Aviation Investigation Final Report

Location:	Dalhart, Texas	**Accident Number:**	FTW04LA169
Date & Time:	June 25, 2004, 15:45 Local	**Registration:**	N49KG
Aircraft:	Piper PA-32R-300	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During cruise climb at 10,400 feet, the engine lost power and the pilot executed a forced landing to a field. According to the pilot, after the engine lost power, he attempted to restart the engine; however, the restart was unsuccessful. During the forced landing, the left wing and right wingtip sustained structural damage, the fuselage was wrinkled, and the firewall was buckled. An examination of the airframe revealed no anomalies. An examination of the engine's dual magneto revealed internal corrosion. No other anomalies were noted with the engine. The magneto was bench tested and found operational.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: loss of engine power due to a corroded magneto for undetermined reasons.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CLIMB - TO CRUISE

Findings
1. (C) IGNITION SYSTEM,MAGNETO - CORRODED

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
2. TERRAIN CONDITION - GROUND

Factual Information

On June 25, 2004, approximately 1545 central daylight time, a Piper PA-32R-300 single-engine airplane, N49KG, was substantially damaged during a forced landing following a loss of engine power while in cruise climb flight near Dalhart, Texas. The instrument-rated private pilot and three passengers were not injured. The airplane was registered to Oklahoma Liquefied Gas Co., Seminole, Oklahoma, and operated by the pilot. Visual meteorological conditions prevailed, and a instrument flight rules (IFR) flight plan was filed for the 14 Code of Federal Regulations Part 91 personal flight. The cross-country flight departed Raton, New Mexico, at 1335, with a planned destination of Seminole, Oklahoma.

The pilot reported that he departed on an IFR flight plan with full fuel from Raton Municipal Airport (RTN), near Raton, New Mexico. While in cruise flight at 10,000 feet msl, air traffic control requested the pilot descend to 9,000 feet or climb to 11,000 feet. The pilot elected to climb to 11,000 feet. At 10,400 feet during cruise climb, the engine lost power. He stated that he switched fuel tanks, advanced the throttle full forward, cycled the magnetos, and turned the boost pump on. The engine still would not start, so the pilot initiated emergency procedures and informed air traffic control that he had to make an emergency landing. The pilot executed a forced landing to a field approximately 20 miles northeast of Dalhart Municipal Airport.

According to a Federal Aviation Administration (FAA) Inspector, who responded to the accident site, the aircraft was facing in a southeast direction in a pasture. The left main gear was sheared off of the aircraft. The left wing and right wingtip exhibited structural damage. The fuselage was wrinkled, and the firewall was buckled. The fuel selector was found selected to the left tank. Both fuel tanks contained a bluish color of fuel. A fuel flow divider line was removed, and fuel drained from the line. Fuel streamed from the line when the fuel boost pump was activated. The inspector removed the dual magneto and the drive gear was intact.

A review of the maintenance records by the FAA inspector revealed the engine underwent its most recent 100-hour inspection on February 2, 2004, at a total time of 869.15 hours since major overhaul. No anomalies were noted during the inspection. At the time of the accident, the engine had accumulated approximately 917 hours since major overhaul.

On July 15, 2004, at the facilities of Air Transport, Phoenix, Arizona, a NTSB investigator examined the airframe and engine. According to the investigator, the propeller was manually rotated; compression was noted to all six cylinders and continuity to the engine accessories was confirmed. Examination of the top spark plugs revealed normal wear and coloration when compared to the Champion AV-27 Check-A-Plug chart. Electrical power was applied to the fuel pump and the pump could be heard operating. A dual magneto timing light was used to test the dual magneto. During the test, the propeller was manually rotated throughout its range several times, and the magneto impulse coupling could be heard clicking; however, the

magneto timing light did not indicate an opening of the points. The magneto was retained for further examination.

On March 31, 2005, at the facilities of Teledyne Continental Motors, Mobile, Alabama, the magneto was examined under NTSB supervision. The magneto was bench tested and the initial test exhibited a functional right side and a non-functional left side. The harness cover was removed for further examination. An examination of the magneto revealed corrosion in the unit. The harness cover was reversed and the magneto was bench tested with no anomalies. The harness cover was then removed and installed in its original position. The magneto was bench tested again with no anomalies noted during the test.

The reason for the loss of engine power was not determined.

Pilot Information

Certificate:	Private	**Age:**	54,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	October 22, 2001
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	March 1, 2004
Flight Time:	3000 hours (Total, all aircraft), 1000 hours (Total, this make and model), 3000 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N49KG
Model/Series:	PA-32R-300	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	32R-7780112
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	February 2, 2004 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	48 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3705 Hrs at time of accident	**Engine Manufacturer:**	Teledyne Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-540-K1G5D
Registered Owner:	Oklahoma Liquefied Gas Co.	**Rated Power:**	300 Horsepower
Operator:	Kenneth Green	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	DHT,3991 ft msl	**Distance from Accident Site:**	21 Nautical Miles
Observation Time:	15:53 Local	**Direction from Accident Site:**	170°
Lowest Cloud Condition:	Few / 7000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots / 15 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	110°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.15 inches Hg	**Temperature/Dew Point:**	22°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Raton, NM (RTN)	**Type of Flight Plan Filed:**	IFR
Destination:	Seminole , OK (H45)	**Type of Clearance:**	IFR
Departure Time:	13:35 Local	**Type of Airspace:**	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	36.022499,-102.547225

Administrative Information

Investigator In Charge (IIC):	Sauer, Aaron
Additional Participating Persons:	Arturo Castillo; Federal Aviation Administration; Lubbock, TX
Original Publish Date:	September 13, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=59509