



National Transportation Safety Board Aviation Accident Final Report

Location:	Miami, FL	Accident Number:	MIA07LA055
Date & Time:	03/02/2007, 1835 EST	Registration:	N682RA
Aircraft:	Cessna 150G	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor

Flight Conducted Under: Part 91: General Aviation - Instructional

Analysis

The certified flight instructor (CFI) stated that the engine began to run rough while performing airwork during an instructional flight. He elected to divert to a nearby airport where he performed an uneventful precautionary landing. While on the ground he performed an engine run-up and noticed a discrepancy with the left magneto. He operated the engine to a high rpm setting with the fuel/air ratio leaned in an effort to clear what he thought was lead fouled spark plugs, and reported that the left magneto drop was within limits (150 rpm). The CFI did not contact the operator to get assistance related to the precautionary landing, and elected to return to the original departure airport. During climbout, when the flight was 6-7 miles from the destination airport, the engine vibrations began and the rpm fluctuated 200 rpm, decreased to 2,000 rpm, then further decreased and remained at 300-400 rpm. He maneuvered the airplane towards a grass airstrip that he knew about, but because of the low light and visibility restriction, he flew past the airstrip. Due to the low altitude, he elected to land in a field perpendicular to the airstrip. While approaching the field, the airplane collided with powerlines then the ground, and nosed over. Postaccident examination of the engine revealed no evidence of a failure or malfunction of the power section. Examination of the fuel system revealed no evidence of preimpact failure or malfunction. Examination of the spark plugs were satisfactory but were wet with oil consistent with an inverted engine. The left magneto operated intermittently during postaccident bench testing. Disassembly of the left magneto revealed the point cam was worn, and the points exhibited erosion. Additionally, the coil tested out of limits; the condenser tested within specification.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot-in-command's (CFI) continued operation of the airplane with known deficiencies (rough running engine). A factor in the accident was no suitable terrain for a forced landing.

Findings

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

Findings

1. IGNITION SYSTEM,IGNITION COIL - FAILURE,TOTAL
 2. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - CONTINUED - PILOT IN COMMAND(CFI)
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Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

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

Findings

3. (F) TERRAIN CONDITION - NONE SUITABLE
 4. OBJECT - WIRE,TRANSMISSION
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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

5. TERRAIN CONDITION - GROUND

Factual Information

On March 2, 2007, about 1835 eastern standard time, a Cessna 150G, N682RA, registered to a private individual, operated by Dean International, Inc., collided with a powerline then the ground during a forced landing following loss of engine power, near Miami, Florida. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 Code of Federal Regulations Part 91 instructional, local flight from Kendall-Tamiami Executive Airport (KTMB), Miami, Florida. The airplane was substantially damaged and the certified flight instructor (CFI) and student pilot sustained minor injuries. The flight originated about 1730, from Kendall-Tamiami Executive Airport.

The CFI stated that after departure while performing maneuvers, the engine experienced "...some short lived vibrations" which he attributed to carbon fouling of the spark plugs. The flight proceeded to the Homestead General Airport where an uneventful precautionary landing was performed. While on the ground, he performed an engine run-up and noticed the left magneto was operating "rough" and the right magneto was "fine", but everything else was "...fine...." He then operated the engine to a high rpm with the fuel/air ratio leaned. He then checked the left magneto drop and reported it was within "tolerances of 150 rpm." The owner of the flight school later reported the CFI did not contact them to obtain assistance following the precautionary landing. The CFI further stated that at that time in his opinion, the aircraft was operating normally and he elected to depart to return to KTMB. During climbout with him at the controls, the engine was operating at full rpm and during a shallow climb out when the flight was approximately 6-7 miles from the destination airport, the engine vibrations began and the rpm fluctuated 200 rpm, decreased to 2,000 rpm, then further decreased and remained at 300-400 rpm. He maneuvered the airplane towards a grass airstrip that he knew about, but because of the low light and visibility restriction, he flew past the airstrip. Due to the low altitude, he elected to land in a field perpendicular to the airstrip. While approaching the field, the airplane collided with powerlines then the ground, and nosed over.

Examination of the engine following recovery was performed with FAA oversight. The examination revealed impact damage precluded operational testing of the engine. The fuel system was checked with no reported discrepancies. Examination of all spark plugs revealed all tested acceptable, with slight oil fouling caused by being inverted. Both magnetos were removed from the engine, and bench tested also with FAA oversight. The left magneto was noted to operate intermittently while on the test bench, and the right magneto was found to operate normally on the test bench. Disassembly of the left magneto revealed the point cam was worn, and the points exhibited erosion. Additionally, the coil tested out of limits. The condenser tested within specification.

Flight Instructor Information

Certificate:	Flight Instructor; Commercial	Age:	25, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	Yes
Medical Certification:	Class 1 Without Waivers/Limitations	Last FAA Medical Exam:	11/01/2006
Occupational Pilot:		Last Flight Review or Equivalent:	03/01/2006
Flight Time:	1100 hours (Total, all aircraft), 66 hours (Total, this make and model), 1000 hours (Pilot In Command, all aircraft), 128 hours (Last 90 days, all aircraft), 38 hours (Last 30 days, all aircraft)		

Student Pilot Information

Certificate:	None	Age:	27, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Without Waivers/Limitations	Last FAA Medical Exam:	01/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N682RA
Model/Series:	150G	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Utility	Serial Number:	15067007
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1550 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-200-A
Registered Owner:	David A. Clark	Rated Power:	100 hp
Operator:	Dean International, Inc.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	KTMB, 8 ft msl	Distance from Accident Site:	
Observation Time:	1853 EST	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.87 inches Hg	Temperature/Dew Point:	26 °C / 21 °C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Homestead, FL (X51)	Type of Flight Plan Filed:	None
Destination:	(KTMB)	Type of Clearance:	None
Departure Time:	1830 EST	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	25.621111, -80.485833

Administrative Information

Investigator In Charge (IIC):	Timothy W Monville	Report Date:	03/31/2008
Additional Participating Persons:	Peggy Barrett; FAA Flights Standards District Office; Miami, FL Carlos Montenegro; FAA Flight Standards District Office; Miami, FL		
Publish Date:			
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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