

Safety Report
Accident Piper PA-34-200T
reg: G-STZA
of: 09/09/2017
Salussola (BI)
Italy

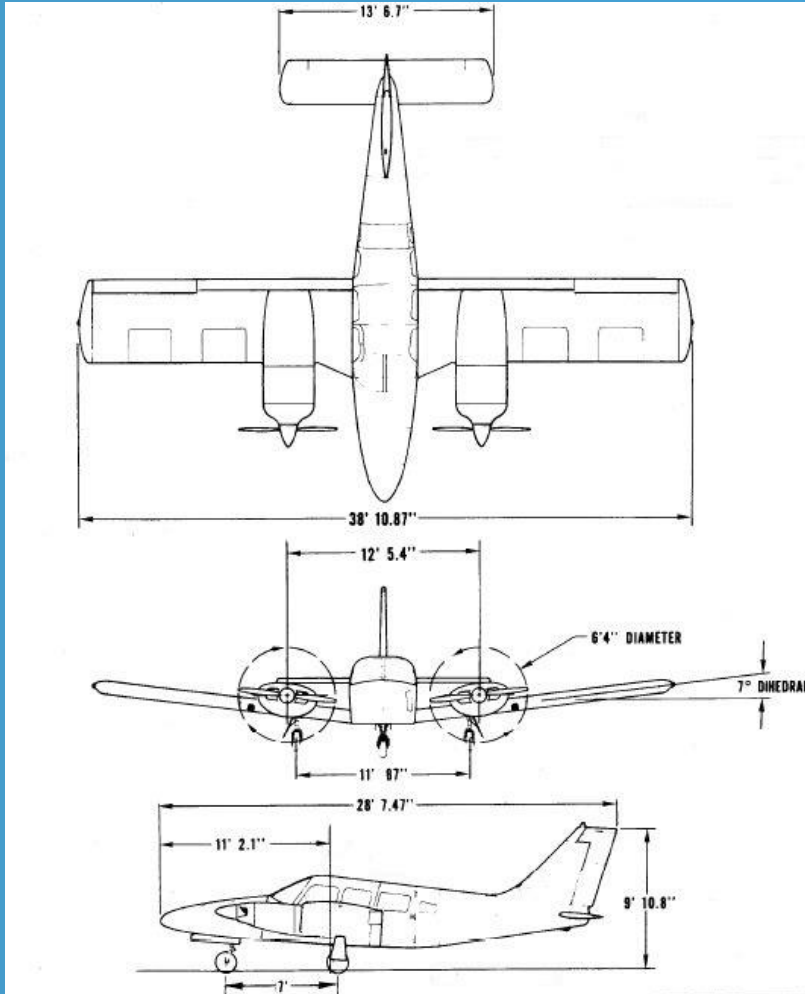
EASA GA and Low Weather Seminar , 17-18 July 2019

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ANSV IIC

Agenda

- Aircraft
- History of the flight
- Accident site
- Other information
- Analysis
- Causes
- Considerations

