



National Transportation Safety Board Aviation Accident Final Report

Location:	GILLETTE, WY	Accident Number:	DEN00LA055
Date & Time:	03/02/2000, 1100 MST	Registration:	N6489W
Aircraft:	Cessna P210N	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

Prior to departure, the airplane was reportedly serviced to capacity (123 gallons). Weather was checked, and the pilot decided to fly VFR at 16,500 feet. No flight plan was filed. TAS was 185 knots, yielding an average GPS ground speed of 180 knots. It was estimated the 1,026 nm flight would take 5.7 hours. Allowing 20 minutes to climb to altitude, the pilot determined he would have more an hour of fuel reserve. Nearing his destination, the fuel gauges 'looked suspiciously low' (the Hoskins fuel calculator indicated 27 gallons of fuel remained). The pilot decided to divert to Gillette. Shortly thereafter, the engine lost power. The pilot made a forced landing on hilly terrain. The airplane touched down hard on a flat spot. The nose landing gear sheared off, and the airplane nosed over. Burning 120 gallons in 5.7 hours would require a consumption rate of slightly more than 21 gph.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to land sooner to refuel, resulting in a power loss due to fuel exhaustion. A factor was a lack of suitable terrain on which to make a forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) FLUID,FUEL - EXHAUSTION
2. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
3. (C) REFUELING - NOT PERFORMED - PILOT IN COMMAND

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

Occurrence #3: NOSE OVER
Phase of Operation: LANDING - ROLL

Findings

4. TERRAIN CONDITION - MOUNTAINOUS/HILLY
5. TERRAIN CONDITION - SOFT
6. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On March 2, 2000, approximately 1100 mountain standard time, a Cessna P210N, N6489W, registered to Flight Lease, Inc., was substantially damaged during a forced landing 1 mile north of Gillette, Wyoming. The private pilot and his passenger were not injured. Visual meteorological conditions prevailed, and no flight plan had been filed for the personal flight being conducted under Title 14 CFR Part 91. The flight originated in Pontiac, Michigan, approximately 0600 eastern standard time.

The following is based on a telephone interview with the pilot and the written accident report he submitted. On the evening and morning before departure, the pilot instructed airport line personnel to service the airplane to capacity (123 gallons). He cautioned the attendants to make sure the airplane was parked on a level surface when it was serviced because "[fuel] will siphon. . . from one tank to another and then overboard." According to the fuel invoice, 95 gallons were added to the fuel load. He checked the weather and determined visual meteorological conditions would exist along the route. He elected to fly VFR at 16,500 feet. He did not file a flight plan.

The pilot said he "attained a TAS (true airspeed) of approximately 185 knots" that yielded an average GPS (Global Positioning System) ground speed of 180 knots. For the 1,026 nm flight, he calculated it would 5.7 hours. He was satisfied with these figures because at fuel consumption rates of 15.6 and 16.5 gph (gallons per hour), the endurance is 7.7 and 7.3 hours, respectively. With a 20 minute allowance to climb to 16,500 feet at 24.5 gph, he calculated he would have "over an hour left for reserve after reaching Sheridan."

When the airplane was 1 hour out from Sheridan, Wyoming, the fuel gauges "looked suspiciously low" (the Hoskins fuel calculator indicated 27 gallons of fuel remained). At that point, Sheridan was 20 minutes flying time away and Gillette was 22 nm away. He decided to divert to Gillette. Approximately 5 miles north of the Gillette Airport, the engine lost power. He declared an emergency with the Gillette control tower. Due to congestion on the frequency with emergency equipment, the pilot was unable to tell the tower where he intended to make a forced landing. The airplane touched down hard on a flat spot in hilly terrain. The nose landing gear was sheared off and the airplane nosed over. After evacuating the airplane, the pilot returned and checked the Hoskins fuel computer. It indicated 14 gallons.

The pilot wrote, "I think there may have been a problem with the fuel computer; that my fuel burn was higher than indicated and thus the unexpected fuel starvation.

"I honestly don't know what happened to my fuel. All indications were that I left with full tanks, including A SLIGHT DRIP (emphasis added) from the tanks where it was parked."

Burning 120 gallons in 5.7 hours would require a consumption rate of slightly more than 21 gph.

Pilot Information

Certificate:	Private	Age:	51
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/04/1999
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	9449 hours (Total, all aircraft), 810 hours (Total, this make and model), 730 hours (Pilot In Command, all aircraft), 257 hours (Last 90 days, all aircraft), 57 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N6489W
Model/Series:	P210N P210N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	P210-00785
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	12/10/1999, Annual	Certified Max Gross Wt.:	4000 lbs
Time Since Last Inspection:	142 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3502 Hours	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	TSIO-520-AF
Registered Owner:	FLIGHT LEASE, INC.	Rated Power:	310 hp
Operator:	FLIGHT LEASE, INC.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	GCC, 4363 ft msl	Distance from Accident Site:	2 Nautical Miles
Observation Time:	1055 MST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	9° C / -4° C
Precipitation and Obscuration:			
Departure Point:	PONTIAC, MI (PTK)	Type of Flight Plan Filed:	None
Destination:	SHERIDAN, WY (SHR)	Type of Clearance:	None
Departure Time:	0600 EST	Type of Airspace:	Class D

Airport Information

Airport:	GILLETTE-CAMPBELL COUNTY (GCC)	Runway Surface Type:	
Airport Elevation:	4363 ft	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	ARNOLD W SCOTT	Report Date:	11/29/2000
Additional Participating Persons:	CARROLL D DYESS; CASPER, WY		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets 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/ .		

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