



Diamond DA 42 training accident Unintentionally entering into spinn - presentation on weight / balance issue during flight training operations

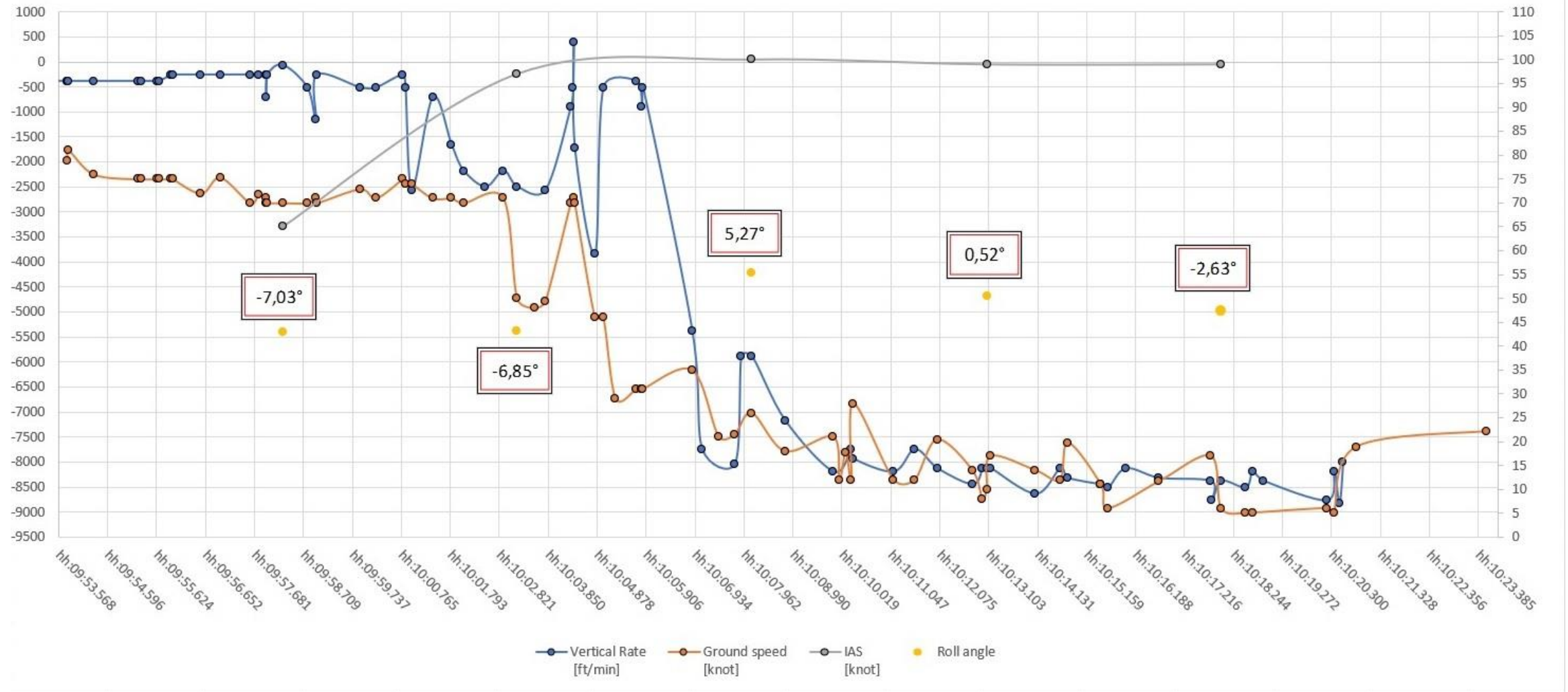
Inspector of Accidents Tor Nørstegård NSIA, Norway

- Instruction on multi-engine piston aircraft (MEP).
- Pilot flight Academy, Norway.
- Instructor (FI(A)IR), student and passenger.
- Student's first flight on multi-engine training.
- Student had 18 hours DA 42 NG in simulator.
- Instructor had 85 hours on type.
- Instructor had mandatory theoretical instruction in spins and had completed a 45-minute instruction flight.



- 3,600 ft above ground
- Fair weather conditions
- Third sequence with slow flight
- Gear and flaps down
- 65 KIAS
- Rolled 7° left
- Rate of descend increased to 8,000 ft/min
- One witness saw a sequence of the AC spinning vertically

