

CIVIL AERONAUTICS BOARD

ACCIDENT INVESTIGATION REPORT

Adopted: August 20, 1952

Released: August 21, 1952

ROBIN AIRLINES, INC., NEAR WHITTIER, CALIFORNIA, APRIL 18, 1952

The Accident

At approximately 0334 PST^{1/} April 18, 1952, a C-46 aircraft, N 8404C, crashed and burned near Whittier, California, resulting in destruction of the aircraft and death to all persons aboard - 26 passengers and three crew members. The aircraft was operated by Robin Airlines, Inc.,^{2/} an irregular carrier, under a lease agreement with its recorded owner, Air Charters, Inc., of Carson City, Nevada.

History of the Flight

N 8404C departed New York, New York, at 1809, April 16, as Trip 416W. After making a scheduled stop at Chicago, Illinois, it arrived at Kansas City, Missouri, at 0208, April 17. At this point the flight was taken over by a new crew consisting of Captain Lewis R. Powell, Reserve Captain John D. Treher, Copilot Charles K. Waldron, and Hostess Dolores A. Bradford. The flight time requirements specified by the Civil Air Regulations (Part 42.48) made it necessary to have a three-man flight crew between Kansas City and Burbank because of the expected flight time involved. For this purpose Reserve Captain Treher had deadheaded from Chicago to Kansas City.

Departure from Kansas City was delayed approximately eleven hours when it was found necessary to replace the right engine oil cooler which had developed a leak. The flight departed Kansas City on a VFR (Visual Flight Rules) flight plan at 1338, with Reserve Captain Treher occupying the left pilot seat and Copilot Waldron, the right. Captain Powell occupied a seat in the main cabin.

A precautionary landing was made at Wichita, Kansas, at 1500, to check oil consumption, which was found to be normal, and the flight departed at 1534 on an IFR (Instrument Flight Rules) flight plan, with Captain Treher still flying the aircraft. Upon arriving in the vicinity of Tucumcari, New Mexico, a severe thunderstorm condition was encountered, whereupon the flight turned eastward and landed at Amarillo, Texas, at 1814. Reserve Captain Treher deplaned at this point, and at 2102 the flight again proceeded westward on an IFR flight plan to Phoenix, Arizona, with Captain Powell occupying the left pilot seat and Copilot Waldron still occupying the right.

^{1/} All times referred to herein are Pacific Standard and based on the 24-hour clock.

^{2/} At the time of this accident Robin Airlines, Inc., was d.b.a. (doing business as) North Continent Airlines, although no authorization to change its name had been obtained from the Civil Aeronautics Board.

At 2235 the flight reported over Albuquerque, New Mexico, and at this point changed from an IFR to a DVFR (Defense Visual Flight Rules) flight plan, estimating Phoenix at 0020. It arrived at Phoenix at 0030, April 18, deplaned three adult passengers and one infant, and departed there at 0143 on a DVFR flight plan to cruise at 8,000 feet, Green 5 airway, to Riverside, California, then direct to Burbank, California, the destination.

At 0313 the flight requested and was furnished the Burbank and Los Angeles 0228 weather, which was as follows: Burbank closed, visibility 1/8 mile, and Los Angeles measured 700 overcast, visibility $2\frac{1}{4}$ with haze and smoke, temperature 57°, dew point 54, wind southeast 1, altimeter 29.91. At this time the flight advised it would file an IFR flight plan later. At 0317 the flight reported over Riverside Range Station at 6,000 feet and requested an IFR approach to Los Angeles, estimating over Downey at 0336. The Los Angeles low-frequency radio range was not in operation, which fact was known to the pilot. At 0323, ARTC (Air Route Traffic Control) gave the following clearance to the aircraft: "From present position to Downey radio beacon cruise at least 500 on top - Descend VFR and cross Downey and maintain 3,000 - Contact Los Angeles Approach Control over La Habra - No delay expected." The pilot repeated this clearance.

The following information concerning the handling of this flight is taken from the report of the Los Angeles Airport Chief Traffic Controller:

"At 0333P, N-04C called Los Angeles Approach Control on 119.9 mc (very loud and clear) advising he believed he was in the vicinity of La Habra and was having difficulty with his ADF equipment account static and that he would have to make some other type of approach. The Approach Controller asked N-04C if he had ILS equipment and whether he believed he could pick up the outer marker satisfactorily. The pilot answered in the affirmative and further stated that he could probably find the ILS Glide Path and proceed from there on in. N-04C was then cleared (0333P) for a straight-in ILS approach from the Los Angeles Outer Marker and given the current Los Angeles weather and also advised that the Los Angeles L.F. Range was inoperative account being shut-down for maintenance.

