



National Transportation Safety Board Aviation Accident Final Report

Location:	Three Rivers, MI	Accident Number:	WPR19TA009
Date & Time:	10/09/2018, 1904 EDT	Registration:	UNREG
Aircraft:	Kreling Supercat	Aircraft Damage:	Substantial
Defining Event:	Aerodynamic stall/spin	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot reported that he had just completed constructing the unregistered experimental, amateur-built airplane, and during takeoff for the airplane's first flight from the grass airstrip, he failed to maintain the proper pitch attitude and adequate airspeed, and the airplane experienced an aerodynamic stall. The airplane struck the ground nose down just beyond the end of the runway, which resulted in substantial damage to the forward fuselage.

The pilot reported no mechanical malfunctions or failures with the airplane that would have precluded normal operation.

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 the proper pitch attitude and adequate airspeed during takeoff, which resulted in an aerodynamic stall.

Findings

Aircraft	Airspeed - Not attained/maintained (Cause) Pitch control - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Pilot (Cause)

Factual Information

On October 9, 2018, at 1904 eastern daylight time, an unregistered experimental amateur-built Supercat airplane collided with terrain after takeoff from Three Rivers Municipal Dr Haines Airport, Three Rivers, Michigan. The private pilot sustained serious injuries, and the airplane sustained substantial damage to the forward fuselage. The airplane was operated by the pilot/builder under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a local personal flight. Visual meteorological conditions prevailed, and no flight plan had been filed. The flight was originating at the time of the accident.

The pilot reported that he recently completed construction of the airplane, and although he had previously performed multiple high-speed taxi tests and "crow hops", this was to be the first flight. He stated that the takeoff runway was a 1,000-ft-long grass strip, adjacent and parallel to Runway 9. After warming up the engine, he taxied the airplane into position, and initiated the takeoff roll. The airplane lifted off after traveling about 1/4 of the runway length, and he stated that during the initial climb he failed to maintain the correct pitch attitude and adequate airspeed, and the airplane experienced an aerodynamic stall. The airplane struck the ground nose-down just beyond the end of the runway.

The airplane was equipped with a Rotax 447 series two-stroke engine. The pilot indicated that he planned to register the airplane with the Federal Aviation Administration once he had established that it could be flown. He reported that there were no preimpact mechanical malfunctions or failures with the airframe or engine that would have precluded normal operation.

History of Flight

Takeoff	Aerodynamic stall/spin (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	63, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Sport Pilot None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	158.1 hours (Total, all aircraft), 0.1 hours (Total, this make and model), 120.4 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Kreling	Registration:	UNREG
Model/Series:	Supercat	Aircraft Category:	Airplane
Year of Manufacture:	2018	Amateur Built:	Yes
Airworthiness Certificate:		Serial Number:	None
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	650 lbs
Time Since Last Inspection:	0 Hours	Engines:	Reciprocating
Airframe Total Time:	0 Hours at time of accident	Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	447
Registered Owner:	On file	Rated Power:	38 hp
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KHAI, 824 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	2317 UTC	Direction from Accident Site:	258°
Lowest Cloud Condition:	Scattered / 8500 ft agl	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.97 inches Hg	Temperature/Dew Point:	26° C / 18° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Three Rivers, MI (HAI)	Type of Flight Plan Filed:	None
Destination:	Three Rivers, MI (HAI)	Type of Clearance:	None
Departure Time:	1904 EDT	Type of Airspace:	Class E

Airport Information

Airport:	THREE RIVERS MUNI DR HAINES (HAI)	Runway Surface Type:	Grass/turf
Airport Elevation:	822 ft	Runway Surface Condition:	Dry
Runway Used:	09L	IFR Approach:	None
Runway Length/Width:	1000 ft / 1000 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	41.961111, -85.586111 (est)

Administrative Information

Investigator In Charge (IIC):	Elliott Simpson	Report Date:	12/16/2019
Additional Participating Persons:	Michael W Matthews; Federal Aviation Administration FSDO; Grand Rapids, MI		
Publish Date:	12/16/2019		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=98511		

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