



Explanatory Note to Decision 2014/028/R

Helicopter Vibration Health Monitoring

RELATED NPA/CRD 2013-22— RMT.0350 AND RMT.0351 (OPS.074) — 15.09.2014

EXECUTIVE SUMMARY

This ED Decision addresses a regulatory issue related to the fitment of a Vibration Health Monitoring (VHM) system on new and existing commercial air transport helicopters not involved in offshore operations, and having a maximum certified take-off mass of more than 3 176 kg or a maximum operational passenger seat configuration of more than 9 seats.

The Agency assessed all aspects related to operations by such helicopters. The assessment indicated that the majority of causes for accidents were operational and not technical.

The Agency concluded that a regulatory requirement for VHM system is not required, as a significant safety improvement for the relevant helicopters would not be introduced. In addition, the associated costs cannot be justified. Consequently, Commission Regulation (EU) No 965/2012 is not proposed to be amended, and the ICAO Annex 6 recommendation regarding VHM system is not transposed into EU legislation for these helicopters.

All commentators responding to the NPA's public consultation supported the Agency's proposal.

This ED Decision proposes to terminate RMT.0350 and RMT.0351 at this stage. The issue will be brought to the European Helicopter Safety Team (EHST) for consideration under the safety promotion pillar.

Applicability		Process map	
Affected regulations and decisions:	Commission Regulation (EU) No 965/2012 'Air Ops'	Terms of Reference	23.08.2013
Affected stakeholders:	Commercial Air Transport (CAT) operators of helicopters with a MTOM of more than 3 175 kg or a MOPSC of more than 9 not involved in offshore operations. Design organisations of the same helicopters.	Concept Paper:	No
Driver/origin:	Legal obligation (ICAO alignment)	Rulemaking group:	No
Reference:	N/A	RIA type:	Light
		Technical consultation during NPA drafting:	No
		Publication date of the NPA:	19.11.2013
		Duration of NPA consultation:	2 months



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1. Procedural information

1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the 'Agency') developed ED Decision 2014/028/R in line with Regulation (EC) No 216/2008¹ (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure².

This rulemaking activity is included in the Agency's 4-year Rulemaking Programme under RMT.0350 (OPS.074(a) and RMT.0351 (OPS.074(b)))³. The scope and timescale of the task were defined in the related Terms of Reference (see process map on the title page).

The draft text of this Decision has been developed by the Agency. All interested parties were consulted through NPA 2013-22⁴.

10 comments were received from interested parties from industry and national aviation authorities.

The Agency has reviewed the comments received on the NPA. The comments received and the Agency's responses are presented in the Comment-Response Document (CRD) 2013-22⁵.

The final text of this Decision has been developed by the Agency and is published together with the CRD.

The process map on the title page summarises the major milestones of this rulemaking activity.

1.2. Structure of the related documents

Chapter 1 contains the procedural information related to this task.

Chapter 2 summarises the findings from the Regulatory Impact Assessment.

Chapter 3 contains references to regulations, decisions and documents.

¹ Regulation (EC) No 216/2008 of the European Parliament and the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1), as last amended by Commission Regulation (EU) No 6/2013 of 8 January 2013 (OJ L 4, 9.1.2013, p. 34).

² The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material (Rulemaking Procedure), EASA MB Decision No 01-2012 of 13 March 2012.

³ See: <http://easa.europa.eu/document-library/notices-of-proposed-amendment>.

⁴ In accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Rulemaking Procedure.

⁵ See: <http://easa.europa.eu/document-library/comment-response-documents>.



2. Explanatory Note

2.1. Overview of the issues to be addressed

To reduce the high accident rates for helicopters in offshore operations in the 1970s and 1980s, the development of Vibration Health Monitoring (VHM) systems was one of the mitigating measures initiated.

Today VHM systems are established as a proven safety tool used to identify the onset of mechanical failures.

Part III of ICAO Annex 6 includes a recommendation that helicopters with a maximum certificated take-off mass in excess of 3 175 kg or a maximum seating configuration of more than 9 should be equipped with a vibration health monitoring system.

During rulemaking for 'Helicopter offshore operations' (NPA 2013-10) this was taken into consideration when suggesting a regulatory requirement for VHM system in commercial air transport (CAT) helicopter operations in a hostile environment.

Therefore, NPA 2013-22 addressed if a general requirement for VHM system is considered necessary for CAT helicopters not involved in offshore operations, but with a maximum certified take-off mass of more than 3 175 kg or a maximum operational passenger seating configuration (MOPSC) of more than 9 seats.

2.2. Objectives

The overall objectives of the EASA system are defined in Article 2 of the Basic Regulation. The specific objective of this proposal is to assess if a VHM system introduces a significant safety improvement to operations with the relevant helicopters.

2.3. Overview of the proposal

The Agency assessed all aspects related to operations by the relevant helicopters with specific attention to the safety impact and the cost impact associated with installation or retro-fitting of a VHM system. The assessment indicated that the majority of accidents (32) experienced over a 12 year period are related to operational issues where controlled flight into terrain (CFIT) was the dominant cause, seconded by loss of control in flight.

A very low number of accidents (4) had technical causes. For 2 of these it is unlikely that significant vibration prior to the accident would occur and thereby initiating a VHM pre-warning. For the other 2 accidents a possible VHM pre-warning cannot be disregarded if a VHM system had been installed, however, it can also not be substantiated.

The Agency concluded that a regulatory requirement for VHM system is not required, as a significant safety improvement for the relevant helicopters would not be introduced. In addition, the associated costs cannot be justified. ICAO Annex 6 recommendation regarding VHM system is, for the same reasons, not transposed into EU legislation for these helicopters.

Commission Regulation (EU) No 965/2012 and EASA AMC or GM to Part CAT are, therefore, not proposed to be amended to include a requirement for VHM system for the relevant helicopters.

During the public consultation process for NPA 2013-22, the Agency's received comments from five NAAs and one helicopter operator association. The proposal not to introduce a regulatory requirement for a VHM system in the relevant helicopters was unanimously supported.

Therefore, this ED Decision proposes to terminate the rulemaking initiated by RMT.0350 and RMT.0351 at this stage. Any operator may decide, based on its risk assessment, type of operation and helicopter used, to fit a VHM system voluntarily. In this regard, EASA will bring this issue to EHEST with a recommendation to encourage installation of VHM equipment on a voluntary basis in large CAT helicopters that are not involved in offshore operations.



3. References

3.1. Related regulations

Commission Regulation (EU) No 965/2012 is not proposed to be changed.

3.2. Affected decisions

EASA Acceptable Means of Compliance (AMC) and Guidance Material (GM) are not proposed to be changed.

