

Investigation Report.

Status: **Safety Bulletin**
Date: **6 AUG 2008**
Time: **19.00 UT**
Type: **Enstrom F28F**
Operator: **Private**
Registration: **OO-VDK**
C/N / msn: **CR 4319; msn: 765**
Manufacturing Date: **1990**
Engine(s): **Lycoming HIO-360-F1AD**
Crew: **Fatality: 0 / Occupants: 1**
Aircraft Damage : **Total Loss**
Location: **In a field in the commune of Zingem, Oost-Vlaanderen.
N 50°55,901'
E 03°36,646.**

Phase: **Flight.**
Nature: **Private flight**
Departure Airport: **Helipad - Zingem**
Destination Airport: **Helipad Zingem**
Flight Number: **N/A**

Narrative:

The helicopter was brought out of the storage hangar by its owner. The 76-y old owner stated he wanted to make a last small flight before storing definitively its helicopter.

The meteorological conditions were Ceiling And Visibility OK. The sunset occurred at 19:19.

When starting the engine, around 19.00, the owner recalled the battery was weak and the fuel meter showed an indication between 0 and the first graduation.

After a distance of 1km flown at a very low speed and altitude (2m above ground), the helicopter was turned back and, at that time, experienced some troubles with the propulsion; the helicopter fell, the main rotor ploughed into the ground and one blade hit the tail boom. The helicopter fell on its RH side.

REF: AAIU (Belgium) 2008-16.

The investigation showed that the helicopter was bought in 1993 by owner. The owner held a student pilot licence until June 1997. Up to that date, he flew with an accompanying instructor. The helicopter had its Certificate of Airworthiness valid until December 2001. The helicopter log book shows that it flew 39 FH between 1997 and 2001. The log book does not record the name of the pilot for each of the flights. The helicopter log book records the last stand of the hour meter; 1074.6 FH on August 28, 2001. The average utilization rate was around 10 FH per year. The current stand of the hour meter is 1127 FH.

The owner stated that the helicopter stopped to be maintained by a Repair Station after December 2001. He said the helicopter was stored in the hangar since that time, and only taken out for an engine run, a hover, or a small hop in the immediate vicinity of the helipad, for the sake of circulating the lubricating oil.

The helipad from which the helicopter departed was located in the garden of the owner. This helipad was inspected and approved for use by the BCAA. The last inspection occurred in 2008.

The inspection of the wreckage confirmed that one fuel tank was empty, and there was a small quantity of fuel present in the other. The damage on the blades were consistent with a ground impact at low speed. The other damages on the helicopter are due to the impact of one (deformed) blade with the tail boom.

Causes.

We can state that this accident was caused by the conjunction of several factors, including:

- the lack of experience of the pilot; besides the fact that his license was expired 10 years ago, he had only 36 FH recorded on the log book from 1993 till 1997.
- the medical fitness of the pilot; no medical check since 1997.
- the helicopter was no longer airworthy since December 2001.
 - o The helicopter stopped being maintained in accordance with the applicable maintenance programme (LAMS).
 - o Airworthiness Directives were no longer applied, and therefore the identified unsafe conditions were not checked and/or corrected, amongst which, but not limited to:
 - AD 2002-08-03. to prevent rotor shaft failure.
 - AD 2002-12-07; to prevent the total oil loss of the engine.
 - AD 2003-14-03; to prevent fuel pump leaks (rpt 6 months)
 - AD 2007-11-02; to prevent loss of control of the helicopter.

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- The engine had exceeded (by 6 years) its service life limit of 12 years.
- the flight was initiated with a known condition of low fuel quantity.
- the helicopter was operated at a height and a velocity that would not allow a safe landing following an engine failure.

Safety Recommendations.

To BCAA.

To introduce a programme to randomly check the status of privately-owned aircraft in the survey planning of the Inspection Department,.

This inspection could include;

- Verification of correct entries in log books;
- Verification of hour-meters stand against the log books,
- Ensuring that aircraft actually written off be removed from the Registry.