



National Transportation Safety Board Aviation Accident Data Summary

| | | | |
|--------------------------------|-----------------------------------|-------------------------|-----------------|
| Location: | SPOKANE, WA | Accident Number: | SEA96FA039 |
| Date & Time: | 01/04/1996, 1853 PST | Registration: | N358SA |
| Aircraft: | Convair 340 | Injuries: | 1 Minor, 1 None |
| Flight Conducted Under: | Part 91: General Aviation - Ferry | | |

Analysis

Before the ferry flight, the pilot (PIC) & inexperienced copilot noted the left & right, float-type, underwing, fuel gauges indicated about 3,900 & 4,050 lbs of fuel, respectively. After takeoff, they noted that the cockpit gauges showed an opposite fuel imbalance of 4,100 & 3,600 lbs in the left & right tanks. Due to this indication, the PIC crossfed fuel from the left tank to both engines for about 30 min to rectify the perceived fuel imbalance. Later as they approached the destination, the left tank was exhausted of fuel, & the left engine lost power, although the left gauge indicated about 500 lbs of fuel remaining in that tank. The PIC then crossfed fuel from the right tank to both engines, & left engine power was restored. ATC vectored the flight for an emergency ILS runway 3 approach. The PIC was distracted during the approach & maneuvered the airplane to re-intercept the localizer. About 500' agl in IMC, both engines lost power. During a forced landing at night, the airplane struck a raised berm & was damaged. No evidence of fuel was found in the left tank; 125 gal of fuel was found in the right tank. Unusable fuel was published as 3 gal. During an exam of the engines & fuel system components, no preimpact failure was found. Historical data from the manufacturer indicated that when the airplane had a low fuel state, unporting of fuel tank outlets could occur during certain maneuvers. This information was not in the Convair 340 flight manual, although unporting of the outlets on this flight was not verified.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper management of the fuel/system, which resulted in loss of power in both engines, due to fuel starvation. Factors relating to the accident were: false indications of the cockpit fuel gauges, darkness, and the presence of a berm in the emergency landing area.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: APPROACH - FAF/OUTER MARKER TO THRESHOLD (IFR)

Findings

1. ALL ENGINES
2. (F) ENGINE INSTRUMENTS,FUEL QUANTITY GAGE - FALSE INDICATION
3. AIRCRAFT MANUALS - INADEQUATE
4. (C) FUEL MANAGEMENT - IMPROPER - PILOT IN COMMAND
5. INFORMATION UNAVAILABLE - MANUFACTURER
6. LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - COPILOT/SECOND PILOT
7. (C) FLUID,FUEL - STARVATION

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings

- 8. (F) LIGHT CONDITION - DARK NIGHT
- 9. (F) TERRAIN CONDITION - BERM

Pilot Information

| | | | |
|----------------------------------|--|------------------------------|----------|
| Certificate: | Airline Transport | Age: | 40 |
| Airplane Rating(s): | Multi-engine Land; Single-engine Land; Single-engine Sea | Instrument Rating(s): | Airplane |
| Other Aircraft Rating(s): | None | Instructor Rating(s): | None |
| Flight Time: | 5194 hours (Total, all aircraft), 817 hours (Total, this make and model), 4962 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

| | | | |
|---------------------------------------|-----------------------------------|-----------------------------|-----------------|
| Aircraft Make: | Convair | Registration: | N358SA |
| Model/Series: | 340 340 | Engines: | 2 Reciprocating |
| Operator: | SALAIR, INC. | Engine Manufacturer: | P&W |
| Operating Certificate(s) Held: | Supplemental | Engine Model/Series: | R-2800-CB16 |
| Flight Conducted Under: | Part 91: General Aviation - Ferry | | |

Meteorological Information and Flight Plan

| | | | |
|---|-----------------------|-------------------------------------|------------------------------|
| Conditions at Accident Site: | Instrument Conditions | Condition of Light: | Night/Dark |
| Observation Facility, Elevation: | GEG, 2372 ft msl | Weather Information Source: | Weather Observation Facility |
| Lowest Ceiling: | Broken / 600 ft agl | Wind Speed/Gusts, Direction: | 7 knots / , 30° |
| Temperature: | -7° C | Visibility | 10 Miles |
| Precipitation and Obscuration: | | | |
| Departure Point: | DEER VALLEY, AZ (DVT) | Destination: | (GEG) |

Wreckage and Impact Information

| | | | |
|----------------------|-----------------|---------------------|-----------|
| Crew Injuries: | 1 Minor, 1 None | Aircraft Damage: | Destroyed |
| Passenger Injuries: | N/A | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Latitude, Longitude: | | | |

Administrative Information

| | | | |
|-------------------------------|---|---------------|------------|
| Investigator In Charge (IIC): | JEFFREY B GUZZETTI | Adopted Date: | 05/23/1997 |
| Investigation Docket: | NTSB accident and incident docket serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ . | | |

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.