



Explanatory Note to ED Decision 2025/020/R

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

Regular update of the air operations rules

Enhanced implementation of flight data monitoring programmes

RMT.0392 — SUBTASK 1e

WHAT THIS DECISION IS ABOUT		
<p>This Decision issues amendments to the acceptable means of compliance (AMC) and guidance material (GM) to the air operations rules on the management system, the alternative training and qualification programme (ATQP) and the flight data monitoring (FDM) programme.</p> <p>The objective is to increase the effectiveness of FDM programmes.</p> <p>The regulatory material is intended to enhance safety and improve efficiency, with a low economic impact.</p>		
REGULATION(S) INTENDED TO BE AMENDED n/a	ED DECISION(S) TO BE AMENDED ED Decision 2014/017/R – AMC & GM to Part-ORO, Issue 2 ED Decision 2012/019/R – AMC & GM to Part-SPA, Initial Issue	
AFFECTED STAKEHOLDERS Member States; aircraft operators; aircrews; design and production organisations		
WORKING METHODS		
Development	Impact assessment(s)	Consultation
By EASA with external support	Detailed (refer to NPA 2024-02)	NPA — public
RELATED DOCUMENTS/INFORMATION — ToR RMT.0392 - Regular update of air operations rules EASA — NPA 2024-02 - Regular update of the air operations rules — Enhanced implementation of FDM programmes and miscellaneous amendments EASA		
PLANNING MILESTONES: Refer to the latest edition of EPAS <i>Volume II</i> .		



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1. About this Decision

1.1. How this regulatory material was developed

The European Union Aviation Safety Agency (EASA) identified several issues related to the implementation of flight data monitoring (FDM) programmes (as described in Chapter 2) and, after assessing the impact of possible intervention actions, identified rulemaking as the necessary action.

This rulemaking activity is included in the 2025 edition of the *European Plan for Aviation Safety (EPAS) Volume II*¹ under rulemaking task RMT.0392 Subtask 1e².

EASA developed the regulatory material in question in line with Regulation (EU) 2018/1139³ (the Basic Regulation) and the Rulemaking Procedure⁴ and in accordance with the objectives and working methods described in the terms of reference for this rulemaking task⁵.

When developing the subject regulatory material, EASA received support from a group of industry experts (refer to Section 2.4).

This regulatory material was consulted on in accordance with the terms of reference for this rulemaking task through Notice of Proposed Amendment (NPA) 2024-02⁶, which was subject to public consultation.

EASA reviewed the comments received with the support of a review group composed of industry experts (refer to Section 2.4). EASA duly considered the comments and the review group's input when preparing the regulatory material presented here.

¹ [European Plan for Aviation Safety | EASA](#)

² This Decision addresses only the issues related to the implementation of FDM programmes, not the other issues that are in the scope of RMT.0392 Subtask 1e.

³ Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (ELI: <http://data.europa.eu/eli/reg/2018/1139/oj>).

⁴ EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision No 01-2022 of 2 May 2022 on the procedure to be applied by EASA issuing opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure'), and repealing Management Board Decision No 18-2015 (<https://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-01-2022-rulemaking-procedure-repealing-mb>).

⁵ [ToR RMT.0392 - Regular update of air operations rules | EASA](#)

⁶ [NPA 2024-02 - Regular update of the air operations rules — Enhanced implementation of FDM programmes and miscellaneous amendments | EASA](#)



2. In summary — why and what

2.1. Why we need to act

RMT.0392 is a standing rulemaking task. Its purpose is to address issues and topics of a miscellaneous nature identified in Regulation (EU) No 965/2012⁷ (the Air Operations Regulation) and the related AMC and GM, which are not addressed by a dedicated rulemaking task.

Relevant evidence for RMT.0392 Subtask 1e includes the following: lessons learnt from standardisation inspections; the report evaluating the relevance and effectiveness of the European Operators Flight Data Monitoring forum (EOFDM) Best Practices Documents (EVT.0009), which assessed the effectiveness of the documents produced by the EOFDM (refer to Section 6.3); and several accident investigation reports. It shows that several AMC and GM to the Air Operations Regulation need to be amended to ensure:

- the minimum performance of flight data monitoring (FDM) programmes⁸, and
- the effectiveness of FDM programmes in supporting aircraft operators' management systems.

2.1.1. Description of the issues

The following issues have been identified:

- lack of minimum performance objectives for the main steps of an FDM programme (flight data recovery, flight data processing, flight data analysis);
- absence of a minimum set of risks that an FDM programme should cover;
- outdated references and examples in the AMC and GM that do not reflect modern technologies and analysis techniques or current industry practice;
- lack of guidance on how the FDM programme should be integrated with other processes in the aircraft operator's management system; and
- clarifying data protection principles when FDM data is used in conjunction with other types of safety data and when FDM data is used for purposes other than ensuring safety.

For more details, please refer to Sections 5.1 and 6.1 of NPA 2024-02.

⁷ Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) (ELI: <http://data.europa.eu/eli/reg/2012/965/oj>).

⁸ FDM refers to the proactive and non-punitive use of digital flight data from routine operations to improve aviation safety. Implementing an FDM programme usually consists of:

- continuously recording flight parameter values throughout the flight,
- routinely collecting these data from aircraft,
- processing the recordings with the help of specific software to extract safety-relevant information, such as deviations from the operating procedures or abnormal parameter values, and
- using this information to help identify safety hazards, assess safety risks and ensure that measures to address safety risks are effective.

The implementation of an FDM programme is required by the Air Operations Regulation for aeroplanes operated for commercial air transport (CAT) and with a maximum certificated take-off mass of more than 27 000 kg (under point ORO.AOC.130) and for helicopters operated for CAT offshore operations when the helicopter is required to be equipped with a flight data recorder (under point SPA.HOFO.145).



At least three safety issues (SIs) included in EASA's commercial air transport (CAT) aeroplanes safety risk portfolio⁹ are related to FDM:

- approach path management (SI-0007);
- entry of aircraft performance data (SI-0015); and
- gap between certified take-off performance and take-off performance achieved in operations (SI-0017).

For more details on these three SIs, please refer to Section 5.1.1 of NPA 2024-02.

In addition, the following safety recommendation made to EASA from aircraft accident and serious incident investigation reports published by the designated safety investigation authorities¹⁰ has been considered:

- SR FRAN-2019-025, issued by the French Bureau d'Enquêtes et d'Analyses (BEA), after the serious incident involving an Airbus A340, registered F-GLZU, on 11 March 2017 at El Dorado International Airport (Colombia)¹¹:

'The BEA recommends that EASA in coordination with the national oversight authorities:

Ensure that European operators introduce in their flight analysis programmes, the indicators required to monitor take-off performance and at the very least, long take-offs.'

