

Brief of Accident

Adopted 07/25/2007

LAX07LA114
File No. 21907 03/17/2007 St. George, UT Aircraft Reg No. N74503 Time (Local): 18:00 MDT

Make/Model: Mooney / M20B
Engine Make/Model: Lycoming / O-360-A1D
Aircraft Damage: Substantial
Number of Engines: 1
Operating Certificate(s): None
Type of Flight Operation: Personal
Reg. Flight Conducted Under: Part 91: General Aviation

	Fatal	Serious	Minor/None
Crew	0	0	1
Pass	0	0	1

Last Depart. Point: St. George, UT
Destination: Blackfoot, ID
Airport Proximity: Off Airport/Airstrip

Condition of Light: Day
Weather Info Src: Weather Observation Facility
Basic Weather: Visual Conditions
Lowest Ceiling: None
Visibility: 10.00 SM
Wind Dir/Speed: 260 / 014 Kts
Temperature (°C): 28
Precip/Obscuration: No Obscuration; No Precipitation

Pilot-in-Command Age: 50

Flight Time (Hours)

Certificate(s)/Rating(s)
Private; Single-engine Land

Total All Aircraft: 462
Last 90 Days: 68
Total Make/Model: 325
Total Instrument Time: 55

Instrument Ratings
Airplane

Ten minutes after takeoff the airplane's engine started running rough, and the airplane collided with terrain during a forced landing into an open area. The pilot leveled the airplane at 6,500 feet for cruise and the engine started running rough and backfiring. The engine would run sporadically rough then smooth out. The pilot executed emergency procedures, switched fuel tanks, and switched on the boost pump, but there was no change in the engine's rough-running condition. He decided to return to the airport, and configured the airplane for best glide. He setup for a 2-mile final to runway 34. The pilot determined that he was not going to make the runway, and force landed the airplane in a clear area by a river bed. An examination of the engine determined that the right magneto contained engine oil. The seal between the engine accessory drive and the magneto was hard, loose fitting, and covered with engine oil. Examination of the engine maintenance logbook revealed that the engine had been manufactured new on February 8, 1979, and installed on the airplane April 13, 1979. A 9-year gap where no maintenance was recorded on the engine occurred between October 1992 (engine total time of 1302.9 hours) and July 2002 (engine total time of 1322.39 hours). A 100-hour inspection was recorded as being completed on July 2, 2002. The most recent 100-hour inspection was performed on June 22, 2006, at 1,439.1 hours total time. There is no record of an engine or magneto overhaul. Lycoming Service Instruction No. 1009AS states that engines that do not accumulate the hourly period of time between overhauls specified (2,000 hours for the O-360-A1D) are recommended to be overhauled in the twelfth year. Teledyne Continental Ignition systems Service Bulletin, SB643B, for all TCM and Bendix magnetos states that the magnetos must be overhauled or replaced at the expiration of 5 years since the date of original manufacture or last overhaul, or 4 years since the date the magneto was placed in service, which ever occurs first with out regard to accumulated operating hours.

Brief of Accident (Continued)

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

Findings

1. (C) IGNITION SYSTEM,MAGNETO - CONTAMINATION,OTHER THAN WATER
 2. (F) MAINTENANCE,SERVICE BULLETIN/LETTER - NOT COMPLIED WITH - OWNER/PILOT MECHANIC
 3. (F) MAINTENANCE,OVERHAUL - NOT PERFORMED - OWNER/PILOT MECHANIC
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Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. TERRAIN CONDITION - ROUGH/UNEVEN

Findings Legend: (C) = Cause, (F) = Factor

The National Transportation Safety Board determines the probable cause(s) of this accident as follows.
Oil contamination of the right magneto. Factors were the airplane owner's failure to comply with manufacturer's service bulletins and overhaul porcedures.