

## SUMMARY

A helicopter of the type AgustaWestland AW 139 had been on a training mission and was on its way to the operating base in Umeå. Then, about 10 minutes to landing a caution was activated for fail on FIPS<sup>1</sup> linked to the tail rotor. The crew asked for a priority landing, which was carried out without any further problems.

The helicopter was equipped with a so-called slipring whose task was to transfer the electrical power to the rotating parts of the tail rotor.

During the technical examination, it was discovered that slipring had become loose from its fix points at the tail rotor gearbox. The slipring was mounted very near the rotating parts of the tail rotor and only its electric harness prevented the solid state parts from starting to rotate and thus risk damaging the tail rotor.

The SHK's examinations have shown that screws with incorrect length had been used during manufacture, which broke after a short operating time. In addition, the investigation highlighted that too low tightening torque has previously been used; that locking wires has been installed in the wrong direction. Despite this an FAA form 8130-3 has been issued.

### Safety recommendations

It is recommended that the FAA assess the need of more effective oversight of PMA holders so that:

- Compliance with the applicable authority requirements and internal procedures is ensured. *(RL 2015:12 R1)*
- All manufactured parts are airworthy upon signing of the FAA Form 8130-3. *(RL 2015:12 R2)*

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<sup>1</sup> FIPS – Full Ice Protection System.