



National Transportation Safety Board Aviation Accident Data Summary

Location:	Fort Pierce, FL	Accident Number:	MIA06LA058
Date & Time:	03/01/2006, 1240 EST	Registration:	N511G
Aircraft:	Mooney M20J	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot stated that about 8 to 10 minutes after takeoff, while still climbing, at an altitude of about 5,000 feet, the airplane lost engine power. The pilot further stated that the gauges showed about 1,000 rpm, and the manifold pressure remained at 25 inches. He turned around and returned to the airport and made attempts to restart the engine, all of which were unsuccessful. The pilot made a forced landing to a clearing short of the airport property, and the airplane incurred substantial damage. A postcrash examination of the airplane revealed that the dual magneto had detached from its mounted position, and was hanging by the ignition harness behind the engine. The magneto had not incurred any damage, and the magneto drive gear was laying in the accessory housing along with one hold-down plate. The retaining nuts, washers and lock washers were not recovered. When tested, the magneto operated on all eight distributor outputs. The impulse coupler was not damaged, and the distributor wiring was intact. There was engine continuity, proper valve action, and compression on all cylinders. Engine oil was present, and there was evidence of some oil having leaked at the back of the engine. No anomalies were noted with either the induction or fuel systems. The airplane had last received an annual inspection on August 2005 when an overhauled engine had been installed. It had accumulated 10 hours since the annual inspection.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Improper magneto installation by maintenance personnel, which resulted in the magneto detaching from the engine and subsequent loss of engine power.

Findings

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

Findings

1. (C) MAINTENANCE, INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL
2. IGNITION SYSTEM, MAGNETO - LOOSE
3. IGNITION SYSTEM, MAGNETO - SEPARATION

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

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

Findings

4. OBJECT - TREE(S)

Occurrence #4: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

Findings

5. TERRAIN CONDITION - BERM

Pilot Information

Certificate:	Private	Age:	65
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	1212 hours (Total, all aircraft), 465 hours (Total, this make and model), 1170 hours (Pilot In Command, all aircraft), 1 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	Registration:	N511G
Model/Series:	M20J	Engines:	1 Reciprocating
Operator:	Alton F. Robertson	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	IO-360-3B6D
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	FPR, 23 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	7 knots / , 240°
Temperature:	25° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	Fort Pierce, FL (FPR)	Destination:	

Airport Information

Airport:	St. Lucie County International (FPR)	Runway Surface Type:	Asphalt
Runway Used:	32	Runway Surface Condition:	Dry
Runway Length/Width:	4756 ft / 100 ft		

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	27.490278, -80.368333		

Administrative Information

Investigator In Charge (IIC):	John W Lovell	Adopted Date:	08/29/2006
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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