



Aviation Investigation Final Report

Location:	BAYOU LA BATRE, Alabama	Accident Number:	MIA00LA006
Date & Time:	October 17, 1999, 17:40 Local	Registration:	N6504L
Aircraft:	Cessna 152	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

According to the pilot, and the operator's fueling records, the pilot pumped 4.5 gallons of fuel into the rental airplane after it had flown 2.5 hours since refuel to full tanks. He then flew it for an additional 2.7 hours, including 3 takeoffs and 2 landings, before the engine lost power. During the forced landing the airplane struck a pecan tree. Examination revealed no fuel was found in the fuel tanks or carburetor, and very little had leaked out of the gascolator, postcrash.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper preflight fuel planning and the his improper en route fuel consumption calculations resulting in a total loss of engine power due to fuel exhaustion.

Findings

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

Findings

1. (C) PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND
2. (C) FUEL CONSUMPTION CALCULATIONS - IMPROPER - PILOT IN COMMAND
3. FLUID,FUEL - EXHAUSTION

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. OBJECT - TREE(S)

Factual Information

On October 17, 1999, about 1740 central daylight time, a Cessna 152, N6504L, registered to Sky King Aviation, Inc., operating as a Title 14 CFR Part 91 personal flight, crashed into a pecan grove following a loss of engine power after takeoff in the vicinity of Bayou La Batre, Alabama. Visual meteorological conditions prevailed and no flight plan was filed. The airplane sustained substantial damage and the private-rated pilot, the sole occupant, was not injured. The flight departed Bayou La Batre, Alabama, about 5 minutes before the accident.

According to the pilot, just after takeoff, his engine sputtered and acted as if it were running out of fuel. He set himself up for a forced landing in a field, but a house emerged into his vision at the last moment, and he tried to adjust his landing pattern in the opposite direction. His airspeed dissipated while trying to stretch his glide and he caught his left wing on a pecan tree. The pilot stated that prior to his origination from Foley, Alabama, earlier that day, his preflight walk-around inspection revealed the left fuel tank indicated 1/4 full, although a visual inspection of the fuel quantity showed just under full. To be safe, he topped off the left tank with 4 1/2 gallons. He stated the right tank was full. He further stated that he performed one touch and go landing at Foley before he headed westbound toward Bayou La Batre.

According to the fixed-base operator, (FBO) N6504L had just returned from a rental flight, and its renter pilot was settling up his charges when the accident pilot arrived to rent the same airplane. Instead of waiting for FBO personnel to refuel the airplane, the accident pilot volunteered to refuel it himself. FBO fueling records confirm that the pilot pumped 4.5 gallons into N6504L; however, those same records revealed that N6504L had flown a .7 hour trip, a 1.0 hour trip, and a .8 hour trip for a total of 2.5 hours since last refueling. According to the FBO, N6504L had full tanks, (26 gallons, 24.5 gallons usable) at the beginning of the rental day. The three previous flights involved only local, low altitude, predominately touch and go landings type operations, and they calculate minimum fuel flow for that type flying to be about 6 gallons per hour. The FBO is certain that no refueling took place, elsewhere.

Subsequent examination of the airplane by FAA personnel revealed that after initial impact with the tree, the airplane impacted the earth nose first and came to rest on its three landing gear. The wings, fuselage, and empennage received substantial damage. The wing fuel tanks had not been compromised by the crash, and were empty. There was an 18-inch diameter spot in the grass under the gascolator where some fuel had leaked. The propeller blades were not damaged. The wreckage was taken to a local FBO where a teardown examination of the fuel system was performed. The carburetor bowl contained no fuel, and the carburetor filter screen was clean. The fuel gascolator was clean and contained no fuel.

Using Hobbs meter times, fuel consumption figures, (confirmed by reference to Avco Lycoming Operator's Manual for the O-235 series engine, fuel flow vs percent rated power

chart), and fueling gallonage figures provided by the FBO, the accident trip lasted 2.7 hours, including 3 takeoffs and 2 landings, and had about 14 gallons of fuel aboard at the origination of the flight.

Pilot Information

Certificate:	Private	Age:	44, Male
Airplane Rating(s):	Single-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 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	March 18, 1998
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	172 hours (Total, all aircraft), 11 hours (Total, this make and model), 126 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N6504L
Model/Series:	152 152	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal; Utility	Serial Number:	15284424
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	September 27, 1999 100 hour	Certified Max Gross Wt.:	1675 lbs
Time Since Last Inspection:	145 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8522 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-235
Registered Owner:	SKY KING AVIATION, INC.	Rated Power:	110 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MOB ,218 ft msl	Distance from Accident Site:	16 Nautical Miles
Observation Time:	17:56 Local	Direction from Accident Site:	348°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	26°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(5R7)	Type of Flight Plan Filed:	None
Destination:	FOLEY (5R4)	Type of Clearance:	None
Departure Time:	17:35 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	Rough
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	30.399534,-88.250137(est)

Administrative Information

Investigator In Charge (IIC): Stone, Alan

Additional Participating Persons: HERBERT DANIEL; BIRMINGHAM , AL

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Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=47585>

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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 [here](#).