European Union Aviation Safety Agency

Comment-Response Document (CRD) 2017-17

CRD 1 to NPA 2017-17 ‘Air Taxi & AEMS’

RELATED NPA: 2017-17 — RELATED OPINION: No XX/202X — RELATED ED DECISION: 202X/XXX/R — RMT.0492 & RMT.0493

DD.MM.202X *[= DATE OF ADOPTION]*

In responding to the comments, the following terminology has been applied to attest EASA's position:

(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.

Individual comments and responses — Air Taxi & AEMS

(General comments)	-

comment	*32* comment by: *Serair* For operators performing various kinds of operations, the option to apply only one regulation to all its operations should be available. For example, in our case, we perform CAT Scheduled operations, AEMS and air taxi operations. These operations are carried out using the same aircrafts and crews, so it would be easier for us to comply only with one of the FTL regulations (CAT or Air taxi/AEMS) instead of both of them. Establishing limitations by kinds of operations may be useful for bigger operators with separated structures, but in our case, it makes it harder to identify and apply the right limitation in each occasion.
response	Accepted The option to apply only a single regulation to all operations is already available. Nonetheless, the text of the regulation will be further clarified. Operators may apply ORO.FTL in combination with either CS FTL.1 or CS FTL.2 for their air taxi or AEMS operations. Operators may not, however, choose CS FTL.2 for their scheduled and charter operations. Choosing CS FTL.2 for their air taxi or AEMS operations means that all requirements of CS FTL.2 apply. 'Cherry picking' will not be possible.

Response with regard to 'multiple (≥ 4) short sectors at night' (comment #37)

comment	37 comment by: *Serair* EASA should take in consideration the existence of operators that perform a high number of sectors with low flight time. In our case, SERAIR delivers press in the Canary Islands, performing 5 sectors of approximately 25 minutes each every night. The limitation of 4 sectors when performing consecutive night duties forces us to have 2 different crews performing those 5 sectors or alternate night and "day" duties in order to maximize crew's productivity. The first option makes the operation costly, and the second one increases the crew's fatigue. The limitation of sectors should be in relation to the flight time of each of them.
response	Accepted

Responses with regard to 'development of more AMC/GM to ORO.FTL.110' (comment #103)

comment	*103* comment by: *UK CAA* **Overall Comment** **Comment:** The CAA supports the extensive work that EASA has done to complete this complex rulemaking task. Our comments focus on areas where the proposals lack an element of clarity or consistency and in some cases where the changes in the text have created a different meaning to the original requirements in Subpart FTL. In order to improve clarity and ensure that the application of the requirements is as intended, we believe EASA should consider including some additional guidance, especially where the requirement is intended to deliver a certain level of performance within each operator's working context. Additional guidance was developed during the Rulemaking group work for ORO.FTL.110 (j) and the UK CAA has also developed guidance on implementing the ORO.FTL.110 requirements. It would support both the industry and the regulators if this material could be included or further developed / supported by EASA for the final Decision material. EASA are requested to consider additional AMC/GM to support application of the requirements, specifically for ORO.FTL.110. **Justification:** Following the implementation of Subpart FTL, it became clear that some operators required more descriptions of acceptable means of compliance and guidance in order to apply the regulations as intended. This would support the NAA's with the implementation and oversight of the requirements.
response	Accepted Additional AMC and GM have been included to support the application of the requirements, specifically as regards point ORO.FTL.110.

comment	*138* comment by: *CAA-NL* **Overall comment** The Netherlands supports the EASA work of the complex rulemaking task. Our comments are mainly focused on lack of clarity or consistency. **General comment**

	How could ambulance flights and HEMS flights be combined if they are performed by the same operator? This in view of GM1 SPA.HEMS.100 (a) under (d) where the difference between HEMS and Air ambulance is explained. If these 2 flights are performed by 1 operator, they should fall under the same regime. It should be added that FTL for "Air Ambulance flights" with helicopters will fall under the HEMS regime.
response	Not accepted Currently, HEMS flights are operated under Member States' national regulations, whilst most Air Ambulance flights are operated under Subpart Q of Council Regulation (EEC) No 3922/91, i.e. the FTL regime differs for both types of operation, even if performed by one operator. EASA does not see a reason why the future FTL rules for AEMS should fall under the HEMS regime.

comment	*235* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland* The Federal Office of Civil Aviation (FOCA) would like to thank the Agency for the good work and the opportunity to comment on this draft NPA.
response	Accepted

comment	*429* comment by: *Skyshare Union representing NetJets crew members* Several factors combine to make the Air Taxi FTL a much less pleasant regime for crew members. Longer max FDP, shorter min rest of 10 hours (no evening meal), shorter min rest on long range after crossing time zones.
response	Noted It is not clear whether the comment is about the current situation in Air Taxi operations or the proposed rules.

Responses to Austro Control (comment #569)

comment	*569* comment by: *Austro Control* **Dear all,** **Austria offers the following comments to this NPA:** **Comments FTL for AEMS, HEMS, Air taxi operation** **1.Page No.** Page 9

Paragraph No. ORO.FTL.105 Definitions
Comment: Even if Air Taxi operation is defined in Article 1 of Reg. 83/2014, it would make sense to add the definition under ORO.FTL.105 for better readability and summarization of all relevant FTL definitions.
Justification: See comment

Accepted

2. Page No: Page 12
Paragraph No: ORO.FTL.205 (d1) Ziffer2:
Comment: "on-board rest" should be added to the definitions under ORO.FTL. 105 – *on-board rest* covers for air-taxi / inflight and additionally on-board rest on ground
Please clarify „ planned in advanced" –for Air taxi – definition is unclear.
Justification
See comment
Proposal (new proposed text, etc.)
Planned in advance: Text for example: "before commencing the preceding rest period".

Accepted

3. Page No: Page 21
Paragraph No: CS.FTL.2.205 – FDP – Night duties
Comment: Clarification needed on appropriate fatigue risk management in regard to the specific Air taxi – operation/ unplanned/ unscheduled/
Justification:
Air taxi operation / small operator will need more and special guidance to be able to comply.

Noted
The requirement on consecutive night duties has been deleted. The limitation of 4 sectors when performing consecutive night duties will force small operators to have 2 different crews for FDPs of 5 sectors or alternate night and 'day' duties in order to maximise productivity. The first option makes the operation costly, and the second one increases crew fatigue.

4. Page No: Page 25-26
Paragraph No: CS.FTL.2.215 in connection with ORO.FTL.215
Comment: It is unclear why the max. FDP is reduced for Air taxi operation only (not applicable for CAT) regarding the counting of positioning time as FDP. Furthermore this would indicate that positioning is more demanding than active flying duty.
(b)(ii) should include "additionally" to the 30 min mentioned in (b)(i)
e.g.: if driving takes 70 min, a FDP reduction of 20 min is intended without the clarification mentioned above.
Justification: See comment
Proposal (new proposed text, etc.)
"Additionally to the 30 min mentioned in (b)(i) twice the duration of the self-driving time in excess of 60 minutes."

Noted
The requirement has been considerably simplified.

Air Taxi operators make extensive use of positioning and that is far more prolonged than positioning in scheduled CAT operations.
The study (Attachment IV to NPA 2017-17) recognises that the impact of the duration of positioning and the mode of transport on pilot fatigue may be significant. On average, every hour of positioning contributed 0.25 to the fatigue score, every hour of flying 0.13. The reduction of the maximum FDP is, therefore, a mitigation measure against long (self-driving) positioning before and after sector duties. The operator needs to specify in its flight time specification scheme the impact of positioning on the maximum FDP depending on the duration of positioning and the mode of transport.

5. Page No: Page 26
Paragraph No:CS. FTL.2.220
Comment :(g) the statement regarding credits for breaks on ground creates uncertainty and is easy to be misunderstood.
From our understanding the intention is that the max FDP may only be extended by 3 h anymore – previous (national) rules allowed up to 8h extension of DT.
Justification: This will be in conflict with the typical Air taxi operation (early morning departure and late evening return with a hotel stay below minimum rest).

Not accepted
The operator may extend the basic maximum daily FDP specified in CS FTL.2.205 by up to 50 % of the combined duration of all breaks on the ground. The limit of 3 hours is only on one of the breaks on the ground.

6.Page No: Page 26-27
Paragraph No:CS FTL 2.225 Stand-By
Comment: The new stand-by regulation is highly complex and would require additional staff to monitor the various stand-by notification types and "idle times".
Justification: This is not appropriate for smaller Air taxi operation (50 % of Austrian Air taxi operation) and would lead to much more confusion.

Partially accepted
The requirement has been considerably simplified. Anyway, a small air taxi operator does not need to implement all complex requirements for standby if the type of operation performed is of a simple nature. For example, such operator may decide to apply a response time of 60 minutes for all its flights, thus avoiding complex calculations.

7.Page No: Page 28
Paragraph No: CS FTL.2.235 Rest periods – Air taxi
Comment: (b) the explained calculation of nights free of duty after time zone differences calculates with beginning and ending the rotations at the home base. This totally ignores the fact that the majority of Air taxi operations does not start or end the rotation at the home base. But crew members are positioned to the A/C (out of home base), then conduct the rotation, do not return to home base until their duty roster is finished, so the "earned nights" cannot be consumed after the fatiguing rotation.

Not accepted
The term 'rotation' is defined as 'a series of duties, including at least one flight duty, and rest period out of home base, starting at home base and ending when returning to home

	base for a rest period where the operator is no longer responsible for the accommodation of the crew member.' Home base should not be confused with a pilot's private residence. Hence, an FCM can start a rotation at the home-base airport with a positioning flight to where the aircraft is. The positioning duty is part of the rotation. The purpose of compensatory rest is re-synchronisation to home base after time-zone crossings, regardless of how many duties have been worked out, how many rest periods have been consumed in the meantime, and the actual acclimatisation status of the crew member upon return. Nevertheless, the requirement has been amended to account for rotations that start with one or more duty periods not involving time-zone crossings, i.e. the time elapsed will count from the flight(s) which have caused de-synchronisation of the crew member's circadian rhythm, not necessarily beginning or ending at home base. **8. Page No:** Page 43 **Paragraph No:** AMC3 ORO.FTL.120 (b)(4) Fatigue risk management (FRM) **Comment:** All guidance material regarding FRM is tailored to fixed wing operation. Additional guidance material for HEMS should be established as soon as possible. Noted HEMS FTL requirements are not part of this Opinion.
response	Responses are given right below each comment.

comment	*878* comment by: *AESA* There is a problem with the meaning of "charter operations". UE 965/2012 only include definition for "Air taxi operation", that means on-demand operations with airplanes of MOPSC of 19 or less. We have not definition for charter operation, so we could accept that, in this context, charter operation means on-demand operation with airplanes of MOPSC of more than 19. But in some cases it makes no sense. For example, AMC1 ORO.FTL.125(a) stablish that for single-pilot charter operations, CS-1 must be followed and for single-pilot air taxi operations, CS-2 apply. Single-pilot operations only can be conducted with aeroplanes below of 5.700kg (sure MOPSC less than 19). ¿What is the difference between charter and air taxi in this case? Since the only definition is for air taxi, we could speak about "Air taxi and AEMS operations" (CS-2) and "Other than air taxi nor AEMS operations" (CS-1). Another possibility would be to include a definition of "charter operations" in definitions of 965/2012, whatever it means.
response	Accepted A definition of 'charter' has been inserted.

comment	*881* comment by: *Stephanie Selim* **General comment on rationale :** DGAC regrets that the rationale is not explanatory enough. Indeed, the rationale of this NPA is only a paraphrase of the proposed requirements and brings no explanation on these proposals. Yet, an explanatory rationale can be useful when we there are doubts about the aim of a requirement, or its interpretation and DGAC often falls back on rationales of previous NPA to lighten the meaning of some requirements.
response	Not accepted The rationale in the NPA must be read together with the scientific studies attached to it. For the sake of brevity, the scientific findings are referred to, but not explained again in the explanatory part of the NPA. Also, the NPA builds on the knowledge and experience gained so far from the implementation of the FTL rules. Assuming that interested parties have such knowledge, it was felt inappropriate to explain the background again.

comment	*910* comment by: *EUROCONTROL* The EUROCONTROL Agency welcomes the publication of EASA Notice of Proposed Amendment 2017-17 on 'Flight Time Limitation' for different types of operation. It also thanks EASA for the opportunity that has been given to submit comments. However, the subject of the amendment is considered outside the scope of activities of EUROCONTROL. In addition, despite the fact that it has no comments to make, the EUROCONTROL Agency would like to confirm that it will read with interest the comments on this NPA received from stakeholders and the responses given to them by EASA in its future comment-response document (CRD). Like for NPA 2017-17, EUROCONTROL staff will be given access to CRD 2017-17, for information.
response	Noted

Responses to FNAM (comment #1004)

comment	*1004* comment by: *FNAM* Attachments #22 #23 #24 #25 #26 **FNAM (Fédération Nationale de l'Aviation Marchande) is the French Aviation Industry Federation/ Trade Association for Air Transport, gathering the following members:** • 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

And the following associated members:
- FPDC: French Drone Professional Union
- UAF: French Airports Professional Union

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:

- 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 and EBAA France have (or may have) no comments about them, neither FNAM and EBAA France accept or acknowledge them. All the following comments are thus limited to our understanding of the effectively published proposed regulation, notwithstanding their consistency with any other pieces of regulation.

#Introduction

FNAM and EBAA France thank the EASA for the will of harmonizing the applicable dispositions in terms of flight time limitations for AEMS operations throughout Europe in order to warrantee a high level of safety.

Due to the complexity of the proposed regulation, at the time being, FNAM and EBAA France fear that each and every stakeholder will interpret this NPA according to its understanding which might act as a hindrance to the level playing field contrary to the initial goal.
Indeed, AEMS operators are not familiar with the EASA FTL schemes and philosophy. Proposed AEMS FTL rules are derivated from current CAT.A FTL rules, with a common basis. Moreover, AEMS operators are still now subject to national FTL rules, which are for France far different from EASA's proposals.

Thus, it is a hard and heavy work for them and us to study, understand and comment EASA's proposals. Some concepts and wordings still appear confusing to us. FNAM and EBAA France would like to avoid misunderstanding or wrong interpretation of EASA's proposals. Else, FNAM and EBAA France but also operators' comments might be inadequate and inefficient.

Generally speaking, FNAM and EBAA France think that the proposed requirements for AEMS would benefit and enhance safety in being clearer and more user friendly. The proposed requirements for AEMS show numerous inconsistencies (there are some numbering issues, nonsenses and contradictions leading to misunderstandings of this NPA). Therefore, it is really hard for the Profession to elaborate final and comprehensive comments due to the difficulty in comprehension of this proposed regulation. For instance,

the structure and the references within this NPA lead to confusion regarding the applicability of the Certification Specifications for AEMS, indeed it is not explicit whether:

- All the CS.FTL.2 requirements shall be applicable "in block; or
- The CS requirements should apply depending on what is said in the implementing rule; or
- Cherry-picking is allowed

It is feared that the complexity of this proposal may lead to misunderstanding and thus wrong application of the regulation which is contrary to the safety goal.
In order to comment properly the proposed requirements, the stakeholders need to understand the whole proposition. Numerous points merit clarification. The comments made thereafter need to be analyzed in light of FNAM and EBAA France's current understanding of this NPA.

COMMENTS ON AEMS PROPOSALS

#AEMS Introduction

Organization of each AEMS companies cannot be compared since they are adapted to their national specific needs and requirements. To that extend, the French AEMS market is marginal and specific which make its AEMS operations and organization unique. Thus, French AEMS operations and organization are different from HEMS and Air Taxi operations and their respective organizations. In that way, the French regulation proposed specific requirements for aeroplane emergency missions in order to address specific operational needs.

First, since AEMS missions deal with life-threatening emergencies, the AEMS and Air Taxi operations are totally different. In that way, distinguishing AEMS and Air Taxi in 2 separate regulatory texts seems more suitable as no operational comparison can be made between the fundamentals of these different activities. This necessity is strengthened due to the proposed European Air Taxi dispositions based on current European CAT requirements. Indeed, due diverging philosophies, AEMS requirements cannot rely on dispositions linked to CAT requirements.
Second, even if AEMS and HEMS operations share the criteria of emergency missions, the nature of these two operations are totally different. Thus, distinguishing AEMS and HEMS in 2 separate regulatory texts seems more suitable as no operational comparison can be made between the fundamentals of these different operations.

#French AEMS System

Emergency operations are deeply linked with national health, security and safety but also mutual insurances. AEMS French operations are composed with two specific domains:

- Graft and organ transportations
- Other emergency transportations (patients, return of hostage, etc.)

In France, AEMS is mostly operated by 2 major private operators on behalf of mutual insurances. Other French AEMS operators also provide mixed services Air Taxi and emergency transportations. The particular case of grafts and organs transportations is an

operation conducted by AEMS operators on behalf for the French healthcare system. Thus, this kind of operation depends on the organization of the French healthcare system (the permanence and continuity of care services is a public utility defined in the French Health Code & a sovereign prerogative), with groupings of medical equipment and skills.
#French Rostering

The current French AEMS organization is based on a H24 availability in case of emergency events such as abroad medical needs, abroad patients, return of hostages, etc. This **operational readiness with really short response time** is warrantee thanks to the French regulation under the disposals of "astreinte" (French reserve). Such a reserve is limited to **24 hours with a short notification time and is not considered in the duty time**. **Provided no flights/activities are performed meanwhile** on reserve, **several consecutive periods are allowed without any rest period between each** reserve**. Indeed, the French system considers the necessary rest for a pilot is taken during the reserve as the crew is not disturbed and is in a suitable accommodation.** The proposed European regulation on standby ***does not allow*** the French operators to comply with the French work pace and will lead to have operational gap without any crew available (Cf. Annex 5).

Additionally, in France, the most usual rostering is 6 consecutive days ON at home base / 3 days OFF with a need for a H24 operational readiness. Hence, considering the nowadays French reserve system and the proposed current standby, all these new requirements will lead to schedule continuously 3 crews per day in service to cover a H24 availability over 14 days instead of 2 crews within the French current system (Cf. Annex 5). The requested 3 days of rest after 6 days of reserve in French regulation does not appear more fatiguing than the 1 day of rest for 1 day of proposed European standby.

Besides, since AEMS missions deal with life-threatening emergencies, the notification time for the crew is quite short. Usually, in France, the crew is notified 3 hours before the flight (considering 1 hour of preflight) when the crew is under the disposals of "reserve" according to French regulation. Moreover, during the flight, the current times are in average 2 hours to load and 1 hour to unload the EMS payload. The rostering considers these durations in order to schedule some AEMS operations which usually have the first flight planned at 08:00 depending on the type of emergency. However, the flexibility of the rostering is ensured thanks to the commander's discretion allowance of 2 hours or more if an unforeseen event occurs after the last take- off or in case of "Force majeure". These inherent necessary flexibility and reactivity to AEMS operations should persist in the proposed European dispositions in order to address operational needs.

The usual French AEMS missions are specific to the French national needs and insurance services.

One of a typical emergency mission is short-haul flights taking care of two consecutive patients in two different cities. The non-augmented crew (2 pilots) needs a flight duty period of at least 14 hours to perform 4 sectors (Cf. Annex 3). This number of sectors may also be necessary in case of a unique patient transportation with positioning before and after the mission or with picking up the specific medical team at another airport than the home base airport. These kind of sectors shall also count as EMS flights. In that way, the French AEMS activity is based on a 14-hour Flight Duty Period with 2 pilots (non-augmented crew) with 4 sectors and the new EASA proposals should take into account this current organization based on medical and emergency needs.

Long-haul flights are also frequent in AEMS French operations. For example, in 2014, a lot of AEMS long-haul flights were necessary to repatriate Ebola patients from Freetown in Sierra Leone to Europe due to the lack of medical care on site (Cf. Annex 2). The augmented crew (3 pilots) had a 18-hour Flight Duty Period to perform 4 sectors. In that way, the French AEMS activity is based on a 18-hour Flight Duty Period with 3 pilots (augmented crew) with 4 sectors and the new EASA proposals should take into account this current organization based on medical and emergency needs.

Moreover, due to the frequent unforeseen circumstances which are faced in AEMS operations, the commander may often extend the Flight Duty Period in order to finish properly the emergency mission. For example, it happens that the 2 hours planned to load the patient is not sufficient if the patient medical stabilization is difficult (Cf. Annex 4). Indeed, the crew cannot engage the flight back as soon as the patient is not stabilized. In that way, in France, the commander can decide to exceed the Flight Duty Period by 2 hours or more if an unforeseen event occurs after the last take-off or in case of "Force majeure". However, when the mission is finished (meaning the aircraft and the crew are back at their operating base), the crew has a rest period of at least 24 hours. Most often, operators are even used to schedule at least 36 hours. That is why, FNAM and EBAA France insist on the crucial needs of commander's discretion that should be at least as flexible in AEMS than in CAT.

To sum up, in France, in order to answer to all national and insurance needs, the French regulation allows and ensures for AEMS operations :

- A H24 operational readiness thanks to a 24 hours reserve with short notification time
- The possibility to have several consecutive reserves provided no flights/activities are performed meanwhile on reserve
- 2 hours of commander's discretion or more in case of "Force majeure" and if an event occurs after the last take off (ideally including just before)

Thus, the French regulation allows up to 18 hours with 4 sectors with a non-augmented flight crew. The real AEMS operations need within this framework are less stringent but require at least:

- 14-hour Flight Duty Period with a non-augmented crew with 4 sectors
- 18-hour Flight Duty Period with an augmented crew with 4 sectors

These principles are absolutely necessary and must be taken into account in the EASA's proposal, otherwise it would be impossible to make some rescue and emergency missions which is neither politically nor socially acceptable (Cf. Annex 2,3,4 & 5).

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#Comparison Impossible With Other Operations

As said before, French AEMS operations and organization are different from HEMS and Air Taxi operations and their respective organizations. AEMS operations are specific and

unique. Thus, AEMS requirements should not be compared nor be adapted from other requirements specific to other types of operations (Cf. Annex 1). Indeed, AEMS, HEMS and Air Taxi have their own unique philosophy and they cannot be associated since their activities are operationally different.

As said in the RIA, no risk has been shown regarding safety or fatigue with the current regulation. Indeed, the total amount of flight times for pilots is quite low, a lot of time can be spent for rest through reserve with short notification time, and the working pace of 6 days ON / 3 days OFF does not appear more tiring. On the contrary, the working pace of 6 days ON / 3 days OFF is better for the labor organization and is bringing a better quality of life for pilots. Indeed pilots prefer to work 6 days in a row and then be 3 days OFF instead of working 1 day and resting the next day (which appears more tedious and tiring). Thus, the well-functioning current French FTL schemes are enforced for years, no excessive fatigue has been demonstrated and the current national system provides French operators and their crews with satisfaction. Besides, in the EMS safety risk assessment of this NPA, it is written that *"Even with the caveats about under-reporting of fatigue as a causal factor it would appear from the occurrence data that the controls that have been in place to manage fatigue in European EMS have generally been effective. Compared to the social benefits from EMS operations in terms of patient safety and health (see below), the overall safety balance (flight safety v patient safety) is very positive".* FNAM and EBAA France strongly ask this option to be considered by the EASA and the Member States: *"no change in the existing situation; {...} AEMS continue to be regulated under Subpart Q plus national rules".* In any case, current EMS system and organization should not be call into question by the European regulations. In that way, FNAM and EBAA France ask that Option 0 from RIA should be retained and the national safe regulation kept as they are.

Nevertheless, EASA's AEMS proposals are inherited from Air Taxi requirements and some HEMS requirements are common with AEMS requirements (Cf. Annex 1). This regulatory structure implies significant changes of philosophy and practices for AEMS operations.

#AEMS vs AirTaxi

Air Taxi proposed requirements are adapted from the previous FTL CAT aircraft dispositions. Considering the different type of missions, the adapted Air Taxi requirements may not fit to AEMS operations. In that way, distinguishing AEMS from other types of operation in separate regulatory texts seems more suitable as no operational comparison can be made with the AEMS fundamentals of this activity.

Actually, Air Taxi and AEMS missions cannot be compared mostly due to the unpredictable character of the activity. All the more since AEMS operations are based on life threatening missions with defined travel through precise sectors which require short time reactions (notification, load, unload, etc.). Although Air Taxi operations rely on client transportations, with no emergency flights.

In Air Taxi, the transported client provides a precise flight plan but it is not rare that the client does not stick to his plan and reprograms it in the middle of the Flight Duty Period. In that way, a flexibility is needed to ensure the possibility of adding sectors to the Flight Duty Period even if it has begun (Cf. Comments on Split Duty). In AEMS operations, this flexibility can be an asset but the most important need is to ensure a flexible commander's discretion. Indeed, the flight plan does not change as often as for Air Taxi operations, but

it is not rare that the Flight Duty Period needs to be extended due to unforeseen circumstances during an emergency mission (Cf. Annex 4). Once again, distinguishing AEMS and Air Taxi in 2 separate regulatory texts seems more suitable as no operational comparison can be made between the fundamentals of these different activities.

#AEMS vs HEMS

Moreover, as AEMS and HEMS operations are sharing the emergency type of mission, the EASA proposed to share some requirement between these two operations (Cf. Annex 1).

However, HEMS and AEMS missions are different in terms of flight characterization. HEMS non-scheduled and unforeseen missions are generally composed with short flights nearby the HEMS operating base. Thus, several missions can be done during one Flight Duty Period with very short notification time (a few minutes). Although, AEMS missions are based on one long-haul or a couple of short-haul missions, often abroad. Due to the flight times, often only one mission can be performed during a Flight Duty Period. Some missions can be planned in advance (10 hours before flights) but some other are extreme emergency flights and cannot be planned in advance but still usually with one hour notification time.

Additionally, HEMS operations in France depends only on French Healthcare System and the HEMS crews shall be available H12 (or H24) depending on the contract with the local hospital. Besides, AEMS crews shall be available H24 not only on behalf for the national Healthcare service but above all for insurance providers' needs. In that way, the HEMS operations depend above all on the hospital home base needs and activities although AEMS operations depends on the current emergency in France and abroad.

Moreover, the crew organization between AEMS and HEMS is diverging. In France, HEMS crew is composed with only one pilot supported with one Technical Crew Member when AEMS flights are performed with at least 2 pilots per crew, 3 in case of augmented long-haul flights. The HEMS crews are often based at hospital, thus, they have the medical team directly on site, despite for AEMS operations, it is not rare to pick up the medical team at another airport than the home base airport. That is why, it is not possible to provide identical requirements for HEMS and AEMS operations since the operational needs are completely different. This is an additional reason for distinguishing AEMS and HEMS in 2 separate regulatory texts seems more suitable as no operational comparison can be made between the fundamentals of these different activities.

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#Conclusion

The impact of the implementation of European FTL regulation for AEMS in France goes beyond the French operators. Thus, it would be appreciated if the RIA addresses more on the social & economic impacts as well as impacts on:

- Graft and organ transportations linked to the national Health care system
- Other emergency transportations linked to insurance needs and organization

Since the AEMS is a really specific and independent operation, the EASA's proposals is blocking on several points. Some points are blocking because they are deeply linked to

HEMS dispositions and some others, because they are inherited from Air Taxi requirements:

- The definition of the EMS payload shall ensure to include the aircraft as an EMS payload (the aircraft is equipped for AEMS missions)
- There is no possibility to ensure the activity in case of "Force Majeure"
- The 10% allowance between scheduled and actual FDP is not appropriate with the AEMS operations and needs to be suppressed
- The limitations of Flight Duty Period (extended and not extended) are not adapted to the AEMS operational needs and shall be extended
- The acclimatization philosophy does not fit to the operational reality for AEMS operations and the limitations need to be extended
- The commander's discretion shall be extended for 2 reasons:

1. The limitation is too restrictive considering the AEMS emergency missions
2. The limitation is even more stringent than for Air Taxi and CAT operations

- Several standby cannot be consecutive while it is necessary that crews ensure a continuous operational readiness
- The standby definition must be clarified so that it can allow a range up to 24-hour operational readiness

Thus, the FNAM and EBAA France agree with option 0 described in the RIA. This option whose choice relies on the Member States (MS) or the EASA's decision, corresponds to the option 0 described in the RIA : no policy change. Safety impact, social impact and economic impact are neutral or having a little impact. The option 0 seems the proper action since a one size fits all model is not applicable to the industry. The well-functioning current national FTL schemes are enforced for years, no excessive fatigue has been demonstrated and more specifically, the current national system provides French operators and their crews with satisfaction. As a consequence, any changes in the FTL schemes in AEMS may take benefit from considering the experience of the existing system and organization instead of creating from scratch a brand new system but inadequate and inefficient.

If the Option 0 is not retained by EASA, FNAM and EBAA France ask for this proposed NPA to be amended and reviewed as stated in the following comments distinguishing AEMS, HEMS and Air Taxi. Indeed, a completely new proposal, distinguishing the AEMS from HEMS and Air Taxi is needed as no operational comparison can be made between the fundamentals of these different activities. FNAM and EBAA France insist above all in protecting the amplitude for the Flight Duty Period and the long reserve with short notification time which are necessary to allow emergency missions. In that way, FNAM and EBAA France ask to have new European dispositions that would allow at least:

- 18 hours maximum FDP with 4 sectors with 3 pilots (augmented crew)(Cf. Annex 2)
- 14 hours maximum FDP with 4 sectors with 2 pilots (non-augmented crew)(Cf. Annex 3)
- A standby definition allowing up to 24 hours of operational readiness (Cf. Annex 5)
- The possibility to have several consecutive standby provided no flights/activities are performed meanwhile on standby (Cf. Annex 5)

- 2h of commander's discretion with non-augmented crew & 3h with augmented crew, which are the same requirements than for CAT operations (Cf. Annex 4)

FNAM and EBAA France ask for this option to be considered in the Comment Response Document (CRD) with the elaboration of a sound RIA. These elements of our proposals for NPA 2017-17 for AEMS form an integrated whole: there are each and all interrelated and interdependent. Moreover, FNAM and EBAA France would be happy to offer its expertise to discuss and study this subject with EASA policy officers. Besides, for clarity reasons, this would imply to separate, regarding the FTL scope, the AEMS from CAT, Air Taxi and HEMS operations. Thus, FNAM and EBAA France hereby:

- Proposes dispositions limited to AEMS
- Agrees and adopts for Air Taxi, the EBAA Europe comments published in CRD

However, since the Air Taxi and AEMS requirements are deeply linked (Cf. Annex 1), the Air Taxi dispositions need to be adapted taking into account the AEMS proposals. Thus, FNAM and EBAA France propose changes for AEMS requirements in this Comment Respond Document which have implied to also comment marginally Air Taxi proposals.

response

1. The statement of FNAM and the French EBAA that AEMS operators are not familiar with the EASA FTL schemes and philosophy is not accepted.

Except for the FDP duration that is subject to national rules, AEMS and single-pilot operations with aeroplanes are covered by Subpart Q of Annex III to Council Regulation (EEC) No 3922/91 since 2008. There are no major differences between the FTL schemes and philosophy of Subpart Q and those proposed by the NPA.

2. The statement that the structure and the references within the NPA lead to confusion regarding the applicability of the certification specifications for AEMS is not accepted.

As explained in the NPA, the proposed requirements need to be read together with other requirements of Regulation (EU) No 965/2012 which would be applicable to AEMS operators as well. Point ORO.FTL.125 requires every AEMS operator to customise its FTL scheme on the basis of the applicable implementing rules and CS.FTL.2 requirements considering the type of operation it conducts.

Where the implementing rule allows for flexibility, that flexibility is further 'shaped' and controlled with the help of CSs. This concept also exists in scheduled and charter operations, and should not be confused with 'cherry picking'. The flexibility, as embedded in the implementing rules, allows for the continuation of safe practices that existed before the adoption of Regulation (EU) No 965/2012 and for the accommodation of new safe practices, based on clear principles.

As usual, EASA will organise workshops in order to familiarise operators and their personnel with the new EU rules during the transition period following their adoption.

3. The statements that AEMS companies from different Member States cannot be compared and that AEMS and air taxi operations are totally different are not accepted.

AEMS are international operations by nature. This makes the principles of organisation and management of AEMS similar across different countries. Hence, AEMS operations in France do not differ fundamentally from AEMS operations in Germany or Switzerland. The proposed FTL rules anyway account for specific operational needs as is the case with other types of operations.

AEMS and air taxi operations indeed present operational specificities which distinguish them from other types of operations and, where necessary, the proposed rules reflect that distinction. However, both operations are on-demand operations where periods of intense and long hours of work alternate with periods of inactivity, and where fatigue originates from the same sources and builds due to same subjective (physiological) and objective factors.

Commonalities between AEMS and air taxi operations have been recognised by all leading experts who participated in the rule drafting. Information about this is provided in the NPA. As you state, some French AEMS operators provide mixed air taxi and AEMS transportation, which would not be possible if the two types of operations were totally different.

4. The statement that the proposed European Union regulation on standby will lead to an operational gap without any crew available, as it does not allow French operators to assign several consecutive 24-hour 'reserve' periods, is accepted. It should be noted, however, that the purpose of the EU rules is to establish safe operational practices, not necessarily using a particular country-specific type of standby/reserve system.

In the field of AEMS, the NPA differentiates between 'reserve' periods with a long notification time > 10 hours (point ORO.FTL.230) and 'other-standby' periods (home or hotel) with a shorter notification time < 10 hours (CS FTL.2.225). It seems that, based on the notification time, the French 'reserve' system is closer to 'other-standby' with notification time < 10 hours.

The French system allows for consecutive 24-hour readiness periods without any rest period between them, if there is no duty assignment and if the pilot has a sleep opportunity and is able to take a rest during the readiness period in a suitable accommodation. This arrangement is acceptable. CS FTL.2.225 has been amended to allow for several successive other-standby periods of a maximum of 24 hours with a minimum of 8-hour sleep opportunity period between them, if taken in suitable accommodation and the crew is not disturbed.

