



National Transportation Safety Board Aviation Accident Final Report

Location:	Sedalia, MO	Accident Number:	CHI01LA194
Date & Time:	07/02/2001, 1859 CDT	Registration:	N902GH
Aircraft:	Houston Challenger II	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The two seat experimental amateur-built airplane was destroyed when it impacted trees located near the southwest perimeter fence about 900 feet west of the approach end of runway 5. The aircraft wreckage pattern was oriented to the southwest. A witness reported that the airplane "ran like new" when it departed. Witnesses near the airport reported seeing the airplane flying low, heading north, and then making a wide right turn to the southwest before impacting the trees. One witness said the engine sputtered twice before impacting the trees. Another witness said he heard the engine quit and saw the propeller stop. He reported the engine started again and the airplane turned back toward the airport before crashing into the trees. The pilot had a total of 100 flight hours. A witness reported the pilot had purchased the airplane within the last year and had flown it about 2 hours, but not at all within the last 3 or 4 months. The airplane did not have a Federal Aviation Administration (FAA) registered "N" number painted on the airplane. No data plate or serial number was found on the airplane. According to FAA records, an Airworthiness Certificate was never issued for the accident airplane. A witness reported he had flown the airplane and that it had a severe yaw problem and he was afraid to fly in it again. He reported the pilot fabricated and installed "stab fins" on the tip of each horizontal stabilizer, and a large trim tab on the rudder. The witness also stated the pilot removed the doors to the airplane because he had been told it would help eliminate the yaw problem. The witness reported the accident flight was the first flight the pilot had taken with the doors removed. An examination of the airplane revealed no preexisting anomalies.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the unsuitable terrain encountered during the forced landing. Additional factors were the pilot's lack of experience in the type of airplane, the loss of engine power for undetermined reasons, and the trees.

Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: APPROACH

Findings

1. (F) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

2. (F) OBJECT - TREE(S)

3. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - ENCOUNTERED - PILOT IN COMMAND

4. (F) LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On July 2, 2001, at 1859 central daylight time, an experimental amateur-built Houston Challenger II, N902GH, was destroyed when it impacted trees located near the southwest perimeter fence of the Sedalia Airport (DMO), Sedalia, Missouri. The private pilot was fatally injured. The experimental airplane had departed from the pilot's private airstrip about 1854. The intended destination was DMO. Visual meteorological conditions prevailed and no flight plan was filed.

A witness, who was a friend of the pilot, reported that he and the pilot had been doing minor repairs and maintenance on the airplane prior to the flight. He reported the pilot decided to fly the airplane to DMO, but he advised against it because of the high wind speeds. The witness reported that the airplane "ran like new" when it departed for DMO.

Witnesses who were located near the airport reported seeing the airplane flying low, heading north, and then making a wide right turn to the southwest before impacting the trees. One witness said the engine sputtered twice before impacting the trees. Another witness said he heard the engine quit and saw the propeller stop. He reported the engine started again and the airplane turned back toward the airport before crashing into the trees.

PERSONNEL INFORMATION

The pilot was a private pilot with a single engine land rating. He held a Third Class Medical Certificate that was issued on September 25, 2000. The pilot reported his total flight time was 100 hours during his last medical examination. A witness reported the pilot had purchased the airplane within the last year and had flown it about 2 hours, but not at all within the last 3 or 4 months.

AIRCRAFT INFORMATION

The airplane was a single engine experimental amateur-built Challenger II. The airplane seated two and had a maximum gross weight of 800 pounds. The engine was a 52 horsepower Rotax 503 engine. The pilot had purchased the airplane within the previous year. There were no maintenance records available and the flight hours on the airplane and engine are unknown.

The two seat experimental airplane did not have a Federal Aviation Administration (FAA) registered "N" number painted on the airplane. No data plate or serial number was found on the airplane. According to FAA records, an Airworthiness Certificate was never issued for the accident airplane.

A witness reported he had flown the airplane and that it had a severe yaw problem and he was afraid to fly in it again. He reported the pilot fabricated and installed "stab fins" on the tip of each horizontal stabilizer, and a large trim tab on the rudder. The witness also stated the pilot removed the doors to the airplane because he had been told it would help eliminate the yaw problem. The witness reported the accident flight was the first flight the pilot had taken with the doors removed.

METEOROLOGICAL CONDITIONS

At 1853, the observed weather at DMO was: winds 120 degrees at 7 knots, sky clear, visibility

10 sm, temperature 28 degrees C, dew point 23 degrees C, altimeter 30.10.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted trees on the southwest corner of the DMO airport, and was about 900 feet west of the approach end of runway 5. The aircraft wreckage pattern was oriented to the southwest. The airplane impacted the trees approximately 20-25 feet above the ground and it remained lodged in the tree branches. Aircraft parts were found 50 feet in front of the airplane wreckage.

An examination of the airplane revealed flight control continuity. The engine inspection revealed the two stroke Rotax engine exhibited continuity and cylinder compression. Fuel was found in the carburetors.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot at the Heckart Gillespie Funeral Home, Sedalia, Missouri.

A Forensic Toxicology Fatal Accident Report was prepared by the FAA Civil Aeromedical Institute. The results were negative.

ADDITIONAL INFORMATION

The FAA was a party to the investigation.

Pilot Information

Certificate:	Private	Age:	51, 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:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	09/25/2000
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	100 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Houston	Registration:	N902GH
Model/Series:	Challenger II	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:		Serial Number:	CH20990W0560
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:		Certified Max Gross Wt.:	800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	503
Registered Owner:	Ralph A. Thomas	Rated Power:	52 hp
Operator:	Ralph A. Thomas	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	DMO, 909 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1853 CDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.1 inches Hg	Temperature/Dew Point:	28° C / 23° C
Precipitation and Obscuration:			
Departure Point:	Sedalia, MO (PVT)	Type of Flight Plan Filed:	None
Destination:	Sedalia, MO (DMO)	Type of Clearance:	None
Departure Time:	1854 CDT	Type of Airspace:	Class G

Airport Information

Airport:	Sedalia Memorial Airport (DMO)	Runway Surface Type:	
Airport Elevation:	909 ft	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Unknown

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):	Jim Silliman	Report Date:	06/18/2002
Additional Participating Persons:	Jim Wesley; FAA; Kansas City, MO		
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/ .		

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.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).