DOI FY 05 Aviation Mishaps

5 Aircraft Accidents

9 Incidents with Potential
NTSB 831.13 Flow and dissemination of accident or incident information.

(b) ... Parties to the investigation may relay to their respective organizations information necessary for purposes of prevention or remedial action.

... However, no (release of) information... without prior consultation and approval of the NTSB.

This is PRELIMINARY information, and is provided for accident prevention purposes only
Talkeetna, AK
April 15, 2005

DeHavilland DHC-2
Beaver
(wheel/ski)
Mission
Passenger and
cargo transport
Damage
Substantial
Injuries
2 minor
Procurement
ARA
NTSB ID
ANC05LA058
Issues

Unnecessary risk taking

High risk pilot

Maintenance inspection

Pre-mission briefing

Wreckage preservation
After landing on the Ruth Glacier, Denali National Park, the pilot taxied outside of the normal maneuver area to drop cargo in a convenient location.

While taxiing, the aircraft approached and attempted to clear a crevasse.

However, the aircraft sustained substantial damage while attempting to jump the crevasse.

Two NPS passengers received minor injuries.
Ruth Glacier landing area

Normal parking area

Normal takeoff area

Normal landing area
Ruth Glacier landing area

Approximate touchdown area

“We’ve got a big hole in front of us”

Tail started to slide downhill

Intended drop off point

Approximate touchdown area and ground path

Tail started to slide downhill
Intended drop off point

Tail started to slide downhill

Two large campsite holes (5'x5'x5')
Crevasse

Approximately 50 feet

Direction of travel
Crevasse

Nearly invisible due to the slope
Damage to wing, gear, and frame
Injury to rear seat passenger due to lack of shoulder harness and FAA authorized modification to the front seat.
Probable Cause

“The pilot's selection of unsuitable terrain for taxi after landing, which resulted in the collapse of the main landing gear and structural damage to the right wing and forward fuselage. A factor associated with the accident was the rough and uneven terrain.”
Corrective Actions/Options

Issues

- Conduct a more thorough background check to identify high-risk pilots

- Conduct a more thorough maintenance check to identify issues such as seats, that although technically legal, are unnecessarily dangerous
**Issues**

- Improve wreckage preservation after an aircraft accident / incident

- Conduct a more thorough pre-mission briefing to improve communications and reduced risk
Delta Junction, AK
July 6, 2005

Cessna A185F
(wheel)

Mission
Cargo transport

Damage
Substantial

Injuries
N/A

Procurement
Fleet

NTSB ID
ANC05TA106
Issues

Unnecessary risk taking

Go in light before you go in heavy

Pre-use inspection of landing areas

Medium risk syndrome
While ferrying a 55 gallon drum of jet fuel into an unprepared landing strip the aircraft’s tail wheel struck the ground approximately 53 feet short of the landing area.

The aircraft became airborne for approximately 75 feet before the main gear touched down on the landing strip. Shortly thereafter the propeller impacted the runway.

The pilot was not injured, but the aircraft received substantial damage.
Last Chance Strip

N64° 23' 49"
W144° 16' 48"

2,300' MSL

32/14
1000' x 16'
Gravel

Primarily a one-way strip due to 2-3° upslope (140°)

The narrow valley makes going around, especially at high gross weight, impossible

Airstrip is not maintained
Final approach at approximately 100’ AGL
Initial tail wheel impact approximately 53’ prior to the cleared area
Rut where right main gear touched down with rain shower in background.
Area of propeller strikes

Area where right main gear went into brush
Brush impacted by right horizontal stabilizer
Horizontal Stabilizer (inverted)
Scratch marks on the underside of right-hand horizontal stabilizer
Wrinkling under a fairing at the inboard end of the right-hand horizontal stabilizer
Inboard view of the crack rack to the inboard right-hand rib of the horizontal stabilizer
Fuselage damage caused by left horizontal stabilizer and hidden under a fairing
Interior view of damage to aft tailboom bulkhead
Probable Cause

“The pilot misjudged distance / altitude during the landing touchdown and subsequent undershoot, and his failure to maintain directional control of the airplane during the landing roll, which resulted in an on-ground encounter with high vegetation.”
Corrective Actions/Options

Discussion

- Pre-season inspection of high-risk landing areas --
  ✓ Thorough, documented inspection using a checklist, with results available for pilot briefings
  ✓ Conducted by an aviation specialist
  ✓ Discrepancies repaired or marked depending on risk assessment
Discussion

- Pilots should routinely make a practice approach and landing at low gross weights before taking loads into unfamiliar remote or unprepared landing areas.

