

## **Opinion No 01/2022**

## Large aeroplane tyre pressure monitoring

## Helicopter ditching and water impact occupant survivability

## Conversion of Class D compartments

RELATED NPA/CRD: 2020-05 — RMT.0586 | RELATED NPA/CRD: 2020-16 — RMT.0120 (27&29.008)

			EXECUTIVE S	SUMMARY		
The ol	he objectives of this Opinion are the following:					
1.	Regarding <i>large</i> catastrophic tyr	ling <i>large aeroplane tyre pressure monitoring</i> (RMT.0586), to decrease the risk of hazardous or ophic tyre failures of large aeroplanes caused by inadequate tyre inflation pressure.				
<ol> <li>Regarding <i>helice</i> risks linked to the</li> </ol>		opter ditching and water impact occupant survivability (RMT.0120), to mitigate the safe he operation of helicopters over water for extended periods of time.			the safety	
	The proposed a without any sigr	mendments that nificant economic	stem from these impact, and with	two rulemaking tasl no environmental o	ks are expected to increan r social impact.	ase safety
<ol> <li>Regarding the aeroplanes use these aeroplan introduction of</li> </ol>		conversion of Clo d for business ope es, as introduce new additional air	ass D compartme erations from the d by Commissio rworthiness requ	ents, to exempt ope e requirement to con n Implementing Rep irements.	erators of certain in-ser overt the Class D compar gulation (EU) 2020/115	vice large tments of 9 on the
	The proposed amendment would ensure that the requirement is proportionate and cost-efficient. It would also increase harmonisation with the equivalent FAA regulation.					
Action area:		Design, production and maintenance improvements				
Related rules:		Annex I (Part-26) to Regulation (EU) 2015/640				
Affected stakeholders:		Rotorcraft and large aeroplane operators and maintenance organisations				
Driver:		Safety		Rulemaking group:	Yes	

Driver:	Safety	Rulemaking group:	Yes
mpact assessment:	Yes	Rulemaking Procedure:	Standard

Start Terms of Reference	Public consultation NPA	Proposal to the Commission Opinion No 01/2022	Adoption by the Commission Implementing Act	<b>Decision</b> Certification Specifications, Acceptable Means of Compliance, Guidance Material
RMT.0586 30.5.2017	5.5.2020	7.2.2022	2022/Q3	2022/Q3
RMT.0120 24.10.2012	23.12.2020	7.2.2022	2022/Q3	2022/Q3
Class D compartment n/a	n/a	n/a	n/a	n/a



## **Table of contents**

1.	About	this Opinion3
	1.1.	How this Opinion was developed
	1.2.	The next steps
2.	In sum	mary — why and what5
	2.1.	Why we need to amend Part-26 and CS-26 — issue/rationale5
	2.2.	What we want to achieve — objectives
	2.3.	How we want to achieve it — overview of the proposals7
	2.4.	What are the stakeholders' views — outcome of the consultation
	2.5.	What are the expected benefits and drawbacks of the proposal11
	2.6.	How we monitor and evaluate the rules11
3.	Refere	nces
	3.1.	Affected regulations
	3.2.	Related decisions
4.	Relate	d documents14



### 1. About this Opinion

#### 1.1. How this Opinion was developed

The European Union Aviation Safety Agency (EASA) developed this Opinion in line with Regulation (EU) 2018/1139<sup>1</sup> ('Basic Regulation') and the Rulemaking Procedure<sup>2</sup>.

# Tyre pressure monitoring (RMT.0586) | Helicopter ditching and water impact occupant survivability (RMT.0120)

These rulemaking activities are included in the European Plan for Aviation Safety (EPAS) for 2021–2025<sup>3</sup> under rulemaking tasks RMT.0586 and RMT.0120. The scope and timescales of the tasks were defined in the related ToRs<sup>4,5</sup>.

The *draft* text of this Opinion has been developed by EASA based on the input of Rulemaking Groups (RMG) RMT.0586 and RMT.0120. All the interested parties were consulted<sup>6</sup> through NPA 2020-05 (RMT.0586)<sup>7</sup> and NPA 2020-16 (RMT.0120)<sup>8</sup>.

