

CIVIL AERONAUTICS BOARD

ACCIDENT INVESTIGATION REPORT

Adopted: January 7, 1958

Released: January 9, 1958

WESTERN AIR LINES, INC., CONVAIR 240-1, N 8406H,
NEAR DAGGETT, CALIFORNIA, JULY 25, 1957

The Accident

About 0337,^{1/} July 25, 1957, an explosion occurred in the lavatory of Western Air Lines Flight 39 during flight near Daggett, California. The blast ruptured the fuselage shell and outrushing air from the pressurized cabin enlarged the rupture. A passenger, apparently intent on suicide, was blown out through the opening. The aircraft, a Convair 240-1, N 8406H, was landed without difficulty at George Air Force Base, Victorville, California. There were no injuries to other occupants.

History of the Flight

Western Air Lines Flight 39, a scheduled Convair passenger flight, originated at Rochester, Minnesota, for Los Angeles, California, with intermediate stops en route including Salt Lake City and Cedar City, Utah; and Las Vegas, Nevada.

A regular crew change had been made at Salt Lake City with Captain Milton L. Shirk, First Officer Seth M. Oberg, and Stewardess Joan M. Hollinger taking the flight to Los Angeles. The flight departed Salt Lake City on schedule, landed at Cedar City, and arrived at Las Vegas at 0221, 12 minutes ahead of schedule. Total gross weight at takeoff from Las Vegas, including fuel, passengers, and baggage, was 35,300 pounds, well under the allowable weight of 40,909 pounds; the load was properly distributed. On board were 12 adult passengers and one infant.

While the flight was being prepared for departure from Las Vegas, the crew obtained an air traffic control clearance from Air Route Traffic Control. Flight 39 was cleared, as requested, to Los Angeles via Victor Airway 21 to Fontana, California, and thence direct to Los Angeles, to maintain 12,000 feet. Visual flight rules conditions existed at Las Vegas at 0255, the time of departure.

About 0322, subsequent clearance was transmitted, via the company radio at Los Angeles, for the flight to descend to and maintain 10,000 feet, and to contact Los Angeles Air Route Traffic Control on 120.3 mcs. over the Arrowhead intersection. At 0324 the flight reported, to company radio, leaving 12,000 feet, and descended to 10,000 feet, on course, at 500 feet per minute. At 0331, Flight 39 reported over Daggett at 10,000 feet, in the clear, estimating Fontana at 0347 and Los Angeles at 0405.

^{1/} All times herein are Pacific daylight based on the 24-hour clock; altitudes are mean sea level.

Soon after this transmission was completed there was a loud noise from the rear of the aircraft. Hurried inspection by the crew members revealed extensive damage in the vicinity of the lavatory and a large opening in the fuselage shell in that area. A check showed one passenger missing.

Radio contact was established at once with George Air Force Base, about 37 miles away, an emergency was declared, and a clearance was received for a landing there. This landing was effected without difficulty at 0348.

A check immediately after landing revealed that Passenger Saul F. Binstock, who had boarded the aircraft at Las Vegas, was unaccounted for.

Investigation

Investigation disclosed that Mr. Binstock had taken seat 9-A, which was second from the rear of the cabin on the left. He sat alone, next to the window. Behind him another male adult passenger sat, also alone. The latter testified that about 15 minutes after takeoff Mr. Binstock rose and went into the lavatory, only a few steps away, to the rear and on the opposite (right) side of the cabin. He remained there so long that the passenger was on the point of informing the stewardess, being prompted by the man's elderly appearance and the fact that the air was slightly rough. He also thought the passenger might have fainted or had some trouble in the lavatory. However, he did not query the stewardess, and Mr. Binstock remained in the lavatory, and was in there when the explosion occurred, about 20 minutes after he left his seat.

Another witness and his wife were sitting just across the aisle from Mr. Binstock. They stated that shortly after takeoff from Las Vegas they observed this passenger sitting across from them and that there did not appear to be anything unusual in his actions except that all of a sudden "he more or less popped up in his seat, stood erect, and walked toward the rear of the airplane." Neither of them actually saw Mr. Binstock enter the lavatory but they stated they were positive he did not return to his seat. Both testified that they were awake throughout the flight.

Miss Hollinger, the stewardess, stated that only a short while before the explosion she had checked passenger seat belts and all were secured. Most of the passengers were dozing or quiet. The stewardess further stated that after accomplishing other routine duties she sat down in seat 10-D, which was located just ahead of the lavatory wall, next to the windows. She also had her seat belt fastened and was there only moments when the explosion occurred.

