

# **EASA**

## ***TERMS OF REFERENCE***

**TOR Nr:** 27&29.019  
**Issue:** 1  
**Date:** 1 October 2007  
**Regulatory reference:** CS-27 and CS-29  
**Reference documents:**

<p><b>1. Subject:</b> Vibration Health Monitoring Specification and Update to Miscellaneous Guidance (MG) 15. New 27/29 MGXX and update to 27/29 MG15. Guidance material.</p>
<p><b>2. Problem/Statement of issue and justification; reason for regulatory evolution (regulatory tasks):</b></p> <p>Due to their particular design, with single load paths and reliance on the integrity of Critical Parts, a single failure of a helicopter rotor or transmission component can result in catastrophic effects. Vibration Health Monitoring (VHM) is now established as a powerful safety tool to aid operators identify the on-set of mechanical failure. Such systems, either individually or integrated into a Health and Usage Monitoring System (HUMS), have been installed on helicopters for many years and have matured with the experience gained.</p> <p>In the UK, the Helicopter Health Monitoring Advisory Group (HHMAG) was set up in the late 1980s, with an international membership from across the industry. This group has been actively involved in developing and assisting the introduction of health monitoring in helicopters. Based on this experience the group has recently completed development of a VHM Specification as a guide to designing, certificating and operating a VHM system. This VHM Specification has been offered to the European Aviation Safety Agency (EASA) for adoption within its regulatory material.</p> <p>In addition, previously published guidance on HUMS (Advisory Circular AC-27 MG15 and AC-29 MG15), are now considered obsolete and in need of updating to reflect developments made in technology since it was published in February 2003.</p> <p>This task will align with and support new operational regulations and future ICAO SARP on the fitment of VHM systems.</p>
<p><b>3. Objective:</b></p> <p>Amend and enhance existing guidance material on VHM/HUMS to reflect recent technological developments.</p>
<p><b>4. Specific tasks and interface issues (Deliverables):</b></p> <ul style="list-style-type: none"><li>• Develop a new MG as guidance material to CS-27 and CS-29 based on the HHMAG developed VHM specification.</li><li>• Update AC-29/AC-29 MG15 to reflect recent technological advances in HUMS and make compatible with the new MG for VHM.</li></ul>
<p><b>5. Working Methods</b> (in addition to the applicable EASA procedures): EASA Rulemaking Group</p>
<p><b>6. Time scale, milestones:</b></p> <p>NPA planned for publication 3<sup>rd</sup> quarter 2008 CRD planned to be issued 2<sup>nd</sup> quarter 2009 Final publication planned for 4<sup>th</sup> quarter 2009</p>