"The Los Angeles Approach Controller then immediately began watching for N-04C's appearance within the next few minutes on the Surveillance Radar Scope on the normal setting of 20 mile range as the flight continued westbound toward the Los Angeles Outer Marker. When no target appeared on the Surveillance Scope by 0337P several radio calls were directed to N-04C by Los Angeles Approach Control. No response was received. * * *

About 1000 the morning of April 18, Mr. Hayden Jones, a rancher of Puente, California, came upon the wrecked aircraft about two miles east of Whittier and $22\frac{1}{2}$ miles east-northeast of the Los Angeles International Airport.

Investigation

The accident occurred near the top of a grassy knoll at an altitude of 980 feet MSL while the aircraft was banked slightly to the left, probably level longitudinally, and on a heading of 260° magnetic. This site is

approximately 2,600 feet north of the center line of the ILS approach path to Los Angeles International Airport, slightly west of north of La Habra, and about $7\frac{1}{2}$ miles east of the Downey fan marker.^{3/}

Evidence indicated that the power plants were operating normally and that both were developing appreciable power at initial impact. Following first ground contact, the aircraft continued airborne for a distance of 1,875 feet across a ravine, where it crashed and burned on the upslope of the opposite side.

Examination of the wreckage revealed that at initial impact with the ground the landing gear was in the extended position and the wing flaps were fully retracted. No evidence was found to indicate that any structural failure or malfunctioning of the aircraft and power plants, or of any of their components, had occurred prior to the accident. As far as could be determined from examination of the wreckage and a review of the maintenance records, the aircraft was well maintained and was in an airworthy condition when it crashed.

Damage to the cockpit section was so extensive that no reliable readings could be made of most of the instruments or control settings. The barometric scale of each of the altimeters was set at 29.89. Examination of the aircraft clock disclosed that although the hour hand was loose on the shaft, the minute hand was stuck at approximately 33:45 and the second hand at :45.

The latest weight and balance report obtainable was the one out of Kansas City, which indicated a gross weight of 44,952 lbs., including 1,315 gallons of fuel. This was within the allowable gross of 45,000 lbs. It was impossible to locate a manifest out of Phoenix, a copy of which should have been mailed to the company's headquarters in accordance with the Civil Air Regulations. At Amarillo, 606 gallons of fuel and 32 quarts of oil were added. Using the basic weights out of Kansas City and estimating 150 gallons per hour fuel consumption (normally used for C-46 flight planning purposes) with 17 gallons per stop allowed for taxiing and warm-up, the aircraft is calculated to have departed Phoenix with a gross weight of 40,542 lbs., including 715 gallons of fuel. At the time of the accident, approximately 422 gallons of fuel remained.

Nearly all of the radio equipment was destroyed by the impact and subsequent fire. It was determined, however, that the ILS Control Head was positioned to Channel (Y), corresponding to the Los Angeles ILS frequencies, and that the ADF was tuned to approximately 260 kc. The Los Angeles ILS outer marker operates on a frequency of 266 kc. According to company maintenance records, all radio equipment had been overhauled, establishing ZERO service time. It was then installed on this aircraft March 25, 1952. The ADF was suitably compensated April 3, 1952.

All radio contacts with the flight were normal, the last one at 0333 being reported as, "very loud and clear." The only irregularity mentioned by the flight crew was the difficulty with the ADF equipment because of static. The Airways Flight Inspection Branch of CAA, on April 18, made a

^{3/} See Appendix A.

special check of the Los Angeles instrument landing system and the La Habra and Downey fan markers. The report on this check indicated that operation of these facilities was normal in all respects.

Information given the crew at Phoenix showed clear weather for the remainder of the flight, with the exception of the immediate vicinity of Los Angeles where Burbank was forecast to be zero-zero with fog, and the Los Angeles Airport 800 feet and 2 miles with fog and haze, at the time of the flight's anticipated arrival there.

During the last leg of the flight, Phoenix to Los Angeles, it appears that clear sky and excellent flying conditions existed as far as Pomona, California. At the time of the accident the weather at Los Angeles Airport was reported to have been ceiling 700 feet, overcast, visibility $2\frac{1}{4}$ miles with haze and smoke; and Burbank ceiling 100 feet, sky obscured, visibility $\frac{1}{4}$ mile with fog. The stratus and fog had been spreading inland and at the time of the accident apparently included the cities of Whittier and Puente, and the adjacent hills. The top of the stratus ranged from about 1,200 to 1,500 feet and it is indicated that the west slopes of the Puente hills, including the tops of the ridges and site of the crash, were in the fog at the time of the accident; however, it was clear immediately to the east of these hills. Aircraft icing conditions did not exist and turbulence, if any, would have been negligible.

