



National Transportation Safety Board Aviation Accident Final Report

Location:	Page, AZ	Accident Number:	WPR09LA480
Date & Time:	07/01/2009, 0930 MST	Registration:	N1055V
Aircraft:	CESSNA R172K	Aircraft Damage:	Substantial
Defining Event:	Abnormal runway contact	Injuries:	3 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that during a landing, the airplane touched down hard and bounced about 10 feet into the air. During the second bounce, the airplane flew in a nose-high pitch attitude until the airspeed bled off, then the airplane touched down hard a third time. The pilot taxied to the ramp and requested that a local mechanic inspect the airplane for obvious evidence of external damage. The mechanic accomplished an external inspection without looking inside the airplane or removing the engine's cowling and reported no obvious external damage. The pilot continued her cross-country flight and, a few days later, concluded the flight and returned the airplane to the fixed base operator. Several days after that, it was determined that the firewall had been substantially damaged, consistent with a hard landing accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper landing flare and inadequate recovery from a bounced landing.

Findings

Aircraft

Personnel issues	Aircraft control - Pilot (Cause)
------------------	----------------------------------

Factual Information

HISTORY OF FLIGHT

On July 1, 2009, about 0930 mountain standard time, a Cessna R172K, N1055V, made a hard bounced landing at the Page Municipal Airport, Page, Arizona. The airplane was substantially damaged. Neither the private pilot nor the two passengers were injured. Visual meteorological conditions prevailed, and a visual flight rules flight plan had been filed for the personal flight. The airplane was operated by Spitfire Aviation, Santa Barbara, California. The flight was performed under the provisions of 14 Code of Federal Regulations Part 91, and it originated from Kingman, Arizona, about 0700.

The pilot reported to the National Transportation Safety Board investigator that Spitfire Aviation's management had authorized her to rent N1055V for the several day duration round-robin cross-country flight. The pilot had previously rented airplanes from this flight school, where she had taken lessons from its owner and learned to fly.

In the pilot's completed Safety Board "Aircraft Accident Report," form 6120.1, the pilot reported that she had departed from Santa Barbara on June 30, 2009, with two passengers. En route to Nevada, the pilot's first landing was at Kingman, where she completely refueled the airplane. The following morning, July 1, the pilot continued the flight and flew to Page, where she made a hard landing.

Regarding the landing, the pilot stated that no crosswind existed during the traffic pattern approach and touchdown. The airplane touched down on its main landing gear and then bounced 10 feet into the air. The pilot further reported that during the second bounce, she recalled that the airplane was in a nose high attitude before it bounced the third (final) time. The last impact on the runway was the hardest, and the pilot stated that she was shaken up by the experience.

Following the hard landing event, the pilot communicated with a certified flight instructor (CFI) employed by Spitfire Aviation, the flight school from whom she had rented the airplane. The pilot requested guidance from the CFI regarding possible reasons for her hard landing and follow-up action regarding the airplane. The CFI provided the pilot with the requested information and guidance.

The pilot requested that a local airplane mechanic look at the airplane before she departed Page to continue her cross-country flight. The Safety Board investigator interviewed the airplane mechanic. The mechanic reported that he performed a brief visual "walk-around" inspection of the airplane. His work was performed for the pilot on a gratuitous basis. The mechanic stated that he did not remove the engine cowling, and no work order was opened. The mechanic reported he informed the pilot that he did not observe any obvious external structural damage. However, he did notice that oil had been leaking from the engine compartment, and the airplane's belly was dirty.

On July 4, the pilot concluded the flight upon returning the airplane to Spitfire Aviation's Santa Barbara fixed base operation.

Wreckage Information

The aforementioned CFI reported to the Safety Board investigator that on July 13, he went to Spitfire's maintenance hangar where N1055V was located. The airplane's engine cowling had

been removed. The airplane's firewall was found bent so badly that it had twisted some of the airplane's instrument housings.

According to the Spitfire mechanic who performed the initial structural examination for damage, major wrinkles in a "V" shape were noted on both the left and right side of the cockpit floor near the center pedestal, and sheet metal on the floor was deformed. The left and right side of the lower firewall was bent. The mechanic reported to the Safety Board investigator that the damage "was consistent with a hard landing event." The Safety Board investigator's subsequent review of Spitfire's records showed that replacement parts were ordered. The airplane had undergone a major structural repair that included repair of the firewall.

ADDITIONAL INFORMATION

Airplane Operation and Repair

After the accident pilot returned the airplane to Spitfire Aviation on July 4, the operator placed the substantially damaged airplane back on its rental flight line. The airplane was subsequently rented.

The Safety Board investigator interviewed the aforementioned CFI. The CFI stated that on July 11 he had detected binding of the airplane's elevator control system but elected to fly the airplane with a student/passenger. After completing the flight, the CFI alerted management of his observations, and the airplane was removed from service to undergo maintenance.

Spitfire's "Daily Schedule" and rental records indicated that N1055V was listed as being continuously in maintenance from at least July 13, 2009, through September 7, 2009. There were no reports of other accidents or incidents involving N1055V between July 4 and July 13 when N1055V entered maintenance.

Contrary to a written insurance loss statement signed by the pilot on August 17, which asserted that the bounced landing event had occurred upon landing in Santa Barbara on August 12, the pilot informed the Safety Board investigator that she had not flown N1055V since returning the airplane to Santa Barbara on July 4. The pilot verbally acknowledged to the Safety Board investigator that the hard landing had, in fact, occurred in Page on July 1, and that the FBO's owner had required her to report that the accident had occurred on a subsequent date. (See the Safety Board's docket for additional information regarding the pilot's first reported date for the landing mishap, airplane rental records, mechanic's statements and ordered parts.)

Accident Notification and Documentation

The National Transportation Safety Board did not receive notification of the accident pursuant to 49 CFR Part 830 from either personnel at Spitfire Aviation who observed the airplane's damaged condition, or from the accident pilot who had been informed of its damage.

On October 20, 2009, Federal Aviation Administration (FAA) personnel received initial information from a former Spitfire Aviation employee that disclosed an accident had occurred that had not been reported. FAA personnel communicated relevant information about the suspected event to the Safety Board investigator.

Spitfire Aviation's owner and its chief airplane mechanic refused to disclose to the Safety Board investigator information about the mishap. They refused access to airplane operation and maintenance records. As a result and after repeated requests for records, on January 22, 2010, the Safety Board issued Spitfire Aviation's owner a subpoena duces tecum.

History of Flight

Landing-flare/touchdown	Abnormal runway contact (Defining event) Hard landing
-------------------------	----------------------------------------------------------

Pilot Information

Certificate:	Private	Age:	33, Female
Airplane Rating(s):	Single-engine Land	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 With Waivers/Limitations	Last Medical Exam:	02/07/2006
Occupational Pilot:	No	Last Flight Review or Equivalent:	07/26/2008
Flight Time:	194 hours (Total, all aircraft), 21 hours (Total, this make and model), 36 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N1055V
Model/Series:	R172K	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	R1722095
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	03/13/2009, 100 Hour	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	57 Hours	Engines:	1 Reciprocating
Airframe Total Time:	7464 Hours	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-360-K
Registered Owner:	WARNER AERO INC	Rated Power:	195 hp
Operator:	Spitfire Aviation, Inc.	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	PGA, 4316 ft msl	Observation Time:	0953 MST
Distance from Accident Site:	0 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:		Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	31° C / 3° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	Calm	Visibility (RVR):	
Altimeter Setting:	29.99 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Kingman, AZ (IGM)	Type of Flight Plan Filed:	VFR
Destination:	Page, AZ (PGA)	Type of Clearance:	None
Departure Time:	0700 MST	Type of Airspace:	

Airport Information

Airport:	Page Municipal (PGA)	Runway Surface Type:	Asphalt
Airport Elevation:	4316 ft	Runway Surface Condition:	Dry
Runway Used:	15	IFR Approach:	None
Runway Length/Width:	5950 ft / 150 ft	VFR Approach/Landing:	Full Stop; Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None		

Administrative Information

Investigator In Charge (IIC):	Wayne R Pollack	Adopted Date:	06/28/2012
Additional Participating Persons:	David T Voelker; Federal Aviation Administration; Van Nuys, CA		
Publish Date:	06/28/2012		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=75132		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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.