



Aviation Investigation Final Report

| | | | |
|--------------------------------|--------------------------------------|-------------------------|------------|
| Location: | Payson, Arizona | Accident Number: | GAA17CA318 |
| Date & Time: | June 4, 2017, 10:24 Local | Registration: | N50526 |
| Aircraft: | Cessna 172 | Aircraft Damage: | Destroyed |
| Defining Event: | Aerodynamic stall/spin | Injuries: | 2 Minor |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that, during an approach to runway 22, the airplane drifted to the right of the runway centerline. He initiated a go-around by turning off the carburetor heat, applying full throttle, decreasing the flaps from 30° to 20°, and pushing forward on the yoke to increase airspeed; the airplane then began to settle into ground effect. The pilot saw that the terrain began to rise, and he recalled that the noise abatement procedure called for a right turn to 270°, so he turned to the right before establishing a climb. The airplane descended into rising terrain, struck trees, and impacted the ground and became engulfed in flames. The postcrash fire destroyed the fuselage.

The METAR reported that the wind was variable at 4 knots and that the temperature was 84°F. The field elevation was 5,504 ft, and the altimeter setting was 30.14 inches of mercury. The density altitude was 8,255 ft.

Per the National Transportation Safety Board Pilot Aircraft Accident Report, the pilot reported that the accident could have been prevented by reviewing the airplane's performance data and atmospheric conditions, especially density altitude and its effect on performance per the manufacturer's Pilot's Operating Handbook. The pilot stated that he would place greater emphasis on performance planning as an essential activity during flight planning.

The pilot reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's inadequate preflight planning that did not account for high-density altitude conditions and his subsequent attempted go-around in conditions that prevented the airplane from attaining a positive climb rate and resulted in its subsequent descent and impact with rising terrain.

Findings

| | |
|-----------------------------|---|
| Personnel issues | Aircraft control - Pilot |
| Personnel issues | Identification/recognition - Pilot |
| Personnel issues | Performance calculations - Pilot |
| Environmental issues | High density altitude - Effect on operation |
| Aircraft | Climb capability - Not attained/maintained |

Factual Information

History of Flight

| | |
|------------------------|---|
| Approach-VFR go-around | Aerodynamic stall/spin (Defining event) |
| Approach-VFR go-around | Collision with terr/obj (non-CFIT) |

Pilot Information

| | | | |
|---------------------------|--|-----------------------------------|----------------|
| Certificate: | Private | Age: | 57,Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | 3-point |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 With waivers/limitations | Last FAA Medical Exam: | March 29, 2016 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | May 12, 2017 |
| Flight Time: | (Estimated) 92 hours (Total, all aircraft), 92 hours (Total, this make and model), 25 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft) | | |

Passenger Information

| | | | |
|---------------------------|----|-----------------------------------|---------|
| Certificate: | | Age: | Male |
| Airplane Rating(s): | | Seat Occupied: | Right |
| Other Aircraft Rating(s): | | Restraint Used: | 3-point |
| Instrument Rating(s): | | Second Pilot Present: | No |
| Instructor Rating(s): | | Toxicology Performed: | No |
| Medical Certification: | | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | | | |

Aircraft and Owner/Operator Information

| | | | |
|--------------------------------------|--|---------------------------------------|--------------------|
| Aircraft Make: | Cessna | Registration: | N50526 |
| Model/Series: | 172 M | Aircraft Category: | Airplane |
| Year of Manufacture: | 1974 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 17264211 |
| Landing Gear Type: | Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | May 17, 2017 100 hour | Certified Max Gross Wt.: | 2300 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 5320.6 Hrs as of last inspection | Engine Manufacturer: | LYCOMING |
| ELT: | Installed, activated, aided in locating accident | Engine Model/Series: | O-320 |
| Registered Owner: | | Rated Power: | 150 Horsepower |
| Operator: | | Operating Certificate(s) Held: | Pilot school (141) |

Meteorological Information and Flight Plan

| | | | |
|---|----------------------------------|---|------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | KPAN, 5157 ft msl | Distance from Accident Site: | 2 Nautical Miles |
| Observation Time: | 17:15 Local | Direction from Accident Site: | 113° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 4 knots / | Turbulence Type Forecast/Actual: | / None |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | / N/A |
| Altimeter Setting: | 30.13 inches Hg | Temperature/Dew Point: | 29°C / 0°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | MESA, AZ (FFZ) | Type of Flight Plan Filed: | None |
| Destination: | Payson, AZ (PAN) | Type of Clearance: | None |
| Departure Time: | 09:36 Local | Type of Airspace: | Class G |

Airport Information

| | | | |
|-----------------------------|-----------------|----------------------------------|-----------|
| Airport: | PAYSON PAN | Runway Surface Type: | Asphalt |
| Airport Elevation: | 5156 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 24 | IFR Approach: | None |
| Runway Length/Width: | 5504 ft / 75 ft | VFR Approach/Landing: | Go around |

Wreckage and Impact Information

| | | | |
|----------------------------|---------|-----------------------------|----------------------------|
| Crew Injuries: | 1 Minor | Aircraft Damage: | Destroyed |
| Passenger Injuries: | 1 Minor | Aircraft Fire: | On-ground |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 Minor | Latitude, Longitude: | 34.266944,-111.366943(est) |

Administrative Information

| | |
|--|---|
| Investigator In Charge (IIC): | Hicks, Michael |
| Additional Participating Persons: | Kenton P Fenning; FAA; Scottsdale, AZ |
| Original Publish Date: | November 14, 2017 |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=95297 |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).