# National Transportation Safety Board
# Aviation Accident Final Report

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| **Location:** | Nuiqsut, AK | **Accident Number:** | ANC01LA146 |
| **Date & Time:** | 09/25/2001, 1609 AKD | **Registration:** | N867TA |
| **Aircraft:** | Douglas DC-6B | **Aircraft Damage:** | Substantial |
| **Defining Event:** | | **Injuries:** | 3 Minor |
| **Flight Conducted Under:** | Part 121: Air Carrier - Non-scheduled | | |

## Analysis

The crew was conducting a GPS instrument approach in a Douglas DC-6B airplane under IFR conditions. Both pilots were certificated and type-rated in the Douglas DC-6B airplane. The first pilot, seated in the right seat, was one of the company's senior check airman, and possessed a right seat dependency endorsement. The second pilot, seated in the left seat, had less experience in the DC-6B airplane. It had been previously agreed that the second pilot would fly the leg of the flight on which the accident occurred. The first pilot reported that light snow showers were present, with visibility reported at 4 miles. During final approach as the airplane passed over the airstrip threshold, a higher than normal sink rate was encountered. He said that the initial touchdown was "firm," but was thought to be within acceptable tolerances. Just after touchdown, the left wing broke free from the airplane at the wing to fuselage attach point. The airplane veered to the left, continued off the left side of the 5,000 feet long by 75 feet runway, down an embankment, and came to rest in an area of wet, tundra-covered terrain. A postcrash fire heavily damaging the center section of the fuselage. The cockpit voice recorder (CVR) revealed that as the airplane progressed along the approach, the first pilot says: "You're only one mile from it....Take it on down ah three." As the airplane passes over the runway threshold, the first pilot says: "Keep that, keep that (expletive) power off.... Just push forward on the nose." The sound of impact is heard 4 seconds later. The minimum descent altitude (MDA) for the approach is 400 feet msl (383 feet agl). A contract weather observer reported lower ceilings, with about 1 mile visibility, over the approach end of the runway at the same time as the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The flightcrew's continued use of an unstabilized GPS approach. Factors associated with the accident were low ceilings, and the inadequate coordination between the crew.

## Findings

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

Findings
1. (F) WEATHER CONDITION - LOW CEILING
2. (C) CONTINUED - FLIGHTCREW
3. (F) CREW/GROUP COORDINATION - INADEQUATE - FLIGHTCREW
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Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
4. WING - SEPARATION

## Factual Information

On September 25, 2001, about 1609 Alaska daylight time, a Douglas DC-6B airplane, N867TA, sustained substantial damage during landing at the Alpine Airstrip, located about 10 miles north of Nuiqsut, Alaska. The airplane was being operated as a visual flight rules (VFR) cargo flight under Title 14, CFR Part 121, when the accident occurred. The airplane was registered to and operated by Northern Air Cargo, Inc., Anchorage, Alaska. The two certificated airline transport pilots, and the flight engineer, sustained minor injures. Visual meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan was in effect. The flight originated at the Deadhorse Airport, Deadhorse, Alaska, about 1530.

During a telephone conversation with the National Transportation Safety Board investigator-in-charge on September 26, the director of operations for the operator reported that both of the pilots were certificated and type-rated in the accident airplane. He added that the first pilot, seated in the right seat, was one of the company's senior check airman, and possessed a right seat dependency endorsement. The second pilot, seated in the left seat, had less experience in the DC-6B airplane. The director of operations reported that prior to departure, both pilots had previously agreed that the second pilot would fly the leg of the flight on which the accident occurred.

During a telephone conversation with the National Transportation Safety Board investigator-in-charge on September 27, the first pilot related that the purpose of the flight was to deliver about 20,000 pounds of oil drilling equipment to a remote oil production site. He reported that light snow showers were present, with visibility reported at 4 miles. The first pilot stated that during final approach, as the airplane passed over the airstrip threshold, a higher than normal sink rate was encountered. He said that the initial touchdown was "firm," but was thought to be within acceptable tolerances. Just after touchdown, the left wing broke free from the airplane at the wing to fuselage attach point. The airplane veered to the left, continued off the left side of the 5,000 feet long by 100 feet wide runway, down an embankment, and came to rest in an area of wet, tundra-covered terrain. A postcrash fire ensued, heavily damaging the center section of the fuselage.