- NPA 2020-05 'Tyre pressure monitoring': 104 comments were received from all interested parties, including industry and national competent authorities.
- NPA 2020-16 'Helicopter ditching and water impact occupant survivability': 70 comments were received from all interested parties, including industry and national competent authorities.

EASA has addressed and responded to the comments received on the NPAs. The comments received and EASA's responses to them are presented in Comment-Response Documents (CRDs) 2020-05<sup>9</sup> and 2020-16<sup>10</sup>, and they are also summarised in Section 2.4 below.

<sup>&</sup>lt;sup>10</sup> <u>http://easa.europa.eu/document-library/comment-response-documents</u>



<sup>&</sup>lt;sup>1</sup> 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) (<u>https://eurlex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139</u>).

<sup>&</sup>lt;sup>2</sup> 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 (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (<u>http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure</u>).

<sup>&</sup>lt;sup>3</sup> <u>https://www.easa.europa.eu/document-library/general-publications/european-plan-aviation-safety-2021-2025</u>

<sup>&</sup>lt;sup>4</sup> ToR RMT.0586 'Tyre pressure monitoring system' Issue 1 (<u>https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0586</u>).

<sup>&</sup>lt;sup>5</sup> ToR RMT.0120 (27&29.008) 'Ditching Occupant Survivability' Issue 1 (<u>https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0120-2729008</u>).

<sup>&</sup>lt;sup>6</sup> In accordance with Article 115 of Regulation (EU) 2018/1139, and Articles 6(3) and 7 of the Rulemaking Procedure.

<sup>&</sup>lt;sup>7</sup> NPA 2020-05 'Tyre pressure monitoring' (<u>https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2020-05</u>).

<sup>&</sup>lt;sup>8</sup> NPA 2020-16 'Helicopter ditching and water impact occupant survivability' (<u>https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2020-16</u>).

<sup>&</sup>lt;sup>9</sup> <u>https://www.easa.europa.eu/document-library/comment-response-documents/crd-2020-05</u>

#### **Conversion of Class D compartments**

The *draft* text of this Opinion has been developed by EASA, after further analysis of the impact of Commission Implementing Regulation (EU) 2020/1159<sup>11</sup> on operators and in coordination with the interested parties (operators and manufacturers of the aeroplanes concerned, and the association that represents them).

The *final* text of this Opinion and of the proposed draft Commission Implementing Regulation and its draft Annex have been developed by EASA. They are published on the EASA website<sup>12</sup>.

The major milestones of this rulemaking activity are presented on the title page.

#### 1.2. The next steps

This Opinion contains the proposed amendments to Regulation (EU) 2015/640<sup>13</sup> and their potential impact(s). It is submitted to the European Commission, which will decide whether to amend that Regulation, based on the subject Opinion.

## Tyre pressure monitoring (RMT.0586) | Helicopter ditching and water impact occupant survivability (RMT.0120)

The Decision with the related certification specifications (CSs) and guidance material (GM) (amendment of CS-26) will be published by EASA when the related regulation (implementing act) is adopted by the European Commission.

EASA publishes together with this Opinion the corresponding *draft CSs & GM text* for information purposes only.

#### **Conversion of Class D compartments**

The proposed amendments to Regulation (EU) 2015/640 do not lead to the need to amend the related CSs and GM. No Decision amending CS-26 on this subject will be published by EASA following the adoption of the respective implementing act by the European Commission.

<sup>&</sup>lt;sup>13</sup> Commission Regulation (EU) 2015/640 of 23 April 2015 on additional airworthiness specifications for a given type of operations and amending Regulation (EU) No 965/2012 (OJ L 106, 24.4.2015, p. 18) (<u>https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX%3A32015R0640&qid=1639397929984</u>).



<sup>&</sup>lt;sup>11</sup> Commission Implementing Regulation (EU) 2020/1159 of 5 August 2020 amending Regulations (EU) No 1321/2014 and (EU) No 2015/640 as regards the introduction of new additional airworthiness requirements (OJ L 257, 6.8.2020, p. 14) (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R1159).

