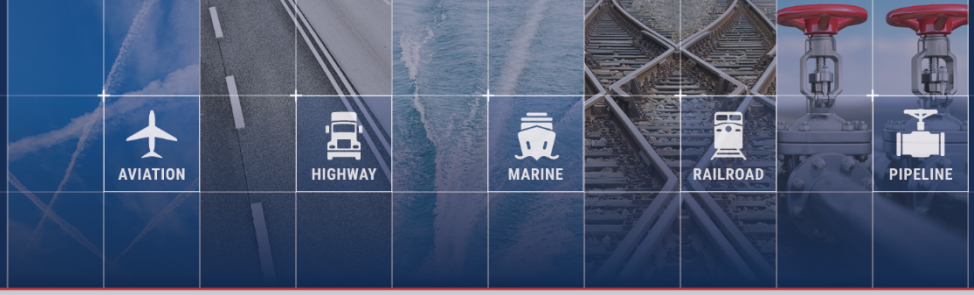

Aviation Investigation Final Report

Location:	ALAMOSA, Colorado	**Accident Number:**	FTW95FA294
Date & Time:	July 13, 1995, 12:10 Local	**Registration:**	N6976T
Aircraft:	CESSNA 310D	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation		

Analysis

WHEN THE PILOT ADVANCED THE MIXTURE CONTROLS FORWARD IN PREPARATION FOR LANDING, BOTH ENGINES LOST POWER SIMULTANEOUSLY. THE AIRPLANE WAS AT LOW ALTITUDE AND AIRSPEED. SUBSEQUENTLY, IT COLLIDED WITH ROUGH TERRAIN AS THE PILOT ATTEMPTED TO MAKE A FORCED LANDING. THE ELECTRIC FUEL PUMPS WERE FOUND IN THE HIGH BOOST POSITION. ACCORDING TO THE SUPPLEMENTAL AIRPLANE FLIGHT MANUAL, IF THE ENGINE-DRIVEN FUEL PUMPS ARE OPERATING NORMALLY, A TOTAL LOSS OF POWER MAY OCCUR, IF THE ELECTRIC FUEL PUMPS ARE PLACED IN THE HIGH BOOST POSITION. DENSITY ALTITUDE WAS ABOUT 9700' AT THE AIRPORT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: TOTAL LOSS OF POWER IN BOTH ENGINES DUE TO FLOODING AFTER THE PILOT HAD PLACED BOTH FUEL PUMP SWITCHES IN THE HIGH BOOST POSITION AND MOVED THE MIXTURE CONTROLS TO THE FULL RICH POSITION. A FACTOR RELATED TO THE ACCIDENT WAS: THE LACK OF SUITABLE TERRAIN FOR THE FORCED LANDING.

Findings

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

Findings

1. 2 ENGINES
2. WEATHER CONDITION - HIGH DENSITY ALTITUDE
3. (C) FUEL BOOST PUMP SELECTOR POSITION - IMPROPER - PILOT IN COMMAND

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

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

Findings
4. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

HISTORY OF FLIGHT

On July 13, 1995, approximately 1210 mountain daylight time, a Cessna 310D, N6976T, was destroyed when it collided with terrain during a forced landing at Alamosa, Colorado. The commercial pilot was seriously injured and the private pilot-rated passenger sustained minor injuries. Visual meteorological conditions prevailed for the business flight conducted under Title 14 CFR Part 91, and no flight plan was filed although the pilot was getting VFR flight following services. The flight originated at Santa Ana, California, at 0830 Pacific daylight time.

Injuries prevented the pilot from being interviewed after the accident. He subsequently submitted the Pilot/Operator Report, upon which the following is based. The pilot said all fuel had been pumped out of the auxiliary tanks and into the main tanks, and the fuel selectors were positioned on the main tanks. He remembered both engines losing power simultaneously, "possibly connected with moving mixture controls (to full rich) prior to landing."

The pilot-rated passenger was interviewed at the hospital. He stated the pilot entered the downwind leg for runway 20 and slowed the airplane by lowering the landing gear and extending flaps to maintain separation with a slower Piper PA-24 ahead of them. As the airplane was turned onto the crosswind leg, the pilot pushed the mixture controls forward and both engines lost power. The airplane was at a low altitude and airspeed, and the pilot attempted to make a landing. The airplane touched down on rough terrain, bounced over a small canal, and impacted the opposite bank in an inverted attitude.

AIRCRAFT INFORMATION

Examination of the cockpit disclosed the mixture and propeller controls were full forward and the throttles were retarded. The airplane was equipped with electrical boost pumps controlled by 3-position switches to comply with Cessna Multiengine Service Bulletin MEB88-3. Both fuel boost pump switches were found in the HIGH position.

According to the Cessna 310D Supplemental Airplane Flight Manual, the HIGH switch position "supplies sufficient fuel flow to sustain partial engine power and should be used solely to sustain the operation of an engine in the event its engine-driven fuel pump fails...At low power (settings with the boost pump on HIGH), the mixture may have to be leaned as necessary for smooth engine operation...CAUTION: If the auxiliary fuel pump switches are placed in the HIGH position with the engine-driven fuel pump(s) operating normally, total loss of engine power may occur."

WRECKAGE AND IMPACT INFORMATION

The wreckage distribution was aligned on a magnetic heading of 052 degrees and was approximately 192 feet long. At the beginning of the scar was a ground disturbance containing pieces of a red lens. At the 39 foot mark was a large ground disturbance, and at the 45 foot mark was another small ground disturbance containing pieces of a green lens. At the 90 foot mark was the right main (tip) tank, and the 93 foot mark was the right aileron. At the 135 foot mark was a barbed wire fence, and between the 150 and 180 foot marks was an irrigation canal (the left main tank was later retrieved from the canal). The main body of wreckage was at the 192 foot mark. The fuselage was circumferentially compromised, the cabin section was inverted and the remainder of the airplane was upright. Both engines were separated from the airframe. The left engine and wing were retrieved from the canal by fire department personnel.

ADDITIONAL INFORMATION

The wreckage was released to the owner's representative on July 14, 1995.

Pilot Information

Certificate:	Commercial	**Age:**	56,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	January 30, 1995
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	8000 hours (Total, all aircraft), 150 hours (Total, this make and model), 80000 hours (Pilot In Command, all aircraft), 18 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N6976T
Model/Series:	310D 310D	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	39276
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	May 3, 1995 Annual	**Certified Max Gross Wt.:**	4990 lbs
Time Since Last Inspection:	21 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	4751 Hrs	**Engine Manufacturer:**	CONTINENTAL
ELT:	Installed	**Engine Model/Series:**	IO-470-D
Registered Owner:	DOUGLAS R. FRITZ	**Rated Power:**	260 Lbs thrust
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:	ALA ,7535 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	11:59 Local	**Direction from Accident Site:**	240°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	240°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	23°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	SANTA ANA , CA (SNA)	**Type of Flight Plan Filed:**	VFR
Destination:	(ALA)	**Type of Clearance:**	VFR on top
Departure Time:	08:30 Local	**Type of Airspace:**	Class E

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 1 Minor	**Latitude, Longitude:**	37.460277,-105.869483(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	ALBERT E WESTBROOK; DENVER , CO
Original Publish Date:	February 14, 1996
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=19237