According to information recorded on the airplane's cockpit voice recorder (CVR), at 1552, prior to leaving their cruise altitude, the crew contacted the contract weather observer at the Alpine Airstrip, and requested current weather conditions. The weather observer responded, in part: "Ah currently visibility four miles with light snow and mist. Overcast one thousand two hundred. Temp minus three. Dew point missing."

At 1555, the second pilot briefed the first pilot and flight engineer on the anticipated GPS approach to runway 21, and included information concerning the missed approach procedures.

At 1558, Anchorage Air Route Traffic Control Center (ARTCC) cleared the accident airplane for the runway GPS 21 approach to the Alpine Airstrip, and advised the crew to contact the Alpine Common Traffic Advisory Frequency (CTAF) on 122.8.

At 1559, the crew contacted the contact weather observer on 122.8, and stated: "Alpine, Yukon six ninety, we're ah...ah ten minuets out... and we'll be landing runway two one." The contract weather observer acknowledged by stating: "Yukon six ninety this is Alpine ah your runway is clear, winds still currently ah two six zero, right at twelve knots, altimeter two niner five niner."

Between 1600:15 and 1606:25, the flight progressed in accordance with the published approach

plate.

At 1606:35, the second pilot asked: "What are we landing... about one twenty three, one ten, something like that?" The flight engineer responds by saying: "Sounds good."

At 1606:40, the first pilot tells the second pilot: "Pull the power back to go down."

At 1607:12, the second pilot asks: "What do we have for landing speeds?"

At 1607:15, the flight engineer responds: "One twenty three, one ten."

At 1607:25, the first pilot states: "(Expletive) you're two miles from it. Where in the (expletive) is it? Take it down. I don't see the (expletive) yet.

At 1607:53, the first pilot states: " You're only one mile from it." "Take it on down ah three."

At 1608:31, the flight engineer states: "Lights right there."

At 1608:32, the second pilot says: "Okay, full flaps, final gear check." The flight engineer responds by saying: "Gear checks. Three wheels. Pressure quality. Before landing complete."

At 1608:49, the first pilot says: "Keep that, keep that (expletive) power off."

At 1608:51, the first pilot stated: "Just push forward on the nose."

At 1608:55, sound of impact, and end of recording.

A complete transcript of the CVR is included in this report.

The GPS 21 approach to runway 21 at the Alpine Airstrip is a Federal Aviation Administration (FAA) approved, private GPS approach, owned and operated by Phillips Petroleum, Inc. The FAA approved approach plate for the GPS 21 approach, while inbound on the 206 degree radial, allows airplanes to descend to 400 feet msl (383 feet agl) until the runway environment is observed, or until reaching the missed approach point, 0.7 miles from the runway. The minimum visibility required for the approach is 1 statue mile.

On September 25, at 1609, the contract weather observer located at the accident airstrip was reporting: Wind, 290 degrees (true) at 12 knots; visibility, 3 statute miles in light snow and mist; clouds and sky condition, 1,000 feet overcast; temperature, 28 degrees F; dew point, missing; altimeter, 29.59 inHg. In the remarks portion of his report, the weather observer reported lower conditions to the north-northeast, and visibility of 1 statute mile.

The Safety Board did not take custody of the airplane wreckage. The airplane's solid-state CVR was retained by Safety Board's Vehicle Recorders Division in Washington, D.C., and will be returned to the operator at a later date.

## Pilot Information

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| **Certificate:** | Airline Transport | **Age:** | 52, Male |
| **Airplane Rating(s):** | Multi-engine Land; Single-engine Land; Single-engine Sea | **Seat Occupied:** | Right |
| **Other Aircraft Rating(s):** | None | **Restraint Used:** | Seatbelt |
| **Instrument Rating(s):** | Airplane | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | No |
| **Medical Certification:** | Class 1 Valid Medical--w/ waivers/lim. | **Last FAA Medical Exam:** | 06/08/2001 |
| **Occupational Pilot:** | | **Last Flight Review or Equivalent:** | 09/17/2001 |
| **Flight Time:** | 22000 hours (Total, all aircraft), 14000 hours (Total, this make and model), 15000 hours (Pilot In Command, all aircraft), 117 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft) | | |

## Co-Pilot Information

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| **Certificate:** | Airline Transport | **Age:** | 37, Male |
| **Airplane Rating(s):** | Multi-engine Land; Single-engine Land; Single-engine Sea | **Seat Occupied:** | Right |
| **Other Aircraft Rating(s):** | None | **Restraint Used:** | Seatbelt |
| **Instrument Rating(s):** | Airplane | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | No |
| **Medical Certification:** | Class 1 Valid Medical--w/ waivers/lim. | **Last FAA Medical Exam:** | 09/09/2001 |
| **Occupational Pilot:** | | **Last Flight Review or Equivalent:** | 09/09/2001 |
| **Flight Time:** | 6100 hours (Total, all aircraft), 3000 hours (Total, this make and model), 2900 hours (Pilot In Command, all aircraft), 202 hours (Last 90 days, all aircraft), 41 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft) | | |

