



European Union Aviation Safety Agency
Comment-Response Document 2016-06 (B)

RELATED NPA 2016-06 (B) — RMT.0573 — 12.10.2020

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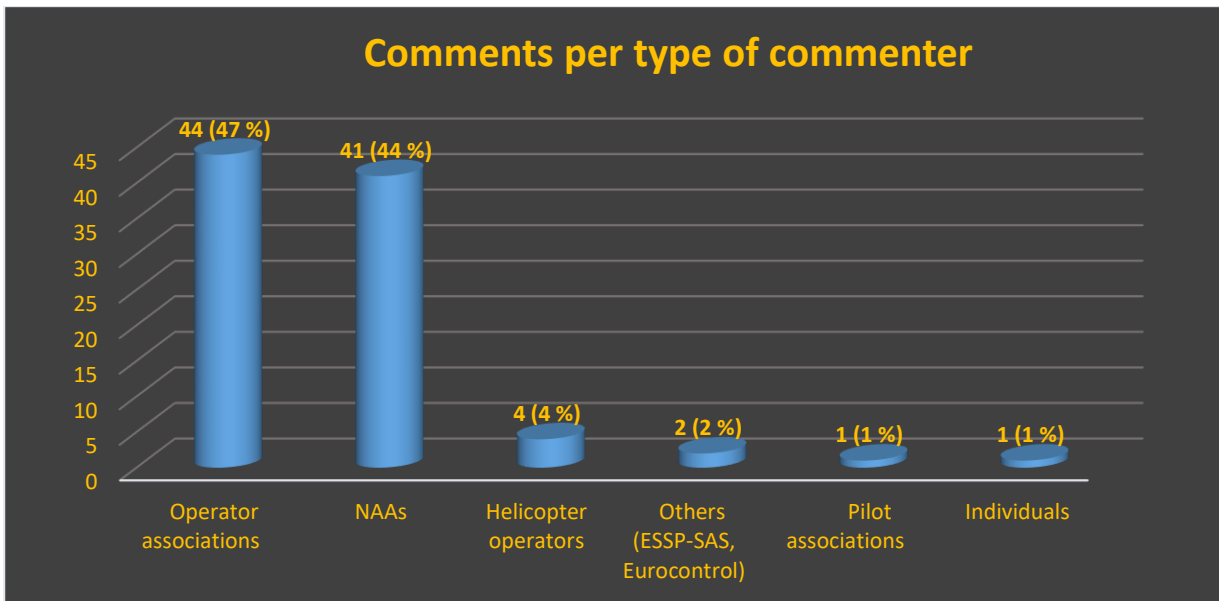
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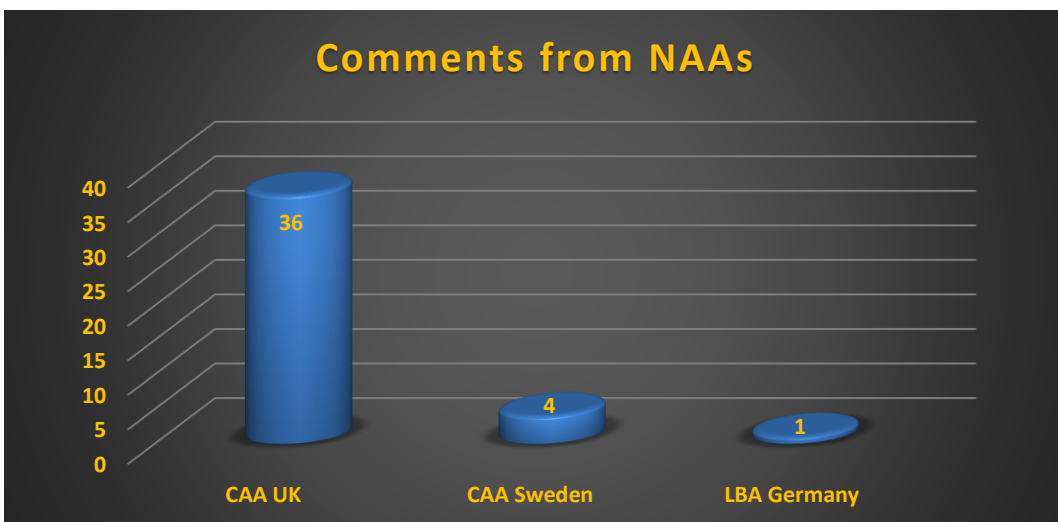
1. Summary of the outcome of the consultation

[NPA 2016-06 \(B\)](#) on changes to Annex III (Part-ORO), Annex IV (Part-CAT), Annex V (Part-SPA), Annex VI (Part-NCC), Annex VIII (Part-SPO), and Annex VII (Part-NCO) (for helicopters) to Regulation (EU) No 965/2012 (the ‘Air OPS Regulation’) received 93 comments from 14 commenters.

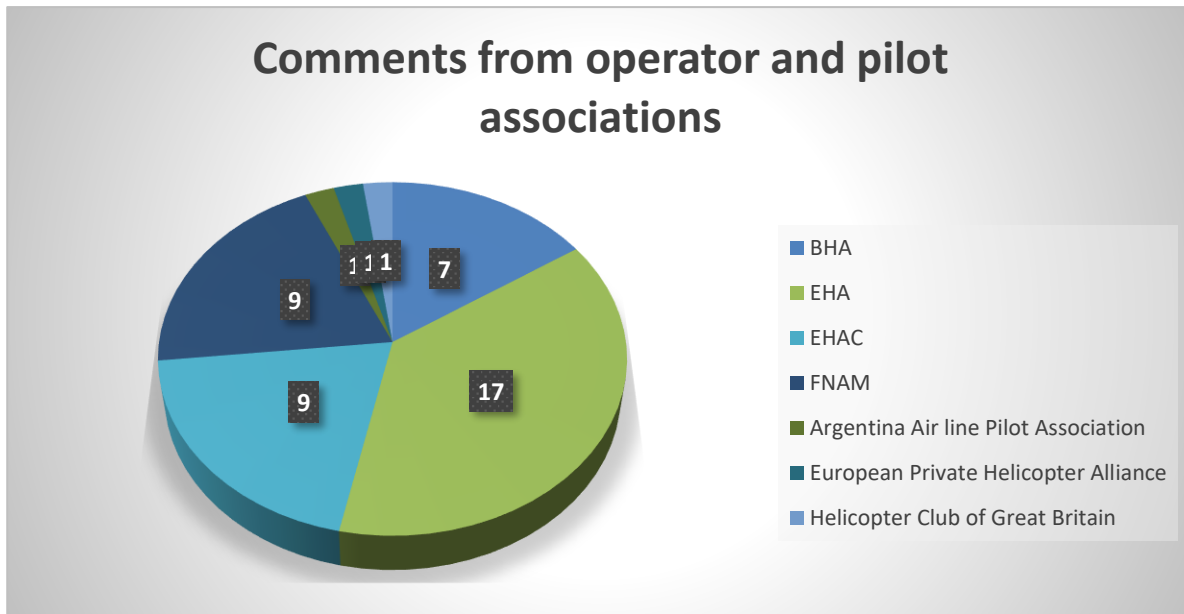
41 comments were submitted by national aviation authorities (NAAs), 44 comments by operator associations, 4 comments by individual helicopter operators, 2 comments by air navigation service providers (ANSPs), 1 by a pilot association, and 1 by an individual, as shown in the bar chart below:



The bar chart below shows the statistics on comments from NAAs:



The pie chart below shows the statistics on comments from operator and pilot associations:



After consideration of the comments received, the proposed rules in the NPA were changed as follows:

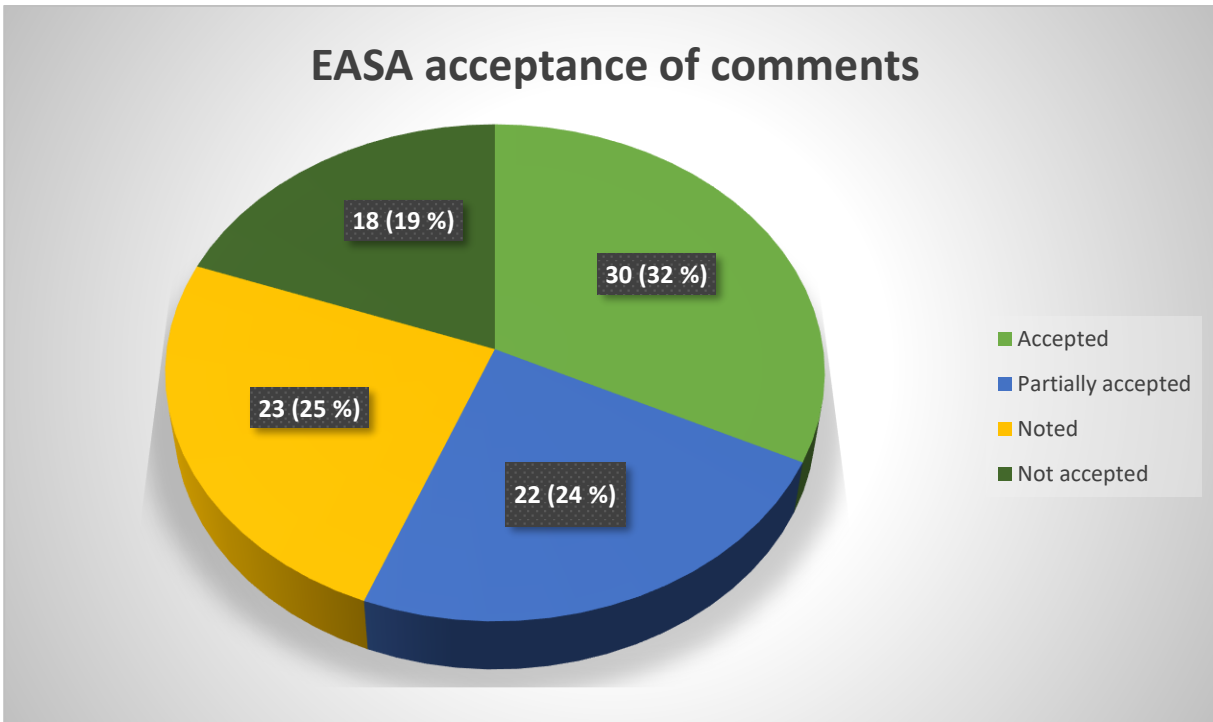
- additional elements of the implementing rules (IRs) were moved to AMC to better harmonise helicopter rules with the CAT and SPO rules for aeroplanes and to make them more performance-based;
- the option to fly under IFR to a destination aerodrome without Annex V (Part-MET) to Implementing Regulation (EU) 2017/373 weather information and with a single alternate aerodrome for CAT helicopters was introduced; and
- an option not to record fuel checks in the operational flight plan during the flight was introduced for single-pilot operations without a stabilisation system.

One additional comment on the NPA was received a few days after the official closure of the NPA public consultation and was deemed sufficiently important to be considered. Based on that comment, the European Union Aviation Safety Agency (EASA) introduced a rule for reduced contingency fuel when planning a flight with an en route alternate aerodrome and a decision point, similar to the rule for aeroplane fuel requirements.

Other important comments were also considered, some of which were not accepted.

A commenter proposed to introduce reduced contingency fuel also for night operations with night vision imaging systems (NVISs). EASA acknowledges that safety would benefit if NVISs was given operational credit. However, it decided that fuel requirements were not the best tool to address this point.

The pie chart below shows the statistics on comment acceptance by EASA:



2. Individual comments and responses

In responding to comments, a standard terminology has been applied to attest EASA's position. This terminology is as follows:

- (a) **Accepted** — EASA agrees with the comment and any proposed amendment is wholly transferred to the revised text.
- (b) **Partially accepted** — EASA either agrees partially with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.
- (c) **Noted** — EASA acknowledges the comment but no change to the existing text is considered necessary.
- (d) **Not accepted** — The comment or proposed amendment is not shared by EASA.