2.1.2 Who is affected by the issue

Member States, aircraft operators, aircrews, and design and production organisations.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This Decision will contribute to achieving the overall objectives by addressing the issues described in Section 2.1.

Regarding FDM, this Decision's specific objective is to enhance the safety of operations with large aeroplanes used for CAT and of operations with large helicopters used for offshore CAT by:

- making FDM programmes more effective; and
- better integrating FDM programmes with aircraft operators' management systems.

For more details on these objectives, please refer to Sections 5.2 and 6.2 of NPA 2024-02.

⁹ EASA safety risk portfolios are presented in *Volume III* of the EPAS ([European Plan for Aviation Safety \(EPAS\) 2025 - 14th edition | EASA](#)).

¹⁰ Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35) (ELI: <http://data.europa.eu/eli/reg/2010/996/oj>).

¹¹ In addition, note should be taken of the following safety recommendation: 'It is recommended that the UK Civil Aviation Authority encourage all UK Air Operator Certificate holders to implement into their flight data monitoring programme algorithms to detect the precursors relevant to the monitoring of takeoff performance detailed in the European Operators Flight Data Monitoring Document, *Guidance for the implementation of flight data monitoring precursors*' (SR UNKG-2022-019, issued by the UK Air Accidents Investigation Branch after the serious incident involving a Boeing 737-800 registered G-JZHL, on 1 December 2021 at Kuusamo Airport, Finland).



2.3. How we want to achieve it — overview of the amendments

To achieve the objectives described in Section 2.2, this Decision issues amendments to the AMC and GM to the following points of Part-ORO and Part-SPA, containing the requirements related to the management system, to FDM programmes of aeroplane operators, to FDM programmes of helicopter offshore operators and to the implementation of an alternative training and qualification programme (ATQP): ORO.GEN.200, ORO.AOC.130, ORO.FC.A.245 and SPA.HOFO.145.

2.3.1. Amendments to increase the effectiveness of FDM programmes

To make FDM programmes more effective, this Decision introduces the following:

- In the AMC to points ORO.AOC.130 and SPA.HOFO.145, conditions that specify minimum performance objectives for the main steps of an FDM programme, which are as follows:
 - (a) **Flight data recovery.** The conditions address the functioning of the airborne system, the set of flight parameters to be collected, the flight collection rate and the time to identify a failure to collect data from an individual aircraft.
 - (b) **Flight data processing.** The conditions address the time for routine processing of the data by the FDM software and the capabilities of the FDM software.
 - (c) **Flight data validation, analysis, documentation and communication of results.** The conditions address the validation of FDM events, documentation of the source of flight parameters and of the algorithms used to produce FDM events and measurements, documentation of which types of occurrences are monitored by the FDM programme and communication of the FDM programme's outputs to flight crew members.
 - (d) **Flight data retention.** The conditions address the retention of raw flight data and of analyses of FDM events.
- In the AMC to points ORO.AOC.130 and SPA.HOFO.145, the notion of 'significant FDM event' and 'FDM event validation'.
- In the AMC to points ORO.AOC.130 and SPA.HOFO.145, a minimum set of risks that should be monitored by an FDM programme. This set includes:
 - (a) risk areas that are relevant for all aeroplane operators, such as those pointed out by the EASA Annual Safety Review;
 - (b) risk areas that are relevant for all offshore operators, such as those pointed out by the EASA Annual Safety Review or HeliOffshore safety performance reports; and
 - (c) indications that the airworthiness of the aircraft may be affected.
- Amendments to GM1 ORO.AOC.130, GM2 ORO.AOC.130, AMC1 ORO.FC.A.245, GM1 SPA.HOFO.145 and GM2 SPA.HOFO.145 to reflect technological evolution and current industry best practices. Examples include the use of modern IT solutions (e.g. software-as-a-service), recommended capabilities of modern FDM software, examples of performance targets for an FDM programme and the advent of large data exchange programmes.

For more details on these amendments, please refer to Annexes I and II to this Decision and to the description of Option 1 in Section 5.3 of NPA 2024-02. In addition, Section 5.5 of NPA 2024-02



contains a detailed assessment of the safety, environmental, social and economic impacts of these amendments, and their impact on general aviation and on proportionality.

2.3.2. Amendments to improve FDM programmes' integration with management systems

To better integrate an FDM programme into an aircraft operator's management systems, this Decision:

- adds the FDM programme to the safety information sources that should be used to support the safety risk management (SRM) steps in AMC1 ORO.GEN.200(a)(3);
- introduces conditions in AMC1 ORO.GEN.200(a)(1) specifying that the FDM programme is part of the safety manager's and the safety review board's responsibilities;
- reinforces internal controls on the implementation of the FDM procedure to protect flight crew identity by referring to FDM procedures in AMC1 ORO.GEN.200(a)(6); this AMC specifies the scope of the aircraft operator's compliance-monitoring function;
- clarifies, in AMC1 ORO.AOC.130, GM1 ORO.AOC.130, AMC1 SPA.HOFO.145 and GM1 SPA.HOFO.145, how the FDM programme should support the SRM process;
- reconciles, in AMC1 ORO.AOC.130 and AMC1 SPA.HOFO.145, the conditions regarding the protection of flight crew identity with the principles regarding the protection of reporters as set out in Regulation (EU) No 376/2014¹²;
- introduces a recommendation, in GM2 ORO.GEN.200(a)(2), that, if a data source that is needed to support SRM requires protection, then the aircraft operator's safety policy should consistently protect this data source when it is used for purposes other than ensuring safety;
- recommends, in GM1 ORO.AOC.130 and GM1 SPA.HOFO.145, that access to FDM data for purposes other than FDM is consistently framed by procedures to protect flight crew identity;
- clarifies, in AMC1 ORO.FC.A.245, what information may be provided by the FDM programme to the person responsible for the ATQP and how this information should be handled.

For more details on these amendments, please refer to Annexes I and II to this Decision and to the description of Option 1 in Section 6.3 of NPA 2024-02. In addition, Section 6.5 of NPA 2024-02 contains a detailed assessment of the safety, environmental, social and economic impacts of these amendments, and their impact on non-commercial aviation and on smaller organisations (proportionality).

2.3.3. Applicability of the amendments to the AMC and GM

The amendments to the AMC and GM issued by this Decision shall become applicable two years after its publication, since they are expected to impact aircraft operators' procedures and the tasks of the Safety Manager, and some amendments may also require changing the agreement with flight crew representatives.