ADS-B, Enhanced Surveillance (EHS) and Flightradar24

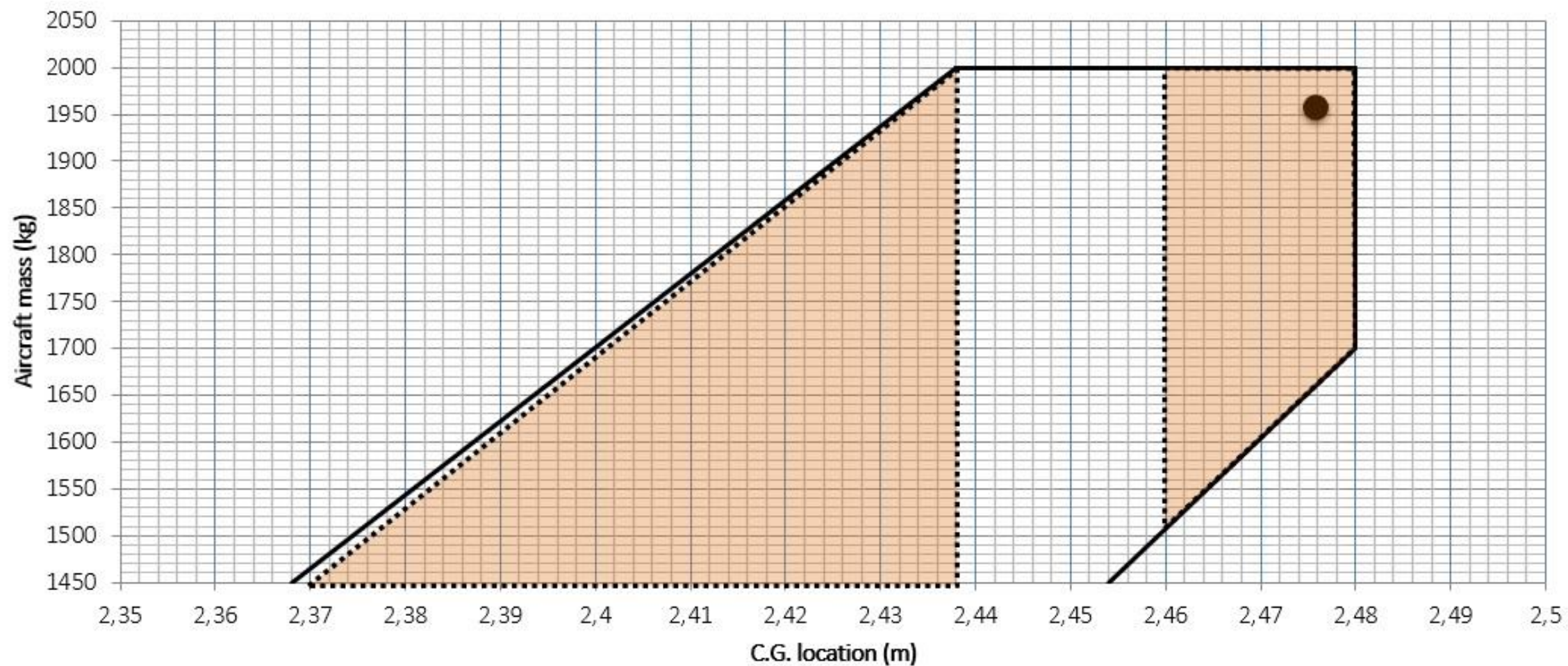








- The wreckage showed heavy damage and it has not been possible to determine what caused loss of control of the airplane based on examinations of the wreckage parts.
- No signs of unsafe maneuvering or reckless behavior.
- The Diamond DA 42 NG is sensitive regarding load distribution. The content of anti-icing fluid in the noes compartment tank greatly affects the balance. A single flight bag positioned in the passenger seat, or in the aft luggage compartment can make a great difference.
- There are no requirements for multi-engine airplanes in the normal category (CS-23) to be certified for spins.
- Demonstration of spin characteristics is only required for single-engine airplanes.
- Spins are generally trickier to handle with an aft CG.



Is the DA 42 well suited as a multi engine trainer?

- Statistics are good. More than 1,000 DA 42 airplanes have been manufactured and it has become a popular training aircraft at many flight schools.
- Is the narrow CD range a safety issue?
- Are requirements for training in multi engine piston aircraft the preferred way of learning how to handle engine issues in a modern passenger jet?

AOPA

2003 Report *Stall/Spin: Entry point for crash and burn?* The report refers to a review of 44 fatal stall/spin accidents during the period 1991–2000.

These accidents occurred in connection with flight training. As many as 91% occurred with an instructor on board, while only 9% occurred when the student was flying solo.

Safety recommendation Aviation No 2023/04T

..... during flight instructions the flight instructor should be the safety barrier. There are no requirements for practical refresher training for instructors in spin prevention and spin recovery.

The Norwegian Safety Investigation Authority recommends that the European Aviation Safety Authority (EASA) consider the requirements for practical training and refresher training of flight instructors, with the emphasis on spin prevention and spin recovery.

EASA response to the Safety Recommendation

- The training provided to the Class Rating Instructor (CRI) is deemed sufficient to prevent a spin entry. The accident happened in an aircraft requiring class rating. The CRIs have a different training program in comparison with FIs. EASA believes that the accident is unrelated to the proposed considerations for the training of the FIs.
- This being said, EASA takes note of the recommendation, and is **considering enhancing spin prevention in refresher training** for FIs in a future rulemaking task for a comprehensive overarching update of Subpart J (Instructors) of the above-mentioned Regulation.