<sup>&</sup>lt;sup>12</sup> <u>http://easa.europa.eu/document-library/opinions</u>

### 2. In summary — why and what

#### 2.1. Why we need to amend Part-26 and CS-26 — issue/rationale

#### Issue 1: Tyre pressure monitoring (RMT.0586)

Incorrect tyre pressure and, in particular, the under-inflation of tyres, is a contributing factor to tyreand wheel-failure-related accidents or incidents of large aeroplanes. These kinds of occurrences have continued to arise, despite the various actions taken by industry and regulators over the last 40 years. These various actions include improvements in tyre maintenance practices, numerous communications on good practices for tyre pressure checks, and improvements in tyre and wheel robustness. Actions have also been taken to mitigate the severity of occurrences, i.e. the improvement of the protection of large aeroplanes against the effects of tyre failures. However, the review of the reported occurrences indicates that a further reduction in the risk posed by tyre failure is needed.

#### Issue 2: Helicopter ditching and water impact occupant survivability (RMT.0120)

Helicopters are naturally unstable when floating on water, with a tendency to capsize and remain inverted due to their high centres of gravity in relation to their centres of buoyancy. To counter this natural instability and to provide opportunities for the occupants to escape, most helicopters used in offshore operations are required by Regulation (EU) No 965/2012<sup>14</sup> (hereafter referred to as the 'Air Operations Regulation') to be fitted with an emergency flotation system (EFS), normally in the form of inflatable bags that are only deployed immediately before or after water entry. An EFS is designed for a controlled ditching, but may also provide some protection against the helicopter immediately sinking following a water impact event.

A capsize creates particular hazards for occupants. The cockpit/cabin quickly fills with water, leading to an inability to breathe, thus creating urgency to escape. This is a particular concern in cold water, where it is well established that the time necessary for escape can exceed an occupant's breath-hold time. A capsize may also lead to occupant disorientation which would further hinder escape. Operational experience has shown that drowning has been the most frequent cause of death following helicopter ditching and survivable water impact events.

To address this issue, at the end of Phase 1 of RMT.0120 in June 2018, EASA published Amendment 5 to CS-27<sup>15</sup> and CS-29<sup>16</sup>, which included a comprehensive set of specifications requiring design improvements that better protect helicopter occupants in case of ditching and water impact. These new specifications are applicable to new applications for design certification.

Phase 2 of RMT.0120 started at the end of 2018 with the task to consider the retrospective application of the design improvements that were included in Amendment 5 to CS-27 and CS-29. EASA re-established a Rulemaking Group of experts and affected stakeholders to support with this task.

<sup>&</sup>lt;sup>16</sup> https://www.easa.europa.eu/document-library/certification-specifications/cs-29-amendment-5



<sup>&</sup>lt;sup>14</sup> 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) (<u>https://eur-lex.europa.eu/legalcontent/EN/TXT/?qid=1593529495409&uri=CELEX:32012R0965</u>).

<sup>&</sup>lt;sup>15</sup> https://www.easa.europa.eu/document-library/certification-specifications/cs-27-amendment-5

#### **Issue 3: Conversion of Class D compartments**

Commission Implementing Regulation (EU) 2020/1159 inserted point 26.157 *Conversion of Class D compartments* into Annex I (Part-26) to Regulation (EU) 2015/640, which establishes additional airworthiness requirements for the conversion of Class D cargo or baggage compartments of large aeroplanes in order to mitigate the risk of fire in such compartments. All in-service large aeroplanes certified by EASA and operated in commercial air transport on or after 26 August 2023 shall comply with point 26.157. However, further analysis shows that, because of their profile of operations (primarily business operations), certain large aeroplanes are not loaded with cargo but with passenger baggage and are thus less subject to the risk of an in-flight fire in their Class D compartments developing into an uncontrollable fire.

