

## CIVIL AERONAUTICS BOARD

## ACCIDENT INVESTIGATION REPORT

Adopted September 5, 1950

Released: September 6, 1950

CESSNA, AT LOS ANGELES, CALIF., OCTOBER 1, 1949

## The Accident

At approximately 2110,<sup>1</sup> October 1, 1949, a Cessna T-50 aircraft, N-61503, owned by Mercer Enterprises, crashed at Los Angeles, Calif. Of the six occupants, one was killed and five, including the pilot, were injured. The aircraft was destroyed.

## History of the Flight

The aircraft departed from Burbank, Calif., for Palo Alto, Calif., at 0950, October 1, 1949, with James Lyman Hayter as pilot, five passengers, no cargo, and 120 gallons of fuel. Northbound the flight was made in accordance with visual flight rules at an altitude of 7,500 feet under clear weather conditions, and with winds from the south at 10 miles per hour. Landing at Palo Alto was accomplished at 1145. The pilot estimated that 60 gallons of fuel were consumed during the flight to Palo Alto, based on an assumed fuel consumption rate of 30 gallons per hour.

At approximately 1835 of the same day, the flight took off from Palo Alto for the return flight to Burbank. A flight plan was filed with San Francisco Radio specifying flight according to visual flight rules to Burbank at an altitude of 7,500 feet. Clear weather with winds from the south at 10 miles per hour was predicted in the last available U S Weather Bureau forecast. Also indicated on the flight plan was the flight time of two hours, with sufficient fuel for three hours flight. Pilot Hayter had 35 gallons of fuel added at Palo Alto.

No difficulty was experienced en route, but when over the vicinity of Grapevine and 61 miles from Burbank, Pilot Hayter became concerned as to whether he had sufficient fuel to con-

tinue to his destination. At this time he was receiving clearly Newhall Radio which is 16 miles north of Burbank, and the fuel gauges, according to his testimony, indicated 35 gallons or more than one hour of fuel remaining. Accordingly, he decided that he could safely reach his destination now only 30 minutes of flight time away without returning to Bakersfield for additional fuel. However, at 2056, over Newhall, Pilot Hayter notified the Burbank tower that he was low on fuel and requested the shortest route to Burbank, he also asked if there were any lighted fields available between Newhall and Burbank. The tower advised that the shortest route was 124 degrees, that there were no lighted fields available, and that Burbank weather was clear with visibility eight miles. From Newhall the flight started a descent from 7,500 feet, holding the advised heading of 124 degrees. After five minutes a heading of 180 degrees was assumed since Burbank was not sighted. During this time no attempt was made to utilize the available aircraft radio equipment for orientation on Burbank.

Approximately nine minutes after passing Newhall the flight entered thin layers of stratus type clouds at 4,000 feet and emerged at approximately 3,000 feet over the downtown area of Los Angeles. Pilot Hayter realized at this time that he had flown past his destination and made a turn to return to Burbank approximately 8 1/2 miles to the northwest. During the turn both engines ceased operation due to fuel exhaustion and an emergency descent was started. Beverly Boulevard, which runs in an east-west direction, was selected as a landing area. Approximately 50 feet above the street and at the intersection of Beverly Boulevard and Rampart Boulevard, the aircraft struck and severed three 16,000 volt power lines which crossed Beverly Boulevard at right

<sup>1</sup> All times referred to herein are Pacific Standard and based on the 24-hour clock

angles Following impact with the power lines the aircraft fell to the street out of control. The tail section was torn from the fuselage by impact with a street lighting standard, and the airplane skidded approximately 500 feet along the street turning to the right approximately 135 degrees from the initial westerly heading. Of the six occupants, one was killed and five, including the pilot, sustained minor injuries. The aircraft was destroyed

### Investigation

The right wing was completely crushed as a result of impact but the left wing was relatively undamaged. The fuselage was severely torn and twisted. Both engines were broken from their mountings and were lying close to the wings. No evidence was found of any malfunctioning of either the engines or accessories, and there was no evidence of a fuel leak in any of the fuel line connections. The left wing fuel tank was undamaged and empty. The right wing tank was ruptured, but there was no evidence of fuel having been in this tank at the time of the crash, as there was no spillage on the street or fuel odor in or around the tank.

An examination of the radio equipment disclosed that it was capable of normal operation. The ADF was found set to the Newhall Radio Range frequency.

