



# Aviation Investigation Factual Report

<b>Location:</b>	BENTON, Kansas	<b>Accident Number:</b>	CHI00LA004
<b>Date &amp; Time:</b>	October 4, 1999, 18:15 Local	<b>Registration:</b>	N7868G
<b>Aircraft:</b>	DRAPER RANS S-10	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Factual Information

### History of Flight

On October 4, 1999, at 1815 central daylight time, an experimental Draper RANS S-10, N7868G, was destroyed when it impacted the ground after a loss of engine power and was consumed by fire. The 14 CFR Part 91 personal flight had departed Benton Airport (1K1), Benton, Kansas, at 1800 CDT on a local flight. The private pilot and registered owner of the airplane, and the pilot rated passenger, received fatal injuries. Visual meteorological conditions prevailed and no flight plan was filed.

A witness reported he saw the airplane for about one or two seconds before the airplane went behind a 20 to 30 foot crest in the road. The airplane's altitude was about 150 feet above the ground and it was in a nosedive. The airplane was going almost straight down and he could see the top of the airplane and the wings. He reported that he was at the accident site about 30 seconds after he initially saw the airplane. He reported the airplane wreckage was about 20 feet from the road and black smoke was rising from behind the five foot high weeds that blocked his view of the accident site. He called 911 to notify emergency personnel. He reported the airplane caught fire and the cockpit was consumed by fire.

Another witness reported that he saw a black smoke cloud rising about 1 to 2 miles north of his location. He reported that when he arrived at the scene, he saw the tail of a small white airplane sticking up out of the five foot high weeds just off the road. He reported the airplane's cockpit, wings, and front end were consumed in flames.

### Personnel Information

The pilot was a private pilot with a single engine land rating. He held a Third Class medical certificate. He had a total of about 176 hours of flight time that included 88 hours in the accident airplane. The pilot's logbook indicated he had flown the accident airplane for one hour on September 13, 1999. Prior to that, the last flight logged in the airplane was on May 7, 1999.

The pilot rated passenger was an airline transport pilot with single and multi-engine land ratings, and was a Certified Flight Instructor in single engine land airplanes. He held a First Class medical certificate. He had a total of about 4,279 flight hours. Copies of his pilot's logbook did not contain any entries that indicated he had piloted a RANS S-10.

### Aircraft Information

The airplane was a single engine experimental Draper RANS S-10, serial number 098803. A Bill

of Sale indicated the pilot had purchased the airplane on August 12, 1993. The airplane seated two in a side by side configuration, and had a maximum gross weight of 960 pounds. The engine was a 65 horsepower Rotax 582 engine.

Airframe and engine logbooks were not located. A notebook the pilot used for recording maintenance actions was found. The notebook indicated the airplane's total airframe time was about 348 hours. The engine had about 95 hours since its last overhaul. The notebook did not indicate if an annual condition inspection had been completed within the previous 12 months.

The notebook indicated that on September 1, 1995, the engine had failed and a forced landing was executed. The landing gear, propeller, and aircraft fabric required repair, and the engine was overhauled. The airplane was repaired and the flown again on May 4, 1996. The airplane was flown about 95 hours before the accident flight.

### Meteorological Conditions

At 1756, the weather conditions at Wichita Mid-continent Airport, Wichita, Kansas, about 15 nautical miles from the accident site, were: winds 130 at 6 knots, visibility 10 miles, sky clear, temperature 62 degrees Fahrenheit, dew point 37 degrees Fahrenheit, altimeter 30.23.

### Wreckage and Impact Information

The airplane wreckage was located approximately four miles north of Benton, Kansas. The wreckage was about 24 feet east of Butler Road and the aircraft was facing to the northwest. A north-south power line paralleled Butler Road and one of the power line poles was about four feet from the left wingtip.

The airplane impacted the ground in about a 30 degree nose down attitude. The engine compartment, cockpit, and left and right wings were consumed by fire. The empennage remained attached to the fuselage and intact. It was not consumed by fire. One blade of the two bladed propeller was found forward of the engine and it was not fire damaged. The other blade was found beneath the engine and it exhibited fire damage.

