



# National Transportation Safety Board Aviation Accident Factual Report

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<b>Location:</b>	MARIETTA, GA	<b>Accident Number:</b>	MIA98LA037
<b>Date &amp; Time:</b>	12/01/1997, 1105 EST	<b>Registration:</b>	N14493
<b>Aircraft:</b>	Cessna FR-172J	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Ferry		

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On December 1, 1997, about 1105 eastern standard time, a Cessna FR-172J, N14493, registered to The Flight School of Gwinnett, Inc., operating as a 14 CFR Part 91 ferry flight, experienced a loss of engine power during cruise flight about 10 miles southwest of Dobbins Air Reserve Base, Georgia. Visual meteorological conditions prevailed and an instrument flight rules flight plan was filed. The aircraft was destroyed, and the commercial pilot sustained minor injuries. The flight originated from Gwinnett County/Briscoe Field, Lawrenceville, Georgia, about 20 minutes before the accident.

The pilot stated while in cruise flight at an altitude of 6,000 feet, under the control of Atlanta Approach Control, the engine tachometer suddenly increased about 100 rpm and as he adjusted power, he experienced "hissing" and "banging" from the engine. Simultaneously, he experienced gradual rpm decay, cowling vibration, oil on the windscreen, and white smoke from under the cowl and in the cockpit. Upon notification of the problem, ATC gave the pilot an immediate vector toward Dobbins ARB. The pilot realized he could not make the airfield, and made a forced landing to a graded, terraced construction site, and came to rest in a wooded area.

NTSB supervised teardown inspection of the engine revealed a rupture in the core of the oil-cooler, indication of no oil from dipstick, heavily scored and burned connecting-rod-to-crankshaft bearing surfaces and scored and burned crankshaft journals. The No. 2 connecting rod cap had separated and the rod was protruding through a hole in the upper crankcase. The No. 1 connecting rod was broken at the crankshaft journal. Parts of the broken No. 1 connecting rod end, the No. 2 rod cap, a pushrod tappet assembly, and other metal fragments were found in the bottom of the crankcase.

FAA supervised engine manufacturer's inspection revealed the oil-cooler leak as "severe", and "...would empty the engine oil supply in a short period of time." No previous repair to the oil-cooler was visible, and no reason for the core failure could be determined.

From the engine logbooks, it was determined that on September 14, 1988, the oil-cooler was installed as a reconditioned component. At the time of the accident, using tachometer readings, the oil-cooler had accumulated about 422 hours.

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	27, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	04/02/1997
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	950 hours (Total, all aircraft), 5 hours (Total, this make and model), 876 hours (Pilot In Command, all aircraft), 121 hours (Last 90 days, all aircraft), 44 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N14493
<b>Model/Series:</b>	FR-172J FR-172J	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	0444
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	11/29/1997, 100 Hour	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>	1 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2904 Hours	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	IO-360-H
<b>Registered Owner:</b>	WILLIAM B. ALLISON	<b>Rated Power:</b>	210 hp
<b>Operator:</b>	THE FLIGHT SCHOOL OF GWINNETT	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MGE, 1068 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	1107 EST	Direction from Accident Site:	60°
Lowest Cloud Condition:	Thin Broken / 1800 ft agl	Visibility	15 Miles
Lowest Ceiling:	Broken / 1800 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	14 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	12° C / 9° C
Precipitation and Obscuration:			
Departure Point:	LAWRENCEVILLE, GA (LZU)	Type of Flight Plan Filed:	IFR
Destination:	WETUMPKA, AL (08A)	Type of Clearance:	IFR
Departure Time:	1030 EST	Type of Airspace:	Class B

## Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	ALAN C STONE
Additional Participating Persons:	MARK MEOLA; COLLEGE PARK, GA DALE CARTER; MARIETTA, GA HOWARD J BURK; MOBILE, AL
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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .