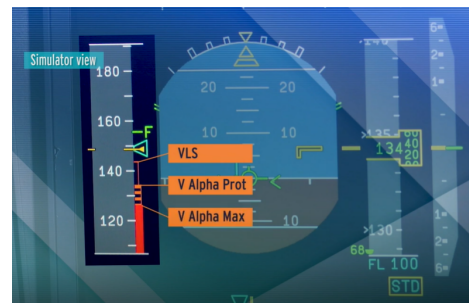


TUNING OF LOW SPEED PROTECTIONS



Definitions

There have been a number of accidents in the past that were due to stall despite various stall warnings at the time. The aim of the low speed protection is to prevent the aircraft from reaching a stall in normal law. This protection must be robust enough to allow the pilot to stand on the protection and to get the maximum performance out of the aircraft when it is required (e.g. during avoidance or GPWS maneuvers).

Purpose of the Flight Tests

Once the stall AOA is determined in flight, the purpose of this test is to tune the various parameters of the Alpha protection at low Mach Number (low altitude), including:

- The AOA not to be exceeded (AlphaMax)
- The AOA at which the protection engages (AlphaProt)
- The AOA at which Alphafloor engages

Several static and dynamic maneuvers are performed in order to ensure the robustness of the Alpha protection while maintaining the best performances of the aircraft.

Application to Line Operations

The Alpha protection is not activated during normal operations and does not interfere with pilot actions on flight control. This protection is only there as a “safety net” when in normal law.

When a situation occurs which suddenly requires the flight crew to have the best maneuverability of the aircraft (e.g. during GPWS maneuver, avoidance maneuver, etc.), then flight crews should rely on the alpha protection and apply full back stick as necessary, without any limitation.

However, should any stall indication appear, and particularly in case of a stall warning, the flight crew must immediately apply the stall recovery procedure as it may be due to a reversion in a non protected law.

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