5. The proposal for 4 sectors as regards the basic FDP (2 pilots, non-augmented crew) and extended FDP with 3 pilots (augmented crew) is accepted. The scientific study conducted in 2015 by FRMSc Limited revealed that it is the amount of flying that contributes to fatigue rather than the number of sectors. On the other hand, a 4-sector FDP would allow to accommodate a larger number of existing operation models that include an aircraft positioning flight prior to the mission flights. The proposal for an 18-hour extended maximum FDP with 3 pilots (augmented crew) is not accepted. The FRMSc Limited study demonstrated that long-duty hours contribute the most to an increase in pilot fatigue levels and decrease in their performance.

6. The proposal to make the rule on commander's discretion (CD) at least as flexible in AEMS and air taxi as in CAT is accepted. 7. The proposal by FNAM and EBAA France that RIA Option 0 should be selected so that there would be 'no change in the existing situation' and that 'AEMS continue to be regulated under Subpart Q plus national rules' is not accepted. As explained in the NPA, fatigue in nationally regulated AEMS and air taxi operations has been underreported or not reported at all. In the five areas where, according to Article 8(4) of Council Regulation (EEC) No 3922/91 (Subpart Q), national rules are still being applied, namely 'standby', 'rest to compensate for TZC', 'reduced rest', 'split duty' and 'in-flight rest', scientific principles have likely not been considered. The purpose of this rulemaking is to bring the regulation of fatigue in AEMS and air taxi operations to a level that is commensurate to the most up-to-date scientific principles and best operational practices. A 2006 Subpart Q does not offer such scientific approach for objective reasons. 8. The proposal that the 10 % allowance between scheduled and actual FDP is not appropriate for AEMS operations and needs to be suppressed is accepted. The Opinion will propose a more performance-based text. 9. EMS payload: please see the response to comments #1035 and #1038. 10. Max FDP for crew member in an unknown state of acclimatation: please see the response to comment #130.

Responses with regard to 'nutrition' (comment #1361)

comment	*1361* comment by: *European Cockpit Association* **AMC1 ORO.FTL.240 Nutrition:** Present rule: MEAL OPPORTUNITY *The operations manual should specify the minimum duration of the meal opportunity, when a meal opportunity is provided, in particular when the FDP encompasses the regular meal windows (e.g. if the FDP starts at 11:00 hours and ends at 22:00 hours meal opportunities for two meals should be given).* *It should define the time frames in which a regular meal should be consumed in order not to alter the human needs for nutrition without affecting the crew member's body rhythms.* ECA Proposed wording: An operator shall specify in its operations manual how the crew member's nutrition during FDP is ensured. During the FDP, there shall be the opportunity for a meal and drink in order to avoid any detriment to a crew member's performance, especially when the FDP, exceeds 6 hours, or 5 hours for single pilot operations or when to other reasons eating or drinking during flight operations is imposible. The circadin rhythm and the regular meal times have to be taken into consideration.
response	Partially accepted

The text proposed by ECA is a combination of existing ORO.FTL.240 and AMC1 ORO.FTL.240 text with new elements. Some of the proposed new elements are accepted and will be added to point ORO.FTL.240.

It should be noted that the specification 'especially when the FDP exceeds 6 hours' does not mean that only FDPs longer than 6 hours must offer meal opportunity. The requirement is applicable for any FDP duration.

comment

1413 comment by: *Airlec Air Espace / Paul Tiba*

Established in 1958, Airlec is the oldest French business aviation company. We have majored in the field of air ambulance for about 20 years and are now the specialized French Air Operator in patient transport - about 1,000 patients per year -.
Airlec owns and operates eight aircraft including three transcontinental jets - Hawker 1000B Elixir -.
We have been continuously investing to provide high-end services to our partners and offer them experienced French specialized medical teams as well as top-of-the-art medical equipments. Moreover, we provide a real bed-to-bed service.
Our approach also goes beyond the economical dimension through the development of hardware and protocol for infectious patients, such as Ebola virus.

AIRLEC thanks the EASA for the will of harmonizing the applicable dispositions in terms of flight time limitations for AEMS operations throughout Europe in order to warrantee a high level of safety.

Due to the complexity of the proposed regulation, at the time being, AIRLEC fears that each and every stakeholder will interpret this NPA according to its understanding which might act as a hindrance to the level playing field contrary to the initial goal. Indeed, AEMS operators are not familiar with the EASA FTL schemes and philosophy. Proposed AEMS FTL rules are derivated from current CAT.A FTL rules, with a common basis. Moreover, AEMS operators are still now subject to national FTL rules, which are for France far different from EASA's proposals.
It is feared that the complexity of this proposal may lead to misunderstanding and thus wrong application of the regulation which is contrary to the safety goal.

— COMMENTS ON AEMS PROPOSALS —AEMS Introduction

Organization of each AEMS companies cannot be compared since they are adapted to their national specific needs and requirements. To that extend, the French AEMS market is specific which make its AEMS operations and organization unique. Thus, French AEMS operations and organization are different from HEMS and Air Taxi operations and their respective organizations. In that way, the French regulation proposed specific requirements for aeroplane emergency missions in order to fit to operational needs.

French AEMS System

Emergency operations are deeply linked with national health, security and safety but also mutual insurances. AEMS French operations is composed with two specific domains:

- Graft and organ transportations
- Other emergency transportations (patients, return of hostage, etc.)

In France, AEMS is mostly operated by 2 major private operators - Oyonair & AIRLEC - on behalf of mutual insurances. Other French AEMS operators provide mixed services Air Taxi and emergency transportations. The particular case of grafts and organs transportations is an operation conducted by AEMS operators on behalf for the French healthcare system. Thus, this kind of operation depends on the organization of the French healthcare system (the permanence and continuity of care services is a public service defined in the French Health Code & a sovereign prerogative), with groupings of medical equipment and skills.

The current French AEMS organization ensures to have H24 availability in case of emergency events such as abroad medical needs, abroad patients, return of hostages, etc. This operational readiness with really short response time is warrantee thanks to the French regulation under the disposals of "reserve". Such a reserve is limited to 24 hours with a short notification time but several consecutive periods are allowed without any rest period between each reserve provided no flights/activities are performed meanwhile reserve. Indeed, the French system considers the necessary rest for a pilot is taken during the reserve as the crew is not disturbed and is in a suitable accommodation. The proposed European regulation on standby does not allow the French operators to comply with the French work pace and will lead to have operational gap without any crew available.

Additionally, in France, the most usual rostering is 6 days ON at home base / 3 days OFF with a need for a H24 operational readiness. Hence, considering the nowadays French reserve and the proposed current standby, all these new requirements will lead to have continuously 3 crews in service to cover a H24 availability over 14 days instead of 2 crews with French current system (Cf. Annex 2 - Illustration 4). The requested 3 days of rest after 6 days of reserve in French regulation does not appear more tiring than the 1 day of rest for 1 day of proposed European standby.

Besides, since AEMS missions deal with life-threatening emergencies, the notification time for the crew is quite short. Usually, in France, the crew is notified 3 hours before the flight (considering 1 hour of preflight) when the crew is under the disposals of "reserve" according to French regulation. Moreover, during the flight, the current times are in average 2 hours to load and 1 hour to unload the EMS payload. The rostering considers these durations in order to schedule some AEMS operations which usually has the first flight planned at 08:00 depending on the type of emergency. However, the flexibility of the rostering is ensured thanks to the commander's discretion allowance of 2 hours or more if an unforeseen event occurs after the last take- off or in "Force majeure" case. These inherent necessary flexibility and reactivity to AEMS operations should persist in the proposed European dispositions in order to fit with the operational needs.

The usual French AEMS missions are specific to the French national needs and insurance services.

One of a typical emergency mission is short-haul flights taking care of two consecutive patients in two different cities. The non- augmented crew (2 pilots) needs a flight duty period of at least 14 hours to perform 4 sectors. This number of sectors may also be

necessary in case of a unique patient transportation with positioning before and after the mission or with picking up the specific medical team at another airport than the home base airport. These kind of sectors shall also count as EMS flights. In that way, the French AEMS activity is based on a 14-hour Flight Duty Period with 2 pilots (non- augmented crew) with 4 sectors and the new EASA proposals should take into account this current organization based on medical and emergency needs.

Long-haul flights are also frequent in AEMS French operations. For example, in 2014, a lot of AEMS long-haul flights were necessary to repatriate Ebola patients from Freetown in Sierra Leone to Europe due to the lack of medical care on site. The augmented crew (3 pilots) had a 18-hour Flight Duty Period to perform 4 sectors. In that way, the French AEMS activity is based on a 18-hour Flight Duty Period with 3 pilots (augmented crew) with 4 sectors and the new EASA proposals should take into account this current organization based on medical and emergency needs.

Moreover, due to the frequent unforeseen circumstances which are faced in AEMS operations, the commander may often extend the Flight Duty Period in order to finish properly the emergency mission. For example, it is not rare that the 2 hours plan to load the patient is not sufficient if the patient medical stabilization is difficult (Cf. Annex 2 – Illustration 3). Indeed, the crew cannot engage the flight back as soon as the patient is not stabilized. In that way, in France, the commander can take the discretion to overpass the Flight Duty Period to 2 hours or more if an unforeseen event occurs after the last take-off or in “Force majeure” case. However, when the mission is finished (meaning the aircraft and its crew are back to their operating base), the crew has a rest period of at least 24 hours and the operators are even used to give at least 36 hours. That is why, AIRLEC insists on the crucial needs of commander’s discretion that should be at least as flexible in AEMS as in CAT.

To sum up, in France, in order to answer to all national and insurance needs, the French regulation allows and ensures for AEMS operations:
• A H24 operational readiness thanks to a 24 hours reserve with short notification time
• The possibility to have several consecutive reserves provided no flights/activities are performed meanwhile reserve • 2 hours of commander’s discretion or more in case of “Force majeure” and if an event occurs after the last take off. Thus, the French regulation allows up to 18 hours with 4 sectors with a non-augmented flight crew. The real AEMS operations need within this framework are less stringent but require at least:
• 14-hour Flight Duty Period with a non-augmented crew with 4 sectors
• 18-hour Flight Duty Period with an augmented crew with 4 sectors
These principles are absolutely necessary and must be taken into account in the EASA proposal, else it would be impossible to make some rescue and emergency missions which is neither politically nor socially acceptable.

#Conclusion

The impact of the implementation of European FTL regulation for AEMS in France goes beyond the French operators. Thus, it would be appreciated if the RIA addresses more on the social & economic impacts as well as impacts on:

- Graft and organ transportations linked to the national Health care system

- Other emergency transportations linked to insurance needs and organization

Since the AEMS is a really specific and independent operation, the EASA's proposals is blocking on several points. Some points are blocking because they are deeply linked to HEMS dispositions and some others, because they are inherited from Air Taxi requirements:

The definition of the EMS payload shall ensure to include the aircraft as an EMS payload (the aircraft is equipped for AEMS missions)
There is no possibility to ensure the activity in case of "Force Majeure"
The 10% allowance between scheduled and actual FDP is not appropriate with the AEMS operations and needs to be suppressed
The limitations of Flight Duty Period (extended and not extended) are not adapted to the AEMS operational needs and shall be extended
The acclimatization philosophy does not fit to the operational reality for AEMS operations and the limitations need to be extended
The commander's discretion shall be extended for 2 reasons:

- 1) The limitation is too restrictive considering the AEMS emergency missions
- 2) The limitation is even more stringent than for Air Taxi and CAT operations

Several standby cannot be consecutive while it is necessary that crews ensure a continuous operational readiness The standby definition must be clarified so that it can allow a range up to 24-hour operational readiness

Thus, AIRLEC ask the EASA to consider option 0 described in the RIA : no policy change.
Safety impact, social impact and economic impact are neutral or having a little impact. The option 0 seems the proper action since a one size fits all model is not applicable to the industry. The well-functioning current national FTL schemes are enforced since years, no excessive fatigue has been demonstrated and more specifically, the current national system provides French operators and their crews with satisfaction.

As a consequence, any changes in the FTL schemes in AEMS may take benefit from considering the experience of the existing system and organization instead of creating from scratch a brand new system but inadequate and inefficient.

If the Option 0 is not retained by EASA, AIRLEC asks for this proposed NPA to be amended and reviewed as stated in the following comments distinguishing AEMS, HEMS and Air Taxi. Indeed, a completely new proposal, distinguishing the AEMS from HEMS and Air Taxi is needed as no operational comparison can be made between the fundamentals of these different activities. AIRLEC insists above all in protecting the amplitude for the Flight Duty Period and the long reserve with short notification time which are necessary to allow emergency missions. In that way, AIRLEC asks to have new European dispositions that would allow at least:

- 18 hours maximum FDP with 4 sectors with 3 pilots (augmented crew)
- 14-15 hours maximum FDP with 4 sectors with 2 pilots (non-augmented crew)

	• A standby definition allowing up to 24 hours of operational readiness • The possibility to have several consecutive standby provided no flights/activities are performed meanwhile standby • 2h of commander's discretion with non-augmented crew & 3h with augmented crew, which are the same requirements than for CAT operations
response	Please see the response to comment # 1004.

comment	*1427* comment by: *European Cockpit Association* ECA appreciates that several of its inputs to earlier consultations and deliberations in the RMG are being – at least partially – reflected in this NPA. In particular, the provisions on cumulative flight times and on positioning are important to be kept as proposed and should ideally be further strengthened. At the same time, several of the proposed provisions raise serious safety concerns and should be amended. While these provisions may suit the commercially-driven flexibility and productivity wishes of the operators, they would risk creating significant safety hazards without any meaningful mitigation, and without being backed by scientific evidence. ECA therefore calls upon the Agency to review and revise those provisions to ensure safe air taxi operations also in future. Also, ECA expresses concerns about the proposed Art. XX, in case the intention is to have this Article replace the existing Art. 1(3) of Reg. 83/2014. If this is the intention, an urgent targeted stakeholder consultation on this aspect is required.
response	Noted ECA's concern is not justified. The proposed Article XX is to replace Article 9b of Regulation (EU) No 965/2012 which, in its current version, has exhausted its purpose. It is necessary to make the scientific review of FTL an ongoing task based on regular feedback from Member States. EASA actually makes the submission of fatigue-relevant data by the Member States stricter since without such data any regulatory review would be impossible or very expensive.

Title	p. 1

comment	*736* comment by: *European Business Aviation Association (EBAA)*

Attachment #47

EBAA recognises the efforts made by the agency together with all the different industry stakeholders including member state representatives in order to develop an effective FTL scheme for Air Taxi Operations.

Unfortunately, our analysis shows that the current proposal is slightly different from the version agreed during the rulemaking group. In particular, some key concepts - such as the “passive contact” - are now missing in the published version of the NPA.

Moreover, in the way it is presented, the rule can be a challenge for air taxi operators, especially the small ones, which often have more complex operations than normal CAT. As a reminder, simplification was one of the main objectives of this rulemaking process, and as it stands the published NPA do not completely full fill this objective.

Here in attachment the comments from EBAA as the European industry representative of Air Taxi Operators.

response

Not accepted

‘Passive contact’ does not represent a ‘key concept’; it is a method of notification. A key concept in the FTL rules is, for example, the undisturbed sleep opportunity.

The opportunity for a ‘passive contact’ shall be included in the Opinion. The operator’s IFTSS should provide for a method of notification that, as far as possible, avoids disruption of the crew member’s prior sleep opportunity.

The way NPA text is presented follows the logic of legal proposals, because it is precisely a legal text, not a procedure in the operations manual.

As usual, EASA will organise workshops in order to familiarise operators and their personnel with the new EU rules during the transition period following their adoption.

comment

1439 comment by: *sprintAir*

Dear Sirs, According to the new NPA 2017-17 objective is to develop new rules for i.e. (ATXO) in terms of FTL.
We want to ask You if there is possibility of change in terms of the point (6) Article 2 (definitions) of the Commision Regulation (EU) 965/2012, ’air taxi operation' means, for the purpose of flight time and duty time limitations, a nonscheduled on demand commercial air transport operation with an aeroplane with a maximum operational passenger seating configuration ('MOPSC') of 19 or less.
As a Charter cargo and charter PAX (MOPSC of 34) passenger configuration air operator, our type of operation is very similar to the ATXO. Crew duty time have a significant impact to our efficiency. Many flights are booked at the last moment. Each operation consist of positioning, commercial and depositioning leg.
Kind Regards,

response	Not accepted Charter operations with aeroplanes with a MOPSC of more than 19 are operations conducted under CS FTL.1. Your approved IFTSS must reflect the specificities of your on-demand cargo and passenger flights.

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comment	*404* comment by: *ANWB MAA* FTL Netherlands is based on scientific research We didn't see the prove of any reap efficiency gains
response	Noted This proposal is also based on scientific research.

comment	*612* comment by: *Transport Malta–- Civil Aviation Directorate* Rules and regulations for AEMS operations are not described in EU 965/2012, as such implementing FTL schemes for an 'unregulated' operations may require also EU 965/2012 recognition.
response	Not accepted AEMS operations have been subject to Regulation (EU) No 965/2012 since 2012.

comment	*793* comment by: *Babcock Mission Critical Services Limited* Attachment #48

	The proposed content of NPA 2017-17 is well-intentioned, and it is desirable that aviation safety is enhanced and maintained. However, EASA has seriously failed to consider absolutely critical differences between what may be considered appropriate for FTLs and other rules in large-scale, scheduled commercial transport, and what serves safety and service in activiites such as HEMS and ATXO (incorporating AEMS). One key example differences include the fact that EMS operations often spend very large proportions of time in standby, because their service is to be available should they be needed. From the data we have reviewed it is not uncommon for less than one EMS flight to occur in an entire standby period (which could be 12h, or even 13h or 14h in duration in some locations in some seasons). Babcock has commissioned Integrated Safety Support and Interdynamics to advise on Fatigue Risk Management Systems design. The organisation has reviewed the proposals within this NPA and provided the attached report: "Mission Critical Services Notice Of Proposed Amendment 2017-17 Response Considerations", Fletcher et al, Integrated Safety Support, 28 February 2018)
response	The statement that 'EASA has seriously failed to consider absolutely critical differences between what may be considered appropriate for FTLs and other rules in large-scale, scheduled commercial transport, and what serves safety and service in activities such as HEMS and ATXO (incorporating AEMS)' is not accepted. Many commentators have criticised NPA 2017-17 for not addressing the specificities of the different type of operations but seem to forget the fact that ATXO and AEMS operations have so far been governed by the 2006 Subpart Q and old national rules (HEMS: only national rules), which, as rightfully admitted by Babcock Ltd, 'have not been tailored to consider EMS or similar operations'. In fact, the 2006 Subpart Q and old national rules do not match contemporary practice and scientific knowledge of human performance limitations and of sleep. They did not properly address transient and cumulative fatigue, operator and individual responsibilities, the impact of duty times on circadian rhythm, and crossing of multiple time zones, etc. EASA developed FTL rules for air taxi, AEMS and HEMS operations with the understanding that each of these activities has specificities that need to be addressed separately. For example, the logic behind the rule on standby is the following: point ORO.FTL.225 establishes common principles and a legal opportunity for flexibility according to the type of operation; CS FTL.1.225 specifies standby in CAT scheduled and charter operations; CS FTL.2.225 specifies standby in air taxi and AEMS operations; CS FTL.3.225 specifies standby and duties at the HEMS operating base. EASA has been working together with industry experts who have provided valuable input for the development of those CSs depending on the type of operation. EASA has also commissioned a number of studies for the collection of data. EASA has found the data obtained to be objective and reliable, and has, therefore, no reason to look for other data sources. The statements made in Attachment No 48 are noted.

	For the comments related to HEMS, please see the response to comment # 54.

comment	*794* comment by: *Yorkshire Air Ambulance* Only "expected to improve safety"? There should really be certainty to improve safety if mandating change.
response	EASA is expecting that proposed measures will lead to safety improvements. If there was no certainty about it, the Agency would not have proposed new requirements.

comment	*795* comment by: *Babcock Mission Critical Services Limited* Babcock has a large amount of data that provides strong operational and scientific evidence that the constraints proposed in the NPA are both unnessary and unlikely to improve safety. In fact, there are reasons why safety could be measurably compromised should EASA continue down the current path. For example, EASA claims that "Operators…will reap efficiency gains and benefit from a level playing field and improved safety" but all modelling we have done indicates that contracts will not at all be commercially viable if the new rules are implemented because many more pilots would be needed to cover the same contract. This leaves only three options: (1) those contracting in EMS services will pay more for the same service, which is very unlikely in many cases where funds would not be available (2) those contracting in EMS services will use their existing budget to allow for a reduced service to their regions and communities, which is more likely given funds for such services are very often already highly constrained, and (3) a proportion of operators will continue to operate as per their contracts but outside of the new legal requirements, in order that they can commercially survive (it is not possible to know how wide-spread such an approach might be).
response	Noted

comment	*796* comment by: *Yorkshire Air Ambulance* Scientific principles have been used since 1975 in the UK, as the preface to CAP371 - Avoidance of Fatigue in Aircrew - makes clear.
response	It is unclear what the comment is about.

comment	*797* comment by: *Babcock Mission Critical Services Limited*

It is impossible to see how EASA's claim that efficiency will be improved when many more staff will be needed, especially when keeping pilots' recency up at remote locations is already sometimes a struggle. On the modelled basis that more pilots would be needed, there is also a factor of where these additional pilots will come from and where all of the (sometimes very rare) simulator training slots will be created from. From all of the data we have seen and modelled, operators will have reduced efficiencies (associated with higher costs), and there is no evidence that safety will be improved and indeed safety might be measurably worsened.

Safety could be worse, for example, because pilots will get to fly significantly less, and in many cases (especially in remote locations, at night and in Winter) recency is already a risk. Safety could also be worsened because, on the basis that many new pilot will be needed, there might need to be a lot of inexperienced pilots hired to fill gaps. However, retaining good pilots might be very difficult in EMS given that flying hours are low, and such positions are often very unattractive to younger pilots needing to build hours.

response Noted

comment *798* comment by: *Yorkshire Air Ambulance*

Are the "efficiency gains" envisaged here either quantifiable or even probable? The NPA fails to demonstrate either.

response It is unclear what the comment is about.

comment *799* comment by: *Babcock Mission Critical Services Limited*

EASA also claims that the proposed changes are good for "Aircrew members who will benefit from improved harmonisation, safety and efficiency". However, it is easy to see how crew would dislike the changes a great deal. For example, EMS pilots often commute to a base that is not near their home, due to the seasonal nature of the base and/or the remoteness of the region their EMS are serving. As such, pilots currently only have to commute once per week as they do one week of work (mostly standby) followed by a week or more off of all duty. The proposed changes would mean maximum cycles times would be cut dramatically based on maximum duty times (which count time on standby as duty). This means they are commuting much more often, and there is large amounts of evidence that such commuting, especially on the roads, is much worse for their individual safety than being in standby mode at their base for longer. Also, the more frequent commuting will cost pilots more, which is much less efficient for their personal finances. They may also have their skills eroded if there is a need to hire more pilots for the same amount of work, or if service coverages get cut so that contract budgets remain intact.

response Noted

Applicability and timelines p. 1

comment	*1401* comment by: *Dr Adam Fletcher* I understand the value in having a standardised set of rules within this segment of the industry. However, there are huge differences in EMS/ATXO and the scheduled commercial airlines that the majority of current rules (flowing from the relevant ICAO SARPs) are based on. For example, standby is used relatively rarely in airlines, and crew often get called to duty from standby. However, in EMS (and to a lesser degree ATXO) standby can make up large proportions of work time. Standby in many contexts (e.g. overnight in a 24-hour EMS base) is often valuable for recovery and preparation, since flying is rare. So, standby cannot be counted as full duty in all circumstances, or allowances for signficant extensions can be made, otherwise, the services that exist will not be able to continue to exist. In many EU jurisdictions now, the community only has EMS coverage because flying rules are flexible when the proportion of work time spent flying is low (which means standby is high). In terms of the timeline, there is a critical need to pause for a period of time. One reasons is that there are a major national reviews underway in multiple relevant jurisdictions, including Canada, Australia and New Zealand. For example, all Australian FLT-related regulations and supporting documents will have undergone a substantial review, on behalf of the Board of Directors of the Australian Civil Aviation Safety Authority (CASA) with a final report due to the Board before March 9th, 2018. I know this because one of my team members and I are 40% of the independent review team. The NPA content is not fit-for-purpose, and requires a major rethink before it costs safety, community service standards, and productivity.
response	Noted It is well understood that standby cannot be counted as full duty in all circumstances. Please, refer to CS FTL.2.225 where the concept of differential calculation of standby for the purpose of cumulative duty is laid down. EASA has always drawn upon international experience as far as it is relevant to the unique nature of the European operating environment. As to the review of fatigue rules conducted by CASA, one of the recommendations in their final report points into the opposite direction to that suggested by the commenter — ‘that CASA adopts prescriptive FDP limits that are more closely aligned with international averages for similar types of operation’.

1. About this NPA p. 3-4

2.1. Why we need to change the rules issue/rationale p. 5-6

comment	*50* comment by: *Wolfgang Zellhuber* In general I am very pleased to see the EASA efforts of harmonisation of FTL in ATXO. Unfortunately I am missing one very important item throughout the entire NPA 2017-17: In commercial air transport by aeroplane for air taxi operations and single-pilot operations many people work as freelance or self-employed personnel (flight crew/cabin crew/a.s.o.). Could you please clarify in GMs and check every point of the entire NPA2017-17 how this NPA could work for freelance/self-employed personnel and how the different clients of the freelance pilots (here: most time competitive operators) should handle and classify their freelance personnel? Please consider: To avoid false self-employment a freelance personnel needs at least several different clients (here: operator) which may be at different home bases, even at different countries and/or time zones. Thank you.
response	The constructiveness of the comment is appreciated. With regard to freelance or self-employed crew members, please refer to the following points of Regulation (EU) No 965/2012: ORO.FC.100(e)(2) and ORO.CC(b)(2); ORO.FTL.115; ORO.FTL.245; and CAT.GEN.MPA.100(b)(4) and (5).

Responses with regard to 'home base' (comment #127)

comment	*127* comment by: *VistaJet* Section 2.1 describes accurately that there are significant differences between Scheduled CAT and ATXO operations, hence why subpart Q is a poor fit. It was a one size fits all solution. However the inclusion of ATXO into ORO.FTL with CS.FTL.2 being based squarely on scheduled CAT (CS.FTL.2), means that ATXO operations are again being forced into a FTL scheme that does not fit. The fact that the concept of home base, and adjusting rest at "home base" is the cornerstone of this NPA, proves that the very foundation on which this regulation is built, is not relevant to ATXO. This FTL scheme is written for a Schedueld/Charter airline that departs home base, and then on a relatively short turn-around, returns to home base. The concept of a perpetual roster with extended rest periods at home base is a concept that very few ATXO operators use. Most ATXO operators apply a fixed rotation pattern during which crew members

	operate in a flexible and dynamic environment, after which they return home for a consolidated "off" block which is a hard reset addressing any cumulative fatigue built up during the rotation. I will supply comments to each section where examples of this mean that this NPA was poorly constructed and based on a foundation which is not rellevant to ATXO or AEMS.
response	The comment related to 'home base' is partially accepted. 'Home base' is defined in point ORO.FTL.105(14) as 'the location, assigned by the operator to the crew member, from where the crew member normally starts and ends a duty period or a series of duty periods and where, under normal circumstances, the operator is not responsible for the accommodation of the crew member concerned'. 'Home base' for scheduled operations is built around the concept of a *single airport location* to mitigate potential fatigue issues with aircrew having to commute to different airports within the same airport system, sometimes at a significantly long distance from their private place of residence. In air taxi and AEMS operations, the duty scheduling structure consisting of long block-off times between duty blocks is considered a mitigating factor; hence, the airport location should not necessarily be a single one. Therefore, in CS FTL.2.200(a), the term 'single' is removed. The operator assigns a home base to each crew member (point ORO.FTL.200). This is relevant, for example, for the establishment of the acclimatisation status, calculation of positioning duties, and determination of compensatory rest. Home base must not be confused with crew member's permanent residence. The operator has no control over the place a crew member has chosen to set up their residence. Commuting or travelling from the private place of residence to the assigned home base and vice versa, as opposed to positioning, does not count for duty. The assigned home base is the place where aircrew start/finish the essential part of their duties vis-à-vis their employer. To determine home base, it may be necessary to establish: (i) the place from which the employee carries out their transport-related tasks; (ii) the place where they return after the completion of those tasks; and (iii) the place where their work tools (e.g. aircraft) are to be found. For on-demand operations, such as air taxi and AEMS, this may be difficult to establish as, for example, the aircraft location may change every time the crew member receives an assignment. The qualifier 'high degree of permanence', which applies to scheduled and charter operations, may be a business limiting factor for air taxi and AEMS operations. This is the reason why it has been removed from subparagraph (a). Nonetheless, the condition 'from where the crew member normally starts and ends a duty period' in the definition of 'home base' is valid for air taxi and AEMS operations.

	Today, some air taxi operators use the concept of 'gateway'. The term 'gateway airport' does not appear in Subpart FTL and, if used instead of 'home base', is a non-compliance with the requirements on home base. The operator may use 'gateway airport' in addition to home base, for example, as a 'funnel' through which positioning flights need to go, but the operator must clarify what relationship exists between 'home base' and 'gateway' in its IFTSS. The home base and a gateway may be the same airport location but may differ. In other words, the assignment of home base is compulsory, whilst the gateway is an optional operational solution. Considering that in air taxi and AEMS operations last-minute changes are typical. If the recurrent extended recovery rest period is increased when the home base changes, as currently required for airlines, such measure in air taxi and AEMS operations would most likely be an unnecessary burden. Therefore, subparagraph (b) has been removed, having in mind that those operations have a specific duty scheduling structure as mentioned above. Also, the concept of 'home base' under Subpart Q and Subpart FTL is used for the purpose of determining the applicable legislation in terms of social security rights and obligations for flight crew and cabin crew members as per Regulation (EC) No 883/2004 on coordination of social security systems.
comment	*308* comment by: *European Helicopter Association (EHA)* NORSK LUFTAMBULANSE AS (Norway): "Single-pilot operations by aeroplane (SPLO) relate to domestic or intra-European flights, generally shorter than multi-pilot CAT operations, but more challenging than multi-pilot operations. Single pilots often operate under high workload conditions, since the pilot assumes multiple roles. This can make single pilots more vulnerable to fatigue." **Comment:** This is not necessarily true for helicopter operation. A well-functioning multi-crew concept comprising a commander and a HEMS technical crew member does not provide a substantially higher workload than for multi-pilot operations. In fact, in many multi-pilot operations the commander will constantly be training or coaching the co-pilot for a command upgrade. That leads to a higher workload than for a professional HEMS technical crew member who has no possibility or ambition to be a pilot.
response	Not accepted Single pilot operations with aeroplanes significantly differ from a typical HEMS crew set-up consisting of one pilot and one technical crew member in that the single pilot is not being assisted by another trained member of the crew. The HEMS technical crew's role is to assist the pilot in many aspects. The presence of a HEMS technical crew is also a mitigation measure against pilot fatigue.

comment	*357* comment by: *European Helicopter Association (EHA)* BHA (UK) Page 6 - Para 1 "Single-pilot operations by aeroplane (SPLO) relate to domestic or intra-European flights, generally shorter than multi-pilot CAT operations, but more challenging than multi-pilot operations. Single pilots often operate under high workload conditions, since the pilot assumes multiple roles. This can make single pilots more vulnerable to fatigue". Comment: Possibly in a SP F/W environment, not so true in a SP + TCM environment.
response	Please see the response to comment #308.

comment	*583* comment by: *NOLAS* “Single-pilot operations by aeroplane (SPLO) relate to domestic or intra-European flights, generally shorter than multi-pilot CAT operations, but more challenging than multi-pilot operations. Single pilots often operate under high workload conditions, since the pilot assumes multiple roles. This can make single pilots more vulnerable to fatigue.” **Comment:** This is not necessarily true for helicopter operation. A well-functioning multi-crew concept comprising a commander and a HEMS technical crew member does not provide a substantially higher workload than for multi-pilot operations. In fact, in many multi-pilot operations the commander will constantly be training or coaching the co-pilot for a command upgrade. That leads to a higher workload than for a professional HEMS technical crew member who has no possibility or ambition to be a pilot.
response	Please see the response to comment #308.

comment	*800* comment by: *Yorkshire Air Ambulance* It is possible that fatigue may be greater in a purely Single Pilot F/W cockpit (vs. two pilots), but not necessarily true in a Single Pilot + Technical Crew Member aircraft. The NPA makes a valid assertion that fatigue for TCMs should be managed and controlled by an FTL, but then fails to provide any credit for HEMS pilots who operate within this hybrid crewing structure.
response	Please see the response to comment #308.

comment	*803* comment by: *Yorkshire Air Ambulance* "Best Practice," is a pejorative term and probably shouldn't be used. Who has sufficient authority to decide what "best practice" is for everyone? Suggest "good practice" as being more acceptable.
response	Accepted

comment	*1152* comment by: *Danish Aviation Association* DAA agrees with the intent to seperate Small and Medium Enterprises (SME) as ATXO operators from CAT Airlines. However, there seems still to be conditions for which the CAT airlines have not been fully modified to SME.
response	Noted

comment	*1453* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)* First paragraph on page 6 It is claimed in the second sentence that single pilot operation is more challenging than multi pilot operation. For HEMS with a HEMS Crew Member, a well-functioning SP+HCM team may very well result in a working environment for the pilot as good as an actual multi crew. The HCM functions like a pilot monitoring and relieves the workload significantly.
response	Please see the response to comment #308.

2.2. What we want to achieve - objectives p. 6

comment	*40* comment by: *ST BARTH COMMUTER* It is a pity that despite being listed in the “Analysis Impacts for Air Taxi and Single Pilot Operations” (Attachment III of this NPA - page 9) as being a company performing single-pilot on demand and scheduled operations, our company was not specifically questioned about the consequences of such proposal in the development of this NPA.

