Aviation Investigation Final Report

Location:	Worthington, Kentucky	**Accident Number:**	MIA07LA155
Date & Time:	September 22, 2007, 14:55 Local	**Registration:**	N26442
Aircraft:	Grumman AA-5A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot replaced the accident airplane's vacuum pump on the day of the accident. During the airplane's flight to a nearby airport, the engine lost the majority of its oil. At the destination airport, the engine was examined for the leak. According to witness staements, the vacuum pump had been installed incorrectly. The discrepancy was corrected and the pilot added 4 quarts of oil to the engine and attempted to return to his home airport; however, the engine overheated during the initial phase of the flight and the pilot returned to the departing airport. He purchased more engine oil, servicing the engine to the full level. Although several people suggested that the pilot have the engine further examined, he declined saying that he had "Get-Home-Itis." Once again the pilot took off for his home airport, but the engine lost all power during the initial climb. The pilot ditched the airplane in a nearby river in a flat attitude, where it submerged. Examination of the wreckage revealed that the No. 4 engine piston had separated from the crankshaft. The pilot did not hold an airframe and powerplant certificate.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The separation of the engine's No. 4 piston from the crankshaft for unidentified reasons and the pilot's continued operation with known equipment deficiencies.

Findings

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

Findings
1. LUBRICATING SYSTEM - LEAK
2. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - CONTINUED - PILOT IN COMMAND
3. POWERPLANT - OVERTEMPERATURE
4. POWERPLANT - SEIZED

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

Factual Information

On September 22, 2007, about 1455 eastern daylight time, a Grumman AA-5A, N26442, registered to and operated by an individual, as a 14 Code of Federal Regulations (CFR) Part 91 personal flight, ditched in the Ohio River near Worthington, Kentucky. Visual meteorological conditions prevailed and no flight plan was filed. The pilot was killed and the airplane incurred substantial damage. The flight departed from the Ashland Regional Airport (DWU), Ashland, Kentucky, about 1453.

Witnesses stated that the pilot arrived at DWU and noticed an engine oil leak, which almost left the engine without oil. After an inspection of the engine, it was discovered that the vacuum pump, which the pilot had installed earlier that day, was installed incorrectly causing the oil leak. He corrected the discrepancy with the pump and added 4 quarts of oil to the engine; 3 quarts less for the required full level. He then took off to fly back to Grayson County Airport (M20), Leitchfield, Kentucky; however, the airplane returned to DWU shortly after departure and parked on the ramp. At that time, the pilot stated to the witnesses that the engine got hot again. The pilot declined to have the engine inspected and stated he had "Get-Home-Itis." He purchased 4 additional quarts of engine oil, which he added to the airplane's engine. The pilot again departed for M20.

On departure, the engine lost total power. The pilot announced the emergency over the common traffic advisory frequency. A witness, fishing in the river north of the airport, saw the airplane ditch in the river in a flat attitude. The airplane floated for a moment, then nosed over and went completely underwater. The pilot was unable to exit the airplane after it was submerged.

Examination of the wreckage by a Federal Aviation Administration inspector revealed that the No. 4 engine piston had separated from the crankshaft.

The pilot, age 80, held a commercial pilot certificate with ratings for airplane single-engine land, airplane multiengine land, and instrument airplane. He was issued a third-class medical certificate on March 23, 2006, with limitations; must wear corrective lenses for near and distant vision. He had documented 3,560 total hours at that time. He held a repairman experimental aircraft builder certificate with limitations of inspection certificate for experimental aircraft make William G Stevens model Lancair 360, serial number 1109P.

The pilot's flight logbook and the accident airplane's maintenance records were not located.

Pilot Information

Certificate:	Commercial	**Age:**	80,Male
Airplane Rating(s):	Single-engine land; Multi-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:**	Yes
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	March 23, 2006
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	3560 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Grumman	**Registration:**	N26442
Model/Series:	AA-5A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	AA5A-0592
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	2200 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	1522 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	0-320
Registered Owner:	William G. Steven	**Rated Power:**	150 Horsepower
Operator:	William G. Steven	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	HTS,828 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	14:51 Local	**Direction from Accident Site:**	135°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.04 inches Hg	**Temperature/Dew Point:**	21°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Worthington, KY (DWU)	**Type of Flight Plan Filed:**	None
Destination:	Leitchfield, KY (M20)	**Type of Clearance:**	None
Departure Time:	14:53 Local	**Type of Airspace:**	

Airport Information

Airport:	Ashland Regional DWU	**Runway Surface Type:**	
Airport Elevation:	760 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	38.554443,-82.738052

Administrative Information

Investigator In Charge (IIC):	Obregon, Jose
Additional Participating Persons:	Joshua Prichard; FSDO/FAA; Louisville, KY
Original Publish Date:	December 28, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=66739