



National Transportation Safety Board Aviation Accident Factual Report

Location:	Berrien Springs, MI	Accident Number:	CHI05CA060
Date & Time:	02/01/2005, 0850 EST	Registration:	N9515B
Aircraft:	Cessna 172RG	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None

Flight Conducted Under: Part 91: General Aviation - Instructional

On February 1, 2004, about 0850 eastern standard time, a Cessna 172RG, N9515B, piloted by a private pilot receiving instruction from a certified flight instructor (CFI), sustained substantial damage during a hard landing on runway 13 at Andrews University Airpark, near Berrien Springs, Michigan, following a simulated loss of engine power during takeoff and subsequent emergency landing after takeoff. The instructional flight was operating under 14 CFR Part 91. Visual meteorological conditions prevailed at the time of the accident. No flight plan was on file. The pilot and CFI reported no injuries. The local flight was originating at the time of the accident.

The pilot's accident report stated:

At approximately 0830 after pre-flighting Cessna 172 RG N9515B, I was instructed by [the] CFI, to perform a short field take off on runway 13. I taxied onto the runway, aligned the aircraft with the center line and stopped. I applied the brakes and full power in the usual fashion. The brakes were released, and as airspeed increased with our ground roll, I rotated the aircraft at 60 knots indicated air speed. On climb out, the air speed was held between 63 and 65 knots (Vy). To

simulate an engine failure, the CFI reduced the throttle.

Immediately upon noticing the loss of power, I lowered the nose of the aircraft to avoid loss of airspeed and to avoid a wing stall. While maintaining control of the aircraft, altitude was lost. An attempt was made to flare the aircraft before contact with the runway.

Subsequently, a hard landing was made, and the aircraft came to a complete stop on the runway.

The CFI's accident report stated:

We had a normal startup and taxi out. We proceeded to the end of runway 13 and the runup was normal. We then made a short field takeoff and during the takeoff I simulated an engine failure. We immediately pushed the nose over but with insufficient airspeed we developed a high sink rate and made a hard landing.

The CFI stated that there were no mechanical malfunctions associated with the airplane during the flight.

At 0853, the recorded weather at the Southwest Michigan Regional Airport, near Benton Harbor, Michigan, was: Wind calm; visibility 4 statute miles; present weather mist; sky condition overcast 6,500 feet; temperature -5 degrees C; dew point -7 degrees C; altimeter 30.46 inches of mercury.

Flight Instructor Information

Certificate:	Commercial	Age:	49, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	08/05/2004
Occupational Pilot:		Last Flight Review or Equivalent:	05/28/2004
Flight Time:	4260 hours (Total, all aircraft), 255 hours (Total, this make and model), 4074 hours (Pilot In Command, all aircraft), 64 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Age:
Airplane Rating(s):	Seat Occupied:
Other Aircraft Rating(s):	Restraint Used:
Instrument Rating(s):	Second Pilot Present:
Instructor Rating(s):	Toxicology Performed:
Medical Certification:	Last FAA Medical Exam:
Occupational Pilot:	Last Flight Review or Equivalent:
Flight Time:	

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N9515B
Model/Series:	172RG	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	172RG0846
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	11/17/2004, 100 Hour	Certified Max Gross Wt.:	2650 lbs
Time Since Last Inspection:	63.4 Hours	Engines:	1 Reciprocating
Airframe Total Time:	6026.7 Hours at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-360-F1A6
Registered Owner:	Andrews University	Rated Power:	180 hp
Operator:	Andrews University	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	BEH, 643 ft msl	Distance from Accident Site:	11 Nautical Miles
Observation Time:	0853 EST	Direction from Accident Site:	346°
Lowest Cloud Condition:		Visibility	4 Miles
Lowest Ceiling:	Broken / 6500 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.46 inches Hg	Temperature/Dew Point:	-5° C / -7° C
Precipitation and Obscuration:			
Departure Point:	Berrien Springs, MI (C20)	Type of Flight Plan Filed:	None
Destination:	(C20)	Type of Clearance:	None
Departure Time:	EST	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:		IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	41.951667, -86.367778

Administrative Information

Investigator In Charge (IIC):	Edward F Malinowski
Additional Participating Persons:	Larry Powell; South Bend, IN FSDO
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .