



National Transportation Safety Board Aviation Accident Factual Report

Location:	Kalispell, MT	Accident Number:	SEA05LA189
Date & Time:	09/01/2005, 2030 MDT	Registration:	N12QJ
Aircraft:	Ballhagen/Shyroch Q-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Personal

On September 1, 2005, approximately 2030 mountain daylight time, an experimental Ballhagen/Shyroch Q-2, N12QJ, impacted the terrain during a no-power forced landing off the end of the runway at Flathead Sky ranch, which is located about five miles southwest of Kalispell, Montana. The private pilot, who was the sole occupant, was not injured, but the aircraft, which is owned and operated by the pilot, sustained substantial damage. The 14 CFR Part 91 personal pleasure flight, which originated at the same airport less than five minutes prior to the accident, was being operated in visual meteorological conditions. No flight plan had been filed. There was no report of an ELT activation.

According to the pilot, who was five hours into a ten hour experimental aircraft flight test regimen, just prior to this flight he had readjusted the valve lash in the Subaru engine that powered the subject aircraft. At the beginning of the flight, he took off on runway 16, and climbed to about 1,000 feet above ground level (agl). After he rolled out on downwind, his ground crew contacted him on the aircraft radio to advise him that the aircraft's engine appeared to have been missing and running rough during the takeoff and initial climbout. About the time that the pilot received the radio transmission, the aircraft's engine quit producing power, and he decided to continue on around the pattern in order to execute a forced landing on the runway from which he had departed. As he turned from base to final, the pilot realized that he might not be able to stretch the glide to the end of the runway, but he elected to attempt to do so. When the aircraft descended to about 25 feet agl, its airspeed slowed to the point where it stall/mushed into the terrain about one-quarter of a mile off the end of the runway. After impacting the terrain, the aircraft slid for about 75 feet before coming to a stop. During the impact with the ground, the front wing (canard) sustained substantial damage.

In a post accident inspection, both the pilot/owner and an FAA Airworthiness Inspector who responded to the scene determined that the valve clearance in the engine had been set with a gap so small that when the internal engine temperature began to increase, the exhaust valves in each cylinder did not completely close. Without the closure of the valves, sufficient compression would not be created in the cylinders, and the engine would stop producing power.

Pilot Information

Certificate:	Private	Age:	57, 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:	No
Medical Certification:	Class 1 With Waivers/Limitations	Last FAA Medical Exam:	09/01/2004
Occupational Pilot:		Last Flight Review or Equivalent:	06/01/2005
Flight Time:	1056 hours (Total, all aircraft), 220 hours (Total, this make and model), 1010 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Ballhagen/Shyrook	Registration:	N12QJ
Model/Series:	Q-2	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	A2876
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	02/01/2005, Annual	Certified Max Gross Wt.:	1200 lbs
Time Since Last Inspection:	5 Hours	Engines:	1 Reciprocating
Airframe Total Time:	300 Hours at time of accident	Engine Manufacturer:	Subaru
ELT:	Not installed	Engine Model/Series:	EA81-1.8L
Registered Owner:	David G. Hudak	Rated Power:	110 hp
Operator:	David G. Hudak	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	24° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Kalispell, MT (MT95)	Type of Flight Plan Filed:	None
Destination:	(MT95)	Type of Clearance:	None
Departure Time:	2025 MDT	Type of Airspace:	

Airport Information

Airport:	Flathead Sky Ranch (MT95)	Runway Surface Type:	
Airport Elevation:	3000 ft	Runway Surface Condition:	
Runway Used:	NA	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	48.128333, -114.348611

Administrative Information

Investigator In Charge (IIC):	Orrin K Anderson
Additional Participating Persons:	Rick Koffman; Helena FSDO
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/ .