Aviation Investigation Final Report

Location:	Red Rock, Arizona	**Accident Number:**	WPR19LA140
Date & Time:	May 5, 2019, 17:56 Local	**Registration:**	N8887U
Aircraft:	Cessna 172	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (partial)	**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, while descending in the single-engine airplane toward the destination airport, the engine lost partial power. He performed a forced landing to a dirt road, during which the airplane contacted a bush, resulting in substantial damage.

Postaccident examination of the engine and an engine test run revealed no anomalies that would have precluded normal operation. Atmospheric conditions at the time of the accident were not conducive to the development of carburetor icing. The reason for the partial loss of engine power could not be determined based on the available information.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A partial loss of engine power for reasons that could not be determined based on the available information.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute-descent	Loss of engine power (partial) (Defining event)

On May 5, 2019, about 1756 mountain standard time, a Cessna 172F airplane, N8887U, was substantially damaged when it was involved in an accident near Red Rock, Arizona. The commercial pilot and three passengers were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that he canceled flight-following about 15 miles west of his destination. During the descent, the engine rpm dropped from 2,600 rpm to 1,300 rpm once or twice, then dropped to 1,000 rpm and remained there. The pilot reported that he checked the magnetos, verified that the fuel selector was on BOTH, and set the fuel mixture to full rich. The pilot performed a forced landing to a dirt road, during which the left wing clipped a bush, resulting in substantial damage. The pilot mentioned that he did not use carburetor heat, as the humidity was very low; calculated relative humidity for the area of the accident site was 27%. Additionally, the pilot reported no additional anomalies with the airplane that would have precluded normal operation.

Review of the Carburetor Icing Probability Chart indicated that conditions were not conducive to carburetor icing.

The airplane was equipped with a Continental Motors O-300-D engine, serial number 29754-D-5-0. Maintenance records revealed that about 6 days before the accident, the Nos. 2- and 3-cylinder assemblies were replaced, and the lower forward crankcase through bolt and hardware were replaced.

Examination of the engine revealed no anomalies, and the engine operated normally during a subsequent test run to about 2,280 rpm.

Pilot Information

Certificate:	Commercial	**Age:**	34,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	3-point
Instrument Rating(s):	Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	December 18, 2018
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	April 18, 2019
Flight Time:	(Estimated) 2000 hours (Total, all aircraft), 90 hours (Total, this make and model), 1260 hours (Pilot In Command, all aircraft), 75 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N8887U
Model/Series:	172 F	**Aircraft Category:**	Airplane
Year of Manufacture:	1965	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	17252806
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	May 4, 2018 Annual	**Certified Max Gross Wt.:**	2299 lbs
Time Since Last Inspection:	266 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5279 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	O-300 SER
Registered Owner:		**Rated Power:**	145 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KMZJ,1892 ft msl	**Distance from Accident Site:**	13 Nautical Miles
Observation Time:	17:55 Local	**Direction from Accident Site:**	145°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	250°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.7 inches Hg	**Temperature/Dew Point:**	32.2°C / -8.9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Carlsbad, CA (CRQ)	**Type of Flight Plan Filed:**	None
Destination:	Marana, AZ (AVQ)	**Type of Clearance:**	VFR flight following
Departure Time:	14:45 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	32.538333,-111.423614(est)

Administrative Information

Investigator In Charge (IIC):	Vanover, Jackie		
Additional Participating Persons:	Daniel W Meeker; FAA; Scottsdale, AZ		
Original Publish Date:	February 9, 2022	**Investigation Class:**	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=99402		