European Union Aviation Safety Agency



Explanatory Note to ED Decision 2024/011/R

issued in accordance with Article 4(2) of MB Decision No 01-2022

Rotorcraft occupant safety in the event of a bird strike

RMT.0726 (SUBTASK 2)

EXECUTIVE SUMMARY

RMT.0726 Subtask 2 relates to the retroactive application of the currently applicable bird strike certification specifications contained in CS-27 and CS-29 to both newly produced and in-service rotorcraft.

EASA, based on the Aviation Rulemaking Advisory Committee Rotorcraft Bird Strike Working Group (ARAC RBSWG) recommendations and a complementary technical assessment, has performed a qualitative assessment of the regulatory impact of Subtask 2 on the affected stakeholders.

Based on the following considerations:

- significant economic impact of the retroactive application of the related requirements on industry;
- unpracticable technical solutions to retrofit some rotorcraft; and
- reduction of the risk for, and mitigation of the consequences of, a bird strike through the issue of Safety Information Bulletin (SIB) 2021-07 on Bird Strike Risk Mitigation in Rotorcraft Operations,

EASA has concluded that rulemaking activity RMT.0726 Subtask 2 is disproportionate due to the negative impacts it would create for aviation industry.

Therefore, rulemaking task RMT.0726 is terminated.

AFFECTED STAKEHOLDERS

Design organisation approval (DOA) holders; production organisation approval (POA) holders; rotorcraft operators

WORKING METHODS

Development	Impact assessment(s)	Consultation
By EASA	Light	Focused — ABs

RELATED DOCUMENTS / INFORMATION

- <u>ToR RMT.0726 Issue 1</u>, issued on 8.9.2020

- <u>ED Decision 2021/016/R</u> on RMT.0726 Subtask 1, issued on 17.12.2021

PLANNING MILESTONES: Refer to the latest edition of the EPAS Volume II.



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1. About this Decision

This Decision relates to Subtask 2 of RMT.0726 on the retroactive application of the currently applicable bird strike certification specifications contained in CS-27 and CS-29 to both newly produced and in-service rotorcraft.

As per ToR RMT.0726 Issue 1¹ and the 2024 EPAS edition², EASA has assessed such a retroactive application and concluded that this rulemaking activity is disproportionate due to the high negative impact it could create for aviation industry.

EASA has consulted its Advisory Bodies through the draft 2025 EPAS edition, also providing a justification on the termination of RMT.0726 without issuing any regulatory material. The Advisory Bodies did not provide any comments.

Considering that there were no objections raised, EASA has decided to terminate RMT.0726 without issuing any regulatory material.

² European Plan for Aviation Safety (EPAS) 2024 - 13th edition | EASA



¹ TOR RMT.0726 - Rotorcraft occupant safety in the event of a bird strike | EASA

2. In summary — why and what

2.1. Introduction

RMT.0726 was initiated in 2020 due to an upward trend in the number of bird strikes to the windshield area of rotorcraft with significant impact forces, and due to the fact that in some cases bird strikes posed a direct risk to rotorcraft occupants and to the safe operation of rotorcraft.

Before initiating RMT.0726, EASA had performed an internal preliminary qualitative assessment of the available options with the objective to improve rotorcraft occupant safety in the event of bird strikes, based on the Aviation Rulemaking Advisory Committee Rotorcraft Bird Strike Working Group (ARAC RBSWG) recommendations.

To achieve this objective, RMT.0726 comprised two subtasks:

- Subtask 1 on new certification specifications for newly certified CS-27 rotorcraft; and
- Subtask 2 on the retroactive application of certain bird strike requirements to both newly
 produced and in-service CS-27 and CS-29 rotorcraft.

EASA performed a detailed impact assessment for Subtask 1 (see NPA 2021-02³), which was completed with the publication of Decision 2021/016/R⁴ on 17 December 2021. It introduced a certification specification in CS-27 (CS 27.631) and the related AMC to ensure that a safe landing can be performed following a bird strike on the windshield of rotorcraft with six or more passenger seats. The wording of the certification specification in CS-29 (CS 29.631) was improved and the related AMC were introduced.