Although the carriage of lithium batteries in cargo or baggage compartments has increased over recent years, in business operations, passenger electronic devices equipped with lithium batteries are mostly transported by passengers in the cabin, which substantially reduces the risk of not identifying and reacting early enough to a thermal runaway and the subsequent fire related to those batteries. In addition, the configuration of the identified aeroplane models (the baggage compartment is depressurised in flight) reduces the possibility for a fire to start and develop in that compartment (due to the lack of oxygen).

The requirement has also introduced a disharmonisation with the applicability of the equivalent FAA regulation on the conversion of Class D cargo or baggage compartments since the FAA requirement does not apply to business operations. Today, the impacted fleet is estimated to be about 300 aeroplanes registered in Europe.

#### 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 proposal will contribute to the achievement of the overall objectives by addressing the issues outlined in Section 2.1.

The specific objectives of this proposal are as follows:

- Issue 1: Tyre pressure monitoring (RMT.0586)
  - Decrease the risk of hazardous or catastrophic tyre failures of large aeroplanes that are caused by inadequate tyre inflation pressure. This is to be achieved through improvements that will ensure that the tyre inflation pressure remains within the safe levels defined by the large aeroplane manufacturer.
- Issue 2: Helicopter ditching and water impact occupant survivability (RMT.0120)
  - Improve, with cost-efficient solutions, the safety of helicopter occupants in case of a ditching or a survivable water impact event.
  - Improve the clarity of the technical specifications related to the certification of helicopters for ditching or emergency flotation.

#### — Issue 3: Conversion of Class D compartments



- Ensure that the requirement that was introduced with point 26.157 to mitigate the risk of a serious incident or accident caused by a fire that starts in the Class D compartment of a large aeroplane is proportionate and cost-efficient.
- Increase harmonisation with the equivalent FAA regulation.

#### **2.3.** How we want to achieve it — overview of the proposals

#### Issue 1: Tyre pressure monitoring (RMT.0586)

It is proposed to amend Regulation (EU) 2015/640 (and in particular its Annex I (Part-26)) to require large aeroplane operators to minimise the risk that a tyre is below its minimum serviceable inflation pressure during operation. The acceptable means to comply with this requirement will be provided in an amendment of CS-26 'Additional airworthiness specifications for operations'. Flexibility would be provided to those operators that may choose to include a task in the aeroplane maintenance programme (AMP) to perform tyre inflation pressure checks at a suitable time interval, and/or install a system that monitors tyre inflation pressure.

Note: A similar specification and acceptable means of compliance have also been introduced in CS-25, at Amendment 26, to address the certification of new large aeroplane designs.

#### Issue 2: Helicopter ditching and water impact occupant survivability (RMT.0120)

It is proposed to amend Regulation (EU) 2015/640 (and in particular its Annex I (Part-26)) to include the following requirements for helicopters that are operated over water for extended periods of time:

Black/yellow marking for operating handles for all helicopters

In a capsized helicopter, passengers and flight crew will be able to identify more easily the operating handle for an emergency exit whilst underwater and in the dark.

- Black/yellow marking for emergency controls used underwater for all helicopters

Emergency controls will be marked with the method of operation, and will be marked with yellow and black stripes if they may have to be operated underwater.

 <u>Remote life raft deployment (cockpit, cabin, from water) for large CS-29 helicopters only</u> (ditching approval only)

It will be required for life rafts to reliably deploy in any foreseeable floating attitude, including capsize, from either inside the ditched helicopter, or if it has capsized, then survivors can deploy the life raft from outside the helicopter whilst in the water.

<u>Substantiated sea conditions for capsize resistance in the rotorcraft flight manual (RFM)</u>

The flight crew and rotorcraft operators will be made aware of the sea conditions substantiated relating to the certification obtained with ditching or emergency flotation design provisions.

The effort required to open each emergency 'egress route' shall not be exceptional for CS-27
 Category A and CS-29 helicopters only



In a capsized helicopter, the emergency exits will be provided for passengers and flight crew to enable rapid escape, i.e. exceptional effort would not be required to open the exit after the mechanism is operated.

 The life raft attachment lines (short and long) should be of a suitable length to prevent damaging the life raft or putting the life raft in a dangerous position for all helicopters

When deployed, the life raft will be able to be retained at a distance from the helicopter to allow occupants to enter and then float at a safe distance from the ditched helicopter, lowering the risk of damage to the life raft.

