



# Aviation Investigation Final Report

<b>Location:</b>	Santa Rosa, New Mexico	<b>Accident Number:</b>	DEN05CA020
<b>Date &amp; Time:</b>	November 5, 2004, 14:30 Local	<b>Registration:</b>	N2695W
<b>Aircraft:</b>	Mooney M20E	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

While preparing to depart, the pilot stated that the airplane's "battery seemed weak" and noted that the ammeter was not charging or discharging. The pilot had the battery charged for 1/2 hour and elected to fly to another airport to have a mechanic examine the airplane. While en route, he noticed "the engine was running rough." The pilot checked both magnetos and noted the left magneto selection resulted in a rough engine. The fuel pressure was also low; however, the pilot felt he would be okay until arriving at his destination. The pilot stated that both magnetos began to run rough. He was unable to maintain altitude and landed on a highway. While maneuvering the airplane to avoid oncoming traffic, the airplane struck a road sign causing substantial damage. Examination of the engine revealed that the P-lead had broken off of the right magneto. The P-lead had been rubbing against a bracket aft of the P-lead, prior to its failure. FAA inspector who examined the airplane stated that an annual inspection should have discovered this situation.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Inadequate maintenance inspection which failed to detect the separation of the right P-lead, resulting in a loss of engine power.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF  
Phase of Operation: CRUISE

Findings

1. (F) IGNITION SYSTEM,MAGNETO GROUNDING LEAD (P-LEAD) - SEPARATION
2. (F) MAINTENANCE,ANNUAL INSPECTION - INADEQUATE - OTHER MAINTENANCE PERSONNEL
3. (F) IGNITION SYSTEM,MAGNETO - FAILURE

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - ROLL

Findings

4. (F) OBJECT - SIGN

## Factual Information

On November 5, 2004, at approximately 1430 mountain standard time, a Mooney, N2695W, piloted by a commercial pilot, was substantially damaged when it impacted a road sign during a forced landing on Highway 54, north of Santa Rosa, New Mexico. Visual meteorological conditions prevailed at the time of the accident. The personal flight was being conducted under the provisions of Title 14 CFR Part 91 without a flight plan. The pilot was not injured. The cross-country flight originated at Miami, Oklahoma, and was en route to Tucumcari, New Mexico.

According to the accident report submitted by the pilot, he had purchased the accident airplane in August of 2003. The pilot requested an inspection to be conducted by Broken Arrow Aviation in Miami, Oklahoma, to ensure there was "no corrosion." The annual inspection was performed on October 3, 2004. The pilot left Miami on the date of the accident. During his flight, the pilot attempted to land at Amarillo, Texas; however, he was unable to establish radio contact with them and elected to continue on to Tucumcari, New Mexico. When the pilot arrived in Tucumcari, he was unable to extend his landing gear and had to "crank the gear down."

The airplane was refueled and while preparing to depart, the pilot stated that the airplane's "battery seemed weak" and noted that the ammeter was not charging or discharging. The pilot had the battery charged for 1/2 hour and elected to fly to Double Eagle Airport, Albuquerque, New Mexico, where he had arranged to have a mechanic examine the airplane.

The pilot departed Tucumcari and upon passing Santa Rosa, he noticed "the engine was running rough." The pilot checked both magnetos and noted the left magneto selection resulted in a rough engine. The fuel pressure was also low; however, the pilot felt he would be okay until arriving in Albuquerque. The pilot stated that both magnetos began to run rough and he attempted to return to Santa Rosa. He was unable to maintain altitude and landed on Highway 54. While maneuvering the airplane to avoid oncoming traffic, the airplane struck a road sign. The outboard 24 inches of the leading edge of the right wing was crushed aft. The four outer ribs of the right wing were fractured and bent.

According to the FAA inspector who traveled to the scene, examination of the engine revealed that the P-lead had broken off of the right magneto. The P-lead had been rubbing against a bracket aft of the P-lead, prior to its failure. The FAA inspector stated further that an annual inspection should have discovered this situation.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	77, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Glider	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	November 1, 2003
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	November 4, 2004
<b>Flight Time:</b>	10500 hours (Total, all aircraft), 50 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Mooney	<b>Registration:</b>	N2695W
<b>Model/Series:</b>	M20E	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	1010
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	October 1, 2004 Annual	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>	6 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-360-A1A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Dawn
<b>Observation Facility, Elevation:</b>	LVS,6877 ft msl	<b>Distance from Accident Site:</b>	50 Nautical Miles
<b>Observation Time:</b>	13:53 Local	<b>Direction from Accident Site:</b>	330°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	14 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	220°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.31 inches Hg	<b>Temperature/Dew Point:</b>	21°C / -17°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	MIAMI, OK (MIO )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	TUCUMCARI, NM (TCC )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Off Airport NONE	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	34.933612,-104.643333

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Bowling, David
<b>Additional Participating Persons:</b>	Aaron Robinson; FAA Flight Standards Field Office; Albuquerque, NM
<b>Original Publish Date:</b>	January 24, 2005
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=60533">https://data.ntsb.gov/Docket?ProjectID=60533</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).