Aviation Investigation Final Report

Location:	EL CAJON, California	**Accident Number:**	LAX98FA045
Date & Time:	November 25, 1997, 11:32 Local	**Registration:**	N757FT
Aircraft:	Cessna 152	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

A Cessna 152 (C-152)and a Cessna 172 (C-172) collided in mid air while in a closed traffic pattern at Gillepsie Field. A student and flight instructor were aboard the C-152, and a student pilot was the sole occupant of the C-172. The C-172 was cleared to takeoff with instructions to follow the C-152. A third aircraft was also in the traffic pattern at the time. After takeoff, the air traffic controller looked away to check on other traffic but when he looked back, neither aircraft was visible. He made several unsuccessful calls to both the pilots. The student in the C-152 reported that he had turned crosswind as he came abeam of the third aircraft. When he reached pattern altitude, he began his downwind turn. He was trimming the aircraft when he saw the C-172 approaching his position. He banked hard to avoid the aircraft, but felt an impact. The instructor attempted to take the controls and, with both pilots on the controls, they executed an emergency forced landing on a surface street. The aircraft elevator control lost effectiveness and the aircraft landed hard. They did not report any other mechanical abnormalities before or after the collision. Witnesses reported that both aircraft were on a converging flight path. The student pilot in the C-172 was making his second solo flight but had not advised the controller. The controller did not specify that he was number 3 in the pattern. Haze was reported in all quadrants. The Brite radar repeater in the tower cab is not capable of monitoring traffic on the south side of the airport due to terrain height.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot of the other aircraft's failure to recognize and follow the aircraft on the downwind as instructed. Factors influencing this accident were the pilot's failure to see and avoid the other aircraft; the flight instructor's inadequate supervision of the flight; the pilot of the other aircraft's failure to verify the controller's instructions; the altitude limitation of the Brite radar

repeater in the tower cab that prevented its use in traffic pattern separation; and the prevailing haze which restricted visibility.

Findings

Occurrence #1: MIDAIR COLLISION
Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings
1. LIGHT CONDITION - DAYLIGHT
2. (F) WEATHER CONDITION - HAZE/SMOKE
3. RADAR ASSISTANCE TO VFR AIRCRAFT - NOT AVAILABLE - FAA(OTHER/ORGANIZATION)
4. IDENTIFICATION OF AIRCRAFT VISUALLY - NOT MAINTAINED - ATC PERSONNEL(LCL/GND/CLNC)
5. (C) VISUAL LOOKOUT - INADEQUATE - PILOT OF OTHER AIRCRAFT
6. (F) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)
7. (F) VISUAL LOOKOUT - INADEQUATE - DUAL STUDENT

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

Occurrence #3: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
8. FLT CONTROL SYST,ELEVATOR CONTROL - FAILURE,PARTIAL

Occurrence #4: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING - ROLL

Findings
9. OBJECT - OTHER
10. OBJECT - POLE
11. OBJECT - FENCE

Factual Information

HISTORY OF FLIGHT

On November 25, 1997, at 1132 hours Pacific standard time, a Cessna 152, N757FT, collided in-flight with a Cessna 172M, N9518H, while in the traffic pattern at El Cajon, California. Both aircraft were destroyed. The flight instructor and student pilot in N757FT received minor injuries; however, the solo student pilot in N9518H received fatal injuries. The Cessna 152 was being operated as an instructional flight by the Golden State Flying Club. Anglo-American Aviation, Inc was also operating the Cessna 172M as an instructional flight. Both flights originated from Gillespie Field, El Cajon, on the morning of the accident. Visual meteorological conditions prevailed at the time and no flight plans were filed.

The ATCT controller at Gillespie Field reported that he had cleared the pilot of N9518H to takeoff. The clearance was for closed traffic on runway 27L with instructions to follow the Cessna ahead in the pattern (N757FT), which was already upwind on a touch-and-go landing. The student pilot in N9518H acknowledged the clearance and initiated his takeoff. At this time, a third aircraft, which was ahead of N757FT, was also in the traffic pattern. After N9518H took off, the controller looked away to check on the position of traffic approaching from the east. When he looked back, however, neither N757FT nor N9518H were visible. He made several calls to both the pilots of aircraft but neither responded.