<u>Life preservers to be within easy reach of each seated occupant for all helicopters</u>

If not already worn during the flight, life preservers will be easily found and reached by passengers.

 <u>Automatic illumination of emergency ditching underwater exits for CS-27 Category A and CS-29</u> <u>helicopters</u>

In a capsized helicopter, passengers will be able to find more easily the emergency exits underwater and in the dark.

 Improved ratio of passengers to emergency ditching exits (one pair of emergency exits per four passengers) for all helicopters

In a capsized helicopter, there will be an emergency underwater exit for each pair of passengers, so that they will not have to wait for more than one passenger to exit the capsized helicopter before making their underwater escape.

 <u>Determination of the robustness of existing emergency flotation systems (EFSs) to consider</u> possible damage

The integrity of the EFSs can be maximised when the EFS design considers the possibility of what damage could occur in the event of a water impact. An assessment of the installation and routing of EFS components, electrical connections and gas lines to maximise the possibility of a successful EFS deployment in the event of a water impact will be conducted. Design changes may be required to be implemented for newly produced helicopters as a result of this assessment.

Automatic deployment of the emergency flotation system (EFS) for all helicopters

In the event of entry into water (ditching or water impact), the EFS must automatically deploy.

 <u>Automatic arming of the emergency flotation system (EFS) for CS-27 Category A and CS-29</u> <u>helicopters</u>

If the system that automatically deploys the EFS is disarmed during flight (to prevent a potential safety issue from the inadvertent deployment of the EFS), then the rearming of the EFS automatic deployment system must not rely upon any pilot action. This is only applicable to helicopters where the inadvertent deployment of the EFS could cause a safety issue, or where safe flight with the EFS deployed has not been demonstrated for the full envelope.



#### **Issue 3: Conversion of Class D compartments**

It is proposed to amend point 26.157 of Annex I (Part-26) to indicate that the requirement does not apply to those aeroplane models contained in the list of aeroplane models that are not subject to certain provisions of Annex I (Part-26).

It is proposed to amend Appendix 1 'List of aeroplane models not subject to certain provisions of Annex I (Part-26)' to Annex I (Part-26) by including the identified aeroplane models that are not subject to point 26.157, namely:

- Gulfstream G100 and G200 series,
- Cessna 500/550/S550/560/560XL,
- Hawker series,
- CESSNA 750 (Citation X) series.

#### 2.4. What are the stakeholders' views — outcome of the consultation

#### Issue 1: Tyre pressure monitoring (RMT.0586)

Overall, the proposal was welcomed by the majority of the commentators who made various suggestions that allowed to improve the proposed amendments to Part-26 and CS-26.

Nevertheless, some commentators suggested to rely on the MRB process to solve the issue. EASA wishes to remind that the MRB process is an optional process and that some large aeroplanes have been certified without using this process. Furthermore, EASA cannot impose measures on tyrepressure-related tasks if the other MRB members do not agree. EASA is also aware that recent MRBs of non-European aeroplane types decided for tyre pressure check intervals which are beyond what EASA considers as reasonably safe. Therefore, EASA does not wish to rely on the MRB process to solve this issue.

Several comments also highlighted that the proposed new point 26.201 of Annex I (Part-26) was too prescriptive and that it should allow for more flexibility for operators regarding possible means to achieve the intended objective, i.e. to minimise the risk of operating an aeroplane with inadequate tyre inflation pressure. EASA has amended the proposal to meet these expectations: the objective is provided in point 26.201 of Annex I (Part-26), while a new CS 26.201 specification would provide for options that can be used to show compliance.

Some commentators asked to also accept ground tyre pressure indication systems, together with operational procedures, as a potential means to meet the objective, as this was not offered in the proposed point 26.201 of Annex I (Part-26). Such systems are now mentioned in the options that would be provided by the new CS 26.201 specification.