	Unlike stated in that same document (page 10), the increase of crew cost is not 10 to 30%, in our case it will be 100%. Our main activity requires multiple (more than 10) short sector (15min) that have to be performed during daylight since our airport close with sunset, and we also operate AEMS. Reducing the maximum FDP to 8H will force us to use 2 pilots to do the exact same schedule done by 1 today. With the sunset limit, there is no way to do more flights and generate more revenue with this second pilot, so our crew cost will double with no increase in revenue. In our area of operation, the Caribbean, we are competing with airlines from independent islands and US companies with far less restricting rules. Therefore, if this NPA is adopted "as is" you are not creating a "Level playing field" you are simply putting our operations to an end.
response	Partially accepted Please, refer to the response to comment #887.

comment	*801* comment by: *Yorkshire Air Ambulance* By scientific knowledge, does this refer to the study by FRMSc, which only looked at a very small sample (<20) of air taxi pilots, using their own commercial algorithms such at SAFE? If so, then it's not particularly balanced.
response	It is not clear which study you are referring to.

comment	*1418* comment by: *Svensk Luftambulans* Isn't there a best practice that has been used in the Nordic countries that should be considered?
response	Best practices used in the Nordic countries have also been considered.

2.3. How we want to achieve it - overview of the proposals p. 6-7

3. Proposed amendments and rationale in detail p. 8

comment

1478 comment by: *Finnish Transport Safety Agency*

Article YY

Article 8 does not take into account training. It should be clarified that national rules apply to training given in ATOs and DTOs.

response

Not accepted

Article 8 of Regulation (EU) No 965/2012 already clarifies that non-commercial operations shall comply with the applicable flight time limitations established by the national legislation of the Member State in which the operator has its principal place of business. Training flights in ATOs and DTOs are considered non-commercial operations.

Draft cover regulation

3.1. Draft cover regulation p. 8-9

Comment #104 on applicability, transition (UK CAA)

comment

104 comment by: *UK CAA*

Page No: 8

Paragraph No: 3.1 Draft Cover Regulation (Draft EASA Opinion), Article XX

Comment: The intent of the monitoring and evaluation of the regulations is supported. This list is management in any type of operation.

There appears to be a grammatical error in paragraph two of the text as it refers to "**once a** year after" when, it would appear, that the intent was "**one** year after" in terms of submitting the data. However, collecting meaningful data in line with the required list within one year of the regulations becoming applicable would generate a high workload for NAA's. Embedding the change to the regulations and conducting oversight will be the priority for the NAA's. We propose that the "one year" requirement for the provision of data is extended to two years to ensure there is sufficient time to establish the methods and process necessary to collect the data in a standardised manner.

EASA has proposed a date of 2025 for the publication of the first report on this data. It is unclear on what basis this date is derived. EASA are requested to provide clarity on this and ensure that it is appropriate to the finally agreed applicability date of the regulations.

Note: The UK CAA has raised a linked comment to this one as referenced on page 68 with regard to the monitoring and evaluation of the regulations. We are requesting support for the NAA's from EASA to ensure the consistency of the data that is provided for the report.

Justification: Sufficient time is provided to NAA's to develop their processes to collect the required data in a useful and standardised manner.

Proposed Text: Propose the text is amended to state that the review data is submitted not less than **two** years after the date of application.

In addition, EASA are requested to clarify the basis behind the 2025 date of the first report on the results of the review once the applicability date for the regulation has been finalised.

response

Not accepted

The requirement in paragraph 2 of Article XX that the data collected by the Member States shall be submitted to EASA at least **once a year** is kept as it is not expected to be overly burdensome.

EASA does not expect NAAs to collect the data by themselves. NAAs will typically request operators to provide their data in a standardised format, which can then be aggregated and submitted to EASA.

As usual, there will be as a minimum a 1-year transition period after the adoption of the regulation, meaning that Member States will have sufficient time to establish the methods and processes necessary to collect data in a standardised manner.

The target date of 2025 was established with the assumption that the regulation would apply from 2020 after adoption in 2018. This is no longer the case.

When Regulation (EU) No 83/2014 (amending Regulation (EU) No 965/2012 laying down technical requirements and administrative procedures related to air operations) was adopted, some of its elements were not entirely based on scientific evidence or the scientific evidence was weak. Therefore, the regulator requested the inclusion of a binding clause to conduct a scientific study.

Considering the costs and amount of effort entailed by the two scientific reviews that have already taken place, EASA has reassessed the need for a future review in a 5-year interval. Data submitted by the MSs shall help determine when and to what extent the next scientific review is to take place.

comment

310 comment by: *European Helicopter Association (EHA)*

NORSK LUFTAMBULANSE AS (Norway):

"The Agency shall conduct a continuous review of the effectiveness of the provisions concerning flight and duty time limitations and rest requirements contained in Annex III to Regulation (EU) No 965/2012.

That review shall involve scientific expertise, where relevant, and be based, as a minimum, on the following operational data collected by the Member States and submitted to the Agency not less than once a year after the date of application of this Regulation:"

Comment: Does all the Authorities have the capability for continuous review and to collect this data?

"Excluded are emergency medical service operations with helicopters conducted exclusively in an operating area, where alternative ground emergency medical services are not possible or are ineffective, as defined by the Member State."

omment: This is highly relevant for operation serving remote areas, where also the mission rate is low. However, here it is important to emphasize that it is not always the location of the HEMS operating base that is relevant, but the actual area served. For example, a helicopter can be based in a city, while serving exclusively remote areas. Also, the wording "ineffective" should perhaps be reviewed as most medical personnel or operators could argue that the majority of road transport could be "ineffective" as compared to helicopter transport.

response

Please, see the response to comment #104.

Please, see the response to comment #54.

comment

359 comment by: *European Helicopter Association (EHA)*

BHA (UK)

"That review shall involve scientific expertise, where relevant, and be based, as a minimum, on the following operational data collected by the Member States and submitted to the Agency not less than once a year after the date of application of this Regulation:"

Comment:
How does EASA envisage national authorities collecting such data?

"Article YY
"Excluded are emergency medical service operations with helicopters conducted exclusively in an operating area, where alternative ground emergency medical services are not possible or are ineffective, as defined by the Member State".

Comment:
Any operator could reasonably argue that all ground EMS provision is "ineffective" in comparison to the skill and delivery speeds of air ambulance staff, thus none of the FTL is applicable.

response	Please, see the response to comment #104. Please, see the response to comment #54.

comment	*585* comment by: *NOLAS* "The Agency shall conduct a continuous review of the effectiveness of the provisions concerning flight and duty time limitations and rest requirements contained in Annex III to Regulation (EU) No 965/2012. That review shall involve scientific expertise, where relevant, and be based, as a minimum, on the following operational data collected by the Member States and submitted to the Agency not less than once a year after the date of application of this Regulation:" **Comment:** Does all the Authorities have the capability for continuous review and to collect this data?
response	Please, see the response to comment #104.

comment	*805* comment by: *Yorkshire Air Ambulance* How does EASA envisage national authorities collecting such data? This will be difficult to achieve for all MS with the resources available.
response	Please, see the response to comment #104.

comment	*806* comment by: *Yorkshire Air Ambulance* Any operator could reasonably argue that all ground EMS provision is "ineffective" in comparison to the skill and delivery speeds of air ambulance staff, thus none of the FTL is applicable. This paragraph needs to be reworded and/or reconsidered.
response	Noted

comment	*876* comment by: *Stephanie Selim* **Article XX :** DGAC thinks that collecting operational data should be a mission of EASA and not of the Member States.

response	Please, see the response to comment #104.

comment	*877* comment by: *Stephanie Selim* **article YY :** The current article 8 states: "*3. CAT operations with helicopters, CAT operations with balloons and CAT operations with sailplanes **shall comply with national requirements**.* *4. Non-commercial operations, including non-commercial specialised operations, with complex motor powered aeroplanes and helicopters, as well as commercial specialised operations with aeroplanes, helicopters, balloons and sailplanes shall continue to be conducted in accordance with **applicable national flight time limitation legislation** until the related implementing rules are adopted and apply."* The bold text is replaced in this NPA (without being mentioned in edit mode) by « *applicable requirements of the national law of the Member State in which the operator has its principal place of business*. » This new formulation can lead to confusion. Indeed, it should not be interpreted as national law of the MS regarding labour laws but only flight time limitations regarding safety regulations. So, we ask for a return for the initial formulation. If this demand is not accepted, we ask for a clarification that this new formulation only concerns safety regulations about flight time limitations, and not labour regulation.
response	Article 8 has been amended by Commission Regulation (EU) 2018/394, and its current version differs from the text quoted in your comment. The scope of Article 8 is limited to FTL requirements.

comment	*1328* comment by: *Civil Aviation Authority of Norway* On the need for transistion time: The flexibility which is proposed with regard to allow operators to establish individual flight time specification schemes (IFTSS) is supported. Due to the different specificities of these operations, we expect that many operators will use this possibility. The task of establishing an IFTSS and getting this approved will however be quite resource demanding for both operators and the authorities. The regulation must allow time for such applications to be processed before it comes in to effect. We therefore consider it necessary to allow for a transition period of 2-3 years, from the date of publication until the regulation becomes applicable.
response	Please, see the response to comment #104.

comment	*1330* comment by: *Bartosz Fibingier* Article 8 point 2: "CAT operations with helicopters, other than emergency medical services, and CAT operations with sailplanes shall comply with the applicable requirements of the national law of the Member State in which the operator has its principal place of business." For the moment Reg. 965/2012 covers operations of aeroplanes, helicopters, balloons and sailplanes. CAT OPS with Balloons, should be addressed here unless rule will be implemented after Balloon will be extracted from under EU Reg. 965/2012. Article 8 point 3: 3. Non-commercial operations, including non-commercial specialised operations, with complex motorpowered aeroplanes and helicopters, as well as commercial specialised operations with aeroplanes, helicopters and sailplanes with regard to flight time limitations shall comply with the applicable requirements of the national law of the Member State in which the operator has its principal place of business, or, where the operator has no principal place of business, the place where the operator is established or resides.' - To simplify, this point could refer to all Non-commercial operations as well as commercial specialized operations. There is no reason why non-commercial specialised operations with other-than-complex motor-powered aircraft should not be covered here (i.e. Balloons and Sailplanes). The rule refers to "applicable" requirements of the national law so and does not mandate the member state to issue a new law.
response	Not accepted Non-commercial operations with non-complex aircraft are not subject to Part-ORO, i.e. not subject to Subpart FTL. It does not make sense to exclude them from something they are a priori excluded.

Response to comment #1029 'Force majeure' (FNAM)

comment	*1029* comment by: *FNAM* FORCE MAJEURE ISSUE AEMS and Air Taxi are deeply linked with national health, security and safety. Current French regulation allows, by sovereign decision of the State, to grant derogation as far as national health, security or safety is involved. Such a possibility shall remain for "Force majeure" and be introduced within the IR, in respect of the sovereignty of each Member State facing major health crisis. For illustrative purposes, the recent missions would not have been possible if this regulation enters into force as it is: • Hostage taking in Amenas in 2013 • Evacuation of injured journalists in Mossoul in 2016

- Airlift between Guadeloupe and Saint Martin in 2017

Therefore, FNAM and EBAA France suggest adding a specific paragraph in this implementing rule allowing pilots to derogate from these requirements in case of Force Majeure as it is already the case in the Current French National Regulation or if the State requisitions an aircraft.

PROPOSAL
For illustrative purposes, in France the following article is applied in case of « Force Majeure » :
"Il peut être dérogé aux limitations mentionnées à la présente section dans les conditions suivantes :
1. Vols urgents, dont l'exécution immédiate est nécessaire :
a) Pour prévenir des accidents imminents et organiser des mesures de sauvetage, ou pour réparer des accidents survenus soit au matériel, soit aux installations ;
b) Pour assurer le dépannage des aéronefs.
2. Pour assurer l'achèvement d'une période de vol que des circonstances exceptionnelles n'auraient pas permis d'effectuer dans les limites préétablies.
3. Vols exécutés dans l'intérêt de la sûreté ou de la défense nationale ou d'un service public sur ordre du Gouvernement constatant la nécessité de la dérogation; la limite est à fixer par le ministre chargé de l'aviation civile." (Ref : CAC D422-12)

response

Not accepted

The application of force majeure is governed by national laws.

Force majeure clauses discharge a party from liability if an unforeseen event beyond the control of that party prevents it from fulfilling its obligations under a contract. Typically, force majeure clauses cover natural disasters, wars or other acts of God.

The objectives of the EU FTL rules are to ensure that crew members are adequately rested at the beginning of each flight duty period (FDP), and that the duration and timing of individual duty periods will enable them to operate to a satisfactory level of efficiency and safety in all normal and abnormal situations. The FTL rules are, therefore, concerned solely with the prevention of fatigue and the maintenance of vigilance in flight. They are not intended to regulate commercial aspects, force majeure, social issues, or lifestyle.

Also, flights that carry out/provide military, customs, police, search and rescue, firefighting, coastguard or similar activities/services are a priori excluded from the scope of the Basic Regulation, as well as from the scope of the applicable implementing rules (Article 2(3) of the Basic Regulation).

comment

1414 comment by: *Airlec Air Espace / Paul Tiba*

FORCE MAJEURE
AEMS and Air Taxi are deeply linked with national health, security and safety. Current French regulation allows, by sovereign decision of the State, to grant derogation as far as

national health, security or safety is involved. Such a possibility shall remain for "Force majeure" and be introduced within the IR, in respect of the sovereignty of each Member State facing major health crisis.
For illustrative purposes, the recent missions would not have been possible if this regulation enters into force as it is:

- Hostage taking in Amenas in 2013
- Ebola patients in 2014
- Evacuation of injured journalists in Mossoul in 2016
- Airlift between Guadeloupe and Saint Martin in 2017

Therefore, AIRLEC suggests adding a specific paragraph in this implementing rule allowing pilots to derogate from these requirements in case of Force Majeure as it is already the case in the Current French National Regulation or if the State requisitions an aircraft.
PROPOSAL
For illustrative purposes, in France the following article is applied in case of « Force Majeure » :
"Il peut être dérogé aux limitations mentionnées la présente section dans les conditions suivantes :
1. Vols urgents, dont l'exécution imm diate est nécessaire :
a) Pour pr venir des accidents imminents et organiser des mesures de sauvetage, ou pour réparer des accidents survenus soit au matériel, soit aux installations ;
b) Pour assurer le dépannage des aéronefs.
2. Pour assurer l'achèvement d'une période de vol que des circonstances exceptionnelles n'auraient pas permis d'effectuer dans les limites préétablies.
3. Vols exécutés dans l'intérêt de la sûreté ou de la défense nationale ou d'un service public sur ordre du Gouvernement constatant la nécessité de la dérogation; la limite est fixer par le ministre chargé de l'aviation civile."
(Ref : CAC D422-12)

response Please, see the response to comment # 1029.

comment *1463* comment by: *European Cockpit Association*

Commented provision:
“Article XX - scientific review"

ECA strongly supports the principle of an ongoing scientific and operational data driven review process of FTL rules.

From the NPA it is unclear whether this new Article XX replaces Art. 1(3) of Reg. 83/2014 or complements it with this new Article specifically focussed on the operations covered by this NPA.

If it is the former (i.e. replace), ECA objects to any decisions to be taken on this new Article and calls upon the Agency to formally consult ECA and ETF, and possibly other stakeholders, on this proposal, as it concerns a provision related to operations that are NOT covered by this NPA, and as it has the potential to dilute and delay the existing CAT related review process. Given that Art. 1(3) of Reg. 83/2014 has been the result of extended political discussions – including at the European Parliament – and was a key

	precondition for many stakeholders to go along with the FTl rules, this technical NPA & rule-making process must not be used to alter the article without a targeted consultation of relevant stakeholders, in particular ECA and ETF. If it is the latter (i.e. complement), we believe that many, if not most, NAAs would have severe difficulties to collect the listed operational data. While we support that NAAs should and do collect such data, we invite the Agency to take steps to ensure it will actually receive such data, and in sufficient quality and quantity. Otherwise this provision will remain without effect, thereby undermining any prospect of carrying out a meaningful evaluation. Also, ECA proposes to delete '*where relevant*' in: "That review shall involve scientific expertise, where relevant, and be based on …" – i.e. in line with the corresponding provision in Reg. 83/2014. Equally, ECA proposes to review and complement the list of data items, which seems limited. In particular, the listed items should cover issues where this NPA proposes flexibilities (compared to CAT) and which might create safety hazards.
response	Please, refer to the response to comment #1427.

ORO.FTL.105

3.1. ORO.FTL.105	p. 9-10

comment	*57* comment by: *APEM Aviation* (13) "...the time between an aircraft first moves from its parking place for the purpose of taking off until..." is not correct English. The existing wording is more correct. Alternatives would be a) "...the time from when an aircraft first moves...", or b) "...the time between from when an aircraft first moves..."
response	Accepted Initial wording will be kept.

Response with regard to 'sector' (comment #58)

comment	*58* comment by: *London's Air Ambulance* Paragraph 24 has been amended to relate the definition of a 'sector' to aeroplanes only. The new paragraph 29 refers to HEMS and states "A sector flown to position an aircraft … for an EMS flight." An EMS flight is stated to be a flight by an aeroplane or a helicopter. The amended wording of paragraph 24 is wrong and needs to be reversed to read "…between and aircraft first moving…"
response	Noted Since HEMS-related text has been removed, the definition of 'sector' does not need to be amended and paragraph 24 remains unchanged for the time being.

comment	*105* comment by: *UK CAA* **Page No:** 9 **Paragraph No:** ORO.FTL.105, (13) Definitions "flight time" **Comment:** The word "total" is missing from this definition and should be included as per PART.FCL.010, Definition for Flight time: "*for aeroplanes, touring motor gliders and powered-lift, it means the **total** time from the moment an aircraft first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight;* *for helicopters, it means the **total** time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped."* **Justification:** Consistency **Proposed Text:** Include the word "total" in the definition in line with the PART FCL definition.
response	Accepted

comment	*106* comment by: *UK CAA* **Page No:** 10 **Paragraph No:** ORO.FTL.105, (24) Definitions "sector"

Comment: The text within the sector definition has been changed from “aircraft” to “aeroplane”. This appears to contradict the numerous references to ‘aircraft’ throughout the document, including the new EMS definition (which is adapted from the HEMS definition).

It is important to maintain the definition to include “aircraft” as the definition of an FDP “means a period that commences when a crew member is required to report for duty, which includes a sector or a series of sectors, and finishes when the aircraft finally comes to rest and the engines are shut down, at the end of the last sector on which the crew member acts as an operating crew member”. All FDP tables (fixed and rotary) are premised on this definition.

Sector is also specifically used in the CS FTL.3.205(f) Flight duty period - HEMS

Justification: The definition of both FDP and EMS flight contains a reference to sector in terms of describing the flight that applies to both fixed and rotary wing. Maintaining the term “aircraft” within the sector definition aligns it to the FDP, EMS and HEMS definitions and affords the final empty sector of the flight the same privileges as the loaded sectors. It would generate confusion with the use of the FDP definition and application of the requirements in CS 3.

Proposed Text: Retain the sector definition as “between an **aircraft** first moving”.

response

Please, see the response to comment #54.

comment

190 comment by: *Premium Jet AG*

The Home Base definition is not applicable to all Air Taxi operation models in general. It should be reviewed or a different definition must be found.

response

Please, see the response to comment #127.

comment

206 comment by: *Cat Aviation AG*

31) Contactable is defined as being an "active" or "passive" way to contact a crew.

response

Not accepted

The term ‘contactable’ does not define an operation as an air taxi operation. A pilot is contactable while on standby or off-duty in the context of any type of operation, not necessarily an air taxi operation. The contact method is determined by the operator in its approved individual FTL scheme.

Please, refer to the definition of ‘standby’ in point ORO.FTL.105(25): ‘“standby” means a pre-notified and defined period of time during which a crew member is required by the

operator to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period.'

comment	*207* comment by: *Cat Aviation AG* "(14) Home base or home location" as definition
response	Please, see the response to comment # 27.

Response with regard to 'break' (comment #233)

comment	*233* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland* *Comment FOCA:* A "break" should only count as a break, if its duration is more than 60 minutes.
response	Not accepted No scientific or operational evidence is provided that supports your proposal.

comment	*610* comment by: *NetJets Europe* **ORO.FTL.105 (5)** Netjets supports the proposed change
response	Noted

comment	*807* comment by: *Yorkshire Air Ambulance* Poor definition. A break is a period when crew members are "free of all tasks," but a duty period ends when a crew members are "free of all duties." What's the difference? The whole concept of breaks has been introduced for this NPA, without the impact being properly considered.
response	Not accepted While on break and free of all tasks, the pilot is still on duty. The concept of 'break' has been used by AEMS operators well before this NPA; hence, it could not have been introduced by the NPA.

comment	*808* comment by: *Yorkshire Air Ambulance* With the change of text, this definition now excludes rotorcraft, contrary to the explanatory notes.
response	Not accepted In HEMS operations, there are no sectors as segments of an FDP. Therefore, paragraph 24 has been amended to relate the definition of a 'sector' in the context of an FDP to aeroplanes only.

comment	*810* comment by: *Yorkshire Air Ambulance* Agree definition for single-pilot operation, but elsewhere in the document FDPs and fatigue levels are considered based on SP experience alone, and take no account of shared responsibilities.
response	Not accepted The HEMS technical crew does not share the responsibility for flying the helicopter with the pilot. Therefore, mixed crew operations are treated as single-pilot operations.

comment	*880* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* (14) the definition "home base" is not any more important for most of Swiss BA operators. Nevertheless, it should be reviewed.
response	Please, see the response to comment #127.

comment	*915* comment by: *AESA* What is the meaning of the statement "also when the aircraft is on the ground" included in definition of "Augmented flight crew"? include it all the time on the ground, or only the time of the flight that the aircraft is on the ground (i.e. taxi)? If all the time is included, what is the difference between on-board rest and split duty?

response	Aircrew may have on-board rest while in the air in the context of extended FDP with augmented crew, or on the ground. If on-board rest is taken on the ground, the time on the ground is the time spent in Class A or Class B facility, not all the time on the ground. When non-augmented aircrew is having rest in Class A facility on the ground, this is a break, in the context of split duty.

comment	*967* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* (31) should be defined in passive or active contact
response	Not accepted Passive and active contact does not define air taxi operations as such. The contact method is not a rule, it is rather a means of compliance.

Response with regard to 'on-board rest' (comment #1032)

comment	*1032* comment by: *FNAM* (5) 'augmented flight crew' ADD an ON-BOARD REST DEFINITION ISSUE FNAM and EBAA France think a clear and precise definition of on-board rest shall be provided. The notion is not easy to understand as it can be on the ground or in-flight and may lead to misunderstanding and subjective interpretations. Plus, clarification should be provided to define "when the aircraft is on ground". As this rest can be taken in the aircraft, the definition shall state that a class A facility is an accommodation when the aircraft is on the ground. Indeed, in the CS FTL.2.220 (split duty), a class A facility is equivalent to an accommodation when the aircraft is on the ground (paragraph (d)). FNAM and EBAA France agree with this logic since it matches all the criteria of the accommodation definition. Hence, in order to clarify it, FNAM and EBAA France suggest adding in the "accommodation" definition that the class A facility is an accommodation when the aircraft is on the ground.

	This shall be applicable for split duty but also for standby, especially for split duty. (cf. split duty and standby comments) Cf. comment 1093 Moreover, FNAM and EBAA France don't understand why the on-board rest is associated with the notion of augmented flight crew. Indeed, a non-augmented crew is able to have on-board rest since it can be taken on the ground. PROPOSAL Provide a clear and precise definition for on-board rest. Add in the definition of an "accommodation" that the class A facility is an accommodation when the aircraft is on the ground.
response	Your proposal for a definition of 'on-board rest' is accepted. Aircrew in air taxi and AEMS operations may have **on-board rest while in the air or on the ground**. On-board rest in the air, in the context of augmented crew only, is similar to the procedures for in-flight rest and is taken during the cruise phase of flight (see GM1 CS FTL.1.205(c)(1)(ii)). If on-board rest is taken by augmented or non-augmented crew, while the aeroplane is on the ground, the time on the ground is the time spent in Class A or Class B facility, not the entire turnaround time. *** The use of Class A facility by non-augmented aircrew, while the aeroplane is on the ground, meets the requirements for accommodation in the context of split duty. Unlike split duty or on-board rest, the time spent on standby cannot be taken on board the aeroplane. Therefore, your proposal to add in the definition of 'accommodation' that Class A facility is an accommodation when the aircraft is on the ground is not accepted.

Response with regard to 'positioning' (comment #1035)

comment	*1035* comment by: *FNAM* (29) 'EMS Flight' ISSUE The definition of the different EMS mission and flight must be precised. As for example, an EMS mission shall not include only the EMS payload transportation but also all the flights needed to transport the medical team or equipment.

	PROPOSAL Add a GM to ORO.FTL.105 (29): *"GM ORO.FL.105(29)* *An EMS flight may concern both a flight with the EMS payload or any positioning flights before/after loading/unloading necessary to perform the EMS flight from/to the home base."*
response	Noted Please, see second subparagraph of point ORO.FTL.105(29).

Response with regard to 'aircraft as medical equipment' (comment #1038)

comment	*1038* comment by: *FNAM* (29) 'EMS Flight' ISSUE The aircraft by itself is part of the medical supplies which cannot be dissociated. Thus, it should be precise in the paragraph (29)(b). Moreover, this definition shall be referred in each and every requirement where the EMS payload is involved. PROPOSAL Replace the paragraph (b) by the following: *"(b) medical supplies (equipment including the aircraft by itself, blood, organs, drugs);"*
response	Please, see second subparagraph of point ORO.FTL.105(29).

Response with regard to 'contactable' (comment #1041)

comment	*1041* comment by: *FNAM* CONTACTABLE DEFINITION ISSUE The definition of contactable is necessary in order to ensure the level playing field and the good understanding of the next dispositions. PROPOSAL *(31) Contactable* *"A short period of time during the day, other than on a `day off', during which the company requires a crew member to be at an agreed location for the purpose of giving*

	*notification of a duty period which will commence not less than ten hours ahead. The contactable period will be between [*] and [*] local time and shall not exceed 21⁄2 hours. * Times to be inserted by the company. If required, the 21⁄2 hours can be split into 2 separate periods. Such arrangements must be agreed by the CAA."* *Source : CAP 371*
response	Not accepted The term 'contactable' does not define an operation as an air taxi operation. A pilot is contactable while on standby or off-duty in the context of any type of operation, not necessarily an air taxi operation. The contact method is determined by the operator in its approved individual FTL scheme. Please, refer to the definition of 'standby' in point ORO.FTL.105(25): '"standby" means a pre-notified and defined period of time during which a crew member is required by the operator to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period.'

comment	*1096* comment by: *European Cockpit Association* Commented text: ORO.FTL.105 Definitions *'break' means a period of time within an flight duty period, shorter than a rest period, counting as duty and during which a crew member is free of all task* ECA comment: Any break to be considered for extending flight operations have to be at least one hour.
response	Please, see the response to comment #233.

comment	*1158* comment by: *Danish Aviation Association* Home base: There seems to be different definitions of home base internally in the EU system. Only one definition should be used not to create confusion. Home base has also to do with the social security legislation, which should not be neglected.
response	Noted As regards scheduled and charter operations, the definition of 'home base' is fully harmonised. As regards air taxi and EMS operations, where currently little or no harmonisation exists, there seems to be different interpretation. EASA believes that the proposed harmonisation of the FTL requirements also in the domain of air taxi or AEMS operations would avoid further confusion among the stakeholders.

Response with regard to the deletion of 'operating base' (comment #1039)

comment	*1039* comment by: *FNAM* (29) 'EMS Flight' ISSUE A sector flown to position an aircraft from or to a place which is not the operating base before or after an EMS flight may also be considered as part of that flight. Indeed, these flights are necessary to ensure the proper AEMS operations and shall not be a burden and limit emergency missions. Additionally, when the last flight is without any passengers, this flight should be considered as an NCC flight. PROPOSAL Modify the last sentence to: *"A sector flown to position an aircraft before or after an EMS flight is considered part of that flight"*
response	Accepted

Response with regard to 'passive contact' (comment #1166)

comment	*1166* comment by: *FNAM* PASSIVE CONTACT FNAM and EBAA France suggest to link the following proposal to the implementing rule ORO.FTL.105 (definitions). PROPOSAL *"GM1 ORO.FTL.110 (a) Operator responsibilities - PASSIVE CONTACT* *A form of passive contact for the notification of roster or duty assignments changes or communication of duty assignments during the reserve may help minimise disruption to established sleep and rest patterns.* *Passive contact is a form of contact a crew member can avoid. Examples of passive contact are:* • *email;* • *a visit to the operator's website by the crew member;* • *inaudible pager;* • *facsimile transmission; and* • *text message."* RATIONALE: This point is needed for the robustness of the rule.

response

Partially accepted

'Passive contact' is a method of notification during standby and is, therefore, a matter to be established by the operator in its approved individual FTL scheme in the operations manual.

Please, refer to AMC3 ORO.FTL.110(a) and GM1 ORO.FTL.110(a).

comment

1183 comment by: *SAF*

(5) "augmented flight crew"

ADD an ON-BOARD REST DEFINITION

ISSUE

SAF thinks a clear and precise definition of on-board rest shall be provided.

The notion is not easy to understand as it can be on the ground or in-flight and may lead to misunderstanding and subjective interpretations.

This shall be applicable for split duty but also for standby.

Moreover, SAF doesn't understand why the on-board rest is associated with the notion of augmented flight crew. Indeed, a non-augmented crew is able to have on-board rest since it can be taken on the ground.

PROPOSAL
Provide a clear and precise definition for on-board rest.

response

Please, see the response to comment #1032.

comment

1184 comment by: *SAF*

(24) 'sector'

AGREEMENT
SAF agrees to replace in the 'sector' definition 'aircraft' by 'aeroplane'. The notion of 'sector' is therefore not defined anymore for helicopters and thus not applicable for HEMS operations.
SAF would like the Agency to keep this change - and the reason why - in mind when EASA extends FTL to other CAT operations with helicopters.

response	Noted

comment	*1185* comment by: *SAF* (29) 'EMS flight' ISSUE According to the definition of a sector (§24) in ORO.FTL.105, the notion of sector is not applicable to HEMS operations. However, the notion of sector appears in the EMS flight definition (§29) although the EMS flight definition shall apply for HEMS operations. Besides, the helicopter by itself is part of the medical supplies which cannot be dissociated. Thus, it should be precise in the paragraph (29)(b). PROPOSAL Replace the paragraph (b) by the following: *"(b) medical supplies (equipment including the helicopter by itself, blood, organs, drugs);"* Replace the sentence in §29: *"A sector flown to position an aircraft to the operating base before or after an EMS flight is considered part of that flight."* by *"A flight flown to position an aircraft to the operating base before or after an EMS flight is considered part of that emergency medical service."*
response	Partially accepted Please, refer to the last sentence of paragraph (29).

comment	*1254* comment by: *Volkswagen AirService GmbH* Clear definition of contactable required.
response	Please, see the response to comment #1041.

comment	*1264* comment by: *Hélicoptères de France* ADD an ON-BOARD REST DEFINITION ISSUE HDF thinks a clear and precise definition of on-board rest shall be provided. The notion is not easy to understand as it can be on the ground or in-flight and may lead to misunderstanding and subjective interpretations. This shall be applicable for split duty but also for standby. Moreover, HDF don't understand why the on-board rest is associated with the notion of augmented flight crew. Indeed, a non-augmented crew is able to have on-board rest since it can be taken on the ground.

PROPOSAL
Provide a clear and precise definition for on-board rest.

#2
(24) 'sector'
AGREEMENT
HDF agrees to replace in the 'sector' definition 'aircraft' by 'aeroplane'. The notion of 'sector' is therefore not defined anymore for helicopters and thus not applicable for HEMS operations. HDF would like the Agency to keep this change - and the reason why - in mind when EASA extends FTL to other CAT operations with helicopters.

#3
(29) 'EMS flight'
ISSUE
According to the definition of a sector (§24) in ORO.FTL.105, the notion of sector is not applicable to HEMS operations. However, the notion of sector appears in the EMS flight definition (§29) although the EMS flight definition shall apply for HEMS operations. (Cf. comment #14.3)
Besides, the helicopter by itself is part of the medical supplies which cannot be dissociated. Thus, it should be precise in the paragraph (29)(b).

PROPOSAL
Replace the paragraph (b) by the following:
"(b) medical supplies (equipment including the helicopter by itself, blood, organs, drugs);"
Replace the sentence in §29:
"A sector flown to position an aircraft to the operating base before or after an EMS flight is considered part of that flight."
by
"A flight flown to position an aircraft to the operating base before or after an EMS flight is considered part of that emergency medical service."

response

Please, see the response to comment #1032 with regard to on-board rest.

Your comment with regard to 'sector' is noted.

comment

1327 comment by: *Gama Aviation (UK) Ltd*

1. Current definition of 'Homebase' is not suitable to all Air Taxi or AEMS operators and is written for scheduled airlines. Definition should be reviewed or another definition more applicable to Air Taxi Operations developed. Some ATXO operators function using the 'Gateway' system which the existing definition does not make allowance for.