¹² Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/200 (OJ L 122, 24.4.2014, p. 18) (ELI: <http://data.europa.eu/eli/reg/2014/376/oj>).



In addition, the conditions in some points of the AMC material listed above, which may cause a change to airborne systems or airborne equipment of aircraft that are already operated, are only applicable to aircraft that will be first issued with an individual certificate of airworthiness (CofA) at least three years after this Decision's publication date. However, point (b) of AMC2 ORO.AOC.130 and point (b) of AMC2 SPA.HOFO.145 are applicable to aircraft that were first issued with an individual CofA on or after 1 January 2016, as it is considered that implementing these two points does not require a change to airborne systems or to airborne equipment for aircraft manufactured after 1 January 2016.

2.4. Stakeholders' views

The views of the industry experts involved in the preparation of the FDM-related content of NPA 2024-02 were very positive on this content. It was unanimously adopted by them.

During the public consultation for NPA 2024-02, EASA received 133 comments from 17 different organisations, distributed as follows:

- 15 comments were made by Member States;
- 95 comments were made by aeroplane operators and aeroplane operator associations;
- 15 comments were made by helicopter operators and helicopter operator associations;
- 3 comments were made by a pilot association;
- 5 comments were made by individuals.

In addition, 124 of these 133 comments were made on the text of the proposed amendments, while the other 9 were made on the statement of the issue, the impact assessments or the expected benefits and drawbacks.

The FDM-related comments on NPA 2024-02 were reviewed with the active collaboration of a group comprising experts from 9 aeroplane operators, 1 helicopter operator, 2 aircraft manufacturers, 2 industry associations and 1 pilot association. All the responses to the comments were jointly prepared by EASA and the review group members and unanimously adopted by the latter.

The responses to the 133 FDM-related comments are distributed as follows:

- 20 comments were accepted;
- 54 comments were partially accepted;
- 39 comments were not accepted;
- 20 comments were noted.

In response to the FDM-related comments on NPA 2024-02, the review group clarified and/or relaxed several conditions in the AMC to points ORO.AOC.130 and SPA.HOFO.145, and they improved some explanations in the GM to points ORO.AOC.130 and SPA.HOFO.145. However, the review group did not identify a need to revise the description of the issue in Chapter 2 of NPA 2024-02, the expected benefits and drawbacks in its Chapter 3 or the impact assessments in its Chapters 5 and 6.

The following is a high-level summary of the subsequent changes made to the amendments proposed in NPA 2024-02, which were made in response to stakeholders' comments. A more detailed overview



of the main comments and how they were addressed is provided in Table 1 of the [Appendix — Detailed overview of the main FDM-related comments issued on](#) NPA 2024-02.

- Point (e) of AMC1 ORO.AOC.130 ('safety information and promotion') now specifies that the aircraft operator should provide, upon request by the competent authority, documentation on the principles it follows to ensure that disseminated FDM-based information is meaningful and of adequate quality.
- The title of point (h) of AMC1 ORO.AOC.130 now reads 'data recovery and validation'.
- The alleviations based on demonstrating a disproportionate cost impact have been removed from points (h)(1), (h)(2) and (h)(3) of AMC1 ORO.AOC.130, as they were considered too complex to implement. In addition, the main purpose of each of these points has been inserted to help aircraft operators demonstrate an alternative means of compliance (AltMoC), if needed.
- In point (h)(1) of AMC1 ORO.AOC.130:
 - the objective per individual aeroplane has been replaced by a global flight recovery objective and made less stringent for smaller operators (fewer than 20 aeroplanes within the scope of point ORO.AOC.130);
 - an alleviation was introduced for aeroplanes that have performed fewer than 50 flights in the past 12 months.
- In point (h)(2) of AMC1 ORO.AOC.130:
 - the operator should have means to identify a failure of the means to collect data from any individual aeroplane within 10 flights or 22 calendar days, whichever they prefer;
 - when failure of the means to collect data from an individual aeroplane is identified, the operator should correct this failure within 120 days.
- Point (h)(3) of AMC1 ORO.AOC.130 now specifies that, for at least 80 % of the flights for which data was collected within the FDM programme in the previous 12 months, the data should have been processed by the FDM software within 22 calendar days of completion of the flight or before 10 subsequent flights are performed with the aircraft that performed the flight, whichever the operator prefers.
- Point (h)(4) of AMC1 ORO.AOC.130 now specifies that the verification of the performance of the flight parameters may rely on documentation provided by the installer of the airborne recording equipment.
- Explanations of the terms 'significant FDM events' and 'validating an FDM event' have been inserted in point (h)(4) and point (h)(5) respectively.
- Point (i) of AMC1 ORO.AOC.130 ('data retention strategy') now specifies that all flight data should be retained at least until valid significant FDM events have been analysed, and it includes an alleviation in the event of a change of FDM software or FDM service provider. In addition, retained data no longer needs to be readily available.
- The conditions regarding documentation in point (l) of AMC1 ORO.AOC.130 and point (d) of AMC2 ORO.AOC.130 now specify that an operator will not have to maintain controlled documents to meet these conditions but just provide documentation upon request and that



this documentation could be automatically or semi-automatically generated with FDM software.

- The title of point (l) of AMC1 ORO.AOC.130 now reads ‘Access to information on flight parameters and FDM algorithms’, and the condition to document the minimum performance of flight parameters needed by FDM algorithms to produce accurate results, which was considered too demanding, has been removed.
- Point (a) of AMC2 ORO.AOC.130 now specifies that the core FDM events should detect deviations that are beyond what is considered normal practice, and not only occurrences that require reporting to the competent authority or unscheduled continued airworthiness activity.
- To ensure the consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter operators, all the amendments to the AMC and GM to point ORO.AOC.130 that are not specific to the type of aircraft used have been replicated in the AMC and GM to point SPA.HOFO.145.



3. Expected benefits and drawbacks of the regulatory material

The expected benefits and drawbacks¹³ are summarised below. For the full impact assessment, please refer to Chapters 5 and 6 of NPA 2024-02.

Regarding safety benefits, the amended AMC and GM increase the effectiveness of the SRM process and of the occurrence-reporting process for many aircraft operators. They create conditions for more effective FDM programme oversight, contribute to addressing several safety issues identified in the EPAS, and improve the FDM programme's support of an ATQP.

Regarding social benefits, the amended AMC and GM make the assessment of air operations fairer for flight crew members. They make the FDM programmes better at supporting flight crews' professional needs.