Finally, some commentators explained that the daily check option provided in the proposed CS 26.201 may create concerns for operators that do not operate daily (for example, business aeroplane operations). EASA reminds that the proposed CS 26.201 provides the possibility to substantiate a different interval. Meanwhile, the recommended pressure check interval should only be established in order to ensure the airworthiness condition of tyres. Whether an aeroplane flies regularly or not is an operational factor. If the aeroplane does not fly regularly, the operator must decide to either service the tyres regularly (to ensure that the pressure remains above the minimum serviceable



pressure) or take appropriate actions to return the tyres to an airworthy condition after the pressure level has dropped below the minimum serviceable pressure.

For further information, please refer to CRD 2020-05<sup>17</sup> which provides responses to individual comments.

#### Issue 2: Helicopter ditching and water impact occupant survivability (RMT.0120)

During the public consultation of NPA 2020-16, the following main topics were raised by the stakeholders:

- General support was received from national competent authorities.
- Requests for clarification of the applicability of the various provisions due to the linkages created between the Air Operations Regulation and Annex I (Part-26) to Regulation (EU) 2015/640. The applicability was verified as part of the final review of the regulatory text.
- Specific suggestions to provide certainty of what is required by individual provisions/specifications such as those for underwater emergency exits, lighting, and life raft retaining lines.
- Requests for clarification of the applicability of Annex I (Part-26) to 'State aircraft' such as those conducting search and rescue operations.
- Several comments were received requesting greater certainty of how the practicality of design changes can be assessed by EASA as a result of the required design review of existing emergency flotation systems (EFSs).
- Several comments were received implying that the requirements for the automatic arming of the emergency flotation without 'any pilot action during flight' were impractical or that the costs in the regulatory impact assessment were too low. The higher costs that were provided were used as the basis for a revised cost–benefit analysis, and the outcome of this analysis was still positive. In the responses to the comments, it was clarified that some rotorcraft types already comply with this requirement and that a design change is not mandated, and the type certificate holder can demonstrate that the emergency flotation system (EFS) is safe throughout the flight envelope.
- Comments were received requesting clarification of how compliance can be demonstrated, particularly for underwater emergency exits. Additional details have been included to the draft text for the corresponding amendments to CS-26, where considered necessary.
- Comments were received on Option 4 'irregular wave testing' in the regulatory impact assessment regarding some elements of the cost-benefit analysis and the statistics that were used. This information was considered and there was no significant impact on the outcome of the cost-benefit analysis, which was still negative.

<sup>&</sup>lt;sup>17</sup> https://www.easa.europa.eu/downloads/121123/en



#### **Issue 3: Conversion of Class D compartments**

Further to the publication of Commission Implementing Regulation (EU) 2020/1159, certain operators and aircraft manufacturers and the association representing them, expressed their views and concerns about the applicability of point 26.157 to operators of all large aeroplanes used in commercial air transport. In their view, the requirement was not cost-efficient for all large aeroplanes, especially those performing business operations. EASA further analysed the impact of point 26.157, in coordination with the parties concerned. This proposal is the outcome of that analysis.

#### 2.5. What are the expected benefits and drawbacks of the proposal

The expected benefits and drawbacks of the proposal are briefly summarised below. For the full impact assessment of the alternative options, please refer to NPA 2020-05<sup>18</sup> (RMT.0586) and NPA 2020-16<sup>19</sup> (RMT.0120).

#### Issue 1: Tyre pressure monitoring (RMT.0586)

The proposal would ensure that tyre inflation pressure is checked at appropriate time intervals, thereby minimising the risk of operating with an unsafe tyre inflation pressure. This will improve safety (by reducing the number of tyre failures) without any significant economic impact, and with no environmental or social impact. The proposed amendment to Annex I (Part-26) is objective oriented, flexible, and does not mandate design changes.

#### Issue 2: Helicopter ditching and water impact occupant survivability (RMT.0120)

The proposed amendments will improve the safety of helicopter offshore operations and will provide for a pragmatic balance of the associated minimal economic impact, and with no environmental or social impact.