- Landings at locations where it is impossible to conduct a safe -go-around should not be considered routine.
Hughes 500D

Mission
Cadastral Survey

Damage
Substantial

Injuries
N/A

Procurement
Exclusive Use

NTSB ID
ANC05TA111

Delta Junction, AK
July 28, 2005
Delta Junction, AK  
July 28, 2005

**Issues**

Unnecessary risk taking

Land as soon as possible after suspected damage

Safety training for ground personnel

Remote fuel site monitoring and maintenance
During a cadastral survey, the pilot of the aircraft struck the top of a Black Spruce tree while attempting an approach into a confined area to pick up two passengers.

All five of the main rotor blades received damage.
Landing Direction

15°–20° Upslope
NOTE:
MD-500 main rotor diameter is 26'4"

Impact tree

Approximate position of survey crew

Landing Direction
The National Transportation Safety Board determined that the probable cause of this accident was...

**Probable Cause**

“The pilot's failure to maintain clearance from trees during the approach to landing, which resulted in the main rotor blades striking a tree. A factor associated with the accident was the tree.”
NBC AMD Observations
Delta Junction, AK July 28, 2005

- Good Communication Procedures
- Installed Experimental Remote Camera for real time weather
- Excellent Base Operations support
Corrective Actions/Options

Discussion

- Do not allow operations to continue after a blade strike is known or suspected to have occurred
- Train new crews in LZ clearing and safety procedures
- Remote fuel sites should be monitored and maintained properly
Piper PA-18

Mission
Law Enforcement

Damage
Substantial

Injuries
N/A

Procurement
Fleet

NTSB ID
ANC05TA126
Coldfoot, AK
August 20, 2005

Issues

More complete aerial recon of remote landing sites

Develop a back-up plan prior to landing

Plan the flight, fly the plan (avoid last second changes)
After landing to a remote "bush" airstrip the pilot attempted to taxi to the side to clear the strip.

During the taxi the left main landing gear hit a rut and the aircraft tipped forward on to its nose.

The pilot was not injured, but the aircraft received substantial damage to the firewall and forward fuselage.
Engine deflected to the right and damage to propeller blades
Damage to firewall
The National Transportation Safety Board determined that the probable cause of this accident was...

**Probable Cause**

“The pilot's selection of unsuitable terrain for landing, which resulted in the airplane nosing down during the landing roll.

A factor associated with the accident was the rough and uneven terrain.”
Corrective Actions/Options

Discussion

- Conduct your aerial recons as though your life depends on it

- Have a primary plan... and a back-up plan (a way out)

- Avoid spontaneously changing your plan
Elko, NV
August 23, 2005

PZL M-18T Turbine Dromader

Mission Fire Suppression
Damage Substantial
Injuries Minor
Procurement Call When Needed
NTSB ID LAX05TA277
Issues

Unnecessary risk taking

Be alert to changing weather conditions - especially heavy winds

Communications

Don’t hesitate to turn down a mission when appropriate
After performing a retardant drop under downhill and downwind conditions the aircraft was unable to establish an adequate rate-of-climb to prevent ground impact.

The pilot elected to make an emergency off-airport landing under control rather than attempt to fly out.

The pilot received minor injuries.
Point of initial impact

Heading 054°
The RIGHT STUFF

Issues

- Mishap reporting and response coordination was excellent
  - Proper notification to AM and Bureau National Office
  - Medical evacuation of pilot
  - Wreckage preservation
Corrective Actions/Options

Issues

- Weather recognition
  - Be alert to changing weather conditions - especially heavy winds
- Keep lines of communication open
- Doing “dry runs” is an acceptable practice
- I am not going back out there because...”
Discussion
Ideas for Managing Risk

Avoid taking unnecessary risks

Medium risk syndrome

Project Aviation Plans

Pre-mission briefings

Pre-use inspections

Mitigate known risks

Document remaining hazards

Have an escape plan

Turn-down protocol
Lessons learned (again)

Use checklists

Don’t fly in a damaged aircraft

Timely mishap reporting and SAFECOMs

Crew Resource Management
(speak up, and shut up, when appropriate)

Aviation Life Support Equipment
(take care of it and it will take care of you)