Subtask 2 was put on hold based on the preliminary qualitative assessment for which EASA concluded that the economic impact of the retroactive application of bird strike requirements would be significant for the industry and that a unilateral, retroactive application of the requirements in the EU regulatory framework would place EU manufacturers and operators of CS-27 and CS-29 rotorcraft at a substantial economic disadvantage.

2.2. Complementary technical assessment related to RMT.0726 Subtask 2

It is important to bear in mind the outcome of the impact assessment for Subtask 1 (see NPA 2021-02):

 Table 8 (Comparison of Tiers I, II, and III, EASA MS operators, 2020-2050, 4-% discount rate) of NPA 2021-02 indicated that only the selected option (i.e. Option 3) for CS-27 rotorcraft provides a very minor overall benefit from a societal point of view when summing up the safety benefit (prevented accidents) and the cost impact for such newly certified rotorcraft.

Therefore, it was expected that implementing such technical design for both newly produced and inservice rotorcraft would have a much higher negative cost impact due to the nature of the work to be performed on existing rotorcraft fleets while at the same time the safety benefit would not increase.

⁴ <u>ED Decision 2021/016/R - Rotorcraft chip detection systems and Rotorcraft occupant safety in the event of a bird strike</u> <u>| EASA</u>



NPA 2021-02 - Rotorcraft occupant safety in the event of a bird strike (RMT.0726 — Subtask 1) | EASA

Further to NPA 2021-02, additional information was gathered to assess the impact as regards Subtask 2:

- EASA's certification experience with new rotorcraft designs has highlighted the technical challenges of complying with currently applicable certification specifications. EASA considers that the retroactive application would entail excessive cost. In some cases (particularly for CS-27 rotorcraft) it would not be practicable for some rotorcraft (e.g. the windshield and its supporting structure would need to be significantly redesigned which, in turn, would increase the weight and would change the centre of gravity, possibly requiring additional ballast at the rear of the rotorcraft). The substantially negative economic impact would be disproportionate to the safety benefit.
- Regarding CS-29 rotorcraft, the demonstration of compliance covers a significant amount of impact areas (not limited to the windshield), such that similar retroactive requirements would involve many tests and potentially significant changes to both structure and equipment.

Based on the initial information collected from Subtask 1 and the additional elements collected for Subtask 2, EASA has concluded that it is not advisable to mandate the application of retroactive requirements, which will have high disproportionate cost impacts with regard to safety benefits. Considering that financial resources are limited, such negative impacts could prevent the aviation industry from focusing on other topics that have higher safety benefits, if the retroactive requirements were to be mandated.

2.3. Other actions taken to mitigate the safety risk

In addition to the rulemaking actions established for Subtask 1, Safety Information Bulletin (SIB) 2021-07 on Bird Strike Risk Mitigation in Rotorcraft Operations⁵ was issued on 19 April 2021 to recommend procedures that would decrease the risk for a bird strike or, should a bird strike occur, mitigate the consequences.

2.4. Conclusion

Based on the following considerations:

- significant economic impact of the retroactive application of the related requirements on industry;
- unpracticable technical solutions to retrofit some rotorcraft; and
- reduction of the risk for, and mitigation of the consequences of, a bird strike through the issue of SIB 2021-07,

EASA has concluded that no further rulemaking activity is necessary, and that rulemaking task RMT.0726 should be terminated.

EASA Safety Publications Tool



3. References

3.1. Related EASA decisions

Executive Director Decision 2021/016/R of 15 December 2021 issuing the following:

'Amendment 9 to the Certification Specifications, Acceptable Means of Compliance and Guidance Material for Small Rotorcraft "CS-27 — Amendment 9"',

'Amendment 10 to the Certification Specifications, Acceptable Means of Compliance and Guidance Material for Large Rotorcraft "CS-29 — Amendment 10"'

'Rotorcraft chip detection systems' and 'Rotorcraft occupant safety in the event of a bird strike'

3.2. Other reference documents

- FAA ROTORCRAFT BIRD STRIKE WORKING GROUP RECOMMENDATIONS TO THE AVIATION RULEMAKING ADVISORY COMMITTEE (ARAC), Revision B, 8 May 2019
- EASA Safety Information Bulletin (SIB) 2021-07 'Bird Strike Risk Mitigation in Rotorcraft Operations', 19 April 2021

