

STALL RECOVERY AND MINIMISING HEIGHT LOSS

A heads-up that the way students learn to minimise height loss during stall recovery could give them grief if they decide to apply to the airlines.

In ab initio flight training, instructors teach the stall with four aims: for the student to be able to control the aeroplane to the point of stall; to recognise the symptoms of the approaching stall; to experience the stall itself; and to recover with minimum height loss.

The student needs to know about stalling so they can recognise one drawing near, and recover from it, especially during approach and landing.

Typically – as if readers of *Vector* needed reminding – the stall happens because the angle of attack of the wing is too high for air to flow smoothly over it. About 15 degrees is the limit. The amount of lift the airflow is producing is insufficient to support the weight of the aircraft.

“To recover from a stall,” says CAA Aviation Safety Advisor Carlton Campbell, “you check forward to reduce the critical angle where it’s stalled to where the wing is flying again. In that recovery the check forward is ‘unstalling’ the aircraft.

“Then applying full power allows us to minimise loss of height in that recovery process. And that’s obviously critical if the stall occurs close to the ground.”

Carlton says this manoeuvre is taught well in the GA environment, but the ‘law of primacy’ is causing a headache for airlines.

“The stall situation in an airliner, particularly a swept wing jet is typically at an altitude where height loss is not a problem,” he says.

“But airline recruits are so focussed on minimising height loss, they’re putting in the power, raising the nose and bringing it back to a climb attitude. They’re risking putting the aircraft into a secondary stall.

“There have been airliner accidents attributable to the crew holding the nose up in a low speed/stall situation.

“Airlines are saying the focus on minimising height loss is not the most important consideration for them.

“So instructors need to make students aware, early in their training, that minimising height loss is important in one context, but that there are other contexts, such as in the airlines, where minimising height loss does not take precedence.” 📌

// A HEADS-UP...

Katrina Witney, CAA Flight Examiner and Flight Standards (theory and syllabus), says many students are in a rush to minimise the height loss.

“They’re too quick to apply power and raise the nose.

“They need to check forward sufficiently to break the stall, *then pause*, giving the aircraft a chance to recover before minimising height loss.

“Without taking that time, they run the risk of putting the aircraft into a secondary stall.

“Not only could this affect their flying if they enter the airlines, it’s also not good GA practice.”