



## Safety recommendation no. 531

<b>Date of the publication</b>	08.06.2017
<b>Number of the final report</b>	2298
<b>Safety deficit</b>	<p>During the approach to the operations base, the pilot of an AgustaWestland AW109SP helicopter reduced the helicopter's forward speed whilst maintaining the rate of descent. The pilot continuously raised the collective to reduce the rate of descent. However, it did not reduce. During the transition from forward flight to hover, the helicopter's power requirement increased. At a forward speed of less than 20 kt, the rate of descent increased from 1,100 ft/min to more than 1,300 ft/min in the final seconds before impact and could no longer be controlled. Eventually, the helicopter hit the ground in a meadow next to the operations base. Three of the four occupants were injured and had to be admitted to hospital.</p> <p>In the approximately four years prior to the accident, the aviation company had recorded 15 cases in which the acceleration sensors of the ARTEX C406-N HM type emergency location transmitter (ELT) were not functioning during routine checks and therefore needed to be repaired. In this investigated accident, the emergency location transmitter of the same type did not work because all six acceleration sensors were defective.</p>
<b>Safety recommendation</b>	<p>The Federal Office of Civil Aviation (FOCA) and the European Aviation Safety Agency (EASA), together with the manufacturers of the AgustaWestland AW109SP helicopter type and the ARTEX C406-N HM emergency locator transmitter, should take appropriate measures to ensure the functioning of the aforementioned emergency locator transmitter after an accident.</p>
<b>Addressees</b>	<p>EASA Europäische Agentur für Flugsicherheit; EASA Europäische Agentur für Flugsicherheit; BAZL Bundesamt für Zivilluftfahrt</p>
<b>Stage of the implementation</b>	<p>Implemented. FOCA advised that it did not have any authority regarding this topic. The safety recommendation could only be processed by the relevant certification authority, i.e. EASA. The European Union Aviation Safety Agency (EASA) contacted the manufacturer of the emergency locator transmitter ARTEX C406-N HM and the American regulator, the Federal Aviation Administration (FAA). As a result of the subsequent clarifications and thanks to the support of the Swiss Transportation Safety Investigation Board (STSB), the FAA issued the Special Airworthiness Information Bulletin CE-19-12 and the EASA issued the Airworthiness Directive No. 2019-0235 on 20 September 2019. This airworthiness directive limits the total operating time of the equipment and requires its inspection at a shortened interval, which depends on the operating time in helicopters, until the emergency locator transmitter is retrofitted with improved accelerometers. In addition, the EASA has published the Safety Information Bulletin 2019-09, which is valid for all emergency locator transmitters and recommends an annual</p>

inspection of the equipment and especially of the functioning of the accelerometer. On 14 June 2018, the EASA introduced supplement 5 to Certification Specification (CS) CS-27 and CS-29, which stipulates in CS 27.1470 and CS 29.1470 that “Each emergency locator transmitter as specified by the applicable operating rules, including sensors and antennas, shall be installed in such a way that in the event of an accident or incident, any damage which could prevent its functioning is minimised”. In addition, the acceptable means of compliance (AMC) 27.1470 and 29.1470 have been adapted to provide further information on the installation of an emergency locator transmitter. The content of these specifications is taken from the EASA Certification Memorandum CM-AS-008 regarding the installation of emergency transmitters and also refers to the regular testing of emergency locator transmitters.

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**Investigation report concerning  
the safety recommendation**

Schlussbericht

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