



National Transportation Safety Board Aviation Accident Final Report

Location:	MARSHALL, MI	Accident Number:	CHI96LA124
Date & Time:	04/02/1996, 2130 EST	Registration:	N2586S
Aircraft:	Cessna 210	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that as the airplane was taking off, a deer hit the left side of the empennage, causing a violent yaw to the left, but the airplane continued to fly. Passengers in the rear seat used a flashlight to inspect the damage. They discovered that the left horizontal stabilizer, elevator and empennage were damaged. The pilot was concerned about tail flutter and possible stalling of the airplane. He determined that he would maintain 100 knots and continue in the same direction to the nearest airport, where he could make a straight-in landing, and emergency services were available. An uneventful landing was made.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A deer that wandered onto the runway. Darkness was a related factor.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF

Findings

1. (F) LIGHT CONDITION - DARK NIGHT
2. (C) OBJECT - ANIMAL(S)
3. FLIGHT CONTROL,ELEVATOR - FOREIGN OBJECT DAMAGE
4. FLIGHT CONTROL,STABILATOR - FOREIGN OBJECT DAMAGE
5. FUSELAGE - FOREIGN OBJECT DAMAGE

Factual Information

On April 2, 1996, at 2130 eastern standard time, a Cessna 210 sustained substantial damage after gaining 10 to 15 feet of altitude during takeoff when it was struck by a deer. The private pilot and the three passengers were not injured. The pilot elected to continue the flight to Pontiac, Michigan, where he performed an emergency landing. The 14 CFR 91 flight was departing Brooks Field Airport, Marshall, Michigan, en route to New Hudson, Michigan. Visual meteorological conditions prevailed and no flight plan was filed.

The pilot reported that during takeoff a deer hit the airplane on the left side of the empennage, causing a violent yaw to the left. He thought at first that the deer had hit the left landing gear. The passengers in the rear seat used a flashlight to inspect the damage to the aircraft. It was discovered that the left horizontal stabilizer, elevator and empennage were damaged. The pilot reported that he was concerned about tail flutter and stalling the airplane. He determined that he would maintain 100 knots per hour and continue in the same direction to the nearest airport where he could make a straight in landing, and where there were emergency services at the field. He continued on to Pontiac, Michigan, and maintained 100 knots during landing and made an uneventful landing.

Pilot Information

Certificate:	Private	Age:	62, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
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:	12/05/1994
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	1895 hours (Total, all aircraft), 1185 hours (Total, this make and model), 1848 hours (Pilot In Command, all aircraft), 54 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N2586S
Model/Series:	210 210	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	21061334
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	12/15/1995, Annual	Certified Max Gross Wt.:	3900 lbs
Time Since Last Inspection:	61 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2537 Hours	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, not activated	Engine Model/Series:	IO-520
Registered Owner:	LARRY L. CRUZEN	Rated Power:	300 hp
Operator:	LARRY L. CRUZEN	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	BTL, 953 ft msl	Distance from Accident Site:	27 Nautical Miles
Observation Time:	1845 EST	Direction from Accident Site:	265°
Lowest Cloud Condition:	Thin Broken / 25000 ft agl	Visibility	15 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	8° C / -3° C
Precipitation and Obscuration:			
Departure Point:	(5D8)	Type of Flight Plan Filed:	None
Destination:	JACKSON, MI (JXN)	Type of Clearance:	None
Departure Time:	2130 EST	Type of Airspace:	Class E

Airport Information

Airport:	BROOKS FIELD (5D8)	Runway Surface Type:	Asphalt
Airport Elevation:	940 ft	Runway Surface Condition:	Dry
Runway Used:	10	IFR Approach:	None
Runway Length/Width:	3500 ft / 75 ft	VFR Approach/Landing:	Precautionary Landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	JAMES P SILLIMAN	Report Date:	05/29/1996
Additional Participating Persons:	MARTHA WINNARD; BELLEVILLE, MI		
Publish Date:			
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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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