At the time of takeoff, from Burbank and Palo Alto, total aircraft weight was approximately 272 pounds in excess of the certificated weight.<sup>2</sup> Since the aircraft was equipped with seats and safety belts for only four passengers, it was necessary for one passenger to sit on the floor during the flight.

The weather at the time of the accident was substantially as forecast, with the exception that the stratus type clouds over Los Angeles formed later than forecast. At the time of the accident the weather was clear and unlimited at Burbank but a thin layer of stratus was forming over the downtown area of Los Angeles.

### Analysis

The normal fuel consumption rate for the two engines installed in the air-

<sup>2</sup> See Appendix I

craft varies between 30 and 35 gallons per hour. In this instance the total flight time was 4.5 hours and the total fuel consumed was 155 gallons, therefore, the fuel consumption rate was 34.4 gallons per hour. The pilot, however, before take-off from Burbank estimated a rate of 30 gallons per hour but made no attempt to determine the actual rate following departure.

When the flight departed Palo Alto, therefore, the total fuel supply was approximately 87 gallons or enough for a flight of 2.5 hours. Since Burbank was approximately 2.5 hours flight from Palo Alto, there was not enough fuel to have reached the destination with a sufficient margin of safety. While en route the pilot could have determined that there was insufficient fuel to reach Burbank safely by calculating the ground speed and the fuel consumption rate.

The accident was the result of poor flight planning, in that no attempt was made to determine the actual fuel consumption rate or the ground speed. Furthermore, after passing Newhall no attempt was made to utilize the available radio equipment for the purpose of orientation on Burbank. If the radio had been properly used the flight should not have flown past its destination and a landing might have been accomplished at Burbank before the fuel was exhausted. The weather can not be considered a contributing factor as it was substantially as forecast.

### Findings

- 1 The aircraft and pilot were properly certificated
2. The total aircraft weight was approximately 272 pounds more than its certificated weight when it departed Palo Alto.
- 3 The weather was clear and unlimited and the wind as forecast
- 4 The flight overflew the destination and the engines failed due to fuel exhaustion.
- 5 The pilot did not determine the actual fuel consumption rate of the engines.
6. No attempt was made to utilize the available radio facilities for the purpose of orientation

Probable Cause

The Board determines that the probable cause of this accident was the exhaustion of fuel prior to arrival at the intended destination, due to improper flight planning and operation.

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BY THE CIVIL AERONAUTICS BOARD

/s/ OSWALD RYAN

/s/ JOSE LEE

/s/ HAROLD A JONES

Russell B. Adams, Member of the Board, did not participate in the adoption of this report.

# Appendix I

## WEIGHT COMPUTATION OF N-61503

	<i>Pounds</i>
Takeoff at Burbank	
Empty weight equipped.....	4,395
Fuel (120 gallons at 6 pounds).....	720
Oil (10 gallons at 7.5 pounds).....	75
Passengers and pilot weight... ..	1,985
Total weight.....	6,175
Maximum gross weight.....	5,700
Overload .....	475
Takeoff at Palo Alto	
Empty weight equipped.....	4,395
Fuel (86.2 gallons at 6 pounds).....	517.2
Oil (10 gallons at 7.5 pounds).....	75
Passengers and pilot weight.....	1,985
Total weight... ..	5,972.2
Maximum gross weight.....	5,700
Overload.....	272.2

<sup>1</sup> Statements of passengers and coroner's report

# Supplemental Data

## Investigation and Hearing

The Civil Aeronautics Board was notified of the accident at 2125, October 1, 1949, by CAA Communications. An investigation was immediately initiated in accordance with the provisions of Section 702 (a) (2) of the Civil Aeronautics Act of 1938, as amended. A public hearing was ordered and was held at Los Angeles, California, October 18, 1949.

## Flight Personnel

James Lyman Hayter held a valid airman certificate with commercial, single and multi-engine, instrument, and flight instructor ratings. He had a total of

2,400 hours, of which 240 were accumulated in the Cessna type aircraft and 100 hours in cross-country operations.

## The Aircraft

The Cessna T-50 (UC-78) aircraft, was owned by Mercer Enterprises, and was currently certificated. It had been operated a total of 1,337 hours and was equipped with two Jacobs engines, model L-4MB, 225 horse power. The last 100-hour inspection on both engines was March 14, 1949, and the time since overhaul on the right engine was 318 hours and 348 on the left engine. It was equipped with two Hamilton Standard Propellers.

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