(General comments)	-
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comment	3	The EUROCONTROL Agency does not have comments on NPA 2016-06 (B).	comment by: <i>EUROCONTROL</i>
response		Noted.	
comment	4	The basic principle or concept of amending fuel planning regulation to account for circumstance (hostile terrain and availability of met information) is sound. However, the application of some of these proposals might readily result in either routine violation (through ignoring an impractical rule) or substitution risk (through introducing a new hazard in the process of trying to mitigate the intended risk).	comment by: <i>Starspeed</i>
response		Noted.	
comment	38	The LBA has no comments on NPA 2016-06 (B).	comment by: <i>Luftfahrt-Bundesamt</i>
response		Noted.	



comment	<p>39</p> <p>Page No: General Comment</p> <p>Paragraph No: Repeated text throughout document</p> <p>Comment: The word “minutes” has been reduced to the term ‘min’ throughout the document, and in NPA 2016-06(A) and (C) as well. It is recommended that in the interests of readability and to prevent incorrect interpretation, the full spelling “minutes” is used throughout.</p> <p>Justification: Clarity of meaning.</p>	comment by: UK CAA
response	<p>Accepted.</p> <p>Identical to comment 18 on NPA 2016-06 (C) (see also CRD 2016-06 (C)).</p>	
comment	<p>77</p> <p>The FNAM (Fédération Nationale de l’Aviation Marchande) is the French Aviation Industry Federation / Trade Association for Air Transport, gathering the following members:</p> <ul style="list-style-type: none"> • CSTA: French Airlines Professional Union (incl. Air France) • SNEH: French Helicopters Operators Professional Union • CSAE: French Handling Operators Professional Union • GIPAG: French General Aviation Operators Professional Union • GPMA: French Ground Operations Operators Professional Union • EBAA France: French Business Airlines Professional Union <p>And the following associated members:</p> <ul style="list-style-type: none"> • FPDC: French Drone Professional Union • UAF: French Airports Professional Union <p><u>Introduction:</u></p> <p>The comments hereafter shall be considered as an identification of some of the major issues the French industry asks EASA to discuss with third-parties before any publication of the proposed regulation. In consequence, the following comments shall not be considered:</p> <ul style="list-style-type: none"> — As a recognition of the third-parties consultation process carried out by the European Parliament and of the Council; — As an acceptance or an acknowledgement of the proposed regulation, as a whole or of any part of it; — As exhaustive: the fact that some articles (or any part of them) are not commented does not mean FNAM has (or may have) no comments about them, neither FNAM accepts or acknowledges them. All the following comments are thus limited to our 	comment by: FNAM

understanding of the effectively published proposed regulation, notwithstanding their consistency with any other pieces of regulation.

response Noted.

Notice of Proposed Amendment 2016-06(B) — Fuel planning and management — Sub-NPA 2016-06(B) ‘Helicopters — Annex I (Definitions), Part-CAT, Part-SPA, Part-NCC, Part-NCO & Part-SPO’ — General comments p. 1-3

comment 40

comment by: UK CAA

Page No: 1

Paragraph No: Executive Summary

Comment: In the Executive Summary for this sub-NPA the intentions for the NPA are described. The intention to align fuel policies across Annexes, where possible, is understood as is the need for proportionality and convergence with ICAO Annex 6. However, after reviewing all elements of the NPA, and in particular parts (B) and (C), the proposal to align Part-SPO with Part-NCC introduces significant issues and is not supported. Due to the wide range of activities to be conducted as specialised operations with all levels of motor powered aircraft, it is not appropriate to impose prescriptive fuel requirements on operators. The more performance based approach taken for Part-NCO is considered to be a practical and proportionate means of setting the safety standards for SPO. It is therefore strongly recommended that a further review is undertaken to address the inconsistencies that will inevitably arise if the proposed fuel provisions are taken forward.

There is also inconsistency evident between the separate parts of this NPA, in particular with regards to the adoption of fuel policies which adds to the difficulties in assessing proportionality and appropriateness.

Justification: The achievement of practical and reasonable fuel policies for the whole range of flying activities covered by the regulation. Imposing unrealistic and prescriptive requirements, especially for specialised operations, will incur unacceptable constraints and most probably non-compliance.

response Accepted.

Identical to comment 19 to [NPA 2016-06 \(C\)](#) (see also CRD 2016-06 (C)).

While the Part-SPO requirement for establishing fuel policies and considering the various elements of fuel needs (fuel to the site of intended landing, destination alternate, final reserve fuel (FRF), etc.) remains harmonised with the Part-NCC requirements. However, the prescriptive FRF requirement was amended and harmonised with the more performance-based approach taken for Part-NCO. That means that the provision related to FRF was at AMC level similar to the new AMC1 NCO.OP.125(b).



2. Explanatory Note — 2.4. Overview of the proposed amendments — 2.4.3. Refuelling

p. 7-8

comment	87	comment by: <i>European HEMS & Air Ambulance Committee (EHAC)</i>
	2.4.3	
	Create CAT.OP.MPA.197, NCC.OP.157, SPO.OP.157, NCO.OP.147, and related AMC/GM to regulate helicopter refuelling with rotors turning in such a way that: [...]	
	relevant industry best practices are transposed; [...]	
	Comment 1	
	EHAC welcomes the application of industry best practices. As there exists no general and every operation covering practice, we propose to amend the phrase with the word “relevant” before industry standard.	
response	Noted.	

3. Proposed amendments — 3.1. Draft regulation (draft opinion) — Annex I (Definitions)

p. 9

comment	14	comment by: <i>British Helicopter Association</i>
	3. We welcome that local helicopter operations have now been defined and it would appear there is some alleviation to the need for ATC when operating helicopters over 3,175 Kg.	
response	Noted.	

3. Proposed amendments — 3.3. Draft AMC and GM (draft decision) — Part-ORO

p. 9-10

comment	7	comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i>
	— AMC3 ORO.MLR.100	
	Under contents of OM for CAT operators the word 'aeroplanes' has been added in part B. The proposed change in Part-A of this NPA is not the same as the change in Part-B. Consider a consistency check.	



response Accepted.
The text was redrafted for consistency.

3. Proposed amendments — 3.4. Draft regulation (draft opinion) — Part-CAT

p. 10-15

comment 5 comment by: *Starspeed*
The requirements for FRF listed at 3.4.2.c.iii appear inconsistent in that the requirements for VFR Night exceed those for IFR.

3.4.3.c - the definition of meteorological information should be clarified for the purposes of this section. For example, by strict definition Fairoaks Airport EGTF does not have any METAR or TAF, but it is within the Heathrow CTZ and it is underneath the ILS Approach to Farnborough EGLF, both of which have regularly updated METARs and TAFs. One Operator may decide that this constitutes 'available meteorological information' and not elect to nominate two destination alternates; and another Operator could apply a strict definition on the basis that EGTF does not provide METAR and TAF, and thus apply a rule that requires two destination alternates (even if a CAVOK day). Apart from creating areas of confusion, this can also lead to aircraft being heavier than required for a small site (such as Battersea Heliport EGLW, again without any specific meteorological information). Clarification of 'available' would be helpful.

response Partially accepted.
The new rule provides for an option to fly under IFR to a destination with no official aviation weather forecasts and a single alternate. With point-in-space approaches, this situation is expected to happen more often in the future.
Even though the FRF may be slightly increased for VFR flights at night, this reflects the additional risks that are specific to VFR flights at night. In addition, the total fuel needs are highly likely to be higher when flying under IFR.

comment 12 comment by: *British Helicopter Association*
1. Some changes had been noted such as CAT.OP.MPA.151 Paragraph C where it stated if no Met was available for the destination aerodrome, 2 nominated alternates and fuel for them were required – what if the destination was a field HLS or met was not yet open?

response Accepted.
The new rule provides for an option to fly under IFR to a destination with no official aviation weather forecasts and a single alternate.



comment	13 comment by: <i>British Helicopter Association</i>
	2. It appears the NPA is now requiring more fuel if VFR at night was being flown, instead of IFR, for the same destination, given that any required alternate was close by. If no alternate required then more fuel was almost definitely needed.
response	Not accepted. Even though the FRF may be slightly increased for VFR flights at night, this reflects the additional risks that are specific to VFR flights at night. In addition, the total fuel needs are highly likely to be higher when flying under IFR.
comment	21 comment by: <i>European Helicopter Association (EHA)</i>
	CAT.OP.MPA.150 item (c)(3)(i) the addition of the text "which should be the amount of fuel required to compensate for unforeseen factors" is totally unnecessary as this is fully covered in the definition of "(26) 'contingency fuel' means the fuel required to compensate for unforeseen factors that could have an influence on the fuel consumption to the destination aerodrome;" Suggest to stay with the old text, the new text does not add anything.
response	Not accepted. The definition of contingency fuel is preserved to maintain consistency with the International Civil Aviation Organization (ICAO) definition. Please note that the EASA definition of contingency fuel is not fully harmonised with the ICAO one, but adapted to the European Union regulatory framework. The IR (e.g. point CAT.OP.MPA.181) should state the safety objective of contingency fuel, for clarity.
comment	22 comment by: <i>European Helicopter Association (EHA)</i>
	The addition in (iii) final reserve fuel, which should be: (A) for visual flight rules (VFR) flights navigating by day with reference to visual landmarks, 20-min fuel at best-range speed; or (B) when flying VFR and navigating by means other than by reference to visual landmarks or at night, 30-min fuel at best-range speed; or (C) for instrument flight rules (IFR) flights, 30-min fuel at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions calculated according to the estimated mass on arrival above the destination alternate or the destination when no destination alternate is required; and

	<p>Comments:</p> <ol style="list-style-type: none"> 1. The addition is only adding complexity. It <i>will add a third FRF number (VFR and navigating by means other than... or at night), which does not make the regulations clearer and leaner.</i> 2. <i>It is also fully covered in the present AMC3 CAT.OP.MPA.150(b) Fuel policy states:</i> <i>(5) final reserve fuel, which should be:</i> <i>(i) for VFR flights navigating by day with reference to visual landmarks, 20 minutes' fuel at best range speed; or</i> <i>(ii) for IFR flights or when flying VFR and navigating by means other than by reference to visual landmarks or at night, fuel to fly for 30 minutes at holding speed at 1 500 ft (450 m) above the destination aerodrome in standard conditions calculated with the estimated mass on arrival above the alternate, or the destination, when no alternate is required;</i> <i>EHA-HeliOffshore proposes to delete the changes and keep present text as is.</i>
response	<p>Not accepted.</p> <p>Even though the FRF may be slightly increased for VFR flights at night, this reflects the additional risks that are specific to VFR flights at night. In addition, the total fuel needs are highly likely to be higher when flying under IFR.</p>
comment	<p>23 comment by: <i>European Helicopter Association (EHA)</i></p> <p>Item (d) The operator shall train its crew members and ensure that the involved ground personnel is trained appropriately.</p> <p>The above text "and ensure that the involved ground personnel is trained appropriately" is inappropriate for the following reasons:</p> <ul style="list-style-type: none"> • The same standard is NOT applied for aeroplanes • How can an operator with HOFO in the future check if the HLO and the HDA offshore is properly trained. How can Lufthansa and AirFrance assess of the SwissPort ground crew is properly trained at all airfields. How canm Easyjet and Ryanair assess the suitability of the training of all refueling crew in Europe? This training is an accountability of the local fuel operator and the local airport who allows these refuels.
response	<p>Not accepted.</p> <p>The text serves a reminder of point ORO.GEN.110 (e) and does not add any new requirements.</p>

comment	<p>28 comment by: <i>European Helicopter Association (EHA)</i></p> <p>CAT.OP.MPA.151 Selection of aerodromes and operating sites — helicopters</p> <p>(c) The operator shall select two destination alternate aerodromes when:</p> <p>(1) the appropriate weather reports and/or forecasts for the destination aerodrome indicate that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be below the applicable planning minima; or</p> <p>(2) no meteorological information is available for the destination aerodrome.</p> <p>Comment EHA-HeliOffshore:</p> <p>What if the destination was a field HLS or Met was not yet open? Should there not be additional guidance to give a possible waiver. Two alternates is a heavy requirement for helicopters which can also land at a suitable landing site but which often cannot be files as alternate.</p>
response	<p>Accepted.</p> <p>The new rule provides for an option to fly under IFR to a destination with no official aviation weather forecasts and a single alternate. With point-in-space approaches, this situation is expected to happen more often in the future. The new reference is point CAT.OP.MPA.192.</p>
comment	<p>29 comment by: <i>European Helicopter Association (EHA)</i></p> <p>CAT.OP.MPA.150 Fuel policy — helicopters</p> <p>Item (c)(3)(iii) final reserve</p> <p>Comment:</p> <p>It appears the NPA is now requiring more fuel if VFR at night was being flown, instead of IFR, for the same destination, given that any required alternate was close by. If no alternate required then more fuel was almost definitely needed.</p>
response	<p>Not accepted.</p> <p>Even though the FRF may be slightly increased for VFR flights at night, this reflects the additional risks that are specific to VFR flights at night. In addition, the total fuel needs are highly likely to be higher when flying under IFR.</p>
comment	<p>30 comment by: <i>European Helicopter Association (EHA)</i></p> <p>We welcome that local helicopter operations have now been defined and it would appear there is some alleviation to the need for ATC when operating helicopters over 3,175 Kg.</p>
response	<p>Noted.</p>

comment	<p>37 comment by: <i>European Helicopter Association (EHA)</i></p> <p>CAT.OP.MPA.150 Fuel policy — helicopters</p> <p>(...)</p> <p>(c)</p> <p>(iii) final reserve fuel, which should be:</p> <p>(A) for visual flight rules (VFR) flights navigating by day with reference to visual landmarks, 20-min fuel at best-range speed; or</p> <p>(B)</p> <p>(C) ...</p> <p>Proposal is to amend the above (c)(iii) i.a.w. SPO.OP.131 as follows:</p> <p>(A1) for visual flight rules (VFR) flights navigating by day with reference to visual landmarks, a reserve fuel of 10 minutes at best-range-speed provided the he/she remains within 25 NM of the aerodrome/operating site of departure; or</p> <p>(A2) for visual flight rules (VFR) flights navigating by day with reference to visual landmarks outside 25 NM of the aerodrome/operating site of departure, 20-min fuel at best-range speed;</p> <p>Motivation:</p> <p>During Heliskiing it makes no sense to go back to the operating site with 20' reserve as:</p> <ol style="list-style-type: none"> 1. the pilot is alone on board; and 2. the fuel truck is on site; and 3. it helps in performance (20 kilos are 20 kilos especially at altitude...)
response	<p>Not accepted.</p> <p>Heli-skiing flight remains a CAT flight with a passenger on board. The return flight is a positioning flight to which CAT rules do not need to be applied.</p>

comment	<p>41 comment by: <i>UK CAA</i></p> <p>Page No: 10/11</p> <p>Paragraph No: 3.4 / 2, CAT.OP.MPA.150</p> <p>Comment: The proposed text for CAT.OP.MPA.150 has, to some extent, been transposed from an AMC and uses incorrect emphasis for a rule. Additionally, terms are used that differ from the text proposed for aeroplanes. It is recommended that “reserve fuel” is not used and that “extra” and “discretionary” are used in the same way as for CAT.OP.MPA.181 for consistency and standardisation. Additionally, and to further align with aeroplanes, it is</p>
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recommended that the FRF should be 'on arrival at' rather than 'on arrival above' the aerodrome, albeit this is different from ICAO Annex 6 Pt III.

