

SE 164-81

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On 1/5/72, a conference was held at the offices of Northwest Airlines (NWA), Seattle-Tacoma International Airport (Sea-Tac), for the purpose of conducting an experiment on the following day, during which a "package" weighing approximately 230 pounds would be dropped from instant Boeing 727.

The conference was chaired by Mr. PAUL A. SODERLIND, Director of Flight Services for NWA, and attended by the following:

U.S. Air Force:

Captain THOMAS SPANGLER;
Captain RONALD WILSON;
M/Sgt. DAVID SAIZ;
Sr. M/Sgt. WALLACE JOHNSON

Federal Bureau of Investigation:

SAC J.E. MILNES;
SA THOMAS J. MANNING;
SA JOHN S. DETLOR;
SA CHARLES E. FARRELL

On 1/5/72, Mr. SODERLIND advised that the Flight Recorder records taken from the particular NWA plane involved in the hijacking, disclose that at 7:43 PM, the rear stairs of the Boeing 727, were extended perhaps 20 degrees and a warning light flashed on the control panel in the pilot's cabin. The records further show there was no pressure bump when the stairs were extended or at least there was no significant bump.

SODERLIND advised that from a careful analysis of the flight recorder and the information furnished by the flight crew, he was convinced that the pressure bump would have to have been associated with either:

- (1). The hijacker going down the stairs or,
- (2). His leaving the aircraft itself.

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In describing the "pressure bump", SODERLIND advised that all three flight crew members felt it in their ears and the "Cabin Pressure Rate of Change Gauge" was then checked and found to have had a very significant change.

Captain THOMAS SPANGLER, U.S. Air Force McChord Air Force Base, Washington, advised that he had requested the unit at SAGE, who prepared the first map concerning radar tracing of the route taken by the hijacked aircraft, to re-analyse their figures and pinpoint as closely as possible, the exact route taken by the aircraft.

It was then arranged that U.S. Air Force Captain RONALD WILSON; M/Sgt. DAVID SAIZ and Senior M/Sgt. WALLACE JOHNSON would construct three "sleds" which could be weighted to approximate 230 pounds.

The sleds were to be constructed in such a fashion that the bottom would have two runners made of 2 x 4s, so that they would be allowed to slide down the air stairs while the plane was in flight.

Departure for the experiment was scheduled for 1/6/72, at 8:30 AM, with all involved requested to be there by 7:30 AM.

On 1/6/72, Mr. PAUL SODERLIND piloted the identical plane which had been involved in the hijacking. As crew members he had the following Northwest personnel:

Captain ERIC M. LINDEN, NWA Manager of Flight Tests, who served as co-pilot;

HAROLD E. ANDERSON, NWA Second Officer, who served in that capacity on both flights;

TERRY G. SMITH, NWA Engineer, and

GLEN DOAN, NWA Pilot, Flight Testing.

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Both SMITH and DOAN were in the aft section of the aircraft during the experimental drop and maintained communication with the pilot and took motion pictures of the experiment. The aforementioned U.S. Air Force representatives and the aforementioned FBI personnel, were also on board. Captain THOMAS SPANGLER was in the cabin with the pilot and maintained contact with an Air Force C-141, which followed the NWA 727 to observe the reaction of the airplane and also to take movie and still pictures of the drop.

The plane was flown from Sea-Tac out over the Pacific Ocean near Hoquiam, Washington, where conditions which prevailed during the hijack, namely flaps at 15 degrees, landing gear down and the air stairs lowered, were in effect.

The air stairs were lowered by the hydraulic controls at the rear of the aircraft and would not go down beyond approximately 20 degrees because of the counter-action of the air stream.

Captain RONALD WILSON and M/Sgt. DAVID SAIZ, who as a safety measure were equipped with parachutes and helmets, walked down the air stairs to test for the reaction of this weight change on the flight instruments and the stability of the stairs themselves.

The result was found to be that the stairs were completely stable with no drag on the person standing on the stairs and with very little change noted on the Cabin Pressure Rate of Change Gauge.

With a man standing at or near the bottom of the stairs, it was noted that the air stairs go down to where the step is almost level and it was apparent that the hijacker could have stood at full height before jumping. At one time it was thought he might have had to roll out if the air stream prevented the stairs from lowering; however, the experiment showed that the weight of a man on the stairs would lower it to a point where he could be standing at full height.

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Two sleds were used in the experiment at different times. The first sled left the bottom of the stairs prematurely and at that time M/Sgt. SAIZ was still standing on the movable part of the air stairs and although there was a significant change shown on the cabin pressure gauge, it was not nearly as significant as it was on the second test.

The second sled was lowered to the end of the air stairs and held with a line. The weight of that sled also depressed the stairs to nearly full extension and when the line was released, the sled fell directly down, according to the witnesses from within the plane and as confirmed by still pictures taken from the Air Force C-141. At one time, the possibility was raised that the hijacker might have been forced up against the underside of the fuselage after he left the plane. This experiment however, proved conclusively that he would have fallen down without any difficulty.

At the moment the sled left the stairs, the members of the flight crew had the same experience in their ears as occurred on the night of the hijacking and the "Cabin Pressure Rate of Change Gauge" reacted as violently. It was concluded that the reaction occurred when the stairs were forced upward by the air stream after the weight had been removed from the stairs.

HAROLD E. ANDERSON, who was a member of the crew on the day the plane was hijacked, served in the same capacity during the above captioned experiment and testified that the reaction during the test was identical with the occurrence during the hijacking.

The test flight left Seattle-Tacoma International Airport at approximately 8:30 AM and returned to the airport at approximately 10:15 AM.

The reaction of the air stairs to the sudden release of the 230 lb. sled is shown in the following photographs.