



National Transportation Safety Board Aviation Accident Final Report

Location:	WELLINGTON, KS	Accident Number:	CHI94FA253
Date & Time:	08/01/1994, 0745 CDT	Registration:	N3693M
Aircraft:	PIPER PA-28-181	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airplane had been delivered to the owner after undergoing a major engine overhaul at Newburgh, NY. The private pilot was also the mechanic who had performed the overhaul and the ferry flight. The last refueling was performed between 4.2 and 4.5 flight hours prior to the accident during the ferry flight from Newburgh to Wellington. The airplane had departed the Wellington Airport, and was returning, when it was observed 'twisting and falling straight down.' The airplane impacted in a near vertical attitude. Post crash inspection revealed no indications of fuel or propeller rotation at impact. No mechanical anomalies were discovered with the airplane or engine.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to maintain aircraft control during the emergency descent, resulting in a stall-spin. Factors were fuel exhaustion resulting from improper fuel calculations by the pilot.

Findings

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

Findings

1. (F) FLUID,FUEL - EXHAUSTION
 2. (F) FUEL CONSUMPTION CALCULATIONS - INADEQUATE - PILOT IN COMMAND
-

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

Occurrence #3: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

3. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
 4. (C) STALL/SPIN - ENCOUNTERED
-

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

5. TERRAIN CONDITION - OPEN FIELD

Factual Information

HISTORY OF FLIGHT

On August 1, 1994, at 0745 central daylight time, a Piper PA-28- 181, N3693M, operated as a personal aircraft by Robert Schuchman of Kingman, Kansas, impacted level terrain 800 feet west of the approach end of runway 17 at Wellington Municipal Airport (EGT), Wellington, Kansas. The airplane was destroyed and the private pilot sustained fatal injuries. Visual meteorological conditions existed at the time of the accident and no flight plan was filed.

The flight operated under 14 CFR Part 91, and originated from Wellington Municipal Airport approximately 0645 hours.

The engine was recently overhauled by the pilot at his home base in New York state, and had just been ferried from Kobelt, New York (10N) to EGT. The itinerary of this flight was as follows:

Date	From-To	Hobbs Time	7/29/94	10N-IDI	1.8 hours	7/30/94	IDI-
PKB	3.9 hours	7/30/94	PKB-SUS	3.6 hours	7/30/94	SUS-EGT	3.2
hours							

A local mechanic, who holds an FAA Inspection Authorization (IA) reported that on July 30, 1994, the pilot and he saw oil in the breather tube for the engine. The pilot removed the spark plugs for inspection and found some evidence of oil on the plugs. On the day of the accident, it was reported that the plane did several touch and go landings prior to the accident. There were no records which would indicate that the airplane was refueled at EGT.

A witness who was jogging near the airport described the airplane as reversing direction and impacting straight down. No fire or engine noise was described.

PERSONNEL INFORMATION

The 47 year old private pilot was the sole occupant of the airplane. He held Airframe and Powerplant Mechanic certificate number 1873149, with an Inspection Authorization. He held a Repairman Certificate with Powerplant privileges, and was employed as a professional aircraft mechanic. According to his logbook, he had accrued a total of 241 hours of flight time as a pilot. Since 1988 he had accumulated 153 hours.

The last biennial flight review entry in the pilots logbook was November 2, 1991, in the accident airplane.

AIRCRAFT INFORMATION

The airplane was a Piper PA-28-181, serial number 28-7890322, and had accumulated 2,009 hours of total flight time on the airframe at the time of the accident. The engine was a Lycoming O-360-A4M, serial number L-24375-36A, rated at 180 horsepower.

Records research revealed that the engine had undergone a major overhaul, which was logged on an FAA Form-337 as completed July 25, 1994, at a tach time of 1988.32 hours. The airplane trip log showed a flight on May 15, 1994, as a flight after engine overhaul. The overhaul was performed in Newburgh, New York, by the pilot. Seventeen (17) hours had been accumulated on the engine since the overhaul was completed. The flight from Newburgh to Wellington was the delivery flight to the owner, and had taken a total of 11.5 hours. Fuel records indicated that N3693M was last fueled at Spirit of St. Louis Airport (SUS), Chesterfield, Missouri, on July 30,

1994, prior to the last leg of this ferry. The pilot and airframe logbook both showed that this leg took 3.2 flight hours. The estimated flight time accumulated on August 1, 1994, prior to the accident was between 1 and 1.3 hours.

