



National Transportation Safety Board Aviation Accident Final Report

Location:	LAKE HAVASU, AZ	Accident Number:	LAX97LA033
Date & Time:	11/01/1996, 2000 MST	Registration:	N2825V
Aircraft:	Cessna 150M	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

The aircraft was fully serviced with 22.5 gallons of fuel before flight, and the pilot calculated that slightly less than 17 gallons would be needed. Approaching the destination, the pilot began a power-on, en route, cruise descent at 200 feet per minute. Shortly thereafter, the engine rpm 'dropped slightly for 4-5 seconds,' and then the engine lost power. The pilot said he was unable to restart the engine, and he prepared for a night forced landing in the desert. Subsequently, the aircraft hit a hillside in a nose high landing attitude, and the nose gear broke off. As the pilot was securing the aircraft, he observed fire in the engine compartment. Subsequently, a postcrash fire consumed the aircraft. During examination of the engine by an FAA airworthiness inspector, no preimpact discrepancy was identified. According to a current weather observation, the sky was clear, the temperature was 67 degrees, and the dew point was 41 degrees. Review of a carburetor icing probability chart showed moderate icing at cruise power and serious icing at glide power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: carburetor ice, and failure of the pilot to use carburetor heat, which resulted in loss of engine power. Factors relating to the accident were: carburetor icing conditions, darkness, and the lack of suitable terrain for a forced landing.

Findings

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

Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. (C) FUEL SYSTEM,CARBURETOR - ICE
3. (C) CARBURETOR HEAT - NOT USED - PILOT IN COMMAND

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

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

Findings

4. (F) LIGHT CONDITION - DARK NIGHT
5. (F) TERRAIN CONDITION - NONE SUITABLE
6. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY

Factual Information

On November 1, 1996, at 2000 hours mountain standard time, a Cessna 150M, N2825V, collided with hilly desert terrain during a night forced landing attempt near Lake Havasu, Arizona. The forced landing was precipitated by a loss of engine power as the aircraft was in an en route descent for landing at the Lake Havasu airport. The aircraft was owned and operated by the certificated commercial pilot and was on a personal cross-country flight. Visual meteorological conditions prevailed at the time and no flight plan was filed. The aircraft was destroyed in the collision sequence and postcrash fire. The pilot was not injured. The flight originated at Camarillo, California, on the day of the accident at 1525 Pacific standard time as a non-stop flight to Lake Havasu.

The pilot stated in his written report that "I filled the oil tank to capacity (6 qts.) and taxied to the self service fuel island where I topped the fuel tanks" prior to departure from Camarillo. "I know the tanks would hold no more[,] because I overflowed both tanks and had to do a slight clean-up on the top of the wings."

The pilot stated that he used the flight manual performance charts to calculate a predicted fuel burn of 4.3 gallons per hour for the planned 3 hours 30 minutes en route leg of the flight to Lake Havasu. The en route leg was to be flown at 2400 rpm at 5,500 feet msl. The total estimated fuel burn of slightly less than 17 gallons also included 1.6 gallons of fuel needed for takeoff and climb operations. The pilot indicated that his fuel calculations factored in a forecasted 15 to 20 knot quartering headwind along his route of flight. Based upon an estimated total fuel burn of 17 gallons out of 22.5 gallons of fuel available, the pilot reported that "I had a reserve of 5 1/2 [gallons,] or almost an hour and a half of flight time."

The pilot reported that after departure from Camarillo, "I used the up drafts . . . to climb 600 - 700 feet a minute . . . the rest of the climb and the flight were uneventful, I adjusted the mixture control for best rpm per the operating handbook." The pilot reported that later in the trip, "I evaluated my flight and determined everything was going exactly as planned." As the aircraft flew over the Needles, California, airport, the pilot noticed that the fuel gage on the left fuel tank "had the needle on the empty mark and the gage on the right read over 1/4 full." At that point, the pilot reviewed the flight plan "and determined that I should have my planned reserve left, and the fuel island was closed at Needles airport so I continued to the Havasu airport."

As the aircraft neared the Lake Havasu airport, the pilot began a power on en route cruise descent at 200 feet per minute. Shortly thereafter, the engine rpm "dropped slightly for 4-5 seconds and then stopped. The engine was rotating but was not pulling. I went to best glide speed of 70 mph and pulled the [carburetor] heat out. I then performed the emergency checklist." The pilot said he was unable to restart the engine and set up for a night forced landing in the desert. He stated that he could not see terrain features until the aircraft was very near the surface. In the aircraft landing light illumination area, he observed that the aircraft was heading for a hill and used the aircraft speed energy to balloon over the hill. Another hill was behind the first one and the aircraft hit the hillside in a nose high landing attitude and the nose gear broke off. As the pilot was securing the aircraft he observed fire in the engine compartment and left the aircraft. The postcrash fire consumed the aircraft.

The pilot reported that he just purchased the aircraft, which had been largely inactive for 2 years while sitting on an airport ramp near the ocean. Six months and 34 flight hours had

elapsed since the last annual inspection. Additionally, the pilot reported that for years, he has owned a Cessna 172 with a Lycoming engine, which traditionally has not required the use of carburetor heat.

The engine was examined after recovery by an Federal Aviation Administration (FAA) airworthiness inspector from the Scottsdale, Arizona, Flight Standards District Office with technical assistance provided by a representative from Teledyne Continental Motors. No preimpact discrepancies were identified during the examination. Reports from both individuals are attached.

According to a National Weather Service observation taken at approximately the same time as the accident occurred, the sky was clear, the temperature was 67degrees Fahrenheit, and the dew point 41 degrees Fahrenheit. Review of a carburetor icing probability chart revealed that the temperature/dew point was in a range of the graph annotated "moderate icing cruise power --- serious icing glide power."

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	55, Male
Airplane Rating(s):	Multi-engine Land; 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):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	09/05/1995
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	2670 hours (Total, all aircraft), 60 hours (Total, this make and model), 2583 hours (Pilot In Command, all aircraft), 130 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N2825V
Model/Series:	150M 150M	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal; Utility	Serial Number:	15076292
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	05/17/1996, Annual	Certified Max Gross Wt.:	1600 lbs
Time Since Last Inspection:	30 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3667 Hours	Engine Manufacturer:	Continental
ELT:	Installed	Engine Model/Series:	O-200-A
Registered Owner:	JEROME C. BURGE	Rated Power:	100 hp
Operator:	JEROME C. BURGE	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	KIF, 781 ft msl	Distance from Accident Site:	2 Nautical Miles
Observation Time:	1850 MST	Direction from Accident Site:	315°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	20 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	15 knots / 28 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	19° C / 5° C
Precipitation and Obscuration:			
Departure Point:	CAMARILLO, CA (CMA)	Type of Flight Plan Filed:	None
Destination:	, AZ (HII)	Type of Clearance:	VFR on top
Departure Time:	1525 PST	Type of Airspace:	Class G

Airport Information

Airport:	LAKE HAVASU CITY (HII)	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	JEFF RICH	Report Date:	08/21/1997
Additional Participating Persons:	BRUCE BESSETTE; SCOTTSDALE, AZ MICHAEL J GRIMES; LANCASTER, CA		
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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