



National Transportation Safety Board Aviation Accident Final Report

Location:	Kahului, HI	Accident Number:	WPR13LA062
Date & Time:	12/01/2012, 1900 HST	Registration:	N3554Y
Aircraft:	CESSNA 172S	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The noninstrument-rated pilot was conducting a personal interisland flight. According to air traffic control information, shortly after the airplane took off, an air traffic controller observed that the airplane's radar track was not heading toward the pilot's intended destination. He asked the pilot if he still intended to land at his original destination, and the pilot replied that he did. The pilot then reported that he was going to perform a 360-degree turn to track toward his intended destination. However, the airplane's radar track showed that the airplane then made a descending left turn. Subsequently, radio and radar contact with the pilot and airplane, respectively, were lost, and a search and rescue mission was initiated. Parts of the airplane were located, but the pilot and the majority of the airplane were not found. During the flight, the pilot did not report any mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Dark (moonless) night conditions prevailed for the flight. Weather information did not reveal the presence of any aviation weather hazards. The data did identify the potential for broken cloud layers below 3,000 ft mean sea level in the area at the time of the accident. Further, weather radar imagery identified light rain showers at ground level. The pilot's intended flightpath likely would have taken the airplane through or very close to the area of light rain; however, it could not be determined how long the pilot might have operated the airplane in these conditions. It is likely that the pilot became spatially disoriented after flying over the ocean during dark night conditions with reduced visibility and subsequently failed to maintain airplane control.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The noninstrument-rated pilot's spatial disorientation and subsequent failure to maintain airplane control while operating over water in dark night conditions with reduced visibility due to rain in the area.

Findings

Aircraft	Performance/control parameters - Not attained/maintained (Cause)
Personnel issues	Spatial disorientation - Pilot (Cause) Aircraft control - Pilot (Cause)
Environmental issues	Water - Contributed to outcome Dark - Effect on operation (Cause) Rain - Effect on operation (Cause)

Factual Information

HISTORY OF FLIGHT

On December 1, 2012, at 1900 Hawaiian standard time, a Cessna 172S, N3554Y, impacted the Pacific Ocean about 5 miles from Kahului Airport (OGG), Kahului, Maui, Hawaii. The owner/pilot operated the airplane under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. The pilot, the sole occupant, is presumed to have received fatal injuries. The airplane was substantially damaged. Night visual meteorological conditions prevailed for the flight from OGG to Molokai Airport (MKK), Kaunakakai, Molokai, Hawaii. No flight plan had been filed.

According to the Federal Aviation Administration (FAA), the flight departed about 6 minutes prior to the accident. Shortly before the accident occurred, an Air Traffic Control (ATC) specialist noted an erratic flight pattern and contacted the pilot. The pilot declined assistance and informed ATC that he planned to make a right 360-degree turn and track inbound to the MKK VOR. The ATC specialist reported that instead of a right 360-degree turn, the airplane's radar track showed a left descending turn and was then lost from radar. The FAA reported that the airplane's last known altitude was 700 feet.

The Coast Guard responded to the last known position and commenced search and rescue (SAR) efforts. The Coast Guard recovered a portion of one of the landing gear, along with some interior airplane pieces; however, the main wreckage was not located. SAR efforts were suspended on December 3, 2012.

PERSONNEL INFORMATION

The pilot, age 51, held a private pilot certificate with ratings for airplane single engine land. He held a third-class medical issued on January 26, 2012, with no limitations. No personal flight records were located for the pilot. The National Transportation Safety Board investigator-in-charge (NTSB IIC) obtained the aeronautical experience listed in this report from a review of the FAA airmen medical records on file in the Airman and Medical Records Center located in Oklahoma City. The pilot reported on his most recent medical application dated January 26, 2012, that he had a total time of 785 hours with 50 hours logged in the past 6 months.

AIRCRAFT INFORMATION

The four-seat, high-wing, fixed-gear airplane, N3554Y, Cessna C172S, serial number 172S8956, was manufactured in 2001. It was powered by a Lycoming IO-360-L2A 160-horsepower. No aircraft logbooks were located for the accident airplane.

METEOROLOGICAL CONDITIONS

Weather conditions reported by OGG, in the accident area were wind from 250 degrees at 7 knots, visibility was 10 statute miles, sky condition was scattered clouds at 2,500 above ground level (agl), temperature 24 degrees, dew point 19 degrees, and an altimeter setting of 30.03 inches of mercury.

According to a specialists report, calculations made by the RAwindsonde Observation Program (RAOB) did not identify any levels of significant turbulence or icing, and the freezing level was identified as 14,725 feet. There was a potential for broken to few cloud layers below 3,000 feet.

The Terminal Aerodrome Forecast (TAF) issued at 1325 forecasted for the accident time

indicated wind from 360 degrees (true) at 6 knots, visibility greater than 6 statute miles, few clouds at 5,000 feet agl, and a broken ceiling at 25,000 feet agl. The TAF issued at Kapalua Airport, Lahaina, Hawaii, located about 16 miles west of the airplane's last known position, at an elevation of 256 feet, forecasted for the accident time indicated wind from 290 degrees (true) at 6 knots, visibility greater than 6 statute miles, few clouds at 4,500 feet agl, scattered clouds at 7,000 feet agl, and a broken ceiling at 25,000 feet agl.

