Aviation Investigation Final Report

Location:	FULLERTON, California	**Accident Number:**	LAX87LA046
Date & Time:	November 21, 1986, 15:33 Local	**Registration:**	N4520D
Aircraft:	GULFSTREAM AA-5B	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

A GULFSTREAM AMERICAN AA-5B LOST POWER AND COLLIDED WITH A TREE SHORT OF THE RUNWAY WHILE ON AN IFR TRAINING FLIGHT. THE FLIGHT INSTRUCTOR HAD JUST SWITCHED FUEL TANKS WHEN THE ENGINE BEGAN TO RUN ROUGH AND THEN QUIT RUNNING. HE WAS UNABLE TO RESTART THE ENGINE. THE PRIVATE PILOT UNDERGOING INSTRUMENT TRAINING CONDUCTED THE PREFLIGHT INSPECTION WITHOUT THE AID OF THE AIRCRAFT OPERATORS MANUAL. HE DID NOT CHECK THE LEFT AND RIGHT WING FUEL SUMP DRAINS. AIRCRAFT FUEL SAMPLES WERE TAKEN FROM THE RIGHT AND LEFT WING TANK FUEL SUMPS AND FUEL LINE FROM THE FUEL PUMP TO THE CARBURETOR. LABRATORY TEST RESULTS INDICATED THE FUEL SAMPLE TAKEN FROM THE FUEL LINE FROM THE FUEL PUMP TO THE CARBURETOR CONTAINED 12.6 % WATER BY VOLUME. THE RIGHT FUEL SUMP ALSO CONTAINED TRACES OF WATER. EXAMINATION OF THE REFUELING TRUCK SAMPLE DID NOT REVEAL ANY IMPURITIES.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
1. (C) PREFLIGHT PLANNING/PREPARATION - POOR - FLIGHT INSTRUCTOR(ON GROUND)
2. (F) FUEL SYSTEM,STRAINER - CONTAMINATION
3. (C) AIRCRAFT PREFLIGHT - IMPROPER - DUAL STUDENT
4. (F) FUEL SYSTEM,TANK - WATER
5. (C) FLIGHT MANUALS - NOT USED - FLIGHT INSTRUCTOR(ON GROUND)
6. (F) FUEL SYSTEM,STRAINER - WATER
7. (C) FLIGHT MANUALS - NOT USED - DUAL STUDENT
8. (C) SUPERVISION - INADEQUATE - FLIGHT INSTRUCTOR(ON GROUND)

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
9. OBJECT - TREE(S)

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	23,U
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	October 23, 1986
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	1398 hours (Total, all aircraft), 4 hours (Total, this make and model), 1258 hours (Pilot In Command, all aircraft), 278 hours (Last 90 days, all aircraft), 76 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GULFSTREAM	**Registration:**	N4520D
Model/Series:	AA-5B AA-5B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	AA5B-1061
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	October 1, 1986 Annual	**Certified Max Gross Wt.:**	1360 lbs
Time Since Last Inspection:	15 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1693 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	O-360-A4K
Registered Owner:	WINGS EXPRESS AVIATION, INC.	**Rated Power:**	180 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	FUL ,96 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	15:33 Local	**Direction from Accident Site:**	60°
Lowest Cloud Condition:	Clear	**Visibility**	4 miles
Lowest Ceiling:	Overcast / 3800 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	210°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LONG BEACH , CA (LGB)	**Type of Flight Plan Filed:**	IFR
Destination:	FULLERTON , CA (FUL)	**Type of Clearance:**	IFR
Departure Time:	14:40 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	FULLERTON FUL	**Runway Surface Type:**	Asphalt
Airport Elevation:	96 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	24	**IFR Approach:**	Circling;VOR
Runway Length/Width:	3121 ft / 75 ft	**VFR Approach/Landing:**	Forced landing;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Wilcox, Thomas
Additional Participating Persons:	LINDA E SILVERTOOTH; LONG BEACH , CA
Original Publish Date:	March 10, 1988
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=25475