



National Transportation Safety Board Aviation Accident Final Report

Location:	Santa Fe, NM	Accident Number:	CEN10LA449
Date & Time:	08/01/2010, 0950 MDT	Registration:	N52708
Aircraft:	CESSNA 172P	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that he had just departed the airport when the engine completely lost oil pressure. Shortly afterward, the engine seized. The pilot performed a forced landing on a nearby mesa. During the descent, smoke was present both inside and outside the cockpit, with the majority of the smoke outside. During landing, the airplane impacted a short rock wall. When the pilot and passenger exited the airplane, smoke and flames were coming from the engine compartment. Most of the airplane was consumed during the ensuing fire. The airplane had experienced an oil leak; the oil cooler had been replaced the day before the accident. A postaccident examination of the wreckage did not reveal the source of an oil leak.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A total loss of engine power following a loss of oil pressure for undetermined reasons.

Findings

Aircraft	Eng oil sys (airframe furnish) - Failure (Cause) Aircraft power plant - Failure
Environmental issues	Wall/barricade - Effect on equipment Wall/barricade - Contributed to outcome
Not determined	Not determined - Unknown/Not determined (Cause)

Factual Information

On August 1, 2010, about 0950 mountain daylight time, a Cessna 172P airplane, N52708, was substantially damaged during a forced landing near Santa Fe, New Mexico, which resulted from a total loss of engine power. The private pilot and passenger were not injured. The personal flight originated at Santa Fe Municipal Airport (SAF), Santa Fe, New Mexico, and was en-route to Double Eagle II Airport (AEG), Albuquerque, New Mexico. The airplane was operated by Sierra Aviation, LLC, and the flight was being conducted under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed at the time of the accident.

The pilot reported he had just departed SAF and was at less than 500 feet above the ground when his attention was drawn outside to look for traffic in the area. When he looked back inside and performed a scan of the engine instruments he saw the oil pressure gauge was at zero. Shortly afterward the engine seized. The pilot then performed emergency forced landing on a nearby mesa. During the descent, smoke was present both inside and outside the cockpit, with the majority of the smoke outside. During landing, the airplane impacted a short rock wall. When the pilot and passenger exited the airplane smoke and flames were coming from the engine compartment. Most of the airplane was consumed during the ensuing fire.

Maintenance had been performed on the airplane on June 4, 2010, to replace the oil cooler with an overhauled unit. According to the mechanic that worked on the airplane, an oil leak was discovered in the vicinity of the oil cooler and oil filler tube a couple of days before the accident. He said he removed the cowl, cleaned the cowl and engine thoroughly, and ran the engine for several minutes at various power settings. After shutdown, he was unable to identify any leak and surmised that the oil dipstick might not have been secured. After the next flight an oil leak was evident so he elected to replace the oil cooler, which occurred on July 31, 2010. He also replaced both safety wires on the oil filler tube. Following a short run up there were no leaks detected. He did state he didn't think the engine was warm enough to close the oil cooler bypass. The airplane was subsequently dispatched on the accident flight the next morning.

A Federal Aviation Administration inspector could not identify the source of the oil leak or fire during a postaccident examination due to the impact damage and fire to the airplane.

History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event) Emergency descent initiated
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Pilot Information

Certificate:	Private	Age:	43, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without Waivers/Limitations	Last Medical Exam:	06/30/2009
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	65 hours (Total, all aircraft), 65 hours (Total, this make and model), 25 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N52708
Model/Series:	172P	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	17274588
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	06/04/2010, 100 Hour	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	6921 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-320 SERIES
Registered Owner:	SIERRA AVIATION LLC	Rated Power:	180 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	SAF, 6348 ft msl	Observation Time:	0955 MDT
Distance from Accident Site:	6 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	240°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Scattered	Temperature/Dew Point:	21° C / 16° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	Light and Variable, Variable	Visibility (RVR):	
Altimeter Setting:		Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Santa Fe, NM (SAF)	Type of Flight Plan Filed:	None
Destination:	Albuquerque, NM (AEG)	Type of Clearance:	VFR
Departure Time:	0940 MDT	Type of Airspace:	

Airport Information

Airport:	Santa Fe Municipal Airport (SAF)	Runway Surface Type:	
Airport Elevation:	6348 ft	Runway Surface Condition:	
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Daniel Baker	Adopted Date:	06/14/2012
Additional Participating Persons:	Dale Nelson; FAA; Albuquerque, NM		
Publish Date:	06/14/2012		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=76807		

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