



Aviation Investigation Final Report

Location:	FRASER, Michigan	Accident Number:	CHI87DEC05
Date & Time:	September 25, 1987, 17:00 Local	Registration:	N2469
Aircraft:	WILLI/BENSEN B-8M	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

AS THE STUDENT PILOT WAS TAKING OFF IN HIS EXPERIMENTAL HOME BUILT GYROPLANE, THE ENGINE LOST POWER, SHORTLY AFTER LIFT-OFF. SUBSEQUENTLY, THE GYROPLANE WAS DAMAGED DURING AN EMERGENCY LANDING. AN EXAM OF THE FUEL SYSTEM REVEALED THAT TANK SEALER HAD DETERIORATED ON THE INSIDE OF THE SEAT TANK & HAD DROPPED IN THE FUEL. SUBSEQUENTLY, A CHECK VALVE FOR A RUBBER HAND BULB (USED TO PRIME THE FUEL PUMPS) HAD BECOME STUCK. THIS RESULTED IN BLOCKAGE OF FUEL TO THE ENGINE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: DETERIORATION OF THE INTERNAL SURFACE OF THE FUEL TANK WHICH LED TO BLOCKAGE OF THE FUEL FLOW AND SUBSEQUENT FUEL STARVATION OF THE ENGINE.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF

Findings

1. (C) FUEL SYSTEM,TANK - DETERIORATED
2. (C) INADEQUATE QUALITY CONTROL - PRODUCTION/DESIGN PERSONNEL
3. (C) FUEL SYSTEM,PRIMER SYSTEM - BLOCKED(TOTAL)
4. (C) FLUID,FUEL - STARVATION

Occurrence #2: FORCED LANDING

Phase of Operation: LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Student	Age:	33, Male
Airplane Rating(s):	None	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	September 21, 1985
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	75 hours (Total, all aircraft), 75 hours (Total, this make and model), 25 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	WILLI/BENSEN	Registration:	N2469
Model/Series:	B-8M B-8M	Aircraft Category:	Gyroplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	86
Landing Gear Type:	Tricycle	Seats:	1
Date/Type of Last Inspection:	August 7, 1987 Unknown	Certified Max Gross Wt.:	800 lbs
Time Since Last Inspection:	29 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	65 Hrs	Engine Manufacturer:	McCulloch
ELT:	Not installed	Engine Model/Series:	O-100
Registered Owner:	DONALD E WILLI	Rated Power:	90 Horsepower
Operator:	DONALD E. WILLI	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MTC ,580 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	20:55 Local	Direction from Accident Site:	45°
Lowest Cloud Condition:	Scattered / 4500 ft AGL	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	17°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	17:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	MCKINLEY FRASER D13	Runway Surface Type:	Macadam
Airport Elevation:	620 ft msl	Runway Surface Condition:	Dry
Runway Used:	27	IFR Approach:	None
Runway Length/Width:	2910 ft / 50 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	42.529319,-82.939399(est)

Administrative Information

Investigator In Charge (IIC): Hopgood, U

Additional Participating Persons:

Original Publish Date: December 10, 1990

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=13549>

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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](#).