On the morning of April 18, shortly after 0330, a farmer and his wife, living on a hill approximately 500 feet above sea level and about $2\frac{1}{2}$ miles in a northwesterly direction from the scene of the accident, were disturbed by a plane flying very low over their home. Getting out of bed, they saw through a window the flashing lights of a low-flying airplane headed in a westerly direction. The plane continued in this direction until out of sight but not out of hearing. Without again seeing the plane they heard it returning, headed easterly, in which direction it continued until beyond their range of hearing. No aircraft other than the one that crashed are known to have been in this area at that time.

Captain Lewis Reed Powell had been actively engaged in aviation for a number of years and had accumulated 7,751 hours of flying time when he became physically incapacitated on March 30, 1951, by a coronary attack. This flight time included, as captain, 1500 hours in DC-3's, 1900 in DC-4's, and 600 in C-46's. He was issued Airline Transport Rating No. 61564 in December 1945. This rating was reissued December 23, 1951, after he had completed a rating and equipment check in DC-3 aircraft given by a CAA designated flight examiner.

The heart attack suffered by Mr. Powell on March 30, 1951, was of such severity that his physician immediately sent him to a hospital in an ambulance, under oxygen. His condition improved sufficiently for him to be taken home by ambulance on April 13, but he was confined to bed for an additional six weeks, following which activity was slowly and gradually resumed. He remained under medical care as an office patient until December 1951, and was last seen by his physician on April 12, 1952. His physician stated that he responded well to treatment and made an uneventful recovery.

On September 1, 1951, Captain Powell visited Dr. Francis C. Herzog, the CAA designated medical examiner from whom he usually took his pilot physical examinations. Although Dr. Herzog found no physical irregularities in this examination, when Captain Powell, in response to a question, stated that he had had a heart attack since his last CAA physical, the examiner told him he could not issue a medical certificate as the matter would require a decision by the CAA Regional Medical Officer. Captain Powell was then requested to obtain an electrocardiogram and a letter from his personal physician for forwarding to the CAA Regional Medical Officer.

Upon receipt of this information the Acting Regional Medical Officer, Dr. Fred M. Ellis, referred the case to the CAA Medical Standards Branch, Washington, D. C., and received the following reply, dated October 23, 1951, "The case of Lewis Reed Powell, age 45, shows definite evidence of posterior myocardial infarct and definite history. I believe that any of these cases should be denied any class of certification, including Mr. Powell."

Dr. Ellis then wrote Dr. Herzog as follows, on November 14:

"This letter is intended to complete your record for Mr. Lewis Reed Powell.

"Dr. John Smith in our Washington office felt that Mr. Powell, like others who have coronary artery disease, should not be certified for solo or pilot in command flying. I have given Mr. Powell a Class One certificate with the following limitation, 'Valid for Company Check Pilot Duties.'

"Mr. Powell has spent considerable time trying to convince me that our policy regarding coronary artery disease is unfair. He was not successful.

"I have suggested that he visit Dr. Smith in Washington for a cardiac survey. I believe that he will do this.

"I am sincerely sympathetic with Mr. Powell's occupational catastrophe; however, I am convinced that coronary artery disease and pilot responsibility are incompatible."

On November 14, 1951, Captain Powell was issued a first-class medical certificate, dated September 1, 1951, with the limitation, "Valid for Company Check Pilot Duties." When Captain Powell was examined on March 14, 1952, for renewal of his medical certificate, Dr. Herzog again found no physical irregularities but because of the pilot's heart history, issued a medical certificate with the same limitation as before.

Mrs. Powell, widow of Captain Powell, was unable to testify at the accident investigation hearing. However, her statement was taken later, at which time she stated that both she and Captain Powell were well aware of the limitation on Captain Powell's medical certificate, as was an official of another irregular carrier for whom Captain Powell made two trips in December 1951. She stated further that Captain Powell told her he was not discussing the limitation on his certificate with any of the other pilots, as he hoped to go to Washington and have the limitation removed.

