



National Transportation Safety Board

Aviation Accident Data Summary

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|--------------------------------|---|-------------------------|------------|
| Location: | HIBBING, MN | Accident Number: | CHI93MA061 |
| Date & Time: | 01/02/1993, 1942 CST | Registration: | N342PX |
| Aircraft: | Saab-Scania AB (Saab) 340A | Injuries: | 31 None |
| Flight Conducted Under: | Part 135: Air Taxi & Commuter - Scheduled | | |

Analysis

DURING THE APPROACH, THE 1ST OFFICER (FO) ASKED THE CAPT IF HE WANTED TO '...POP THE BOOTS?' TO REMOVE ICE OFF THE WINGS. THE CAPT RESPONDED '...IT'S GOING TO THE HANGAR. I'LL RUN'EM ON THE GROUND...' THE FO RETARDED POWER OVER THE THRESHOLD & THE SINK RATE INCREASED; THE CAPT OBSERVED 900 FPM. THE FO APPLIED ADDITIONAL BACK PRESSURE ON THE YOKE, BUT IT WAS INADEQUATE TO ARREST THE HIGH SINK RATE. ADDITIONAL BACK PRESSURE WAS APPLIED, AND THE STALL HORN SOUNDED FOLLOWED SHORTLY THEREAFTER BY THE CAPT STATING 'I GOT IT.' DURING THE HARD LANDING THE RIGHT MAIN LANDING GEAR BROKE, THE FUEL TANK RUPTURED, AND THE RIGHT WING REAR SPAR BENT UPWARD. APRX 18 HRS AFTER THE ACCIDENT, 3/16 INCH OF RIME MIXED WITH CLEAR ICE WAS OBSERVED ON THE LEADING EDGES OF THE WING, HORIZ STAB, AND VERT STAB. THE ICE HAD FINGER-LIKE PROTRUSIONS POSITIONED VERTICALLY TO THE WING SURFACES. THE COMPANY'S LINE OPS MANUAL DOES NOT DISCUSS FLIGHT CHARACTERISTICS OR LANDING TECHNIQUES SPECIFIC TO WING ICE. NEITHER PILOT HAD RECEIVED COMPANY'S CURRENT CRM TRAINING.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FIRST OFFICER'S FAILURE TO MAINTAIN A PROPER DESCENT RATE DURING THE LANDING, AND THE CAPTAIN'S INADEQUATE SUPERVISION BY NOT TAKING TIMELY ACTION TO ENSURE A SAFE LANDING. FACTORS WHICH CONTRIBUTED TO THE ACCIDENT WERE: THE COMPANY'S FAILURE TO PROVIDE ADEQUATE TRAINING ON THE AIRPLANE'S FLIGHT CHARACTERISTICS AND/OR HANDLING TECHNIQUES UNDER CONDITIONS OF WING ICE CONTAMINATION, THE COMPANY'S FAILURE TO ASSURE THAT BOTH PILOTS HAD RECEIVED THE CURRENT CREW RESOURCE MANAGEMENT (CRM) TRAINING, AND THE EXISTING WEATHER CONDITIONS WHICH RESULTED IN AN ACCUMULATION OF ICE ON THE AIRPLANE'S WING.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. LIGHT CONDITION - DARK NIGHT
2. (F) WEATHER CONDITION - SNOW
3. (F) WEATHER CONDITION - DRIZZLE/MIST

4. (F) WEATHER CONDITION - ICING CONDITIONS
 5. (F) WING - ICE
 6. ANTI-ICE/DEICE SYSTEM - NOT USED
 7. (C) PROPER DESCENT RATE - NOT MAINTAINED - COPILOT/SECOND PILOT
 8. (F) INADEQUATE TRAINING - COMPANY/OPERATOR MANAGEMENT
 9. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND
 10. (F) INADEQUATE TRAINING - COMPANY/OPERATOR MANAGEMENT
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Occurrence #2: MAIN GEAR COLLAPSED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
11. LANDING GEAR,MAIN GEAR STRUT - OVERLOAD

Pilot Information

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| Certificate: | Airline Transport | Age: | 30 |
| Airplane Rating(s): | Multi-engine Land; Single-engine Land; Single-engine Sea | Instrument Rating(s): | Airplane |
| Other Aircraft Rating(s): | None | Instructor Rating(s): | Airplane Multi-engine; Airplane Single-engine; Instrument Airplane |
| Flight Time: | 6500 hours (Total, all aircraft), 2800 hours (Total, this make and model), 195 hours (Last 90 days, all aircraft), 75 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|---------------------------------------|---|-----------------------------|--------------|
| Aircraft Make: | Saab-Scania AB (Saab) | Registration: | N342PX |
| Model/Series: | 340A 340A | Engines: | 2 Turbo Prop |
| Operator: | EXPRESS I | Engine Manufacturer: | GE |
| Operating Certificate(s) Held: | Commuter Air Carrier (135) | Engine Model/Series: | CT-7 |
| Flight Conducted Under: | Part 135: Air Taxi & Commuter - Scheduled | | |

Meteorological Information and Flight Plan

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|---|-----------------------|-------------------------------------|------------------------------|
| Conditions at Accident Site: | Instrument Conditions | Condition of Light: | Night/Dark |
| Observation Facility, Elevation: | HIB, 1353 ft msl | Weather Information Source: | Weather Observation Facility |
| Lowest Ceiling: | Obscured / 500 ft agl | Wind Speed/Gusts, Direction: | 10 knots / 18 knots, 170° |
| Temperature: | -7° C | Visibility | 1 Miles |
| Precipitation and Obscuration: | | | |
| Departure Point: | MINNEAPOLIS, MN (MSP) | Destination: | |

Airport Information

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|-----------------------------|------------------------|----------------------------------|---------------------------------|
| Airport: | HIBBING-CHISHOLM (HIB) | Runway Surface Type: | Asphalt |
| Runway Used: | 31 | Runway Surface Condition: | Ice; Snow--compacted; Snow--wet |
| Runway Length/Width: | 6758 ft / 150 ft | | |

Wreckage and Impact Information

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|-----------------------------|---------|----------------------------|-------------|
| Crew Injuries: | 3 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | 28 None | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Latitude, Longitude: | | | |

Administrative Information

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|--------------------------------------|--|----------------------|------------|
| Investigator In Charge (IIC): | FRANK S GATTOLIN | Adopted Date: | 04/21/1994 |
| Investigation Docket: | NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ . | | |

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