Aviation Investigation Final Report

Location:	SALINE VALLEY, California	**Accident Number:**	LAX99LA231
Date & Time:	June 25, 1999, 10:30 Local	**Registration:**	N8728Q
Aircraft:	Cessna TU206F	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The flight departed its home base, flew to another airport, and was returning home when the engine lost power due to fuel exhaustion. The pilot reported that he took off originally with full fuel tanks and had not refueled at the en route stop. He stated that he had the fuel selector positioned to the right tank, but he noticed that both the left and right fuel gauges indicated decreasing amounts of fuel. The right fuel gauge dropped to 'empty' and the engine suddenly quit. He switched the fuel selector to the left tank, turned on the boost pump, and the engine restarted. The engine quit again as he was over a group of mountains. The pilot was high and fast during the forced landing to a road and collided with an embankment. The airplane had been topped off with fuel 2 weeks prior to the accident, but the pilot did not remember if he had flown the airplane in that 2-week period; he did not maintain any type of pilot logbook or flight record. He thought that the fuel strainer valve had been stuck in the open position, allowing the fuel to drain out. According to Cessna, fuel cannot be used from both fuel tanks simultaneously, and if the fuel strainer had been stuck open, fuel would drain out only from the tank selected on the fuel selector valve. The airplane and engine were examined by an FAA inspector, with no mechanical discrepancies found. The pilot reported that he hadn't experienced any mechanical problems prior to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to verify the fuel quantity prior to departure, which led to fuel exhaustion.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE

Findings
1. (C) FLUID,FUEL - EXHAUSTION
2. (C) FUEL SUPPLY - NOT VERIFIED - PILOT IN COMMAND
3. (C) REFUELING - NOT PERFORMED - PILOT IN COMMAND

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

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
4. TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT
5. TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

On June 25, 1999, at 1030 hours Pacific daylight time, a Cessna TU206F, N8728Q, experienced a loss of engine power and collided with ground obstructions during the subsequent forced landing in an open area in Saline Valley, California. The accident site is about 50 miles southwest of Bishop, California. The aircraft, owned and operated by the pilot, sustained substantial damage. The private pilot and three passengers were not injured. The personal cross-country flight, conducted under the provisions of 14 CFR Part 91, originated from the Bishop Airport earlier the same morning, stopped at the Boulder City, Nevada, airport, and departed about 0945 en route back to Bishop. Visual meteorological conditions prevailed and no flight plan was filed.

The pilot reported that he took off from Bishop with full fuel tanks (80 gallons). He estimated that each leg of the flight lasted approximately 1 hour 25 minutes. He further estimated that with full tanks of fuel, the aircraft's endurance was about 5 hours 20 minutes, with a fuel burn of about 15 gallons per hour. He stated that during his preflight in Boulder City, he noted that the strainer valve seemed to be binding and stuck after he drained fuel from the main fuel sump. The pilot reported that he took off with the fuel selector positioned to the right tank, but he later noticed that the left and right fuel gauges were both indicating decreasing amounts of fuel. He reported that the right fuel gauge dropped to "empty" and the engine suddenly quit. The pilot stated that when he switched the fuel selector to the left tank and turned on the boost pump, the engine started back up. He stated that the engine ran for about 3 to 4 minutes before quitting again. He set up an approach to a dirt road located in a canyon, but came in too high and fast. The pilot reported that he forced the airplane down to the road and applied full brakes after landing. The aircraft impacted an embankment that was slightly higher than the wings. Both wings, the nose gear, and part of the tail collided with the terrain. The nose gear sheared off.

The pilot reported that after the accident, he noted a small amount of fuel on the ground underneath the main fuel sump. He stated that it looked like the strainer valve had been stuck in the open position, which allowed the fuel to drain out.

A Federal Aviation Administration inspector from the Las Vegas Flight Standards District Office responded to the accident site. He reported that he didn't find any mechanical discrepancies with the airplane.

According to the Cessna TU206F Pilot's Operating Handbook, fuel cannot be used from both fuel tanks simultaneously. A representative from Cessna reported that if the strainer valve had been stuck open, fuel would drain out only from the tank selected on the fuel selector valve. The Cessna TU206F fuel system schematic confirms that the fuel strainer is positioned after the fuel selector valve.

The pilot supplied a copy of a fuel receipt which reflected that the airplane had been topped off with fuel on June 11, 1999. He stated that he did not remember if he had flown the airplane between then and the accident flight; he did not maintain any type of pilot logbook or flight record.

The pilot reported that he had not experienced any mechanical problems with the aircraft prior to the accident.

Pilot Information

Certificate:	Private	**Age:**	64,U
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	June 2, 1999
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	3100 hours (Total, all aircraft), 2950 hours (Total, this make and model), 3100 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N8728Q
Model/Series:	TU206F TU206F	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	U20603471
Landing Gear Type:	Tricycle	**Seats:**	6
Date/Type of Last Inspection:	May 21, 1999 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2300 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	TSIO-520-C
Registered Owner:	KEN KESSLER	**Rated Power:**	285 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:	BIH ,4120 ft msl	**Distance from Accident Site:**	50 Nautical Miles
Observation Time:	10:56 Local	**Direction from Accident Site:**	300°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	330°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	32°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BOULDER CITY , NV (61B)	**Type of Flight Plan Filed:**	None
Destination:	BISHOP , CA (BIH)	**Type of Clearance:**	None
Departure Time:	09:45 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

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Mars, Noelani
Additional Participating Persons:	FRED WEIR; LAS VEGAS , NV
Original Publish Date:	August 14, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46746