The inspection of the wreckage revealed that all flight controls were attached to the airframe and all cables were still intact. Continuity was established to all flight controls.

The carburetors and ignition system were consumed by fire. The engine could not be rotated. The subsequent inspection of the engine did not reveal any pre-impact anomalies.

The propeller blade that was found forward of the engine was separated from the hub and it exhibited the following characteristics: no chordwise scratching, no dents or nicks in the leading edge, and no blade twist. The composite blade strands that were attached to the blade hub were separated and bent in the forward direction to the hub, and not angled opposite the

plane of rotation.

#### Medical and Pathological Information

Autopsies were performed on the pilot and pilot rated passenger at the Sedgwick County Regional Forensic Science Center in Wichita, Kansas.

Forensic Toxicology Fatal Accident Reports were prepared by the FAA Civil Aeromedical Institute. The report concerning the pilot indicated the following results:

No carbon monoxide detected in blood.

No cyanide detected in blood.

No ethanol detected in urine.

0.637 (ug/ml, ug/g) Ephedrine detected in blood.

0.176 (ug/ml, ug/g) Pseudoephedrine detected in blood.

0.1 (ug/ml, ug/g) Phenylpropanolamine detected in blood.

Ephedrine present in urine.

Pseudoephedrine present in urine.

Phenylpropanolamine present in urine.

Pseudoephedrine is a common decongestant that is found in over-the-counter cold and allergy preparations. Phenylpropanolamine is an over-the-counter decongestant. Ephedrine is a stimulant, weight loss product, or decongestant in many nutritional supplements and is an asthma medication available over the counter in tablet form. Ephedrine has stimulant effects and large doses have been reported to result in excitation, trembling, insomnia, nervousness, palpitations, elevated heart rate, vertigo, headache, sweating, chest pain, abnormal heart rhythmns, seizures, and death. Tolerance to some of these effects may occur with continuous use. Ephedrine is not typically sold in combination with pseudoephedrine in any cold preparations.

The toxicology report on the pilot rated passenger was negative.

#### Additional Information

The RANS S-10 flight properties were described in the RANS-10 SAKOTA: GENERAL DESCRIPTION AND FLIGHT PROPERTIES manual. The manual stated the following: "The S-10

flight properties are conventional in respect to general aviation aircraft in the areas of control and response. There is a slightly higher rate of speed decay in zero thrust mode and potential for high sink rates due to the 9.4 lb. wing loading. In pitch, the S-10 in neutral." The manual stated, the best glide speed, engine off was 60 mph. The manual stated, "35 mph is typical stall speed with no flaps, 30 mph with flaps."

The Federal Aviation Administration was a party to the investigation.

The wreckage was released to the family of the pilot.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	44, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	March 23, 1998
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	176 hours (Total, all aircraft), 88 hours (Total, this make and model), 130 hours (Pilot In Command, all aircraft), 1 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	DRAPER	<b>Registration:</b>	N7868G
<b>Model/Series:</b>	RANS S-10 RANS S-10	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	098803
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	960 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	348 Hrs	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	582
<b>Registered Owner:</b>	TIM KLASSEN	<b>Rated Power:</b>	65 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Dusk
<b>Observation Facility, Elevation:</b>	ICT ,1332 ft msl	<b>Distance from Accident Site:</b>	15 Nautical Miles
<b>Observation Time:</b>	17:56 Local	<b>Direction from Accident Site:</b>	45°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	130°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	17°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(1K1 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	37.780788,-97.100074(est)

## Administrative Information

Investigator In Charge (IIC):	Silliman, Jim
Additional Participating Persons:	JOHN PARSONS; WICHITA , KS
Report Date:	April 24, 2000
Last Revision Date:	
Investigation Class:	<a href="#">Class</a>
Note:	
Investigation Docket:	<a href="https://data.nts.gov/Docket?ProjectID=47513">https://data.nts.gov/Docket?ProjectID=47513</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).