Aviation Investigation Final Report

Location:	Boise City, Oklahoma	**Accident Number:**	DFW05FA015
Date & Time:	November 5, 2004, 12:00 Local	**Registration:**	N7415Y
Aircraft:	Piper PA-30	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Ferry		

Analysis

The twin-engine airplane impacted terrain while maneuvering following a go-around and subsequent loss of control just north of its destination airport. Witnesses observed the airplane initiating two go-arounds before departing the airport traffic pattern. On-scene examination of the wreckage did not reveal any airplane anomalies. An autopsy was performed on the 67-year old commercial pilot, which revealed that his death was caused by atherosclerotic coronary artery disease.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's incapacitation (cardiovascular) resulting in a loss of aircraft control.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings
1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. (C) INCAPACITATION(CARDIOVASCULAR) - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
3. TERRAIN CONDITION - OPEN FIELD

Factual Information

HISTORY OF FLIGHT

On November 5, 2004, approximately 1200 central standard time, a Piper PA30-160 twin-engine airplane, N7415Y, was substantially damaged when it impacted terrain while maneuvering following a go-around and subsequent loss of control near the Boise City Municipal Airport (17K) near Boise City, Oklahoma. The commercial pilot, sole occupant of the airplane, was fatally injured. Visual meteorological conditions prevailed, and a flight plan was not filed for the personal flight that was conducted under 14 Code of Federal Regulations Part 91. The ferry flight originated from the Ernest A. Love Field Airport (PRC) near Prescott, Arizona, approximately 0900 central standard time, with 17K as its intended destination.

In a written report, a witness stated that he observed the airplane approaching the airport from the southwest and entering a right downwind for runway 22. The airplane appeared to have made a stabilized approach, and it nearly touched down before initiating a go-around approximately 40 feet above the ground. The airplane then climbed to the north, circled the airport, and made another low pass over the runway. The airplane then climbed out to the north once again, and the witness lost sight of the airplane.

A second witness reported a similar sequence of events and added that the engines were running smoothly when the airplane made passes over the runway. The witness also reported that the sky was clear.

According to fuel receipts obtained from the wreckage, the airplane was last fueled on the date of the accident at PRC with 27.2 gallons of 100-octane aviation fuel.

PERSONNEL INFORMATION

A review of the Federal Aviation Administration (FAA) airman records revealed that the 67-year old pilot held a commercial pilot certificate with ratings for airplane single-engine land, airplane multi-engine land, and instrument airplane. The pilot also possessed a flight instructor certificate with ratings for airplane single-engine and instrument airplane.

No personal flight records were located for the pilot. The pilot's most recent second-class medical was issued on September 13, 2004, at which time he reported a total of 10,700 hours of flight time on his medical application. The medical certificate displayed the following limitation: "must wear corrective lenses."

AIRCRAFT INFORMATION

The airplane was a low wing 1964-model configured for five seats, serial number 30-478. The airplane was purchased on November 4, 2004, by a private individual, and was being repositioned from California at the time of the accident.

The airplane was powered by two Lycoming IO-320 B1A engines, serial numbers L-1057-55 (left) and L-1061-55 (right), rated at 160 horsepower each and driven by Hartzell model E2YL-2BS/7663-4 propellers. Total time on the left engine was 3,040.01 hours. Total time on the right engine was 3,042.08 hours.

A review of the airplane logbooks indicated that the most recent 100-hour inspection was performed on April 27, 2004, with a tachometer time of 3,022.9 hours. The last annual inspection was performed by the same repair station on March 27, 2004, with a tachometer time of 3,022.9 hours. It was noted that the engine data plates on both engines did not match the engine serial numbers stamped into the respective cases.

METEOROLOGICAL INFORMATION

At 1156, the automated weather observing system at the Springfield Municipal Airport (SPD) near Springfield, Colorado, located 31 miles north of the accident site, reported wind from 270 degrees at 9 knots, temperature 75 degrees Fahrenheit, dew point 12 degrees Fahrenheit, and barometric pressure of 30.15 inches of Mercury.

COMMUNICATIONS

The pilot did not file a flight plan or receive a weather briefing for the 499-nautical mile repositioning flight. There were no recorded communications with air traffic control (ATC).

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest upright in a level grass-covered field on a 230-degree heading. The global positioning system (GPS) location of the accident site was latitude 36.48.009 degrees North, longitude 102.30.551 degrees West. The first ground scar was located 135 feet from the main wreckage, with a debris path along a magnetic heading of 175 degrees.