The amended AMC and GM bring moderate economic benefits for both aircraft operators and aircraft manufacturers by:

- reducing the risk of an occurrence with a significant cost impact on the aircraft operator and/or the aircraft manufacturer;
- supporting a more cost-efficient SRM process for the aircraft operator; and
- creating the conditions for enhanced support to the continuing airworthiness and in-line assessment of new aircraft systems.

The identified drawbacks of the amended AMC and GM are related to the slight increase in some costs. These costs are limited as the amendments to the AMC expected to cause changes to aircraft operators' procedures and/or require changes to the agreement with flight crew representatives will be applicable two years after their adoption. In addition, the applicability of the amendments to the AMC that may impact on the design of airborne systems or airborne equipment is restricted to aircraft that will be manufactured three years after this Decision's publication date (refer to Section 2.3).

The identified drawbacks are summarised as follows:

- a very limited expense for aircraft operators to get the FDM software updated to meet some new conditions in the AMC;
- a very limited expense for aircraft operators to adapt their internal procedures to meet some new conditions in the AMC, such as being able to provide documentation upon the competent authority's request or preventing disclosure of flight crew identity;
- a very limited increase in cost for aircraft manufacturers, associated with a slight increase in support for their aircraft operators;
- a cost impact on small CAT operators that is, in proportion, slightly higher than on larger CAT operators (no cost impact on non-commercial operations);
- a possible slight and temporary increase in the workload for FDM staff; and
- a very limited increase in cost for national competent authorities to take account of the amended AMC in their oversight activities.

¹³ The stakeholders' comments made during the public consultation of NPA 2024-02 did not lead the review group to revise the assessment of expected benefits and drawbacks.



4. Monitoring and evaluation

No specific monitoring or evaluation of the amendments is planned, apart from standardisation activities and the exchange between EASA and the relevant stakeholders, which should help EASA identify any emerging issues.



5. Actions to support implementation

No specific actions are planned to support the implementation of the amendments, apart from standardisation activities and the exchange between EASA and the relevant stakeholders.



6. References

6.1. Related EU regulations

- Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (ELI: <http://data.europa.eu/eli/reg/2018/1139/oj>)
- Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/2007 (OJ L 122, 24.4.2014, p. 18) (ELI: <http://data.europa.eu/eli/reg/2014/376/oj>)
- Commission Implementing Regulation (EU) 2015/1018 of 29 June 2015 laying down a list classifying occurrences in civil aviation to be mandatorily reported according to Regulation (EU) No 376/2014 of the European Parliament and of the Council (OJ L 163, 30.6.2015, p. 1) (ELI: http://data.europa.eu/eli/reg_impl/2015/1018/oj)
- Commission Delegated Regulation (EU) 2020/2034 of 6 October 2020 supplementing Regulation (EU) No 376/2014 of the European Parliament and of the Council as regards the common European risk classification scheme (OJ L 416, 11.12.2020, p. 1) (ELI: http://data.europa.eu/eli/reg_del/2020/2034/oj)
- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (OJ L 119, 4.5.2016, p. 1) (ELI: <http://data.europa.eu/eli/reg/2016/679/oj>)
- Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35) (ELI: <http://data.europa.eu/eli/reg/2010/996/oj>)

6.2. Related EASA decisions

- Decision 2014/017/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ORO of Regulation (EU) No 965/2012 and repealing Decision 2012/01/R of the Executive Director of the Agency of 24 October 2012 ('AMC & GM to Part ORO – Issue 2') (<https://www.easa.europa.eu/en/document-library/agency-decisions/ed-decision-2014017r>)
- Decision No 2012/019/Directorate R of the Executive Director of the Agency of 24 October 2012 Acceptable means of compliance and guidance material to Commission Regulation (EU)



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- EASA, *Standardisation Annual Report 2021*¹⁶
 - European Operators Flight Data Monitoring Forum (EOFDM) Working Group B, *Guidance for the implementation of flight data monitoring precursors*, revision 4, 2022 ([Study_WGB_Precursors \(v6\)_20230120.pdf](#))
 - EOFDM Working Group C, *BREAKING THE SILOS — Fully integrating flight data monitoring into the safety management system*, revision 1, 2024 ([BreakingTheSilos_Revision1_Dec2024_0.pdf](#))
 - EOFDM Working Group C, *Flight Data Monitoring — Analysis techniques and principles*, Initial issue, 2021 ([eofdm_fdm_analysis_techniques_and_principles_initial_issue.pdf](#))
 - EOFDM Working Group C, *Key performance indicators for a flight data monitoring programme*, version 1, 2017 ([214908_EOFDM_WGC_KPIforFDMPProgrammeVer1.0.pdf](#))
 - Global Helicopter Flight Data Monitoring, *Helicopter Flight Data Monitoring – Industry best practice*, 2012¹⁷
 - HeliOffshore, *Helicopter Flight Data Monitoring (HFDM) — Recommended Practice for Oil and Gas Passenger Transport Operations*, Version 1.0, 2020 ([HFDM-RP-v1.0-1.pdf](#))
 - International Civil Aviation Organization (ICAO), *Annex 13 — Aircraft accident and incident investigation*, 13th edition, July 2024¹⁸
 - ICAO, *Annex 19 — Safety management*, 2nd edition, July 2016¹⁹
 - ICAO, *Annex 6 — Operation of aircraft, Part I International commercial air transport — Aeroplanes*, 12th edition, ICAO online store, 2022²⁰
 - ICAO, *Annex 6 — Operation of aircraft, Part III International operations — Helicopters*, 11th edition, ICAO online store, 2022²¹
 - ICAO, Document 10000, *Manual on Flight Data Analysis Programmes (FDAP)*, 2nd edition, ICAO online store, 2021²²
 - ICAO, Document 9859, *Safety Management Manual*, 4th edition, ICAO online store, 2018²³
 - ICAO, *State letter ref. AN 11/1.3.36–24/34 of 18 April 2024, adoption of Amendment 49 to Annex 6 Part I*²⁴
 - Safety Management International Collaboration Group, *Determining the Value of SMS*, 2016 (<https://skybrary.aero/sites/default/files/bookshelf/3427.pdf>)
 - UK Civil Aviation Authority, *CAP 739: Flight Data Monitoring*, 2013 ([CAP 739: Flight Data Monitoring | UK Civil Aviation Authority](#))

¹⁶ This document is not public.

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7. Appendix — Detailed overview of the main FDM-related comments issued on NPA 2024-02

Table 1 provides a detailed overview of the main FDM-related comments received during the public consultation of NPA 2024-02 and how they were addressed.