#### **Issue 3: Conversion of Class D compartments**

The proposal is expected to provide for a level playing field and avoid imposing non-proportionate and non-cost-efficient burdens on operators of certain large aeroplanes (business aeroplanes). Further assessment concluded that for those aeroplanes, the risk of an in-flight fire starting in a Class D compartment and developing into an uncontrollable fire is very low, and that an acceptable level of safety exists without converting existing Class D compartments for these aeroplanes. The proposal is also expected to increase harmonisation with the equivalent FAA regulation.

#### 2.6. How we monitor and evaluate the rules

#### Issue 1: Tyre pressure monitoring (RMT.0586)

The monitoring of the effects created by the proposed amendment to Annex I (Part-26) (and the related amendment to CS-26) would consist of analysing, in the long term, the direction of the trend of the numbers of accidents and incidents triggered by tyre failures, in particular the ones caused by tyre under-inflation.

<sup>&</sup>lt;sup>19</sup> https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2020-16



<sup>&</sup>lt;sup>18</sup> <u>https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2020-05</u>

This could be performed once large aeroplane operators comply with the requirements of the amended Annex I (Part-26) and large aeroplanes have been operated for a sufficient amount of flight time, which would require several years (at least 5 years to obtain relevant statistical information).

In addition, the amendment made to Part-26 / CS-26 might be subject to interim / ongoing /ex post evaluation that will show the outcome that is obtained after the application of the new regulations, taking into account the earlier predictions made in the impact assessment of NPA 2020-05. The evaluation would provide evidence-based judgement of the extent to which the proposal has been relevant (given the needs and its objectives), effective and efficient, coherent, and has achieved added value for the EU. The decision as to whether an evaluation will be necessary should also be taken based on the monitoring results.

#### Issue 2: Helicopter ditching and water impact occupant survivability (RMT.0120)

The monitoring of the effects brought about by the proposed amendments to Annex I (Part-26) (and the related amendments to CS-26) will consist of the following:

- (a) experience gained by EASA upon request from type certificate holders and supplemental type certificate holders to verify the review of existing EFS designs for robustness in the event of a water impact;
- (b) experience gained by EASA upon requests for the certification of systems that enable the automatic arming and deployment of EFSs;
- (c) experience gained by EASA regarding requests to approve other design changes to existing designs to comply with the proposed amendments to Annex I (Part-26);
- (d) monitoring the number of ditching and water impact events involving helicopters and reviewing the number of fatalities from such events.

Items (a), (b) and (c) depend on the applications received by EASA following the amendment of Annex I (Part-26) / CS-26. A review may be made at the earliest 5 years following the amendment of Annex I (Part-26) / CS-26.

Item (d) will be an ongoing review, but a more detailed review may be performed at the earliest 5 years following the amendment of Annex I (Part-26) / CS-26 to establish whether there is a positive trend in occupant survivability.

#### **Issue 3: Conversion of Class D compartments**

The monitoring of the effects brought about by the proposed amendments to Annex I (Part-26) / CS-26 will consist of monitoring the trend in the numbers of accidents and incidents caused by in-flight fire in large aeroplane Class D compartments after the end of the transition period.

Cologne, 7 February 2022

Patrick KY Executive Director



#### 3. References

#### 3.1. Affected regulations

 Commission Regulation (EU) 2015/640 of 23 April 2015 on additional airworthiness specifications for a given type of operations and amending Regulation (EU) No 965/2012 (OJ L 106, 24.4.2015, p. 18)

#### 3.2. Related decisions

 Executive Director Decision 2015/013/R of 8 May 2015 adopting Certification Specifications for additional airworthiness specifications for operations (CS-26 — Issue 1)



#### 4. Related documents

- CRD to NPA 2020-05 'Tyre pressure monitoring' (RMT.0586)<sup>20</sup>
- CRD to NPA 2020-16 'Helicopter ditching and water impact occupant survivability' (RMT.0120 (27&29.008))<sup>21</sup>

<sup>&</sup>lt;sup>21</sup> <u>https://www.easa.europa.eu/document-library/comment-response-documents</u>



<sup>&</sup>lt;sup>20</sup> <u>https://www.easa.europa.eu/document-library/comment-response-documents/crd-2020-05</u>