Summary

The intention was to perform a training flight under visual flight rules (VFR). Runway 16, which was being used, was accessed by the instructor to be the most critical runway at Stockholm/Skavsta Airport if an engine failure were to occur as there were obstructions in the direction of take-off.

During the take-off phase and up to an altitude of 500 feet, everything was normal. Just after this, the engine began to lose power before finally failing. The instructor took control of the aeroplane, called *'returning'* on the tower frequency and attempted to return to the runway in the opposite direction. During the turn at low speed, the left wing contacted the ground. The aeroplane then hit the ground with its belly and right wing. The aeroplane then rotated in the roll axis before coming to a halt with the left wing folded in under the fuselage and with the empennage broken off. The engine was torn off and ended up separate from the fuselage.

The instructor and the student were able to get themselves out of the aeroplane uninjured. One witness was on site immediately in order to help after the accident.

The accident was caused by the engine failing in a situation in which there were limited opportunities to land safely. The lack of sufficient knowledge and experience of the difficulties involved in performing a 180 degree turn at low altitude back to the runway following an engine failure led to an uncontrolled impact.

A contributory cause has been that the flight school has not identified through its safety management system the risks that can arise in the event of an engine failure at low altitude.

An underlying cause has been that the EASA's regulations for engine failure after take-off do not describe how this training should be conducted.

Safety recommendations

EASA is recommended to:

- Evaluate and decide whether and which high-risk manoeuvres shall be included in training and be described in a guidance document. One such high-risk manoeuvre could be the operation that involves how to assess when a turn back to the field is safe. See sections 2.4.1 and 2.5.1. *(RL 2021:03 R1)*
- Develop and distribute through the competent authorities a safety bulletin in order to increase knowledge of "*the impossible turn"*. *(RL 2021:03 R2)*

The Swedish Transport Agency is recommended to:

- In its role as competent authority, to review the training organisation's safety management systems in terms of the handling and training of emergency procedures at low altitude after take-off. *(RL 2021:03 R3)*

The Transportation Safety Bureau of Hungary is recommended to:

Revise the training requirement, and confirm that the training organisations are complying with AMC1 FCL.930.FI. *(RL 2021:03 R4)*