Justification: Consistency of terminology for CAT and correct emphasis for rules.

Proposed Text: Amend the proposal as indicated:

CAT.OP.MPA.150 Fuel policy — helicopters

(...)

(c) The operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:

(1) taxi fuel, which ~~should~~ **shall** not be less than the amount expected to be used prior to take-off;

(2) trip fuel;

~~(3) reserve fuel consisting of:~~

~~(i)~~**(3)** contingency fuel, which ~~should~~ **shall** be the amount of fuel required to compensate for unforeseen factors;

~~(ii)~~**(4) destination** alternate fuel, if a destination alternate aerodrome is required;

~~(iii)~~**(5)** final reserve fuel, which ~~should~~ **shall not be less than:**

(A) for visual flight rules (VFR) flights navigating by day with reference to visual landmarks, ~~20-min~~ **minutes** fuel at best-range speed; or

(B) when flying VFR and navigating by means other than by reference to visual landmarks or at night, ~~30-min~~ **minutes** fuel at best-range speed; or

(C) for instrument flight rules (IFR) flights, ~~30-min~~ **minutes** fuel at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions calculated according to the estimated mass on arrival ~~above~~ **at** the destination alternate or **at** the destination when no destination alternate is required; and

~~(iv)~~**(6)** additional fuel, if required by the type of operation; ~~and~~

~~(7) extra fuel if required by the commander~~ **to take into account anticipated delays or specific operational constraints; and.**

(8) discretionary fuel, if required by the commander.

(d) The operator shall ensure that in-flight replanning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination aerodrome other than originally planned includes:

(...)

(e) **Notwithstanding** ~~As an alternative to~~ paragraphs (b) to (d) above, for helicopters with an MCTOM of 3 175 kg or less, by day and over routes navigated by reference to visual landmarks, or for local helicopter operations(LHOs), the fuel policy shall ensure that, on completion of the flight, or series of flights, the final reserve fuel is sufficient for:

response	<p>(1) 30 minutes of flying time at best-range speed; or</p> <p>(2) 20 minutes of flying time at best-range speed when operating within an area providing continuous and suitable precautionary landing sites.</p> <p>Partially accepted.</p> <p>Most of the proposed changes in wording were incorporated except for the use of 'Notwithstanding'.</p>
comment	<p>42 comment by: UK CAA</p> <p>Page No: 14</p> <p>Paragraph No: 3.4 / 5, CAT.OP.MPA.153(c)</p> <p>Comment: The proposed text appears to have been copied from elsewhere and the terms "commander" and "pilot in command" used confusingly. For CAT operations, the term should be 'Commander'. We recommend the text should be adjusted as shown below.</p> <p>Justification: Consistency and correct use of terminology.</p> <p>Proposed Text:</p> <p>(c) The commander shall declare an emergency when the actual usable fuel on board is less than final reserve fuel. The pilot in command commander shall advise the air traffic control (ATC) of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at an aerodrome or operating site, the pilot commander calculates that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel.</p> <p>Accepted.</p> <p>The new reference is point CAT.OP.MPA.195 (see Opinion No 02-2020).</p>
comment	<p>43 comment by: UK CAA</p> <p>Page No: 14</p> <p>Paragraph No: 3.4 / 6, CAT.OP.MPA.154</p> <p>Comment: CAT.OP.MPA.182, to be renumbered 154, was published in CR(EU) 2106/1199 with associated AMC/GM in Decision 2016/015/R. The text proposed in this NPA differs from that published and seems to reflect the AMC not the rule, and is in effect elevating the AMC to a rule without justification. It is suggested that this may be an oversight and unintended proposal which will introduce difficulties into the CAT regulations and is not reflected in the other Annexes. It is recommended that this proposal is deleted and the current published text of CAT.OP.MPA.182 retained.</p>

	<p>Justification: Probable unintended proposal to published rule text and over restrictive effect on CAT rules.</p>
response	<p>Partially accepted.</p> <p>The text of point CAT.OP.MPA.182 ‘Destination aerodromes — instrument approach operations’, which was introduced through Regulation (EU) 2016/1199, as well as its related AMC and GM, were retained in the new rules, the only difference being that the number of the point has changed, to preserve the structure of the new fuel rules.</p> <p>Said text is now under:</p> <ul style="list-style-type: none"> — for aeroplanes: the new point CAT.OP.MPA.182 (f), with related AMC and GM in the new AMC1 CAT.OP.MPA.182(f) and GM1 CAT.OP.MPA.182(f) respectively; and — for helicopters: the new point CAT.OP.MPA.192 (d), with related AMC and GM in the new AMC1 CAT.OP.MPA.192(d) and GM1 CAT.OP.MPA.192(d) respectively.
comment	<p>44 comment by: UK CAA</p> <p>Page No: 15</p> <p>Paragraph No: 3.4 / 7, CAT.OP.MPA.197</p> <p>Comment: It is recommended that sub-paragraphs (b), (c) and (d) are placed into AMC to support (e) which should be the requiring rule and amended as shown. It is also not clear how approval will be achieved. Suggested text provided.</p> <p>Justification: Clarification of requirement and method of compliance and approval.</p> <p>Proposed Text:</p> <p>Move sub-paragraphs (b) to (d) to AMC and amend sub-paragraph (e) as follows:</p> <p>(e) The operator shall ensure that the helicopter refuelling procedures with engine and/or rotors running and any change thereto shall be are specified in the operations manual and require prior approval has been granted by the competent authority.</p>
response	<p>Not accepted.</p> <p>Points CAT.OP.MPA.197 (b) to (d) introduce the basic safety objectives, which are further elaborated on in the AMC and GM (e.g. risk assessment, procedures training).</p> <p>The text of point (d) ((e) in the NPA) was reworded, as it is also used for other approvals. In addition, it was kept for consistency with the Air OPS Regulation.</p>

comment	<p data-bbox="359 237 395 271">76</p> <p data-bbox="1187 237 1465 271" style="text-align: right;">comment by: <i>ESSP-SAS</i></p> <p data-bbox="359 297 1469 412">Item (6) CAT.OP.MPA.182 seems to be renumbered, but currently does not appear neither in the consolidation version of Reg. 965/2012 (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32013R0800) nor EASA Easy Access Rules AIR OPS.</p> <p data-bbox="359 439 1469 553">It seems to be an edition failure and should be removed. the content of this provision constitutes a penalty to the implementation and use of GNSS based procedures for helicopters (RNP 0.3 and PinS based on GNSS).</p>
response	<p data-bbox="359 600 584 633">Partially accepted.</p> <p data-bbox="359 660 1469 813">The text of point CAT.OP.MPA.182 ‘Destination aerodromes — instrument approach operations’, which was introduced through Regulation (EU) 2016/1199, as well as its related AMC and GM, were retained in the new rules, the only difference being that the number of the point has changed, to preserve the structure of the new fuel rules.</p> <p data-bbox="359 840 635 873">Said text is now under:</p> <ul data-bbox="359 900 1469 1066" style="list-style-type: none"> <li data-bbox="359 900 1469 972">— for aeroplanes: the new point CAT.OP.MPA.182 (f), with related AMC and GM in the new AMC1 CAT.OP.MPA.182(f) and GM1 CAT.OP.MPA.182(f) respectively; and <li data-bbox="359 999 1469 1066">— for helicopters: the new point CAT.OP.MPA.192 (d), with related AMC and GM in the new AMC1 CAT.OP.MPA.192(d) and GM1 CAT.OP.MPA.192(d) respectively.
comment	<p data-bbox="359 1149 395 1182">78</p> <p data-bbox="1219 1149 1465 1182" style="text-align: right;">comment by: <i>FNAM</i></p> <p data-bbox="359 1209 576 1243">CAT.OP.MPA.150</p> <p data-bbox="359 1270 1469 1384">The FNAM thinks it is a good initiative to base, in the CAT.OP.MPA.150, the calculation of the final reserve fuel on the best range speed and not on the normal cruising speed. We thank the EASA for it.</p>
response	<p data-bbox="359 1429 443 1462">Noted.</p>
comment	<p data-bbox="359 1541 395 1574">79</p> <p data-bbox="1219 1541 1465 1574" style="text-align: right;">comment by: <i>FNAM</i></p> <p data-bbox="359 1601 576 1635">CAT.OP.MPA.153</p> <p data-bbox="359 1662 1469 1939">The FNAM was surprised to see the introduction of the phraseology “MINIMUM FUEL” and “MAYDAY MAYDAY MAYDAY FUEL” in the 965/2012 regulation without adding, at the same time, the corresponding requirements in the SERA and in the ATM/ANS regulations. Therefore, to ensure consistency between the several European regulations, the FNAM suggests to add in the SERA and in the ATM/ANS regulations the adequate corresponding requirements regarding the “MINIMUM FUEL” state and the declaration of a fuel emergency situation “MAYDAY MAYDAY MAYDAY FUEL”.</p> <p data-bbox="359 1966 1469 2036">In the current regulation, the “MINIMUM FUEL” is not a declaration which confers any special treatment by ATC (it is not an emergency situation) but an information message. Controllers</p>

should bear in mind that an emergency situation is possible should any additional delay occur. Hence, controllers are not required to provide priority to pilots of aircraft that have indicated or suggested that they are becoming short of fuel or have used the phraseology “MINIMUM FUEL”. The term “MINIMUM FUEL” indicates that the pilot, intending to land at a specific aerodrome, calculates that any change to the existing clearance to that aerodrome might result in landing with less than the planned final reserve fuel.

Furthermore, the FNAM would like the EASA to add some clarifications regarding this IR: Pilots & controllers shall keep in mind that PAN remains a universally prescribed means of declaring any urgency situation which requires assistance including low fuel emergency. In such case the declaration, whatever its cause, shall require priority to be given. Controllers & pilots should also understand that a PAN or a MAYDAY declaration arising because of low fuel may not necessarily use the fuel-specific phraseology suggested in PANS-ATM - pilot may make a standard form declaration first and only once it has been acknowledged explain that the problem is low fuel and priority corresponding to the declaration made is required.

response Partially accepted.

Regulation (EU) 2016/1185, amending Regulation (EU) No 923/2012, on common rules of the air (published on 21 July 2016), and EASA ED Decision 2016/023/R (published on 14 October 2016), amending the AMC and GM to the rules of the air, introduced the rules on the ‘MINIMUM FUEL’ declaration in the European regulatory system before the Air OPS rules. GM1 SERA.11012 ‘Minimum fuel and fuel emergency’ provides the following clarification:

The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing, and any change to the existing clearance may result in landing with less than planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

In addition, EASA [\(SIB\) 2018-08](#) was published on 8 May 2018, which reminded air operators and ATC of the relevant requirements in ICAO Annex 6 and Doc 4444, as well as in Part-SERA. Moreover, SIB 2018-08 points to the detailed explanations and scenarios for the use of the ‘MINIMUM FUEL’ declaration, which are provided in ICAO Doc 9976 ‘Flight Planning and Fuel Management (FPFM) Manual’.

