

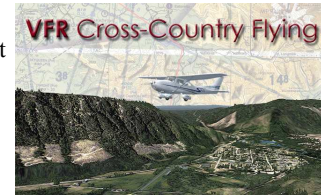


THE WEEKLY PLOG

Progress and End of Course Checks

2006 Week 26

NASA will be receiving two more ASRS forms soon. One of them from a student who made a blunder and one from me, who allowed the blunder to happen. What really frustrates me is that this particular event probably occurs two or three times per year, to me, while evaluating student pilots on the Lesson 36 End of Course Check. It is always based on the same set of circumstances, the weather. And the results are nearly the same; I take control of the aircraft and we return to Battle Creek after seven minutes of flying. What is causing students to fail after being airborne for only seven minutes?



CROSS-COUNTRY FLYING INVOLVES FLYING IN A VARIETY OF AIRSPACE.

The answer is busting into someone else's airspace without permission. Here is how the situation develops. The student plans a VFR cross country with a planned course to the Southwest. The usual altitude to fly is 4,500' msl. If the weather has a cloud layer near that altitude, then the student picks the next lower 'even' altitude, which would be 2,500' msl. Of course, you know that the semi-circular altitude rule is only in effect if flying above 3,000' agl, but students do not know this. The rule is also based on magnetic course flown, which does not account for wind effect. If you look at the Chicago Sectional chart, you will notice two things: 1) the Southwest direction will take the student near the Kalamazoo Class D surface Area and 2) Battle Creek is on the North side of the chart, at the bottom. Any courses plotted in a southerly direction will require the student to transfer the line from North side to the South side.

Lets tackle the second issue. I have not yet met a student pilot that can transfer a line from one side of the chart to the other side, myself included. On the last 36 EoC check, when I transferred the line from South to North, it was 8nm south of the Battle Creek airport. No wonder the student was off course so early in the flight. Some students have a solution to this problem; they use two Chicago Sectionals. I don't care for this solution since it either involves buying two sectionals (expensive for a student) or it involves the student using an out-of-date sectional along with the current one. Transferring your course line between sides of a sectional chart is a basic navigation skill that you and your student should have. One more point here, some DPE's will test this skill on CFI checkrides. It is better to learn it now, than to have your student bust their initial CFI ride.

The first issue is the result of poor planning (wrong course line), lack of knowledge (airspace requirements) and/or lack of practice (not flying into other towered airfields). If you look at your students cross-country destinations, do any of them include a non-radar airfield with an operating control tower? Probably not (you cannot count Battle Creek either). Taking your student to several different destinations will be quite beneficial to them over their piloting career. You should make a list of the various airspace types and take your student into each one of them at some point in their training. Each airspace is unique and the requirements to operate safely in each one will change from one type to another.

What should this student have done to avoid the airspace bust? Three possibilities come to mind. First, use Radar Flight Following. I highly encourage students to call ATC and ask for flight following. I suspect some students do not do this since they know that they will not be going all the way to the destination. ATC is a resource, use it. Second, fly higher. 3,500' msl will clear the Delta airspace by 100'. The semi-circular rule does not apply until approximately 4,000' msl. Third, fly around the Delta surface area. As you near the airspace, simply turn 60° off course (away from the airspace) and fly for several minutes. Then turn 120° towards your course for the same amount of time that you flew away from it. Now you are back on course; make any final course adjustments at your next fix.

Take note if you pass within four miles of any airspace type that requires radio communication. Interestingly enough, none of these students would have failed the 36 EoC had they flown at a higher altitude. And we would not know of this problem either.

Announcements

Please report any Progress Check, Stage Check or Check-ride failures to me. Include the failed subject areas.

Make sure that you are putting in a good faith effort on the weekends. Management (not me) is investigating a major decline in weekend flying hours.

THE BACK SIDE

Plogs

After carefully planning the cross-country flight and filling in the log, the student made a blunder with the fuel calculation. I know that there are some DPE's that would question the student and probably issue a salmon colored paper to the student. See if you can find the mistake. The planned fuel flow is 8.5 gph.

Fuel	
Taxi	1.1
Flight	15.37
Reserve	3.0
Total	19.47
Departure	KBTL
Destination	KBMI

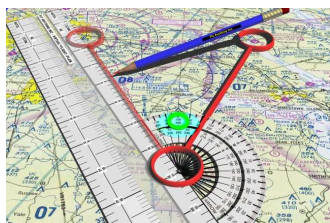
FUEL PLANNING FOR A VFR
CROSS-COUNTRY.
WHAT'S WRONG HERE?

I see three things wrong here, the most critical of which is the reserve fuel plan. FAR's state 30 minutes reserve in the day time. With the planned consumption being 8.5 gph, then the reserve amount should be 4.25 gallons, not 3.0 gallons. I know that this is only a small calculation error, but I asked the student why use 3.0 gallons for reserve fuel. The answer shocked me: "because I always use 3 gallons for reserve". Without giving consideration to FAR fuel reserves, an FAA examiner would likely fail the applicant for lack of knowledge.

Besides reserve fuel, the departure and destination boxes should have fuel amounts in them, not the airport identifier. The departure fuel box would be filled in when the pilot knows how much fuel is onboard the airplane. Subtract the total required for the mission and you end up with the planned destination fuel load.

When you get to your destination, you should dip the tanks and see just how close your planning was to actual consumption. On my recent trip back from Duluth, my preflight planning estimate was 11 gallons would be in the tank upon landing at Battle Creek. The MFD calculated 10 gallons remaining. After landing I dipped the tanks and measured 13 gallons. By doing this, you may learn just how close you were to running out of fuel.

Quiz Time



CAN YOU DRAW THE COURSE
LINE FROM NORTH SIDE TO
SOUTH SIDE?

Since North to South course plotting is an important skill for pilots, this weeks quiz will involve plotting a course on the Chicago Sectional Chart from North to South sides.

Plot a course from the small island on the south side of Gull lake to the junction of I-69 and I-90 (Indiana Toll Road). Determine the True Course of your line.

See Dominic for the answer.