Table 1 — Overview of the main FDM-related comments received during the public consultation of NPA 2024-02

Section of the NPA and, if applicable, number of the AMC or GM paragraph commented on	Point of the AMC or GM paragraph commented on	Summary of the comments	Comment number(s)	Summary of the EASA responses to the comments and of the subsequent changes to the amendments initially proposed in NPA 2024-02
Not applicable (general comment)	Not applicable	The conditions on documenting processes, algorithms and methods of validation do not consider the impact on a large fleet, especially when it comes to maintaining the FDM programme documents controlled and up to date, updating the FDM software and adjusting the size of the FDM team. The cost assessment is not always realistic, and it does not consider the model of having a third party providing FDM services. In some cases, the new guidance is too vague and open to interpretation, exposing operators to different audit findings across different national aviation authorities.	#166	<p>The statements regarding increasing complexity due to the size of operations and stakeholder concerns regarding the impact assessment are not substantiated.</p> <p>The conditions regarding documentation in point (l) of AMC1 ORO.AOC.130 and point (d) of AMC2 ORO.AOC.130 do not imply any more that the operator has to maintain controlled documents, and the scope of this documentation has been adjusted so that it could be automatically or semi-automatically generated with FDM software.</p> <p>To better address the case of an operator contracting an FDM service provider, explicit reference to this case is inserted in point (d) of AMC1 ORO.AOC.130.</p> <p>GM issued by EASA is not binding. A competent authority may not raise a finding against an</p>



Section of the NPA and, if applicable, number of the AMC or GM paragraph commented on	Point of the AMC or GM paragraph commented on	Summary of the comments	Comment number(s)	Summary of the EASA responses to the comments and of the subsequent changes to the amendments initially proposed in NPA 2024-02
				operator just because the operator does not implement GM.
Chapter 2. In summary — why and what	Not applicable	<p>The definition of ‘flight data’ needs to be expanded to highlight the need for the more active use of data and better explain what is meant by ‘proactive’.</p> <p>The proposed AMC and GM do not sufficiently stress the importance of systematic follow-up on FDM event definitions, thresholds, and how operational changes may affect the data.</p> <p>The proposed AMC and GM should address the need for competences among the operator’s management to correctly interpret and use the FDM data.</p>	#78, #80, #81	<p>The definition of ‘flight data monitoring’ in Annex I to Regulation (EU) No 965/2012 is not proposed to be amended by NPA 2024-02, and an amendment to this definition is not considered necessary to support the amendments to the AMC and GM to points ORO.AOC.130 and SPA.HOFO.145.</p> <p>The need to adapt FDM event definitions and thresholds to operational changes is part of the management of change. An explanation has been inserted in point (c) of GM1 ORO.AOC.130 to address this aspect.</p> <p>The abilities to analyse and communicate information obtained from flight data are already recommended for the role of the team leader in point (e)(3) of GM1 ORO.AOC.130. In addition, point (e)(3) now specifies that the FDM analyst position requires at least a basic knowledge of statistics.</p>
Chapter 3. Expected benefits and drawbacks of the proposed regulatory material		<p>The FDM software may need updating or even replacing to meet the proposed AMC, which would have a significant cost impact.</p> <p>The new documentation-related conditions in the AMC may also have a significant impact, as it would require</p>	#88, #142	Today, the FDM software suites used by most operators and FDM service providers either already have these capabilities or can easily be upgraded to include these capabilities. In addition, the number of FDM software changes does not



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		<p>more human resources in the FDM team of every operator.</p>		<p>depend on the number of aircraft that are part of an operator’s FDM programme. Therefore, the associated cost is not proportionate to the size of an operator’s fleet. Further, as indicated, in order to provide industry with a sufficient notice period to implement the amendments, the amendments to AMC1 ORO.AOC.130 will become applicable two years after the publication of the Decision.</p> <p>The conditions regarding FDM documentation have been rephrased so that no controlled document will be required and the operator will only need to provide documentation upon request by its competent authority. Further, the condition to document the principles of validating FDM events has been removed from point (h)(5).</p> <p>It should be noted that this documentation will not need to be created for each new individual aircraft, since a single document:</p> <ul style="list-style-type: none"> - can address the quality of FDM outputs; - can address the principles of validating significant FDM events; - can provide information on the data source and performance of flight parameters for a fleet of aircraft;



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				<ul style="list-style-type: none"> - can provide information on the algorithms used to produce FDM events or FDM measurements for a fleet of aircraft.
Section 4.2 AMC1 ORO.GEN.200(a)(1)	Points (a), (c) and (d)	<p>Consider adding text about the use of FDM for the evaluation of safety assurance and that the FDM programme's effectiveness is routinely reassessed and efforts are made to continually improve the programme.</p> <p>Consider including that the safety review board should ensure that sufficient resources are available to conduct the desired FDM activities.</p> <p>The new proposed conditions should be applicable to operators that are implementing an FDM programme on a voluntary basis and not only operators that are required to have an FDM programme.</p>	#22, #23, #170	<p>The intent of this comment is addressed by the proposed amendments to point (d) of AMC1 ORO.GEN.200(a)(3) and point (b) of AMC1 ORO.GEN.200(a)(6) for the subcomponent 'safety performance and measurement' of safety assurance as defined in ICAO Doc 9859 (Safety Management Manual) and by point (e) of AMC1 ORO.GEN.200(a)(3) for the subcomponent 'management of change'.</p> <p>The role of the review board regarding the FDM programme is already addressed by point (c) of AMC1 ORO.GEN.200(a)(1).</p> <p>If the new conditions were applicable to voluntary FDM programmes, this could dissuade some operators from launching an FDM programme on a voluntary basis. This would have an overall detrimental effect on safety.</p>
Section 4.2 AMC1 ORO.AOC.130	(e)	<p>Point (e) should include a caution about sharing unvalidated data, as this would affect the trust of flight crew members in the FDM programme.</p> <p>In addition, point (e) is not clear on whether individual pilots should be provided with information on their</p>	#62, #90, #146	Point (e) now specifies that the operator should provide, upon request by the competent authority, documentation on the principles it implements to ensure the adequate quality of the FDM programmes' output used for safety information



