



National Transportation Safety Board Aviation Accident Final Report

Location:	Sturtevant, WI	Accident Number:	CHI05LA067
Date & Time:	02/03/2005, 1500 CST	Registration:	N68714
Aircraft:	Cessna 152	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Instructional

Analysis

The airplane experienced a nose gear collapse during a precautionary landing in a corn field. The student pilot stated that her radios became inoperative during the second leg of the solo cross country flight. She elected to bypass the airport she intended on landing at to return to her home airport. During the flight to her home airport, the pilot noticed that the fuel gauges were indicating empty. She stated the airplane was topped off at her last departure point so she should have had plenty of fuel, but she thought the airplane was possibly leaking fuel so she decided to land at a nearby airport. The pilot stated she lowered the flaps while in the traffic pattern, but she doesn't remember the flaps extending. She stated that as she tried to turn onto final approach, the airplane would not bank and the controls felt sluggish. The pilot stated she knew she was not going to make it to the runway so she located a field in which to land. The pilot stated she reduced the power to idle at which time the stall warning sounded so she lowered the nose of the airplane. She stated the field had a slight rise so she held the airplane off the ground as long as possible. The nose gear contacted snow during the landing and the nose gear collapsed. Post accident inspection of the airplane revealed corrosion was present at the wiring connectors on the master switch. The fuel gauges, radios, and flaps, are electrically actuated components. The flight controls were inspected and control continuity was established.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to identify the electrical system failure and to maintain adequate airspeed during the landing approach. Factors associated with the accident were the electrical system failure, the snow covered terrain, and the pilot's lack of experience.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE

Findings

1. (F) ELECTRICAL SYSTEM,ELECTRIC SWITCH - CORRODED
2. (F) ELECTRICAL SYSTEM - FAILURE
3. (C) MISCELLANEOUS - NOT IDENTIFIED - PILOT IN COMMAND

Occurrence #2: NOSE GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings

4. (C) AIRSPEED - INADEQUATE - PILOT IN COMMAND
5. PRECAUTIONARY LANDING - PERFORMED - PILOT IN COMMAND
6. (F) TERRAIN CONDITION - SNOW COVERED
7. LANDING GEAR,NOSE GEAR ASSEMBLY - OVERLOAD

Factual Information

On February 3, 2005, at 1500 central standard time, a Cessna 152, N68714, experienced a nose gear collapse during a precautionary landing in a field in Sturtevant, Wisconsin. The student pilot was not injured. The airplane received substantial damage. The 14 CFR Part 91 solo instructional flight was operating in visual meteorological conditions and a visual flight rules flight plan was filed. The flight departed from the Rock County Airport (JVL), Janesville, Wisconsin, at 1255, with an intended destination of Witmann Regional Airport (OSH), Oshkosh, Wisconsin.

The pilot stated the accident occurred during a solo cross county flight. She stated the flight was planned from the Waukegan Regional Airport (UGN), Waukegan, Illinois, to JVL, to OSH, then back to UGN. She stated she flew uneventfully to JVL where she topped off the airplane with 26 gallons of fuel. The pilot stated that approximately 15 to 20 minutes after departing JVL, she dialed in the OSH very high frequency omnirange navigational equipment (VOR), but was unable to pick up a signal. She stated she then tried to listen to the OSH automated terminal information service (ATIS), at which time she realized that the aircraft radios were not working. The pilot stated since OSH was a controlled field she decided to return to UGN. The pilot stated she was over Fond Du Lac, Wisconsin, when she made this decision. She stated she turned south and flew west of Milwaukee at 2,000 feet mean sea level (msl) and then turned to follow the highway to UGN. The pilot stated she used her cell phone and left messages with her instructor and the flying club chief pilot to inform the air traffic control tower at UGN that she would be coming in without radio contact. She stated she then noticed that the fuel gauges were indicating that the fuel tanks were empty. The pilot stated she knew the airplane should have had plenty of fuel, but she thought that maybe a fuel cap was left off when the airplane was fueled or that the airplane was losing fuel for some other reason. She stated she started looking for a field in which to land when she realized that the Sylvania Airport (C89) was about 2 miles in front of her. The pilot stated that at this time she did not realize that there was a problem with the electrical system.

The pilot stated she was too high and fast to make a straight in approach to land on runway 28, so she decided to enter a right downwind for runway 08. She stated she lowered the flap handle while in the traffic pattern, but she didn't remember seeing the flaps extend nor did she remember feeling the drag of the flaps extending. The pilot stated she was at an altitude of about 500 feet at and airspeed of 70 knots while on base. She stated, "As I turned to enter final, the plane would not bank, although it did yaw slightly to the right, it felt sluggish as if I was going to stall - but my speed was above stall speed at that point." She stated she knew she was not going to make it to the runway so she located a cornfield in which to land. The pilot stated she reduced the power to idle at which time the stall warning sounded so she lowered the nose of the airplane. She stated the field had a slight rise so she held the airplane off the ground as long as possible. The nose gear contacted snow during the landing, and the nose gear collapsed.

Post accident inspection of the airplane was conducted by inspectors from the Milwaukee, Wisconsin, Federal Aviation Administration Flight Standards District Office. The inspection revealed an intermittent connection of the spade terminals on the "Battery Master/Alternator switch prevented the battery contactor relay from closing. This prevented power to the electrical bus and the alternator field circuit. The spade connectors had a good physical connection, but poor electrical connection due to the dull white appearance of the connectors.

When the wire bundle at the switch was moved slightly, the battery relay opened and closed intermittently. The connectors were removed from the switch terminals, slightly cleaned and re-connected. The intermittent operation ceased.

The fuel gauges, radios, and flaps, are electrically actuated components. The flight controls were inspected and control continuity was established.

Pilot Information

Certificate:	Student	Age:	56, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last Medical Exam:	05/10/2004
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	101 hours (Total, all aircraft), 101 hours (Total, this make and model), 16 hours (Pilot In Command, all aircraft), 27 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Cessna	Registration:	N68714
Model/Series:	152	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	15285332
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	01/02/2005, 100 Hour	Certified Max Gross Wt.:	1675 lbs
Time Since Last Inspection:	14.5 Hours	Engines:	1 Reciprocating
Airframe Total Time:	7099.5 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-235-L2C
Registered Owner:	Stick and Rudder Club, Inc.	Rated Power:	110
Operator:	Stick and Rudder Club, Inc.	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	RAC, 674 ft msl	Observation Time:	1453 CST
Distance from Accident Site:	10 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	60°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	4° C / -2° C
Lowest Ceiling:	None	Visibility	6 Miles
Wind Speed/Gusts, Direction:	11 knots, 270°	Visibility (RVR):	
Altimeter Setting:	30.19 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	JANESVILLE, WI (JVL)	Type of Flight Plan Filed:	VFR
Destination:	Waukegan, IL (UGN)	Type of Clearance:	None
Departure Time:	1255 CST	Type of Airspace:	Class E

Airport Information

Airport:	Sylvania (C89)	Runway Surface Type:	
Airport Elevation:	785 ft	Runway Surface Condition:	
Runway Used:	NA	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Precautionary Landing; Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None		

Administrative Information

Investigator In Charge (IIC):	Pamela S Sullivan	Adopted Date:	02/28/2006
Additional Participating Persons:	Daryl I Grubbs; FAA, Flight Standards District Office; Milwaukee, WI		
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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