Day	1 sm	Clear of clouds.
Night	3 sm	500 feet below, 1,000 feet above, 2,000 feet horizontal.
> 1,200 AGL but <10,000 MSL		
Day	1 sm	500 feet below, 1,000 feet above, 2,000 feet horizontal.
Night	3 sm	500 feet below, 1,000 feet above, 2,000 feet horizontal.
> 1,200 AGL and =>10,000 MSL.	5 sm	1,000 feet below, 1,000 feet above, 1 sm horizontal.

WEATHER: Download and read AC 00-45H. If you prefer to have a hard copy you can purchase one at the flight school. Make absolutely sure that you can decipher everything on a METARS, TAF, and Area Forecast, talk about frontal systems, identify different frontal systems on graphical weather products as well as be able to read the various graphical weather products that depict other than frontal systems. Additionally, you should be able to decipher a pilot report (PIREP).

AIRCRAFT: Be able to explain LHAND for your aircraft. Know the electrical system and fuel systems. I.e., a 14 Volt System that has a 14Volt/60 amp alternator and 12 volt battery and gravity fed fuel system

(172), or a 14 Volt System that has a 14Volt/60 amp alternator and 12 volt battery and fuel system that has 2 fuel pumps, one mechanical and one electrical.

Lycoming O-360, 180 HP at 2700 RPM's (archer) or Lycoming O-320, 150hp@2700 RPMS (172M)
Horizontally Opposed
Air Cooled
Normally Aspirated
Direct Drive

VFR EQUIPMENT REQUIREMENTS: Use TomatoFlames for day VFR and FLAPS for additional equipment needed at night.

VFR DAY

Tachometer
Oil Pressure
Magnetic Compass
Air Speed Indicator
Temperatur (if water cooled)
Oil Temperature
Fuel Guage(s)
Landing Gear Indicator (if retractable gear)
Altimeter
Manifold Pressure (if applicable)
ELT
Seat Belts

NIGHT FLIGHT (IN ADDTION TO VFR DAY)

Fuses
Landing Lights
Anti Collision Lights
Position Lights
Source of Electricity

Oxygen Use:

> 12,500 and up to 14,000 for > 30 mins	Crew Required
Over 14,000 regardless of time	Crew Required
Over 15,000	Crew Required and must be avail to all