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		<p>flights and whether differentiated information is needed for flight crew members and other staff.</p>		<p>sharing and that disseminated FDM-based information is meaningful.</p> <p>Operators are free to decide whether or not to include confidential feedback to individual flight crew members. In addition, operators should determine which professional groups and post holders are relevant to inform for safety purposes, beyond their flight crew members.</p>
<p>Section 4.2 AMC1 ORO.AOC.130</p>	<p>(h)(1)</p>	<p>The objective of a flight collection rate of 80 % for each individual aeroplane that is within the scope of point ORO.AOC.130 is too prescriptive. The main reasons are:</p> <ul style="list-style-type: none"> • when the recording equipment needs to be replaced, spare parts might be unavailable for longer periods of time due to delivery delays, meaning that to reach 80 % flight collection rate for each individual aeroplane the operator would have to artificially move parts across its fleet; • the objective does not take into account the case where the aeroplanes spend an extensive time on the ground or are very infrequently used for exceptional circumstances (e.g. during the COVID-19 pandemic). <p>Criteria are missing for assessing the cost impact of the objective on operators and justifying a less demanding</p>	<p>#32, #139, #148, #149, #186, #178</p>	<p>The alleviation based on demonstrating a disproportionate cost impact, which was embedded in point (h)(1), has been removed. In addition, the main purpose of this point has been inserted into the text of point (h)(1), to help an operator in demonstrating an AltMoC, if needed.</p> <p>Further, the quantitative objective contained in point (h)(1) has been modified as follows:</p> <ol style="list-style-type: none"> a. the objective per individual aeroplane has been replaced by a global flight recovery objective, which was made less stringent for smaller operators (fewer than 20 aeroplanes within the scope of point ORO.AOC.130); b. an exception was introduced for aeroplanes that have performed fewer than 50 flights in the past 12 months: they will not have to be



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		<p>objective (flight collection rate of 60 %, instead of 80 %).</p> <p>Point (h)(1) should specify objectives tailored to each operator's fleet, operation characteristics and processes.</p> <p>Note: Unlike the others, one commentator proposed an even more ambitious objective than that proposed in NPA 2024-02 regarding the flight collection rate.</p>		<p>included to compute the flight collection rate.</p> <p>In addition, according to Article 71 of Regulation (EU) 2018/1139, Member States may grant exemptions to natural or legal persons in the event of urgent unforeseeable circumstances or urgent operational needs, where several additional circumstances have been met.</p> <p>To ensure consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter operators, these changes have been replicated in point (h)(1) of AMC1 SPA.HOFO.145.</p> <p>Finally, to clarify that operators may have (and are encouraged to have) a more ambitious objective than that specified in point (h)(1), guidance has been inserted into GM1 ORO.AOC.130 and GM1 SPA.HOFO.145.</p>
Section 4.2 AMC1 ORO.AOC.130	(h)(2)	The objective of identifying within 15 calendar days a failure of the means to collect data from any individual aeroplane that is within the scope of point ORO.AOC.130 is too stringent for aeroplanes equipped with quick-access recorders, which require a manual download of their data, and for business jets, which	#9, #82, #139, #178	The alleviation based on demonstrating a disproportionate cost impact, which was embedded in point (h)(2), has been removed. In addition, the main purpose of this point has been inserted into the text of point (h)(2) to help an operator demonstrate an AltMoC, if needed.



Section of the NPA and, if applicable, number of the AMC or GM paragraph commented on	Point of the AMC or GM paragraph commented on	Summary of the comments	Comment number(s)	Summary of the EASA responses to the comments and of the subsequent changes to the amendments initially proposed in NPA 2024-02
		<p>perform infrequent flights and may fly to a different destination each time.</p> <p>In addition, criteria are missing for assessing the cost impact of the objective on operators and justifying a less demanding objective (22 calendar days to identify a failure of the means to collect data from any individual aeroplane instead of 15 calendar days).</p>		<p>Further, the quantitative objective contained in point (h)(2) has been replaced by the following.</p> <ul style="list-style-type: none"> - The operator should have means to identify a failure of the means to collect data from any individual aeroplane within 10 flights or within 22 calendar days. The operator may choose between these two alternative criteria (within 22 calendar days or within 10 flights). - When failure of the means to collect data from an individual aeroplane is identified, the operator should correct this failure within 120 days. <p>To ensure consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter operators, these changes have been replicated in point (h)(2) of AMC1 SPA.HOFO.145.</p> <p>Finally, to clarify that operators may have (and are encouraged to have) a more ambitious objective than that specified in point (h)(2), guidance has been inserted into GM1 ORO.AOC.130 and GM1 SPA.HOFO.145.</p>
Section 4.2 AMC1 ORO.AOC.130	(h)(3)	The objective of processing flight data within 15 calendar days of completion of the flight for at least	#2, #34, #82, #139	A minor update of the FDM software would be needed to compare the date at which a flight



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		<p>80 % of the flights for which data was collected is too stringent for business jets as they perform infrequent flights and may fly to a different destination each time.</p> <p>In addition, FDM software updates may be needed to be able to compare the flight date and the date at which the corresponding flight data was processed by the software.</p> <p>In addition, criteria are missing for assessing the impact of the objective on operators and justifying a less demanding objective (22 calendar days to process flight data for 80 % of the flights, instead of 15 calendar days).</p> <p>Note: Unlike the others, one commentator proposed an even more ambitious objective than that proposed in NPA 2024-02 regarding the time to process flight data.</p>		<p>recording is identified by the software and the value of the date parameter in that flight recording and to store this data for each flight. The development cost would be accordingly small. In addition, the amendments to AMC1 ORO.AOC.130 will be applicable two years after their adoption.</p> <p>The alleviation based on demonstrating a disproportionate cost impact, which was embedded in point (h)(3), has been removed. In addition, the main purpose of this point has been inserted into the text of point (h)(3), to help an operator demonstrate an AltMoC, if needed.</p> <p>Further, the quantitative objective has been replaced by the following: for at least 80 % of the flights for which data was collected within the FDM programme in the past 12 months, the data should have been processed by the FDM software within 22 calendar days of completion of the flight, or before 10 subsequent flights are performed with the aircraft that performed the flight. The operator may choose between these two alternative criteria (within 22 calendar days or within 10 flights).</p> <p>To ensure consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter</p>