2. Add 'Total' to point (13) for consistency with Part FCL definition:

"for aeroplanes, touring motor gliders and powered-lift, it means the **total** time from the moment an aircraft first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight"

response	Please, see the response to comment #127 with regard to 'home base'. Your proposal with regard to point (13) 'flight time' is accepted.

comment	*1443* comment by: *European Cockpit Association* Commented text: On-board rest ORO.FTL.105 Definitions (5) 'augmented flight crew' & 'on-board rest' ECA Comment: The proposed concept of 'on-board rest' as an equivalent to 'in-flight rest' is seriously flawed, contrary to available scientific advice such as that obtained by EASA in preparation for the 2010-14 NPA on CAT FTLs, and not a current acceptable practice. As described the 'rest' period would include any time spent in the rest facility, including during approach, landing, taxy, turnaround, brief and flight preparation, take-off and departure. At any of these times no meaningful rest will be achievable, and a flight crew member would normally be expected to take part in these phases of flight. Any rest while any activity is taking place on the aircraft, and outside of the Cruise phase, will be heavily disturbed and/or fragmented as flight/activity phases change, and not effective for FDP extension. Were rest only to be permitted starting and finishing within a period of complete inactivity on the aircraft, on the ground, this would effectively be, and fall under, the requirements of split duty. Proposal Remove the concept of 'on-board rest' and return to the existing system of 'in-flight' rest which already goes far beyond the advice from EASA's scientific input.
response	Not acceptable The commentator has misunderstood the concept of on-board rest. Aircrew may have on-board rest while in the air or on the ground. On-board rest in the air, in the context of augmented crew, is similar to the procedures for in-flight rest and is only taken during the cruise phase of flight (see GM1 CS FTL.1.205(c)(1)(ii)). If on-board rest is taken on the ground, the time on the ground is the time spent in Class A or Class B facility only, not the entire turnaround time. Hence, the on-board rest period cannot be taken during critical phases of flight and during briefings and flight preparation.

comment	*1476* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

	"(24) 'sector' means the segment of an FDP between an ~~aircraft~~ aeroplane first moving for the purpose of taking off until it comes to rest after landing on the designated parking position." The replacement of the word "aircraft" in (24) with the word "aeroplane" makes the definition of "EMS flight" in (29) inconsistent since "sector" according to the changed (24) excludes helicopters. It becomes unclear whether positioning in (29) refers to aeroplanes and/or helicopters.
response	Please, see the response to comment #58.

comment	*1486* comment by: *Airlec Air Espace / Paul Tiba* #1 ISSUE The definition of the different EMS mission and flight must be precised. As for example, an EMS mission shall not include only the EMS payload transportation but also all the flights needed to transport the medical team or equipment. PROPOSAL Add a GM to ORO.FTL.105 (29): GM ORO.FL.105(29) An EMS flight may concern both a flight with the EMS payload or any positioning flights before/after loading/unloading necessary to perform the EMS flight from/to the home base. #2 ISSUE The aircraft by itself is part of the medical supplies which cannot be dissociated. Thus, it should be precise in the paragraph (29)(b). Moreover, this definition shall be referred in each and every requirement where the EMS payload is involved. PROPOSAL Replace the paragraph (b) by the following: "(b) medical supplies (equipment including the aircraft by itself, blood, organs, drugs);" #3 ISSUE A sector flown to position an aircraft from or to a place which is not the operating base before or after an EMS flight may also be considered as part of that flight. Indeed, these flights are necessary to ensure the proper AEMS operations and shall not be a burden and limit emergency missions. Additionally, when the last flight is without any passengers, this flight should be considered as an NCC flight. PROPOSAL Modify the last sentence to: "A sector flown to position an aircraft before or after an EMS flight is considered part of that flight" #4 ISSUE

The definition of contactable is necessary in order to ensure the level playing field and the good understanding of the next dispositions.
PROPOSAL
(31) Contactable
"A short period of time during the day, other than on a `day off', during which the company requires a crew member to be at an agreed location for the purpose of giving notification of a duty period which will commence not less than ten hours ahead. The contactable period will be between [*] and [*] local time and shall not exceed 21⁄2 hours.
* Times to be inserted by the company. If required, the 21⁄2 hours can be split into 2 separate periods. Such arrangements must be agreed by the CAA."
Source : CAP 371

response

1. Please, see the response to comment #1035.

2. Please, see the response to comment #1038.

3. Please, see the response to comment #1039.

4. Please, see the response to comment #1041.

comment

1503 comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

We consider the definition provided for "home base" to be out of touch with current reality. We propose to reconsider this.

response

Please, see the response to comment #127.

ORO.FTL.100

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comment

139 comment by: *CAA-NL*

ORO.FTL.100 Scope

Comment:
It is suggested to add the requirement for AEMS to the text.

response

Accepted

comment	*380* comment by: *Joachim J. Janezic (Institute for Austrian and International Aviation law)* Since EASA would like to extend the scope of FTL to HEMS-CM (for what reason and on what scientific basis?) we have to stress that in many cases this staff is not employed directly by the HEMS operator but rather assigned by voluntary mountain rescue organisations, the Red Cross, etc. Reading the NPA it remains fully unclear how these persons should be treated within a strict system - as the one suggested in the NPA - which presumes that HEMS-CM are employed by the operator so that the operator can plan their shifts.
response	Noted Compliance with the EASA FTL requirements can be achieved by using own flight crew, crew hired from another organisation or freelance pilots. The responsibilities of operators and crew members with regard to fatigue risk management are clearly defined in Regulation (EU) No 965/2012. Although there are currently no common FTL requirements for HEMS operations, flight operations with helicopters, including HEMS, are regulated by Regulation (EU) No 965/2012. Notwithstanding the above, flights that carry out / provide military, customs, police, search and rescue, firefighting, coastguard or similar activities/services are excluded from the scope of the Basic Regulation and its implementing rules (Article 2(3) of the Basic Regulation).
comment	*1252* comment by: *Volkswagen AirService GmbH* Single pilot operations, HEMS and ATXO are completly different. It makes no sense to combine these under one regulation (or CS) as you can not compare the fatigue load of singe pilot work to multi crew cockpit.
response	Not accepted The purpose of these rules is not to compare fatigue loads of singe-pilot work with multi-crew cockpit. The purpose is to establish common principles for fatigue risk management. Where specificities exist, they are addressed separately.

ORO.FTL.110

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Responses with regard to 'robustness of rosters' (Netjets comment #55)

comment

55 comment by: *NetJets Europe*

ORO.FTL.110 (j)
The 33% seasonality is not applicable to Air taxi operations due to the on-demand type of operation.
NetJets suggests that it should be modified (eventually at AMC level) in order for operational robustness to be under the operator's management system with performance indicators to monitor e.g. PIC discretions and exceedances of FDP limits, in order to ensure that the planning of FDPs is effective and within the limits.

response

Accepted

Air taxi operations are in most cases on-demand operations that do not have a seasonal character.
An assessment of FDP exceedances, however, can serve the purpose of improving flight planning and crew arrangements (see amended proposal for point ORO.FTL.110(k) and associated GM).

comment

93 comment by: *B. Wagner*

zu (k):
nicht praktikabel, da es zu einem höheren Verwaltungsaufwand kommt, um den prozentualen Anteil zu ermitteln. Dabei kann diese Überschreitung in Mitteleuropa sowieso nur in den drei Monaten mit den längsten Tagen auftreten und ist abhängig vom Auftreten entsprechend später Alarmierungen, die aufgrund ihrer zugrunde liegenden Notfälle nicht vorhersagbar sind.
Daraus eine geänderte Dienstplanung zu erzwingen, erscheint wenig sinnvoll.

response

Please, see the response to comment #55.

comment

108 comment by: *UK CAA*

Page No: 10

Paragraph No: ORO.FTL.110 (j) & (k) Operator Responsibilities

Comment: Bullet point (j) includes Air Taxi operations within the need to change arrangements where the operation "in that schedule during a scheduled seasonal period" is exceeded by 33%. Bullet point (j) should only be for scheduled and charter operations and Air Taxi operations should be moved into bullet point (k).

Justification: Air Taxi operations do not set schedules for a seasonal period as by their nature they are on-demand and short notice operations. Therefore, the assessment of realistic planning would be better represented if they were included in bullet point (k).

	Proposed Text: Bullet point (j) add "**except for air taxi** and EMS" and insert in bullet point (k) "**in air taxi** and EMS operations"
response	Please, see the response to comment #55.

comment	*128* comment by: *VistaJet* This point is not relevant to ATXO as there are no seasonal schedules. Suggest to use AMC1 ORO.FTL.110(J) requiring the operator to establish and monitor KPI's for robustness of rosters and perhaps further guidance material can be written for ATXO specifically.
response	Please, see the response to comment #55.

comment	*141* comment by: *CAA-NL* **ORO.FTL.110 (j) & (k) Operator Responsibilities** **Comment**: Bullet point (j) includes Air Taxi operations within the need to change arrangements where the operation "in that schedule during a scheduled seasonal period" is exceeded by 33%. Air Taxi operations do not set schedules for a seasonal period as by their nature they are on-demand and short notice operations. Therefore, the assessment of realistic planning should be better represented in the text.
response	Please, see the response to comment #55.

comment	*155* comment by: *VistaJet* ORO.FTL.110 Operator Responsibilities After the initial working group the proposal included the function of "Passive Contact". This function is essential especially in the proposal for it's use in the "Reserve" function. This is necessary to protect the crew's sleep opportunity and allow operations to give less then 10hrs notice where crew are rested and willing to fly on shorter notice. suggest to include highlighted text From the original draught amendment: GM1 ORO.FTL.110 (a) Operator responsibilities - PASSIVE CONTACT

A form of passive contact for the notification of roster or duty assignments changes or communication of duty assignments during the reserve may help minimise disruption to established sleep and rest patterns.

Passive contact is a form of contact a crew member can avoid. Examples of passive contact are:
- **email;**
- **a visit to the operator's website by the crew member;**
- **inaudible pager;**
- **facsimile transmission; a**nd
- **text message.**

response

Please, see the response to comment #1166.

comment

183 comment by: *Cat Aviation AG*

Air Taxi does not have fixed schedules therefore has to be exempted as well. Suggested rewording:
(j). except for EMS and **air taxi operations**, change a schedule.....

An Operator establishes via his Management System a robust and safe way to monitor and evaluate trends in schedules and adjust as necessary to avoid fatigue.

response

Please, see the response to comment #55.

comment

191 comment by: *Premium Jet AG*

(J) This definition does not apply to Air Taxi Operations. It should be either excluded or differently specified. Air Taxi Operators do not have schedules. They might be binded to a provision in their manuals to track and ammend their flights.
(k)Please attach Guidance Material. Air Taxi need flexibility in their rostering and unforseen changes. Maybe via performance indicators etc.

response

Please, see the responses to comments #55, #282 and #283.

comment

205 comment by: *Cat Aviation AG*

We do not have regular schedules in Air Taxi - and therefore no seasonal periods. Adjust point (j) by exempting EMS & Air Taxi Operations.

response

Please, see the response to comment #55.

comment	*226* comment by: *Rabbit-Air Ltd* **Exception should also be granted for corporate aviation operators who operate under an AOC**. Corporate aviation operator with AOC are often belonging to a big company, and exclusively transporting company passengers for remuneration. Corporate operators planning their schedules maximum on a monthly base, usually even on a 14 day base. As such their does not exist a seasonal period schedule.
response	Corporate aviation operations are non-commercial operations, hence they are outside the scope of the EASA FTL requirements.

comment	*231* comment by: *Thomas Henselmann* (j): Applies also for Air-Taxi operations since there is usually no schedule as such.
response	Please, see the response to comment #55.

Response with regard to 'roster robustness' (EBAA comment #282)

comment	*282* comment by: *European Business Aviation Association (EBAA)* EBAA COMMENT: This point is not applicable to Air Taxi Operations. Suggested change: "(j) except for EMS and air taxi operations,..." Rationale: Air-Taxi does not have 'Schedules'! EBAA proposes an AMC for monitoring robustness of rosters. Suggested change: NEW AMC2 ORO.FTL.110 (k) OPERATIONAL ROBUSTNESS The operator should describe in its Management System a process to track and trend flight and duty time transgressions and deviations.
response	Accepted

comment	*283* comment by: *European Business Aviation Association (EBAA)* EBAA COMMENT: Guidance material on AMC is needed. Suggested change: NEW. GM2 ORO.FTL.110(k) Operator responsibilities OPERATIONAL ROBUSTNESS OF ROSTERS (AIR TAXI OPERATIONS) Performance indicators for operational robustness may include the following: the use of commander's discretion; the use of (unplanned) reduced rest; duty time transgressions related to; technical delays; commercial delays;

	delays due to customer's plan changes; ATC delays; and the number of on the day changes that impinge on a planned rest period encroaching a local night.
response	Accepted

comment	*619* comment by: *Transport Malta - Civil Aviation Directorate* The scheduling and seasonal period concept is not applicable to Air Taxi operators. We would like to see a more realistic concept of operational robustness for air taxi operations.
response	Please, see the response to comment #55.

comment	*883* comment by: *Stephanie Selim* **ORO.FTL.110 (j) :** Technical comment – We think that general requirements applicable to air taxi operations should better take into account constraints of this kind of operations. We wonder if that requirement makes sense for air taxi operations which are unpredictable by definition. Proposal: "**In the case of scheduled and air taxi operations** ~~**except for EMS operations**~~, change a schedule or crew arrangements, if the actual operation exceeds the maximum flight duty period on more than 33 % of the flight duties in that schedule during a scheduled seasonal period;"
response	Please, see the response to comment #55.

comment	*884* comment by: *Stephanie Selim* **ORO.FTL.110 (k) :** Technical comment – We think that general requirements applicable to EMS operations should better take into account constraints of this kind of operations. We wonder if that requirement makes sense for EMS operations which are unpredictable by definition and for which the notion of scheduled FT is a non-sense. And we wonder why it is asked for 33% of the flight duties for operations except EMS during a scheduled seasonal period, and 10 % of FDP in any 3 months for EMS operations. The reason is not explained in the rationale. Proposal: We ask for the deletion of that point.

response | Please, see the responses to comments #55 and #282.

comment | *981* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart*

(j) Air Taxi don't have regular schedules and seasonal periods. Therefore should be exempted like EMS.

(k) Flexibility in rostering for unforseen changes is needed. Guidance needed.

response | Please, see the responses to comment #55, #282 and #283.

comment | *1042* comment by: *FNAM*

ORO.FTL.110 (j)

ISSUE – Air Taxi
In Air Taxi, it is possible to have only one flight per year on a given route and this kind of operation is unscheduled as it is based on clients' unpredictable schedules. In that way, the 33% of FDP in a scheduled seasonal period is not representative. The incertitude over max FDP is thus very low for mostly Air Taxi operations. Moreover, the operator should as mitigation describe in its Management System a process to track and trend flight and duty time transgressions and deviations.

PROPOSAL
Add "(j) except for EMS and Air Taxi operations[...]"

Add a new AMC2 ORO.FTL.110(j)
NEW AMC2 ORO.FTL.110(j)
Operator responsibilities - "MANAGEMENT OF ROSTER CHANGES (AIR TAXI OPERATIONS AND AEMS)
The operator should establish a procedure for the notification of roster changes that minimizes the disruption to the crew member's ability to obtain appropriate sleep and rest."

Add a new GM2.ORO.FTL.110(j)
NEW *GM2 ORO.FTL.110(k) Operator responsibilities*
"OPERATIONAL ROBUSTNESS OF ROSTERS (AIR TAXI OPERATIONS)
Performance indicators for operational robustness may include the following:
the use of commander's discretion;
the use of (unplanned) reduced rest;
duty time transgressions related to;
technical delays;
commercial delays;
delays due to customer's plan changes;
ATC delays; and

the number of on the day changes that impinge on a planned rest period encroaching a local night."

response

Please, see the responses to comments #55, #282 and #283.

The proposal to add an AMC for the notification of changes to published rosters is also accepted. It, however, refers to point ORO.FTL.110(a).

comment

1044 comment by: *FNAM*

ORO.FTL.110 (k)

ISSUE – AEMS
In AEMS, the operation can never be scheduled due to the emergency specificity of the missions. In that way, the 10% of FDP in any 3 months is far not representative as it is possible to have only few missions over a 3-month period. The incertitude over max FDP is thus very low for mostly AEMS operations.
Moreover, the operator should as mitigation describes in its Management System a process to track and trend flight and duty time transgressions and deviations

PROPOSAL
Suppress the paragraph (k).

Add a new AMC2 ORO.FTL.110(j)
NEW AMC2 ORO.FTL.110(j)
Operator responsibilities - "MANAGEMENT OF ROSTER CHANGES (AIR TAXI OPERATIONS AND AEMS)
The operator should establish a procedure for the notification of roster changes that minimizes the disruption to the crew member's ability to obtain appropriate sleep and rest."

Add a new GM2.ORO.FTL.110(j)
NEW. "GM2 ORO.FTL.110(k) Operator responsibilities
OPERATIONAL ROBUSTNESS OF ROSTERS (AIR TAXI OPERATIONS)
Performance indicators for operational robustness may include the following:
the use of commander's discretion;
the use of (unplanned) reduced rest;
duty time transgressions related to;
technical delays;
commercial delays;
delays due to customer's plan changes;
ATC delays; and
the number of on the day changes that impinge on a planned rest period encroaching a local night."

response

Please, see the responses to comments #55, #282, #283 and #1042.

comment	*1260* comment by: *Volkswagen AirService GmbH* No fixed schedules are available in business aviation operations. Planning is subject to frequent changes. Limitations on max. duty times and FDP should be sufficient.
response	Please, see the responses to comments #55 and #282.

comment	*1331* comment by: *Gama Aviation (UK) Ltd* Point (j): Should read "except for EMS **and Air Taxi** operations,...." Seasonal periods or schedules are not used in Air Taxi operations due to their short notice or on demand nature. Point (k): Many EMS operations are not scheduled therefore changing "schedule or crew arrangement" as a result of FDP exceedances are not always possible. Additionally, no provision for the 4 hour Air Ambulance FDP allowance in Gama Aviation's exisiting FTL scheme increases the liklihood that point k will be a frequently recurring issue for our operation. It's is our view that this is simply not a practical requirement for AEMS operations of the type we operate and allowance must be made for this.
response	Please, see the responses to comments #55 and #282.

comment	*1389* comment by: *Gama Aviation (UK) Ltd* A form of passive contact for the notification of roster or duty assignments, changes or communication of duty assignments during the reserve may help minimise disruption to establish sleep and rest patterns. GM1 ORO FTL 110 Suggest add new point defining Passive Contact Passive contact is a form of contact a crew member can avoid. Examples of passive contact are: (a) E-Mail (b) A visit to the operators Website/Intranet by the crew member (c) Inaudible pager (d) Facimilie transmission (e) Text Message
response	Please, see the response to comment #1166.

comment	*1469* comment by: *VOLDIRECT* (j) except for EMS operations, change a schedule or crew arrangements, if the actual operation exceeds the maximum flight duty period on more than 33 % of the flight duties in that schedule during a scheduled seasonal period; This point is not applicable to Air Taxi Operations. Suggested change: "(j) except for EMS and air taxi operations,..." Rationale: Air-Taxi does not have 'Schedules'! How do we monitor exceedances of maximum FDPs on more than 33% of the flight duties in that schedule during a scheduled seasonal period?
response	Please, see the response to comment #55.

comment	*1480* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)* "(k) in EMS operations, change a schedule or adapt crew arrangements, if the actual operation exceeds the maximum FDP on any EMS operating base on more than 10 % of the FDPs in any 3 months." (k) versus (j). Where is the the rationale for the 10% for EMS operations compared to the 33% in para (j) for other operations like CAT operations with aeroplane.
response	Please, see the response to comment #55.

comment	*1488* comment by: *Airlec Air Espace / Paul Tiba* ISSUE – AEMS In AEMS, the operation can never be scheduled due to the emergency specificity of the missions. In that way, the 10% of FDP in any 3 months is far not representative as it is possible to have only few missions over a 3-month period. The incertitude over max FDP is thus very low for mostly AEMS operations. Moreover, the operator should as mitigation describes in its Management System a process to track and trend flight and duty time transgressions and deviations. PROPOSAL Suppress the paragraph (k). Add a new AMC2 ORO.FTL.110(j) NEW AMC2 ORO.FTL.110(j) Operator responsibilities - "MANAGEMENT OF ROSTER CHANGES (AIR TAXI OPERATIONS AND AEMS) The operator should establish a procedure for the notification of roster changes that minimizes the disruption to the crew member's ability to obtain appropriate sleep and

rest."
Add a new GM2.ORO.FTL.110(j)
NEW. "GM2 ORO.FTL.110(k) Operator responsibilities

OPERATIONAL ROBUSTNESS OF ROSTERS (AIR TAXI OPERATIONS)
Performance indicators for operational robustness may include the following:
the use of commander's discretion;
the use of (unplanned) reduced rest;
duty time transgressions related to;
technical delays;
commercial delays;
delays due to customer's plan changes;
ATC delays; and
the number of on the day changes that impinge on a planned rest period encroaching a local night."

ISSUE
Keep the Table 2 coming from the CAT.A regulation and add the possibility, if an operator has a FRM, of increasing the FDP limitations in the Table 2 by.
• For AEMS operations:
o 2 hours until 4 sectors
o 1h30 for 5 sectors
o 1h for 6 sectors and onwards

response Please, see the responses to comments #55, #282, #283 and #1042.

comment *1504* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

(j) It should be taken into account that ATXO do not have regular schedules and seasonal periods. Therefore, an exemption, like for EMS, should be provided.

(k) The provisions fall short on providing much needed flexibility in rostering in case of unexpected contingencies. The provision of respective guidance is highly

response Please, see the responses to comments #55, #282 and #283.

ORO.FTL.205

3.1. ORO.FTL.205 p. 10-13

comment *21* comment by: *Alpine airlines - FR.AOC.0088*

50% of our operations are between 2 & 3 sectors per day. For example, our customer need to go somewhere and come back the same day. In our company, the average FDP for 2 sectors per day is 11, 4 hrs, always between 0600 and 2100. We never observe any case of fatigue and no report from pilots in this type of FDP.

Currently, the subpart Q is: 1 to 3 sectors: Max FDP = 13 hrs. In the new purpose of Table 5, the maximum possible FDP is 11 hrs (column "up to 4 sectors"), 2 hrs less than subpart Q. We will appreciate a new column in the table 5, including the case of "up to 3 sectors", including 1 hr more of FDP than column "Up to 4 sectors".

The table could be like this :

Starting time of FDP	Numbers of sectors							
	Up to 3	4	5	6	7	8	9	10 or more
0600 – 0659	***11 :00***	10 :00	09 :15	08 :45	08 :15	08:00	08:00	08:00
0700 – 0759	***11 :30***	10 :30	09 :45	09 :15	08 :45	08 :15	08:00	08:00
0800 – 1259	***12 :00***	11 :00	10 :15	09 :45	09 :15	08 :45	08:15	08:00
1300 – 1429	***11 :30***	10 :30	09 :45	09 :15	08 :45	08 :15	08:00	08:00
1430 – 1659	***11 :00***	10 :00	09 :15	08 :45	08 :15	08:00	08:00	08:00
1700 – 2159	***10 :00***	09 :00	08 :15	08:00	08:00	08:00	08:00	08:00
2200 – 0359	***09:00***	08:00	08:00	08:00	08:00	08:00	08:00	08:00
0400 – 0559	***09 :15***	08 :15	08:00	08:00	08:00	08:00	08:00	08:00

response

Please note that Table 5 refers to any single-pilot operation.

For two-pilot ATXO and AEMS operations, Table 1 of CS2 FTL.2.205 applies.

There, for FDPs starting in the range 0600–0814, the proposed FDP is 13 hours, i.e. the same as in Subpart Q.

Response with regard to 'planned extensions in ATXO and AEMS operations' (comment #33)

comment	*33* comment by: *Serair* To make it easier to apply when performing various types of operations, it would be better to increase the number of sectors to 5 in (d1) (2) (i). (d1) Maximum daily FDP for acclimatised crew members in two-pilot air taxi and AEMS operations with the use of extensions without on-board rest [...] 2) The use of the extension shall be planned in advance, and shall be limited to a maximum of: (i) 5 sectors; or
response	Accepted

Replies with regard to Table 5 (comments #41, #42)

comment	*41* comment by: *ST BARTH COMMUTER* Table 5 for single-pilot operation is too restrictive. The decrease from the starting FDP of 11H should be more gradual. With a "normal" starting of FDP (between 0700 and 0900), the maximum FDP should be at least 10H up to 10 sectors, then decrease to 8H at 12 sectors or more.
response	Not acceptable An FDP of 10 hrs for 10 sectors would be more than the currently applicable limit for two-pilot operations (see Table 2) where the maximum FDP for the same number of sectors is 9 hrs. From an operational perspective, this is not justified as occurrence data shows that in single-pilot operations where the workload is not shared, the risk of accidents is much higher compared with two-pilot crew. It is not justified from a scientific perspective either. Scientific data shows that fatigue increases with the increase of the number of take-offs and landings (sectors). Please, also refer to the response to comment #887.

comment	*42* comment by: *Airtask Group* Item ORO.FTL.205 (b)(6) would infer that a derogation against table 5 using a 'BREAK' may be applied for?

response

Although it is not 'a derogation against Table 5', extension of FDPs applicable to single-pilot operations is possible with split duty, i.e. with a break on the ground between the sectors, under certain conditions.

comment

56 comment by: *NetJets Europe*

ORO.FTL.205 (b)(6)
NetJets supports proposal to have a different maximum FDP table for acclimatised two crew operations for air taxi operations.

ORO.FTL.205 (d1)
NetJets supports proposal

ORO.FTL.205 (d1)(4)
NetJets supports proposal

ORO.FTL.205 (e)
NetJets supports proposal

ORO.FTL.205 (f)(1)(i)
What does air taxi apply, 2 or 3 hours above the Air taxi table or the ORO.FTL.205.(b) and (e)?
If the maximum discretion is added to the OFO.FTL.205 (b) and (e), this becomes complex as it requires one to refer back and forth between various tables. NetJets suggests adding a table to CS with the maximum FDP allowed with PIC discretion for two pilot operations.
Complexity example: The Air taxi FDP table has 1-3 sectors in the first column while the CAT only has 1-2. If applying the 3rd sector max FDP it would require then comparing to the CAT table in a different column which could lead to confusion and it becomes complex.

response

Your proposal to clarify the requirements on commander's discretion in a CS is accepted.

Point (f1) is inserted in point ORO.FTL.205 to provide a legal reference, while detailed requirements on commander's discretion for air taxi and AEMS operations are laid down in CS3 FTL.2.205.

comment

109 comment by: *UK CAA*

Page No: 11

Paragraph No: ORO.FTL.205 Flight duty period (FDP), (b) (1) Two pilot and Single pilot operations

Comment: The addition of the terminology "two-pilot operation other than HEMS", or "single-pilot operation" could potentially generate confusion on the applicability of the

	tables to cabin crew members. EASA are requested to clarify the applicability of the tables to cabin crew. The term applicable to "two-pilot operation" needs to be clearly explained in terms of the FDP limit for cabin crew. This could be within the text or within FAQ, stating this applies to all crew members carried where the flight crew consists of a minimum of two pilots. **Justification:** Clarity of the application of the tables to cabin crew.
response	Accepted

Response with regard to 'mixed operations' (comment #129)

comment	*129* comment by: *VistaJet* ORO.FTL.205 states the operator shall establish maximum daily FDP's, but then goes on into great detail with tables and extensions of allowable daily FDP. Surely you have one or the other? As an operator who has different fleets with different dynamics, i.e short haul many sectors, and long haul with 1 or 2 sectors, it is impossible to apply one system to both types of operation. A suggestion would be to take a similar stance to international systems where a standard 14hr max duty limit is set, whereafter the approved FRMS further tailors restrictions specific to the type of operation. In summary ORO.FTL.205 is 100% accurate but operators should be able to work from a single max daily FDP figure and establish a custom limit in accordance with their management systems and FRMS.
response	Noted The aim of point ORO.FTL.205 is to ensure that crew members can operate at a satisfactory level of alertness rather than make the requirements easier to be applied by operators with mixed fleets. Considering the existing differences in complexity of operations, operators, and maturity of their fatigue management systems, EASA proposal includes both detailed requirements for less complex operators and a greater flexibility for more complex operators with mature FRMS.

Response with regard to Tables 3 & 4 (comment #130)

comment	*130* comment by: *VistaJet* The limits prescribed in Table 3 are excessively restrictive for an AXTO. The base limit should realistically be set at 12Hrs without FRMS, 13Hrs with FRMS.

ATXO is not the same as scheduled CAT and crew will often spend extended time (days) on the ground after crossing multiple timezones making them unacclimatised, but very well rested. In addition, they have consolidated "OFF" blocks (generally 2 weeks for long haul ATXO) whereby any affects of timezone crossing and cumulative fatigue is addressed.

In addition, this NPA is already restricting monthy and annual flight hours limits, reducing the 28 day and annual limit by 20% or more.

Duty hours have also been further restricted adding a reduced 14 day limit (110hrs). All of these limits are amounting to having to increase crew head count by 30% minimum which is commercially not viable.

response

The comment about Table 3 for air taxi operations is accepted.

NPA 2017-17 did not include specific limits for two-pilot crew in an unknown state of acclimatisation in air taxi and AEMS operations. Using the limits prescribed in Table 3 for scheduled CAT operations is not an option for air taxi operations as these limits are not tailored to them.

CS FTL.2 will include limits for two-pilot crew in an unknown state of acclimatisation, for air taxi and AEMS operations.

The comments regarding cumulative limits are addressed under the relevant section.

comment

131 comment by: *VistaJet*

Addressing point (d1) again the 1hr extension at planning stage is too limiting to be set at 4 sectors, or 3 sectors encroaching the WOCL.

Propose to improve flexibility here by making it 5 sectors and 4 sectors respectively.

response

Accepted

Please, see the response to comment #33.

Response with regard to 'minimum rest due to planned extensions' (comment #166)

comment

166 comment by: *Air Hamburg Luftverkehrsgesellschaft mbH*

D1 (1): The minimum pre- and postflight rest shall be increased by 2 hours.

This should be also an option to choose from in case of an extension, as the 60hrs subsequent should only be chosen as a last possiblity. The two hours before and after will give the pilot a better option to recover from fatigue.

response	Accepted

comment	*167* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* (d1) (2): The use of extension ~~shall be planned in advance, and~~ shall be limited to a maximum of: (i) 6 sectors when the WOCL is not enchroached; or (ii) 4 sectors when the WOCL is enchroached by 2 hours or less, or (iii) 3 sectors when the WOCL is enchroached by more than 2 hours. *An extension cannot always be planned in advance, due to delays and other unforseen circumstances. This will give the operator a better possibility to plan their schedules. Instead of making use of the commanders discretion they can use the extension, which will give the crew members a longer rest period.* (e) on-board rest can also be on ground
response	Accepted Please, see the responses to comments #33 and #1262.

Response in relation to Tables #2, #3 and #4 in ATXO and AEMS operations (comment #192)

comment	*192* comment by: *Premium Jet AG* (b) Table 2: Table should be redone for Air Taxi. Table 3: And increase Legs 1-3 to 12h FDP. Leg 4 upwards FDP fits Table 4: Increase Legs 1-3 to 13h FDP. Rest unchanged (d1) Please revert to previously agreed version with EBAA: sectors 5 instead of 4 and 3 to 4
response	Tables 2, 3 and 4 do not apply automatically to air taxi and AEMS operations. The operator may choose to apply the tables of CS FTL.2 for air taxi and AEMS operations instead. In such a case, however, the operator must apply the entire CS FTL.2. As regards Tables 3 and 4, please refer to the response to comment #130. As regards paragraph (d1), please refer to the response to comment #33.

comment	*204* comment by: *Cat Aviation AG* Table 2 is very fractured with too many FDP changes every 30' of starting time. AirTaxi's main purpose is flexibility, which will be strongly hampered to administer and manage in

	planning. Please consider the difference in Operations between scheduled commercial and Air Taxi/EMS. Refer to our comments under 4.5 Conclusion, page 67 of the NPA. Suggest to re-do this table 3 to show following timings: 1-2 Sec = 13hrs // 3-4 Sec = 12hrs FDP. Reasoning refer to our comments under 4.5 Conclusion, page 67 of the NPA. Suggest to re-do this table 4 to show following timings with FRMS: 1-2 Sec = 14hrs // 3-4 Sec = 13hrs FDP. Reasoning refer to our comments under 4.5 Conclusion, page 67 of the NPA
response	Table 2 applies to scheduled operations. For air taxi operations, Table 9 of CS FTL.2 applies. Please, refer to the response to comment #1003 in relation to Table 9. As regards Tables 3 and 4, please refer to the response to comment #130.

Responses in relation to 'ORO.FTL.205(d1)' (comment #208)

comment	*208* comment by: *Cat Aviation AG* (d1) takes away more flexibility than for scheduled operations. Operator will assure robustness of schedule taking into account nature of AirTaxi business. Suggestion i. The maximum daily FDP as calculated as per "Maximum Daily Flight Duty Period (FDP)" can be extended by up to 1 hour. ii. The maximum number of extensions is 2 in any 7 consecutive days. iii. Extensions are not allowed for a FDP of 6 sectors or more. iv. Where a FDP encroaches on the WOCL by up to 2 hours, extensions are limited to up to 4 sectors. v. Where a FDP encroaches on the WOCL by more than 2 hours, extensions are limited to up to 3 sectors. vi. Where a FDP is planned to use an extension, pre and post flight minimum rest is increased by 2 hours or post flight rest only is increased by 4 hours. Where the extensions are used for consecutive FDPs the pre and post rest between the two operations shall run consecutively. vii. Where a FDP is planned encroaching the entire WOCL the maximum FDP is limited to 12 hours.
response	Accepted The principles for FDP extensions in scheduled operations will also apply to air taxi/AEMS operations. Please, refer to the comments and responses under section 'CS FTL.2.205'.

comment	*236* comment by: *Thomas Henselmann*

	(b) Check table 2 for Air Taxi Operations, a further reduction in Max FDP without FRMS would be a significant burden. Previous limitations proved a reasonable frame for the FDP. Adjusting tables 3&4 for Air Taxi Operations would be highly appreciated. Max FDP for 1-3 sectors 12h without FRMS and 13h with FRMS can be essential for Air Taxi Operations.
response	Please, refer to the responses to comments #130 and #192.

comment	*237* comment by: *Thomas Henselmann* (d1) decreased sectors (5 to 4) and 4 to 3 when encroaching WOCL might be limiting to Air Taxi operations. Keeping previous regulations would be appreciated.
response	Accepted

comment	*286* comment by: *European Business Aviation Association (EBAA)* (d1) Maximum daily FDP for acclimatised crew members in two-pilot air taxi and AEMS operations with the use of extensions without on-board rest EBAA COMMENTS: 1. The use of extensions in the NPA has been lower down to 4 sectors instead of 5 as previously agreed in the draft IR. - Back to previous agreed versions 2. The use of extensions in the NPA has been lower down to 3 sectors instead of 4 when the WOCL is encroached by more than 2 hours, this is against what has previously been agreed in the draft IR. Back to previous agreed versions
response	Accepted Please, see also the response to comment #33.

