

DEPARTMENT OF COMMERCE
BUREAU OF AIR COMMERCE
WASHINGTON

REPORT OF THE ACCIDENT BOARD
BUREAU OF AIR COMMERCE

Statement of probable cause concerning an aircraft accident
which occurred to a plane of Transcontinental and Western
Air, Incorporated, near Albuquerque, New Mexico, on August 3,
1935

To the Director of Air Commerce:

On August 3, 1935 at about 12:55 a. m. approximately 50 miles East of Albuquerque, New Mexico, an airplane of United States registry, piloted by a licensed airman, while being operated in scheduled flight carrying passengers and United States mail, was forced to land with resultant destruction of the aircraft, but no serious injuries to the passengers or crew.

The plane, a Douglas, model DC-2, bore Department of Commerce license number NC-13722 and was being operated by Transcontinental and Western Air, Incorporated, between Los Angeles, California, and Newark, New Jersey, with scheduled stops at Albuquerque, Amarillo, Kansas City, Columbus and Pittsburgh. The pilot, Clifford V. Abbott, held a Department of Commerce transport pilot's license and a scheduled air transport rating. The co-pilot, W. W. Jones, also held a Department of Commerce transport pilot's license and a scheduled air transport rating.

The passengers were: H. B. Bowen, C. J. Wheeler, M. Buckner, Steve Hannigan, Father Walter Plimmer, Murray Blank, L. A. McDonald, G. A. Hallquit and T. F. Whipps.

After refueling, this trip, known as Flight 8, took off from Albuquerque at 12:31 a. m. The pilot climbed to an altitude of 9300 feet where he changed the propeller settings from low to high pitch and switched from the emergency tank of 87 octane fuel used while taking off to the left main tank of 80 octane fuel used for cruising.

Shortly after this, while at an altitude of 9500 feet, the left engine stopped and immediately after, the right engine stopped. The pilot immediately changed back to the emergency tank and with the assistance of the co-pilot attempted to get the engines started again by pumping the throttles and using the wibble pump. This was continued until the plane had lost so much altitude that an emergency landing could not be avoided. The pilot then dropped two flares, seeking a landing field, and by the aid of a third flare, dropped by a plane which had come to his assistance, succeeded in effecting an emergency landing.

The country in which this landing was effected is covered with a dense growth of scrub pine trees growing to heights of 15 to 20 feet. The ground is rolling with considerable rock formation making the general surface fairly rough. There were several small open pastures in the vicinity and the plane came to rest in one of these after having cut a swath through surrounding trees. The left wing apparently became entangled in the trees pulling the plane down. The nose then apparently plowed through a clump of trees which swung the plane around to the left, allowing it to contact the ground while headed approximately opposite to the direction of approach.

The plane which rendered such effective assistance to Flight 6 in the emergency had refueled at Albuquerque and had departed some time previously. This plane experienced the same difficulty when changing from 87 to 80 octane fuel but the crew had been fortunate in getting the engines started again on 87 octane fuel. After satisfying themselves through experiment that something was definitely wrong with the 80 octane fuel and realizing that Flight 6 had or was about to take off with the same fuel, they radioed this flight of their experience and how they overcame it and turned at once toward Albuquerque to aid Flight 6 if necessary.

They sighted Flight 6 just after it had dropped its flares and was slightly above the tree tops in effecting the emergency landing. They immediately dropped one of their flares to keep the ground lighted until the plane came to rest and then flew overhead until signaled from the ground that everything was alright.

The failure of the engines was found to be due to the presence of a large amount of water in the 80 octane fuel with which the plane had been serviced at Albuquerque. A check of the fuel storage system at Albuquerque disclosed that on 5000 gallon underground tank contained about 200 gallons of water. After extensive tests, it was found that with a certain amount of water in the fuel pit, pumping fuel from the underground storage tank would cause water to syphon from the fuel pit into the tank through an air vent running between the two. On the afternoon of the preceding day there had been an unusual amount of rainfall which had flooded the concrete apron and filled the fuel pit with water.

It is the opinion of the Accident Board that the probable cause of this accident was an abnormal amount of water in the left main fuel tank of the aircraft due to accidental entry of water into an underground fuel storage tank.

The manner in which water got into this underground tank was very unusual and immediate steps were taken on all air lines to prevent a recurrence.

ACCIDENT BOARD

Jesse W. Lankford,
Secretary.