



Aviation Investigation Final Report

Location:	KENNESAW, Georgia	Accident Number:	ATL00LA055
Date & Time:	May 9, 2000, 16:04 Local	Registration:	N34BD
Aircraft:	Jackson VELOCITY RG	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While performing a low high-speed pass at 200 ft. agl over runway 27, the airplane experienced an extreme vibration and veered to the right. The pilot climbed to 1,000 ft. agl, reduced the power to idle, and the engine then quit. He initiated a forced landing in a field north of the airport. During the forced landing, the airplane collided with several trees and a chain link fence. The main wreckage was located 2 miles north of the airport, and the lower engine cowling of the rear mounted engine, 2 feet of one propeller blade and 6 inches of the opposite propeller blade were located 1,600 ft. from the approach end of runway 27. An inspection of the separated section of the lower cowling revealed that the attachment points were torn from their respective fasteners. According to the airplane's maintenance records, the pilot had recently performed maintenance on the airplane by removing and reinstalled the cowling.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A separation of the lower engine cowling and subsequent partial separation of propeller blades during a low high-speed pass. A factor was the recent maintenance work performed by the owner/pilot mechanic.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (C) COOLING SYSTEM,COWLING - SEPARATION
2. (C) PROPELLER SYSTEM/ACCESSORIES, BLADE - SEPARATION
3. (F) MAINTENANCE,SERVICE OF AIRCRAFT/EQUIPMENT - PERFORMED - OWNER/PILOT MECHANIC

Occurrence #2: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL

Phase of Operation: CLIMB

Occurrence #3: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: EMERGENCY DESCENT/LANDING

Factual Information

On May 9, 2000, at 1604 eastern daylight time, a Jackson Velocity RG experimental homebuilt airplane, N34BD, registered to and operated by the pilot, was substantially damaged when it collided with ground during a high-speed low pass over runway 27 at Cobb County-McCollum Field in Kennesaw, Georgia. The private pilot and one passenger received minor injuries. Visual meteorological conditions prevailed, and no flight plan was filed for the local personal flight being conducted under Title 14 CFR Part 91. The flight originated at 1530.

According to the pilot, he flew northwest of the airport for approximately 30 minutes. During his return to the airport, he contacted the airport tower and requested to perform a low high-speed pass over runway 27, which was approved. While on a right base for the runway, he descended to an altitude of 200 feet above ground level (agl). According to the pilot, he was flying at an airspeed of 185 knots, which is below the airplane's Vne (velocity not to exceed) speed of 200 knots. Shortly thereafter, the airplane began to experience an "extreme vibration" and then veered to the right. The pilot climbed to an altitude of 1,000 feet agl and he reduced the power to idle. The pilot stated that the "propeller was gone by this time" and the engine quit.

While at an airspeed of 70 knots, the pilot initiated a forced landing in a field and attempted to land under utility lines. Prior to touching down, the airplane's left wing clipped a tree. The airplane collided with the ground and a chain link fence, then bounced once. The left wing struck another tree, turning the airplane 90 degrees to the left. The right wing, the right side of the fuselage and the canard struck a tree, and the airplane came to rest. The airplane traveled approximately 250 feet following its first impact with the tree.

A postaccident examination of the airplane was conducted by an FAA inspector. The main wreckage was located in a residential area located approximately 2 miles north of the airport. The left wing, rear-mounted engine and right front seat were separated from the airplane and found within close proximity to the main wreckage. However, the lower engine cowling, 2 feet of one propeller blade and 6 inches of the opposite propeller blade were located approximately 1,600 feet from the approach end of runway 27.

An inspection of the separated section of the lower cowling revealed that the attachment points were torn, resulting in a separation from the fasteners. According to the airplane's maintenance records, the pilot performed maintenance work on the airplane on April 4, 2000, at a tachometer time of 667.0 hours. During the repair, the pilot removed and reinstalled the cowling in order to replace 2 spark plugs. At the time of the accident, the tachometer indicated 667.8 hours.

According to an engineering representative with Velocity Aircraft, the recommended method

for attaching the cowling is by fastening it with stainless steel screws with a beveled head and a one-half inch washer, with a locking nut plate underneath. An examination of the airplane revealed that this was the method by which the cowling was attached.

Pilot Information

Certificate:	Private	Age:	67, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
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 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	November 10, 1998
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2500 hours (Total, all aircraft), 600 hours (Total, this make and model), 2500 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Jackson	Registration:	N34BD
Model/Series:	VELOCITY RG VELOCITY R	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	001
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	July 20, 1999 Annual	Certified Max Gross Wt.:	2250 lbs
Time Since Last Inspection:	41 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	668 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-360-C1E6
Registered Owner:	BILLY C. JACKSON, SR.	Rated Power:	200 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MGE ,1068 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	16:55 Local	Direction from Accident Site:	145°
Lowest Cloud Condition:	Scattered / 7000 ft AGL	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	15 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	29°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(RYY)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	15:30 Local	Type of Airspace:	Class D

Airport Information

Airport:	COBB COUNTY-MCCOLLUM RYY	Runway Surface Type:	
Airport Elevation:	1040 ft msl	Runway Surface Condition:	
Runway Used:	27	IFR Approach:	None
Runway Length/Width:	5355 ft / 75 ft	VFR Approach/Landing:	Go around

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	34.019329,-84.609489(est)

Administrative Information

Investigator In Charge (IIC):	Scott, B. beach
Additional Participating Persons:	GEORGE C JONES; ATLANTA , GA
Original Publish Date:	December 4, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=49166

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](#).