Captain Powell made application for employment as a pilot with Robin Airlines on December 22, 1951, and on December 23 successfully passed an equipment and rating check in DC-3 aircraft, given by C. A. Rector, than Director of Operations for Robin Airlines and a CAA designated check pilot. Powell was hired by Robin Airlines on February 20, 1952, and on February 23 was given a pre-assignment check by C. A. Rector in C-46 equipment. He was assigned as a copilot and made his first flight for the company on February 24, Burbank-Oakland-Burbank, in a C-46. From the time he was employed by Robin through March 31, Powell made nine flights as copilot - four in C-46's and five in DC-3's; four flights as co-captain - one in a C-46 and three in DC-3's; and two flights as reserve captain, both in DC-3's. On April 1 he passed an equipment and rating check in the C-46, given by CAA Designee William H. Butler, with a below average grade of 75%, and on that date was assigned as captain by Robin Airlines.

From April 1 until April 18, the date of the accident, Powell made nine flights as captain in C-46 equipment. With the exception of two trips between Burbank and Oakland, all of his flights for Robin Airlines were between Burbank and Kansas City. All of the passenger-carrying flights made by Powell were contrary to the limited medical certificate which restricted him to company check pilot duties.

Company officials testified that prior to the accident they were not aware of any limitation on Captain Powell's medical certificate, although they had examined his pilot papers on more than one occasion. CAA Designee Butler, who gave Powell his C-46 equipment check on April 1, testified that he, too, looked at Powell's pilot papers, including his medical certificate, and was aware of no medical limitation. He stated further that he was sure he would have noticed the statement under "limitations" because it would be so unusual.

On March 11 CAA Aviation Safety Agent G. O. Trapp ran a ramp check at Amarillo on a flight on which Powell was a crew member. He stated in his report that Powell did not possess the required airman identification card. Mr. Trapp did not testify at the Board's accident investigation hearing but a statement was obtained from him later, in which he stated that he examined Powell's medical certificate during the ramp check and noted no limitations. This is understandable if the medical certificate was folded when it was examined. It has been demonstrated that a medical certificate can be so folded and placed in a container that while all other pertinent information can be easily read, that portion relating to limitations can be concealed. In addition, the specific wording of the limitation was such as not to indicate clearly and unambiguously the fact that it was intended to be a limitation to acting solely as a check pilot and in no other capacity, but was at least susceptible of the construction that it represented an additional authorization.

The waiver clause in Part 29 of the Civil Air Regulations is designed for use where a pilot's experience, ability, and judgment compensate for physical deficiency. However, no amount of experience, ability, and judgment can compensate for an organic disease which may, at any time, completely incapacitate the pilot. Hence the finding required by Section 29.5 before a

waiver is granted could not be properly made in this case. We have, therefore, requested the Administrator of Civil Aeronautics to take specific steps to prevent recurrence of such a situation as arose in the case of Captain Powell.

According to testimony of Dr. Ellis, the acting CAA medical officer of Region VI, the intent of the limitation placed on this medical certificate was to restrict Powell to company check pilot duties only and he was not to fly solo, as pilot in command, or as a copilot. Captain Powell was fully aware of the intent of this medical limitation. Dr. Ellis testified that Powell spent several hours with him at the time the medical certificate was issued, discussing the significance of the limitation and trying to persuade him to issue the certificate without it. The record also shows that Mr. Frank Allen, then Chief, Safety Operations Division, CAA Region VI, also knew of the limitation, and that he had discussed it with both Captain Powell and Dr. Ellis.

The autopsy surgeon reported he found definite evidence that Captain Powell had a badly damaged heart and that he had had a recent hemorrhage. While he could not determine whether or not death occurred before the crash, he did state that this hemorrhage had occurred within, "probably a matter of hours, at the outside. It could have been immediately before or it could have been a matter of several hours before."

Robin Airlines' ground training program for pilots is handled under contract by Fowler Aeronautical Service at Burbank. A description of that training program was given in the Board's report issued July 16, 1952, covering the forced landing involving this carrier at Cobourg, Canada, December 20, 1951.

During the period of approximately two months that Powell was in the employ of Robin Airlines, he received and completed two of Fowler's source material reviews - one with a grade of 100%, the other with 90%. In addition, he had one-half hour of Link instruction in March, which was discontinued because of mechanical difficulty with the equipment.

Company records indicated that Copilot Waldron was sent one of these source material reviews after he started working for Robin Airlines on April 1; however, there was nothing to indicate that he had either received or completed it. On April 1 Waldron was given a pre-assignment instrument and equipment check flight in a C-46 by CAA Designee Butler, after which time he was assigned by Robin Airlines as a copilot.