The stewardess was nearest to the damaged area. She said, "I locked up and just then I heard a horrible blast, a terrific gush of wind and the cabin filled with a thick fog and an eerie light. I put my hand to my head as I sat bolt upright. My hat was gone and my hair was flying in my face. I was stunned, shocked, I thought this was the end for a minute . . . I knew there was a hole behind me, but I was not about to move. The window on my right was shattered." Shortly thereafter Miss Hollinger and the passengers nearest the rear of the cabin were moved forward.

The stewardess further stated that despite the suddenness of the explosion no one panicked. She immediately gave the passengers emergency instructions and again ascertained that all passenger seat belts were fastened. A quick count of the passengers showed there were eleven, plus one infant, aboard; one passenger was missing.

Most, if not all, of the remaining passengers were awakened by the explosion. All were substantially in agreement that there was a "loud noise." One passenger in a rear seat stated that following the noise there was a tremendous rush of air in the cabin, "cyclone-like in volume," and followed by noises like pieces of the plane tearing off.

Captain Shirk stated that in the 0331 position report over Daggett he informed the company that the aircraft and radio were o. k., except the cooling was not working properly. Pressurization had been used to maximum and airflow was excellent, except that it was warm. He was then given the Los Angeles weather.

It was immediately thereafter that the loud report from the rear of the airplane occurred. At that moment the first officer was flying the airplane and he stated he had the sensation that the explosion and the explosive decompression sounded like someone had fired both barrels of a double-barreled shotgun behind his head. He said he noticed no fumes at this time and that the airplane flew normally following the blast while he was at the controls. The captain said that he quickly scanned the instrument panel and determined that the exact altitude was 10,000 feet (7,500 feet above the ground), cabin pressurization set to an altitude of 4,000 feet (approximately 2.3 pounds p. s. i.). Outside temperature was plus 10 degrees centigrade, and the indicated airspeed was 185 knots. The engines, radios, and all other components of the aircraft continued to operate normally. Captain Shirk further said that neither he nor the first officer noticed any indication of cabin pressure rise or fall just prior to decompression.

A quick inspection of the cabin by flashlight revealed a hole in the right side of the airplane just forward of the right stabilizer and just aft of rear seat 10-D (where the stewardess was sitting) and generally in the area where the lavatory was located. The hole, visible to him from where he stood in the cabin, looked to be approximately 2 by 5 feet. The captain then ran forward to the cockpit, radioed the company their position, described the damage visible to him, and stated he was making an emergency landing at George Air Force Base where complete emergency facilities were available. The descent, approach, and landing on the air base were accomplished without further incident.

Following the landing the passengers were able to deplane by use of the integral stair-door at the rear of the cabin. An interview of passengers and an inspection of the passenger list at that time revealed that the missing passenger was Mr. Binstock. Further investigation confirmed him to be Mr. Saul F. Binstock, age 62, of North Hollywood, California.

From the outset of the investigation it was evident that the explosion was not due to any mechanical or structural failure of the aircraft or its components, or any action or lack of action by the crew. However, in order to make certain that this definitely was the case, a detailed examination of the damage to the aircraft was made. Simultaneously, a search back along the flight path resulted in the recovery of certain missing parts identified as coming from N 8406H. The body of Mr. Binstock, the missing passenger, was also found. This body showed, in addition to pronounced effects of the fall, a marked mutilation of the left hand, from which finger ends were missing. Mr. Binstock's coat in the area of the left arm and breast was cut and perforated as from the explosion of a blasting cap.

A wreckage distribution chart was prepared during the investigation. It plots the approximate geographical locations of these objects having fallen from the aircraft and the location of the body which corresponded to the general flight path of the aircraft following the accident. The distribution of these various items was approximately three miles long in the direction of flight and about one-half mile in width.

The area of the opening in the fuselage shell was about 40 square feet, being generally rectangular, and about 7 by 6 feet. It was clearly indicated that there had been an explosion with its forces centered on the washbasin shelf which extends along the outer wall of the lavatory. This conclusion was immediately obvious following a partial reassembly of damaged parts, and in consideration of radiating forces. This partial restoration of parts showed conclusively that the violence of the explosion decreased in all directions from the lavatory shelf. Nowhere was there any evidence of metal fatigue.

Chemical analyses of smudge found on damaged parts disclosed that the explosive was dynamite, as determined positively by certain ingredients of dynamite which were present in the smudge.

In the cabin lining near the explosion site was found a small fragment of copper. Although it could not be identified as a portion of a blasting cap because of its small size, its chemical composition was consistent with that of the shell of a blasting cap. An unexploded blasting cap was found in the lavatory toilet, together with a number of burned paper matches and pieces of burned paper.

Investigation revealed that Mr. Binstock procured dynamite and blasting caps several weeks before the incident.

Mr. Binstock arrived at Las Vegas at 2015 on the evening of July 24 from Burbank Airport, Burbank, California, on Western Air Lines Flight 14. A thorough investigation of his activities while in Las Vegas revealed that they were not abnormal. He had dinner at a hotel and returned to the airport at 0045.