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				<p>operators, these changes have been replicated in point (h)(2) of AMC1 SPA.HOFO.145.</p> <p>Finally, to clarify that operators may have (and are encouraged to have) a more ambitious objective than that specified in point (h)(3), guidance has been inserted into GM1 ORO.AOC.130 and GM1 SPA.HOFO.145.</p>
Section 4.2 AMC1 ORO.AOC.130	(h)(4)	<p>Two commentators argued that 90 calendar days to ensure that certain flight parameters are recorded with adequate performance on a newly operated aeroplane is not a sufficiently stringent objective. Contrariwise, a commentator requested additional flexibilities to account for potential practical issues.</p> <p>A commentator suggested that fulfilling point (a)(4) of AMC1 CAT.GEN.MPA.195(b) should be sufficient to meet the intent of proposed point (h)(4).</p>	#35, #91, #178, #219	<p>Based on industry experience, up to 90 days may be needed by the operator to check that all required flight parameters are recorded, as this implies getting appropriate documentation from the installer of the airborne recording system. Therefore, this time objective was not shortened. It was not extended either, as, according to Article 71 of Regulation (EU) 2018/1139, Member States may grant exemptions to natural or legal persons in the event of urgent unforeseeable circumstances or urgent operational needs — and, according to the system of findings defined in point ARO.GEN.350 of the EU rules for air operations, in the case of a level 2 finding, the competent authority shall grant the organisation a corrective action implementation period appropriate to the nature of the finding that may be up to three months, and that may be extended further in certain cases.</p>



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				<p>Point (a)(4) of AMC1 CAT.GEN.MPA.195(b) does not address the intent of point (h)(4) of AMC1 ORO.AOC.130, which is to ensure that, for a new aeroplane in the operator’s fleet, a minimum set of flight parameters with adequate performance is available for the FDM programme, so that basic FDM events and measurements can be easily implemented for that aeroplane. In order to clarify the intent of point (h)(4)(ii) of AMC1 ORO.AOC.130, the text of this point now specifies that this check may rely on documentation provided by the installer of the airborne recording equipment.</p> <p>To ensure consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter operators, this change has been replicated in point (h)(4) of AMC1 SPA.HOFO.145.</p>
Section 4.2 AMC1 ORO.AOC.130	(h)(5)	<p>A commentator requested further explanation of the term ‘significant FDM event’, and another one requested an explanation of the notion of ‘validation of an FDM event’.</p> <p>A commentator requested clarification of whether the start time when computing the time to validate an FDM event is the time of first detection of the FDM event or</p>	#36, #92, #147, #150, #178	The text of point (h)(5) in NPA 2024-02 contains two objectives: one regarding the operator’s knowledge of the principles for validating an FDM event, and one on a time frame for validating significant FDM events. Therefore, this point has been split into two: new point (h)(5) only addresses the principles to validate an FDM event,



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		<p>the latest time when the FDM event was detected by the FDM software.</p> <p>A commentator requested removing the term ‘analysis’ from point (h), as this point does not address data analysis but only the recovery of the flight data and validation of significant FDM events.</p> <p>A commentator highlighted that meeting point (h)(5) requires FDM software capable of recording the time when it detected an FDM event and when that FDM event was validated by the FDM analyst.</p>		<p>while point (h)(6) sets an objective regarding the validation of significant FDM events.</p> <p>An explanation of the term ‘significant FDM events’ has been inserted into point (h)(3) of AMC1 ORO.AOC.130. In addition, an explanation of the term ‘validating an FDM event’ has been inserted into point (h)(5).</p> <p>Finally, the term ‘analysis’ has been removed from point (h) so that the scope of that point is now data recovery and validation.</p> <p>To ensure consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter operators, these changes have been replicated in point (h)(5) of AMC1 SPA.HOFO.145.</p> <p>The necessary adaptation of the FDM software had been identified in NPA 2024-02. It is considered that introducing a capability into current FDM software to record the time an FDM event was detected would not be challenging for FDM software providers.</p>
Section 4.2 AMC1 ORO.AOC.130	(i)	One commentator found that a minimum data retention time of two years would require an unnecessarily large data storage volume, which in turn would have an environmental impact, while another	#3, #37, #93	80 % retention of raw or decoded flight data over the past two years is considered sufficient to meet the objectives of point (i) (i.e. have sufficient data to monitor long-term trends, to factor in seasonal



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		<p>commentator found that a data retention time of five years would be needed to assess seasonality changes, the effects of changes to procedures and long-term impacts.</p> <p>Another commentator requested clarification of the term ‘closed issues’ in point (i)(2).</p>		<p>variations, and to test and validate new FDM event definitions).</p> <p>In addition, point (i) only specifies a minimum retention time and does not prevent an operator from retaining flight data for more than two years.</p> <p>The associated data storage volume is rather small. In addition, part of this data could be recorded on storage media that do not require any energy to retain.</p> <p>The text of point (i) has been changed as follows:</p> <ul style="list-style-type: none"> - it specifies that all flight data should be retained at least until valid significant FDM events have been analysed; - it specifies that the 80 % data retention objective is not applicable after a change of FDM software or FDM service provider, until two years after the start time of deployment of the new FDM software or the start time of a new FDM service; - ‘readily available’ has been replaced by ‘available for processing by the FDM software’;



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				- the term 'closed issues' in point (i)(1) has been replaced by 'de-identified analyses of significant FDM events'.
Section 4.2 AMC1 ORO.AOC.130	(k)	<p>Preventing disclosure of crew identity does not work for small operators; inevitably, all personnel involved in operations have access to identified FDM data.</p> <p>If the operator does not manage to agree with its flight crew representatives on the procedure specified in point (k), alternatively the requirements in Article 16(10) of Regulation (EU) No 376/2014 should be included in this procedure, and this procedure would only need to be endorsed by the operator's management.</p> <p>The wording 'protection of the information source' in point (k)(6) is not clear.</p>	#11, #61, #167	<p>Even in a small operator that has a small number of pilots, access to identified FDM data should be restricted to specifically authorised post holders.</p> <p>The requirement in Article 16(10) of Regulation (EU) No 376/2014 is already applicable to all operators that are based in Member States. Point (k) of AMC1 ORO.AOC.130 has been applicable for more than 10 years, and there have been very few reported difficulties with flight crew member representatives in agreeing on the content of the procedure to prevent the disclosure of crew identity.</p> <p>In point (k)(6), 'protection of the information source may be withdrawn' is replaced by 'flight crew identity may be disclosed' for clarity.</p>
Section 4.2 AMC1 ORO.AOC.130	(l)	Meeting point (l) would only be possible if the aircraft manufacturer provided information on the data source and performance of the flight parameters and the FDM service provider provided description of the algorithms implemented in the FDM software.	#82, #94, #152, #179, #187, #206	The need to get appropriate information from the aircraft manufacturer and the FDM service provider is already taken into account in NPA 2024-02: the scope of point (l) is restricted to aeroplanes with an individual CofA first issued on or after [date of publication + three years].



