Collision with overpass, Boeing 757-2S7, March 1, 1997

Micro-summary: This Boeing 757-2S7's vertical stabilizer hit an overpass.

Event Date: 1997-03-01 at 2012 MST

Investigative Body: National Transportation Safety Board (NTSB), USA

Investigative Body's Web Site: http://www.ntsb.gov/

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- 2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. Your company's flight operations manual is the final authority as to the safe operation of your aircraft!
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|---|---|----------------------------------|--------------|----------------|-----------------------|--------------------------------------|------------------|--|--|--|
| National Transportation Safety Board NTSB II | | | W97IA11 | 2 | Aircraft Regist | Aircraft Registration Number: N902AW | | | | |
| FACTUAL REPORT Occurrence | | | ate: 03/01 | /1997 | Most Critical In | Most Critical Injury: None | | | | |
| AVIATION ETYBON | rence T | ype: Incide | ent | Investigated B | Investigated By: NTSB | | | | | |
| Location/Time | | | | | | | | | | |
| Nearest City/Place | State | Zip Co | ode | Local Time | Time Zone | | | | | |
| DENVER | со | 80249 | | 2012 | MST | | | | | |
| Airport Proximity: On Airport | Airport Proximity: On Airport Distance From L | | | | Direction Fro | Direction From Airport: | | | | |
| Aircraft Information Summary | | | | | • | | | | | |
| Aircraft Manufacturer | | | Model/Series | | | | Type of Aircraft | | | |
| Boeing | 7 | 757-2S7 | | Airplane | | | | | | |
| Sightseeing Flight: No | Air N | Air Medical Transport Flight: No | | | | | | | | |

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

On March 1, 1997, at 2012 mountain standard time, a Boeing 757-2S7, N902AW, owned by Meridian Trust Company of Reading, Pennsylvania, and operated by America West Airlines, Inc., of Phoenix, Arizona, sustained minor damage when it struck an overhead bridge while taxiing at Denver, Colorado, International Airport. There were no injuries to the two cockpit crew members, 4 cabin crew members, and 95 passengers. Visual meteorological conditions prevailed, and an IFR flight plan had been filed. The airplane was being operated as Flight 491, scheduled domestic passenger service, under Title 14 CFR Part 121. The flight originated at Phoenix, Arizona, at 1819 Pacific standard time.

According to the transcript of control tower communications, the airplane landed on runway 07. At 1952:49, as its landing roll was slowing, the crew was instructed to "turn left at (taxiway) bravo four" and to remain on the tower frequency until entering taxiway "alpha sierra, then contact ramp tower contact ramp control." The crew acknowledged. At 1953:08 the tower controller asked, "You don't normally fly a (Boeing) seven five (seven) in here, do you?" The crew did not answer, and there were no further transmissions between Denver control tower and flight 491.

There was a recording equipment malfunction in the B concourse control tower. As a result, only transmissions from the controller were recorded. According to the transcript, the controller instructed "Cactus 491, (taxi via) alpha sierra to the gate (A-44), sir. Be advised that we've got men in vehicles that are working in that area. They should give way to you but if you have any problems with that commute, give me a call back." The B concourse control tower is manned by airport personnel, not FAA air traffic control (ATC) personnel. According to the assistant deputy manager of aviation, most of the personnel are former military or civilian ATC personnel and have been thoroughly trained in ground operations.

To get to gate A-44 via taxiway alpha sierra, the airplane had to pass beneath an overhead bridge connecting the main terminal building and "A" concourse. As the airplane passed beneath the bridge, its vertical stabilizer struck the bridge, crushing the vertical stabilizer cap and rudder.

The following note appears on the Jeppesen taxi chart: "CAUTION: OVERHEAD PASSENGER BRIDGE ON SOUTH SIDE OF CONCOURSE A PROVIDES 40' TAIL AND 117' WINGSPAN CLEARANCE WHEN ON TAXIWAY CENTERLINES." The following America West NOTAM (Notice to Airmen) was contained in the dispatch release and was given to the flight crew: "757 AIRCRAFT EFFECTIVE 1 MARCH, DO NOT TAXI UNDER THE PASSENGER BRIDGE SOUTH SIDE OF CONCOURSE A."

According to the captain's statement, "it appeared that there was more than adequate clearance for the tail of the aircraft, but I became more concerned with the wingtip clearance from the side support of the bridge rather than the tail clearance."

In his statement the controller on duty in the B concourse control tower wrote, "All I could see

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Occurrence Date: 03/01/1997

Occurrence Type: Incident

| Narrative (| Continued) |
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was the aircraft's lights and told the aircraft to taxi alpha sierra. I was not expecting a (Boeing) 757 on this flight and did not see the aircraft was a 757."

According to an America West spokesman, this was the first time the airline had used the Boeing 757 on this particular route. They had previously used the Airbus 320. There is adequate clearance for the Airbus 320, but not the Boeing 757, to pass beneath the overhead bridge.

