



Aviation Investigation Final Report

Location:	Millbrook, New York	Accident Number:	ERA10LA221
Date & Time:	April 11, 2010, 15:00 Local	Registration:	N417VR
Aircraft:	CZECH AIRCRAFT WORKS SPOL SRO SPORTCRUISER	Aircraft Damage:	Destroyed
Defining Event:	Loss of control in flight	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

According to several witnesses, the airplane's engine sounded good during the takeoff roll, but at liftoff the wings were rocking and the airplane was not gaining altitude. They said that almost immediately, the airplane banked hard left back toward the airport, and disappeared from view. The sounds of impact were heard, and a fire ensued at ground contact that completely consumed the airplane. Some of the witnesses stated that they saw something fall off of or from the airplane during the turn. A firefighter who responded immediately to the scene said the pilot told him that he tried to hold the canopy shut and fly the airplane at the same time and did not lock the canopy.

Postaccident flight testing and information gathered from previous investigations (WPR09LA075 and WPR10LA276) revealed that an unlocked canopy remained slightly ajar in flight. Without being latched, the hinged canopy would rest in the fully closed position. After takeoff, the unlatched canopy lifted from the frame rail. Flight testing revealed that the relative airflow held the canopy in a lowered, slightly-open position, and that the airplane remained fully controllable. Following these three investigations, the manufacturer added a pre-takeoff canopy closed-and-locked check to the checklist, and a canopy unlocked in-flight procedure to the Pilot Operating Handbook.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain aircraft control after takeoff while he was distracted by trying to

hold shut the unlocked cockpit canopy. Contributing to the accident was the pilot's failure to lock the canopy prior to takeoff, and the inadequate guidance in the Pilot Operating Handbook regarding canopy locking procedures.

Findings

Aircraft	Passenger/crew doors - Incorrect use/operation
Organizational issues	Availability of policy/proc - Manufacturer
Aircraft	Lateral/bank control - Not attained/maintained
Personnel issues	Lack of action - Pilot

Factual Information

History of Flight

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

On April 11, 2010, about 1500 eastern daylight time, a special light sport Czech Air Works Sportcruiser, N417VR, was destroyed following an uncontrolled descent and collision with terrain after takeoff from Sky Acres Airport (44N), Millbrook, New York. The certificated sport pilot/owner was seriously injured. Visual meteorological conditions prevailed, and no flight plan was filed for the personal flight, which was conducted under the provisions of Title 14 Code of Federal Regulations Part 91.

According to several witnesses, the airplane's engine sounded good during the takeoff roll and throughout the flight, but at liftoff, the wings were rocking and the airplane was not gaining altitude. They said that almost immediately, the airplane banked really hard left back toward the airport, and disappeared from view. The sounds of impact were heard, and a fire ensued at ground contact. Some of the witnesses stated that they saw something fall off of, or from the airplane during the turn.

One of the witnesses was an off-duty firefighter who responded to the scene immediately on foot. He said the airplane was on fire, but the pilot was some distance from the airplane. As the firefighter got to the scene, the pilot told him that he crawled out. The pilot also told him that he tried to hold the canopy shut and fly the plane at the same time and did not lock the canopy.

Examination of the airplane by Federal Aviation Administration (FAA) aviation safety inspectors revealed that the airplane was completely consumed by fire. Only a small portion of the tail section, and a melted engine block were identified.

According to FAA records, the airplane was manufactured and registered in 2009. The maintenance records were not recovered. Therefore, the airplane's total time and maintenance history could not be determined.

The pilot held a private pilot certificate with ratings for airplane single-engine land, single-engine sea, and instrument airplane. The pilot's most recent FAA third class medical certificate was issued November 3, 2002. He reported 1,076 total hours of flight experience on that date. The pilot's logbook was not recovered, and his total flight experience could not be determined.

As a result of previous Safety Board investigations (WPR09LA075 and WPR10LA276) it was learned that without being latched, the hinged canopy would rest in the fully closed position.

After takeoff, the unlatched canopy lifted from the frame rail. Flight testing revealed that the relative airflow held the canopy in a lowered, slightly-open position, and that the airplane remained fully controllable.

These accidents demonstrated that, without guidance from the manufacturer, the pilots attempted to hold the canopy closed and fly the airplane simultaneously, which resulted in distractions while trying to control the airplane. As a result of these investigations, the manufacturer added a pre-takeoff canopy closed-and-locked check to the checklist, and a canopy unlocked in-flight procedure to the Pilot Operating Handbook.

Pilot Information

Certificate:	Private; Sport Pilot	Age:	70, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	November 3, 2002
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1076 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CZECH AIRCRAFT WORKS SPOL SRO	Registration:	N417VR
Model/Series:	SPORTCRUISER	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Special light-sport (Special)	Serial Number:	08SC232
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	ROTAX
ELT:	Installed, not activated	Engine Model/Series:	912ULS
Registered Owner:	LSA LLC	Rated Power:	100 Horsepower
Operator:	LSA LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	POU,698 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	14:53 Local	Direction from Accident Site:	240°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / 16 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.11 inches Hg	Temperature/Dew Point:	19°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Millbrook, NJ (44N)	Type of Flight Plan Filed:	None
Destination:	Millbrook, NJ (44N)	Type of Clearance:	None
Departure Time:	14:57 Local	Type of Airspace:	

Airport Information

Airport:	Sky Acres 44N	Runway Surface Type:	
Airport Elevation:	698 ft msl	Runway Surface Condition:	Dry
Runway Used:	35	IFR Approach:	None
Runway Length/Width:	3830 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	41.707221,-73.737777(est)

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Markus Buttikofer; FAA/FSDO; Teterboro, NJ
Original Publish Date:	June 20, 2011
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=75712

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