



Aviation Investigation Final Report

Location: LOS ANGELES, California Incident Number: LAX85IA297

Date & Time: June 27, 1985, 15:32 Local Registration: N473AC

Aircraft: BOEING 737-247 Aircraft Damage: Minor

Defining Event: 96 None

Flight Conducted Under: Part 121: Air carrier - Scheduled

Analysis

THE CAPTAIN STATED THAT THE 'B' HYDRAULIC SYSTEM LOW OIL LEVAL LAMP ILLUMINATED WHILE THE ACFT WAS IN CRUISE FLT. AS HE COMPLETED THE FAILURE CHECK AND PLACED THE 'B' SYSTEM INTO STANDBY RUDDER CONDITION THAT PROVIDES HYDRAULIC PRESSURE TO ONLY THE RUDDER, THE 'A' HYDRAULIC SYSTEM FAILED. THE FLIGHTCONTINUED TO IT'S DESTINATION AND WHEN THE CREW WAS UNABLE TO LOWER THE TRAILING EDGE FLAPS, DUE TO ANOTHER MALFUNCTION, LANDED WITHOUT INCIDENT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be:

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CRUISE - NORMAL

Findings

1. HYDRAULIC SYSTEM, SHUTOFF VALVE - SWITCHED OFF

2. INATTENTIVE - PILOT IN COMMAND

3. HYDRAULIC SYSTEM, SEAL - SEPARATION

- 4. HYDRAULIC SYSTEM, PUMP FATIGUE
 5. FLT CONTROL SYST, WING FLAP CONTROL INOPERATIVE

Page 2 of 6 LAX85IA297

Factual Information

Pilot Information

| Certificate: | Airline transport; Flight instructor | Age: | 51,Male |
|---------------------------|--|-----------------------------------|-------------|
| Airplane Rating(s): | Single-engine land; Multi-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | Airplane | Second Pilot Present: | Yes |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 1 Valid Medicalw/ waivers/lim | Last FAA Medical Exam: | May 1, 1985 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | |
| Flight Time: | 11532 hours (Total, all aircraft), 4075 hours (Total, this make and model), 10612 hours (Pilot In Command, all aircraft), 208 hours (Last 90 days, all aircraft), 71 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft) | | |

Page 3 of 6 LAX85IA297

Aircraft and Owner/Operator Information

| Aircraft Make: | BOEING | Registration: | N473AC |
|----------------------------------|------------------------|-----------------------------------|--------------------|
| Model/Series: | 737-247 737-247 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Transport | Serial Number: | 19614 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 124 |
| Date/Type of Last Inspection: | Unknown | Certified Max Gross Wt.: | 100800 lbs |
| Time Since Last Inspection: | | Engines: | 2 Turbo fan |
| Airframe Total Time: | | Engine Manufacturer: | P&W |
| ELT: | Installed | Engine Model/Series: | JT80 |
| Registered Owner: | AIR CAL | Rated Power: | 14500 Lbs thrust |
| Operator: | | Operating Certificate(s) Held: | Flag carrier (121) |
| Operator Does Business As: | | Operator Designator Code: | ACLA |

Meteorological Information and Flight Plan

| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
|----------------------------------|---------------------------|--------------------------------------|-----------------|
| Observation Facility, Elevation: | LAX ,126 ft msl | Distance from Accident Site: | |
| Observation Time: | 14:49 Local | Direction from Accident Site: | |
| Lowest Cloud Condition: | Scattered / 3000 ft AGL | Visibility | 4 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 9 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 250° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29 inches Hg | Temperature/Dew Point: | 22°C / 15°C |
| Precipitation and Obscuration: | N/A - None - Haze | | |
| Departure Point: | SAN FRANCISCO , CA (SFO) | Type of Flight Plan Filed: | IFR |
| Destination: | LOS ANGELES , CA (LAX) | Type of Clearance: | IFR |
| Departure Time: | 14:20 Local | Type of Airspace: | Class A;Class E |
| | | | |

Page 4 of 6 LAX85IA297

Airport Information

| Airport: | LOS ANGELES INTL LAX | Runway Surface Type: | Concrete |
|----------------------|----------------------|----------------------------------|----------|
| Airport Elevation: | 126 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 25L | IFR Approach: | ILS |
| Runway Length/Width: | 1196 ft / 200 ft | VFR Approach/Landing: | None |

Wreckage and Impact Information

| Crew Injuries: | 4 None | Aircraft Damage: | Minor |
|------------------------|---------|-------------------------|-------|
| Passenger Injuries: | 92 None | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 96 None | Latitude, Longitude: | |

Page 5 of 6 LAX85IA297

Administrative Information

| Investigator In Charge (IIC): | Wall, J. | |
|--------------------------------------|--|--|
| Additional Participating Persons: | JAMES D BALDINGER; LONG BEACH , CA | |
| Original Publish Date: | | |
| Last Revision Date: | | |
| Investigation Class: | <u>Class</u> | |
| Note: | | |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=24562 | |

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 Code of Federal Regulations section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 United States Code section 1154(b)). A factual report that may be admissible under 49 United States Code section 1154(b) is available here.

Page 6 of 6 LAX85IA297