Aircraft



Piper PA 34-200T Seneca II

MTOM: 2.150 Kg

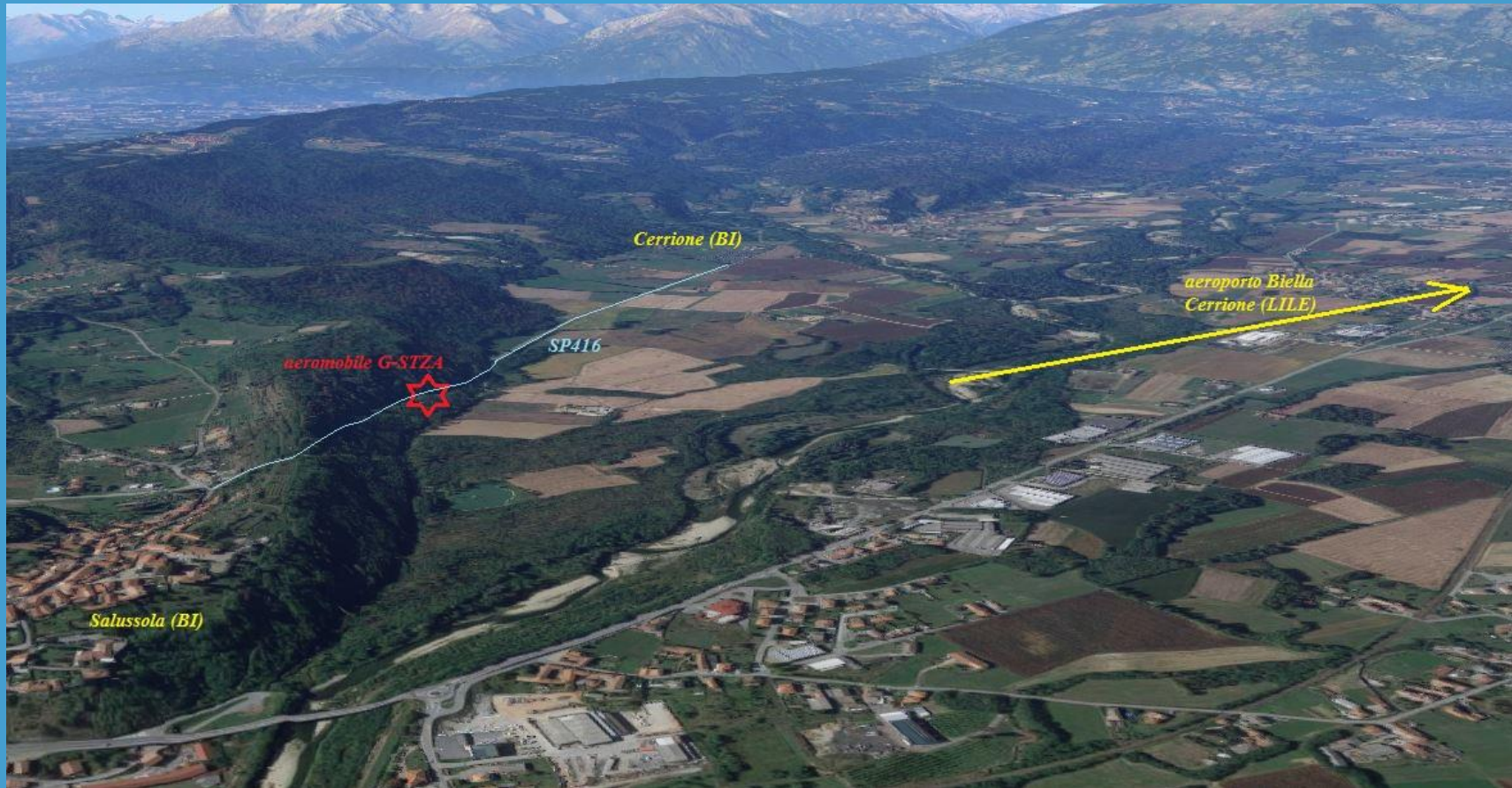
ENGINE: (2) Continental TSIO-360EB, 215 hp (each)



History of the flight

- The PA-34-200T reg. G-STZA had taken off, with the pilot only on board, at around 08.00' UTC, in VFR, from airfield "Piovera" (AL), to carry out a transfer flight, according to the VFR flight rules, with planned landing at airport Biella Cerrione (LILE).
- The aircraft, after the last contact with Milano FIC near the city of Valenza, which took place at 08.12' UTC, no longer made any radio calls, nor answered ATS communications.
- Subsequently, the wreck of the aircraft was identified near the city of Salussola, about 2.2 NM from the Biella Cerrione airport; the pilot lost his life in the accident.

Accident site



Accident site



Accident site



Other information

- **Pilot licence and medical: ok (no IR rated)**
- **Aircraft documentation and maintenance: ok**
- **Radio communications: normal flow**