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| ÁVÍATIQŇ | | | rrence Type | · Incident | | | | | | | | |
|---|--------------------------------|---------------|------------------------|--------------------------------------|--------------------|---------|----------------------|-------------|-------------|----------|--------|-------------------|
| VETY BOK | | Occur | urrence Type: Incident | | | | | | | | | |
| Landing Facility/Approach Info Airport Name | ormation | $\overline{}$ | Airport ID: | T Airport El | vation | Pun | way Used | Pupws | av Lengt | h T | Punw | vay Width |
| DENVER INTERNATIONAL | | - 1 | Airport ID: DEN | Airport Ele | evation Ft. MSL | | Way Useu | Kuliwa | ay Lengt | '' | Kunw | /ay widiri |
| DENVERNINTERNATIONAL | | | | 3401 | Ft. IVIOL | | | | | | | |
| Runway Surface Type: | | | | | | | | | | | | |
| Runway Surface Condition: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Type Instrument Approach: | | | | | | | | | | | | |
| VFR Approach/Landing: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Aircraft Information | | | | | | | | | | | | |
| Aircraft Manufacturer | | | | l/Series | | | | | Serial | Number | | |
| Boeing | | | 757-2 | 2S7 | | | | | 2332 | 2 | | |
| Airworthiness Certificate(s): Transport | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Landing Gear Type: Retractable - | • | | | 111 | 141 | | 2 1 2 2 2 2 | : 22 | N. Complete | (- | | |
| Homebuilt Aircraft? No response type: | Number of Seats: 2 | 200 | | ed Max Gross anufacturer: | VVT. | | | | Numbe | er of En | | : 2 d Power: |
| Turbo Fan | | | Rolls-Ro | | | | Model/Se RB 211 | | | | | 000 LBS |
| - Aircraft Inspection Information | | | | | | | | | | | | |
| Type of Last Inspection | | | Date of Las | st Inspection | | Time Si | ince Last Inspection | | | Airfram | ne Tot | tal Time |
| Continuous Airworthiness | | | 03/1997 | | | | | 45376 Hours | | | | |
| - Emergency Locator Transmitter (E | LT) Information | | • | | | | | | | | | |
| ELT Installed? No | ELT Operate | .ed? | | ELT Aided in Locating Accident Site? | | | | | | | | |
| Owner/Operator Information | | | | | | | | | | | | |
| Registered Aircraft Owner | | | Street / | Address | . | | | | | | | |
| MERIDIAN TRUST COMPANY | , | | City | 35 N. | SIXTH | ST. | | | | State | | Zip Code |
| WEIGHT TROOT COM. T | | | City READING F | | | | | | | | e | 2ip Code 19601 |
| | | | Street A | | | | | | | | • | |
| Operator of Aircraft | | | | 4000 | E. SKY | HARBO | R BLVD. | | | | | |
| AMERICA WEST AIRLINES | | | City PHOENIX | | | | | | | | | Zip Code 85034 |
| Operator Does Business As: | Operator Designator Code: AWXA | | | | | | | AZ VXA | | 00004 | | |
| - Type of U.S. Certificate(s) Held: | | | | | | | <u> </u> | | , | V/U . | | |
| Air Carrier Operating Certificate(s): | Flag Carrier/Don | nestic | | | | | | | | | | |
| | - | | | | | | | | | | | |
| Operating Certificate: | | | | Operato | or Certifi | cate: | | | | | | |
| Regulation Flight Conducted Under: | Part 121: Air Ca | arrier | | | | | | | | | | |
| Type of Flight Operation Conducted: | Scheduled; Dor | mestic; | Passenge | r Only | | | | | | | | |
| | | FACTU | JAL REPC | ORT - AVIA | TION | | | | | | | Page 2 |
| | , | FACIU | JAL KEPU | JKI - AVIA | MOIL | | | | | | | Page 2 |

