



Aviation Investigation Final Report

Location:	BRANDYWINE, Maryland	Accident Number:	ATL83LA275
Date & Time:	July 14, 1983, 14:15 Local	Registration:	N582H
Aircraft:	ENSTROM F28C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

IN LEVEL CRUISE FLT THE PLT EXPERIENCED A SEVERE VIBRATION FOLLOWED BY UNCONTROLLABLE ROTATION TO THE RIGHT. THE PLT WAS UNABLE TO REGAIN DIRECTIONAL CONTROL & CRASHED INTO TREES. INVESTIGATION REVEALED THAT THE REAR T/R DRIVE COUPLING, PN28-13609, HAD FAILED FROM EXCESSIVE WEAR DUE TO INADEQUATE LUBRICATION. SERVICE BULLETIN 0065, DATED 8/19/83, WAS ISSUED DIRECTING INSPECTION OF THE COUPLING BEFORE THE NEXT FLT. AD83-18-04, AMENDMENT 39-4721, WAS ALSO ISSUED TO PRECLUDE FURTHER FAILURES.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) ROTOR DRIVE SYSTEM, TAIL ROTOR DRIVE SHAFT - FAILURE, TOTAL

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE - NORMAL

Occurrence #3: FORCED LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Occurrence #4: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
2. OBJECT - TREE(S)

Factual Information

Pilot Information

Certificate:	Private	Age:	54, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	July 7, 1983
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2037 hours (Total, all aircraft), 37 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	ENSTROM	Registration:	N582H
Model/Series:	F28C F28C	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	363
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	March 28, 1983 Annual	Certified Max Gross Wt.:	2350 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1256 Hrs	Engine Manufacturer:	LYCOMING
ELT:		Engine Model/Series:	HIO-360-E1AD
Registered Owner:	KEN DIXON CHEVROLET BUICK INC.	Rated Power:	205 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	32°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	WALDORF , MD	Type of Flight Plan Filed:	None
Destination:	CLINTON , MD (W32)	Type of Clearance:	None
Departure Time:	14:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	38.689922,-76.850463(est)

Administrative Information

Investigator In Charge (IIC): Drake, John

Additional Participating Persons:

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=6126>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).