



Aviation Investigation Final Report

Location:	Sheridan, Wyoming	Accident Number:	CEN16LA019
Date & Time:	October 9, 2015, 12:30 Local	Registration:	N153RW
Aircraft:	Quest Kodiak 100	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The commercial pilot was conducting a personal local flight. Two witnesses reported observing the airplane lift off in an extreme nose-high attitude, level off, and then reenter a nose-high attitude before it descended and impacted the ground 1,500 ft south of the runway.

After the accident, the pilot told the airport manager that the flight controls had jammed during takeoff. The airport manager reported that he examined the airplane and that all of the flight controls moved freely. During subsequent examination, flight control continuity from the cockpit controls to all of the flight control surfaces was confirmed, and all of the flight controls moved freely. The floorboards were removed to check for debris, but none was found.

The pilot reported that the last flight in the airplane was flown by another pilot who had mentioned to him that someone in the service center had given him a red foam block with a streamer, which he had placed between the elevator and the horizontal stabilizer as instructed. The accident pilot stated that he did not see the foam block or feel it during the control checks, which were normal. The recovery crew, airport manager, and insurance adjuster reported that they did not find a red foam block with a streamer.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The loss of airplane control during takeoff for reasons that could not be determined based on the available information.

Findings

Not determined

(general) - Unknown/Not determined

Factual Information

History of Flight

Takeoff	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On October 9, 2015, about 1230 mountain daylight time, a Quest Kodiak 100, N153RW, impacted terrain during takeoff at Sheridan County Airport (KSHR), Sheridan, Wyoming. The pilot, the sole occupant on board, was seriously injured. The airplane was substantially damaged. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Day visual meteorological conditions prevailed at the time of the accident, and no flight plan had been filed. The local flight was originating at the time of the accident.

The pilot told the airport manager that the flight controls had jammed during takeoff. The airport manager examined the airplane and said all flight controls moved freely. The elevator trim was ½ units nose up. Flaps were fully deployed (35 degrees). The engine condition lever was in the feathered position.

Two airport mechanics who witnessed the accident said the airplane lifted off in an extreme nose-high attitude, leveled off, and then assumed a nose-high attitude again before descending and impacting the ground about 1,500 feet south of runway 24.

On October 20, 2015, representatives from the National Transportation Safety Board, Federal Aviation Administration, and Quest Aircraft Company examined the airplane at Beegles Aircraft Service in Greeley, Colorado. Flight control continuity was traced from the cockpit controls to all flight control surfaces. All controls moved freely. The floorboards were removed and checked for any debris. None was found. The Hobbs meters (flight and block) read 23.9 and 28.2 hours, respectively. The altimeter was set to 30.06 inches of mercury, or 1021.5 millibars, and indicated 4,800 feet msl (above mean sea level).

Data cards from the airplane's multi-function and primary function displays (MFD, PFD) data cards were retrieved and sent to the National Transportation Safety Board's Vehicles Recorders Division for readout. According to the specialist's report, the cards "contained firmware version and navigation databases that did not record data. No accident related data was recovered from the SD cards."

According to an e-mail from the pilot, "the last flight was flown. . .by . . ., the other pilot trained to fly the plane. [He] had gone with me to [a] reunion in Wichita to get more experience in the plane and spent most of the time with the people in the service center. He does not live here in Sheridan and came over on Friday to see how things were going. He mentioned to me that someone in the service center had given him a foam block that, when wedged in the elevator, [it raises it] enough that people in the shop would not bump their heads. He had placed the block as instructed before going home and if he had told me about it, I had certainly forgotten it. If it would have been red with a removable streamer I certainly

would have seen it. I am not sure why I did not feel it in the control check. Maybe due to the seat position and my lack of familiarity with the control input range. In any event I believe that the foam block placed between the horizontal stabilizer and the elevator was the primary factor for the accident and that the block should have been discovered by me during the preflight or the pre-takeoff check."

The recovery crew, airport manager, and insurance adjuster were contacted. No one remembered seeing a red foam rubber block with a streamer. The airport manager did say that on the evening of the accident, the pilot's wife went to the airplane and removed personal belongings.

Pilot Information

Certificate:	Airline transport; Commercial	Age:	73
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	May 28, 2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	13500 hours (Total, all aircraft), 20 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Quest	Registration:	N153RW
Model/Series:	Kodiak 100	Aircraft Category:	Airplane
Year of Manufacture:	2015	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	100-0153
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:		Certified Max Gross Wt.:	7255 lbs
Time Since Last Inspection:		Engines:	1 Turbo prop
Airframe Total Time:	28 Hrs	Engine Manufacturer:	PRATT AND WHITNEY
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	PT6A-34
Registered Owner:	ROBERT L. WALLICK, JR.	Rated Power:	750 Horsepower
Operator:	ROBERT L. WALLICK, JR.	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	F9AA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KSHR,4021 ft msl	Distance from Accident Site:	
Observation Time:	12:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.12 inches Hg	Temperature/Dew Point:	26°C / 5°C
Precipitation and Obscuration:			
Departure Point:	Sheridan, WY (KSHR)	Type of Flight Plan Filed:	None
Destination:	Sheridan, WY (KSHR)	Type of Clearance:	None
Departure Time:	12:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	Sheridan County KSHR	Runway Surface Type:	Asphalt
Airport Elevation:	4021 ft msl	Runway Surface Condition:	Dry
Runway Used:	24	IFR Approach:	None
Runway Length/Width:	5039 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	44.769165,-106.980278(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	YANCEY RUSHTON; FAA FLIGHT STANDARDS DISTRICT OFFICE; Denver, CO JOSEPH T WALSH; FAA FLIGHTSTANDARDS DISTRICT OFFICE; Denver, CO BRIAN D RICHARDSON; FAA FLIGHT STANDARDS DISTRICT OFFICE; DENVER, CO ABBIE OTIS; FAA FLIGHT STANDARDS DISTRICT OFFICE; DENVER, CO JAMISON SLIPPY; QUEST AIRCRAFT COMPANY; SANDPOINT, ID
Original Publish Date:	June 16, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=92180

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](#).