The new fuel rules introduce the requirements for the ‘MINIMUM FUEL’ and a ‘MAYDAY MAYDAY MAYDAY FUEL’ declarations in the Air OPS Regulation, as well as more examples of their use in the new GM1 CAT.OP.MPA.185.

The ‘PAN’ declaration is not a standard declaration for fuel, but for other urgencies.

Following publication of [Opinion No 02-2020](#), EASA will initiate safety promotion activities to increase the awareness and understanding of the differences between the various fuel-related messages amongst pilots and ATC personnel.

Similar to comment 79.



comment	<p>80 comment by: FNAM</p> <p>CAT.OP.MPA.197</p> <p>Regarding the new requirement CAT.OP.MPA.197 the FNAM would like to thank the EASA for introducing the “refuelling with engine(s) and/or rotors running — helicopters” in the parts CAT, NCC, NCO and SPO of this regulation and which was only applicable for the Part SPA.HEMS before.</p>
response	<p>Noted.</p> <p>The new reference is point CAT.OP.MPA.200.</p>
comment	<p>88 comment by: European HEMS & Air Ambulance Committee (EHAC)</p> <p>CAT.OP.MPA.197</p> <p>Refuelling with engine(s) and/or rotors running — helicopters</p> <p>(a) Refuelling with engine(s) and/or rotors running shall only be conducted:</p> <p>(1) with no passengers or technical crew members embarking or disembarking;</p> <p>(2) if the aerodrome/operating site operator allows such operations;</p> <p>(3) in accordance with any specific procedures and limitations in the aircraft flight manual (AFM);</p> <p>(4) with JET A or JET A-1 fuel types; and</p> <p>(5) in the presence of the appropriate rescue and fire fighting facilities (RFFF).</p> <p>Comment 2</p> <p>The definition of “Appropriate rescue and firefighting facilities (RFFF)” has to be specified in accordance with the existing best practices of the relevant industry, i.e. according to the operational risks.</p>
response	<p>Partially accepted.</p> <p>‘rescue and firefighting facilities (RFFF)’ was changed to ‘rescue and firefighting (RFF) facilities or equipment’. The new AMC3 CAT.OP.MPA.200 describes what is acceptable in a pragmatic way.</p> <p>The new reference is point CAT.OP.MPA.200 and related AMC3 CAT.OP.MPA.200.</p>

3. Proposed amendments — 3.5. Draft AMC and GM (draft decision) — Part-CAT

p. 15-22

comment	<p data-bbox="359 371 375 405">6</p> <p data-bbox="1177 371 1465 405" style="text-align: right;">comment by: <i>Starspeed</i></p> <p data-bbox="359 434 1473 999">3.5.7 is generally a good guideline, but to state that rotors refuelling with passengers on board should 'never be justified' other than EMS might generate unintended consequences, it is also inconsistent with 3.4.7 that indicates that only refuelling during embarkation/disembarkation is to be prohibited. An example, aircraft such as EC155 are limited in payload under CAT operations; a typical scenario is that a corporate flight with 6 passengers with enroute time of 2 hrs. In theory within the capability of the aircraft, but this does not leave much opportunity to allow for 'contingencies' as prescribed in earlier sections of this NPA. Currently, rotors running refuels are a practical means to mitigate the problem associated with balancing a poor available payload and good fuel planning. If Rotors Running Refuels with passengers onboard becomes prohibited this could result in pilots trying to fly further on existing fuel and could generate more incidents of aircraft flying below planned landing fuel. The risk associated with refuelling with passengers on board is very small (provided mitigations are in place), whereas the risk of aircraft landing below planned minima is relatively large.</p>
response	<p data-bbox="359 1032 443 1077">Noted.</p> <p data-bbox="359 1106 1473 1178">This AMC is about refuelling with rotors stopped, whereas the comment seems to be related to operations with rotors running.</p>
comment	<p data-bbox="359 1256 375 1290">8</p> <p data-bbox="422 1256 1473 1328" style="text-align: right;">comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p> <p data-bbox="359 1357 635 1391">GM1 CAT.OP.MPA.197</p> <p data-bbox="359 1420 1473 1491">'Risk assessment should include justification'. Is it really necessary to ask for justification in the risk assessment? The reason has little to do with the actual alternative risk minimization</p>
response	<p data-bbox="359 1518 443 1563">Noted.</p> <p data-bbox="359 1592 1473 1664">Risk assessments are to assess both benefits (not to be interpreted as justifications) and new risks.</p>
comment	<p data-bbox="359 1742 375 1776">9</p> <p data-bbox="422 1742 1473 1814" style="text-align: right;">comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p> <p data-bbox="359 1843 647 1877">AMC1 CAT.OP.MPA.195</p> <p data-bbox="359 1906 1473 1977">Headline has been changed from 'General' to 'Aeroplanes'. For consistency the text 'aircraft' ought to be changed to aeroplanes.</p>

response	Accepted. The new rule references are AMC1-AMC7 CAT.OP.MPA.200.
comment	16 comment by: <i>British Helicopter Association</i> 5. The IHSG is working on Guidelines /SARPs for rotors or engine running re-fuels. Shouldn't this amendment be delayed until the ICAO work is concluded? From what we have seen they have been debating whether seat belts are done up or undone - very little guidance in the NPA.
response	Noted. EASA is part of the ICAO working group (WG) and will harmonise its rules with ICAO.
comment	18 comment by: <i>British Helicopter Association</i> 7. Unloading passengers is sensible on a sunny day or when there is shelter but remote locations on a wet and windy day the passenger is more likely to be at risk of hypothermia than a risk of fire. The NPA should allow for pilot to make a risk assessment in line with FOM.
response	Partially accepted. The wording 'should never be justified' was deleted and the new text clarified.
comment	24 comment by: <i>European Helicopter Association (EHA)</i> See previous comment, industry advises to keep the text at (5) as is. There is in our view no reason or motivation to change this in the helicopter industry. This rule has been applied for years with positive outcomes.
response	Not accepted. The comment is understood as being related to point (a)(5) of the deleted AMC3 CAT.OP.MPA.150(b), which is now included in new AMC1 CAT.OP.MPA.191(b)&(c). Even though the FRF may be slightly increased for VFR flights at night, this reflects the additional risks that are specific to VFR flights at night. In addition, the total fuel needs are highly likely to be higher when flying under IFR.
comment	25 comment by: <i>European Helicopter Association (EHA)</i> AMC1 CAT.OP.MPA.153 In-flight fuel management — helicopters COMPLEX MOTOR-POWERED HELICOPTERS, OTHER THAN LOCAL OPERATIONS The operator should base in-flight fuel management procedures on the following criteria:

	<p>(a) ...</p> <p>(1) ...</p> <p><u>(2) The relevant fuel data should be recorded.</u></p> <p>Additional information is required as it is still unclear where this should be recorded and how. Maybe the development of GM material is required;</p> <p>GM CAT.OP.MPA.153 In-flight fuel management — helicopters</p> <p>Recording of relevant fuel data</p> <p>The recording of the relevant fuel data may be done as follows:</p> <ol style="list-style-type: none"> 1. By R/T call to local ATC agency or local flight following agency 2. By an entry in the FMS provided this is stored in the memory of the FMS 3. By an entry on electronic version of the Operational Flight Log provided the information is retrievable after flight 4. By an entry in the Operational Flight Log
response	<p>Partially accepted.</p> <p>The phrase ‘fuel should be recorded’ was deleted as it duplicates point CAT.OP.MPA.175.</p> <p>In AMC1 CAT.OP.MPA.175(a), simplification options are extended to single-pilot operations of complex helicopters with no stabilisation.</p>
comment	<p>33 comment by: <i>European Helicopter Association (EHA)</i></p> <p>AMC2 CAT.OP.MPA.195 Refuelling with engines and rotors stopped — with passengers on board, embarking, or disembarking — helicopters</p> <p>Comment: The IHSB is working on Guidelines /SARPs for rotors or engine running re-fuels. Shouldn't this amendment be delayed until the ICAO work is concluded? From what we have seen they have been debating whether seat belts are done up or undone - very little guidance in the NPA.</p>
response	<p>Noted.</p> <p>EASA is part of the ICAO WG and will harmonise its rules with the ICAO.</p>
comment	<p>45 comment by: <i>UK CAA</i></p> <p>Page No: 16</p> <p>Paragraph No: 3.5 / 1, AMC1 CAT.OP.MPA.150(b), sub-paragraph (a)(4) and (6)</p> <p>Comment: The following amendments are recommended:</p>

	<p>At (4), amend the text to include “destination” in front of ‘alternate fuel’.</p> <p>At (6), amend the text to reflect that used for CAT aeroplanes as regards “extra fuel” and “discretionary fuel”.</p> <p>Justification: Consistency of terminology.</p> <p>Proposed Text:</p> <p>“(4) destination alternate fuel, should be:</p> <p>(.....)</p> <p>(6) extra fuel, which should be at the discretion of the commander to take into account anticipated delays or specific operational constraints; and</p> <p>(7) discretionary fuel, if required by the commander.”</p>
response	<p>Accepted.</p> <p>The new reference is AMC1 CAT.OP.MPA.192.</p>
comment	<p>46 comment by: UK CAA</p> <p>Page No: 19</p> <p>Paragraph No: 3.5 / 7, AMC2 CAT.OP.MPA.195</p> <p>Comment: We believe the proposed text is poorly worded and unclear in its intent. It does not meet the requirements for an AMC. It is strongly recommended that the original text as in AMC1 CAT.OP.MPA.195, both the general part at sub paragraphs (a) and (b) and the helicopter part at (d) are retained and put into a revised AMC2. Alternatively, AMC1 could be retained unchanged.</p> <p>Justification: Relevance and clarity of meaning/intent</p>
response	<p>Partially accepted.</p> <p>The wording was improved.</p> <p>However:</p> <ul style="list-style-type: none"> — point (d) of AMC1 CAT.OP.MPA.195 (now renumbered as AMC3 CAT.OP.MPA.200) was deleted, as it is covered by AMC4 CAT.OP.MPA.200 and AMC7 CAT.OP.MPA.200; — point (b) is not needed in an AMC; and — point (a) is not relevant to helicopters.

comment	<p>47</p> <p>Page No: 20</p> <p>Paragraph No: 3.5 / 8, AMC1 CAT.OP.MPA.197(b)</p> <p>Comment: It is recommended that the paragraph be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. A suggested form of words is provided.</p> <p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>(b) In addition, operational procedures to be described in the operations manual should specify that at least the following precautions are taken:</p> <p><i>“(b) The operational procedures specified in the operations manual should cover at least the following factors:”</i></p>	comment by: UK CAA
response	<p>Not accepted.</p> <p>However, the wording was slightly modified to be harmonised with the ICAO amendments on fuel (Amendments 36, 38, and 40 to Part I of).</p>	
comment	<p>48</p> <p>Page No: 21</p> <p>Paragraph No: 3.5 / 9, AMC2 CAT.OP.MPA.197</p> <p>Comment: It is recommended that the paragraphs be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. Suggested amendments are provided.</p> <p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>“(a) In addition to AMC1 CAT.OP.MPA.197, for refuelling with passengers on board, operational procedures to be described specified in the operations manual should specify cover at least the following precautions are taken: factors:</p> <p>(1) the way positioning of the helicopter should be positioned related in relation to the wind and refuelling facilities or vehicles should be defined, whenever practicable, together with the corresponding helicopter evacuation strategy;</p> <p>(2) on a heliport, the ground area beneath the exits intended for emergency evacuation should be kept clear;</p> <p>(3) additional passenger briefing and instructions should be defined, and the need for ‘No smoking’ signs should to be on;</p> <p>(4) the setting of interior lighting should be set to enable identification of emergency exits;</p>	comment by: UK CAA

(5) the use of doors during refuelling ~~should be defined~~ on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open unless otherwise specified in the aircraft flight manual (AFM);

(6) ~~one qualified person~~ **the provision of at least one suitable person** capable of handling emergency procedures ~~concerning fire protection and~~ **including** fire fighting, handling communications, and initiating and directing an evacuation **who** should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and

(7) unless passengers are regularly trained in emergency evacuation procedures, **the provision of** an additional crew member or ground crew member ~~should be assigned~~ to assist in the rapid evacuation of the passengers.”

response

Partially accepted.

The wording of the introduction was harmonised with the ICAO amendments 36, 38 and 40.

comment

86

comment by: *Argentina Air line Pilot Association*

This is a potentially dangerous procedure, with only one advantage: save time for operator, and money.

To develop such procedure (hot refuelling with passengers on board, embarking or disembarking) companies need:

1. people to control general procedure,
2. people (helpers) to move out, luggages from passenger disembarking,
3. people (helpers) to move in, luggages from passenger embarking
4. people to check fuel and show the captain, before fill,
5. In many cases -check fuel again after filling- and show,
6. people on board to guide passenger in case of emergency,
7. captain and F.O. in their working position controlling everything,
8. training everyone with extra responsibilities, because of fuel

Take into account that in off shore locations, emergency ways out are narrow, wind can be strong, many people moving surrounding chopper.

