

GA1321

Posted on 06.12.2022 by Steve Forward

Category: [General Aviation](#)

Report Title Dual-reading ASI

Initial Report

As a retired but active pilot and flying instructor I still fly many different types. The gliding club at which I fly and regularly tow operates several tug aircraft, but the particular aircraft of this report is less fuel efficient and is now effectively only used as a backup on very busy days. I had flown it many times but not recently. On a particularly good soaring day, the primary tug, which is a fully equipped modern light aircraft, was in full use. I offered to carry out a few tows in the aircraft in question to reduce the queue of waiting gliders (I had carried out the daily inspection on it earlier). The tow appeared normal to me but on final approach the stall warning sounded at a higher speed than I expected. On the second tow the glider pilot radioed to say he required more speed. Only after releasing the glider did I realise that I had been reading the speeds marked on the prominent outside ring of the ASI markings as knots, although the knots were on the inside ring and the outside was in mph. Matters were compounded because I had recently flown and towed in an aircraft of the same type with an ASI marked in knots only.

Comment

It doesn't matter how experienced you are, there's always a little trap to fall into, and this one is a classic Human Factors outcome from operating different aircraft with different instrument displays. It's easy to be clever in hindsight about mentally preparing for and considering the differences in aircraft but it's easy to overlook small things like ASI markings which might not be immediately obvious. If you regularly change aircraft during the day as an instructor then there's a risk of complacency and habituation so there may be a case for a memory-jogger in aircraft that have peculiarities compared to other aircraft in the fleet. Nevertheless, you need to know your aircraft, especially if you're jumping between different aircraft on a regular basis, so give yourself a couple of minutes to consciously familiarise yourself with the aircraft, its systems and its performance, especially at the end of the day or when under pressure – the Human Factors risks with aircraft having different displays or configurations must be consciously countered no matter how experienced you are.

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.

Pressure – desire to reduce the queue of gliders.

Awareness – did not assimilate the meaning of the ASI markings.

Complacency – habitual behaviour from other aircraft.

pressurePressure

loss_of_awarenessAwareness

complacencyComplacency