The left wing remained attached to the fuselage at all attach points. The flap was secure and retracted. The aileron was separated at the outboard hinge point, but the center and inboard hinge points were secure. The control rod was secured to the aileron and bellcrank. The control and balance cables were attached to the bellcrank, and continuity was verified to the control wheel. Fuel was observed in the left inboard and outboard tanks, with the filler caps secure. The left landing gear was extended, but was collapsed beneath the wing. The left engine was complete and in its proper position secured to the firewall, however, the left propeller was partially separated from the engine.

The right wing remained attached to the fuselage, but the front attach points were not

connected, and the outer six feet of the wing tip separated from the inboard section. The flap was retracted. The aileron was separated at the center and outboard hinge points, but was attached at the inboard hinge point. The control rod was secured to the aileron and bellcrank. The aileron control and balance cables were attached to the bellcrank, and continuity was verified to the control wheel. Fuel was observed in the right inboard fuel tank, and the filler cap was secure. The right outboard tank was tilted upward and fuel could not be observed from the filler opening, but the outboard filler cap was secure. The right landing gear was extended. The right engine was separated from the nacelle and inverted. The right propeller was detached from the engine and came to rest approximately 28 feet from the main wreckage.

The fuselage section was intact and sustained only minor structural deformation, except for the separated empennage section which was found partially detached. The nose landing gear appeared to have been extended, but had collapsed beneath the fuselage during impact. The gear handle was in the extended position. All five seats were secured and equipped with seat belts, with no impact deformation. The left front seat belt was fastened, but had been cut for extrication. All engine and flight instruments and radios appeared undamaged.

The empennage section of the airplane was distorted and was found rotated in a counterclockwise direction approximately 55 degrees. The horizontal stabilizer remained attached, and the stabilator trim drum was found in a neutral setting. The control cables for the rudder and stabilator were secure, and control continuity was verified to cockpit controls.

Engine crankshaft and valve train continuity were established on both engines when they were rotated by hand using a turning tool at the vacuum pad. Thumb suction and compression were observed, and magnetos on both engines furnished spark at their respective plug ends. Fuel and oil screens were removed from both engines and observed to be free of blockage. Fuel was observed at the engine driven fuel pump inlet on both engines. Both fuel selector valves were in the "main" or inboard position.

MEDICAL AND PATHOLOGICAL INFORMATION

The Oklahoma City Medical Examiner, Oklahoma City, Oklahoma, performed an autopsy on January 5, 2004. The cause of death was determined to be atherosclerotic coronary artery disease. Additionally, there were two areas of old myocardial infarction.

The FAA's Civil Aeromedical Institute's (CAMI) Forensic and Accident Research Center examined the specimens taken by the medical examiner. The toxicological tests were negative for carbon monoxide, cyanide and alcohol.

An open package of Tagamet (over-the-counter heartburn medication) was found inside the cabin of the airplane.

FIRE

There was no evidence of a post-impact fire found during the on-scene portion of the investigation.

TESTS AND RESEARCH

A Janitrol combustion heater was recovered from the aircraft and examined by an NTSB representative on November 9, 2004, at Air Salvage of Dallas in Lancaster, Texas. No anomalies were found during the examination.

ADDITIONAL INFORMATION

The wreckage, excluding the Janitrol combustion heater, was released to the owner on November 6, 2004. The heater was released on November 9, 2004.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	67,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):		**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	September 13, 2004
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N7415Y
Model/Series:	PA-30	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	30-478
Landing Gear Type:	Tricycle	**Seats:**	5
Date/Type of Last Inspection:	April 27, 2004 100 hour	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	17.2 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	3040.1 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	IO-320-B1A
Registered Owner:	On file	**Rated Power:**	160 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SPD,4176 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	11:56 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots / 0 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	270°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.14 inches Hg	**Temperature/Dew Point:**	24°C / -11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Prescott, AZ (PRC)	**Type of Flight Plan Filed:**	None
Destination:	Boise City, OK (17K)	**Type of Clearance:**	None
Departure Time:	07:26 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	Boise City Municipal Airport 17K	**Runway Surface Type:**	Grass/turf
Airport Elevation:	4178 ft msl	**Runway Surface Condition:**	Dry
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Traffic pattern

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:**	36.800277,-102.515274

Administrative Information

Investigator In Charge (IIC):	McGill, C Frank
Additional Participating Persons:	Jeff M Jennings; Federal Aviation Administration; Oklahoma City, OK John Butler; Lycoming Engines; Arlington, TX Michael McClure; Piper Aircraft; Prosper, TX
Original Publish Date:	June 8, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=60501