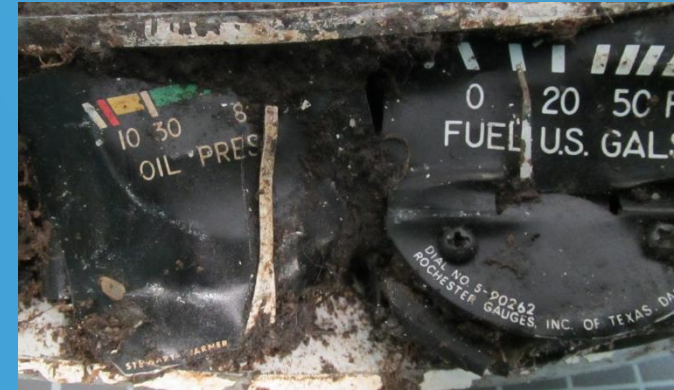
Other information

Radar plotting



Other information

Avionics analysis



Other information

Engine technical analysis

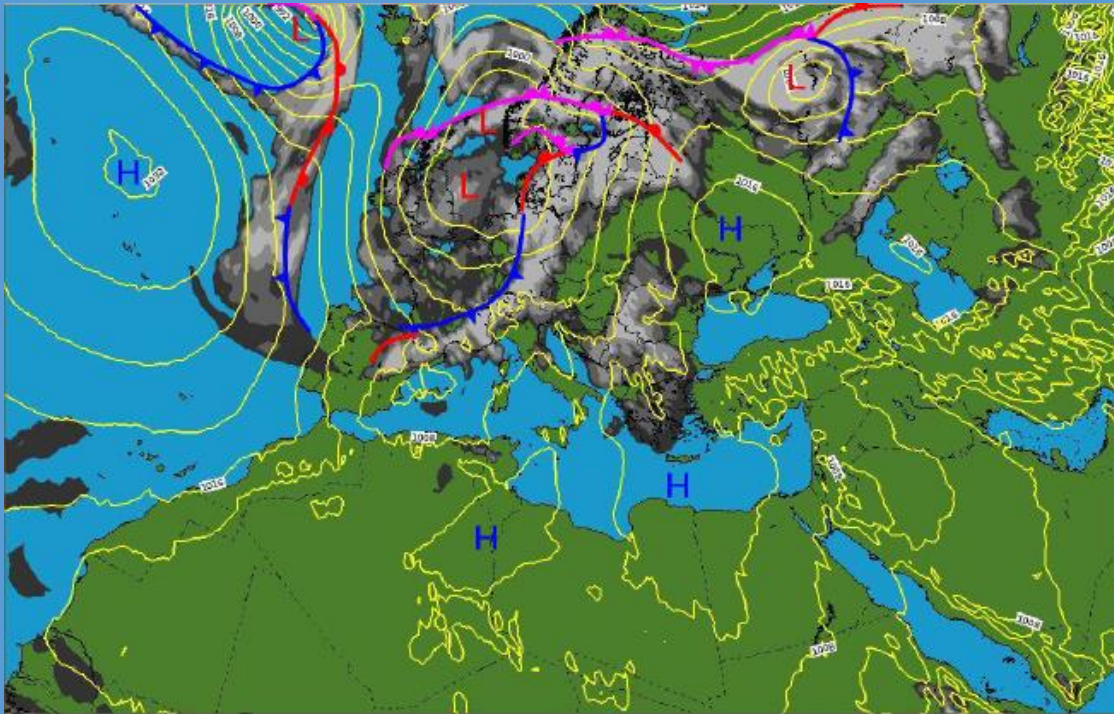


Analysis

Weather

An analysis of acquired meteorological data (expected and observed) showed a situation of humid south-western flow, layer-cumuliform cloud cover with associated towering cumulus and mainly close to the Alpine chain. Some convective phenomena were also highlighted, but without electrical phenomena, intermittent precipitation and visibility between 3000 and 5000 meters; in the presence of high terrain, the mountains may have contributed in creating conditions of darkening of the ground, due to low base clouds.

Analysis Weather



MET report LILE: wind variable, wind intensity 2 kt, estimated visibility 1000 m, observed phenomena light rain, cloud coverage total, estimated cloud base 500 ft, 17°C/17 dew point, 1005 hpa.

Analysis

Weather

- METAR LIMC 090820Z 13007KT 5000 BR SCT020 BKN040 19/17 Q1006
RERA NOSIG=
- METAR LIMF 090820Z 04004KT 360V070 3500 BR FEW008 SCT014
BKN022 18/15 Q1005=
- TAF LIMC 090500Z 0906/1012 VRB05KT 4000 BR BKN030 TEMPO
0911/0924 3000 SHRA=
- TAF LIMF 090500Z 0906/1006 VRB05KT 9999 SCT060 TEMPO 0912/0922
4000 SHRA=

Analysis

Weather

- (AIP-Italy ENR 1.2-3)
- «VFR flights shall not take off or land neither at an aerodrome located outside a control zone, nor at an aerodrome located within class G ATZ, or enter the ATZ or aerodrome traffic circuit of that aerodrome when the reported meteorological conditions at that aerodrome are below the following minima:
 - a) the ceiling is less than 180 m (600 ft); or
 - b) the ground visibility is less than 1500 m, [*omissis*]»

Analysis

Pilot

- High flight experience on GA planes
- Extra avionics (Garmin GNS 430)
- No IR rated
- Familiar with airport LILE
- Take off airfield in VMC

Spatial Disorientation

- Somatogyral Illusion – “graveyard spiral”
- Once the spiral turn or spin is stabilized, the angular acceleration will tend towards zero, with a constant velocity turn (ie no acceleration). In this situation the semicircular canals will not be stimulated, as they only register a change in angular velocity. The canals will effectively then signal that there is no turn happening. The visual system, however, being the dominant orientation mechanism, will over-ride the vestibular system signals and confirm the ongoing turn, due to the outside visual world rotating as the turn continues.» (Australian Transport Safety Bureau, David G. Newman, op. cit.)

Causes

The ACC was caused by the impact of the aircraft with the terrain (CFIT), during the last part of the flight, next to the landing in LILE.

The accident occurred in an environmental context characterized by adverse weather conditions (significantly reduced visibility), not compatible with the type of flight according to the VFR rules programmed by the pilot.

A contributing factor to the event may be identified in a condition of spatial disorientation suffered by the pilot, which caused a decay of his situational awareness, such as to make him lead the aircraft to a CFIT.

Considerations

- Underestimation of low weather encountering conditions by GA pilots
- Poor flight planning
- Mostly happens with experienced pilots
- Flight Schools: training provisions to illustrate how to effectively use the “weather tools” available today (app’s, wx briefing stations,...)

THANK YOU FOR YOUR ATTENTION

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