Response with regard to 'FDP extensions' (comment #288)

comment	*288* comment by: *European Business Aviation Association (EBAA)* (d1) Maximum daily FDP for acclimatised crew members in two-pilot air taxi and AEMS operations with the use of extensions without on-board rest FOR AEMS: 4h extension at planning stage subject to following conditions: -Dedicated Air Ambulance Air Ambulance Definition:- when the sole reason for the flight is to carry an ill or injured person to a recognised medical facility, or the carriage of a human organ necessary for a transplant operation. A sector flown to position an aircraft to the operating base before or after an Air Ambulance flight is considered part of that flight.

	The company operates a dedicated Air Ambulance service and accordingly the allowable FDP, as per section 7.4.11, may be planned to be increased by up to a maximum of 4 hours. This is referred to as Air Ambulance FDP and to use this allowance the following must apply: • When an ill or injured person is carried a qualified medical attendant must accompany the flight. • The only passengers that may be carried in addition to the patient and medical crew are the immediate family or next of kin; • The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an Air Ambulance flying duty; • Two Pilot Crew; The Ambulance Allowance may be used in order to position an aircraft to transfer a patient and return back to base to enable the aircraft to be available for further life saving work with a fresh crew. This allowance cannot be planned to exceed 4 hours. Upon completion of an Air Ambulance FDP the appropriate full rest period must be taken. There is no limit to the number of Air Ambulance FDP's that can be undertaken within a roster period and no requirement for extended time before the Air Ambulance FDP can be used again. The use of Commander's discretion to further extend the Ambulance FDP beyond the extra 4 hours permitted may be exercised only to off-load/deliver the patient or organ to the destination. This is then deemed to be an Extended Ambulance FDP and cannot be planned for. Such discretion cannot be used after the patient or organ has been off-loaded. A discretion report must be submitted with the flight paperwork. Following an Extended Air Ambulance FDP the appropriate full rest period must be taken. In addition at least 48 hours must elapse between the end of one extended Air Ambulance FDP and the start of another extended Air Ambulance FDP. In one Air Ambulance operation involving two or more extended FDP duties (the first of which is positioning to uplift a patient or organ) the necessity for the 48 hours rest may be deferred until return to base. In this case the Commander may reduce the rest following the first FDP by up to 3 hours or to 10 hours in suitable accommodation, whichever is the greater. A pilot can only fly 3 Air Ambulances extended FDPs in any 28 consecutive days. (This ruling shall only apply where extensions exceed one and a half hours); • You may undertake a normal Air Ambulance FDP once rested following an Extended Air Ambulance FDP; • The relevant duty records must show where an FDP was conducted in accordance with this supplement; • The use of split duty to extend the FDP is not permitted. All details to be recorded on form GAL221 - Air Ambulance Commanders Discretion Report
response	This seems to be an excerpt from a particular OM or national regulation on air ambulance. Air ambulance is a normal CAT flight where urgency is not an issue. CS FTL.1 applies.

Response with regard to 'commander's discretion' (comment #290 (EBAA))

comment	*290* comment by: *European Business Aviation Association (EBAA)* (f) Unforeseen circumstances in flight operations — commander's discretion EBAA COMMENT: The reference table (MaxFDP) needs to be amended for Air Taxi Operations to refer to CS FTL.2.205. Suggested change: amend ORO.FTL.205 (f).
response	Not accepted Point ORO.FTL.205(f1) and associated CS FTL.2 apply to the use of commander's discretion in air taxi and AEMS operations.

comment	*449* comment by: *Cat Aviation AG* For Air Taxi please adjust ORO.FTL.205 (f)1 (i) to refer to ORO.FTL.205 and CS FTL.2.205 as well, so as to clarify which FDP tables are referred to (either to ORO or to the certification specification, if this paragraph applies to both, then both have to be referred to). Furthermore what is the rationale for allowing AEMS to extend the FDP if a patient has to be transported, especially relevance to safety?
response	Please, see the response to comment #290.

comment	*885* comment by: *Stephanie Selim* **ORO.FTL.205 (b)(1) :** **Technical comment** – DGAC asks for adding the possibility to extend the basic maximum daily FDP for two-pilot air taxi and two pilot AEMS operations providing that: (i) the basic maximum daily FDP extension is under FRM (ii) the basic maximum daily FDP given in table 2 can be extended by up to one hour. This "one hour extension" is in line with the possibility given by current ORO.FTL.205(b)(3) compared to ORO.FTL.205(b)(2) when the number of sector is lower than 7. Moreover, crew members are acclimatised.
response	Not accepted The FDP extension for two-pilot acclimatised crew is addressed by point ORO.FTL.205(d) and (d1). Please, refer to the responses to comments #130 and #192.

comment	*886* comment by: *Stephanie Selim* **ORO.FTL.205 (b)(3) :** Editorial comment - The maximum FDP should apply to the same scope of operations as ORO.FTL.205(b)(1) and (2): "The maximum daily FDP **for two-pilot operation other than HEMS** when crew members are in an unknown state of acclimatisation and the operator has implemented a FRM, shall be in accordance with the following table:"
response	Not accepted HEMS are no longer part of this proposal.

Responses with regard to 'single-pilot operations' (comment #887 (DSAC))

comment	*887* comment by: *Stephanie Selim* **ORO.FTL.205 (b)(4) :** **Technical comment -** No specific impact assessment has been developed for single pilot commuting operations. This type of operation is defined by a high number of repetitive short flights during a duty service. Therefore, in the case of single-pilot operations other than HEMS, it is proposed to assess the impact of fatigue of the possibility to extend the maximum daily FDP to 10 hours without limiting the number of sectors providing that flights are only by day in VFR, fights are always between a limited number of well-known airports, and all sectors last less than one hour.
response	Accepted Your proposal seems to depict an existing operation. Point ORO.FTL.205(b) allows single-pilot operators to establish individual FTL schemes where the maximum daily FDP is 10 hours irrespective of the number of sectors, provided that flights are conducted only by day in VFR and each sector lasts for less than 1 hour.

comment	*888* comment by: *Stephanie Selim* **ORO.FTL.205 (b)(6) :** Editorial comment - The scope of application should be more precise and apply to two-pilot air taxi and two-pilot AEMS operations only: "By derogation from (b)(1), flight time specification schemes in **two-pilot** air taxi and **two-pilot** AEMS operations may specify the maximum daily FDP

	without the use of extensions for acclimatised crew members in accordance with the certification specification applicable to those operations.”
response	Accepted Clarification on the scope of application is provided as necessary.

comment	*889* comment by: *Stephanie Selim* **ORO.FTL.205 (d) :** Editorial comment - The scope of application should be more precise and apply to two-pilot scheduled and two-pilot charter operations only: “Maximum daily FDP for acclimatised crew members in two-pilot scheduled and **two-pilot** charter operations with the use of extensions without in-flight rest.”
response	Accepted

comment	*890* comment by: *Stephanie Selim* **ORO.FTL.205 (d1) :** Editorial comment - The scope of application should be more precise and apply to two-pilot air taxi and two-pilot AEMS operations only: “Maximum daily FDP for acclimatised crew members in two-pilot air taxi and **two-pilot** AEMS operations with the use of extensions without on-board rest”
response	Accepted

comment	*891* comment by: *Stephanie Selim* **ORO.FTL.205 (e) :** Editorial comment – A more explicit wording is suggested: “Maximum daily FDP with the use of extensions due to in-flight **rest** or, in the case of AEMS or air taxi operations, **due to** on-board rest”
response	Accepted

comment	*892* comment by: *Stephanie Selim*

ORO.FTL.205 (e) :

Technical comment –
DGAC wonders if it applies to two-pilot operations only or both single and two-pilot operations? If it applies to single pilot operation, an augmented flight crew with one additional pilot may lead to have a maximum FDP higher than the FDP derived from two-pilot operations. This comment apply also to CS FTL.1.205(c) and CS FTL.2.205 Extension of the maximum basic daily FDP due to on-board rest under ORO.FTL.205(e).

response

Point ORO.FTL.205(e) applies to augmented flight crew in two-pilot operations where in-flight / on-board rest is used; hence, it does not apply to operations where the minimum crew is one or two pilots, i.e. single-pilot or non-augmented two-pilot crew.

comment

893 comment by: *Stephanie Selim*

ORO.FTL.205 (f)(1)(i) :

Technical comment –
Following the technical comment on ORO.FTL.205(e) and the answer given, it may be necessary to precise if augmented flight crew refers here to both single and two-pilot operations.

response

Please, refer to the response to comment #892.

comment

894 comment by: *Stephanie Selim*

ORO.FTL.205 (f)(3) :

Technical comment –
This requirement should also apply to EMS: "The commander shall consult all crew members on their alertness levels before deciding the modifications under subparagraphs 1 and 2 **and 7**."

response

Accepted

This requirement is included in CS FTL.2 and is applicable to air taxi and AEMS operations.

comment

895 comment by: *Stephanie Selim*

ORO.FTL.205 (f)(7) :

Technical comment –
This requirement is new and dedicated to EMS operations. However, should we consider that ORO.FTL.205 (f)(2), (3), (4), (5) and (6) also apply to EMS operations or should we refer

	only to the applicable CS ? It is suggested that it should also apply to EMS: "The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in EMS operations **under ORO.FTL.205(f)**, which occur at or after the reporting time, shall be established on the basis of the relevant certification specifications"
response	Please, refer to the response to comment #290.

comment	*993* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* (b) Table 2 is too complicated and not suitable for Air Taxi. Too many FDP changes - every 30'. Please consider the difference in operations between scheduled commercial and Air Taxi ad-hoc operation. please redo the table. Table 3 Please redo to: 1-2 sectors max 13 FDP, 3-4 sectors max 12 FDP Table 4 Please redo to: 1-2 sectors max 14 FDP, 3-4 sectors max 13 FDP
response	Please, refer to the responses to comments #130 and #192.

comment	*996* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* (d1) The FDP extension two times in any 7 consecutive days of max 1 hour is essential for flexibility. Suggestion: ii. The maximum number of extensions is 2 in any 7 consecutive days iii. Extensions are not allowed for a FDP of 6 sectors or more iv. Where a FDP encroaches on the WOCL by up to 2 hours, extensions are limited to 4 sectors v. Where FDP encroaches on the WOCL by more than 2 hours, extensions are limited to up to 3 sectors vi. Where FDP is planned to use an extension, pre and postflight minimum rest is increased by 2 hours or postflight rest is only increased by 4 hours. Where the extensions are used for consecutive FDP's, the pre and post rest between the two operations shall run consecutively. vii. Where FDP is planned encroaching the entire WOCL, the max FDP is limited to 12 hours.
response	Please, refer to the response to comment #208.

comment	*1030* comment by: *Rabbit-Air Ltd*

	The table 2 is too fractured for Air Taxi operation. It is the benefit to have airplanes waiting for clients! With duty changes every 30 or even 15 minutes operation will be blocked through administration.
response	Please, see the response to comment #192.

comment	*1033* comment by: *Rabbit-Air Ltd* Table 3: Max. FDP of 13 hrs for 1 to 2 sectors is frequently needed and should be considered when re-doing the table. Short positioning following a long range flight or vice versa. For example. 3- 4 sect. = 12hrs. 5- = 11hrs
response	Please, see the response to comment #192.

comment	*1037* comment by: *Rabbit-Air Ltd* Table 4: Max. FDP of 14 hrs incl. FRM for 1 to 2 sectors is occantionally needed and should be considered when re-doing the table. 3-4 sect. Under FRM should be 13 hrs.
response	Please, see the response to comment #192.

comment	*1048* comment by: *FNAM* The paragraph (a)(1) seems redundant with the prescriptions of the paragraph (b). FNAM and EBAA France suggest clarifying the writing. PROPOSAL Suppress the newly added paragraph (a)(1).
response	Not accepted Paragraph (a)(1) clarifies the concept and scope of applicability of CS FTL.1 and CS FTL.2.

comment	*1050* comment by: *FNAM* In the paragraph (b), it is not explicit whether: • All the CS.FTL.2 requirements shall be applicable "in block"; or

- The CS requirements should apply depending on what is said in the implementing rule; or
- Cherry-picking is allowed

Indeed, two options seem to be presented, one described in ORO.FTL.205 (b) and another in CS FTL.2.205. In that way, the CS is a substitution of the IR, which is not the aim and the statute of a CS. The complexity of this proposal may lead to misunderstanding and thus wrong application of the regulation.
Therefore, FNAM and EBAA France suggest listing the two options in the CS.FTL.2.205 (b) instead of having one described in the IR and one in the CS.

PROPOSAL
For Air Taxi and AEMS, suppress all FDP limitations (Tables) in the IR ORO.FTL.205 and refer only to the CS in this IR as it is the case for HEMS in the §(b)(7).

response

Not accepted

Please, see the response to comment #192.

comment

1051 comment by: *FNAM*

(b) Regarding the notion of a Daily FDP
For small FT, it is possible to have multiple FDP within the same day. For instance: One FDP from 07:00 to 8:30 followed by a 12h rest period and then a FDP from 20:30 to 22h.

response

Yes, as long as these FDPs are separated by a rest period that is equal to the previous duty or a minimum rest period.

comment

1054 comment by: *Rabbit-Air Ltd*

(d) and (d1): Max. FDP extension twice any 7 days by max. 1 hour is reasonable. The flexibility should be maintained when planning FDP with extension! Minimum rest should be increased by either increasing 2 hours pre- and post-flight or 4 hours post-flight rest only. There are too many if and when's possible and do therefore enhance the chance of mistakes.

response

Noted

comment

1058 comment by: *FNAM*

Attachments #55 #56

Table 2

Keep the Table 2 coming from the CAT.A regulation and add the possibility, if an operator has a FRM, of increasing the FDP limitations in the Table 2 by (Cf. Annex 2 & 3):

- For Air Taxi operations: 1 hour no matter the number of sectors
- For AEMS operations:
  - 2 hours until 4 sectors
  - 1h30 for 5 sectors
  - 1h for 6 sectors and onwards

In order to mitigate these proposals, a scientific study may assess whether and how it may be possible to have FDP over 14 hours under a FRM
Cf. comment 1107

PROPOSAL
Add a sentence below the Table 2 to allow, if an operator has a FRM, to increase the FDP limitations in the Table 2 by:

- For Air Taxi operations: 1 hour no matter the number of sectors
- For AEMS operations:
  - 2 hours until 4 sectors
  - 1h30 for 5 sectors
  - 1h for 6 sectors and onwards

response

Please, see the responses to comments #192, #993 and #1050.

comment

1060 comment by: *FNAM*

(d1)(1)
Regarding the limitations of the use of the extension (planned in advance), FNAM and EBAA France share EBAA Europe's point of view. It is possible in the CAT FTL regulation to use these extensions for 5 sectors or 4 sectors when the WOCL is encroached by 2 hours or less. Hence, FNAM and EBAA France would like the same dispositions to be applicable for Air Taxi and AEMS operations.

PROPOSAL
Rewrite the paragraph (2)
"(2) The use of the extension shall be planned in advance, and shall be limited to a maximum of:
(i) 5 sectors; or
(ii) 4 sectors; when the WOCL is encroached by 2 hours or less; or
(iii) 3 sectors, when the WOCL is encroached by more than 2 hours."

response

Accepted

comment	*1062* comment by: *FNAM* (e) PROPOSAL: Add the following paragraph: *"By way of derogation from ORO.FTL.110(a) for AEMS and Air Taxi operations, operator may schedule an additional pilot and schedule an in-flight rest for crew members at any point in time including after reporting time."* RATIONALE: There is no additional fatigue with this disposition compared to if it was intended before, thus the mitigation is included in the proposal.
response	This is already possible and does not represent a derogation from point ORO.FTL.110(a), but requires planning and scheduling of an extended FDP due to on-board rest and augmented crew. Also, it requires that the subsequent sectors allow for each flight crew member to take their due on-board rest. Therefore, your proposal is not accepted. Please, refer to CS FTL.2.205(b)(11).

comment	*1067* comment by: *FNAM* FNAM and EBAA France agree with Air Taxi commander's discretion proposals (same as CAT.A FTL's dispositions)
response	Noted

comment	*1072* comment by: *FNAM* (f) FORCE MAJEURE AEMS and Air Taxi are deeply linked with national health, security and safety. Current French regulation allows, by sovereign decision of the State, to grant derogation as far as national health, security or safety is involved. Such a possibility shall remain for "Force majeure" and be introduced within the IR, in respect of the sovereignty of each Member State facing major health crisis. For illustrative purposes, the recent missions would not have been possible if this regulation enters into force as it is: • Hostage taking in Amenas in 2013 • Evacuation of injured journalists in Mossoul in 2016 • Airlift between Guadeloupe and Saint Martin in 2017 Therefore, FNAM and EBAA France suggest adding a specific paragraph in this implementing rule allowing pilots to derogate from these requirements in case of Force

Majeure as it is already the case in the Current French National Regulation or if the State requisitions an aircraft.

PROPOSAL
For illustrative purposes, in France the following article is applied in case of « Force Majeure » :
"Il peut être dérogé aux limitations mentionnées à la présente section dans les conditions suivantes :
1. Vols urgents, dont l'exécution immédiate est nécessaire :
a) Pour prévenir des accidents imminents et organiser des mesures de sauvetage, ou pour réparer des accidents survenus soit au matériel, soit aux installations ;
b) Pour assurer le dépannage des aéronefs.
2. Pour assurer l'achèvement d'une période de vol que des circonstances exceptionnelles n'auraient pas permis d'effectuer dans les limites préétablies.
3. Vols exécutés dans l'intérêt de la sûreté ou de la défense nationale ou d'un service public sur ordre du Gouvernement constatant la nécessité de la dérogation; la limite est à fixer par le ministre chargé de l'aviation civile."
(Ref : CAC D422-12)

response

Please, see the response to comment #1029.

comment

1143 comment by: *GBAA*

ORO.FTL.205 (d1)(1) Flight duty period (FDP)
The option to compensate extended duty by 60h extended rest period instead of 36h latest after the period of 168h starting with the first duty hour is very tempting. However, this rest time period extension of extra 24h should only be necessary once for all extensions within this 168h period.

response

Please, refer to the response to comment #208.

comment

1168 comment by: *Danish Aviation Association*

ORO.FTL.205 FDP: The tables seem not to have been changed to accomodate the specifics of the SME single-pilot and two-pilot operations.
In Table 5 is the FDP reduced compared to two-pilot operations, but a scientific reason seems not to support that decicion. All tables should be reassessed.

response

Not accepted

Scientific studies attached to the NPA show that SPLO are far more fatiguing than a two-pilot configuration due to increased workload.

comment	*1189* comment by: *SAF* (a)(1) The paragraph (a)(1) seems redundant with the prescriptions of the paragraph (b). SAF suggests clarifying the writing. PROPOSAL: Suppress the newly added paragraph (a)(1).
response	Not accepted Please, refer to the response to comment #1048.

Responses with regard to 'planning of FDP extensions' (comment #1262)

comment	*1262* comment by: *Volkswagen AirService GmbH* Refering to 205 (d1) (2) Extensions shall be planned in advance: As we operate on demand only, it is not possible to preplan and roster specific duties in advance. All duties are dependend of each other and are on short notice, only. We may roster undefined periods of duty, but dedicated duties are not known, yet. If we have to schedule duties in advance we have to keep available personnell for each duty, every day, even if we do have no tasks. This is impossible and makes no sense with regard to fatigue management, as well.
response	Not accepted It is possible to plan in advance by preparing a strategic roster of duties, standbys and days-off. Extended duties must be also notified in advance to crew members to allow them plan adequate rest. The maximum and/or minimum time for advance notification of an extended FDP needs to be established by the operator in accordance with point ORO.FTL.110 and specified in the OM-A. Notification times may also be established taking into account the WOCL.

comment	*1263* comment by: *Volkswagen AirService GmbH* Referring to d1): How much time in advance does the extension need to be planned? This is not feasible for air taxi operators in most cases and would be useless if kept this way. To take advantage of the one hour extension, the extension should be fully usable on a tactical level, notwithstanding any commander's decisions. This is comparable to present

	extensions granted on a national regulation level (i.e. extension of up to 14 hours twice in 7 days, without prior planning.), which has shown to be valuable.
response	Please, see the response to comment #1262.

comment	*1343* comment by: *Gama Aviation (UK) Ltd* Tables 3 & 4 should be ammended to reflect 1-3 sectors to maintain consistency with the other tables. In table 3, 1-3 sectors should be ammended to 12 hours maximum FDP without FRMS. Suggested Change: 1-3 Sectors = 12 Hours, 4 Sectors = 10 Hours, 5 Sectors = 9Hours 30 Minutes and then 9 hours for the remaining sectors up to the maximum of 8. In table 3, 1-3 sectors should be ammended to 13 hours maximum FDP **with** FRMS. Suggested Change: 1-3 Sectors = 13 Hours, 4 Sectors = 11 Hours, 5 Sectors = 10Hours 30 Minutes.....
response	Tables 3 and 4 do not automatically apply to air taxi and AEMS operations. Please, refer to the responses to comments #130 and #192.

comment	*1364* comment by: *Bartosz Fibingier* 1) Table 5 Maximum daily FDP* in hours — Acclimatised crew members — single-pilot operation other than HEMS: "The flight time for each sector shall be limited to 4 hours with autopilot and to 2 hours without autopilot" - a requirement is not scaled to the real risk attached. The requirement is considered as overregulating this subject. The extent of the CAT SPL OPS is very limited in general. As of that, exposure to the hazard is limited and automatically lowers the scaled risk level. Due to the type of airplanes and speed range of those aircraft on which this type of OPS is applicable will extremely limit business case and may impact many companies for which CAT OPS is an additional way to sustain positive income (i.e. ATOs). Please analyze and maybe present factual data on the scale of those operations in Europe (preferably compared to World data compared to a number of accidents/incidents in which exceedance of applicable (mentioned above) flight times caused unacceptable higher risk or participated in causal factors to an accident/incident. As per NPA 4.1.4.2 (...) None of these occurrences (12 accidents and 9 serious incidents) were found to contain any information as to whether fatigue was a factor in the occurrence.

2) point d1) for ATX and AEMS OPS is more restrictive than point d) applicable to SCHED and Charter CAT OPS which is in contradiction to EASA statements in:

"2.1. (...) ATXO are on-demand operations, the majority at short notice; they are characterised by frequent standby duties at home, frequent change of schedule, long break periods between duties and time zone crossings. Air taxi pilots on average fly significantly fewer hours per year than scheduled or charter airline pilots. Considerable use is made of positioning of crew and aircraft relative to scheduled flights.
(...) In the context of FTL, there are significant differences between ATXO, AEMS, HEMS and SPLO on the one hand, and typical CAT operations on the other. Still, ATXO, AEMS and SPLO are regulated on the basis of duty and flight time limits, and rest requirements of Subpart Q that have been designed for scheduled multi-crew airline operations. In comparison to flight times and duty periods that apply in CAT, ATXO and AEMS require much more flexibility and ability to accommodate often very demanding duties while managing fatigue to acceptable levels. Today, Subpart Q does not to provide that flexibility or the necessary levels of control and mitigation.", and
"2.2. The objectives of the EASA system are defined in Article 2 of the Basic Regulation. This proposal will in particular contribute to the high uniform level of civil aviation safety, provide a level playing field for all actors in the common European aviation market, and facilitate the free movement of goods, persons and services."

response

The FT values in Table 5 are proposed by the industry.

With regard to planned extensions, please refer to the responses given to comments #33 and #1262.

comment

1366 comment by: *Gama Aviation (UK) Ltd*

There is no equivalent in EASA for the Dedicated Air Ambulance FTL variation currently used by Gama Aviation Ltd. Should this variation not be possible under EASA, this is likley to have significant adverse impact on the operation of AEMS in our operation. We therefore seek assurances that this variation will still be possible under EASA FTL.

Exisiting Variation:

Air Ambulance Definition:- when the sole reason for the flight is to carry an ill or injured person to a recognised medical facility, or the carriage of a human organ necessary for a Transplant operation. A sector flown to position an aircraft to the operating base before or after an Air Ambulance flight is considered part of that flight.
The company operates a dedicated Air Ambulance service and accordingly the allowable FDP, as per section 7.4.11, may be planned to be increased by up to a maximum of 4 hours. This is referred to as Air Ambulance FDP and to use this allowance the following must apply:

• When an ill or injured person is carried a qualified medical attendant must accompany the flight.

	• The only passengers that may be carried in addition to the patient and medical crew are the immediate family or next of kin; • The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an Air Ambulance flying duty; • Two Pilot Crew; The Ambulance Allowance may be used in order to position an aircraft to transfer a patient and return back to base to enable the aircraft to be available for further life saving work with a fresh crew. This allowance cannot be planned to exceed 4 hours. Upon completion of an Air Ambulance FDP the appropriate full rest period must be taken. There is no limit to the number of Air Ambulance FDP's that can be undertaken within a roster period and no requirement for extended time before the Air Ambulance FDP can be used again. The use of Commander's discretion to further extend the Ambulance FDP beyond the extra 4 hours permitted may be exercised only to off-load/deliver the patient or organ to the destination. This is then deemed to be an Extended Ambulance FDP and cannot be planned for. Such discretion cannot be used after the patient or organ has been offloaded. A discretion report must be submitted with the flight paperwork. Following an Extended Air Ambulance FDP the appropriate full rest period must be taken. • In addition at least 48 hours must elapse between the end of one extended Air Ambulance FDP and the start of another extended Air Ambulance FDP. In one Air Ambulance operation involving two or more extended FDP duties (the first of which is positioning to uplift a patient or organ) the necessity for the 48 hours rest may be deferred until return to base. In this case the Commander may reduce the rest following the first FDP by up to 3 hours or to 10 hours in suitable accommodation, whichever is the greater. • A pilot can only fly 3 Air Ambulances extended FDPs in any 28 consecutive days. (This ruling shall only apply where extensions exceed one and a half hours); You may undertake a normal Air Ambulance FDP once rested following an Extended Air Ambulance FDP; • The relevant duty records must show where an FDP was conducted in accordance with this supplement; • The use of split duty to extend the FDP is not permitted. All details to be recorded on form GAL221 - Air Ambulance Commanders Discretion Report
response	Noted

	Air ambulance is a normal CAT scheduled/charter flight where urgency is not an issue. This means that, for air ambulance, CS FTL.1 applies.

comment	*1444* comment by: *European Cockpit Association* Commented text: On-board rest ORO.FTL.205 (e) ECA Comment: The proposed concept of 'on-board rest' as an equivalent to 'in-flight rest' is seriously flawed, contrary to available scientific advice such as that obtained by EASA in preparation for the 2010-14 NPA on CAT FTLs, and not a current acceptable practice. As described the 'rest' period would include any time spent in the rest facility, including during approach, landing, taxy, turnaround, brief and flight preparation, take-off and departure. At any of these times no meaningful rest will be achievable, and a flight crew member would normally be expected to take part in these phases of flight. Any rest while any activity is taking place on the aircraft, and outside of the Cruise phase, will be heavily disturbed and/or fragmented as flight/activity phases change, and not effective for FDP extension. Were rest only to be permitted starting and finishing within a period of complete inactivity on the aircraft, on the ground, this would effectively be, and fall under, the requirements of split duty. Proposal: Remove the concept of 'on-board rest' and return to the existing system of 'in-flight' rest which already goes far beyond the advice from EASA's scientific input.
response	Not accepted In-flight and on-board rest, while airborne, is only possible during the cruise phase of flight. On-board rest is also possible while on the ground, unlike in-flight rest. It can be reasonably expected that meaningful rest will be achievable during such rest periods. On-board rest in air taxi and AEMS operations is: (a) a period of a temporary relief of operational tasks, taken by a member of an augmented crew **during the cruise phase** of the flight in an on-board facility meeting the required standard; or (b) a period of a temporary relief of operational tasks, taken by a member of an augmented or non-augmented crew in an on-board facility meeting the required standard, while the aeroplane is **on the ground**.

comment	*1455*	comment by: *Association of Air Ambulances*

ORO.FTL.205(b)

There is no mention in this paragraph of the FDP table for two-pilot HEMS which is at CS.FTL.3.205. Elsewhere in the amended IR there is reference to CS.FTL so it would be useful and aid clarity if a new paragraph ORO.FTL.205(b)(8) was adding:

"In the case of two-pilot HEMS operations, the FDP limitation stated in CS.FTL.3 (a) Table 1, are applicable."

It is our opinion that a definition of Multi-Pilot operation rather than Two-Pilot operations.

response

Not accepted

HEMS is no longer part of this proposal.

comment

1465 comment by: *VOLDIRECT*

Table 5 Single Pilot: The table shows number of sectors starting at 4.
Air taxi for business is often an eary departure in the morning and a late return in the evening, 2 sectors only. Split duty is used, 2 sectors only.
For example, The current DGAC rule enables for a maximum daily FDP of 13:00 hours for 1/2 sectors; table 5 shows 10:00 hours for 4 sectors! We lose 3 hours.

response

Noted

Extension by 3 hrs of an FDP of a 10-hr single-pilot operation is already possible with split duty, i.e. with a break on the ground of 6 hrs spent in accommodation or of more than 6 hrs spent in suitable accommodation, between the sectors.

comment

1481 comment by: *Finnish Transport Safety Agency*

ORO.FTL.205 (b)(4)

Pilots in single-pilot CAT operations in Finnish Lapland fly tourists and locals in an area where other transport possibilities are scarce or non-existing. The operations are flown during the summer season only. These operations have major impact on local economy.

At the moment national FTL requirements allow FDP of 10 hours for these operations. The 8 hour FDP stated in ORO.FTL.205 would cause need for additional pilots and additional costs.

The FDP should be extended to 10 hours in certain conditions, since the nature of the operations is quite different compared other air taxi operations. The number of sectors during the day may be as high as 20 as the flights are very short, usually under 15 minutes. In addition the flights are flown in day VFR and in an environment familiar to pilot. The flight planning and navigation are simple as the flights are similar to each other.

This rule would also fit A to A flights, where the sectors are also short and flown locally

Proposal:
Add new paragraph ORO.FTL.205 (b)(8) as follows:

(8) By way of derogation from (b)(4) table 5, the FDP may be extended to 10 hours regardless of the number of sectors in air taxi operations when
a) flown in day VFR; and
b) route sectors are less than 30 minutes or flown from A to A.
However, the total flight time during the FDP may only be maximum 6 hours.

response

Please, refer to the response to comment #887.

comment

1505 comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

(b) This constitutes a highly presprictive part:

- Table 2 provides a much too complicated scheme and is therefore not suitable for ATXO. There are simply too many FDP changes (every 30' is to high of a change-rate). Please consider the difference in operations between scheduled commercial and Air Taxi adhoc operation. Conclusion: The table needs in any case to be reconsidered, dropped or completely redone.

- Table 3: Change suggestion based on practical expertise 1-2 sectors max 13 FDP, 3-4 sectors max 12 FDP
- Table 4: Change suggestion based on practical expertise 1-2 sectors max 14 FDP, 3-4 sectors max 13 FDP

response

Please, refer to the response to comment #192.

comment

1506 comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

(d1) An FDP-extension twice in any 7 consecutive days of max 1 hour constitutes an essential for needed flexibility.

	Therefore, we suggest the following: ii. The maximum number of extensions is 2 in any 7 consecutive days iii. Extensions shall not be allowed for an FDP of 6 sectors or more iv. Where a FDP encroaches on the WOCL by up to 2 hours, extensions shall be limited to 4 sectors v. Where FDP encroaches on the WOCL by more than 2 hours, extensions shall be limited to up to 3 sectors vi. Where FDP is planned to use an extension, pre and postflight minimum rest shall be increased by 2 hours or postflight rest shall only be increased by 4 hours. Where the extensions are used for consecutive FDPs, the pre and post rest between the two operations shall run consecutively. vii. Where FDP is planned encroaching the entire WOCL, the max FDP shall be limited to 12 hours.
response	Accepted

ORO.FTL.210 (cumulative limits)

3.1. ORO.FTL.210 p. 13-14

comment	*27* comment by: *Johannes Brantz* Guaranteed Days off Besides the monthly limit of duty time the German 2. DV LuftBO contains also a number of guaranteed days off per month. As the FTL focusses on a reduction of Fatigue driven by long duty times an additional regulation of guaranteed number of days off (for example 8 days/month) would accomplish the FTL perfectly.
response	Point ORO.FTL.210 deals with cumulative duty and FT limits, not with days-off. Clause 9 of Council Directive 2000/79/EC deals with days-off per month and per year. That Directive has since its adoption been transposed into each Member State's national legislation. Today, both Council Directive 2000/79/EC and Commission Regulation (EU) No 965/2012 apply in the EU. A mandatory rest period under Subpart ORO.FTL may be included in a day, or days, free of duty.

comment	*28* comment by: *Johannes Brantz* Maximum Duty Hours per year In 2002 there was a proposal made to limit the annual Duty Time to 1800 hours for flight crews that have mobile or flight duty times per year that exceed 20 % of there annual duty hours. The current limit of 190 duty hours in 28 consecutive days would accumulate to 2477 hours per year. Which is 677 hours more than the proposal from 2002 and 477 hours more then the current 2000 hour limit in Germany. So an actual increase of duty hours will counteract the intended reduction of fatigue. The annual duty hour limits should be reviewed combined with the applicable law for vacation days. For example a 2000 hour limit contract should include the vacation days and as well as an 1800 hour limit contract could well see vacation days on top of the 1800 hour limit.
response	The annual duty limit is not the product of simply multiplying the 28-day limit with the number of times 28 days occur in a year. The currently applicable annual duty limit is 2 000 hours as per Council Directive 2000/79/EC. That Directive deals with cumulative duty period per year. It has since its adoption been transposed into each Member State's national legislation. Today, both

	Council Directive 2000/79/EC and Commission Regulation (EU) No 965/2012 apply in the EU. In order to facilitate understanding and implementation, the annual duty limit of 2 000 hours will be included in point ORO.FTL.210.
comment	*29* comment by: *Johannes Brantz* Equal distribution of Duty time per year I am convinced that an equal distribution of duty time per year will reduce fatigue. However the actual situation is a high number of duty hours in the summer months and less duty hours in the winter months. Currently operators are not held accountable to equalize duty hours. Therefore in order to avoid overtime payments in the summer pilots are scheduled to have extensive days off during the winter months. So that they duty time to the operator in the summer.
response	Noted Council Directive 2000/79/EC, as transposed into Member States' national legislation, requires that the maximum annual working time be spread as evenly as practicable throughout the year.
comment	*66* comment by: *NetJets Europe* **ORO.FTL.210 (a)** NetJets supports proposal
response	Noted Please, also refer to the response given to comment #130.
comment	*87* comment by: *AIR ZERMATT AG* • The total duty periods to which an individual crew member may be assigned shall not exceed a maximum daily FDP of 14 hours. • FDP of more than 12 hours can only be extended to the max of 14 hours by **split duty**. This requires at least one break of a minimum of 120 consecutive minutes during the FDP; • Additionally, the following rest periods shall apply: **Working days in a row:** **Min. rest period in hours:**

4	36 hours
5	60 hours
6	84 hours

Working 7 days in a row must not be allowed!

response

Not accepted.

