



National Transportation Safety Board Aviation Accident Final Report

Location:	Washington, OK	Accident Number:	FTW01LA113
Date & Time:	05/03/2001, 1300 CDT	Registration:	N9696B
Aircraft:	Cessna 172RG	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor

Flight Conducted Under: Part 91: General Aviation - Instructional

Analysis

According to the flight instructor and pilot receiving instruction, the student was demonstrating a commercial flight maneuver, at 2,100 feet agl, when they smelled an odor similar to "electrical burning." The instructor told the student to terminate the maneuver and return to the airport. While the student was terminating the maneuver, visible smoke appeared in the cabin, and heat was felt coming from beneath the instrument panel. The instructor assumed control of the airplane. The engine was shut down and a forced landing was executed to a field. During the landing, the airplane encountered soft terrain, nosed over and came to rest inverted. A plastic hydraulic reservoir, from the hydraulic power pack, was found melted and laying on the cockpit floor. The hydraulic power pack was examined and functionally tested at Aero Electric Inc., Wichita, Kansas, under supervision of the FAA. According a report from Aero Electric, the power pack and its related components operated within manufacturer's specifications.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the in-flight fire for an undetermined reason, which resulted in a forced landing. A contributory factor was the lack of suitable terrain for the forced landing.

Findings

Occurrence #1: FIRE

Phase of Operation: MANEUVERING

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED
2. PRECAUTIONARY LANDING - PERFORMED - PILOT IN COMMAND
3. ENGINE SHUTDOWN - INTENTIONAL - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: NOSE OVER

Phase of Operation: LANDING - ROLL

Findings

4. TERRAIN CONDITION - SOFT
5. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On May 3, 2001, at 1300 central daylight time, a Cessna 172RG airplane, N9696B, was substantially damaged during a forced landing following an in-flight fire near Washington, Oklahoma. The airplane was registered to Christensen Aviation Inc., of Wilmington, Delaware, and operated by Airman Flight School, Inc., of Norman, Oklahoma. The flight instructor and private pilot receiving instruction sustained minor injuries. Visual meteorological conditions prevailed and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 instructional flight. The local flight originated from the University of Oklahoma Westheimer Airport, Norman, Oklahoma, at 1230.

According to the flight instructor and pilot receiving instruction, the student was demonstrating a commercial flight maneuver at 2,100 feet agl, when they smelled an odor similar to "electrical burning." The instructor told the student to terminate the maneuver and return to the Westheimer Airport. While the student was terminating the maneuver, visible smoke appeared in the cabin and heat was felt coming from beneath the instrument panel. The instructor assumed control of the airplane. The engine was shut down, and a forced landing was executed to a field. During the landing, the airplane encountered soft terrain, nosed over and came to rest inverted.

According to an FAA inspector, who examined the airplane, a plastic hydraulic reservoir from the hydraulic power pack was found melted and laying on the cockpit floor. He stated that the left wing-tip, the right wing strut, and the vertical stabilizer were structurally damaged. He added that the engine firewall was buckled.

The hydraulic power pack was examined and functionally tested at Aero Electric Inc., Wichita, Kansas, under supervision of the FAA. According a report from Aero Electric, the power pack and its related components operated within manufacturer's specifications.

Pilot Information

Certificate:	Flight Instructor	Age:	24, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	07/20/2000
Occupational Pilot:		Last Flight Review or Equivalent:	01/26/2001
Flight Time:	580 hours (Total, all aircraft), 170 hours (Total, this make and model), 500 hours (Pilot In Command, all aircraft), 280 hours (Last 90 days, all aircraft), 110 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Student Pilot Information

Certificate:	Private	Age:	26, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	01/26/1999
Occupational Pilot:		Last Flight Review or Equivalent:	04/22/2000
Flight Time:	205 hours (Total, all aircraft), 5 hours (Total, this make and model), 110 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N9696B
Model/Series:	172RG	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	172RG0975
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	04/04/2001, 100 Hour	Certified Max Gross Wt.:	2658 lbs
Time Since Last Inspection:	97 Hours	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-360-F1A6
Registered Owner:	Christensen Aviation Inc.	Rated Power:	180 hp
Operator:	Airman Flight School Inc.	Operating Certificate(s) Held:	None
Operator Does Business As:	N/A	Operator Designator Code:	QFGS

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	OUN, 1182 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	1353 CDT	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 2900 ft agl	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	16 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.06 inches Hg	Temperature/Dew Point:	26° C / 17° C
Precipitation and Obscuration:			
Departure Point:	Norman, OK (OUN)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	Unknown
Departure Time:	1230 CDT	Type of Airspace:	Class G

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Jason A Ragogna	Report Date:	11/14/2001
Additional Participating Persons:	Bob Morris; Federal Aviation Inspector; Oklahoma City, OK Henry J Soderlund; Cessna Aircraft Company; Wichita, KS		
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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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).