



EASA
European Aviation Safety Agency

Staying In Control

Session 1

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Your safety is our mission.

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1. Safety issues

➤ Staying in Control

- Flying skills, Pilot Awareness, Intentional Low Flying, Engine Failures, Stall in Final Turn or During Take-Off

➤ Coping with Weather

- Entering IMC, Icing conditions, Carburettor icing, Weather information

➤ Preventing Mid-Air Collisions

- Airspace infringement, See and Avoid, Airspace complexity

➤ Managing the flight

- Navigation, Fuel Management, Forced landings

USA GA study

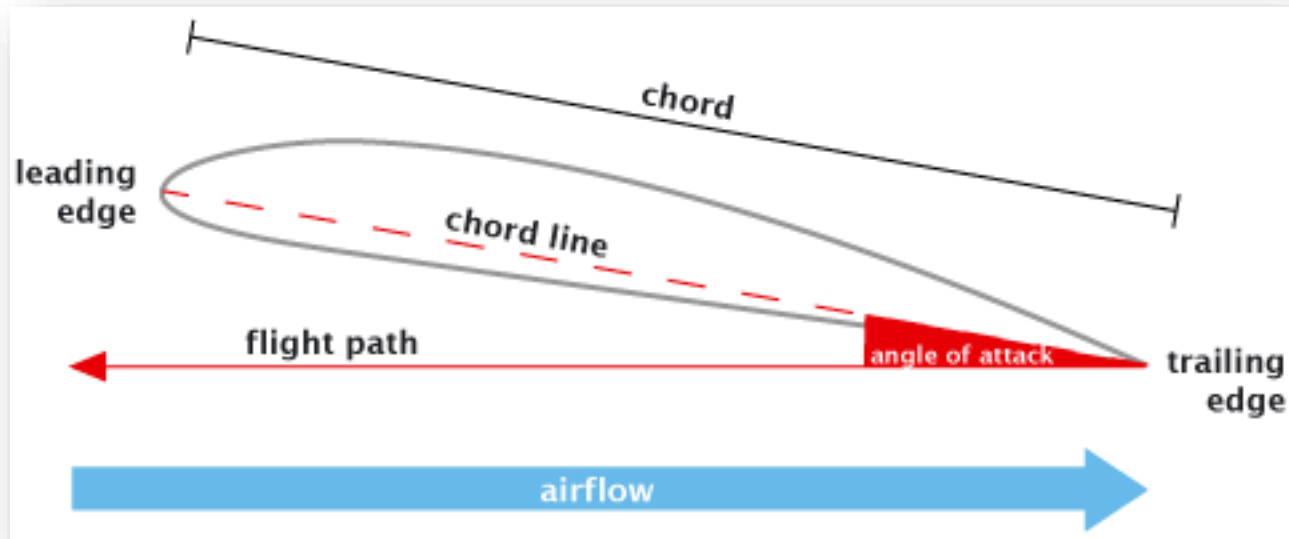
- **General Aviation Joint Steering Committee (GAJSC), Safety Assessment Team (SAT) 2014**
- **LOC, mainly stalls, accounted for approx 40% of Fatal GA airplane accidents 2001 - 2010**

- AoA awareness should be promoted & use of devices encouraged
- On 25 Jul 2014 an FAA initiative to promote installing the devices in aircraft and educate pilots in their use was announced

CaughtOnTapeTV



Angle of Attack



Attitude / angle of attack

“the angle between the line of the chord of an aerofoil and the relative airflow.”

Why do we need to know this?

This will only work if the ball is in the centre!





Remember – there is no such thing as a single stalling speed

AoA Indicators for General Aviation







Root causes

- Stall after take off is statistically number 1
 - High power, high AoA, etc.
- Loss of Situation Awareness, distraction, etc.
- Lack of understanding of AoA
- Lack of competence
- Coping with startle / surprise factor (especially if no situation experience)



Factors

- Human Factors
 - Poor Decision Making, e.g. flying in the first place, Aborting take-off, Going Around in Approach and Landing
 - Stress (hearing the first one to be lost)
 - Etc.
- Wrong flying techniques
- Intentional low flying is almost a separate issue



What can be done?

- Skills and knowledge of Flight Instructors and of Pilots
 - Maintaining pilots competence after licencing?
 - From checking to coaching: making check flights with Flight Instructors more useful
- Threat and Error Management (TEM), including distraction management

Good instructors make good pilots!



How can this be done?

- **Make more effective use of biennial flight reviews**
- Flight Instructor seminars
- AoA awareness campaigns
- Scenario-based training and simulator-based training to develop experience (“train the brain”) and improve Decision Making

It is all about Human Factors!



How can this be done?

➤ Technology

- Promote spin resistant aircraft and airplanes that provide aerodynamic warnings + parachutes?
- AoA indicator, stall detector, etc.
- Modifications and installation should be made easier
- I-Pads, etc. (beware of distraction potential)

➤ Safety Promotion

- SP material in mother tongue and highly visual, to reach all FIs and Pilots; Translation: NAA and Safety Promotion Network (SPN) role, budget



Who is going to do it?

➤ EASA and NAAs: encourage cultural change

➤ How to encourage new way of thinking?

➤ Positive reinforcement programme?

Working
together

➤ GA Community

➤ *Capitalising on existing material?*

➤ *Instructor academy?*

➤ In discussion: CRM for regulators?



Civil Aviation Authority

HANDLINGSENSE LEAFLET STALL/SPIN AWARENESS 2

gap
GENERAL AVIATION
PRACTICE

Spin Avoidance and Recovery

Civil Aviation Authority
OF NEW ZEALAND
In March, following a fatal accident in Australia

EGAST
European General Aviation Safety Team

STALL AND SPIN LOSS OF CONTROL

FOR GENERAL AVIATION PILOTS

SAFETY PROMOTION LEAFLET



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Thank you

Comments and questions are welcomed

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