The student pilot in N757FT reported that he made a crosswind turn as he came abeam of his downwind traffic. He had climbed to 1,200 feet msl when he began a turn to downwind. He had started trimming the aircraft for level flight when he saw another aircraft, about 20 yards away, headed toward him from his 10 o'clock position. He banked hard to the right to avoid the aircraft, but subsequently felt an impact.

The instructor attempted to take the controls and, with both pilots on the controls, they executed an emergency forced landing on a surface street. The aircraft elevator control lost effectiveness and the aircraft landed hard. They did not report any other mechanical abnormalities before or after the collision.

The tail section of the solo student's aircraft separated in the air. The aircraft struck the roof of a private home while the tail section came to rest in the driveway of another home.

Witnesses reported that the "white" plane (N9158H) was southbound, while the "yellow" (N757FT) plane was in a turn from south to east. About the time the yellow plane had turned 90 degrees, their flight paths converged. It appeared that both aircraft made abrupt maneuvers before the collision. After contact, both aircraft entered steep descents and disappeared from view.

PERSONNEL INFORMATION

The flight instructor had been employed by the operator to provide dual instruction in the same make and model as the accident aircraft. She had logged 154 hours in the preceding 90 days. She had received her airplane single engine instructor rating on December 5, 1996. She was employed by Golden State Flying as a flight instructor, and was giving dual instruction at the time of the accident.

Her student, who was on the controls at the time, was reviewing the flight maneuvers in preparation for his private pilot check ride. He was also endorsed for solo flight and was current in the aircraft.

The solo student pilot was on his second solo flight. He had previously logged .3 hours during his first solo on November 20, 1997. His last dual flight was on the day of the accident. This solo flight was scheduled, but was not supervised.

The student pilot's license had been endorsed for solo in a Cessna 172 by his instructor, but there was no corresponding endorsement in his pilot logbook. His logbook reflected required pre-solo dual flight instruction. His instructor reported that he was an above average student and had had no particular problems thus far in his flying program.

AIRCRAFT INFORMATION

FAA airworthiness inspectors conducted a review of the aircraft and engine logbooks from both aircraft. The logbook entries indicated that both aircraft had been inspected and maintained in accordance with applicable Federal Air Regulations (FARs).

METEOROLOGICAL INFORMATION

The current weather information being broadcast as "information Sierra" on the ATIS frequency was: winds calm; visibility 25 statute miles; haze all quadrants; temperature 23 degrees centigrade; and altimeter setting 30.01 inches of mercury. This was essentially consistent with the conditions reported in the hourly surface weather observation.

COMMUNICATIONS

The pilots in both aircraft were in two-way radio contact with the Gillespie ATCT at the time of the accident. The controller advised the pilot of N9518H to "follow the Cessna ahead of you in the pattern" at the time he was cleared to takeoff. The pilot acknowledged the transmission. The controller did not specify that he was number 3 in the pattern. The solo student did not advise the controller that this was his second solo flight.

AIRPORT INFORMATION

The antennae for the Brite radar repeater in the tower cab at Gillespie Field is located at Miramar Naval Air Station and, due to terrain height, is not capable of monitoring traffic on the south side of the airport. It does become available to monitor traffic in that area when the aircraft are at least 1,600 to 2,000 feet msl. The pattern altitude for runway 27L is 1,200 feet msl.

WRECKAGE AND IMPACT INFORMATION

The wreckage of N757FT was located at 32 degrees 48.8 minutes north longitude and 117 degrees 00.1 minutes west latitude, approximately 1,600 feet south of Valley Lake. The bearing from Gillespie Field was 229 degrees and it was located 1.8 statute miles from the center of the airport.

The aircraft made a forced landing, traveling diagonally across the roadway in a southwesterly direction. The aircraft crossed the center divider, two lanes of opposing traffic, and struck a frangible based aluminum light pole with its right wing. It then yawed right, crossed the curb, and went partially through a 6-foot chain link fence. The nose of the aircraft came to rest extending across a cement lined drainage ditch.

The right main wheel was separated from the strut. The fuselage was partially separated at the control panel and was also buckled downward aft of the luggage area.

A further examination of N757FT revealed trailing edge damage to the left wing and a series of slashes in the leading edge of the left horizontal stabilizer. In the area of the slashes, the metal was extruded from the upper skin surface toward the bottom side of the stabilizer. The distance between the slashes was 5.5 inches, 5.5 inches, 5 inches, and 2.5 inches, measured inboard along the leading edge.