The total estimated time since the last refueling was between 4.2 and 4.5 hours. Useable fuel was 48 gallons. The expected cruise fuel consumption rate, according to the owner, was 9.5 gallons per hour. Fuel consumption at takeoff power, and during touch and go maneuvering is higher.

AERODROME INFORMATION

The asphalt runway was oriented 170-350 degrees, and was 3538 feet long and 50 feet wide. There were no obstructions within 1 mile to the north and west of the runway. The surrounding terrain was flat, open field.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest 800 feet from the approach end of runway 17 on a magnetic heading of 275 degrees. The airplane was in a vertical position, with the left wingtip pointed 224 degrees magnetic, and the right wing pointed 036 degrees magnetic. No ground scars were evident surrounding the wreckage. A ground scar evident upon removal of the wreckage displayed green glass at one end and red glass at the other. These linear scars were 16 feet and 16 feet 10 inches long respectively on either side of the crater which contained the engine. The design wingspan is 35.0 feet. All major components remained with the wreckage. Numerous light pieces of glass were scattered north and west of the main wreckage.

The forward section of the cockpit and wings were crushed directly aft 2 feet.

The engine was buried in mud, and excavated from a depth of 5 feet. No indication of rotation was present on the propeller blades. Both blades were deformed aft around the engine case. No elongation of the propeller mounting bolts was noted.

Continuity existed to all control surfaces from the cockpit, and no pre-accident discrepancies were noted. The elevator and rudder trim tabs were neutral.

During excavation of the engine, several quarts of oil poured out of the engine crankcase.

Both fuel tanks were ruptured. No evidence of fuel was found, no smell of fuel existed at the accident site, and no fuel stains were observed on the ground. A local mechanic reported that he did not smell any fuel immediately after the accident at the crash site. All fuel system strainers and screens were inspected and found to be unobstructed. The fuel valve was in the left tank position. The fuel lines from both the electric and engine driven fuel pumps did not have fuel. Both pumps were internally functional. The line to the fuel pressure gauge did not exhibit fuel. The carburetor was broken from its mounts. No fuel was found in the carburetor bowl.

MEDICAL AND PATHOLOGICAL

Toxicological test were negative for any tested substances. An autopsy was performed by E. K. Mitchell, M.D., of Topeka, Kansas, on August 2, 1994. The report stated that no anatomical contributing factors were noted.

TESTS AND RESEARCH

The engine was disassembled and inspected with no discrepancies noted. Both magnetos were

removed and produced sparks. The propeller shaft was rotated, and resulted in the accessory drive gears at the opposite end of the engine rotating.

ADDITIONAL INFORMATION

The wreckage was released to the owner on August 3, 1994. The engine was released to the owner on August 10, 1994.

Pilot Information

Certificate:	Private	Age:	47, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	12/29/1993
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	241 hours (Total, all aircraft), 204 hours (Total, this make and model), 192 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N3693M
Model/Series:	PA-28-181 PA-28-181	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	7890322
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	10/01/1993, Annual	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	47 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2009 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	O-360-A4M
Registered Owner:	ROBERT L. SCHUCHMAN	Rated Power:	180 hp
Operator:	ROBERT L. SCHUCHMAN	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ICT, 1332 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	0656 CDT	Direction from Accident Site:	360°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	7 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	22° C / 18° C
Precipitation and Obscuration:			
Departure Point:	(EGT)	Type of Flight Plan Filed:	None
Destination:	, KS (EGT)	Type of Clearance:	None
Departure Time:	0645 CDT	Type of Airspace:	Class D; Class G

Airport Information

Airport:	WELLINGTON MUNICIPAL (EGT)	Runway Surface Type:	Asphalt
Airport Elevation:	1273 ft	Runway Surface Condition:	Dry
Runway Used:	17	IFR Approach:	None
Runway Length/Width:	3538 ft / 50 ft	VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	MATTHEW L THOMAS	Report Date:	05/09/1995
Additional Participating Persons:	JERRY UNRUH; WICHITA, KS RICHARD A PERIGO; WICHITA, KS		
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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