Analysis

Since examination of the wreckage and review of maintenance records did not reveal any evidence of failure or malfunctioning of the aircraft or power plants or of any of their components prior to the crash, and since no mechanical difficulty was reported in any of the radio contacts with the flight, it must be concluded that the cause of the accident was operational rather than mechanical.

Based on the known fuel aboard when the flight departed Kansas City and that taken aboard at Phoenix, it is evident that there was sufficient fuel for the flight to have remained in the air from two to three hours longer had the

crew considered it necessary or advisable. It is also apparent that at initial impact with the ground the aircraft was in controlled flight with both engines operating at appreciable power.

The aircraft had ample radio equipment and all contacts, the last of which was just a few seconds before the crash, were reported to have been "loud and clear." It could not be determined whether these contacts were made by the captain or the copilot. Moreover, nothing was said or otherwise noted to indicate that the flight was in any difficulty, or what things were other than normal, and the flight appears to have been routine from the time it departed Amarillo until it reported over Riverside.

In light of the now known facts concerning the captain's physical condition, there has been much conjecture as to whether he suffered a heart attack in flight. The Board believes that if this had occurred, some indication would have been given in the radio contacts. If the captain made the contacts, he apparently was all right; if they were made by the copilot and something had happened to incapacitate the captain, it would seem very unlikely that no mention would be made of the situation. The normality of these contacts, five of which took place in the one-minute period preceding the accident, leads us to the conclusion that no unusual condition existed in the cockpit. It should be noted, however, that both the captain and the copilot must have been badly fatigued at this stage of the flight. Evidence shows that they arrived at the Kansas City Airport about 0200, April 17, although the flight did not depart until approximately 11 $\frac{1}{2}$ hours later because of mechanical difficulty.

Copilot Waldron's flight duty time was continuous from the time of departing Kansas City until the accident, approximately 14 hours later.^{4/} Captain Powell deadheaded from Kansas City to Amarillo, where he took over as pilot in command. Although his actual flight duty time totaled less than seven hours, more than 25 hours had elapsed between the time he and Waldron arrived at the Kansas City Airport and the time of the accident. The amount of rest they might have had during the delay at Kansas City is not known; however, it is known that neither left the airport during that period.

From the time of departure from Phoenix until reporting over Riverside at 6,000 feet, the flight averaged approximately 200 mph. Had this average been maintained beyond Riverside the flight would have arrived in the vicinity of La Habra at approximately 0329, five minutes before the accident occurred. A very unlikely reduction in ground speed to 141 mph would have been required to bring the flight direct from Riverside to the scene of the accident in the 17-minute interval between reporting over Riverside and the time of the accident. It, therefore, appears more logical to believe that the flight arrived in the La Habra area about 0329 and spent the next few minutes maneuvering in that area at a low altitude. This belief is further substantiated by statements of witnesses who saw and heard a low-flying aircraft in the area a few minutes before the crash occurred.

^{4/} This time greatly exceeds the limitations prescribed under Part 42.48 of the Civil Air Regulations.

Since the flight had been instructed by ARTC to maintain 3,000 feet until passing Downey, its altitude in the vicinity of La Habra (east of Downey) should not have been less than 3,000 feet. It is difficult to explain the flight's being so low in this area, unless the pilot was attempting to make a visual approach beneath the overcast, which, in our opinion, is most likely to have happened. The layer of fog had moved inland to a point approximately five miles east of the scene of the accident; east of there, however, the weather was clear. Much of Captain Powell's flying experience had been acquired in the Los Angeles area and he was familiar with the terrain. Only one-half mile south of the scene of the accident, the terrain is considerably lower, and had the aircraft been in this area, a visual approach might have succeeded. There is no excuse for such an approach to have been attempted, however, in view of the presumed capabilities of the crew and the properly functioning flight and ground facilities available for the ILS approach for which the flight had been cleared.

On March 21, 1952, the Administrator filed a complaint with the Board requesting revocation of the irregular air carrier operating certificate held by Robin Airlines, Inc. On April 18, 1952, after the subject accident, the Administrator imposed an emergency suspension on that certificate and on June 17, 1952, the Board continued the emergency suspension pending final decision in the revocation proceeding.