## Flight Engineer Information

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| **Certificate:** | Flight Engineer; Private | **Age:** | 57, Male |
| **Airplane Rating(s):** | Single-engine Land | **Seat Occupied:** | Rear |
| **Other Aircraft Rating(s):** | None | **Restraint Used:** | Seatbelt |
| **Instrument Rating(s):** | None | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | No |
| **Medical Certification:** | | **Last FAA Medical Exam:** | |
| **Occupational Pilot:** | | **Last Flight Review or Equivalent:** | |
| **Flight Time:** | | | |

## Aircraft and Owner/Operator Information

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| **Aircraft Make:** | Douglas | **Registration:** | N867TA |
| **Model/Series:** | DC-6B | **Aircraft Category:** | Airplane |
| **Year of Manufacture:** | | **Amateur Built:** | No |
| **Airworthiness Certificate:** | Transport | **Serial Number:** | 45202 |
| **Landing Gear Type:** | Retractable - Tricycle | **Seats:** | 5 |
| **Date/Type of Last Inspection:** | 08/21/2001, Continuous Airworthiness | **Certified Max Gross Wt.:** | 103800 lbs |
| **Time Since Last Inspection:** | 66 Hours | **Engines:** | 4 Reciprocating |
| **Airframe Total Time:** | 70754 Hours at time of accident | **Engine Manufacturer:** | P&W |
| **ELT:** | Installed, activated, did not aid in locating accident | **Engine Model/Series:** | R-2800-CB3 |
| **Registered Owner:** | Northern Air Crago, Inc. | **Rated Power:** | 2400 hp |
| **Operator:** | Northern Air Crago, Inc. | **Operating Certificate(s) Held:** | Flag carrier (121) |
| **Operator Does Business As:** | | **Operator Designator Code:** | NACA |

## Meteorological Information and Flight Plan

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| **Conditions at Accident Site:** | Visual Conditions | **Condition of Light:** | Day |
| **Observation Facility, Elevation:** | PALP | **Distance from Accident Site:** | |
| **Observation Time:** | 1609 ADT | **Direction from Accident Site:** | |
| **Lowest Cloud Condition:** | | **Visibility** | 3 Miles |
| **Lowest Ceiling:** | Overcast / 1000 ft agl | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | 12 knots / | **Turbulence Type Forecast/Actual:** | / |
| **Wind Direction:** | 290° | **Turbulence Severity Forecast/Actual:** | / |
| **Altimeter Setting:** | 29.59 inches Hg | **Temperature/Dew Point:** | -2°C |
| **Precipitation and Obscuration:** | | | |
| **Departure Point:** | Deadhorse, AK (PASC) | **Type of Flight Plan Filed:** | IFR |
| **Destination:** | Nuiqsut, AK (PALP) | **Type of Clearance:** | IFR |
| **Departure Time:** | 1544 ADT | **Type of Airspace:** | Class E |

## Airport Information

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| **Airport:** | Alpine Airstrip (PALP) | **Runway Surface Type:** | Gravel |
| **Airport Elevation:** | 17 ft | **Runway Surface Condition:** | Snow--wet |
| **Runway Used:** | 21 | **IFR Approach:** | Global Positioning System |
| **Runway Length/Width:** | 5000 ft / 100 ft | **VFR Approach/Landing:** | Full Stop |

## Wreckage and Impact Information

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| **Crew Injuries:** | 3 Minor | **Aircraft Damage:** | Substantial |
| **Passenger Injuries:** | N/A | **Aircraft Fire:** | On-Ground |
| **Ground Injuries:** | N/A | **Aircraft Explosion:** | None |
| **Total Injuries:** | 3 Minor | **Latitude, Longitude:** | 70.333333, -150.933333 |

## Administrative Information

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| **Investigator In Charge (IIC):** | Clinton O Johnson | **Report Date:** | 09/09/2002 |
| **Additional Participating Persons:** | James B Porter; Federal Aviation Administration; Fairbanks, AK | | |
| **Publish Date:** | | | |
| **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.ntsb.gov/pubdms/. | | |