We think, there are many disadvantages vs. advantages, and we need to be proactive in safety situations.

response

Noted.

The proposed text provides a basis to establish sound procedures when the risk assessment concludes that the benefits (including safety benefits) outweighs the risks.



comment	<p>89 comment by: <i>European HEMS & Air Ambulance Committee (EHAC)</i></p> <p>AMC2 CAT.OP.MPA.197</p> <p>Refuelling with engine(s) and/or rotors running — with passengers on board — helicopters</p> <p>[...]</p> <p>(3) the passenger briefing and instructions should be defined, and the 'No smoking' signs should be on or at least a placard must be placed indicating that smoking is forbidden; [...]</p> <p>Comment 3</p> <p>CS 27.853 (Compartment interiors) does not require any 'No smoking' sign that can be turned ON/OFF for Helicopters where smoking is not allowed. There only must be a placard so indicating. Therefore the requirement needs to be amended without changing the intent that smoking is forbidden.</p>
response	<p>Accepted.</p> <p>The new reference is point (c) of AMC4 CAT.OP.MPA.200, point.</p>
comment	<p>90 comment by: <i>European HEMS & Air Ambulance Committee (EHAC)</i></p> <p>AMC2 CAT.OP.MPA.197</p> <p>Refuelling with engine(s) and/or rotors running — with passengers on board — helicopters</p> <p>[...]</p> <p>(6) one qualified person capable of handling emergency procedures concerning fire protection and firefighting, handling communications, and initiating and directing an evacuation should remain at a specified location; this person should not be the qualified pilot at the controls or and, if possible, also not the person performing the refuelling; and</p> <p>Comment 4 This adds the requirement for a 3rd person involved in refuelling the helicopter which is NOT current practice in current HEMS operations. It is also impractical as the doctor is supposed to monitor the patient and there is usually no qualified 3rd person available to perform the required task. If there is a qualified 3rd person available, it is recommended to involve that person in the refuelling procedure, albeit no incidents or accidents in HEMS operations during hot refuelling are known in the past.</p>
response	<p>Not accepted.</p> <p>A third person is necessary and probably available in most cases.</p> <p>See also response to comment 91.</p>

comment	<p>91 comment by: <i>European HEMS & Air Ambulance Committee (EHAC)</i></p> <p>AMC2 CAT.OP.MPA.197</p> <p>Refuelling with engine(s) and/or rotors running — with passengers on board — helicopters [...]</p> <p>(7) unless passengers are regularly trained in emergency evacuation procedures, an additional crew member or ground crew member should be assigned to assist in the rapid evacuation of the passengers. [...]</p> <p>Comment 5</p> <p>EHAC is of the opinion that doctors participating regularly in ESET courses they are considered as “regularly trained in emergency evacuation”. It is industry practice that such trained doctors are tasked to assist in the rapid evacuation of passengers/patients.</p>
response	<p>Noted.</p> <p>If doctors meet the requirements for assisting in the evacuation, they can be used.</p>

3. Proposed amendments — 3.6. Draft regulation (draft opinion) — Part-SPA

p. 22-23

comment	<p>15 comment by: <i>British Helicopter Association</i></p> <p>4. The NPA does not appear to recognise the use of NVIS and we propose an amendment of SPA.HEMS.150 to read as follows:</p> <p>SPA.HEMS.150 Fuel supply — alleviation</p> <p>(a) As an alternative to CAT.OP.MPA.150(b) to (d), When the HEMS mission is conducted under VFR within a local and defined geographical area, the fuel policy shall ensure that, on completion of the mission, the fuel remaining is sufficient for:</p> <p>(a) 30 min of flying time at best-range speed; or</p> <p>(b) by day or during NVIS Ops, when operating within an area providing continuous and suitable precautionary landing sites, 20 min of flying time at best-range speed.</p>
response	<p>Noted.</p> <p>Different incentives to adopt NVISs are being considered under the HEMS rulemaking task.</p>
comment	<p>17 comment by: <i>British Helicopter Association</i></p> <p>6. It appears that SPA.HEMS.155 allows for passengers (would count casualty/patient) to be embarked or disembarked while re-fuelling. This is the one scenario where it should be banned as lots of extraneous personnel might be involved in a stretcher removal, hence</p>



response	<p>inadvertently at risk. Focus would be on patient and not what is going on. Accept that alleviation to allow passengers (casualty/patient) to remain on-board is for HEMS is sensible.</p> <p>Accepted.</p> <p>Point SPA.HEMS.155 is restricted to operations with persons on board and does no longer include disembarking/embarking.</p>
comment	<p>31 comment by: <i>European Helicopter Association (EHA)</i></p> <p>The NPA does not appear to recognise the use of NVIS and we propose an amendment of SPA.HEMS.150 to read as follows:</p> <p>SPA.HEMS.150 Fuel supply — alleviation</p> <p>(a) As an alternative to CAT.OP.MPA.150(b) to (d), When the HEMS mission is conducted under VFR within a local and defined geographical area, the fuel policy shall ensure that, on completion of the mission, the fuel remaining is sufficient for:</p> <p>(a) 30 min of flying time at best-range speed; or</p> <p>(b) by day or during NVIS Ops, when operating within an area providing continuous and suitable precautionary landing sites, 20 min of flying time at best-range speed.</p>
response	<p>Noted.</p> <p>Different incentives to adopt NVISs are being considered under the HEMS rulemaking task.</p>
comment	<p>32 comment by: <i>European Helicopter Association (EHA)</i></p> <p>SPA.HEMS.155 Refuelling with passengers embarking, on board or disembarking</p> <p>Comment:The IHSG is working on Guidelines /SARPs for rotors or engine running re-fuels. Shouldn't this amendment be delayed until the ICAO work is concluded? From what we have seen they have been debating whether seat belts are done up or undone - very little guidance in the NPA.</p>
response	<p>Noted.</p> <p>EASA is part of the ICAO WG and will harmonise its rules with Amendments 36, 38, and 40 of Part I, as well as Amendment 33 to Part II, and Amendment 19 to Part III of ICAO Annex 6.</p>
comment	<p>34 comment by: <i>European Helicopter Association (EHA)</i></p> <p>In addition to: SPA.HEMS.155 Refuelling with passengers embarking, on board or disembarking</p> <p>It appears that SPA.HEMS.177 allows for passengers (would count casualty/patient) to be embarked or disembarked while re-fuelling. This is the one scenario where it should be</p>

	banned as lots of extraneous personnel might be involved in a stretcher removal, hence inadvertently at risk. Focus would be on patient and not what is going on. Accept that alleviation to allow passengers (casualty/patient) to remain on-board is for HEMS is sensible.
response	Accepted. Point SPA.HEMS.155 is restricted to operations with persons on board and will no longer include disembarking/embarking.
comment	35 comment by: <i>European Helicopter Association (EHA)</i> In addition to SPA.HEMS.155 Refuelling with passengers embarking, on board or disembarking Comment: Unloading passengers is sensible on a sunny day or when there is shelter but remote locations on a wet and windy day the passenger is more likely to be at risk of hypothermia than a risk of fire. The NPA should allow for pilot to make a risk assessment in line with FOM.
response	Partially accepted. The wording 'should never be justified' was deleted and the new text clarified.

3. Proposed amendments — 3.7. Draft AMC and GM (draft decision) — Part-SPA

p. 23

comment	74 comment by: <i>UK CAA</i> Page No: 23 Paragraph No: 3.7 / 1, new AMC1 SPA.HOFO.110(a)(4) Comment: This is not required as the operator will still be using Part-CAT, Part-NCC or Part-SPO and the procedures will be already there. We recommend this should be deleted. Justification: Simplification
response	Noted. Indeed, the procedures are already in Part-CAT and not intended to be changed. This AMC only ensures that hot refuelling is included in the helicopter offshore operations (HOFO) approval to reflect current practice and avoid the need for another approval.



3. Proposed amendments — 3.8. Draft regulation (draft opinion) — Part-NCC

p. 23-24

comment	<p>49</p> <p>comment by: UK CAA</p> <p>Page No: 23</p> <p>Paragraph No: 3.8, Part-NCC</p> <p>Comment: General Comment. Whilst reviewing NPA 2016-06(C), it was noted that NCC.OP.130 (Fuel and oil supply – aeroplanes) will be amended to some extent and separate comments have been made. However, NCC.OP.131 (Fuel and oil supply – helicopters) has not been proposed to be changed. It is recommended that the changes in NPA 2016-06(C) and the UK CAA proposals for NCC.OP.130(b) and (c) are reviewed against NCC.OP.131 for consistency and application, particularly with regards to the establishment of a fuel policy by the operator. It does not seem appropriate for there to be a difference. AMC and GM should also be aligned as far as possible as there is none currently provided or proposed for helicopters.</p> <p>Justification: Alignment of procedures and policy.</p> <p>Proposed Text: Use similar text as proposed by UK CAA for amended NCC.OP.130 and its AMC/GM is recommended.</p>
response	<p>Partially accepted.</p> <p>The content of points NCC.OP.130 and NCC.OP.131 was completely revised for clarity and terminology consistency with Part-CAT and ICAO Annex 6, Part II, Chapter 3.4.3.5.2.</p>
comment	<p>50</p> <p>comment by: UK CAA</p> <p>Page No: 23</p> <p>Paragraph No: 3.8 / 1, NCC.OP.157(a)(1)</p> <p>Comment: We believe the term ‘Technical Crewmember’ is inappropriate for NCC, and should be deleted.</p> <p>Justification: Correct terminology.</p>
response	<p>Accepted.</p>
comment	<p>51</p> <p>comment by: UK CAA</p> <p>Page No: 23/24</p> <p>Paragraph No: 3.8 / 1, NCC.OP.157</p> <p>Comment: It is recommended that sub-paragraphs (b), (c) and (d) are placed into AMC to support (e) which should be the requiring rule and be amended as shown. It is not clear how</p>

	<p>“prior approval by the competent authority” can be achieved for NCC operators. Recommend delete this element as reflected in SPO.OP.157.</p> <p>Justification: Clarification of requirement and method of compliance and approval.</p> <p>Proposed Text:</p> <p>Move sub-paragraphs (b) to (d) to AMC and amend sub-paragraph (e) as follows:</p> <p>(eb) The operator shall ensure that the helicopter refuelling procedures with engine and/or rotors running and any change thereto shall be are specified in the operations manual.</p>
response	<p>Not accepted.</p> <p>Points NCC.OP.157 (b) to (d) introduce the basic safety objectives, which are further elaborated on in the AMC and GM (e.g. risk assessment, procedures training).</p> <p>The text of point (e) is also used for other approvals and was kept for consistency with the Air OPS Regulation.</p>
comment	<p>52 comment by: UK CAA</p> <p>Page No: 24</p> <p>Paragraph No: 3.8 / 2, NCC.OP.205(b)</p> <p>Comment: The use of the term “to a site” may be misinterpreted and it is recommended that the text is amended to read ‘aerodrome or operating site’. Also the use of the phrase “shall be made” is inappropriate and it is recommended that it is replaced with the ICAO text of ‘can be made’.</p> <p>Justification: Clarity and correct use of defined terminology</p> <p>Proposed Text:</p> <p>(b) The pilot in command shall monitor the amount of usable fuel to ensure that it is not less than the fuel required to proceed to an aerodrome or operating site where a safe landing shall can be made with the planned final reserve fuel remaining.</p>
response	<p>Partially accepted.</p> <p>The definition of ‘safe landing’ includes the concept of an aerodrome or operating site. It is therefore not appropriate to include it here. ‘Shall’ was replaced by ‘can’. The use of the term ‘site’ is explained in the related GM.</p> <p>Identical to comment 23 on NPA 2016-06 (C) (see also CRD 2016-06 (C)).</p>

comment	<p data-bbox="359 241 391 273">81</p> <p data-bbox="1220 241 1476 273" style="text-align: right;">comment by: <i>FNAM</i></p> <p data-bbox="359 302 502 333">NCC.OP.157</p> <p data-bbox="359 358 1476 515">Regarding the new requirement NCC.OP.157 the FNAM would like to thank the EASA for introducing the “refuelling with engine(s) and/or rotors running — helicopters” in the parts CAT, NCC, NCO and SPO of this regulation and which was only applicable for the Part SPA.HEMS before.</p>
response	<p data-bbox="359 560 438 591">Noted.</p>
comment	<p data-bbox="359 672 391 703">82</p> <p data-bbox="1220 672 1476 703" style="text-align: right;">comment by: <i>FNAM</i></p> <p data-bbox="359 728 502 759">NCC.OP.205</p> <p data-bbox="359 784 1476 1064">The FNAM was surprised to see the introduction of the phraseology “MINIMUM FUEL” and “MAYDAY MAYDAY MAYDAY FUEL” in the 965/2012 regulation without adding, at the same time, the corresponding requirements in the SERA and in the ATM/ANS regulations. Therefore, to ensure consistency between the several European regulations, the FNAM suggests to add in the SERA and in the ATM/ANS regulations the adequate corresponding requirements regarding the “MINIMUM FUEL” state and the declaration of a fuel emergency situation “MAYDAY MAYDAY MAYDAY FUEL”.</p> <p data-bbox="359 1086 1476 1411">In the current regulation, the “MINIMUM FUEL” is not a declaration which confers any special treatment by ATC (it is not an emergency situation) but an information message. Controllers should bear in mind that an emergency situation is possible should any additional delay occur. Hence, controllers are not required to provide priority to pilots of aircraft that have indicated or suggested that they are becoming short of fuel or have used the phraseology “MINIMUM FUEL”. The term “MINIMUM FUEL” indicates that the pilot, intending to land at a specific aerodrome, calculates that any change to the existing clearance to that aerodrome might result in landing with less than the planned final reserve fuel.</p> <p data-bbox="359 1433 1476 1758">Furthermore, the FNAM would like the EASA to add some clarifications regarding this IR: Pilots & controllers shall keep in mind that PAN remains a universally prescribed means of declaring any urgency situation which requires assistance including low fuel emergency. In such case the declaration, whatever its cause, shall require priority to be given. Controllers & pilots should also understand that a PAN or a MAYDAY declaration arising because of low fuel may not necessarily use the fuel-specific phraseology suggested in PANS-ATM - pilot may make a standard form declaration first and only once it has been acknowledged explain that the problem is low fuel and priority corresponding to the declaration made is required.</p>
response	<p data-bbox="359 1803 582 1834">Partially accepted.</p> <p data-bbox="359 1859 1476 1971">Regulation (EU) 2016/1185, amending Regulation (EU) No 923/2012, on common rules of the air (published on 21 July 2016), and EASA ED Decision 2016/023/R (published on 14 October 2016), amending the AMC and GM to the rules of the air, introduced the rules on</p>

the 'MINIMUM FUEL' declaration in the European regulatory system before the Air OPS rules. GM1 SERA.11012 'Minimum fuel and fuel emergency' provides the following clarification:

The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing, and any change to the existing clearance may result in landing with less than planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

In addition, EASA ([SIB 2018-08](#)) was published on 8 May 2018, which reminded air operators and ATC of the relevant requirements in ICAO Annex 6 and Doc 4444, as well as in Part-SERA. Moreover, SIB 2018-08 points to the detailed explanations and scenarios for the use of the 'MINIMUM FUEL' declaration, which are provided in ICAO Doc 9976 'Flight Planning and Fuel Management (FPFM) Manual'.

The new fuel rules introduce the requirements for the 'MINIMUM FUEL' and a 'MAYDAY MAYDAY MAYDAY FUEL' declarations in the Air OPS Regulation, as well as more examples of their use in the new GM1 CAT.OP.MPA.185.

The 'PAN' declaration is not a standard declaration for fuel, but for other urgencies.

Following publication of [Opinion No 02-2020](#), EASA will initiate safety promotion activities to increase the awareness and understanding of the differences between the various fuel-related messages amongst pilots and ATC personnel.

Same comment as 195 on [NPA 2016-06 \(A\)](#) (see also CRD 2016-06 (A)).

3. Proposed amendments — 3.9. Draft AMC and GM (draft decision) — Part-NCC

p. 24-29

comment

53

comment by: UK CAA

Page No: 25

Paragraph No: 3.9 / 2, AMC2 NCC.OP.155

Comment: The proposed text is poorly worded and unclear in its intent. It does not meet the requirements for an AMC. It is strongly recommended that the original text as in AMC1 NCC.OP.155, both the general part at subparagraphs (a) and (b) and the helicopter part at (d) are retained and put into a revised AMC2. Alternatively, AMC1 could be retained unchanged. This is a similar comment as for AMC2 CAT.OP.MPA.195.

Justification: Relevance and clarity of meaning/intent

response

Partially accepted.

The wording was improved.

However:



- point (d) of AMC2 NCC.OP.155 was deleted, as it is covered by AMC1 NCC.OP.157 and AMC2 NCC.OP.157;
- point (b) is not needed in an AMC; and
- point (a) is not relevant to helicopters.

comment

54

comment by: UK CAA

Page No: 26**Paragraph No:** 3.9 / 3, AMC1 NCC.OP.157(b)

Comment: It is recommended that the paragraph be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. A suggested form of words is provided.

Justification: Clarification and format for meeting the requirements.

Proposed Text:

~~(b) In addition, operational procedures to be described in the operations manual should specify that at least the following precautions are taken:~~

(b) The operational procedures specified in the operations manual should cover at least the following factors:

response

Not accepted.

However, the wording was slightly modified to be harmonised with Amendments 36, 38, and 40 of Part I, as well as Amendment 33 to Part II, and Amendment 19 to Part III of ICAO Annex 6.

comment

55

comment by: UK CAA

Page No: 26**Paragraph No:** 3.9 / 4, AMC2 NCC.OP.157

Comment: It is recommended that the paragraphs be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. Suggested amendments are provided. In addition, the paragraph numbering needs to be corrected.

Justification: Clarification and format for meeting the requirements.

Proposed Text:

(a) In addition to AMC1 NCC.OP.157, for refuelling with passengers on board, operational procedures ~~to be described~~ **specified** in the operations manual should ~~specify~~ **cover** that at least the following **factors** ~~precautions are taken:~~



~~(11)~~(1) the way **positioning of** the helicopter should be positioned related **in relation** to the wind and refuelling facilities or vehicles should be defined, whenever practicable, together with the corresponding helicopter evacuation strategy;

~~(12)~~(2) on a heliport, the ground area beneath the exits intended for emergency evacuation should be kept clear;

~~(13)~~(3) **additional** passenger briefing and instructions should be defined, and the **need for** 'No smoking' signs **should to** be on;

~~(14)~~(4) **the setting of** interior lighting should be set to enable identification of emergency exits;

~~(15)~~(5) the use of doors during refuelling should be defined on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open unless otherwise specified in the aircraft flight manual (AFM);

~~(16)~~(6) one qualified person **the provision of at least one suitable person** capable of handling emergency procedures concerning fire protection and **including** fire fighting, handling communications, and initiating and directing an evacuation **who** should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and

~~(17)~~(7) unless passengers are regularly trained in emergency evacuation procedures, **the provision of** an additional crew member or ground crew member **should be assigned** to assist in the rapid evacuation of the passengers.

response

Accepted.

However, the wording of the introduction was harmonised with Amendments 36, 38, and 40 of Part I, as well as Amendment 33 to Part II, and Amendment 19 to Part III of ICAO Annex 6.uel.

comment

56

comment by: UK CAA

Page No: 27**Paragraph No:** 3.9 / 5, GM1 NCC.OP.157

Comment: We believe the reference to "Helicopter Emergency medical Service (HEMS)" in first paragraph is inappropriate for NCC and should be deleted.

Justification: Accuracy and relevance.

response

Accepted.



comment	<p>57</p> <p>Page No: 28</p> <p>Paragraph No: 3.9 / 6, GM1 NCC.OP.205(b)&(d), Note.</p> <p>Comment: It is not clear why the definition of “Safe Landing” is included here as there is a proposal in NPA 2016-06 (A) on page 31 to include it in Annex 1 Definitions. Either, Annex 1 is amended with a definition for all other Annexes, or the Note is retained.</p> <p>In addition, the term “Precautionary Landing is used in this GM without definition. It is recommended that the definition of a “precautionary landing”, as shown in proposed GM1 NCO.OP.185(b)&(c) sub-paragraph (c) on page 34, is added here as well or included in Annex 1 for use in all Annexes.</p> <p>Justification: Standardisation of terms and definitions.</p>	comment by: UK CAA
response	<p>Not accepted.</p> <p>The repeated definition of ‘safe landing’ was deleted from GM1 NCC.OP.205(b)&(d). The term ‘precautionary landing site’ was also deleted from the definition of ‘safe landing’ in Annex I (Definitions) to the Air OPS Regulation, and it is no longer needed elsewhere in that rule.</p>	
comment	<p>58</p> <p>Page No: 28</p> <p>Paragraph No: 3.9 / 7, GM1 NCC.OP.205(c)</p> <p>Comment: The term “Precautionary Landing is used in this GM without definition. It is recommended that the definition of a “precautionary landing”, as shown in proposed GM1 NCO.OP.185(b)&(c) sub-paragraph (c) on page 34, is added here as well or included in Annex 1 for use in all Annexes.</p> <p>Justification: Standardisation of terms and definitions.</p>	comment by: UK CAA
response	<p>Not accepted.</p> <p>The term ‘precautionary landing’ is no longer used in this GM, and it is also deleted from the definition of ‘safe landing’.</p>	

comment	<p>92 comment by: <i>European HEMS & Air Ambulance Committee (EHAC)</i></p> <p>AMC2 NCC.OP.157</p> <p>Refuelling with engine(s) and/or rotors running — with passengers on board — helicopters</p> <p>OPERATIONAL PROCEDURES</p> <p>[...] (13) the passenger briefing and instructions should be defined, and the ‘No smoking’ signs should be on if there is no placard in the cabin indicating that smoking is forbidden in the helicopter; [...]</p> <p>Comment 6</p> <p>CS 27.853 (Compartment interiors) does not require any 'No smoking' sign that can be turned ON/OFF for Helicopters where smoking is not allowed. There only must be a placard so indicating. Therefore the requirement needs to be amended without changing the intent that smoking is forbidden.</p>
response	<p>Accepted.</p> <p>Helicopters operated in NCC are likely to be CS/FAR-29-certified, but those rules do not always require a ‘No smoking’ sign.</p>

3. Proposed amendments — 3.10. Draft regulation (draft opinion) — Part-NCO

p. 29-32

comment	<p>1 comment by: <i>PDG Helicopters</i></p> <p>NCO.OP.147 & SPO.OP.157</p> <p>It is normal regulatory practice to place a lower regulatory burden on NCO & SPO flights than on CAT flights and yet this appears not to be the case with regards to rotors-running refuelling. For example, the requirement for NCO flights to use a checklist is a pointless complication and unlikely to be complied with. The lengthy AMCs and GM for SPO flights are an example of unnecessary verbiage.</p> <p>Rotors-running refuels do constitute a potentially higher risk activity but there is little evidence that this potentially higher risk manifests in a significant number of incidents. Therefore it is entirely reasonable that NCO and SPO flights should receive a lighter regulatory touch than CAT in this regard (as in others).</p>
response	<p>Partially accepted.</p> <p>In NCO and SPO, refuelling with rotors turning can take place without authority approval. AMC2 SPO.OP.157 was amended to make use of the capabilities of task specialists, but this AMC2 SPO.OP.157 is not referred to in GM1 NCO.OP.147.</p>



comment	<p>19 comment by: <i>Helicopter Club of Great Britain</i></p> <p>The requirement at (f) to have rescue and firefighting services present during rotors running refuelling is unduly restrictive for NCO operations. Refuelling often takes place at non airfield sites where such RFFF facilities are not available, and this requirement would make rotors running refuelling operations illegal at such sites. This would severely restrict and delay many NCO operations and is disproportionate.</p> <p>In many light turbine helicopters shutting down the engine, followed a few minutes later by a restart, severely stresses the engine, causes an increased engine cycle count, and brings a heightened risk of an engine overtemping event. An overtemping event is very expensive for the operator, and brings increased engine reliability problems. Thus the overall effect of this proposal would decrease safety, by making an inflight engine failure more likely, probably more likely than a safety issue with rotors running refuelling.</p> <p>This is a disproportionate proposed regulation, and should not apply to NCO. Observance of the remaining proposed rules (a-e) and (g) would be sufficient for an adequate level of safety.</p>
response	<p>Accepted.</p> <p>‘rescue and firefighting facilities (RFFF)’ was changed to ‘rescue and firefighting (RFF) facilities or equipment’. The new AMC1 SPO.OP.157 that is referred to in GM1 NCO.OP.147 describes what is acceptable in a pragmatic way.</p>
comment	<p>20 comment by: <i>European Private Helicopter Alliance</i></p> <p>The requirement at (f) to have rescue and firefighting services present during rotors running refuelling is unduly restrictive for NCO operations. Refuelling often takes place at non airfield sites where such RFFF facilities are not available, and this requirement would make rotors running refuelling operations illegal at such sites. This would severely restrict and delay many NCO operations and is disproportionate.</p> <p>In many light turbine helicopters shutting down the engine, followed a few minutes later by a restart, severely stresses the engine, causes an increased engine cycle count, and brings a heightened risk of an engine overtemping event. An overtemping event is very expensive for the operator, and brings increased engine reliability problems. Thus the overall effect of this proposal would decrease safety, by making an inflight engine failure more likely, probably more likely than a safety issue with rotors running refuelling.</p> <p>This is a disproportionate proposed regulation, and should not apply to NCO. Observance of the remaining proposed rules (a-e) and (g) would be sufficient for an adequate level of safety.</p>
response	<p>Accepted.</p> <p>‘rescue and firefighting facilities (RFFF)’ was changed to ‘rescue and firefighting (RFF) facilities or equipment’. The new AMC1 SPO.OP.157 that is referred to in GM1 NCO.OP.147 describes what is acceptable in a pragmatic way.</p>

comment	<p>59</p> <p>Page No: 29</p> <p>Paragraph No: 3.10 / 1, NCO.OP.125(a)</p> <p>Comment: The new section at (a) is supported but the term ‘guaranteed’ is not considered appropriate in this context as this is a planning stage and the ‘completion of a flight’ cannot be totally predicted. It is recommended that the section is amended as shown below.</p> <p>Justification: Reasonable terminology for the intent of the rule.</p> <p>Proposed Text:</p> <p>(a) The pilot-in-command shall ensure that the quantity of energy/fuel and oil carried on board is sufficient to guarantee that for the intended flight is to be completed safely, taking into account the meteorological conditions, any element affecting the performance of the aircraft, and any delays that are expected in flight, with an allowance for contingencies that may reasonably be expected to affect the flight.</p>	comment by: UK CAA
response	<p>Accepted.</p> <p>See comment 35 on NPA 2016-06 (C) (see also CRD 2016-06 (C)).</p>	
comment	<p>60</p> <p>Page No: 29</p> <p>Paragraph No: 3.10 / 1, NCO.OP.125(b)</p> <p>Comment: It is appreciated that there is an ambition to allow a degree of flexibility in the establishment of a Final Reserve Fuel but its planning mentioned here seems to have become very confused with the other fuel planning elements such as ‘contingency’ as stated in sub-paragraph (a). It is strongly recommended that this section be re-written as shown and that the relevant material be expanded in AMC/GM.</p> <p>Justification: Clarity of purpose and intent.</p> <p>Proposed Text:</p> <p>(b) The pilot-in-command shall plan a quantity of fuel/energy to be protected as final reserve fuel/energy in order to ensure a safe landing. when unforeseen occurrences may not permit safe completion of an operation as originally planned. In determining the quantity of the final reserve fuel/energy, the pilot in command shall take into account:</p> <p>(1) the severity of the hazard to persons or property that may result from an emergency landing after fuel/energy starvation;</p> <p>(2) the terrain in which such an emergency landing is made;</p> <p>(3) the weather conditions at and close to the destination/alternate aerodrome;</p>	comment by: UK CAA

	<p>(4) the precision of the measurement and calculation of fuel/energy expected on board at the end of the flight;</p> <p>(5) the availability of alternative landing options; and</p> <p>(6) the likelihood of unexpected circumstances that might prevent or delay a safe landing at the end of the intended flight;</p>
response	<p>Not accepted.</p> <p>The concept that FRF is intended for ‘unforeseen occurrences [that] may not permit safe completion of an operation as originally planned’ is set out in a note to ICAO Annex 6, Part I, Chapter 4.3.7.2 (and is equally applicable to non-commercial operations). While some of the criteria may also be relevant to contingency fuel assessment, they are all relevant to assessing the quantity of the FRF that needs to be carried.</p> <p>The distinction between FRF and contingency fuel is clearly set out in GM1 NCO.OP.125(b).</p> <p>Same comment as 36 on NPA 2016-06 (C) (see also CRD 2016-06 (C)).</p>
comment	<p>61 comment by: UK CAA</p> <p>Page No: 32</p> <p>Paragraph No: 3.10 / 5, NCO.SPEC.140</p> <p>Comment: We believe the text as written is not as clear as it could be to achieve the aim. We recommended the version provided below. Also deletion of the reference to NCO.OP.126(a) leads to ambiguity of which rule to operate to; this should be reinstated.</p> <p>Justification: Clarity of intent.</p> <p>Proposed Text:</p> <p>NCO.SPEC.140 Fuel and oil supply — helicopters</p> <p><i>Notwithstanding–NCO.OP.126(a)(1), the</i> The pilot-in-command of a helicopter may only commence a VFR flight by day when remaining within 25 NM of the aerodrome/operating site of departure, with a final reserve fuel of not less than 10 minutes at best-range-speed.</p>
response	<p>Partially accepted.</p> <p>The new point NCO.OP.125 (b) introduces the concept of FRF. It also provides for some risk management factors that should be considered in determining a reasonable FRF amount, to replace the current prescriptive values of points NCO.OP.125 (a) and NCO.OP.126 (a). Points NCO.SPEC.135 and NCO.SPEC.140 are no longer needed and were therefore deleted. Further guidance is included in the new GM1 NCO.OP.125(b).</p>

comment	83	comment by: <i>FNAM</i>
	NCO.OP.147	
	Regarding the new requirement NCO.OP.147 the FNAM would like to thank the EASA for introducing the “refuelling with engine(s) and/or rotors running — helicopters” in the parts CAT, NCC, NCO and SPO of this regulation and which was only applicable for the Part SPA.HEMS before.	
response	Noted.	

comment	84	comment by: <i>FNAM</i>
	NCO.OP.185	
	<p>The FNAM was surprised to see the introduction of the phraseology “MINIMUM FUEL” and “MAYDAY MAYDAY MAYDAY FUEL” in the 965/2012 regulation without adding, at the same time, the corresponding requirements in the SERA and in the ATM/ANS regulations. Therefore, to ensure consistency between the several European regulations, the FNAM suggests to add in the SERA and in the ATM/ANS regulations the adequate corresponding requirements regarding the “MINIMUM FUEL” state and the declaration of a fuel emergency situation “MAYDAY MAYDAY MAYDAY FUEL”.</p> <p>In the current regulation, the “MINIMUM FUEL” is not a declaration which confers any special treatment by ATC (it is not an emergency situation) but an information message. Controllers should bear in mind that an emergency situation is possible should any additional delay occur. Hence, controllers are not required to provide priority to pilots of aircraft that have indicated or suggested that they are becoming short of fuel or have used the phraseology “MINIMUM FUEL”. The term “MINIMUM FUEL” indicates that the pilot, intending to land at a specific aerodrome, calculates that any change to the existing clearance to that aerodrome might result in landing with less than the planned final reserve fuel.</p> <p>Furthermore, the FNAM would like the EASA to add some clarifications regarding this IR: Pilots & controllers shall keep in mind that PAN remains a universally prescribed means of declaring any urgency situation which requires assistance including low fuel emergency. In such case the declaration, whatever its cause, shall require priority to be given. Controllers & pilots should also understand that a PAN or a MAYDAY declaration arising because of low fuel may not necessarily use the fuel-specific phraseology suggested in PANS-ATM - pilot may make a standard form declaration first and only once it has been acknowledged explain that the problem is low fuel and priority corresponding to the declaration made is required.</p>	
response	<p>Partially accepted.</p> <p>Regulation (EU) 2016/1185, amending Regulation (EU) No 923/2012, on common rules of the air (published on 21 July 2016), and EASA ED Decision 2016/023/R (published on 14 October 2016), amending the AMC and GM to the rules of the air, introduced the rules on</p>	

the 'MINIMUM FUEL' declaration in the European regulatory system before the Air OPS rules. GM1 SERA.11012 'Minimum fuel and fuel emergency' provides the following clarification:

The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing, and any change to the existing clearance may result in landing with less than planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

In addition, EASA ([SIB 2018-08](#)) was published on 8 May 2018, which reminded air operators and ATC of the relevant requirements in ICAO Annex 6 and Doc 4444, as well as in Part-SERA. Moreover, SIB 2018-08 points to the detailed explanations and scenarios for the use of the 'MINIMUM FUEL' declaration, which are provided in ICAO Doc 9976 'Flight Planning and Fuel Management (FPFM) Manual'.

The new fuel rules introduce the requirements for the 'MINIMUM FUEL' and a 'MAYDAY MAYDAY MAYDAY FUEL' declarations in the Air OPS Regulation, as well as more examples of their use in the new GM1 CAT.OP.MPA.185.

The 'PAN' declaration is not a standard declaration for fuel, but for other urgencies.

Following publication of [Opinion No 02-2020](#), EASA will initiate safety promotion activities to increase the awareness and understanding of the differences between the various fuel-related messages amongst pilots and ATC personnel.

Same comment as 195 on [NPA 2016-06 \(A\)](#) (see also CRD 2016-06 (A)).

3. Proposed amendments — 3.11. Draft AMC and GM (draft decision) — Part-NCO

p. 32-34

comment	26	comment by: <i>European Helicopter Association (EHA)</i>
	Typo error	
	GM1 NCO.OP.125(b)(6) Fuel and oil supply — aeroplanes and helicopters The likelihood of unexpected circumstances arising after the aircraft is fuelled may increase with the duration of the planned flight (eg. during a long flight, a problem at the destination aerodrome or operating site is more likely to have occurred than during a short local flight).	
response	Accepted.	
comment	27	comment by: <i>European Helicopter Association (EHA)</i>
	GM1 NCO.OP.185(b)&(c) In-flight fuel management	
	(a) The pilot-in-command may consider reporting the remaining fuel/energy endurance after a MINIMUM FUEL or MAYDAY MAYDAY MAYDAY FUEL call.	

Note: **as for CAT, the final reserve fuel is always 30 min**, but for Part-NCO operators, the final reserve varies from 10 to 45 min; therefore, the air traffic control (ATC) may not be aware of the amount of the remaining fuel/energy.

The above bold text is incorrect.

For CAT the final reserve may vary between 20 or 30 minutes for CAT depending on VFR or IFR and day or night / way of navigation.

response

Accepted.

The assertion that the FRF varies between 10 and 45 minutes was also corrected.

comment

62

comment by: UK CAA

Page No: 32

Paragraph No: 3.11 / 1, AMC1 NCO.OP.125(b)

Comment: We believe the first sentence should be amended to include 'fuel/energy' as shown below.

Justification: Clarity.

Proposed Text: The final reserve ***fuel/energy*** quantity should be no less than required to fly:

response

Accepted.

Same as comment 37 on [NPA 2016-06 \(C\)](#) (see also CRD 2016-06 (C)).

comment

63

comment by: UK CAA

Page No: 33

Paragraph No: 3.11 / 5, GM1 NCO.OP.125(b)(6)

Comment: We believe this GM should be deleted as it provides no useful information that is not obvious.

Justification: Superfluous information.

response

Accepted.

Same as comment 38 on [NPA 2016-06 \(C\)](#) (see also CRD 2016-06 (C)).



comment	<p>64</p> <p style="text-align: right;">comment by: UK CAA</p> <p>Page No: 34</p> <p>Paragraph No: 3.11 / 8, GM1 NCO.OP.185(b)&(c), sub-paragraph (a), Note</p> <p>Comment: As written the 'Note' is confusing with its mention of CAT. It is recommended that this sentence be amended as shown.</p> <p>Justification: Clarity of information</p> <p>Proposed Text:</p> <p>Note: as for CAT, the final reserve fuel is always 30 min, but for Part-NCO operators, the final reserve varies from 10 to 45 minutes; therefore, the air traffic control (ATC) may not be aware of the amount of the remaining fuel/energy and therefore endurance.</p>
response	<p>Partially accepted.</p> <p>The assertion that the FRF varies between 10 and 45 minutes was also corrected.</p> <p>Same as comment 39 on NPA 2016-06 (C) (see also CRD 2016-06 (C)).</p>

comment	<p>65</p> <p style="text-align: right;">comment by: UK CAA</p> <p>Page No: 34</p> <p>Paragraph No: 3.11 / 8, GM1 NCO.OP.185(b)&(c), sub-paragraph (c)</p> <p>Comment: The definition of "Precautionary Landing" is useful here but as previously mentioned might be better placed in Annex 1 Definitions rather than being repeated.</p> <p>Justification: Clarity of information</p>
response	<p>Not accepted.</p> <p>The term 'precautionary landing' is no longer used in this GM. It was therefore deleted from everywhere else it was used, including from the definition of 'safe landing'.</p>

3. Proposed amendments — 3.12. Draft regulation (draft opinion) — Part-SPO

p. 34-36

comment	<p>10</p> <p style="text-align: right;">comment by: Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</p> <p>SPO.OP.157 and AMCs to 155 and 157 - The term passengers for an SPO flight brings uncertainty to the categorization of CAT versus SPO. EASA should consider aligning the term used with article 5.7 in regulation (EU) 965/2012.</p>
response	<p>Accepted.</p>



comment	<p>11 comment by: <i>Ian HENTLEY</i></p> <p>New SPO.OP.157 a(5) clarification of what is "appropriate"</p> <p>An example being that the company I work for has its own re-fuelling bowsers which we use when operating our utility operations off airfield. The bowsers are UK road legal and the drivers are appropriately ADR qualified. The ground crew are trained to aircrew standard of fire-fighting qualification - would this be considered "appropriate"? If not the requirement to have RFFF could be very restrictive for any future operations.</p>
response	<p>Accepted.</p> <p>‘rescue and firefighting facilities (RFFF)’ was changed to ‘rescue and firefighting (RFF) facilities or equipment’. The new AMC1 SPO.OP.157 that is referred to in GM1 NCO.OP.147 describes what is acceptable in a pragmatic way.</p>
comment	<p>36 comment by: <i>European Helicopter Association (EHA)</i></p> <p>Comment to SPO.OP.157 Refuelling with engine(s) and/or rotors running — helicopters</p> <p>The industry views this as a too complex procedure and it should be changed with former AMC1 SPO 155 (part hel). At least for no pax onboard.</p>
response	<p>Partially accepted.</p> <p>The new AMC2 SPO.OP.157 was amended to make use of the capabilities of task specialists.</p>
comment	<p>66 comment by: <i>UK CAA</i></p> <p>Page No: 34</p> <p>Paragraph No: 3.12 / 1, SPO.OP.131</p> <p>Comment: It is strongly recommended that this section be amended for alignment with SPO.OP.130 for aeroplanes, or amalgamation with that section, as separately proposed by the UK CAA in response to NPA 2016-06(C), particularly with regard to the establishment of a ‘fuel policy’ and the amended Final Reserve Fuel requirements – FRF is not mentioned in the present SPO.OP.131. The section enforces constraints on SPO activities which would be better managed by the operator using a performance based rule with comprehensive AMC/GM to support it.</p> <p>Justification: The proposal introduces requirements that cannot be met when considering the whole range of SPO activities. A more proportionate set of requirements, possibly based on the performance principles use in the proposed Part-NCO requirements should be assigned.</p> <p>Proposed Text: See UK CAA response to NPA 2016-06(C), SPO.OP.130.</p>

response Partially accepted.

Similar to comment 29 on [NPA 2016-06 \(C\)](#) (see also CRD 2016-06 (C)).

While the Part-SPO requirement for establishing fuel policies and to considering the various elements of fuel needs (fuel to destination, destination alternate, FRF etc.) remains harmonised with the Part-NCC requirements, the prescriptive FRF requirement was amended to be harmonised with the more performance-based approach taken for Part-NCO.

comment 67 comment by: UK CAA

Page No: 35

Paragraph No: 3.12 / 2, SPO.OP.157

Comment: It is recommended that sub-paragraphs (b), (c) and (d) are placed into AMC to support (e) which should be the requiring rule and be amended as shown below.

Justification: Clarification of requirement and method of compliance and approval.

Proposed Text:

Move sub-paragraphs (b) to (d) to AMC and amend sub-paragraph (e) as follows:

(~~e~~) The **operator shall ensure that the** helicopter refuelling procedures with engine and/or rotors running and any change thereto ~~shall be~~ **are** specified in the operations manual.

response Partially accepted.

Points SPO.OP.157 (b) to (d) introduce the basic safety objectives, which are further elaborated on in the AMC and GM (e.g. risk assessment, procedures training).

The wording of point (e) was changed as proposed.

comment 68 comment by: UK CAA

Page No: 36

Paragraph No: 3.12 / 3, SPO.OP.190, (b)

Comment: The use of the term “to a site” may be misinterpreted and it is recommended that the text is amended to read ‘aerodrome or operating site’. Also the use of the phrase “shall be made” is inappropriate and it is recommended that it is replaced with the ICAO text of ‘can be made’.

Justification: Clarity and correct use of defined terminology

Proposed Text:

(b) The pilot in command shall monitor the amount of usable fuel to ensure that it is not less than the fuel required to proceed to an **aerodrome or operating** site where a safe landing ~~shall~~ **can** be made with the planned final reserve fuel remaining.

response	<p>Partially accepted.</p> <p>The definition of 'safe landing' includes the concept of an aerodrome or operating site. It is therefore not appropriate to include it here. 'Shall' is replaced by 'can'.</p> <p>Same as comment 30 on NPA 2016-06 (C) (see also CRD 2016-06 (C)).</p>
comment	<p>69 comment by: UK CAA</p> <p>Page No: 36</p> <p>Paragraph No: 3.12 / 3, SPO.OP.190, sub-paragraphs (c)&(d)</p> <p>Comment: Due to the nature of SPO activities, the proposed text and procedures may lead to an unnecessary level of confusion and misreporting of fuel conditions. It is likely that many SPO flights will not be in controlled airspace or be using ATC so it is strongly recommended that for Part-SPO the proposed text for Part-NCO as at NCO.OP.185 is used instead. This would be more appropriate and proportional.</p> <p>Justification: Proportionate and appropriate procedures and terminology</p> <p>Proposed Text: Delete proposed sub-paragraphs (c) and (d) and replace with:</p> <p><i>(c) The pilot-in-command of a controlled flight shall advise the air traffic control (ATC) of a minimum fuel/energy state by declaring MINIMUM FUEL when, having committed to land at a specific aerodrome or operating site, the pilot calculates that any change to the existing clearance to land at that aerodrome or operating site, or other air traffic delays, may result in landing with less than the final reserve fuel/energy.</i></p> <p><i>(d) The pilot-in-command of a controlled flight shall declare a situation of fuel/energy emergency by broadcasting MAYDAY MAYDAY MAYDAY FUEL when the usable fuel/energy estimated to be available upon landing at the nearest site where a safe landing can be made in accordance with normal operating procedures is less than the planned final reserve fuel/energy.</i></p>
response	<p>Accepted.</p> <p>Same as comment 31 on NPA 2016-06 (C) (see also CRD 2016-06 (C)).</p>
comment	<p>85 comment by: FNAM</p> <p>SPO.OP.157</p> <p>Regarding the new requirement SPO.OP.157 the FNAM would like to thank the EASA for introducing the "refuelling with engine(s) and/or rotors running — helicopters" in the parts CAT, NCC, NCO and SPO of this regulation and which was only applicable for the Part SPA.HERMS before.</p>
response	<p>Noted.</p>

3. Proposed amendments — 3.13. Draft AMC and GM (draft decision) — Part-SPO

p. 36-40

comment

70

comment by: UK CAA

Page No: 37**Paragraph No:** 3.13 / 2, AMC2 SPO.OP.155

Comment: In a similar way as for comments on AMC2 NCC.OP.155 and AMC2 CAT.OP.MPA.195, we believe that the proposed text is poorly worded and unclear in its intent. It does not meet the requirements for an AMC. It is strongly recommended that the original text as in AMC1 SPO.OP.155 (b) is retained and put into a revised AMC2. Alternatively, AMC1 could be retained unchanged. Additionally, the considerations stated for aeroplanes is more comprehensive and worthy of review against the helicopter requirements.

Justification: Relevance and clarity of meaning/intent

response

Partially accepted.

The wording was improved.

However, point (b) of AMC1 SPO.OP.155 was deleted, as it is covered by AMC1 SPO.OP.155 and AMC2 SPO.OP.155.

comment

71

comment by: UK CAA

Page No: 37**Paragraph No:** 3.13 / 3, AMC1 SPO.OP.157(b)

Comment: It is recommended that the paragraph be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. A suggested form of words is provided below.

Justification: Clarification and format for meeting the requirements.**Proposed Text:**

~~(b) In addition, operational procedures to be described in the operations manual should specify that at least the following precautions are taken:~~

(b) The operational procedures specified in the operations manual should cover at least the following factors:

response

Not accepted.

However, the wording was slightly modified to be harmonised with Amendments 36, 38, and 40 of Part I, as well as Amendment 33 to Part II, and Amendment 19 to Part III of ICAO Annex 6.



comment

72

comment by: UK CAA

Page No: 38**Paragraph No:** 3.13 / 4, AMC2 SPO.OP.157

Comment: It is recommended that the paragraphs be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. Suggested amendments are provided below.

Justification: Clarification and format for meeting the requirements.

Proposed Text:

In addition to AMC1 SPO.OP.157, for refuelling with passengers on board, operational procedures ~~to be described~~ **specified** in the operations manual should **specify cover** at least the following **factors** ~~precautions are taken~~:

(a) ~~the way~~ **positioning of** the helicopter ~~should be positioned related~~ **in relation** to the wind and refuelling facilities or vehicles ~~should be defined, whenever practicable,~~ together with the corresponding helicopter evacuation strategy;

(b) on a heliport, the ground area beneath the exits intended for emergency evacuation should be kept clear;

(c) **additional** passenger briefing and instructions ~~should be defined,~~ and the **need for** 'No smoking' signs ~~should~~ **to** be on;

(d) **the setting of** interior lighting ~~should be set~~ to enable identification of emergency exits;

(e) the use of doors during refuelling ~~should be defined~~ on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open unless otherwise specified in the aircraft flight manual (AFM);

(f) ~~one qualified person~~ **the provision of at least one suitable person** capable of handling emergency procedures ~~concerning fire protection and~~ **including** fire fighting, handling communications, and initiating and directing an evacuation **who** should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and

(g) unless passengers are regularly trained in emergency evacuation procedures, **the provision of** an additional crew member or ground crew member ~~should be assigned~~ to assist in the rapid evacuation of the passengers.

response

Accepted.

However, the wording of the introduction was harmonised with Amendments 36, 38, and 40 of Part I, as well as Amendment 33 to Part II, and Amendment 19 to Part III of ICAO Annex 6.



comment	<p>73</p> <p>Page No: 39</p> <p>Paragraph No: 3.13 / 6, GM1 SPO.OP.190(b)&(d)</p> <p>Comment: The term “Precautionary Landing is used in this GM without definition. It is recommended that the definition of a “precautionary landing”, as shown in proposed GM1 NCO.OP.185(b)&(c) sub-paragraph (c) on page 34, is added here as well or included in Annex 1 for use in all Annexes.</p> <p>Justification: Standardisation of terms and definitions.</p>	comment by: UK CAA
response	<p>Not accepted.</p> <p>The term ‘precautionary landing’ is no longer used in this GM or in any of the new fuel rules.</p>	
comment	<p>93</p> <p>New AMC2 SPO.OP.157</p> <p>Refuelling with engine(s) and/or rotors running — with passengers on board — helicopters</p> <p>[...] (c) the passenger briefing and instructions should be defined, and the ‘No smoking’ signs should be on if there is no placard in the cabin indicating that smoking is forbidden in the helicopter; [...]</p> <p>Comment 7</p> <p>CS 27.853 (Compartment interiors) does not require any 'No smoking' sign that can be turned ON/OFF for Helicopters where smoking is not allowed. There only must be a placard so indicating. Therefore the requirement needs to be amended without changing the intent that smoking is forbidden.</p>	comment by: European HEMS & Air Ambulance Committee (EHAC)
response	<p>Accepted.</p>	
comment	<p>94</p> <p>New AMC2 SPO.OP.157</p> <p>Refuelling with engine(s) and/or rotors running — with passengers on board — helicopters</p> <p>[...] (f) one qualified person capable of handling emergency procedures concerning fire protection and firefighting, handling communications, and initiating and directing an evacuation should remain at a specified location; this person should not be the qualified pilot at the controls or and, if possible, also not the person performing the refuelling;</p> <p>Comment 8</p> <p>This adds the requirement for a 3rd person involved in refuelling the helicopter which is NOT current practice in current HEMS operations. It is also impractical as the doctor is supposed</p>	comment by: European HEMS & Air Ambulance Committee (EHAC)

	<p>to monitor the patient and there is usually no qualified 3rd person available to perform the required task. If there is a qualified 3rd person available, it is recommended to involve that person in the refuelling procedure, albeit no incidents or accidents in HEMS operations during hot refuelling are known in the past.</p>
response	<p>Not accepted.</p> <p>A third person is necessary and probably available in most cases.</p> <p>See also response to comment 91.</p>
comment	<p>96 comment by: <i>European HEMS & Air Ambulance Committee (EHAC)</i></p> <p>New AMC2 SPO.OP.157</p> <p>Refuelling with engine(s) and/or rotors running — with passengers on board — helicopters</p> <p>[...] (g) unless passengers are regularly trained in emergency evacuation procedures, an additional crew member or ground crew member should be assigned to assist in the rapid evacuation of the passengers.</p> <p>Comment 9</p> <p>EHAC is of the opinion that doctors participating regularly in ESET courses they are considered as “regularly trained in emergency evacuation”. It is industry practice that such trained doctors are tasked to assist in the rapid evacuation of passengers/patients.</p>
response	<p>Noted.</p> <p>If doctors or task specialists meet the requirements for assisting in the evacuation, they can be used.</p>