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Occurrence Date: 03/01/1997

| A TOTAL CENT OF T | Occurrence Date: 05/01/1991 | | | | | | | | | | |
|---|-----------------------------|-------------------------|--|----------------------|----------------------------|----------|-----------|--------|---------------|---------------------|--|
| AVIATION | Occurrence Type: Incident | | | | | | | | | | |
| First Pilot Information | | | | | | | | | | | |
| Name | | | City | | | | State | Da | ate of Birth | Age | |
| On File | | | On File | File On File On File | | | | | | 56 | |
| Sex: M Seat Occupied: Left Princ | n Pilot | | | Cer | tificate N | ımber | : On File | | | | |
| Certificate(s): Airline Transport; Commercial | | | | | | | | | | | |
| Airplane Rating(s): Multi-engine Land; Single-engine Land | | | | | | | | | | | |
| Rotorcraft/Glider/LTA: None | | | | | | | | | | | |
| Instrument Rating(s): Airplane | | | | | | | | | | | |
| Instructor Rating(s): None | | | | | | | | | | | |
| Type Rating/Endorsement for Accident/Incident Aircraft? | ? Yes | | | Current | Biennial | Flight R | eview? | | | | |
| Medical Cert.: Class 1 Medical Cert. Status: | Valid Med | icalw/ wa | aivers/lir | n. | Da | te of La | st Medic | al Exa | m: | | |
| | | | | | | | | | | | |
| - Flight Time Matrix All A/C This Make and Model s | Airplane Single Engine | Airplane Mult-Engine | Night | Actua | Instrument ual Simulate | | Rotoro | raft | Glider | Lighter Than Air | |
| Total Time 17500 2500 | | | | | | | | | | | |
| Pilot In Command(PIC) 15000 2500 | | | | | | | | | | | |
| Instructor | | | | | | | | | | | |
| Last 90 Days 130 130 | | | | | | | | | | | |
| Last 30 Days 2 2 | | | | | | | | | | | |
| Last 24 Hours 1 1 1 | | | | | | | | I | | | |
| Seatbelt Used? Yes Shoulder Harness U | Jsed? Yes | | | oxicology P | erformed | ? No | | Seco | ond Pilot? Ye | S | |
| Flight Plan/Itinerary | | | | | | | | | | | |
| Type of Flight Plan Filed: IFR | | | | | | | | | | | |
| Departure Point | | | T | State | Airport I | dentifie | r De | partui | Time Zone | | |
| PHOENIX | | | | ΑZ | | | 1819 | | | MST | |
| Destination | | | | State | Δirnort | dentifie | r | | | | |
| Same as Accident/Incident Location | | State | DEN | rport Identifier EN | | | | | | | |
| Type of Clearance: IFR | | | - | | | | | | | | |
| Type of Airspace: | | | | | | | | | | | |
| Weather Information | | | | | | | | | | | |
| Source of Briefing: Company | | | | | | | | | | | |
| Method of Briefing: | | | | | | | | | | | |
| F | FACTUAL | REPORT | - AVIA | ΓΙΟΝ | | | | | | Page 3 | |

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Occurrence Type: Incident

| | ETYBOR | | Occi | urrence ryp | e: incider | τ | | | | | |
|---------------|----------------------------------|------------|---------|---|--------------|--------------------------------|-----------------------------------|-------|-----------------|-------------|-----|
| Weather | Information | | | | | | | | | | |
| WOF ID | Observation Time | Time Zone | WOFE | Elevation | WOF D | OF Distance From Accident Site | | | Direction From | Accident Si | te |
| DEN | 1953 | MST | 54 | 31 Ft. MSL | | | 0 NM | | 0 Deg. Mag. | | |
| Sky/Lowes | st Cloud Condition: Scat | tered | | | 2 | 5000 Ft. AGL | GL Condition of Light: Night/Dark | | | | |
| Lowest Ce | illing: None | | | 0 Ft. AGL | Visit | oility: 1 | 10 SM | Altir | meter: | 29.00 | "Hg |
| Temperatu | ıre: -1 °C | Dew Point: | -7 | 7 °C Wii | nd Direction | : 160 | | Der | nsity Altitude: | | Ft. |
| Wind Spee | ed: 5 | Gusts: | | Weather Condtions at Accident Site: Visual Conditions | | | | | | | |
| Visibility (R | RVR): 0 Ft. | Visibility | y (RVV) | 0 SM | Intensi | ty of Precipitati | ion: Unknown | | | | |
| Restriction | Restrictions to Visibility: None | | | | | | | | | | |
| Type of Pre | Type of Precipitation: None | | | | | | | | | | |
| Accident | Information | | | | | | | | | | |
| Aircraft Dar | mage: Minor | | Aircra | aft Fire: No | ne | | Aircraft Exp | losio | n None | | |
| Classificati | ion: U.S. Registered/U | J.S. Soil | | | | | | | | | |
| - Injury Su | mmary Matrix | Fatal | Serious | Minor | None | TOTAL | | | | | |
| First Pi | lot | | | | 1 | 1 | | | | | |
| Second | d Pilot | | | | 1 | 1 | | | | | |
| Studen | t Pilot | | | | | | | | | | |
| Flight In | nstructor | | | | | | | | | | |
| Check | Pilot | | | | | | | | | | |
| Flight E | Engineer | | | | | | | | | | |
| Cabin / | Attendants | | | | 4 | 4 | | | | | |
| Other C | Drew | | | | | | | | | | |
| Passen | ngers | | | | 95 | 95 | | | | | |
| - TOTAL A | ABOARD - | | | | 101 | 101 | | | | | |
| Other C | Ground | 0 | 0 | 0 | | 0 | | | | | |
| - GRANE | O TOTAL - | 0 | 0 | 0 | 101 | 101 | | | | | |
| | | | | | | | | | | | |

National Transportation Safety Board

FACTŲAL REPORT AVIATION NTSB ID: FTW97IA112

Occurrence Date: 03/01/1997

Occurrence Type: Incident

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|----|----|------|-------|----|-----|------|------|-----|
| | | | | | | | | |

Investigator-In-Charge (IIC)

ARNOLD W. SCOTT

Additional Persons Participating in This Accident/Incident Investigation:

RAYMOND TOWLES FAA GSDO DENVER, CO 80249