

## **SUMMARY**

A helicopter of the type MD 600N started from Frösön, Östersund, for a VFR flight to Bromma, Stockholm. Close to Kungsängen at an altitude of 1500 feet, the engine stopped and the pilot turned in an autorotation to search for suitable diversion site. In connection with the emergency landing the helicopter overturned and extensive damage occurred. The pilot was alone on board and was not injured.

There were about 30 liters of fuel remaining, which is more than the minimum amount of usable fuel. In spite of this, the engine stopped by fuel exhaustion. The engine's fuel exhaustion was caused by a non-functioning fuel transfer system. The transfer system did not work as intended due to a clogged check valve.

The check valve in the fuel transfer system had an impaired function due to contamination. Hence the remaining fuel could not be used and the engine stopped.

Contributing to the occurrence was that the type certificate holder`s extended maintenance instruction on annual checks of the fuel transfer system was not complied with and that such functional checks were therefore not performed.

The Commission also found that the helicopter had been foiled in such an extent that it must be considered as a modification and that this action was carried out by a company which was not a part of the air transport system. This is considered as a risk factor but it did not influence the course of the event.

### **Safety recommendations**

EASA is recommended to:

- Use appropriate means to inform the sector of which forms of foiling of an aircraft that are permitted. *(RL 2015:11 R1)*

The Swedish Transport Agency is recommended to:

- Develop supervisory methods so that EASA Part M, Subpart G approval holders ensure that Aircraft Maintenance Programmes (AMP) are based on the latest data from the type certificate holders. *(RL 2015:11 R2)*
- Use appropriate means to inform the sector of which forms of foiling of an aircraft that are permitted. *(RL 2015:11 R3)*