The main wreckage of N9518H was located at 32 degrees 49.1 minutes north longitude and 116 degrees 59.7 minutes west latitude. The bearing from Gillespie Field was 233 degrees and was located 1.4 statute miles from the center of the airport.

The aircraft struck the roof of a home, coming to rest near the rear of the house next to the kitchen. The fuselage separated at the firewall with the forward portion coming to rest on the dining room floor. The nose gear, engine cowling, and remains of the instrument panel were found embedded in the roof. The cabin, forward section of the empennage, wings, and main landing gear came to rest in an inverted position on the rear patio.

Fuel from the aircraft was reported by El Cajon firefighters to have pooled on the patio and in the kitchen of the house.

A further examination of N9518H revealed that the empennage had separated from the aircraft before impact. An imprint with the letters "NE" visible was found on the right side of the

empennage of N9518H. The tire on the left main gear of N757FT had the words "AERO TRAINER" on the sidewall. The separated wheel fairing from the left main gear of N757FT was found in the front yard of the house next door.

The separated empennage from N9518H was located at 32 degrees 49.2 minutes north longitude and 116 degrees 59.7 minutes west latitude, and came to rest on the front driveway of a home. The elevator and rudder cables were broken and exhibited fraying. Control continuity was established between the remaining cables and control surfaces.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted on November 26, 1997, by the San Diego County Coroner's Office, with specimens retained for toxicological examination. The toxicological test results were negative for alcohol and all screened drug substances.

SURVIVAL ASPECTS

The flight instructor in N757FT reported that, after the aircraft came to rest, fuel began leaking from the right wing into the cockpit and onto her clothing. There was no fire extinguisher available and neither occupant was wearing fire resistant clothing.

The seat belts and shoulder harness retained both occupants throughout the accident sequence. Both seats remained attached to their respective tracks. The right forward doorpost, however, was crushed downward, partially restricting the movement of the right door and allowing fuel to drain into the cabin from the right wing.

The student pilot was able to open his cabin door and egress without assistance or further difficulty. The flight instructor egressed through the broken windscreen, also without assistance.

Police investigators, who arrived first on the scene, reported that both occupants appeared shaken and stunned.

ADDITIONAL INFORMATION

The wreckage of N9518H was released to a representative of the registered owner on March 10, 1998. The wreckage of N757FT was released to a representative of the registered owner on July 9, 1998.

The ELT in N9518H separated from the aircraft in-flight and was destroyed. It was later located, broken open, on the roof of another home.

According to the student pilot, the ELT in N757FT was activated in the air immediately following the collision. After exiting the aircraft, the student pilot moved the ELT switch from

its center position to the "on" position. It was later switched off by an FAA inspector.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	19,Female
Airplane Rating(s):	Single-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 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	May 22, 1997
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	898 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N757FT
Model/Series:	152 152	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	15279711
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	September 25, 1997 Annual	**Certified Max Gross Wt.:**	1670 lbs
Time Since Last Inspection:	94 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5928 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-235-L2C
Registered Owner:	VOLAR CORPORATION	**Rated Power:**	115 Horsepower
Operator:	JEAN RUNNER	**Operating Certificate(s) Held:**	None
Operator Does Business As:	GOLDEN STATE FLYING CLUB	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SEE ,387 ft msl	**Distance from Accident Site:**	
Observation Time:	11:50 Local	**Direction from Accident Site:**	225°
Lowest Cloud Condition:	Unknown	**Visibility**	25 miles
Lowest Ceiling:	Broken / 25000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/ None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	25°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	(SEE)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	VFR
Departure Time:	11:29 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	GILLESPIE FIELD SEE	**Runway Surface Type:**	Asphalt
Airport Elevation:	387 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	27L	**IFR Approach:**	
Runway Length/Width:	5341 ft / 100 ft	**VFR Approach/Landing:**	Touch and go;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 Minor	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Minor	**Latitude, Longitude:**	32.790832,-116.959182(est)

Administrative Information

Investigator In Charge (IIC):	CRISPIN, ROBERT
Additional Participating Persons:	GEORGE S VARGO; SAN DIEGO , CA FRED LEEPER; WICHITA , KS CHARLES R MOTE; TUCSON , AZ
Original Publish Date:	February 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=29927