Findings

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

1. The carrier was operating under Air Carrier Operating Certificate No. 6-272, reissued by the Civil Aeronautics Administration on December 18, 1951, to Robin Airlines, Inc.
2. The aircraft was properly certificated, in an airworthy condition, and loaded within its certificated gross weight; it carried ample fuel for continued flight at the time of the accident.
3. Captain Lewis R. Powell served as command pilot on this flight and on previous ones, contrary to the limitation imposed by his medical certificate, although he was fully aware that this limitation restricted his flying activities to company check pilot duties only.
4. Copilot Charles K. Waldron was properly certificated for the flight involved, but during this flight exceeded the flight time limitations prescribed under Section 42.48 of the Civil Air Regulations.
5. The flight was not conducted in accordance with the ARTC approach clearance, in that it descended considerably lower than the minimum altitude prescribed between Riverside range and Downey fan marker.
6. The flight was in clear weather until reaching the Puente Hills, which were clear on the east slope but in fog to the west.
7. Weather conditions at Los Angeles International Airport were satisfactory for the ILS approach for which the flight had been cleared, but were not satisfactory for a visual approach.

Probable Cause

The Board determines that the probable cause of this accident was the action of the pilot in voluntarily descending below the minimum altitude for which he was cleared, and attempting an approach at an altitude too low to clear the terrain.

BY THE CIVIL AERONAUTICS BOARD:

/s/ DONALD W. NYROP

/s/ OSWALD RYAN

/s/ JOSH LEE

/s/ CHAN GURNEY

Joseph P. Adams, Member, did not participate in the adoption of this report.

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

Investigation and Hearing

At approximately 0555, April 18, 1952, the Civil Aeronautics Board was advised through the Los Angeles CAA Communications Station that a Robin Airlines, Inc., Curtiss C-46 airplane was overdue at Los Angeles International Airport. It had been unreported since 0333. About 1000 on April 18, the Los Angeles County Sheriff's Office advised the Board that the wrecked aircraft had been located approximately two miles east of Whittier, California. Two CAB investigators were dispatched to the scene and an investigation was immediately initiated in accordance with the provisions of Section 702(a)(2) of the Civil Aeronautics Act of 1938, as amended. In connection with the investigation of the accident, a public hearing was held at Santa Monica, California, May 14 and 15, 1952.

Air Carrier

On April 30, 1948, the Board issued a letter of registration to Norman D. Kessler, d.b.a. Robin Airlines, and the non-scheduled air carrier operating certificate was issued by the CAA on June 25, 1948. Robin Airlines, Inc., is a California corporation with its principal place of business at Lockheed Air Terminal, Burbank, California. On December 27, 1949, the Board adopted an order reissuing the letter of registration to the corporation, Robin Airlines, Inc., and an air carrier operating certificate was reissued by the CAA on March 16, 1950. This operating certificate expired on June 30, 1951, but was reissued by the CAA on December 18, 1951.^{5/}

Flight Personnel

Captain Lewis Reed Powell, age 46, became an employee of Robin Airlines, Inc., February 20, 1952. He held Airline Transport Pilot Rating No. 61564 and had on September 1, 1951, and again on March 14, 1952, been issued a first-class medical certificate which stated under limitations, "Valid for Company Check Pilot Duties." Captain Powell had accumulated a total flight time of 7,913 hours, of which approximately 600 hours had been in the type of equipment involved. His last instrument and rating check was accomplished April 1, 1952.

Copilot Charles K. Waldron, age 37, held Pilot Certificate No. 27169, with commercial, flight instructor, instrument, and airplane single and multi-engine land ratings. His last CAA medical examination was accomplished on December 31, 1951, and his last instrument and equipment check on April 1, 1952. Of his total flight time of approximately 3,000 hours, 495 were in the type of equipment involved.

Hostess Dolores A. Bradford, age 20, having previously been employed by Miami Airlines and Federated Airlines as a hostess, came with Robin Airlines, Inc., December 18, 1951.

^{5/} For detailed information concerning the corporate and operational history of Robin Airlines, Inc., see Docket SA-250 and the Board's report covering that carrier's forced landing at Cobourg, Canada, issued July 16, 1952.

The Aircraft

The aircraft, a Curtiss C-46, N 8404C, was equipped with two Pratt and Whitney engines, Model R-2800-75, and Hamilton Standard propellers, Model 23E50-505. The aircraft was under lease by Robin Airlines, Inc., from its owner, Air Charters, Inc., a Nevada corporation. By the terms of the lease, dated March 28, 1952, which was to continue in effect until March 28, 1953, the aircraft was to be maintained by International Airports, Inc., Burbank, California, in accordance with the Arrow Airways, Inc., approved maintenance manual.