EASA proposes EU-harmonised FTL rules based, as far as possible, on latest scientific evidence and good practices in Europe.

It is not clear what your comment suggests and what scientific evidence/good practice it can be related to.

comment

110 comment by: *UK CAA*

Page No: 13

Paragraph No: ORO.FTL.210 (a)(c)(d) Flight times and duty periods

Comment: We believe the insertion of additional text in sub-paragraphs (a), (c) and (d) has changed the meaning and application of the limits. By inserting the text “either of the following limits” implies an either / or meaning suggesting that only one of the limits need to be applied. This would be an incorrect application and generates potential confusion.

Justification: The correct application of this requirement.

Proposed Text: Delete “either of” in sub-paragraphs (a). (c) and (d), leaving the text at “shall not exceed the following limits” or change “either” to “any”.

response

Accepted

Response with regard to 'monthly cumulative limits' (comment #132 (VistaJet))

comment	*132* comment by: *VistaJet* ORO.FTL.210 duty period limit for 14 days 110 hrs is very limiting. As mentioned previously, almost all ATXO use a rotation style roster (eg. 2 weeks on 2 weeks off) and include significant positioning as a passenger to get to the operating aircraft. 60hrs is already limiting but now to impose a 14 day 110hr limit is VERY restrictive. As mentioned in ATXO cumulative fatigue and acclimatisation is addressed during the consolidated "OFF" block every month. However, to make the operation commercially viable, crew availablity during the on block is essential. As there is NO HOME BASE, crew members are positioned via airline to the place of duty for that rotation. This means, before they have flown a commercial sector they may have accumulated up to 24 Hrs of duty, depending on where there are positioned to. Crew are also positioned frequently during their rotation which again counts towards duty. With the lower limit in the 2nd weel, it means that rotations will have to be cut short, and/or we will not be able to position crew back home after their rotation. From a social, safety and commercial perspective it then makes sense to allow violation of the 110hrs if sending crew home as passengers rather than giving them extended rest away from home, not to violate the 110hrs. Therefore suggest to amend (a)1 60hrs duty in 7 days unless crew member is positioned as passenger to his/her home.
response	Partially accepted The following amendments with regard to the cumulative limits of 110 hours and 60 hours will be made to point ORO.FTL.210: Point ORO.FTL.210(a) will be made applicable to scheduled and charter operations. For air taxi and AEMS operations, point (a1) will be inserted without the limit of 110 hours as this limit does not appear in Subpart Q. Also, point (a2) will be inserted to incorporate existing derogation cases from cumulative requirements, according to which the 60 hours duty limit in air taxi and AEMS operations may be exceeded by a maximum of 10 hours, provided this exceedance is used solely for the purpose of positioning a crew member back to their home base for the start of the extended recovery rest period, under certain conditions. Your comment with regard to 'home base' is not accepted.

comment	*193* comment by: *Premium Jet AG* (a): (1) & (2) are not based on scientific values. Please rework.

	positioning must be possible after acc. 60h
response	Noted Point ORO.FTL.210(a): (1) and (2) apply to scheduled and charter operators. For air taxi and AEMS operations, point (a1) will be inserted without the limit of 110 hours as this limit does not appear in Subpart Q. It is not clear what scientific values are known to Premium Jet. For example, 60 hrs in 7 days is a cumulative limit that exists under Subpart Q and has been implemented by air taxi operators so far. Not everything in the FTL requirements is based on scientific values though. There are also requirements that are based on experience.

comment	*238* comment by: *Thomas Henselmann* (a) possible extension on (1)&(2) for possible home proceedings should be regarded.
response	Please, refer to the response to comment #132.

comment	*291* comment by: *European Business Aviation Association (EBAA)* (a) The total duty periods to which an individual crew member may be assigned in scheduled and charter operations and in air taxi and AEMS operations shall not exceed either of the following limits: EBAA COMMENT: Limitations defined in point (1) and (2) are not based on any scientific data. CS FTL.2.210 – Less restrictive daily FDP – more restrictive cumulative flight hours. Suggested change: The 60 and 110 hours limit can be exceeded as long as the exceedance is only used to positioning home as a passenger to begin an ERRP. As a mitigation, EBAA suggests that EERP must include at least 3 local nights. Rationale: • Not scientific • Not affect the safety of flight – not a fatigue issue. • Under specific mitigation measure. The NPA allows Air-Taxi operators the freedom to apply two different maximum FDP structures (ORO.FTL.210 & CS.FTL.2.205) depending on the maximum number of flight hours assigned to a crew member. If we adopt the reduction in the cumulative flight hours allocated to each crew member (in 28 and 84 days, and in 12 consecutive calendar months) then the daily FDP allowed to be applied can be increased up to a maximum of 15 hours twice in any 7-day period.
response	Please, refer to the responses to comments #132 and #193.

comment	*450* comment by: *Cat Aviation AG* a) (2) should be removed. Point 1 and 3 are sufficient for robustness of air taxi schedule. For Home Positioning of a crew as passenger this not restriction can be exceed.
response	Please, refer to the response to comment #132.

comment	*735* comment by: *European Business Aviation Association (EBAA)* **ORO.FTL.210 Flight times and duty periods** (a) The total duty periods to which an individual crew member may be assigned in scheduled and charter operations and in air taxi and AEMS operations shall not exceed either of the following limits: (1) 60 duty hours in any 7 consecutive days; (2) 110 duty hours in any 14 consecutive days; (3) 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period. EBAA COMMENT: Limitations defined in point (1) and (2) are not based on any scientific data. CS FTL.2.210 –Less restrictive daily FDP – more restrictive cumulative flight hours. Suggested change: The 60 and 110 hours limit can be exceeded as long as the exceedance is only used to positioning home as a passenger to begin an ERRP. As a mitigation, EBAA suggests that EERP must include at least 3 local nights. Rationale: • Not scientific • Not affect the safety of flight – not a fatigue issue. • Under specific mitigation measure. The NPA allows Air-Taxi operators the freedom to apply two different maximum FDP structures (ORO.FTL.210 & CS.FTL.2.205) depending on the maximum number of flight hours assigned to a crew member. If we adopt the reduction in the cumulative flight hours allocated to each crew member (in 28 and 84 days, and in 12 consecutive calendar months) then the daily FDP allowed to be applied can be increased up to a maximum of 15 hours twice in any 7-day period.
response	Please, refer to the responses to comments #132 and #193.

comment	*1001* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* (a) 2 should be removed. (1) and (3) are sufficient for robustness of Air Taxi shcedule. This restriction can be exeeded in case of a positioning of a crew as passenger back home.
response	Please, refer to the responses to comments #132 and #193.

comment	*1024* comment by: *Stephanie Selim* (a)

	Technical comment- Experience feedbacks on scheduled CAT FTL show that regulations should frame in an adequate manner flight and rest time limitations while keeping flexibility for operational hazards which sometimes occur. Margins exist for FDP with commander's discretion but don't exist for duty times, which can be a problem when arriving at duty time limit for cumulative duty times. Thus, in order to allow operators to manage that kind of hazard with an acceptable level of safety, DGAC proposes to assess the implementation of flexibilities allowing return positioning of crew members in the case where duty times on a given period are exceeded.
response	Please, refer to the responses to comments #132 and #193.

comment	*1025* comment by: *Stephanie Selim* (e)(1) Technical comment – With this paragraph, AEMS operations don't have any flight time limit to apply if they choose the basic FDP definition given in ORO.FTL.205(b)(6) (and CS FTL.2.205 table 1). Indeed, in the case of AEMS operations, ORO.FTL.210(e)(1) defines 'total flight time' by referring to the basic FDP definition given in ORO.FTL.205(b)(1), and ORO.FTL.210(e)(2) refers to the basic FDP definition given in ORO.FTL.205(b)(6) but the associated definition of the 'total flight time' in the CS FTL.2.210 applies only to ATXO. Therefore, DGAC wonders what flight time limitations apply to AEMS.
response	Accepted AEMS operations were mistakenly removed from point (e)(1).

comment	*1026* comment by: *Stephanie Selim* (e)(1) Editorial comment – The table number needs to be corrected: "in accordance with (c). In such case, table **2~~1~~** in ORO.FTL.205(b)(1) shall apply; or"
response	Accepted The numbering of the table will be corrected.

comment	*1027* comment by: *Stephanie Selim* (e)(1) Editorial comment – The table number should be added to be coherent with ORO.FTL.210 (e)(1): "in accordance with the limits specified in the certification specifications applicable to air taxi operations. In such case, **table 1 in** CS FTL.2.205 for air taxi shall apply."
response	Accepted

comment	*1057* comment by
	3 local nights (suggestion EBAA) would hinder crew planning of a small operator having minimum crew available! Preferred suggestion of CatAvi using extended rest of 36 hrs incl. 1 local night is reasonable.
response	Partially accepted It is not clear to which requirement of point ORO.FTL.210 the comment refers. In principle, 60 hours of extended recovery rest, including 3 local nights, are proposed under point ORO.FTL.205(d1) as additional mitigation measure for ATXO and AEMS operators to compensate for the extended daily FDPs without in-flight rest. However, since the requirement for 3 local nights of extended recovery rest may put undue burden on small operators with limited pilot resources, it seems reasonable to remove it. Operators shall anyway comply with point ORO.FTL.235(d) 'Recurrent extended recovery rest periods', i.e. minimum 36 hours including 2 local nights. Those 36 hours are increased to 48 hours twice every month.

comment	*1074* comment by: *FNAM* (a) ISSUE FNAM and EBAA France propose to exceed these limits when crew members are positioning home to begin an extended recovery rest period. As a mitigation, the next extended recovery rest period to the positioning shall include at least 3 local nights. PROPOSAL *"(a) The total duty periods to which an individual crew member may be assigned in scheduled and charter operations and in Air Taxi and AEMS operations shall any of the following limits:* *(1) 60 duty hours in any 7 consecutive days;* *(2) 110 duty hours in any 14 consecutive days;* *(3) 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period.* ***These limits can be exceeded to positioning home if the next consecutive extended recovery rest includes at least 3 local nights**."*
response	Please, refer to the responses to comments #132 and #193.

comment	*1086* comment by: *FNAM* (e) ISSUE

The scope of the disposition is confusing. Indeed, the scope concerns respectively:

- Air Taxi and AEMS: first sentence in (e)
- Only Air Taxi for (e)(2) although the referred CS FTL.2.205 applies for AEMS and Air Taxi operations

Besides due to the possible evolution of the regulation notably for the CS, the IR shall not refer directly to a precise CS number, such as CS FTL.2.205. Moreover, the CS should have been clearly named in a manner to identify easily to which paragraph of the IR it refers.

Furthermore, in the paragraph (e), it is not explicit whether:

- All the CS.FTL.2 requirements shall be applicable "in block"; or
- The CS requirements should apply depending on what is said in the implementing rule; or
- Cherry-picking is allowed

Indeed, two options seem to be presented, one described in ORO.FTL.210(c) and another in CS FTL.2.210. In that way, the CS is a substitution of the IR, which is not the aim and the statute of a CS. The complexity of this proposal may lead to misunderstanding and thus wrong application of the regulation.
Therefore, FNAM and EBAA France suggest listing the two options in the CS.FTL.2.210 instead of having one described in the IR and one in the CS.
Cf. comment 1132

PROPOSAL
Rewrite clearly for Air Taxi and AEMS the 2 options in CS.
"(e) The total flight time to which an individual crew member may be assigned in Air Taxi and AEMS operations is established in accordance with the limits specified in the certification specifications applicable to Air Taxi and AEMS operations" and then refers to the 2 options in CS.

response

Noted

Point (e) is deleted. The total FT limits applicable to scheduled/charter operations are applicable to air taxi and AEMS operations, as has been the case so far.

comment

1145 comment by: *GBAA*

ORO.FTL.210 (a)(3) Flight times and duty periods
The term "spread as evenly as practicable throughout that period (of 28 days)" does not make any sense for an operator with a floating fleet. Usually two persons per position are employed each applied for period of 14 days on an specific airplane. The remaining time of the month is travel and rest time. So in this way, the potential maximum 190 hours of duty are limited by the 110 hours limitation in any 14 consecutive days anyway.

response	Please, refer to the responses to comments #132 and #193.

comment	*1176* comment by: *Danish Aviation Association* ORO.FTL.210: This is another example, where CAT airlines rules are implied on SME ATXO operators. There is a lack of scientific analysis and data. These flight times and duty periods should be deleted and replaced with limitations based on scientific data, fatigue reports and flight safety reports and allow for mitigation measures under the FRMS.
response	Please, refer to the responses to comments #132 and #193.

comment	*1266* comment by: *Volkswagen AirService GmbH* Referring to (c): This table differs from CS.FTL.2.210. It is unclear to us which table needs to be applied. Please clarify.
response	Accepted Corrections are made as necessary.

comment	*1367* comment by: *Bartosz Fibingier* "(1) in accordance with (c). In such case, table 1 in ORO.FTL.205(b)(1) shall apply" - As per eur-lex there is no table 1 under ORO.FTL.205(b)(1), it starts with table 2 Maximum daily FDP — Acclimatised crew members.
response	Accepted Corrections are made as necessary.

comment	*1368* comment by: *Gama Aviation (UK) Ltd* We believe that the limitations in (a) 1) & 2) are not based on scientific data, and that whilst there is less restrictive daily FDP more restrictive cumulative flight hours have been applied. Suggest that the 60 hour and 110 hour limits may be exceeded, but only for the purposes of positioning crew home as a passenger to begin an extended rest & recovery period.

	Additionally, the NPA allows the operater the choice between two different maximum daily FDP structures (ORO.FTL.210 or CS.FTL.2.205) depending on the minimum number of flight hours assigned to a crew member. If the reduction in lower cumulative hours is adopted, then the daily FDP allowed to be applied should be increased to a maximum of 15 hours twice in any 7 day period.
response	Please, refer to the responses to comments #132 and #193.

comment	*1386* comment by: *Swiss Air-Ambulance Rega* Rega does 24 h on STBY with 6 h consecutive break and, in addition, to start night STBY, 180 min. breaks with at least one break of minimum 120 consecutive min. before in the daytime. Proposed amendment: The total duty periods to which an individual crew member may be assigned shall not exceed a maximum daily FDP of 14 hours. FDP of more than 12 hours can only be extended to a maximum of 14 hours by split duty. This requires at least one break of a minimum of 120 consecutive minutes during the FDP. Additionally, the following rest periods shall apply: Working days in a row and min. rest period in hours: 4 days: 36 hours 5 days: 60 hours 6 days: 84 hours Working 7 days and more in a row must not be allowed
response	Not accepted Please, refer to the responses to comments #132 and #193.

comment	*1394* comment by: *European Helicopter Association (EHA)* **Deutscher Hubschrauber Verband / DHV** (Germany) Paragraph No: ORO.FTL.210 (d)(1)(2)(3) Comment: There is no obvious reason to limit the total flight time per crew member except for the total flight time per year (in accordance with German FTL: 900 hours) Justification: Proven FTL system Proposed Text: delete (1) and (2), amend (3) to show „900 hours per calendar year“
response	Please, refer to the responses to comments #132 and #193.

comment	*1412* comment by: *Dr Adam Fletcher* The inclusions in this section illustrate exactly why a major rethink of this approach is needed. In the case of flight time limits, the vast majority of EMS pilots will never get near them. This is because flying in EMS is generally relatively rare compared to standby hours (often in a ratio of 1 hours flying to 10 or more hours standby, as can be suppported by data from the EU). However, the duty periods, should they include standby, will force many existing operations to severely reduce services to their communities. For example, in many remote parts of Europe and also many populated ones, it is common to use a 7 day on and 7 day off roster. This typically means 72 hours per week made up of perhaps 7 hours flying, a small number of hours of other duty (e.g. checking weather, completing paperwork), with the majority of time spent in standby, which could include time to sleep, watch movies, or study. If standby is counted as duty, then many operations will not be viable, and safety, community service and productivity will all predictably suffer.
response	Noted Please, refer to the responses to comments #132 and #193. For the purpose of calculating maximum daily FDP, only airport standby is counted as FDP. The method of calculation of the time spent on home/hotel standby for the purpose of calculating cumulative limits (point ORO.FTL.210) takes into account the response time.

comment	*1507* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* Suggestion: (a)2 must be removed. (1) and (3) are sufficient for the robustness of an ATXO-schedule. This restriction might be exceeded in case of a positioning of a crew as passenger at home.
response	Please, refer to the responses to comments #132 and #193.

ORO.FTL.215 (positioning)

3.1. ORO.FTL.215	p. 14

comment	*46* comment by: *VDV M* Time spent positioning for the calculation of consecutive rest prior next FDP should take into account the number of positioning sectors (like when changing more than one way of

	transport), flying as a passenger a direct fligth of 12hours, or 3 flights of 3 hours each, although resulting in a similar total lenght of travel is a different experience. Similarly mitagtions for better comfort classes (business or first) should be provided.
response	Partially accepted There will be a differentiation between positioning as a passenger and positioning as an operating crew. As regards comfort classes, there is no scientific evidence to suggest that they influence flight crew fatigue levels.

comment	*196* comment by: *Premium Jet AG* clarify positioning. self driving counts only for the driver as FDP in a special way. And it must be inline with FRMS.
response	Please, refer to the responses to the comments under section 'CS FTL.2.215'.

comment	*219* comment by: *ADAC Luftrettung gGmbH* Wird die Reisezeit zur Heimatbasis als duty time oder FDP angesehen?
response	Travel time to home base is not positioning. Please, refer to the definition of 'positioning' in ORO.FTL.105(18).

comment	*274* comment by: *European Helicopter Association (EHA)* SHA (Switzerland) Positioning duration below 3 hours shall not count as duty period
response	It is not clear what is meant under 'positioning' here. Please, refer to the definition of 'positioning' in ORO.FTL.105(18).

comment	*383* comment by: *Joachim J. Janezic (Institute for Austrian and International Aviation law)* To ORO.FTL.215(c): It is expected that most European HEMS operators will apply for deviations according to Article 22 Basic Regulation and flight time specification schemes according to ORO.FTL.125.

	Since this will lead to a deviation from the CS (but not from the Part-ORO.FTL itself!) it remains unclear what effect such a deviation might cause on the rule ORO.FTL.215(c) stating *"…in accordance with the certification specification…"*. The possibility to obtain an approval for a deviation should be addressed in this rule.
response	Not accepted. The possibility to deviate from the CSs is, however, limited in scope by point ORO.FTL.215(c) itself, i.e. an IFTSS shall specify the impact of positioning on the maximum FDP. A deviation from the CSs should not breach the implementing rules. This is the reason why the IFTSS are subject to approval by the competent authority.

comment	*451* comment by: *Cat Aviation AG* for comments to (c) pls refer to CS FTL.2.215 for AirTaxi.
response	Noted

comment	*1031* comment by: *Stephanie Selim* (c) **Technical comment-** The provision is proposed to be specific to air taxi operations. However, there is no rational to limit it only to this type of operations (apart from the probability of occurrence which seems higher for air taxi operations). The effect on fatigue can be supposed to be similar for all kind of operations. It is therefore proposed to modify ORO.FTL.215(c): "flight time specification schemes established in accordance with the **applicable** certification specifications ~~**applicable to air taxi operations**~~ shall specify the impact on the maximum FDP of:"
response	Not accepted There is currently no CS FTL.1.215 for positioning in scheduled and charter operations, meaning that operators should comply with the applicable implementing rule.

ORO.FTL.220 (Split duty)

3.1. ORO.FTL.220	p. 14

comment	*67* comment by: *NetJets Europe*

	ORO.FTL.220 (a)(2) NetJets supports proposal
response	Noted Support appreciated.

Response in relation to 'split duty' (comment #1040 (DSAC))

comment	*1040* comment by: *Stephanie Selim* **Technical comment** – Since flight time can't be scheduled in advance in air taxi and EMS operations, the same applies to breaks on the ground. Still in order to ensure an efficient period of rest for the crew members during the break, it seems important to keep a principle of planning even with a very short notice (in order to have adequate flexibility to cover unforeseen activities). Therefore, an additional point is proposed in ORO.FTL.220(a): "**(a)(3) In the case of air taxi and EMS operations, and by way of derogation from ORO.FTL.110, a split duty and an additional break on the ground may be planned at any point in time including after reporting. When a break on the ground is added within the FDP, the operator recalculates the maximum FDP in accordance with ORO.FTL.220.**"
response	The concept is accepted. This flexibility will be added in point ORO.FTL.220 with the necessary adaptations required for legal certainty.

comment	*1043* comment by: *Stephanie Selim* (a)(2) Editorial comment – Regulation refers to the basic maximum daily FDP: "the possibility to extend the **basic** maximum ~~**basic**~~ daily FDP taking into account the duration of the break or, in the case of air taxi and EMS operations, breaks on the ground, the facilities provided to the crew member to rest and other relevant factors;" However, by applying this proposal of changing "prescribed under point ORO.FTL.205(b)" by "basic maximum daily FDP", we found some ambiguities on the fact that all FDP defined under ORO.FTL.205(b) are not clearly mentioned as "basic FDP" ? · ORO.FTL.205(b)(6) does not define any basic FDP according to the wording and the corresponding CS FTL.2.205 is not defined as a basic FDP. Therefore, does it means that air taxi and AEMS operations cannot apply FDP extensions with split duty when applying ORO.FTL.205(b)(6) ? · ORO.FTL.205(b)(7) does not define any basic FDP for HEMS according to the wording while the corresponding CS FTL.3.205 define a maximum basic FDP. Proposal: add the word basic where missing in the text of PART ORO and CS or come back to the previous wording "prescribed under point ORO.FTL.205(b)".

response	Accepted Point ORO.FTL.220(a)(2) will be clarified as regards air taxi/AEMS operations.

comment	*1089* comment by: *FNAM* ISSUE The rule needs to allow split in post planning phase or in operation phase. PROPOSAL Add the following paragraph: *"By way of derogation from ORO.FTL.110(a), for AEMS and Air Taxi operations, a split duty may be scheduled at any point in time including after reporting time."* RATIONALE: There is no additional fatigue with this disposition compared to if it was intended before, thus the mitigation is included in the proposal. Cf. comment 1135
response	Accepted Please, refer to the response to comment #1040.

comment	*1091* comment by: *FNAM* (a) ISSUE FNAM and EBAA France suggest coming back to the break definition. In any case, a break has to be taken on the ground. Therefore, the wording *"or, in the case of Air Taxi and EMS operations, breaks on the ground,"* is unnecessary and should be suppressed since it may only lead to misunderstanding. Cf. comment 1133 PROPOSAL Suppress the wording *"**or, in the case of Air Taxi and EMS operations, breaks** on the ground,".*
response	Not accepted The wording 'break on the ground' is already used in the existing implementing rule.

comment	*1103* comment by: *European Cockpit Association*

Commented text:
ORO.FTL.220 Split duty; (c)
split duty shall not follow a reduced rest.

ECA comment:
add: *(d) split duty is not allowed while being on alert.*
Reasoning: unclear wording - operators already looking for a possibility to combine breaks on ground during being on alert with split duty - there is a need for clarification, that this not to be used to extend the time of being on alert)

response

Not accepted

A break is, by definition, a period during which the crew member is free of all tasks, i.e. they are having a rest period. Being alert is presumably a state where the crew member is on duty or awaits to be called for duty, i.e. they are on standby. 'Standby' is not part of the FDP, whereas 'break on the ground' is.

comment

1159 comment by: *GBAA*

ORO.FTL.220 (b) Split duty
"The break(s) on the ground shall count in full as FDP" makes it very difficult to calculate and the clarity of the statements, how long a break can be, is impaired unnecessarily.
Example: A 3 hour flight is followed by a maximum break and another 4 hour flight. Now, the client likes to know the latest departure time of the second leg.
Let's assume the operator uses 60 minutes for post- and pre-flight duties and travelling (30 minutes after and 30 minutes before the flight - the latter counts as FDP I suppose). Moreover, let's assume the maximum FDP is 13 hrs (It is very hard to use any figures out of the proposed table of max. FDP since it is way too much depended of the check-in time).
So, the operator will have a FDP of 1h preflight+3h flight+0.5h preflight+4h flight=8.5h. This results in a maximum break of 4h (also regarding postflight). But, 50% of that will again extend the FDP in this case. So, new max. FDP is 13h+2h=15h. Now, the break can be longer by 2h which is then a maximum break of 6h. Having a 6h break equals 50%=3h extension or 16h in total which allows a break of 7.5h which extends... and so on. In the last mentioned iteration, the latest departure would be 12h after the first departure which is not the lastest possible. This procedure is anything else but practicable!
As an alternative, Austria solved this issue by switching at more than a 6 hours break from extending the FDP by 50% to simply having an addition FDP of 1 hour and keeping the regular maximum FDP.

response

Not accepted

The proposed alternative is not clear. An extension of 1 hour of the regular maximum FDP is incomparable with an extension of 3 or more hours (50 % of all breaks). The time for break, or breaks, is a period of time within an FDP during which a crew member is free of all tasks and has a rest opportunity.

	The time for post- and pre-flight duties and travelling is part of the FDP and is fixed by the operator (30 minutes as a minimum). The longer the breaks (but not longer than the minimum rest), the lesser the impact of post- and pre-flight duties and travelling on the FDP.

comment	*1446* comment by: *European Cockpit Association* Commented text: "Split duty, breaks on the ground" References p.14 ORO.FTL.220 (a) (2) p.26 CS FTL.2.220 (a) & (b) p.32 CS FTL.2.220 no. 27 ECA Comment: The CS2 introduces the idea of multiple breaks on the ground between different sectors being available to add together for the purposes of a split duty FDP extension. There is no scientific basis for this suggestion, indeed scientific advice previously received by EASA advocates "limiting the fragmentation of sleep as afar as possible" in order for it to provide meaningful rest. This 'split-split duty' enables the complete opposite of that advice, providing only fragmented rest opportunities that should not be usable for the extension of FDP under split duty. Proposal: Only one continuous and undisturbed break in an FDP should be available for the extension of that FDP under split duty. The 'split-split duty' must be prohibited.
response	Not accepted In a 24-hour-a-day industry, breaks can happen for various reasons. In fact, there is scientific evidence demonstrating that breaks from a continuous performance of a required task are important to maintain a consistent and appropriate level of performance. A break spent in a suitable accommodation where the crew can obtain rest/sleep opportunity is an effective mitigation measure against fatigue.

comment	*1466* comment by: *VOLDIRECT* (c) says that split duty shall not follow a reduced rest. This is NOT compatible with air taxi operations, where early morning / late return typical flights for business, require a split duty during the day.
response	Not accepted

A minimum rest period should be assigned after an early morning / late return duty prior to reporting for another duty. The break is shorter than the minimum rest but is not reduced rest in the sense used in point ORO.FTL.235(c).

ORO.FTL.225 (Standby)

3.1. ORO.FTL.225 Standby and duties at the airport p. 14-15

Responses in relation to 'standby'

comment	*452* comment by: *Cat Aviation AG* for comments refer to CS FTL.2.225. Standby for Air Taxi Ops.
response	Noted

comment	*1093* comment by: *FNAM* (e) ISSUE In the CS FTL.2.220 (split duty), a class A facility is equivalent to an accommodation. FNAM and EBAA France agree with this logic. In the same philosophy and to ensure consistency, FNAM and EBAA France would like Class A facility to be considered as an accommodation for standby also. Therefore, FNAM and EBAA France suggest adding it in the paragraph (e) and precising it in the definition of an accommodation (cf. comment 1032). PROPOSAL Add a GM to CS FTL.2.220 for Air taxi and AEMS operations whose content is the following: "A *Class A facility is an accommodation."*
response	Accepted Please, refer to GM3 CS FTL.2.225 'Standby'.

comment	*1279* comment by: *Volkswagen AirService GmbH* Standby is different in ATXO from charter or scheduled operations. We do not standby only for a particular flight. We are on standby in a general manner for any type of duty. Stby is a regular service in ATXO. FTL 225. does not reflect this fact.
response	Noted

Point ORO.FTL.225 applies to all types of operations. The specific requirements for air taxi/AEMS operations are contained in CS FTL.2.225. The structure of the FTL regulation has been clarified in the explanatory text of NPA 2017-17.

comment

1281 comment by: *Volkswagen AirService GmbH*

Refers to (b) "shall be in the roster".

As we operate on demand only, it is not possible to preplan and roster specific duites. All duties are depending on each other and are on short notice. We may roster undefined periods of duty, but dedicated duties are not known in advance. If we have to schedule all duties in advance, we have to keep available personnel for each duty, every day, even if we have no tasks. This makes no sense with regard to fatigue management as well. Flights and duties are planned in our operations on short-term basis only.

response

Noted

Your comment refers to point (a) of point ORO.FTL.225.

Please note that 'standby in the roster' does not mean that the start and end time of standby shall be in the roster too. The operator may apply strategic planning to rosters.

Start and end times may be notified later on, at short notice, but still in advance to provide crew members concerned with the opportunity to plan adequate rest.

comment

1293 comment by: *Volkswagen AirService GmbH*

Referring to (f): Standby at home or at hotel should be possible for 24 h as long as a sufficient reporting time (eg. 3 hours) is granted.

response

Noted

It is possible. Please, refer to CS FTL.2.225.

comment	*1325* comment by: *Babcock Mission Critical Services Limited* **<u>Passive & Active Standby</u>** The nature of EMS standby is very different to that of scheduled commercial aviation, which does not rely on standby to a major degree at all. Even in busier EMS operations, were most of the requirement is to be available on-demand, coupled with a need for crew to sometimes fly multiple short sectors at short notice, the actual time spent at the EMS base on call or on duty is significantly higher and generally less demanding. This is especially the case during night shift, where crew can most frequently sleep throughout the night in suitable accommodation on base. There are other permutations, however, and the differences between them are critical to consider before writing regulations. We urge EASA to reconsider its position on counting Standby as duty, as described in the report submitted to EASA via comment 793 (Mission Critical Services Notice of Proposed Amendment 2017-17 Response Considerations, Fletcher et al, Integrated Safety Support, February 2018).
response	Not accepted Point ORO.FTL.225 stipulates that *airport standby* is a duty period for the purpose of cumulative duties and rest, but it is not an FDP. The period of *other standby* (which is different from airport standby) in a suitable accommodation (at home or hotel) is not automatically considered a duty period. It is usually a percentage (0 to 100%) depending on the response time. Please, also note that *airport duty* is different from *airport standby*.

ORO.FTL.235 (Rest)

3.1. ORO.FTL.235	p. 15

Responses in relation to 'rest'.

comment	*15* comment by: *Aliparma/FOPh* Rationale: a lot of Airtaxi Operators are homebased on small airports / cities and often crew members lives in the sorroundings. It means less than 30 minutes travelling to / from home. For this reason I would add point 3 to ORO FTL.235 as follows: (a) Minimum rest period at home base.

(1) The minimum rest period provided before undertaking an FDP starting at home base shall be at least as long as the preceding duty period, or 12 hours, whichever is greater.
(2) By way of derogation from point (1), the minimum rest provided under point (b) applies if the operator provides suitable accommodation to the crew member at home base.
3) By way of derogation from point (1) and for air taxi operations only, the minimum rest provided under point (b) applies if the travelling time to residence, temporary accomodation or suitable accomodation is less than 30 minutes from the Home base.

(b) Minimum rest period away from home base.
The minimum rest period provided before undertaking an FDP starting away from home base shall be at least as long as the preceding duty period, or 10 hours, whichever is greater. This period shall include an 8-hour sleep opportunity in addition to the time for travelling and physiological needs.

response

Not accepted

Operators that need more flexibility than that allowed for under point ORO.FTL.235(a) and (b) may use the option provided under point ORO.FTL.235(c) to further reduce rest periods at home base or at outstation.

comment

16 comment by: *Aliparma/FOPh*

I would add point 7) to c1

c1) Reduced rest for air Taxi operations :

1)...
2)...
3)...
4)...
5)...
6)...
7) the travelling time to/ from the Home base.

response

Accepted

comment

68 comment by: *NetJets Europe*

ORO.FTL.235 (c1)
NetJets supports proposal

response

Your support is appreciated.

comment	*201* comment by: *Premium Jet AG* (a): Mitigation already under limitation for BA 80/210 and 625 Point 7: No scientific data dased on. See study and correct or remove.
response	The comment is not clear. Point ORO.FTL.235 does not have a point (7).

comment	*453* comment by: *Cat Aviation AG* ref our comments and details refer to CS.FTL 2.235 c) - which seems more restrictive than CS.1 - what is the rationale?
response	CS FTL.2.235(c) refers to planned reduced rest periods and takes into account the specific characteristics of air taxi and AEMS operations.

comment	*1053* comment by: *Stephanie Selim* (c) Technical comment – This subsection ORO.FTL.235(c1) applies only to air taxi whereas CS FTL.2.235(c) refers to both air taxi and AEMS. A clarification is needed.
response	Accepted Text clarified.

comment	*1098* comment by: *FNAM* (c1) ISSUE The aim of (c1) is unclear and may lead to misunderstanding. Indeed: 1/ On the one hand, the paragraph (c1) refers to certification specifications for Air Taxi and is only applicable for Air Taxi. On the other hand, the corresponding certification specification is applicable for Air Taxi and AEMS operations. There is no CS applicable for the sole Air Taxi operations on this matter. 2/ For Air Taxi Operators, according to the current wording, both paragraph (c) and (c1) apply. This is not consistent.

Therefore, there is a need to clarify the scope of the paragraph (c) and (c1) or to withdraw the paragraph (c1).

PROPOSAL

- Suppress the paragraph (c1)

OR

- Change the scope of paragraph (c): "(*c) […] except for AEMS and Air Taxi operations* "; AND
- Add in the scope of the paragraph (c1) the AEMS operations

response

1. Accepted. Text clarified.

2. Accepted. Text clarified.

3.2. Draft certification specifications - CS FTL.1 p. 18

comment *565* comment by: *Rüdiger Neu*

Bei der Nutzung von individuellen CS, sowohl auf der Basis von Betreibern oder Ländern, wird das Ziel der EASA eine Harmonizierung zu bekommen klar verfehlt.

Der Wettbewerb würde außerdem erschwert werden, da ein neuer Betreiber die CS des Vorgängers nicht nutzten kann und bei einer Übernahme eine CS nur mit hohem Kostenaufwand bzw. garnicht erstellen kann, da er sich an die Vorgaben halten muss.

response

Noted

The purpose of certification specifications (CSs) is clearly defined by the legislator. CSs are non-binding technical standards issued by EASA, which indicate the means to demonstrate compliance with Regulation (EU) 2018/1139 and with the delegated and implementing acts adopted on the basis thereof, and which are used by persons and organisations for the purpose of certification.

CS FTL.2.100 p. 21

comment	*161* comment by: *Safety and Compliance Manager* Attachments #73 #74 FTLs prescribed by EASA have increased the levels and frequency of Fatigue and Stress reported by Crew. Please see CHIRP editorials attached (relevant information in yellow). These were published 1 year and 2 years after entry in force of the regulation and the analysis is alarming. The proposed FTLs in CS-FTL2 have not taken into account the fatigue reports done by the crew these past 2 years! Why? Evidence has shown that CS-FTL1 is much safer than what was published in part FTL. And EASA must take into account this reality. The proposed FTL decrease safety.
response	These statements are not accepted. EASA has used scientific reports and advice (referenced in NPA 2017-17 and in CRD 2010-14) to develop CS FTL.1 and CS FTL.2.

GM1 CS FTL.2.100 p. 21

comment	*1334* comment by: *ENAC* *"An AEMS flight may include positioning the aeroplane after the patient is unloaded from the aeroplane to enable it to return to a suitable location for the next AEMS flight".* We propose to consider also the positioning flight **before** the patient is loaded.
response	Accepted This concept has already been reflected in definition (29) of 'AEMS operation'. GM1 CS FTL.2.100 will be complemented.

comment	*772* comment by: *AECA helicopteros.* Positioning is not defined for AEMS, only for Air taxi (CS FTL 2.215).

response	CS FTL.2 applies to air taxi and AEMS operations.

comment	*1087* comment by: *Stephanie Selim* Technical comment- This GM does not bring any additional guidance, since everything is already in 'EMS flight' definition (cf. last sentence). Moreover, it brings confusion with the commander's discretion impossibility to extend FDP after the last take-off if the patient is not on board (see also CS FTL.2.205 corresponding comment). It is proposed to delete it.
response	Not accepted Even if commander's discretion cannot be used after the last take-off, if the patient is not on board, the operation still benefits from the greater number of sectors and the longer duration of the FDP allowed under CS FTL.2.

CS FTL.2.200 (Home base)

CS FTL.2.200	p. 21

Replies in relation to home base

comment	*48* comment by: *Wolfgang Zellhuber* In air taxi operation a high percentage of freelance pilots/personnel are working. Due to the fact that (to avoid a status of false self-employment) a freelance pilot needs at least two different operators, there is a high possibility that these two operators have different home bases. For example one operator has home base EDDM, the other operator EDMA. The driving distance/time between the two aerodromes is 84km/50minutes. How shall a pilot, and more important, how shall the two operator handle that situation if they consider either EDDM or EDMA as only homebase or if the pilot has a regular "change" of the home base (when the pilot is flying for the operator based at EDDM-> EDDM is the home base, when the pilot is flying for the operator at EDMA-> EDMA is the home base) which requires the pilot to have a rest of 72 hours? This situation would ruin the pilot because he/she is not able to work and earn his/her living costs.

In fact EASA would justify this with safety reasons. In some cases this argument could be rejected. To use the above example again: If the pilot has his/her permanent residence have way between the two aerodromes the hazards/risks are equaliy spread. And even if the pilot was living at one of the two aerodromes the other aerodrome is still in a 90 minutes travelling time.

Please consider that such regulation could have/could be

- a competitive disadvantage of freelance personnel,
- against the freedom of professional practice

The NPA 2017-17 pushes many operator in situations of uncertainty. Please clarify the relevant issues.

response

Noted

Please, refer to the response to comment #127.

Home base is the place form which a crew member normally starts and ends a duty period, including a positioning flight. The assignment normally appears in the crew member's individual schedule/roster.

A freelance pilot working for two operators will have two home bases from which they start their duty periods.

comment

69 comment by: *NetJets Europe*

CS FTL2.200 (a)
Opportunity to clarify what does "high degree of permanence" mean?

CS FTL2.200 (b)
NetJets proposes that the requirement of CS.FTL2.200 (b) is only applicable if the change of home base is the requirement of the operator and not at the request of the crewmember.
In air taxi operations, some operators provide the crew members with the opportunity to temporarily change their home base between rotations or to begin a rotation from a place (temporary home base) different from the normal home base. When this is at the request of the crewmember, the crewmembers have to ensure that they have adequately planned and used the rest opportunity to rest. In these cases, it is not the operator that requires the change and the operator is not responsible for the travelling time between homebases.

response

Noted

Home base is the place from which a crew member normally starts and ends a duty period, including a positioning flight.

Please, refer to the response to comment #127.

comment	*134* comment by: *VistaJet* The concept of home base is not so simple for ATXO. As many operators use gateway airports crew may move location from one gateway to the next on the following rotation. Also, the base of operations is not where the aircraft are, so cannot be used. A high degree of permanence needs to be further clarified for ATXO.
response	Noted Home base is the place from which a crew member normally starts and ends a duty period, including a positioning flight. Please, refer to the response to comment #127.

comment	*168* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* (c) If the change of homebase is on request of the pilot (b) does not apply. Rest periods as described in ORO.FTL.235 will apply in this case.
response	Noted Please, refer to the response to comment #127.

comment	*194* comment by: *Premium Jet AG* (a) due to the business models of business aviation it should be taken into account that gateways are used. Anyhow a mutual agreement between the operator and the employee should be possible without the increased recovery rest period.
response	Please, refer to the response to comment #127.

comment	*240* comment by: *Thomas Henselmann* (a) the definition home base might not apply to some Air Taxi operations. Please review the option towards a mutual agreement on duty and rest periods on the basis of a gateway concept without extended rst periods for air taxi operations.
response	Please, refer to the response to comment #127.

comment	*293* comment by: *European Business Aviation Association (EBAA)* CS FTL.2.200 Home base — air taxi and AEMS

(a) The home base is a single airport location assigned with a high degree of permanence.
(b) In the case of a change of home base, the recurrent extended recovery rest period prior to starting duty at the new home base is increased once to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is positioning."

EBAA COMMENT: Due to the nature of the business employee and operator should be able to mutually agree on changing the Homebase on a rotation/duty period basis without being restricted by the recurrent extended recovery rest period

SUGGEST CHANGE: Review the point in accordance.

RATIONALE: today some business aviation operators/business models use the concept of gateway. The rule needs to consider this situation.

response Please, refer to the response to comment #127.

comment *423* comment by: *Skyshare Union representing NetJets crew members*

We propose an amendment to (b) to add "...is positioning unless undertaken on an off-duty day at the request of the crew member."

Reasoning:

We use 'gateway' airports, where we report for a tour of duty but we have no aircraft based. From the gateway airport NetJets positions us, in duty time, to meet our aircraft.

NetJets allows us to change gateway for personal reasons, for example if we have homes in more than one country or want to spend time temporarily somewhere else.

The protections in CS.FTL.2.200 (b) regarding travelling time being 'positioning' do not affect the use of temporary gateways where the switch is made during a tour (we simply start the tour at one gateway and end at another). Travel to gateway is always duty (flight duty or positioning) regardless whether it's a permanent or temporary gateway. However, when the switch is made during off-duty days this regulation inconveniently requires the travel from permanent to temporary gateway to be counted as positioning. For example if we drive with our family to another country to use another gateway for an extended vacation, this regulation would require that drive to be counted as positioning and duty time, which is an unfair burden on the company and risks us losing this facility.

response Please, refer to the response to comment #127.

comment *769* comment by: *AECA helicopteros.*

Determine the concept of 'high degree of permanence'. Our proposal is include as definition.

response | Please, refer to the response to comment #127.

comment | *770* comment by: *AECA helicopteros.*

Question needing answer by regulation:

In case of base change for emergency reasons, the pilot need specific training, regarding the new base?.

response | Please, refer to the response to comment #127.

comment | *804* comment by: *Babcock Mission Critical Services Limited*

It could be understood that if you have a pilot assigned to one AEMS home base and you scheduled this pilot to one or several duties to another base, the operator must let him rest 72 hours with 3 local nights between the positioning and the first duty.

We think it must only apply if you change the home base of the pilot as a permananent assignment, not as a result of, for example, if a pilot is sick and you need to roster immediately another pilot assigned to other home base.

Revise “Home base” definition:

CS FTL.2.200 Home base — air taxi and AEMS

(a) The home base is any location assigned to the crew member with a high degree of permanence.

(b) In the case of a change of home base, the recurrent extended recovery rest period prior to starting duty at the new home base is increased once to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is considered Positioning in accordance with ORO.FTL.215.

CS.FTL.3.200 Home Base – HEMS

(a) The home base is any location assigned to the crew member with a high degree of permanence.

(b) In the case of a change of home base, the recurrent extended recovery rest period prior to starting duty at the new home base is increased once to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is considered Positioning in accordance with ORO.FTL.215

GM.CS.FTL.2/3.200 (a) Home Base

	In case of a touring pilot, their main place of residence may be considered as their home base. In this case fatigue protection is provided by all travelling to/from a HEMS operating base, as being considered as positioning within the FDP.
response	Please, refer to the response to comment #127.

comment	*897* comment by: *Stephanie Selim* **CS FTL.2.200 (b) :** Editorial comment – Wording similar to CS FTL.1.200 is suggested: "In the case of a change of home base, the **first** recurrent extended recovery rest period prior to starting duty at the new home base is increased ~~once~~ to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is positioning."
response	Please, refer to the response to comment #127.

comment	*1061* comment by: *Rabbit-Air Ltd* review definition of home base. Home location (incl. not exclusivly an airport) would match better to Ait Taxi.
response	Please, refer to the response to comment #127.

comment	*1101* comment by: *FNAM* ISSUE Due to the specific operation of Air Taxi and AEMS, and in order to have the same philosophy than in HEMS, FNAM and EBAA France propose the possibility to have multiple airport bases for Air Taxi and AEMS operations. PROPOSAL Add in CS the possibility to have multiple home base such as: "*(a) The home base is assigned to each crew member with a high degree of permanence and may either be:* *(1) a single operating base; or* *(2) multiple operating bases if the travelling time between any of these operating bases does not exceed 120 minutes under usual conditions* *(b) In the case of a change of home base, the recurrent extended recovery rest period prior to starting duty at the new home base is increased once to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is positioning or flight duty period."*

response	Please, refer to the response to comment #127.

comment	*1369* comment by: *Gama Aviation (UK) Ltd* Due to the nature of ATXO operations, the operator should be able to change the home base, if mutally agreed, on a per rotation/duty period basis without subsequent restriction of extended recovery rest period. Some ATXO operators use the Gateway concept for crew reporting and this should be accounted for.
response	Please, refer to the response to comment #127.

CS FTL.2.205 (FDP)

CS FTL.2.205	p. 21

comment	*43* comment by: *VDV M* In air taxi operations, last minute changes to flight schedules are quite frequents. Flight crew once advised of an impending flight duty, should therefore take appropriate actions to be adequate rested for the incoming duty. In case of changes to schedules, longer duties than planned, flight crew will therefore lack of proper rest. Some sort of mitigation should exist in case of major flight schedule changes. The same applies to food and drink opportunities, not all airports allow crew to introduce personal food into the airport environment, therefore extended than planned fligth schedule should allow for crew to maintan their operational robustness.
response	Accepted Changes to the flight plan and crew schedule after an assigned FDP has already started need to be managed by the operator for fatigue-related risks under its SMS or FRMS. In addition, changes to crew schedule after reporting are allowed in unforeseen circumstances under commander's discretion or split duty. In both cases, mitigation measures are foreseen, including a requirement for the consent of crew members, provision of suitable accommodation, and nutrition in the case of split duty (ref.: point ORO.FTL.220).

comment	*44* comment by: *VDV M* The time in advance to which an impending flight duty is communicated to a flight crew member will have a major effect on the previous rest the crew member will consciosly be able to take.
response	Accepted This is already captured in point ORO.FTL.110.

comment	*47* comment by: *VDV M* Air taxi operations, by their nature, differently to scheduled operations, require fligth crew to fully prepare the aircraft not only from a purely cockpit point of view (FMS, performance calculations..), but also from a technical point of view (covers removal, pin removal, engine covers, etc..).

Not specifying an absolute minimum pre/post-flight duty, will lead too much discretion to operators.

Furthermore operators should be required to specify different pre/post-flight in case of adverse weather climate where lenghty aircraft preparation are required. For example in winter in nordic countries aircraft needs to be fully drained by water based fluids to avoid damages, and catering equipment to be removed to avoid freezing. Similarly pre flight duties are longer as aircrafts need to be unfrozen before being powered up (not talking in this comment of deicing-anticing fluid application).

Similarly as RNP guidelines require operators to implement procedures in their manuals when crew members are expected to update avionics database, these procedures should indicate the average time needed, so to be taken into account in pre/post-flight duties.

response

Noted

As per AMC1 ORO.FTL.210(c), the operator needs to specify pre-flight and post-flight duty times taking into account the type of operation, the size and type of aircraft used, and airport conditions.

Your comment also confirms that pre- and post-flight duty times are context driven. Therefore, it makes no sense to establish mandatory absolute minimum times for every operator.

Please note that post-flight duty counts as duty period. The operator is responsible to monitor roster robustness, in particular to monitor whether the actual post-flight duty time is longer than that established in the OM. The operator has to ensure that the time allocated for post-flight duties is adequate, since rest or shortened rest could potentially impact on fatigue.

Pre-flight and pre-departure duties are part of the ground duties. Ground duties are part of the FDP. The operator has the responsibility to specify reporting times that allow sufficient time for ground duties.

Responses in relation to Tables 9 and 10 of CS FTL.2 (previous Tables 1 and 2)

comment

111 comment by: *UK CAA*

CS FTL.2.205, Flight Duty Period

Comment: From page 21 there are 6 paragraphs referring to CS FTL.2.205, for clarity they should all be uniquely identified: (a), (b), (c), etc.

For the final documentation, EASA are requested to ensure the regulations are clearly identified with uniquely numbered sections and subsections.

Justification: Clarity

response	Accepted Changes have been made to ensure that implementing rules and CSs are clearly identified by assigning unique numbers to sections and subsections.

comment	*142* comment by: *CAA-NL* **CS FTL.2.205, Flight Duty Period** **Comment:** From page 21 there are 6 paragraphs referring to CS FTL.2.205, for clarity they should all be uniquely identified: (a), (b), (c), etc.
response	Please, refer to the response to comment #111.

comment	*737* comment by: *European Business Aviation Association (EBAA)* CS FTL.2.205 Flight duty period (FDP) — air taxi and AEMS - Night duties in air taxi and AEMS Night duties in air taxi and AEMS operations under ORO.FTL.205(b)(6) and (d1) Night duties in air taxi and AEMS operations comply with the following: (1) When establishing the maximum FDP for consecutive night duties, the number of sectors is limited to 4 sectors per duty. (2) The operator applies appropriate fatigue risk management to actively manage the fatiguing effect of night duties of more than 10 hours in relation to the surrounding duties and rest periods. EBAA comment: due to the high frequency, short flight at AEMS this is not achievable for some operators Suggested change: to have a limit of 4 sectors after 3 nights
response	Partially accepted. EASA decided to remove this CS. However, a new CS3 FTL.2.205 requires that disruptive duties be assigned under appropriate FRM mitigations, in a similar manner as that for scheduled and charter operations.

comment	*777* comment by: *AECA helicopteros.* CS ORO FTL 2.205. This code is repeated 6 times, without specific differences. This makes difficult its administrative reference.
response	Accepted

comment	*825* comment by: *Babcock Mission Critical Services Limited* We find the layout and alphanumeric referencing within CS.FTL.x.205 to be ambiguous and hence confusing. In each case, there is more than one instance of the heading, but with different suffixes, e.g. – AEMS, - ATX and AEMS, - HEMS, etc. and in some cases the only differentiation is the line of text *below* the header in *italics*. We recommend that EASA revises the layout of these requirements and/or provide unique alphanumeric references in each case, in order to remove ambiguity and potential confusion, and for ease of reference.
response	Accepted

comment	*905* comment by: *Stephanie Selim* General editorial comment – Number the subsection of CS FTL.2.205, respecting the order of ORO.FTL.205: **(a)** Maximum daily FDP without extensions under ORO.FTL.205(b)(6) **(b)** Night duties in **two-pilot** air taxi and **two-pilot** AEMS operations under ORO.FTL.205(b)(6) and (d1) **(c)** Maximum daily FDP with extensions without on-board rest under ORO.FTL.205(d1)(4) **(d)** Extension of the maximum basic daily FDP due to on-board rest under ORO.FTL.205(e) **(e)** Unforeseen circumstances in AEMS operations — commander's discretion **(f)** Unforeseen circumstances in air taxi and AEMS — delayed reporting
response	Accepted

comment	*909* comment by: *Stephanie Selim* Editorial comment – The scope of application should be more precise and apply to two-pilot air taxi and two-pilot AEMS operations only as referred to ORO.FTL.205(b)(6) and (d1): Title: "Night duties in **two-pilot** air taxi and **two-pilot** AEMS operations under ORO.FTL.205(b)(6) and (d1)" Text: "Night duties in **two-pilot** air taxi and **two-pilot** AEMS operations comply with the following:"
response	Please, refer to the response to comment #737.

comment	*1003* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* Table 1 is too fractured with too many FDP changes every 15' to 30'. This is far to complicated for Air Taxi operation. WOCL period, most limitations in FDP, now starts already at 1700h reference time. Please consider the difference between scheduled commercial and Air Taxi. Please redo the table.
response	Noted Under Subpart Q, a 13-hour FDP starting at 17:00 hrs will fully encroach on the WOCL, i.e. will be limited to 11 hrs. The same 11 hrs are required for duties starting at 17:00 according to Table 1.

comment	*1104* comment by: *FNAM* ISSUE Due to the high frequency, short flight at AEMS, the proposal may not achievable for some operators with the 4 sector limitation. PROPOSAL Modify the CS.2.205 such as: *"(1) When establishing the maximum FDP for consecutive night duties, the number of sectors is limited:* *(i) For Air Taxi , to 4 sectors per duty* *(ii) For AEMS, for more than 2 consecutive night duties, to 4 sectors per duty* *(2) ...."*
response	Please, refer to the response to comment #737.

comment	*1162* comment by: *GBAA* CS FTL.2.205 (2) Flight duty period (FDP) — air taxi and AEMS What does "appropriate fatigue risk management" mean to extend the 10h of night flying? How can it be achieved by a small company with 3 aircraft depending on night flights which the client requests? For instance, flying from Paris to Kinshasa during the night. First leg to Niamey takes about 6:00h and the second leg to Kinshasa about 3:45h. Preparation of 1h plus a fuel stop of 45 minutes equals a total FDP of 11:30h. Currently, the Subpart Q states that "whenever a FPD including an extension starts in the time bracket from 2200h to 0459h the duration of the FDP shall be reduced to 11:45h." The new proposal would not allow this unless a costly study is prepared and accepted most probably only for this specific route which takes place maybe only once or twice a year. Why isn't it possible to keep the old rule?

response	Please, refer to the response to comment #737.

comment	*1372* comment by: *Gama Aviation (UK) Ltd* The limitation of 4 sectors in consecutive night shifts is not a practical restriction for short sector length and high frequency operations of the type operated by Gama Aviation, and has significant potential for adverse restriction in the operation of AEMS services in Scotland. Suggest night duties be restricted to a maximum of 3 consecutive shifts in according with exisiting regulations: Should any duties be scheduled to be carried out in any part of the period between 0200to 0459 local time, for a minimum of 2 and a maximum of 3 consecutive nights, then crew members must be free from all duties by 2100 hours local time before covering the block of consecutive night duties, such that crew members can take a rest period during a local night. The operator may roster crew members for either 2 or 3 consecutive night duties, but must ensure that the duty preceding this series of duties finishes by 2359 hours local time (2 nights) or 2100 hours local time (3 nights). *OR* The 4 sector limit only becomes applicable after the 3rd consecutive night shift in AEMS operations.
response	Please, refer to the response to comment #737.

comment	*1508* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* As a general remark: Table 1 is much too fractured and entails too many FDP changes every 15-30 minutes. This is far too complicated for an ATXO. Please consider the difference between scheduled commercial AO and ATXO. We strongly suggest to reconsider, redo and or drop this table completely.
response	Please, refer to the response to comment #737.

comment	*135* comment by: *VistaJet* This table is overly complex and is near impossible to work with in an operational capacity.

Having start times separated by as little as 14min is quite frankly unworkable. In the ATXO/VIP charter environment it is impossible to plan the feasibiltiy of a trip where a delay of 15 min will put you into discretion. The nature of the This table will almost certainly result in a high % of non-compliance.

Again, a simple hard limit with FRMS customising limits based on the scope of the operation is far more practicle in all instances. It is unnecessary to have an overly complex FTL table AND FRMS.

Suggest to have similar to the FAA Part 135, a simple 14Hr FDP limit.

response

Please, refer to the response to comment #737.

comment

169 comment by: *Air Hamburg Luftverkehrsgesellschaft mbH*

Table: Maximum daily FDP in hours - Acclimatised crew members in two-pilot air taxi and AEMS operations

Number of sectors will remain the same, except 9and 10 will be the same

0600-0800	13:00	12:30	11:30	11:00	10:30	10:00	10:00
0801-0900	13:30	12:30	11:30	11:00	10:30	10:00	10:00
0901-1200	14:00	13:30	12:30	11:00	10:30	10:00	10:00
1201-1300	13:30	13:30	12:30	11:00	10:30	10:00	10:00
1301-1400	13:00	12:30	12:30	11:00	10:30	10:00	10:00
1401-1600	12:00	11:30	11:30	11:00	10:30	10:00	09:00
1601-1700	11:30	11:00	10:30	10:00	10:00	09:00	09:00
1701-0430	11:00	10:30	10:00	10:00	09:00	09:00	09:00
0431-0600	12:00	11:30	11:00	10:30	10:00	09:00	09:00

This table needs to be simplified. Our suggestion is above.
15 min sectors are not working for us, as our clients change timings a lot.
At 9 secotrs we would suggest to make it 9 or more.

response

The table will be reworked to remove granularity and allow for a step longer than 15 minutes, for simplicity.

comment

195 comment by: *Premium Jet AG*

Table 1: is not inline with other requirements (CAT OPS)
Table 2: Suggestion: Acc. ORO.FTL.205(d1)add sector 5 and with poss. FRMS extension up to 14hFDP
(6) limit should be extended if FRMS is used delayed reporting: Far too complex.

response	The comment is not clear.

comment	*209* comment by: *Cat Aviation AG* this table 1 is too fractured with too many FDP changes every 30' of starting time. AirTaxi's main purpose is flexibility, which will be strongly hampered to administer and manage in planning. WOCL period most limitations in FDP now starts already at 1700h reference time! Suggest to redo table taking into consideration the difference in Operations between scheduled commercial and Air Taxi/EMS. Refer to our comments under 4.5 Conclusion, page 67 of the NPA.
response	Please, refer to previous responses regarding Table 1.

comment	*294* comment by: *European Business Aviation Association (EBAA)* CS FTL.2.205 Flight duty period (FDP) — Maximum daily FDP without extensions EBAA COMMENT: MAJOR ERRORS in Table 1- Not consistent with neither the ORO (main CAT OPS) nor with the previous versions. Suggested change: EBAA suggests to correct this table to be in ling on the FRMC table (Table 2: Revised basic FDP table). Rationale: to be provided by EBAA
response	Your statement about 'major errors' is not accepted. The table was actually developed by EBAA and provided to EASA. One correction is required for reference time '0830-0844' for the '4 Sectors' column; it should read '13:00' instead of '12:30'. However, the table will be simplified and the maximum FDP will be 13 hours, as for airliners.

comment	*702* comment by: *Captain M Alcaide GVI* Although I have read the document, I haven't found the rationale behind the increase of maximum daily FDP, I guess must be based on some studies. 14 hours for two pilots is a very long period regardless of your operation CAT or ATXO, I dare say it will always be more stressful and fatiguing for the later. It's not about cumulative duties, obviously ATXO pilots fly much less than airline pilots. Flying ATXO requires objectively more time before the flight and more time after the flight, again I can't understand the support for an increase in maximum FDP. I have flown this kind of operation for a long time, first in the Air Force flying transport category civilian aircraft (i.e. Airbus 310 300) and for some time under two

	CAT Operators flying for a corporation and I can assure you that the same flight i.e. Madrid-Mexico is going to be more fatiguing for as than for an airline crew, and nevertheless the rationale is to increase FTL for ATXO. I really don't understand as we all share the same air space....I don't think the survey behind the studies is well done or has been made with some bias in mind. Yes ATXO pilots fly less hours, but when they fly they are as humans as airline pilots, and more time, regardless of previous rest, brings same consequences, a fatigue pilot is prone to error.
response	Accepted The table will be simplified and the maximum FDP will be 13 hours, as for airliners.

comment	*814* comment by: *NetJets Europe* **CS FTL.2.205 Table 1** Netjets supports this table. Correction required on line reference time "0830-0844" for the "4 Sectors" column, it should read "13:00" instead of "12:30";
response	Please, refer to the response to comment #702.

comment	*835* comment by: *Yorkshire Air Ambulance* Quite probably the most absurdly complex table that only EASA could have derived.
response	Air ambulance flights are covered by CS FTL.1.

comment	*1064* comment by: *Rabbit-Air Ltd* table is too fractured and rises questions to scientific relevance when using 30' or even 15' steps. The flexibility in operation for VIP's is lost resp. The administation to meet the requirement is far to big!
response	Please, refer to previous responses in relation to the table.

comment	*1105* comment by: *FNAM* ISSUE There are six CS FTL.2.205 with exactly the same title, which introduces complexity, uncertainty and may lead to misunderstanding. FNAM and EBAA France suggest adding precisions in the title of this paragraph in order to quickly make the link with the involved ORO paragraph.

PROPOSAL
Replace the title of this CS by: *"CS FTL.2.205(b)(1)"*

response: Partially accepted

comment: *1106* comment by: *FNAM*

ISSUE
Cf. comment 1050
In the paragraph (b), it is not explicit whether:

- All the CS.FTL.2 requirements shall be applicable "in block";or
- The CS requirements should apply depending on what is said in the implementing rule;or
- Cherry-picking is allowed

Indeed, two options seem to be presented, one described in ORO.FTL.205 (b)(1) and another in this CS FTL.2.205. In that way, the CS is a substitution of the IR, which is not the aim and the statute of a CS. The complexity of this proposal may lead to misunderstanding and thus wrong application of the regulation.

PROPOSAL
FNAM and EBAA France suggest listing the two options in this CS.FTL.2.205 renaming it *"CS FTL.2.205(b)(1)"* instead of having one Table in the IR and one Table in the CS.

response: Not accepted

Please, refer to the responses to the comments in the 'General comments' section and in section 'ORO.FTL.205'.

comment: *1107* comment by: *FNAM*

Attachments #75 #76

Table 1
ISSUE
As explained here below, FNAM and EBAA France suggest putting all the Tables i.e limitations of FDP for Air Taxi and AEMS operations in the CS.

1/ Withdraw for Air Taxi and AEMS operations the Table 2 from the IR ORO.FTL.205 (b)(1) and put it in the CS as the OPTION 1, allowing, if an operator has a FRM, to increase the FDP limitations in the Table 2 by (Cf. Annex 2 & 3):

- For Air Taxi operations: 1 hour no matter the number of sectors

- For AEMS operations:
  - 2 hours until 4 sectors
  - 1h30 for 5 sectors
  - 1h for 6 sectors and onwards

In order to mitigate these proposals, a scientific study may assess whether and how it may be possible to have FDP over 14 hours under a FRM
Cf. comment 1058

2/ OPTION 2: Redo the table 1 of this CS to ensure it can be used for Air Taxi and AEMS operations, taking into account that for Table 2 of the ORO.FTL.205(b), if an operator has a FRM, it is possible to increase the FDP limitations in the Table 2 by (Cf. Annex 2 & 3):

- For Air Taxi operations: 1 hour no matter the number of sectors

- For AEMS operations:
  - 2 hours until 4 sectors
  - 1h30 for 5 sectors
  - 1h for 6 sectors and onwards

In order to mitigate these proposals, a scientific study may assess whether and how it may be possible to have FDP over 14 hours under a FRM
Cf. comment 1058

PROPOSAL
OPTION 1: Table 2 of the ORO.FTL.205 (b)(1) + if an operator has a FRM, the operator may increase the FDP limitations in the Table 2 by:

- For Air Taxi operations: 1 hour no matter the number of sectors

- For AEMS operations:
  - 2 hours until 4 sectors
  - 1h30 for 5 sectors
  - 1h for 6 sectors and onwards

OR
OPTION 2: New table (redo table 1 form this CS) taking into account that for Table 2 of the ORO.FTL.205(b), if an operator has a FRM, it is possible to increase the FDP limitations in the Table 2 by:

- For Air Taxi operations: 1 hour no matter the number of sectors

- For AEMS operations:
  - 2 hours until 4 sectors
  - 1h30 for 5 sectors
  - 1h for 6 sectors and onwards

response

Not accepted

	Both air taxi- and AEMS-related Table 1 and Table 2 are in CSs, not in the IR.

comment	*1116* comment by: *European Cockpit Association* Commented text: Table 1 ECA Comment: Table 1 does not reflect the purpose of the Rulemaking group anymore - in the context of other proposals of the NPA 2017-17. The sense was, that a single pilot flight crew should not have longer active working time than 12 hours dual pilot within a possibly by breaks extended longer alertness- (working-) time. Limiting factor is the minimum time of rest within 24 hours. Any time spent on standby/alertness plus post- and pre-flight- duties has to be counted for the cumulative duty limits. Suggesting max limit 12 hours depending on reporting time and to be prolonged by breaks of more than one hour up to 16h.
response	Not accepted As regards single-pilot operations, please refer to Table 5.

comment	*1163* comment by: *GBAA* CS FTL.2.205 Flight duty period (FDP) — air taxi and AEMS Maximum daily FDP without extensions A total FDP of 14h plus 3 sectors is very nice, but only in the most favorable time of the day. Outside this time frame, it becomes very complicated. A couple of minutes later or earlier check-in can decided about 15 minutes extra. Is this intended?
response	Please, refer to the previous responses in relation to the table.

comment	*1370* comment by: *Gama Aviation (UK) Ltd* Error in Table 2. 08:30-08:44, 4 Sectors should read 13:00 and not 12:30. Table should be reviewd for accuracy.
response	Please, refer to the previous responses in relation to Table 2.

comment	*1445* comment by: *European Cockpit Association* Commented text: "Flight duty Period (incl. night and unknown state of acclimatisation)" Reference CS FTL.2.205 Table 1 ECA Comment: All 3 scientific evaluations to the CAT FTL rulemaking process upon which this NPA is based recommend the maximum FDP at night be limited to 10 hours. Only one of these evaluations considered a reduction in FDP for multiple sectors of 30 mins, the other evaluations recommended more. Whilst under the CS2 regime (only in conjunction with lower cumulative flight time limits) there is justification for FDP reduction as of only the 4th sector, this reduction should be a minimum of 45mins per sector. Proposal: The table should be amended to ensure a maximum night FDP of 10 hours (and the related FDP for crews in an unknown state of acclimatisation should reflect this), and FDP reduction for sectors beyond the 3rd of 45 minutes minimum.
response	Not accepted The proposal is about air taxi and AEMS flights, not about scheduled operations.

comment	*1482* comment by: *Airlec Air Espace / Paul Tiba* AIRLEC suggests putting all the Tables i.e limitations of FDP for Air Taxi and AEMS operations in the CS. - Withdraw for Air Taxi and AEMS operations the Table 2 from the IR ORO.FTL.205 (b)(1) and put it in the CS, allowing, if an operator has a FRM, to increase the FDP limitations in the Table 2 by • For AEMS operations: o 2 hours until 4 sectors o 1h30 for 5 sectors o 1h for 6 sectors and onwards - In CAT.A FTL regulation, it is possible to have extensions of the FDP for 5 sectors. This should be the same for Air Taxi and AEMS operations. PROPOSAL Update this table and replace it by the one provide for CAT operations in CS.FTL.1.205(b) Maximum daily FDP with extension. Moreover, if an operator has a FRM, it is possible to increase the FDP limitations in this Table by: • For AEMS operations: o 2 hours for 1 to 4 sectors o 1h30 for 5 sectors In order to mitigate these proposals, a scientific study may assess whether and how it may be possible to have FDP over 14 hours under a FRM

response

Noted

The tables relevant for air taxi and AEMS operations are contained in CS FTL.2.

