



National Transportation Safety Board Aviation Accident Final Report

Location:	COSHOCTON, OH	Accident Number:	ATL86LA236
Date & Time:	09/01/1986, 1150 EDT	Registration:	N549H
Aircraft:	ENSTROM F-28C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

THE PLT INITIATED A MAXIMUM POWER TAKEOFF FROM A CONFINED PARKING LOT WITH 2 PASSENGERS ON BOARD. THE AREA WAS BORDERED BY OBSTRUCTIONS & PEOPLE. THE PLT RPTD THAT DURING LIFT-OFF, SHE INCREASED POWER TO 2900 RPM, LIFTED OFF TO A 4' HOVER WITH 33' OF MANIFOLD PRESSURE, THEN BEGAN A MAX PERFORMANCE TAKEOFF, 'PULLING POWER AND TURNING THROTTLE' FOR EXTRA RPM WITH SLOW FORWARD SPEED, REACHING 36' OF MANIFOLD PRESSURE. AT APRX 15' AGL, THE PLT NOTED A DECREASE IN RPM. SHE INCREASED THROTTLE APPLICATION, THEN DECREASED THE COLLECTIVE, BUT WAS UNABLE TO RECOVER THE LOSS OF RPM. SHE MADE A LEFT PEDAL TURN TO AVOID OBSTRUCTIONS & PEOPLE. SUBSEQUENTLY, THE HELICOPTER TOUCHED DOWN HARD & WAS DAMAGED. AN EXAM OF THE ENG DID NOT REVEAL ANY DEFECTS. THE FLT MANUAL WARNED THAT LOSS OF ROTOR & ENG RPM WOULD FOLLOW WHEN THE ENG WAS OVERBOOSTED. AT 36.5' OF MANIFOLD PRESSURE, THE POP-OFF VALVE WOULD HAVE ACTIVATED WHICH WOULD HAVE RESULTED IN A SLIGHT POWER LOSS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: MISCELLANEOUS/OTHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
2. (F) TERRAIN CONDITION - HIGH OBSTRUCTION(S)
3. (C) COLLECTIVE - EXCESSIVE - PILOT IN COMMAND
4. (C) THROTTLE/POWER CONTROL - IMPROPER USE OF - PILOT IN COMMAND
5. AIRCRAFT PERFORMANCE, CLIMB CAPABILITY - OTHER
6. (C) ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF

Factual Information

Pilot Information

Certificate:	Commercial	Age:	33, Female
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	09/16/1985
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	412 hours (Total, all aircraft), 388 hours (Total, this make and model), 291 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ENSTROM	Registration:	N549H
Model/Series:	F-28C F-28C	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	345
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	04/11/1986, Annual	Certified Max Gross Wt.:	2350 lbs
Time Since Last Inspection:	68 Hours	Engines:	1 Reciprocating
Airframe Total Time:	1132 Hours	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	HIO-360-E1AD
Registered Owner:	TRANS ROTOR, INC.	Rated Power:	205 hp
Operator:	TRANS ROTOR, INC.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ZZV, 790 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	0000 EDT	Direction from Accident Site:	180°
Lowest Cloud Condition:	Unknown / 1700 ft agl	Visibility	7 Miles
Lowest Ceiling:	Overcast / 1700 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21 °C / 16 °C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1150 EDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	CHARLES T FOUTS	Report Date:	
Additional Participating Persons:	RICHARD S PEMBERTON; COLUMBUS, OH		
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).