Aviation Investigation Final Report

Location:	EL CAJON, California	**Accident Number:**	LAX98FA045
Date & Time:	November 25, 1997, 11:32 Local	**Registration:**	N9518H
Aircraft:	Cessna 172M	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

A Cessna 152 (C-152)and a Cessna 172 (C-172) collided in mid air while in a closed traffic pattern at Gillepsie Field. A student and flight instructor were aboard the C-152, and a student pilot was the sole occupant of the C-172. The C-172 was cleared to takeoff with instructions to follow the C-152. A third aircraft was also in the traffic pattern at the time. After takeoff, the air traffic controller looked away to check on other traffic but when he looked back, neither aircraft was visible. He made several unsuccessful calls to both the pilots. The student in the C-152 reported that he had turned crosswind as he came abeam of the third aircraft. When he reached pattern altitude, he began his downwind turn. He was trimming the aircraft when he saw the C-172 approaching his position. He banked hard to avoid the aircraft, but felt an impact. The instructor attempted to take the controls and, with both pilots on the controls, they executed an emergency forced landing on a surface street. The aircraft elevator control lost effectiveness and the aircraft landed hard. They did not report any other mechanical abnormalities before or after the collision. Witnesses reported that both aircraft were on a converging flight path. The student pilot in the C-172 was making his second solo flight but had not advised the controller. The controller did not specify that he was number 3 in the pattern. Haze was reported in all quadrants. The Brite radar repeater in the tower cab is not capable of monitoring traffic on the south side of the airport due to terrain height.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The solo student's failure to see and follow the other aircraft on the downwind as he had been instructed. Factors influencing this accident was the failure of the pilots in the other aircraft to see and avoid the aircraft encroaching on his flight path; the pilot's failure to verify the controller's instructions; the altitude limitation of the Brite radar repeater in the tower cab that

prevented it use in traffic pattern separation; and the prevailing haze which restricted visibility.

Findings

Occurrence #1: MIDAIR COLLISION
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. LIGHT CONDITION - DAYLIGHT
2. (F) WEATHER CONDITION - HAZE/SMOKE
3. (F) RADAR ASSISTANCE TO VFR AIRCRAFT - NOT AVAILABLE - FAA(OTHER/ORGANIZATION)
4. IDENTIFICATION OF AIRCRAFT VISUALLY - NOT MAINTAINED - ATC PERSONNEL(LCL/GND/CLNC)
5. (F) INTERPRETATION OF INSTRUCTIONS - NOT VERIFIED - PILOT IN COMMAND
6. (C) VISUAL LOOKOUT - INADEQUATE - PILOT IN COMMAND
7. (F) VISUAL LOOKOUT - INADEQUATE - PILOT OF OTHER AIRCRAFT

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
8. EMPENNAGE - SEPARATION

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
9. TERRAIN CONDITION - RESIDENTIAL AREA

Factual Information

HISTORY OF FLIGHT

On November 25, 1997, at 1132 hours Pacific standard time, a Cessna 152, N757FT, collided in-flight with a Cessna 172M, N9518H, while in the traffic pattern at El Cajon, California. Both aircraft were destroyed. The flight instructor and student pilot in N757FT received minor injuries; however, the solo student pilot in N9518H received fatal injuries. The Cessna 152 was being operated as an instructional flight by the Golden State Flying Club. Anglo-American Aviation, Inc was also operating the Cessna 172M as an instructional flight. Both flights originated from Gillespie Field, El Cajon, on the morning of the accident. Visual meteorological conditions prevailed at the time and no flight plans were filed.

The ATCT controller at Gillespie Field reported that he had cleared the pilot of N9518H to takeoff. The clearance was for closed traffic on runway 27L with instructions to follow the Cessna ahead in the pattern (N757FT), which was already upwind on a touch-and-go landing. The student pilot in N9518H acknowledged the clearance and initiated his takeoff. At this time, a third aircraft, which was ahead of N757FT, was also in the traffic pattern. After N9518H took off, the controller looked away to check on the position of traffic approaching from the east. When he looked back, however, neither N757FT nor N9518H were visible. He made several calls to both the pilots of aircraft but neither responded.

