

GA1324

Posted on 06.12.2022 by Steve Forward

Category: [General Aviation](#)

Report Title Incorrect pressure setting

Initial Report

I was the instructor checking out an experienced pilot on a Cessna 152 at [Airfield]. We briefed the flight and we needed to do some stalls that ideally required an altitude of at least 3500ft in order to recover by approximately 3000 ft AGL. The cloud base from my previous sortie suggested that this may have to be done between breaks in the cloud or above the cloud layer. The pilot being checked-out completed all external and internal checks and we departed the circuit and climbed out to the North West under the CTA with a base of 4500ft and 5500ft AMSL. We climbed up to around 5000ft under the base of 5500 leaving sufficient space.

The stalls and steep turns where completed and occasionally the altimeter read as high as 5200ft. I noted that GPS integrity was lost during the steep turns and awaited for it to return before descending back toward the airfield. I was using the small moving map on the installed electronic navigation system and confirming the boundaries against a current map rather than using SkyDemon as I would in my own aircraft. Alerts for approaching airspace were set to appear but no aural alert was set. Noting our position I did briefly take control to hasten the descent as we approached the lower CTA with a limit of 4500ft. As we continued back towards the airfield, I briefed the pilot to complete a standard overhead join at 2000ft AGL. At that point I checked the pressure setting on the altimeter to discover it was still set on QFE and hence realised that we had probably been at least 400ft higher than indicated and had potentially been inside the CTA by around 100ft or so. We completed the remaining aspects of the flight without incident.

I phoned [Airport] on landing and they confirmed that they had not identified any infringement over the last hour or so in that area. They confirmed with the CTA controlling authority that they also had not identified any infringement during the same time period. So on this occasion it would appear that my decision to try and maintain a margin of 500ft had prevented an infringement caused by a 400ft error in the altimeter indication due to the incorrect altimeter setting. I was relieved but annoyed as earlier in the same week I had watched the GASCo seminar on airspace infringements and I had previously set the altimeter to QFE to aid the previous student's knowledge of the height during a circuit. I had failed to notice the licensed pilot on my next flight had not taken off on QNH which is my preferred method of operation.

Lessons learnt:

1. All pilots are different and some will depart on a QFE. As an instructor I should have monitored the completion of the checklist better, double checked the altimeter setting and then discussed the merits of whether to depart on QFE or QNH.
2. Despite the broken nature of the cloud coverage it was higher than I thought and I lost a degree of situation awareness. Whilst I utilised the simple map on the installed GPS, I did not utilise the better display of my SkyDemon in order to check my positioning.
3. Prior to flight I did not complete a TEM briefing nor a proposed outbrief which may have helped increase awareness of the altitude and airspace risk.
4. As a new instructor, flying with a more experience pilot can lead you into a false sense of security and belief that the pilot flying will do everything correctly or as I would.

I guess on further reflection I learnt that whilst checking out an experienced pilot I should watch everything they do and treat them as a student. I watch my students doing checks but didn't double check his checks. As P1 I guess I learnt that it's my licence at stake not theirs!

Comment

Firstly, might we commend the reporter for his frank and honest report, and for allowing for a margin of error when operating under controlled airspace. The latter probably saved the day and further reinforces the value of the '[Take 2](#)' campaign of leaving a margin for just such eventualities. As the reporter comments, instructors/examiners need to be very careful about making assumptions about other pilots' capabilities regardless of their experience levels and so it's important that thorough briefings are undertaken, including what altimeter setting will be used for take-off and when it will be changed, and to what, if getting airborne on QFE.

Key Issues

Dirty Dozen Human Factors

The following 'Dirty Dozen' Human Factors elements were a key part of the CHIRP discussions about this report and are intended to provide food for thought when considering aspects that might be pertinent in similar circumstances.

Awareness – did not assimilate which setting the altimeter was set to.

Communication – pre-flight briefing and in-cockpit communication between the crew.

Complacency – habitual behaviour and assumptions based on student/check pilots experience.

loss_of_awarenessAwareness

poor_communicationCommunication

complacency Complacency



