



National Transportation Safety Board Aviation Accident Data Summary

Location:	Kankakee, IL	Accident Number:	CHI03LA240
Date & Time:	08/02/2003, 1755 CDT	Registration:	N15SA
Aircraft:	Enstrom F-28C	Injuries:	3 Minor, 1 None
Flight Conducted Under:	Part 91: General Aviation - Other Work Use - Sightseeing		

Analysis

The sightseeing aerial observation helicopter sustained substantial damage when the main rotor impacted the tail rotor drive shaft during a landing in a county fairground parking lot. The tail rotor drive shaft separated from the helicopter. The tail rotor drive shaft impacted the rear window of a vehicle parked in the parking lot. Three passengers reported minor injuries and the pilot reported that he was uninjured. The pilot stated, "I made a stabilized steep approach to the landing area. Once I detected the helicopter skids come in contact with the surface I lowered the collective at that moment the helicopter dropped and lunged forward. The landing site was a nearly level area with 2-3 inch tall grass." Wind was 170 degrees at 7 knots. An on-scene examination of the helicopter detected no pre-impact anomalies. The helicopter's flight manual stated, "The cabin interior is a full, three-place, side by side seating arrangement." The helicopter's center of gravity range was 92.0 to 100 inches. The operator's calculated center of gravity was 91.74 inches.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot misjudged flare which led to a hard landing. Contributing to the accident was the pilot's failure to follow procedures/directives when he exceeded the airplane's weight and balance.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING

Findings

1. (C) ROTOR SYSTEM,MAIN ROTOR BLADE - OTHER
2. (F) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND
3. (C) FLARE - MISJUDGED - PILOT IN COMMAND
4. (F) AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING

Findings

5. OBJECT - VEHICLE

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	44
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Airplane Single-engine; Helicopter
Flight Time:	1771 hours (Total, all aircraft), 125 hours (Total, this make and model), 1771 hours (Pilot In Command, all aircraft), 82 hours (Last 90 days, all aircraft), 51 hours (Last 30 days, all aircraft), 9 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Enstrom	Registration:	N15SA
Model/Series:	F-28C	Engines:	1 Reciprocating
Operator:	Spitfire Aerospace Technologies Inc.	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	HIO360E1AD
Flight Conducted Under:	Part 91: General Aviation - Other Work Use - Sightseeing		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	IKK, 630 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	7 knots / , 170°
Temperature:	22° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	Kankakee, IL	Destination:	

Airport Information

Airport:	GREATER KANKAKEE (IKK)	Runway Surface Type:	Grass/turf
Runway Used:		Runway Surface Condition:	Dry
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	41.071389, -87.846389		

Administrative Information

Investigator In Charge (IIC): Edward F Malinowski

Adopted Date: 03/02/2004

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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