



National Transportation Safety Board Aviation Accident Data Summary

Location:	Gustavus, AK	Accident Number:	ANC07LA022
Date & Time:	03/03/2007, 1610 AST	Registration:	N5134V
Aircraft:	Hughes 369D	Injuries:	2 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

The helicopter was being operated as a visual flight rules on-demand passenger flight under Title 14, CFR Part 135. The purpose of the flight was to tranquilize moose for capture and collaring. The company's chief pilot said a moose was shot with a tranquilizer dart from the helicopter, and that the helicopter was used to block the moose from moving into a hazardous area. The pilot of an airplane orbiting above said the moose charged the helicopter, and that as the helicopter attempted to evade the moose, the moose reared, or jumped, contacting the helicopter's tail rotor. The helicopter pilot reported a loss of directional control, and made a hovering autorotation to the ground. The flex coupling between the drive shaft and the tail rotor gearbox failed, and the spinning drive shaft cut the tail boom and separated the tail from the rest of the airframe. According to the chief pilot, the company's practice had been for the helicopter to hover/maneuver about 10 feet above the ground, and no closer to the darted animal than 10 feet horizontally. He said the pilot and scientist aboard felt the distances were appropriate. He said this was the first incident of extreme, erratic, behavior on the part of a darted animal, and that due to this incident, the company has revised its procedure, and now requires the pilot to maintain 30 feet of altitude above the ground and 30 feet horizontally from a darted animal.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The inadequate clearance from a tranquilized moose while hovering in ground effect, and the operator's inadequate procedures for such operations, which resulted in an in-flight collision with the moose. Factors associated with the accident were the moose, a sheared tail rotor drive shaft, and the resultant lack of tail rotor anti-torque control.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: HOVER - IN GROUND EFFECT

Findings

1. (F) OBJECT - ANIMAL(S)
2. (C) CLEARANCE - INADEQUATE
3. (C) PROCEDURE INADEQUATE - COMPANY/OPERATOR MANAGEMENT

Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: HOVER - IN GROUND EFFECT

Findings

- 4. (F) ROTOR DRIVE SYSTEM, TAIL ROTOR DRIVE SHAFT - SHEARED
- 5. (F) TAIL ROTOR/ANTI-TORQUE CONTROL - NOT AVAILABLE

Occurrence #3: FORCED LANDING
 Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
 6. TERRAIN CONDITION - SNOW COVERED

Pilot Information

Certificate:	Commercial	Age:	26
Airplane Rating(s):	None	Instrument Rating(s):	Helicopter
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Helicopter
Flight Time:	2700 hours (Total, all aircraft), 415 hours (Total, this make and model), 2600 hours (Pilot In Command, all aircraft), 44 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	Registration:	N5134V
Model/Series:	369D	Engines:	1 Turbo Shaft
Operator:	Temsco Helicopter Inc.	Engine Manufacturer:	Allison
Operating Certificate(s) Held:	Commuter Air Carrier (135); On-demand Air Taxi (135)	Engine Model/Series:	250C20B
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Weather Information Source:	Pilot
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	Light and Variable / ,
Temperature:	-8° C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Gustavus, AK (PAGS)	Destination:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	58.426667, -135.704444		

Administrative Information

Investigator In Charge (IIC): Lawrence R Lewis

Adopted Date: 06/27/2007

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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