



# **Aviation Investigation Final Report**

Location:	Point Lookout, Missouri	Accident Number:	DEN08LA121
Date & Time:	July 6, 2008, 11:15 Local	<b>Registration:</b>	N53661
Aircraft:	Cessna 337G	Aircraft Damage:	Substantial
Defining Event:	Fuel contamination	Injuries:	2 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

## Analysis

Heavy rains and thunderstorms were present over the airport the three days prior to the accident. The pilot identified water in the left fuel tank during preflight and sumped the tank until he no longer saw any water. During the takeoff, as the main wheels were lifting off, the forward engine quit. Unable to climb, the pilot aborted the takeoff and shutdown both engines, but was unable to stop the airplane before the airplane went off the end of the runway and down a steep, rocky embankment. Examination of the airplane revealed that the left wing spar was bent up and both wings rear attach points were broken. Water was found in the left fuel tank and forward engine fuel system. A broken seal was found around the recessed fuel fill port adapter plate and filler flange.

## **Probable Cause and Findings**

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A fuel flange seal leak and water in the fuel resulting in a loss of engine power during takeoff. Contributing to the accident was an inadequate preflight.

### Findings

Aircraft	(general) - Damaged/degraded	
Personnel issues	Flight planning/navigation - Pilot	
Aircraft	Fuel - Fluid condition	
Environmental issues	(general) - Not specified	

### **Factual Information**

History of Flight	
Takeoff-rejected takeoff	Fuel contamination (Defining event)
Takeoff-rejected takeoff	Collision with terr/obj (non-CFIT)

#### HISTORY OF FLIGHT

On July 6, 2008, about 1115 Central Daylight Time (CDT), a Cessna 337G twin-engine airplane, N53661 impacted terrain after losing power on one engine while taking off. The private pilot and one passenger received minor injuries. The airplane was substantially damaged. The personal flight was being conducted under the provisions of Title 14 Code of Federal Regulations Part 91 without a flight plan. Visual meteorological conditions prevailed at the time of the accident. The cross-country flight was originating from the Taney County Airport (PLK), Point Lookout, Missouri at the time of the accident and was destined for Lansing Municipal Airport (IGQ), Chicago, Illinois.

The pilot stated there had been several days of heavy rainfall and thunderstorms prior to the accident and he had subsequently spent a significant amount of time sumping water from the left wing tank. His preflight engine run-up and magneto check were normal. The front engine quit during takeoff just as the main landing gear were lifting off. The pilot lowered the nose and aborted the takeoff. He ensured both engines were shutdown and applied maximum braking to stop the airplane. The pilot was unable to stop the airplane before the end of the runway and the plane went over a steep, rocky embankment.

Examination of the airplane revealed the left wing spar bent upwards, both wing rear attach fittings broken, one tail-boom was bent, and the landing gear and undercarriage were damaged.

#### PERSONNEL INFORMATION

The pilot held a private pilot certificate with ratings for airplane multi-engine land airplane. His last Federal Aviation Administration (FAA) third-class medical was issued on December 01, 2006, with no limitations.

The pilot completed NTSB form 6120.1 indicated total flight time of 1,417 hours; of which 1,166 hours were in this make and model of airplane. He logged 5 hours in the last 90 days and 4 in the last 30 days. His last noted flight review was completed November 20, 2006.

#### AIRCRAFT INFORMATION

The 1976-model Cessna 337G, serial number 33701763, was a high wing, semi-monocoque airplane, with a retractable tri-cycle landing gear, and was configured for six occupants. The airplane was powered by two horizontally opposed, fuel injected, six-cylinder engines. The engines were Continental IO-360, rated at 210 horsepower and driving constant speed propellers.

According to the airframe logbook, the airplane's most recent annual inspection was completed on July 6, 2007, with an airframe total time of 1,431.5 hours. At the time of the accident, the airframe had accumulated approximately 1448 hours and 16.5 hours since the last inspection.

The engine logbook revealed that the engine had been inspected in accordance with an annual inspection on July 6, 2007.

#### METEOROLOGICAL INFORMATION

At 11:53 central daylight time, the weather observation facility at Harrison, Arkansas (HRO) reported, wind variable at 5 knots, visibility 10 miles, few clouds at 9,000 feet, temperature 86 degrees Fahrenheit, dew point 71 degrees Fahrenheit, and a barometric pressure of 29.99 inches of Mercury.

#### **AERODROME INFORMATION**

Taney County Airport was an uncontrolled airport operating under class E classification airspace. The field elevation was 938 feet mean sea level (msl). Runway 29 was a 3739-foot-long by 100-foot-wide grooved asphalt runway.

#### WRECKAGE AND IMPACT INFORMATION

On site documentation of the wreckage was conducted by investigators from the Federal Aviation Administration.

The airplane was located on a steep, rocky hillside approximately 100 feet west of the departure end of runway 29. The airplane was intact and all major components of the airplane were accounted for at the site.

Inspection of the airplane revealed water in the left fuel tank and the forward engine fuel system, including the forward engine gascolator/strainer and the forward engine fuel distribution valve. The right wing tank was compromised during recovery and the fuel was lost. There was no water found in the rear engine gascolator/strainer or rear engine fuel distribution valve.

The fuel fill ports and caps are recessed below the surface of the upper wing. When water was placed in the recessed area of the left wing fuel fill port water was observed leaking into the

left fuel tank through the adapter plate and filler flange seal.

The engine demonstrated good compression at each cylinder and electrical current to each spark plug. Both magnetos produced spark when turned by hand.

### MEDICAL AND PATHOLOGICAL INFORMATION

The pilot and front seat passenger received minor facial injuries during the accident sequence. The injuries included bruising, cuts with stitches and a broken nose to the pilot.

#### **Pilot Information**

Certificate:	Private	Age:	58,Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3	Last FAA Medical Exam:	December 1, 2006
Occupational Pilot:	No	Last Flight Review or Equivalent:	November 1, 2006
Flight Time:	1417 hours (Total, all aircraft), 1166 hours (Total, this make and model), 1347 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N53661
Model/Series:	337G	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	33701763
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	July 1, 2007 Annual	Certified Max Gross Wt.:	4630 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	1448 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO360G
Registered Owner:	Gary Grande Pre	Rated Power:	210 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:	Gary Grande Pre	Operator Designator Code:	

### Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.98 inches Hg	Temperature/Dew Point:	32°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Point Lookout, MO	Type of Flight Plan Filed:	None
Destination:	Lansing Mun Apt, IL (IGQ )	Type of Clearance:	None
Departure Time:	11:15 Local	Type of Airspace:	

### **Airport Information**

Airport:	M GRAHAM CLARK PLK	Runway Surface Type:	Asphalt
Airport Elevation:	938 ft msl	Runway Surface Condition:	Dry
Runway Used:	29	IFR Approach:	None
Runway Length/Width:	3739 ft / 100 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor, 2 None	Latitude, Longitude:	36.625831,-93.237503

#### **Administrative Information**

Investigator In Charge (IIC):	Baker, Daniel	
Additional Participating Persons:	Tom Bartels; Kansas City	
Original Publish Date:	September 26, 2008	
Last Revision Date:		
Investigation Class:	<u>Class</u>	
Note:		
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=68421	

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available <u>here</u>.