The Area Forecast (AF) for the Hawaiian Islands issued at 1740 and valid until 0600 on December 2, 2012, reported isolated visibility of 5 statute miles with haze below 6,000 feet within the area of Oahu to the Big Island. It also advised of scattered or broken ceiling from 20,000 to 25,000 feet msl. The AF directed toward "Oahu Molokai Lanai and Maui and remainder of Big Island," advised of scattered clouds at 3,000 feet msl, scattered clouds or a broken ceiling at 4,000 feet msl, cloud tops to 7,000 feet msl, and isolated light rain showers with cloud bases at 3,000 feet msl possible.

There were no AIRMETs or SIGMETs issued for the Hawaiian Islands, to include the accident location. There were no pilot reports made below 10,000 feet in the vicinity of the Hawaiian Islands within 3 hours of the accident time. A detailed report is attached to the docket for this accident.

According to the United States Naval Observatory Astronomical Applications Departments' sun and moon data, sunset was at 1744, and the end of civil twilight was at 1808.

COMMUNICATIONS

Review of the ATC radar and communication tapes revealed that the pilot was attempting to fly from Maui to Molokai.

According to the tower controller at OGC, the pilot had requested a visual flight rules (VFR) clearance to depart the airport. Prior to taxiing to the active runway, the pilot requested that the lights be turned up and the controller complied by increasing the intensity of the runway lights to step 3 and verified that that was the intensity that the pilot wanted. After takeoff, the controller observed a normal climb out. The controller noticed that the accident airplane was about 2 miles northwest of the field; it made a right turn and began a climb above 1,000 feet. The controller then observed on the radar that the airplane was at 1,500 feet and had entered into a descent. The controller was able to see the airplane out of his window, but lost sight of the airplane in the darkness. According to the radar, the airplane was 5 1/2 miles north-northwest of the airport, in a right turn at 500 feet before the radar target entered into a "coast" status. The controller attempted to find the airplane via binoculars, and then looked back at the radar scope. He observed the pilot's tag pop up about 1/4 mile from the last observed position proceeding westbound at 700 feet; the radar tag went into a coast status again about 6 miles north of the airport. The controller subsequently received a call from Honolulu Control Facility (HCF), stating that they had lost radio and radar with the accident pilot and airplane. HCF queried whether or not the pilot had come over to the tower frequencies. The tower controller broadcasted on the tower, ground, and clearance delivery frequencies, but received no reply from the pilot.

According to the HCF controller, the accident airplane had been radar identified about 4 miles northwest of OGG, and the pilot was instructed to resume his own navigation and altitude. The controller noted that the airplane had turned northeast bound and was traveling away from his intended destination. The pilot was asked to verify his destination, to which he replied

requesting radar vectors. The controller asked where the pilot wanted radar vectors to, and if he wanted an Instrument Flight Rules (IFR) clearance. The pilot declined the IFR clearance and stated that he was destined for Molokai Airport. When the controller asked if the pilot was tuned into the Molokai VORTAC, the pilot asked for verification that the frequency was 1161.1. The controller stated that the correct frequency was 116.1. The pilot was requested to report on course to Molokai, and that the radar track was northeast bound and that a 295- or 300-degree heading would take him to the north side of the airport. The pilot reported that he was going to do a right 360-degree turn, to which the controller asked the pilot to verify his intentions. The pilot did not respond, and radar contact was lost at 1900. The controller attempted to contact the pilot to no avail.

The controller reported that the pilot sounded clear and calm with no stress apparent during the radio transmissions. The last radar echo showed the accident airplane in a left turn at 700 feet above the water.

The airplane dropped off radar about 2.5 miles north of Pa'ia, Maui, and about 7 nautical miles northwest of OGG. The airplane was under visual flight rules (VFR).

MEDICAL AND PATHOLOGICAL INFORMATION

The airplane and the pilot were not located. As a result, an autopsy and toxicology could not be performed.

According to the Federal Aviation Administration, during the pilot's last medical exam dated January 26, 2012, the pilot reported high blood pressure and kidney stones. A review of the pilot's medical history indicated that the high blood pressure was controlled with medication and the history of kidney stones (resolved issue) should not pose a hazard to flight safety.

ADDITIONAL INFORMATION

On December 8, 2012, the right wheel and tire washed up on the Kailua Beach Park.

History of Flight

Maneuvering	Loss of control in flight (Defining event) Collision with terr/obj (non-CFIT)
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Pilot Information

Certificate:	Private	Age:	51
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Unknown
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 Without Waivers/Limitations	Last Medical Exam:	01/26/2012
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	785 hours (Total, all aircraft), 0 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N3554Y
Model/Series:	172S	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	172S8956
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	IO-360-L2A
Registered Owner:	KRALL JOSE H	Rated Power:	180 hp
Operator:	KRALL JOSE H	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	OGG, 54 ft msl	Observation Time:	1854 HST
Distance from Accident Site:	6 Nautical Miles	Condition of Light:	Night/Dark
Direction from Accident Site:	180°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Scattered / 2500 ft agl	Temperature/Dew Point:	24° C / 19° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	6 knots, 250°	Visibility (RVR):	
Altimeter Setting:	30.03 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Kahului, HI (OGG)	Type of Flight Plan Filed:	None
Destination:	Kaunakakai, HI (MKK)	Type of Clearance:	VFR Flight Following
Departure Time:	1854 HST	Type of Airspace:	

Airport Information

Airport:	Kahului Airport (OGG)	Runway Surface Type:	N/A
Airport Elevation:	54 ft	Runway Surface Condition:	
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Tealeye Cornejo	Adopted Date:	05/13/2015
Additional Participating Persons:	Kyle M Bartler; Federal Aviation Administration; Honolulu, HI		
Publish Date:	05/13/2015		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=85726		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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