Upon arrival at the airport Mr. Binstock presented his gate pass and ticket to the agent at the Western Air Lines counter. The gate pass indicated Flight 14 out of Burbank on the 24th. The name Binstock was on the ticket plus a first initial the agent could not identify. The agent noted that no reservation card had been made out for Mr. Binstock so he asked him for his first name because the first name is sometimes listed by mistake instead of the last name. To this request Mr. Binstock made a somewhat flippant and vulgar reply. He was then informed that Flight 39 went directly to Los Angeles International Airport and did not stop at Burbank where he had originally started his trip. Mr. Binstock said his car was at the airport in Burbank and further volunteered the information that he had a way to get there. He had no baggage either checked or hand-carried. Following this conversation Mr. Binstock sat directly across from the passenger counter for approximately two hours until the flight's arrival.

Analysis

The evidence is conclusive that the structural damage which occurred aboard Flight 39 while over the vicinity of Daggett, California, was due to a sudden violent explosion in the lavatory. The physical evidence showed that explosive forces emanated from a focal point (i. e., the lavatory washstand

shelf) and left a residue that, under analysis proved to be unexploded ingredients of dynamite. Further proof existed in the finding of a copper fragment in the cabin insulation similar to the material of an unexploded blasting cap that was also found in the toilet receptacle.

It is clear that Passenger Binstock had previously procured dynamite and that dynamite was in his possession shortly before this accident. It is also clear that the detonation of dynamite aboard the aircraft occurred while Passenger Binstock was in the lavatory and that his left hand was in close proximity to the dynamite at the time of detonation. The fact that burned matches and paper were found in the toilet receptacle makes it evident that there had been previous attempts to detonate the blasting cap before it was successful. Accordingly, the Board concludes that the dynamite was intentionally detonated by Passenger Binstock.

Findings

On the basis of all available evidence the Board finds that:

1. The crew, the aircraft, and the carrier were currently certificated.
2. Passenger Binstock went into the lavatory shortly after takeoff and remained there until the explosion occurred.
3. Heat from burned matches and paper applied to a blasting cap was the method used in exploding the dynamite.
4. Both dynamite and the blasting caps had been procured by Passenger Binstock.
5. The explosion ruptured the fuselage shell.
6. Outrushing air from the pressurized cabin greatly enlarged the rupture and Passenger Binstock was blown out through the hole.
7. The aircraft remained under control and was landed uneventfully at a nearby Air Force Base.

Probable Cause

The Board determines that the probable cause of this accident was the act of a passenger in exploding dynamite in flight.

BY THE CIVIL AERONAUTICS BOARD:

/s/ JAMES R. DURFEE

/s/ CHAN GURNEY

/s/ HARMAR D. DENNY

/s/ G. JOSEPH MINETTI

/s/ LOUIS J. HECTOR

S U P P L E M E N T A L D A T A

Investigation

The Civil Aeronautics Board was advised of this accident early on the morning of July 25, 1957. An investigation was immediately started in accordance with the provisions of Section 702 (a) (2) of the Civil Aeronautics Act of 1938, as amended.

Air Carrier

Western Air Lines, Inc., is a Delaware corporation, organized and existing under the laws of the State of Delaware. Its principal offices are located at Los Angeles International Airport, Los Angeles, California. It possesses a currently effective certificate of public convenience and necessity issued by the Civil Aeronautics Board and an air carrier operating certificate issued by the Civil Aeronautics Administration to transport by air persons, property, and mail over these routes, including that between Salt Lake City, Utah, and Los Angeles, California.

Flight Personnel

Captain Milton L. Shirk, age 37, had been employed by Western Air Lines since March 25, 1946. He held a valid airman certificate with airline transport and multi-engine land ratings, and an appropriate rating for the Convair 240-1 aircraft. He had a total of 9,745 flying hours, with 3,092 hours in the type aircraft involved in this accident.

First Officer Seth M. Oberg, age 25, had been employed by Western Air Lines since September 1951. He held a valid airman certificate with commercial rating. He had a total of 1,115 flying hours, with a total of 35 hours in the Convair 240-1.

Stewardess Joan M. Hollinger, age 25, had been employed by Western Air Lines since June 30, 1954. She had received the company's standard training and checkout on the aircraft involved.

The Aircraft

N 8406H, a Convair 240-1, had a total time of 21,043 hours, of which 10,093 had been since overhaul. It was currently certificated by the Civil Aeronautics Administration. The aircraft was equipped with two Pratt and Whitney R-2800 engines and two Hamilton Standard 43E60-381 propellers. Times on both engines since last overhaul were: No. 1, 635 hours, and No. 2, 471 hours, with 1,199 hours and 309 hours on Nos. 1 and 2 propellers, respectively.