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		<p>Amended point (I) is too focused on documentation rather than on the proficiency of the FDM analysts, as suggested by the first sentence of that point.</p> <p>The administrative cost and burden associated with maintaining documentation on flight parameters and on FDM algorithms will reduce the time available for more safety-relevant tasks.</p> <p>Only very specialised personnel would be able to assess the minimum performance of flight parameters needed for a given FDM algorithm to deliver meaningful results (in point (I)(2)(ii)).</p>		<p>Regarding the scope of point (I): specific and measurable objectives cannot be set to verify the operator’s staff knowledge of FDM parameters and FDM algorithms, as there are no industry standards and no commonly recognised syllabus for FDM analysts. Therefore, the title of point (I) now reads ‘access to information on flight parameters and FDM algorithms’.</p> <p>Regarding the cost impact of point (I): in practice, documentation would not be needed for each new individual aircraft:</p> <ul style="list-style-type: none"> - a single document on the data source and performance of flight parameters can address a fleet of aircraft; - similarly, a single document can provide information on the algorithms used to produce FDM events or FDM measurements for a fleet of aircraft. <p>In addition, such documentation may be automatically or semi-automatically produced by the FDM software, and it may be produced upon request, as the purpose is that the operator has unhindered access to information on the flight parameters and the algorithms used to produce FDM events and measurements.</p>



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				<p>Therefore, point (l) now specifies that the operator should be able to provide the documentation, upon request by the competent authority, within 90 calendar days after it starts operating an aircraft.</p> <p>The condition ‘and their minimum performance for the algorithm to deliver reliable results’ has been removed from point (l)(2)(ii).</p>
Section 4.2 AMC2 ORO.AOC.130	(a)	Point (a) should also address event rate target goals as well as timelines for reviewing the events and measurements to check whether the target goals were met.	#75	<p>The rate of an FDM event depends on the way the event is defined. In addition, event rate targets should be adjusted depending on particular operational conditions and safety targets decided under the operator’s management system. Further, when considering a very low volume of operations, a given FDM event definition may not frequently produce FDM events, even when including low-severity events. As a result, reliably assessing rates in that case would be challenging. Therefore, it is not considered appropriate to specify FDM event rate targets in AMC2 ORO.AOC.130 or to include a condition that the operator should establish such FDM event rate targets.</p> <p>However, the text of point (a) of AMC2 ORO.AOC.130 has been modified to specify that the trigger conditions of the core FDM events</p>



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				<p>should be set to detect deviations that are beyond what is considered normal practice and not only occurrences that require reporting or unscheduled continued airworthiness activity. In addition, point (a) has been rephrased to clarify that the scope of the set of core FDM events and measurements is the most significant safety risk identified by the operator and that the definitions of these FDM events and measurements should also be adapted when new safety risks are identified.</p> <p>To ensure consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter operators, these changes have been replicated in point (a) of AMC2 SPA.HOFO.145.</p>
Section 4.2 AMC2 ORO.AOC.130	(b)	FDM only provides factual information. The risk assessment is performed at a later stage.	#95	Point (b) has been reworded to specify that the FDM programme should include FDM events or FDM measurements that are relevant to monitor precursors of the key risk areas. This change has been replicated in point (b) of AMC2 SPA.HOFO.145.
Section 4.2 AMC2 ORO.AOC.130	(d)	Point (d) focuses on having controlled paper-based documentation up to date, while the priority should be that the operator has knowledge and understanding of the FDM programme. This penalises operators that	#180, #205	The documentation specified in point (d) of AMC2 ORO.AOC.130 may be automatically or semi-automatically produced, for example, by the FDM software. In addition, the purpose of point (d)



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		<p>have an in-house FDM programme, while those operators that just subcontract FDM and are less knowledgeable about FDM will not be impacted. Storing the knowledge built by the FDM team in the FDM software is sufficient for an effective FDM programme.</p> <p>Documentation-related conditions should be more performance based and avoid creating administrative burden. The FDM documents should be useful for the operator on a daily basis and should not only be maintained for meeting requirements. Electronic documentation formats should be acceptable.</p>		<p>of AMC2 ORO.AOC.130 is also met when such documentation is produced upon request.</p> <p>Therefore, point (d) of AMC2 ORO.AOC.130 now specifies that the operator should be able to produce the documentation upon request by the competent authority. In addition, text has been inserted into GM1 ORO.AOC.130 to clarify that point (d) of AMC2 ORO.AOC.130 could be met using automatic documentation generation.</p> <p>To ensure consistency of the FDM-related AMC and GM across the air operations rules and a level playing field between aeroplane and helicopter operators, these changes have been replicated in point (d) of AMC2 SPA.HOFO.145 and in GM1 SPA.HOFO.145.</p>
Section 4.2 AMC1 SPA.HOFO.145	(h)(2) and (h)(3)	For offshore operators with a small volume of operations, requiring that the time between flight data download from the aircraft and flight data processing does not exceed seven days may hamper the protection of the identities of crews involved in FDM events. The maximum time between flight completion and data routine processing should be 15 days, like in AMC1 ORO.AOC.130 for aeroplanes.	#129	The protection of the flight crew identity does not require delaying the processing of flight data. The purpose of protecting the flight crew identity in the FDM programme is to prevent misuse of FDM data associated with a flight crew member, such as use for punitive purposes or uncontrolled dissemination of identified data. This can be achieved by a data access and security policy and a dedicated procedure: refer to points (j) and (k) of point SPA.HOFO.145.



Section of the NPA and, if applicable, number of the AMC or GM paragraph commented on	Point of the AMC or GM paragraph commented on	Summary of the comments	Comment number(s)	Summary of the EASA responses to the comments and of the subsequent changes to the amendments initially proposed in NPA 2024-02
				However, the conditions in point (h)(2) and (h)(3) of point SPA.HOFO.145 have been aligned with the condition in point (h)(2) of AMC1 ORO.AOC.130, and it now specifies that 80 % of the flights should be processed by the FDM software either within 22 days or before 10 subsequent flights are performed with the same aircraft.
Section 4.2 GM1 ORO.AOC.130	(c)	For operators with a very low volume of operations, it is almost impossible to detect trends, and every individual FDM event needs to be analysed.	#10	Point (c)(3) of AMC1 ORO.AOC.130 now specifies that statistics should include rate and trend information only where the number of flights flown is sufficient to reliably generate that information. In addition, a mention of distributions has been inserted into this point, as they belong to the basic sets of statistics used in the framework of an FDM programme.
Section 4.2 GM1 ORO.AOC.130	(b)(3)	The term 'FDM service' is not consistently addressed in the AMC and GM.	#156	The text of point (d) of AMC1 ORO.AOC.130 has been amended to include the possibility of relying on an FDM service (i.e. a specialised service to process flight data).

