



# Aviation Investigation Factual Report

<b>Location:</b>	Groton, Connecticut	<b>Accident Number:</b>	ERA09LA064
<b>Date &amp; Time:</b>	November 19, 2008, 18:33 Local	<b>Registration:</b>	N2337F
<b>Aircraft:</b>	Cessna 172S	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Controlled flight into terr/obj (CFIT)	<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Factual Information

On November 19, 2008, at 1833 eastern standard time, a Cessna 172S, N2337F, was substantially damaged when it impacted trees during a night traffic pattern approach to Groton-New London Airport (GON), Groton, Connecticut. The certificated flight instructor and the certificated student pilot incurred minor injuries. Visual meteorological conditions prevailed, and no flight plan had been filed for the flight, which originated at Westchester County Airport (HPN), White Plains, New York. The instructional flight was conducted under 14 Code of Federal Regulations (CFR) Part 91.

The student pilot, sitting in the left seat, reported that he was practicing full stop landings at Groton. About 1825, he took off from runway 33 for his third circuit, and on final approach, he "suddenly lost sight of the runway and went into the trees."

The flight instructor stated that while on the final approach to runway 33, he looked at the airspeed indicator, and when he looked back up, all he saw were trees. The flight instructor further noted that it appeared that the airplane was "lined up properly and centered on the runway."

Runway 33 was 4,000 feet long and 100 feet wide. Runway elevation was 6 feet above mean sea level (msl). The runway threshold was displaced 205 feet due to trees. A 3.5-degree Precision Approach Path Indicator (PAPI) normally provided visual glideslope information.

According to a Federal Aviation Administration (FAA) inspector, a Notice to Airmen (NOTAM) was in effect at the time of the accident, indicating that the PAPI was out of service. A previous flight check revealed that tree heights obscured the PAPI on final approach, and although the trees had subsequently been cut to alleviate the problem, they had not been cut sufficiently to eliminate the need for the NOTAM.

An examination of the wreckage site by the inspector revealed that the airplane impacted 30- to 40-foot trees, about 1/4 mile from, and "generally aligned with the runway." The trees were located in a hilly, heavily wooded area at an elevation of about 200 feet msl. Tree damage extended for about 100 feet and was aligned toward runway 33.

The inspector also noted that the airplane's engine was separated from the fuselage, which was "severely crushed and twisted." The tail section was also damaged, with the rudder and elevator twisted. The left door was missing from the fuselage and the cabin compartment was "somewhat intact."

A Survival Factors Group documented the three-point inflatable (airbag) restraint system.

According to the Group Factual Report, the student pilot, seated in the left seat, was 6 feet, 9 inches tall and weighed 290 pounds. The flight instructor, seated in the right, was 6 feet, 4 inches tall and weighed 185 pounds.

An examination of the cockpit revealed that the trim control switch plate on the left side control column was fractured, exposing trim electrical wires. The throttle lever was bent inboard towards the mixture control and the adjacent mixture lever was bent inboard towards the throttle lever. The flap lever on the right side of the cockpit was bent downward and the parking brake bracket was fractured and bent rearward. The fuse panel on the right lower side of the instrument panel was compressed forward and fractured at the outboard and center console. The outboard side of the instrument panel was compressed 4 inches forward toward the firewall and the inboard side next to the center console was compressed 3 inches forward.

The left pilot seat was locked into the 11th pin hole back from full forward while the right seat was locked into the 9th pin back from full forward. The seats were removed and no deformation was noted.

The three-point AmSafe restraints were intact and the webbing showed no evidence of trauma. The webbing on each shoulder restraint exhibited a thin area of stress, consistent with the seatbelts having been worn at the time of the crash.

Both airbags were deployed. The airbag stitching and seams were intact, and no damage was observed. The latch sensors (buckle switches) for both airbags were intact and the vent holes for both airbags were round and intact. On the left airbag, there were small black scuff marks on the pilot's side approximately 14 inches from the top of the bag to 19 inches from the top of the bag and 3 inches from the inboard edge of the bag. On the right airbag, there were black scuff marks on the instrument panel side of the bag at the base extending approximately 5.5 inches from the bottom.

Both pilots had been soaked with fuel during the accident, but neither pilot incurred any broken bones or other serious injuries.

Neither pilot reported any preaccident mechanical anomalies with the airplane. Weather, reported at the airport at 1856, included winds from 330 degrees true at 8 knots, a few clouds at 12,000 feet, and visibility 10 statute miles.

According to U.S. Naval Observatory data, sunset occurred at 1625, and the end of civil twilight occurred at 1655.

## Flight instructor Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	72,Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2	<b>Last FAA Medical Exam:</b>	June 17, 2008
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	September 17, 2008
<b>Flight Time:</b>	4200 hours (Total, all aircraft), 2000 hours (Total, this make and model), 2900 hours (Pilot In Command, all aircraft)		

## Student pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	54,Male
<b>Airplane Rating(s):</b>	None	<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>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3	<b>Last FAA Medical Exam:</b>	June 30, 2008
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N2337F
<b>Model/Series:</b>	172S	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	172S10537
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	November 18, 2008 AAIP	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	694 Hrs as of last inspection	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-360-L2A
<b>Registered Owner:</b>	DIMITRI AVIATION LLC	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	Panorama Flight Services	<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>	Night
<b>Observation Facility, Elevation:</b>	GON, 5 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	18:56 Local	<b>Direction from Accident Site:</b>	330°
<b>Lowest Cloud Condition:</b>	Few / 12000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	330°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.95 inches Hg	<b>Temperature/Dew Point:</b>	-4°C / -12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	White Plains, NY (HPN )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Groton, CT (GON )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	19:45 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Groton GON	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	9 ft msl	<b>Runway Surface Condition:</b>	Unknown
<b>Runway Used:</b>	33	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	4000 ft / 100 ft	<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 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>	2 Minor	<b>Latitude, Longitude:</b>	41.321109,-72.036109(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Cox, Paul
<b>Additional Participating Persons:</b>	Marilyn Pearson; FAA/FSDO; Windsor Locks, CT Henry Soderlund; Cessna Aircraft Company; Wichita, KS Tom Barth; AmSafe Aviation; Phoenix, AZ
<b>Report Date:</b>	February 11, 2010
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=69474">https://data.nts.gov/Docket?ProjectID=69474</a>

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