



Aviation Investigation Final Report

Location:	HARPER, Oregon	Accident Number:	SEA00FA030
Date & Time:	December 10, 1999, 17:00 Local	Registration:	N5347C
Aircraft:	Cessna 140A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane was substantially damaged and the pilot fatally injured when the airplane collided with terrain in an isolated area of the state. It was believed to have departed a ranch, about twelve miles southwest, in what was described as 'heavy snow conditions.' No flight plan was filed for the flight, and there was no report of the pilot receiving a weather briefing in preparation for the flight. The nearest aviation weather reporting point was about 70 miles from the crash site. An airmet for mountain obscuration in the area was in effect at the time of the accident. Toxicological testing was performed by the FAA Toxicological laboratory. Blood, brain, and urine toxicological samples were positive for amphetamine, and methamphetamine.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot-in-command's failure to maintain terrain clearance. Factors include meteorological conditions obscuring the pilot's visibility and incapacitation due to illegal substances.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings

1. (F) WEATHER CONDITION - OBSCURATION

2. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
3. (F) INCAPACITATION(DRUGS) - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On December 10, 1999, approximately 1700 Pacific standard time, a Cessna 140A, N5347C, was substantially damaged when it collided with terrain near the Mud Flat ranch, 35 miles south of Harper, Oregon. The commercial pilot, the sole occupant, was fatally injured. The airplane was believed to have last departed the Crowley Ranch, about twelve miles southwest, at 1630, with its destination Caldwell, Idaho, the pilot's home. A rancher in the general area at the time observed heavy snow conditions. No flight plan was filed for the flight, which was to have been operated under 14 CFR 91. There was no fire. The ELT assisted in the location of the wreckage after the family reported the pilot missing on December 11.

The airplane was found inverted at the end of a 70 foot long ground scar which was oriented along a 228 degree magnetic bearing to the airplane. Sheriff's GPS location of the wreckage was at 43 degrees 20.80 minutes north, 117 degrees 36.86 minutes west, with an elevation of 4535 feet MSL. The wreckage was located by sheriff personnel using a ground vehicle and the ELT signal.

The nose of the airplane and the lower fuselage exhibited extensive crushing of the sheet metal skin and bulkheads. The landing gear bulkheads (the gear box) and the associated structure were separated from the lower fuselage structure.

Investigators noted a strong odor consistent with gasoline near the wreckage. None of the seat belts or shoulder harnesses were buckled, and there was no evidence of the attachment points being compromised or damaged. According to sheriff's deputies, the pilot's remains were found on the ground outside the right side of the airplane.

PERSONNEL INFORMATION

No record of a current flight review was found in the pilot's logbook. The pilot did have endorsements in 1996 for aeronautical knowledge and flight proficiency in preparation for a flight instructor rating, and did have a tailwheel airplane endorsement December 28, 1996. His flight instructor certificate was renewed on the basis of recent activity in October 1998; his flight instructor certificate was reissued March 99, due to the fact that the original was not received.

METEOROLOGICAL INFORMATION

Reported weather at Baker, Oregon, about 70 miles north of the accident site, at 1656 included three statute mile visibility, some clouds at 200 feet, 1000 feet broken, and 1500

overcast. At 1550, about an hour before the assumed crash time, Baker weather was 1/2 mile visibility with fog, 400 feet scattered, 1500 overcast. An airmet for mountain obscuration in the area was in effect at the time of the accident. Terminal Forecasts, and Surface Weather Observations for Baker and Boise, Idaho, as well as the associated airmet, are appended to this report.

WRECKAGE AND IMPACT INFORMATION

The wreckage was located in an open field with rolling terrain and scrub vegetation. The wreckage was distributed along a debris path with ground scars that was oriented along a 228 degree magnetic heading for the point of apparent initial impact. The wreckage path was approximately 75 feet from the initial impact point to the nose of the airplane, which was inverted. The left and right doors were found separated on the left and right side, respectively, of the ground scars, approximately 60 feet from the point of apparent initial impact. GPS (global positioning system) readouts at the airplane were 43 degrees 20' 50" N, and 117 degrees 36' 51" W. A landing strip (with 08 and 26 runways), at Mud Flat ranch, was approximately .5 miles due north of the wreckage.

The rudder was neutral, as found at the scene. The elevators were resting on their upward stop (with the airplane inverted); the ailerons were neutral; the left flap was up, and the right flap was displaced in excess of 90 degrees. Elevator trim was determined to have been in a neutral position. The elevators and horizontal stabilizer exhibited little damage. The rudder and vertical fin exhibited tip damage.

The left lift strut was separated from its fuselage attachment structure; the right lift strut was essentially intact, with displacement damage at both the wing and fuselage attachment points. The fuselage exhibited extensive crushing and folding from the airplane's nose back to a point aft of the trailing edge of the wings. The belly of the tailcone, aft of the wing trailing edge exhibited folding and wrinkling, and the tailcone exhibited approximately 30 degrees downward displacement aft of the wing trailing edge. The left main landing gear leg remained attached to its saddle and associated structure, however that structure had separated from the rest of the aircraft structure. The right main landing gear leg and its saddle structure remained partially attached to the associated carry-through structure. The belly of the airplane exhibited crushing and scratch marks and disintegration. The bottom of the cowling was crushed, collapsed, and torn, and the spinner was crushed around the propeller hub. Approximately 10 inches of one propeller blade was curled aft; the other blade exhibited forward curling of its tip, with a relatively small radius aft bend about midspan.

None of the seat belts were found in a buckled position and all of their attachment points remained attached to the airframe; the pilot's remains had been found outside the airplane next to the engine.

The fuel selector was determined to have been in the left tank position; the carburetor butterfly valve was found to be in wide-open position. No liquid fuel was found at the accident scene,

however a strong odor consistent with petroleum distillates was noted throughout the wreckage and the wreckage distribution path.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed by Dr. Brauer, Malheur County Medical Examiner

Toxicological testing was performed by the FAA Toxicological laboratory. Results were negative for carbon monoxide, cyanide and ethanol. Blood, brain, and urine samples were positive for amphetamine, and methamphetamine. (See attached toxicological report.)

TESTS AND RESEARCH

The powerplant was inspected by FAA inspectors and Teledyne Continental Motors representatives after the wreckage was removed from the scene. The spark plugs were determined to have been worn, but clean; both magnetos produced spark when manually turned. The crankshaft flange was bent and broken. During the course of inspection, the flange was straightened to the extent necessary to manually pull the engine through. All cylinders produced compression, and valve-train continuity was established.

ADDITIONAL INFORMATION

The wreckage was released to the owner on June 13, 2000.

Pilot Information

Certificate:	Commercial	Age:	44, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	January 5, 1999
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	3000 hours (Total, all aircraft), 770 hours (Total, this make and model), 75 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N5347C
Model/Series:	140A 140A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	15510
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	July 30, 1999 Annual	Certified Max Gross Wt.:	1500 lbs
Time Since Last Inspection:	139 Hrs	Engines:	Reciprocating
Airframe Total Time:	3495 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	C-85-14F
Registered Owner:	SALLY VILLANUEVA	Rated Power:	85 Horsepower
Operator:	TOMMY W. BALLARD	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Unknown	Condition of Light:	Day
Observation Facility, Elevation:	KBK ,3369 ft msl	Distance from Accident Site:	70 Nautical Miles
Observation Time:	16:50 Local	Direction from Accident Site:	330°
Lowest Cloud Condition:	Unknown	Visibility	3 miles
Lowest Ceiling:	Broken / 1000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	5°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CROWLEY RANCH , OR	Type of Flight Plan Filed:	None
Destination:	CALDWELL , ID (EUL)	Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	43.860836,-117.639579(est)

Administrative Information

Investigator In Charge (IIC):	Stockhill, Michael
Additional Participating Persons:	RUSSELL GRAVES; BOISE , ID MIKE GRIMES; MOBILE , AL SETH D BUTTNER; WICHITA , KS
Original Publish Date:	May 9, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=48524

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