The student pilot in N757FT reported that he made a crosswind turn as he came abeam of his downwind traffic. He had climbed to 1,200 feet msl when he began a turn to downwind. He had started trimming the aircraft for level flight when he saw another aircraft, about 20 yards away, headed toward him from his 10 o'clock position. He banked hard to the right to avoid the aircraft, but subsequently felt an impact.

The instructor attempted to take the controls and, with both pilots on the controls, they executed an emergency forced landing on a surface street. The aircraft elevator control lost effectiveness and the aircraft landed hard. They did not report any other mechanical abnormalities before or after the collision.

The tail section of the solo student's aircraft separated in the air. The aircraft struck the roof of a private home while the tail section came to rest in the driveway of another home.

Witnesses reported that the "white" plane (N9158H) was southbound, while the "yellow" (N757FT) plane was in a turn from south to east. About the time the yellow plane had turned 90 degrees, their flight paths converged. It appeared that both aircraft made abrupt maneuvers before the collision. After contact, both aircraft entered steep descents and disappeared from view.

PERSONNEL INFORMATION

The flight instructor had been employed by the operator to provide dual instruction in the same make and model as the accident aircraft. She had logged 154 hours in the preceding 90 days. She had received her airplane single engine instructor rating on December 5, 1996. She was employed by Golden State Flying as a flight instructor, and was giving dual instruction at the time of the accident.

Her student, who was on the controls at the time, was reviewing the flight maneuvers in preparation for his private pilot check ride. He was also endorsed for solo flight and was current in the aircraft.

The solo student pilot was on his second solo flight. He had previously logged .3 hours during his first solo on November 20, 1997. His last dual flight was on the day of the accident. This solo flight was scheduled, but was not supervised.

The student pilot's license had been endorsed for solo in a Cessna 172 by his instructor, but there was no corresponding endorsement in his pilot logbook. His logbook reflected required pre-solo dual flight instruction. His instructor reported that he was an above average student and had had no particular problems thus far in his flying program.

AIRCRAFT INFORMATION

FAA airworthiness inspectors conducted a review of the aircraft and engine logbooks from both aircraft. The logbook entries indicated that both aircraft had been inspected and maintained in accordance with applicable Federal Air Regulations (FARs).

METEOROLOGICAL INFORMATION

The current weather information being broadcast as "information Sierra" on the ATIS frequency was: winds calm; visibility 25 statute miles; haze all quadrants; temperature 23 degrees centigrade; and altimeter setting 30.01 inches of mercury. This was essentially consistent with the conditions reported in the hourly surface weather observation.

COMMUNICATIONS

The pilots in both aircraft were in two-way radio contact with the Gillespie ATCT at the time of the accident. The controller advised the pilot of N9518H to "follow the Cessna ahead of you in the pattern" at the time he was cleared to takeoff. The pilot acknowledged the transmission. The controller did not specify that he was number 3 in the pattern. The solo student did not advise the controller that this was his second solo flight.

AIRPORT INFORMATION

The antennae for the Brite radar repeater in the tower cab at Gillespie Field is located at Miramar Naval Air Station and, due to terrain height, is not capable of monitoring traffic on the south side of the airport. It does become available to monitor traffic in that area when the aircraft are at least 1,600 to 2,000 feet msl. The pattern altitude for runway 27L is 1,200 feet msl.

WRECKAGE AND IMPACT INFORMATION

The wreckage of N757FT was located at 32 degrees 48.8 minutes north longitude and 117 degrees 00.1 minutes west latitude, approximately 1,600 feet south of Valley Lake. The bearing from Gillespie Field was 229 degrees and it was located 1.8 statute miles from the center of the airport.

The aircraft made a forced landing, traveling diagonally across the roadway in a southwesterly direction. The aircraft crossed the center divider, two lanes of opposing traffic, and struck a frangible based aluminum light pole with its right wing. It then yawed right, crossed the curb, and went partially through a 6-foot chain link fence. The nose of the aircraft came to rest extending across a cement lined drainage ditch.

The right main wheel was separated from the strut. The fuselage was partially separated at the control panel and was also buckled downward aft of the luggage area.

A further examination of N757FT revealed trailing edge damage to the left wing and a series of slashes in the leading edge of the left horizontal stabilizer. In the area of the slashes, the metal was extruded from the upper skin surface toward the bottom side of the stabilizer. The distance between the slashes was 5.5 inches, 5.5 inches, 5 inches, and 2.5 inches, measured inboard along the leading edge.

