



National Transportation Safety Board Aviation Accident Data Summary

Location:	INDIANAPOLIS, IN	Accident Number:	CHI00LA002
Date & Time:	10/02/1999, 1040 EST	Registration:	N602H
Aircraft:	Enstrom EN-28	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot said that prior to initiating the flight he conducted a 'run-up.' He said, during the magneto check the engine ran rough and exceeded the normal magneto drop. He said he continued to run the engine at high RPM and leaned the fuel mixture for a minute. He said he then conducted another 'run-up' and the magneto drop was within specified limits.. He stated that during the initial climb the engine began to 'pop' and the rotor RPM was dropping. He said he elected to attempt a turn to the heliport; however, due to the continued loss of power he elected to conduct an autorotational landing in a gravel construction area. During the autorotational landing the helicopter landed hard and received substantial damage. Subsequent to the accident an examination of the helicopter and engine was conducted. The magneto and harness were examined and no discrepancies were found. All the spark plugs were removed and examined. The bottom spark plug from the #2 cylinder was oil fouled and did not test fire. The top spark plug from the same cylinder (#2) fired with a weak and intermittent spark. All the other spark plugs test fired. No additional anomalies were found in the helicopter or engine.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's attempted operation of the helicopter with known deficiencies, and his improper autorotation to landing. Factors were one fouled spark plug and another partially failed spark plug in the same cylinder, and the construction area.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) IGNITION SYSTEM, SPARK PLUG - FOULED
2. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - ATTEMPTED - PILOT IN COMMAND
3. (F) IGNITION SYSTEM, SPARK PLUG - FAILURE, PARTIAL

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: HARD LANDING
Phase of Operation: EMERGENCY LANDING

Findings

- 4. (F) TERRAIN CONDITION - CONSTRUCTION AREA
- 5. (C) AUTOROTATION - IMPROPER - PILOT IN COMMAND

Pilot Information

Certificate:	Commercial	Age:	62
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	None
Flight Time:	4758 hours (Total, all aircraft), 147 hours (Total, this make and model), 4758 hours (Pilot In Command, all aircraft), 87 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Enstrom	Registration:	N602H
Model/Series:	EN-28 EN-28	Engines:	1 Reciprocating
Operator:	HAWK, ROBERT H.	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	HIO-360-E1BD
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	IND, 797 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	10 knots / , 210°
Temperature:	18° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	, IN (IN03)	Destination:	

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC): STEPHEN A WILSON

Adopted Date: 01/18/2001

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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