



# Aviation Investigation Factual Report

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<b>Location:</b>	Lakeland, Florida	<b>Accident Number:</b>	MIA07LA072
<b>Date &amp; Time:</b>	April 7, 2007, 13:03 Local	<b>Registration:</b>	N8FA
<b>Aircraft:</b>	American Aviation Corp. (AAC) AA-1A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Factual Information

On April 7, 2007, about 1303 eastern daylight time, an American Aviation AA-1A, N8FA, registered to and operated by a private individual, collided with a tree then the ground during a forced landing near Lakeland, Florida. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 Code of Federal Regulations Part 91 personal, local flight from South Lakeland Airport (X49), Lakeland, Florida. The airplane was substantially damaged and the private-rated pilot, the sole occupant, sustained minor injuries. The flight originated about 1200, from South Lakeland Airport.

The pilot stated that the oil quantity was between 5.5 and 5.75 quarts when he started the flight. After takeoff the flight proceeded to a nearby airport where he performed a practice GPS approach. While returning to the departure airport, the engine decreased 100 rpm. He checked the "...fuel pump, [alternate] air, [magnetos], fuel tanks & primer, continued rpm drop." The engine gauges were in the green arc, but the cylinder head temperature began increasing. He notified Lakeland Linder Regional Airport (KLAL) Air Traffic Control Tower (ATCT), and proceeded to make an off airport forced landing. While descending for the forced landing, the airplane impacted a tree then the ground. He was wearing the installed seatbelt but was not wearing the installed shoulder harness. He sustained a cut on his chin which went to the bone; it required 40 sutures.

Postaccident examination of the airframe and engine by several FAA airworthiness inspectors revealed no oil on the exterior surface of the fuselage bottom skin, or out the crankcase breather hose. No oil was noted in the engine compartment, or on the firewall. Only 37 ounces of oil were found remaining in the engine; the oil was thick and had ferrous particles in it. Metal and carbon was noted in the oil screen, which was stuck in the housing. Resistance was noted during attempts to rotate the engine by hand. The No. 3 cylinder was removed and the connecting rod was noted to be "very tight" when attempting to move it. The same cylinder connecting rod bushing was loose in the rod. All cylinder connecting rods and compression rings exhibited evidence of thermal distress. The No. 4 connecting rod bearing exhibited metal transfer, and the piston pin bushing was loose in the rod. The No. 4 cylinder piston "...started to burn on the back side, from the top down thru the piston pin plug." The spark plugs of cylinder Nos. 1, 2, and 3 appeared "OK" but were dark in color, and the spark plugs for No. 4 cylinder exhibited aluminum transfer. All spark plugs appeared to be "low time with correct gap." The internal damage to the engine was consistent with inadequate oil supply.

Review of the maintenance records revealed the engine oil was changed on March 15, 2006, and the engine was last inspected in accordance with a 100-Hour inspection on March 29, 2006; the airplane had not been operated between the oil change and the 100-Hour inspection. The oil change and 100-Hour inspection were performed by the pilot, who is also an airframe and powerplant mechanic; the airplane had accumulated 2.7 hours since then.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	68, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	November 1, 2004
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	April 1, 2005
<b>Flight Time:</b>	900 hours (Total, all aircraft), 200 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	American Aviation Corp. (AAC)	<b>Registration:</b>	N8FA
<b>Model/Series:</b>	AA-1A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	AA1A-0335
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	March 1, 2006 Annual	<b>Certified Max Gross Wt.:</b>	1500 lbs
<b>Time Since Last Inspection:</b>	2.7 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3478.2 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-235-C2C
<b>Registered Owner:</b>	Robert J. Perigo	<b>Rated Power:</b>	108 Horsepower
<b>Operator:</b>		<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>	Day
<b>Observation Facility, Elevation:</b>	KLAL,142 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	12:50 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few / 2500 ft AGL	<b>Visibility</b>	15 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	300°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.05 inches Hg	<b>Temperature/Dew Point:</b>	16°C / 2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Lakeland, FL (X49 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(X49 )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:00 Local	<b>Type of Airspace:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<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 Minor	<b>Latitude, Longitude:</b>	27.948888,-81.940277

## Administrative Information

**Investigator In Charge (IIC):** Monville, Timothy

**Additional Participating Persons:** Ron Morgan; FAA Flight Standards District Office; Orlando, FL  
Frank Webner; FAA Flight Standards District Office; Orlando, FL

**Report Date:** April 15, 2008

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=65560>

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](#).