Aviation Investigation Final Report

Location:	Baker, California	**Accident Number:**	WPR09LA177
Date & Time:	April 2, 2009, 16:30 Local	**Registration:**	N222G
Aircraft:	Cessna 337G	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was in cruise flight when both engines began to sputter and lose power. He attempted a restart of each engine but was unsuccessful. He estimated that the wind was out of the southeast at 40 knots and he wanted to turn into the wind for the landing, but could only get to a gravel road, which had a crosswind. He lowered the landing gear at the last instant in an attempt to cushion the landing, and kept the left wing low into the wind. The left wing contacted a gravel berm along the left side of the road, and the airplane spun around on the road. The landing gear fractured and separated and the airplane came to rest with the right wing on the ground. Recovery personnel drained 27 gallons of fuel from the left tank and 1.5 gallons from the right tank; the fuel selector valves were positioned for normal cruise flight. During a followup examination of the airplane no anomalies were noted. Fuel supplies were plumbed into the aircraft fuel system at both the left and right wing fuel tanks and both engines were started and run at various power settings. The investigation could not determine the reason for the power loss.

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 for undetermined reasons.

Findings

Environmental issues	Rough terrain - Contributed to outcome
Environmental issues	Crosswind - Not specified
Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Collision with terr/obj (non-CFIT)

On April 2, 2009, about 1630 Pacific daylight time, a Cessna 337G, N222G, encountered uneven terrain during a forced landing near Baker, California. The pilot/owner was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The certificated airline transport pilot and one passenger sustained minor injuries; the airplane sustained substantial damage to the airframe and wings. The cross-country personal flight departed Corona, California, at 1545, with a planned destination of Henderson, Nevada. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that he was in cruise flight when both engines began to sputter and lose power. He attempted a restart, but was unsuccessful. He stated that the airplane was losing altitude rapidly. He headed toward Interstate 15 thinking that he would be found quicker. He estimated that the wind was out of the southeast at 40 knots. He wanted to turn into the wind for the landing, but could only get to a gravel road, which had a crosswind. He lowered the landing gear at the last instant in an attempt to cushion the landing, and kept the left wing low into the wind. The left wing contacted a gravel berm along the left side of the road, and the airplane spun around on the road. The landing gear fractured and separated; the airplane came to rest with the right wing on the ground.

Recovery personnel reported that they drained 27 gallons of fuel from the left tank, and 1.5 gallons from the right tank.

The Safety Board investigator-in-charge (IIC) examined the airplane and engines.

The IIC removed the top spark plugs from the front engine. All spark plugs were clean and oval shaped with no mechanical deformation. The spark plug electrodes were gray in color, which corresponded to normal operation according to the Champion Aviation Check-A-Plug AV-27 Chart.

The IIC manually rotated the crankshaft with the propeller. The crankshaft rotated freely, and the valves moved approximately the same amount of lift in firing order. The gears in the accessory case turned freely, and he obtained thumb compression on all cylinders in firing order. He connected the spark plugs to the respective ignition harness leads, rotated the propeller, and produced spark at all plug electrodes.

The IIC removed the top spark plugs from the rear engine. All spark plugs were clean and oval shaped with no mechanical deformation. The spark plug electrodes were gray, which corresponded to normal operation according to the Champion Aviation Check-A-Plug AV-27 Chart.

The IIC manually rotated the crankshaft with the propeller. The crankshaft rotated freely, and the valves moved approximately the same amount of lift in firing order. The gears in the accessory case turned freely, and he obtained thumb compression on all cylinders in firing order. He connected the spark plugs to the respective ignition harness leads, rotated the propeller, and produced spark at all plug electrodes.

Recovery personnel plumbed a fuel supply to the left wing inlet line, and installed a propeller that was not certified for this airplane. The front engine was started without difficulty; there were no fuel flow indications due to impact damage. After the engine temperature stabilized, they applied full throttle and obtained 26 inches of manifold pressure and a maximum of 1,400 engine revolutions per minute (rpm). Initially black smoke came from the exhaust, but then it cleared. Movement of the mixture control had no effect until the last inch of travel toward the idle cutoff position. The engine idled smoothly at 700 rpm, and was shut off smoothly with the mixture control.

Recovery personnel plumbed a fuel supply to the right wing inlet line. The rear engine was started without difficulty; there were no fuel flow indications due to impact damage. After the engine temperature stabilized, they applied full throttle and the manifold pressure went to the top of the green arc. The engine rpm increased and was climbing through 2,500 rpm. They did not go higher as the rear propeller was deformed, and the engine started to vibrate. They set the rpm at 1,800 and completed a magneto check; the rpm dropped 100 rpm on the left magneto and 50 rpm on the right magneto. Aft movement of the mixture control smoothed out engine operation. The engine idled smoothly at 750 rpm, and was shut off smoothly by the mixture control with a 50-rpm rise.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	71,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	March 17, 2009
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	March 17, 2009
Flight Time:	19000 hours (Total, all aircraft), 3000 hours (Total, this make and model), 15000 hours (Pilot In Command, all aircraft), 10 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N222G
Model/Series:	337G	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	33701783
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	April 17, 2008 Annual	**Certified Max Gross Wt.:**	4630 lbs
Time Since Last Inspection:	30 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	1698 Hrs as of last inspection	**Engine Manufacturer:**	Teledyne Continental Motors
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-G
Registered Owner:	Roger L Levander	**Rated Power:**	210 Horsepower
Operator:	Roger L Levander	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KDAG,1927 ft msl	**Distance from Accident Site:**	40 Nautical Miles
Observation Time:	16:51 Local	**Direction from Accident Site:**	220°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	28 knots / 36 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	27°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Corona, CA (AJO)	**Type of Flight Plan Filed:**	None
Destination:	Henderson, NV (HND)	**Type of Clearance:**	VFR flight following
Departure Time:	15:45 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Minor	**Latitude, Longitude:**	35.25,-116.083335(est)

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	Ron Allen; FAA Riverside FSDO; Riverside, CA
Original Publish Date:	April 22, 2010
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=73589