The main wreckage of N9518H was located at 32 degrees 49.1 minutes north longitude and 116 degrees 59.7 minutes west latitude. The bearing from Gillespie Field was 233 degrees and was located 1.4 statute miles from the center of the airport.

The aircraft struck the roof of a home, coming to rest near the rear of the house next to the kitchen. The fuselage separated at the firewall with the forward portion coming to rest on the dining room floor. The nose gear, engine cowling, and remains of the instrument panel were found embedded in the roof. The cabin, forward section of the empennage, wings, and main landing gear came to rest in an inverted position on the rear patio.

Fuel from the aircraft was reported by El Cajon firefighters to have pooled on the patio and in the kitchen of the house.

A further examination of N9518H revealed that the empennage had separated from the aircraft before impact. An imprint with the letters "NE" visible was found on the right side of the

empennage of N9518H. The tire on the left main gear of N757FT had the words "AERO TRAINER" on the sidewall. The separated wheel fairing from the left main gear of N757FT was found in the front yard of the house next door.

The separated empennage from N9518H was located at 32 degrees 49.2 minutes north longitude and 116 degrees 59.7 minutes west latitude, and came to rest on the front driveway of a home. The elevator and rudder cables were broken and exhibited fraying. Control continuity was established between the remaining cables and control surfaces.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted on November 26, 1997, by the San Diego County Coroner's Office, with specimens retained for toxicological examination. The toxicological test results were negative for alcohol and all screened drug substances.

SURVIVAL ASPECTS

The flight instructor in N757FT reported that, after the aircraft came to rest, fuel began leaking from the right wing into the cockpit and onto her clothing. There was no fire extinguisher available and neither occupant was wearing fire resistant clothing.

The seat belts and shoulder harness retained both occupants throughout the accident sequence. Both seats remained attached to their respective tracks. The right forward doorpost, however, was crushed downward, partially restricting the movement of the right door and allowing fuel to drain into the cabin from the right wing.

The student pilot was able to open his cabin door and egress without assistance or further difficulty. The flight instructor egressed through the broken windscreen, also without assistance.

Police investigators, who arrived first on the scene, reported that both occupants appeared shaken and stunned.

ADDITIONAL INFORMATION

The wreckage of N9518H was released to a representative of the registered owner on March 10, 1998. The wreckage of N757FT was released to a representative of the registered owner on July 9, 1998.

The ELT in N9518H separated from the aircraft in-flight and was destroyed. It was later located, broken open, on the roof of another home.

According to the student pilot, the ELT in N757FT was activated in the air immediately following the collision. After exiting the aircraft, the student pilot moved the ELT switch from

its center position to the "on" position. It was later switched off by an FAA inspector.

Pilot Information

Certificate:	Student	**Age:**	25,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	November 11, 1997
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	12 hours (Total, all aircraft), 12 hours (Total, this make and model), 12 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N9518H
Model/Series:	172M 172M	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal; Utility	**Serial Number:**	17266195
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	July 30, 1997 100 hour	**Certified Max Gross Wt.:**	2300 lbs
Time Since Last Inspection:	81 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5234 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-320-E2D
Registered Owner:	EDWAR A. MASLON	**Rated Power:**	160 Horsepower
Operator:	ANDY BURR	**Operating Certificate(s) Held:**	None
Operator Does Business As:	ANGLO AMERICAN AVIATION	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SEE ,387 ft msl	**Distance from Accident Site:**	
Observation Time:	11:50 Local	**Direction from Accident Site:**	225°
Lowest Cloud Condition:	Unknown	**Visibility**	25 miles
Lowest Ceiling:	Broken / 25000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/ None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	25°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	(SEE)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	VFR
Departure Time:	11:30 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	GILLESPIE FIELD SEE	**Runway Surface Type:**	Asphalt
Airport Elevation:	387 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	27L	**IFR Approach:**	
Runway Length/Width:	5341 ft / 100 ft	**VFR Approach/Landing:**	Touch and go;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	32.790832,-116.959182(est)

Administrative Information

Investigator In Charge (IIC):	CRISPIN, ROBERT
Additional Participating Persons:	GEORGE S VARGO; SAN DIEGO , CA FRED LEEPER; WICHITA , KS CHARLES R MOTE; TUCSON , AZ
Original Publish Date:	February 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=29927