Aviation Investigation Final Report

Location:	Winslow, Arizona	**Accident Number:**	WPR12LA302
Date & Time:	July 11, 2012, 12:40 Local	**Registration:**	N718JT
Aircraft:	BUNCH COZY-CANARDIII	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, during takeoff, the airplane became airborne with 3,000 ft of runway remaining. When the airplane was between about 25 and 40 ft above ground level (agl), its nose dropped, and the pilot then pulled back on the control stick. The pilot was able to level out the airplane and establish a 200-ft-per-minute climb rate. As the airplane approached 75 ft agl at an indicated airspeed of about 95 mph, the airplane's nose dropped to about a 30- to 45-degree nose-down attitude. The pilot again pulled back on the control stick, but he was unable to regain control of the airplane before it impacted the ground.

The pilot reported that the engine was running roughly during an initial start-up, but he stated that it ran normally during a subsequent start-up and two engine run-ups before taking off on the accident flight. A postaccident examination of the engine and airframe revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation. The airplane's calculated gross weight exceeded its allowable maximum gross weight, and high-density altitude conditions existed at the time of the accident. Although these conditions likely affected the airplane's performance, the pilot was able to establish a positive climb rate after takeoff; however, he did not maintain control of the airplane as the pitch changed.

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 airplane control during climb in high-density altitude conditions and with the airplane's weight in excess of its maximum allowable gross weight.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Pitch control - Not attained/maintained
Aircraft	Maximum weight - Capability exceeded
Environmental issues	High density altitude - Effect on equipment

Factual Information

History of Flight

Prior to flight	Aircraft loading event
Takeoff	Loss of control in flight (Defining event)

On July 11, 2012, about 1240 mountain standard time (MST), an experimental Bunch Cozy-Canard III, N718JT, impacted terrain during takeoff at Winslow, Arizona. The owner/pilot was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The private pilot sustained serious injuries, and the passenger was fatally injured; the airplane sustained substantial damage by impact forces. The cross-country personal flight was departing Winslow-Lindbergh Regional Airport (INW), Winslow, about 1240, with an unconfirmed destination. Visual meteorological conditions prevailed, and no flight plan had been filed.

The airplane landed at INW about 1100 MST; after the pilot refueled the airplane he inquired from the airport fixed base operator (FBO) personnel about finding a mechanic. The pilot stated that the engine was running rough and that he needed to remove and check the spark plugs.

The pilot was advised that there were no mechanics based at Winslow but that one could be called from Flagstaff, Arizona. The pilot indicated he was going to try and "clear" the engine, and then would call the mechanic.

About 1 1/2 hours later, witnesses saw the accident airplane departing INW using runway 29. As the airplane approached the departure end of runway 29 it descended and hit an off airport road and cartwheeled into a dirt field.

Inspectors from the Federal Aviation Administration (FAA) responded to the accident site. After documenting the wreckage it was recovered for further examination.

The FAA accident coordinator interviewed the pilot. The pilot reported that he did have a rough running engine, but was able to clear the engine prior to takeoff. He also stated there were no other maintenance issues related to the engine or flight controls.

The pilot reported that during takeoff, the airplane became airborne with 3,000 feet of runway remaining. When the airplane was 25-40 feet above the ground the pilot experienced a nose down pull on the control stick; the pilot pulled back on the control stick to counter the nose drop. The pilot was able to level the airplane and established a 200-foot-per-minute climb. As he approached 75 feet there was another pitching down event, which was about a 30-45 degrees nose down attitude. The pilot recalled that the airplane was traveling about 95 miles per hour indicated airspeed at the time. The pilot again pulled back on the control stick but was unable to recover before the airplane impacted the ground.

Pilot Information

Certificate:	Private	**Age:**	65
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	March 11, 2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	239.3 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BUNCH	**Registration:**	N718JT
Model/Series:	COZY-CANARDIII	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	BUNCH 1
Landing Gear Type:	Retractable - Tricycle	**Seats:**	3
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	LYCOMING
ELT:		**Engine Model/Series:**	O-320
Registered Owner:	TISCHLER JOSEPH F	**Rated Power:**	150 Horsepower
Operator:	TISCHLER JOSEPH F	**Operating Certificate(s) Held:**	None

The airplane was an experimental-Matthew B Bunch, Model Cozy Canard III, serial number- BUNCH 1. A review of the airplane's logbooks revealed the airplane had a total airframe time of 259.1 hours at the last conditional inspection. The logbooks contained an entry for the conditional inspection dated November 7, 2011. The Hobbs hour meter read 259.1 at the last inspection. The Hobbs hour meter read 341.4 at the accident site.

Fueling records at INW established that the airplane was last fueled on July 11, 2012, at 1107 MST, with the addition of 23.8 gallons of 100LL-octane aviation fuel. Examination of the maintenance and flight department records revealed no unresolved maintenance discrepancies against the airplane prior to departure.

The maximum gross weight for the airplane per the Cozy pilot operating handbook is 1,800 pounds. The weight of the airplane at takeoff was calculated by the NTSB investigator-in-charge using the empty

weight of the airplane as determined by the May 14, 2011, weight and balance revision, the weight of the occupants, 46.7 gallons of fuel, and 100 pounds of baggage. The calculated gross weight at the time of departure was about 1,852.0 pounds and the airplane's center of gravity was 99.6 inches, which is inside the forward limit of the weight and balance envelope.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KINW,4883 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	12:56 Local	**Direction from Accident Site:**	120°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.12 inches Hg	**Temperature/Dew Point:**	34°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Winslow, AZ (INW)	**Type of Flight Plan Filed:**	None
Destination:	Denver, CA (DEN)	**Type of Clearance:**	None
Departure Time:	12:40 Local	**Type of Airspace:**	

A review of recorded weather data from the INW automated weather observation station revealed at 1256 MST conditions were; wind 360 degrees at 8 knots, temperature 34 degrees Celsius, dew point 8 degrees Celsius, and an altimeter setting of 30.13 inches of Mercury. Using the reported weather conditions and field elevation, the calculated density altitude was about 8,048 feet.

Airport Information

Airport:	WINSLOW-LINDBERGH RGNL INW	**Runway Surface Type:**	Asphalt
Airport Elevation:	4941 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	29	**IFR Approach:**	None
Runway Length/Width:	7100 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Serious	**Latitude, Longitude:**	35.032222,-110.730003

Investigators examined the wreckage at the accident scene. The first identified point of contact (FIPC) was a ground scar on Coopertown Road, which is an east-west road that is just north of the airport boundary fence line. The debris path was along a magnetic heading of 320 degrees. The orientation of the fuselage was inverted facing southeast.

Tests and Research

Examination of the recovered airframe and engine was conducted on July 24, 2012, at the facilities of Air Transport, Inc., Phoenix, Arizona. No evidence of pre-impact mechanical malfunction was noted during the examination of the recovered airframe and engine that would preclude normal operation.

A Garmin nuvi 200w portable GPS unit was recovered at the accident site. The GPS unit was sent to the NTSB vehicle recorder lab in Washington, D.C., for download. Data was extracted from the unit but contained no tracking information. A copy of the GPS factual report is attached to the docket.

Additional Information

According to FAA Advisory Circular AC 20-27F, Certification and Operation of Amateur-Built Aircraft, "Amateur builders are free to develop their own designs or build from existing designs. We do not approve these designs and it would be impractical to develop design standards for the wide variety of design configurations, created by designers, kit manufacturers, and amateur builders."

The pilot operator did not submit a Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2).

Administrative Information

Investigator In Charge (IIC):	Jones, Patrick
Additional Participating Persons:	Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	January 12, 2015
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=84279