The table with the FDP extensions will be reworked.

comment

70 comment by: *Rega / Swiss Air-Ambulance*

1. CS FTL.2.205 (1) (page 23 of 70 NPA 2017-17)

Existing proposed CS FTL.2.205 (1): the FDP is limited to 3 sectors;

Adaption requested by the writer for CS FTL.2.205 (1):

… the FDP is limited to **4 (four)** sectors;

Justification:

· The AEMS & Air Taxi Ops is quite often influenced by ultimate customs or technical (fuel) stops required by national authorities/aeroplane range limitations thus exceeding the proposed "limitation to 3 sectors". This to be able to reach the final destination (pick-up of patient) and continue to the point of disembarkation of patient or fly (back) to the point of origin to disinfect the AEMS aeroplane;

· Flight crew members are also with 4 (ISO 3) sectors able to get on-board rest according:

o CS FTL.2.205 (2) (... 2 consecutive hours for those flight crew members at control during the last landing ...);

o To the individual FRMS in order to get at least twice 2 hours per maximum FDP according CS FTL.2.205 (i) and (ii);

· The limitation of sectors to 3 is senseless as the extension of FDP using on-board rest shall be linked to at least 4 possible sectors. Otherwise the extension of FDP using on-board rest makes operationally no sense;

· I will give EASA below three examples of recent Rega/Swiss Air-Ambulance AEMS missions where 4/5 sectors were of ultimate necessity to conduct the mission successfully:

o Zürich, Switzerland **LSZH** - Abidjan, Cote d'Ivoire **DIAP** (**custom stop**) - Korhogo, Cote d'Ivoire **DIKO** (**patient pick-up**) - Abidjan, Cote d'Ivoire **DIAP** (**custom stop**) - Zürich, Switzerland **LSZH** (patient drop-off);

o Bangkok, Thailand **VTBD** (**patient pick-up**) - Paro, Bhutan **VQPR** (**patient pick-up**) - Lahore, Pakistan **OPLA** (**fuel stop** due to max. take-off weight limitations at Paro, VQPR) -

Baku, Azerbaijan **UBBB** (**fuel stop** due to range limitations) - Zürich, Switzerland **LSZH** (patient drop-off);

o Santa Cruz, Bolivia **SLVR (crew layover** to avoid sleeplessness of the flight crew at high altitude at La Paz) - La Paz, Bolivia **SLLP** (**patient pick-up**) - Santa Cruz, Bolivia **SLVR** (**fuel stop** due to max. take-off weight limitations at La Paz, SLLP) - Fortaleza, Brazil **SBFZ** (**fuel stop** due to range limitations) - Sal, Cape Verde, **GVAC** (**fuel stop** due to range limitations) **-** Zürich, Switzerland **LSZH** (patient drop-off) --> this mission was flown under the ULR regime.

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response: Accepted

comment: *99* comment by: *Mario Broesel*

I would recommend to keep CS FTL.2.205 Table 1 and Table 2 which shows the maximum daily FDP without and with extensions more simple. It`s quality not quantity that counts. It is a good deal if the maximum allowed FDP depending on her start reference time, but fewer rows with larges time frames would keep it more clearly and easy to use in daily business.

response: Please, refer to the previous responses in relation to Tables 1 and 2.

comment: *136* comment by: *VistaJet*

This table is easier to work with than Max FDP without extension. However, this table would improve operational robustness if the max FDP could be increased by a further hour up to a maximum of 14hrs, with an approved FRMS.

In addition, the ORO.FTL.205 table has an additional sector. It is does not make sense that the ATXO has fewer sectors allowed at it is never a repetitive schedule as is the case in scheduled CAT.

response: Noted

Please, refer to CS1 FTL.2.205.

comment	*170* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* Table: Maximum daily FDP in hours - Acclimatised crew memebers in two-pilot air taxi and AEMS operations with extension without on-board rest: FDP can be extended by up to 1 hour, if no on board rest or augmented crew are applicable. The regulations according to ORO.FTL205 (d1) apply. *The extension is already regulated in ORO.FTL205 very briefly. It contradicts with the rules stated.*
response	Noted The table with the maximum daily FDP with extension without on-board rest is contained in CS2 FTL.2.205.

comment	*212* comment by: *Cat Aviation AG* Table 2 is rather too fragmented, over complicated to manage. Also no extension possible from 1900-0614h start time. What is the rationale for further restriction here? Suggest to manage this simpler by : adding 1 hour to max FDP in 2 crew ops acclimatised, and define some criteria for robustness of schedule.
response	Please, refer to the previous responses in relation to the tables.

comment	*241* comment by: *Thomas Henselmann* Table 2 not consistent with CAT Ops, should be defined for more than 4 sectors. With FRMS a maximum of 14h max FDP should be possible with extension.
response	Please, refer to the previous responses in relation to the tables.

comment	*365* comment by: *European Helicopter Association (EHA)* BHA (UK) Table 1 Comment: Quite probably the most absurdly complex table that only EASA could have derived.
response	Your statement is not accepted.

Table 1 was developed and provided to EASA by EBAA.

comment *866* comment by: *ACM AIR CHARTER*

FDP extensions after 1900LT (CS.FTL.2.205 table 2)
NPA 2017-17 does not consider the type of operation that ACM as a long range business aircraft operator conducts on a regular basis (single long range sectors with block times greater than 10 hours, 3 to 4 times per month).
Customers using ultra-long range capable aircraft (e.g. GLEX, G550, FA7X, BBJ, ACJ) schedule their flights with an evening departure and arrival in the morning. Our flight crews are facing night flights with flight times over 10 hours around 3-4 times per calendar month with long rest periods – often greater than 36 hours – in between those flights.
In general, crews on GLEX, FA7X and BBJ within our company tend to fly in total only 4 to 6 days per calendar month while total working days (including positioning and FDPs) vary between 7 and 10 days per calendar month.

To be able to conduct those flights with a single two-pilot crew, FDP extensions for those evening/night departures up to one hour are required and feasible with current FTL regulations according EU-OPS, subpart Q.

With implementation of CS FTL.2.205 – table 2, those extensions are no longer permitted.

Over the past four years (2014-2017), ACM conducted 217 flights with actual block times greater than 10:00hrs, which covers more than 40% of our total hours flown on BBJ, GLEX and FA7X.
150 of these flights required a FDP extension up to 12 hours.
These flights are considered as the major backbone of our company, and 70 % of the flights on our long range fleet of aircraft would no longer be possible with the implementation of CS 2.205 table 2.
To continue the business relationship with our customers, ACM demands to keep the existing possibilities of FDP extensions of 1 hour when flight duty encroaches or covers the WOCL.

It is worth to mention that over the entire time of operation, not a single fatigue-related incident was reported.

Since ACM is not the only operator performing these kind of flights, the negative impact on the industry would be significant, e.g. an increase in proceeding costs, the requirement to hire additional pilots and the obligation to perform crew changes at places with poor airline connections. In addition, positioning would be more time consuming, tiring and cost intensive.
Another operational concern is to maintain recent experience requirements for each pilot (3 take-offs and landings within 90 days as PF) due to the lack of sectors flown when augmenting the flight crew, which would result in additional simulator costs for the operator.

response

Accepted

Banning extensions after 1900 until 0614 will ground ATXO flights that are currently operated with non-augmented two-pilot crew, and which are anyway allowed under Subpart Q of EU-OPS, where the extension between 2200–0459 is fixed to 11:45 hrs.

The table will be reworked. Please, refer to CS2 FTL.2.205.

comment

911 comment by: *Stephanie Selim*

Technical comment –
Table 2 presents maximum FDP with extensions. However, extended FDP in Table 2 is derived from the basic maximum daily FDP under ORO.FTL.205(b)(6) (=> table 1 of CS FTL.2.205). Table 2 is not derived from the basic maximum daily FDP under ORO.FTL.205(b)(1) as we can see that the maximum FDP with 3 sectors and a start at 0700 is extended by 1h30 (which is not permitted according to ORO.FTL.205(d1)). A second table 2 (2bis) should therefore be derived from the basic maximum daily FDP under ORO.FTL.205(b)(1).And table 2 should be a derived in a third table 2 (2c) to include the possibility for the operator to extend the basic maximum daily FDP given in table 2 of ORO.FTL.205 by up to one hour for two-pilot air taxi and two pilot AEMS operations providing that the basic maximum daily FDP extension is under FRM (possibility introduced in the technical comment on ORO.FTL.205(b)(1)).

response

The table will be reworked. Please, refer to CS2 FTL.2.205.

comment

1005 comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart*

Table 2 This table is too fragmented, over complicated to manage. Also no extension possible from 1900-0614h. What is the rational for restrictions here? Please redo the table.

response

The table will be reworked. Please, refer to CS2 FTL.2.205.

comment

1069 comment by: *Rabbit-Air Ltd*

Table 2: No extension possible from 1900-0614: no reference found! What is the reason for this restriction? This table should be redo…

response

The table will be reworked. Please, refer to CS2 FTL.2.205.

comment

1109 comment by: *FNAM*

ISSUE
There are six CS FTL.2.205 with exactly the same title, which introduces complexity, uncertainty and may lead to misunderstanding. FNAM and EBAA France suggest adding precisions in the title of this paragraph in order to quickly make the link with the involved ORO paragraph.

PROPOSAL
Replace the title of this CS by: *"CS FTL.2.205(d)(1)"*

response

Accepted

Numbers have been added to the CSs to facilitate cross-referencing.

comment

1119 comment by: *European Cockpit Association*

Commented text:
Table 2

ECA Comment:
This table does not reflect the purpose of the Rulemaking Group anymore - also in the context of other proposals of the NPA.
The sense as proposed by the Rulemaking group was, that a single pilot flight crew should not have longer active working time than 10 hours within a possibly by breaks extended longer alertness- (working-) time. Limiting factor is the minimum time of rest within 24 hours. Any time spent on standby/alertness plus post- and pre-flight- duties has to be counted for the cumulative duty limits. suggesting max limit 10 hours depending on reporting time and to be prolonged by breaks of more than one hour up to 16h which is in line with max. FDP in case of in-flight-rest.

response

Table 2 refers to non-augmented two-pilot crew of air taxi and AEMS operations, and not to single-pilot flight crew as your comment suggests.

comment

1120 comment by: *European Cockpit Association*

ECA comment:

ECA supports the compromise as achieved by the Rulemaking Group:
The operator may assign, between two extended recovery rest periods, a block of not more than 2 consecutive FDPs extended to a maximum of 14:45 h alertness (15:30 hours FDP to allow for pre- and post- flight duties) and including a reduced rest period between the 2 consecutive FDPs, provided that:
- The rest period preceding the first FDP is at least 36 hours including 2 local nights. The last night before extended duties of more than 14hours has to be taken at the HEMS operating base
- The reporting time is between 06:30-11:59

	- Any time of the extension of the FDP of more than 10 hours is equalled by the time of breaks and which are used for relaxing. Only the time of breaks which are longer than one hour can be used to extend the FDP. - The rest period after completion of the two consecutive FDPs of more than 14 hours is extended to include 3 local nights - The rest period between the two consecutive FDPs shall allow the possibility for 8 hours uninterrupted sleep if WOCL is enclosed and is minimum 08:30h; If the WOCL is not enclosed, the rest period cannot be reduced below 10 hours. In case of the use of commander's discretion the following min rest time has to be prolonged by the time of the extension of FDP by commander's discretion.
response	Noted

comment	*1164* comment by: *GBAA* CS FTL.2.205 Flight duty period — air taxi and AEMS Maximum daily FDP with extensions without on-board rest Between 1900h-0614h, a maximum of 11h is too less! I brought already an example from Paris to Kinshasa which would be feasible in an FDZ of 11:30h. Why does the extension start from 0615? If the check-in time is postpone by 15 minutes, it will bring an additional 30 minutes compared to a check-in time of 0600h. This calls for optimizing... Why not simply add one hour extra?
response	The table will be reworked. Please, refer to CS2 FTL.2.205.

comment	*1186* comment by: *Danish Aviation Association* CS.FTL.2.205 Table 1 & 2: Tables should be reconsiddered as mentioned in earlier comments (ORO.FTL.205). Limitations in Table 2 should be changed to allow to more than 4 sectors subject to FRMS analysis.
response	The tables will be reworked. Please, refer to CS1 and CS2 FTL.2.205.

comment	*1203* comment by: *FNAM* ISSUE In CAT.A FTL regulation, it is possible to have extensions of the FDP for 5 sectors. This should be the same for Air Taxi and AEMS operations. PROPOSAL

Update this table and replace it by the one provided for CAT operations in CS.FTL.1.205(b) Maximum FDP with extension. Moreover, if an operator has a FRM, it is possible to increase the FDP limitations in this Table by:

- For Air Taxi operations : 1 hour
- For AEMS operations:
  - 2 hours for 1 to 4 sectors
  - 1h30 for 5 sectors

In order to mitigate these proposals, a scientific study may assess whether and how it may be possible to have FDP iver 14 hours under a FRM.

response: The table will be reworked. Please, refer to CS2 FTL.2.205.

comment: *1371* comment by: *Gama Aviation (UK) Ltd*

Table 2 should be extended beyond 4 sectors for consistency.

response: The table will be reworked. Please, refer to CS2 FTL.2.205.

comment: *1509* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

General remark: Table 2 is again too fragmented and burdensome, as well as overly complicated in order to manage it. No extension possible from 1900-0614h, which is further limiting factor. The logic for these restrictions is not discernible. Please reconsider, redo and/or completely drop the table.

response: The table will be reworked. Please, refer to CS2 FTL.2.205.

comment: *1522* comment by: *General Aviation Manufacturers Association / Hennig*

The General Aviation Manufacturers Association (GAMA) appreciates the opportunity to file comments about the important topic of Flight Time Limitations (FTL). GAMA appreciates the work undertaken by the European Aviation Safety Agency (EASA) and the associated rulemaking team to advance the issue of FTL.

FTL is always a complicated topic about which to advance policy. GAMA appreciates EASA having considered the latest science in the field. GAMA, however, has concerns about the NPA proposing a framework that may overcomplicate compliance for an operator. An example of a component of the EASA proposal that overcomplicates FTL are the Flight Duty Period (FDP) allowances laid out in Tables 1 and 2 for air taxi and emergency medical

	service operations with aeroplanes. The proposal includes a duty period based on start time and is further complicated by the number of sectors in which the flight crew operates. GAMA views this framework as extremely difficult for a typical operators to comply with and encourages EASA to continue to work with the stakeholders to establish a simpler structure to FTL for these operators.
response	The tables will be reworked. Please, refer to CS1 and CS2 FTL.2.205.

Responses in relation to 'FDP extensions with augmented crew'

comment	*2* comment by: *TipTaf* Many ATXO operated aircrafts (GLEX, G550) have a crew rest facility that reclines to 80 deg back angle to the vertical but the total length available for rest is of 160 cm or less making impossible to have a proper rest to pilots taller than 160 cm. To avoid a possible miss interpretation of the definition of class A rest facility, my personal suggestion is to amend the definition of Class A rest facility giving a minimum required total length of the bunk bed or other surface.
response	Partially accepted The length and width must be adequate to accommodate a physically average person, otherwise it will not meet Class A facility standards.

comment	*45* comment by: *VDV M* class A facility, which are the best comfort in terms of inflight rest and therefore provide the most usable flight duty, do not take into account a total lenght and width. 80deg or a fully horizontal bed, without the possibility to fully extend one owns legs and stretch are of no use. Given the small size nature of business jets, operational procedures should be established by the operator to limit the noise produced in the galley, and/or passenger interference direct or indirect (eg. flight attendant push call buttons) while crew memebers are having inflight rest.
response	Accepted Class A facility is a bunk. If that bunk does not have adequate length and width, it will not meet Class A specifications. Your proposal for operational procedure to limit noise levels is already included in the text.

comment	*83* comment by: *SHug* Extension of the maximum basic daily FDP due to on-board rest under ORO.FTL.205(e) 1. (i) with one additional flight crew member: 1. (A) up to 15 hours with class B rest facilities; or 2. (B) up to 16 hours with class A rest facilities; 2. (ii) with two additional flight crew members: 1. (A) up to 16 hours with class B rest facilities; or 2. **(B) up to 24 hours with class A rest facilities,** provided all the following conditions are met: **(1) the FDP is limited to 5 sectors;** justification: flights with 2 additional flight crew member are far less tiring than with only 1 additional flight crew member by experience. 5 sectors are operationaly needed to operate globally.
response	Not accepted An average crew member needs approximately 7–8 hours *continuous uninterrupted* restorative sleep within any 24-hour period, as found by scientists. This means that an individual FDP of an average crew member may be up to 16–17 hours with on-board rest, without additional mitigation measures provided by the FRMS. In-flight/on-board rest with augmented crew is intended for use on one or two **long** sectors. This is to allow time for in-flight rest (minimum rest for crew being at the controls is 2 hours) in the **cruise phase** of flight. This is likely to be impossible with 5 shorter sectors as it may prevent good rest opportunities from being available.

comment	*96* comment by: *B. Wagner* Diese Tabelle erlaubt FDP bis zu 18:00h, mit der in (6) genannten Regel sogar 19:00h. Voraussetzung hierfür ist lediglich das Einhalten von "on-board rest" in der vorgeschriebenen Länge. Wenn solch lange Dienstzeiten möglich sind in einem Umfeld, wo die Ruhemöglichkeiten deutlich schlechter sind als auf einer HEMS Station, was begründet dann die viel restriktiveren Dienstlängen im HEMS Betrieb aus CS FTL.3.205 FDP HEMS? Eigentlich müsste es umgekehrt sein und die Dienstzeiten HEMS bei entsprechender Ruhemöglichkeit deutlich länger ermöglicht werden als bei AEMS oder ATXO.
response	Not accepted. HEMS is not part of this proposal.

comment	*112* comment by: *UK CAA* **Page No:** 24

Paragraph No: CS FTL.2.205 Flight Duty Period (3) (a)(b) – Air Taxi and AEMS - On-board rest facilities

Comment: We propose that EASA considers developing AMC / GM for the specifications for the Class A and B rest facilities for both air taxi and scheduled and charter operations. Experience of the application of "minimum specifications" without understanding the detail of the facilities they were based on and the level of sleep they should be able to provide, has been a challenge for regulators. The purpose of the in-flight / on-board rest facility is to enable the crew to sleep, not just meet a very simple technical specification for the seat.

Justification: Clarity and to ensure that the facility provided enables the crew to achieve the level of rest and sleep required to be able to safely extend the duty.

response Accepted

As regards air taxi/AEMS aeroplanes, it may be difficult to ensure separation between the flight crew compartment and the cabin, as well as to guarantee full comfort as regards noise, light and disturbances. However, the operator is not fully relieved from the responsibility to mitigate, as much as possible, the impact of light and noise on crew.

comment *113* comment by: *UK CAA*

Page No: 24

Paragraph No: CS FTL.2.205 (6) & (9) Flight Duty Period – Air Taxi and AEMS

Comment: Editorial. Suggest that a single type of hours / minutes reference is maintained throughout the bullet points, either hours and minutes or just minutes.

Justification: Clarity and consistency of referencing.

response Accepted

comment *137* comment by: *VistaJet*

CS FTL.2.205 Flight Duty Period - Air Taxi and AEMS
(9) having the flexibilty to add a fresh crew member to achieve augmented duty time limits is an excellent function, as due to space limitations on ATXO aircraft it is more comfortable to limit the time of 3 crew augmentation.

The ability to add a crew member on a tech stop means adding a crew member who has managed to have longer rest in a more comfortable facility (hotel) and will improve safety.

However, the limit of 1h30 for the first sector on a potential 17hr FDP makes no sense.

	Suggest to maintain the function of allowing 2 Flight Crew to complete the first sector, adding a 3rd crew member during the tech stop, as long as all crew members who require it, achieve 150min on-board rest.
response	Accepted The limit of 1h30 under point (11) has been removed.

comment	*159* comment by: *Safety and Compliance Manager* FTL proposed do not allow to plan flights in Taxi Aviation, where maximum flexibility is required. Basic Rule in Business Aviation : schedules change, ofter and last minute. Here is an example of Daily Ops in a Business Aviation company with large aircraft: client A decides to depart 30 minutes earlier, or 30 minutes later, or later in the evening, or earlier in the morning, or add a stop to pick / drop a passenger. With the proposed FTL, this means that I need to organise a crew change or make a night stop somewhere because suddenly we are 15 minutes too short! Safetywise here are the high risks : - Proposed FTL are much too complicated and are already bringing a lot of stress to the planners in our company, any tiny change will require a thorough analysis of the FTL. - Proposed FTL are complicated, with the massive schedule changes operators face daily, mistakes will happen, which will bring tension with Crew, planer, clients, making crew fly stressed. - A crew change needs at least 48h to plan, to get last minute permits to make a night stop takes time. We might have to force the crew to make a night stop in unsafe places (Flying to South Africa or China for example, don't offer many safe places to rest) : this will increase stress in our crew, that prefer to extend the duty rather than do a short rest somewhere. - If a client is 30 minutes late for the last leg (stuck in trafic), how will the crew deal with it, when they will have to inform the passenger that they have to cancel the flight because they will be overduty of 15 minutes? High level of stress and in the end, they will prefer to do the fligth rather than facing a stressful situation. - Proposed FTL are complicated, restrictive, with no flexibility : owners will prefer to fly "Private", where FTL are less restrictive and there will be much less stress for everyone. - Proposed FTL will force to many deviations.
response	Not accepted

	EASA believes that with an FDP of 13–14 hours non-augmented and 15–17 hours augmented, all changes due to delays and additional stops can be accommodated. However, the tables will be simplified to remove granularity.

comment	*160* comment by: *Safety and Compliance Manager* The new CS must allow the Operator to use its FRMS (which must be approved by National authorities). The FRMS should allow the Operator to draw FTL in order to Operate Commercially. FRMS monitors effectively the Fatigue and give the oportunity to the operator to review the FTL in order to increase safety. FTL implemented through the FRMS are safer, adapted and relevant to the operation. Applying stringent FTL will bring stress, reduce safety and the FRMS becomes irrelevant, as we have no choice but to apply the regulations, therefore monitoring and training become totally are irrelevant.
response	Accepted

comment	*211* comment by: *Cat Aviation AG* change for Option with one additional flight crew under (i) (A) up to 16 hours with class B rest facilities (B) up to 18 hours with class A rest facilities Reasoning refer to our comments under 4.5 Conclusion, page 67 of the NPA.
response	Not accepted However, it is possible that the 16-hr period in Class A (three pilots) be increased by 1 hour if the FDP includes a consecutive 150-minute on-board rest period for each flight crew member at the controls during the last landing, and by 2 hours if the operator has a functioning FRMS.

comment	*243* comment by: *Thomas Henselmann* (6) The limit should be extended under FRMS (e.g. one additional hour)
response	Accepted

comment	*244* comment by: *Thomas Henselmann* (9) Time limit 1:30h should be extended or exchanged with adequate rest time onboard for the acting crew on the first sector.
response	Please, refer to the response to comment #137.

comment	*455* comment by: *Cat Aviation AG* point (9): pls clarify and suggested text: the frist sector of an FDP requiring an augmented flight crew may be accomplished with two flight crew members, if during the whole FDP, the minimum onboard rest of 150mins per crew is observed and the freshest crew member conducts the landing.
response	Please, refer to the response to comment #137.

comment	*624* comment by: *Transport Malta - Civil Aviation Directorate* Re (5) - The inclusion of the term and provision of cabin crew in air taxi operations may give rise to mis interpretations. Although CAD agrees with any rule making task clarifying the qualification and training requirement for personnel providing any safety related duties on board, the inclusion of cabin crew under Air Taxi FTL may be mis-leading.
response	Noted

comment	*632* comment by: *Cristina BENZ* Extension of the maximum basic daily FDP due to on-board rest under ORO.FTL.205(e) (i) with one additional flight crew member: (A) up to 15 hours with class B rest facilities; or (B) up to 16 hours with class A rest facilities; (ii) with two additional flight crew members: (A) up to 16 hours with class B rest facilities; or **(B) up to 24 hours with class A rest facilities,** provided all the following conditions are met: (1) the FDP is limited to 5 sectors; justification: flights with 2 additional flight crew member are far less tiring than with only 1 additional

	flight crew member by experience. 5 sectors are operationaly needed to operate globally.
response	Please, refer to the response to comment #83.

comment	*860* comment by: *NetJets Europe* CS FTL.2.205 Netjets support the proposal CS FTL.2.205 (9) Why is there a limit of 01h30 for first sector? What needs to be guaranteed is that the flight crews have the minimum on-board rest time in order to extend the maximum FDP.
response	Please, refer to the response to comment #137.

comment	*912* comment by: *Stephanie Selim* Editorial comment – Number the subparagraph of CS FTL.2.205 Extension of the maximum basic daily FDP due to on-board rest under ORO.FTL.205(e) in a similar manner to CS FTL.1.205(c): "(**1**~~**3**~~) The on-board rest facilities comply with one of the following descriptions: **–** ~~**a.**~~ 'Class A rest facility' means a bunk or other surface that allows for a flat or near flat sleeping position. It reclines to at least 80° back angle to the vertical. **–** ~~**b.**~~ 'Class B rest facility' means a seat in an aircraft cabin that reclines at least 45° back angle to the vertical, has a seat width of at least 20 inches (50 cm) and provides leg and foot support. provided all the following conditions are met: (**i**~~**1**~~) the FDP is limited to 3 sectors; (**ii**~~**2**~~) the minimum on-board rest period is a consecutive 90-minute period for each crew member and 2 consecutive hours for those flight crew members at control during the last landing. **(2)** The maximum basic daily FDP in air taxi or AEMS operations may be extended due to on-board rest for flight crew: (i) with one additional flight crew member: (A) up to 15 hours with class B rest facilities; or (B) up to 16 hours with class A rest facilities; (ii) with two additional flight crew members: (A) up to 16 hours with class B rest facilities; or (B) up to 17 hours with class A rest facilities, (**3**~~**4**~~) The operator describes means to provide darkness and noise mitigation in the operations manual and ensures that these means are available to all crew members during on-board rest. The operator establishes a procedure in the operations manual to ensure that crew members are not disturbed during on-board rest.

(**~~4~~5**) The minimum on-board rest in Class A or B on-board rest facility for each cabin crew member is:
Table
(**~~5~~6**) The limits **specified in (2)** for pilots may be increased by 1 hour, if the FDP includes a consecutive 150-minute on-board rest period for each flight crew member.
(**~~6~~7**) All time spent in the rest facility is counted as FDP.
(**~~7~~8**) The minimum rest at destination is at least as long as the preceding duty period, or 14 hours, whichever is greater.
(**~~8~~9**) The first sector of an FDP requiring an augmented flight crew may be accomplished with two flight crew members, if that sector does not exceed 01h30.

response Noted

comment *925* comment by: *Stephanie Selim*

Technical comment-
In (6), DGAC woulld like to add the possibility to increase the limits for pilots, under FRM, by 1 hour. This FDP extension can be combined with the one hour extension when the FDP include a consecutive 150 minutes on-board rest period for each flight crew member. In that case, the maximum daily FDP is limited to 18 hours. This provision is justified by long range operations. For instance, the limits proposed in the NPA would not permit some long range AEMS operations for medical repatriation.
Proposal :
"(6) The limits for pilots may be increased by 1 hour**: (i)** if the FDP includes a consecutive 150-minute on-board rest period for each flight crew member**, or (ii) if the operation has implemented a FRM. (6a) The increase of limits for pilots under (6)(i) and (6)(ii) can be cumulated but in that case the maximum daily FDP remains limited to 18 hours**".

response Partially accepted

comment *930* comment by: *Stephanie Selim*

Technical comment-
In the (1), in the case of AEMS, DGAC would like to add the possibility to add a 4th sector providing that this additional segment is dedicated to position the aircraft back to its operating base with only crew member on board and the aircraft medical equipment. This possibility should be under FRM. This provision is necessary to ensure continuity of aeroplane emergency medical service by returning to the operating base for the next AEMS flight, which would not be possible with a limitation to 3 sectors.
Proposal :
"**In the case of AEMS operations, the FDP may be increased to 4 sectors under FRM providing that the 4th sector is a sector flown to position the aircraft back to the operating base with only crew members on board and no cargo.**"

response Partially accepted

	The FDP should be limited to 4 sectors (without an FRMS) to reflect the typical air taxi/AEMS operation, including a stop to a customs airport (not an entry airport) and one aircraft positioning sector.
comment	*931* comment by: *Stephanie Selim* Technical comment – Does the subparagraph CS FTL.2.205 Extension of the maximum basic daily FDP due to on-board rest under ORO.FTL.205(e) apply to two-pilot operations only or both single and two-pilot operations ? If it applies to single pilot operation, an augmented flight crew with one additional pilot may lead to have a maximum FDP higher than the FDP derived from two-pilot operations.
response	Not accepted. Point ORO.FTL.205(e) is based on a minimum of two-pilot operation which can be augmented by one or two additional pilots.
comment	*942* comment by: *AESA* Class A rest facility doesn't stablish a minimum width of the facility. It could be supposed that a bunk that recline at least 80º will have width enough, but in case of other surfaces it could be necessary to define a minimum width.
response	Please, see previous responses regarding on-board rest facilities.
comment	*1007* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* (i) change option with one additional flight crew (A) up to 16 hours with class B rest facilities (B) up to 18 hours with class A rest facilities (ii) (A) up to 18 hours with class B rest facilities (B) up to 20 hours with class A rest facilities
response	Please, refer to the response to comment #632.
comment	*1070* comment by: *Rabbit-Air Ltd* 1 additional flight crew having class A rest facility: max. daily FDP should be extended to 18 hrs.

response	Maximum daily FDP may be extended by 1 hour under the condition of a consecutive 150-minute on-board rest period for each flight crew member at the controls during last landing, and by 2 hours under an FRMS.

comment	*1071* comment by: *Rabbit-Air Ltd* (5) should be less restrictive then for pilots
response	The comment is not clear.

comment	*1073* comment by: *Rabbit-Air Ltd* (6) fully agree to comment of CatAvi. Simplify by using 16 resp. 18 hrs.
response	The comment is not clear.

comment	*1075* comment by: *Rabbit-Air Ltd* (9) remove time restriction 1h30 and add the need that all required minimum in-flight-rest is assured.
response	Accepted

comment	*1121* comment by: *FNAM* Attachments #77 #78 Cf. comment 1124 ISSUE Due to the difference of activities between EMS flights and Air Taxi operations, FNAM and EBAA France suggest differentiating the extended limitations of the FDP for Air Taxi and AEMS operations. Besides, additional extensions of the extended maximum basic daily FDP should be described if the operator has a FRM (Cf. Annex 2 & 3). PROPOSAL 1 The maximum basic daily FDP in Air Taxi or AEMS operations may be extended due to on-board rest for flight crew with one additional crew member:

	Extended maximum basic daily FDP No FRM	Additional extension of this FDP	Extended maximum basic daily FDP with FRM and with pause
Air Taxi	Class B facility 15h	The extended maximum basic daily FDP for pilots may be increased by **1 hour** if the FDP includes a consecutive 150-minutes on-board rest period for each flight crew member.	The extended maximum basic daily may be increased by 2 hours if: • the FDP includes a consecutive 150-minute on-board rest period for each flight crew member; AND • Under a FRM
	Class A facility 16h		
AEMS These AEMS limits apply only if there is a consecutive 120-minutes on-board rest period for each flight crew member; otherwise Air Taxi limits here above shall apply.	Class B facility 16h	The extended maximum basic daily FDP for pilots may be increased by **1 hour** if the FDP includes a consecutive 150-minutes on-board rest period for each flight crew member.	The extended maximum basic daily may be increased by 2 hours if: • the FDP includes a consecutive 180-minute on-board rest period for each flight crew member; AND • Under a FRM
	Class A facility 17h		

For PEQ 4: all these limitations of maximum FDP may be increased by 1 hour.

PROPOSAL 2
Otherwise, FNAM and EBAA France propose a second solution and asks to replace the proposal with the CAP 371 dispositions:
When carrying out an AEMS flight, the allowable FDP in the company's approved FTL scheme may be increased by up to a maximum of 4 hours, subject to the conditions being met:

- Where an FDP is extended under the terms of this provision, a qualified medical attendant must accompany the EMS payload
- The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an EMS duty

response

Partially accepted

Please, see previous responses.

With regard to the FDP with 'pause', please refer to CS FTL.2.220 related to split duty with break(s) on the ground.

It should be crystal clear, however, that the breaks do not 'pause' or stop the duty time as they are part of the FDP.

comment

1124 comment by: *FNAM*

Attachments #79 #80

(6)

Cf. comment 1121

ISSUE
Due to the difference of activities between EMS flights and Air Taxi operations, FNAM and EBAA France suggest differentiating the extended limitations of the FDP for Air Taxi and AEMS operations.
Besides, additional extensions of the extended maximum basic daily FDP should be described if the operator has a FRM (Cf. Annex 2 & 3).

PROPOSAL 1
The maximum basic daily FDP in Air Taxi or AEMS operations may be extended due to on-board rest for flight crew with one additional crew member:

	Extended maximum basic daily FDP No FRM	Additional extension of this FDP	Extended maximum basic daily FDP with FRM and with pause
Air Taxi	Class B facility 15h	The extended maximum basic daily FDP for pilots may be increased by **1 hour** if the FDP includes a consecutive 150-minutes on-board rest period for each flight crew member.	The extended maximum basic daily may be increased by 2 hours if: • the FDP includes a consecutive 150-minute on-board rest period for
	Class A facility 16h		

			each flight crew member; AND • Under a FRM
AEMS These AEMS limits apply only if there is a consecutive 120-minutes on-board rest period for each flight crew member; otherwise Air Taxi limits here above shall apply.	Class B facility 16h	The extended maximum basic daily FDP for pilots may be increased by **1 hour** if the FDP includes a consecutive 150-minutes on-board rest period for each flight crew member.	The extended maximum basic daily may be increased by 2 hours if: • the FDP includes a consecutive 180-minute on-board rest period for each flight crew member; AND • Under a FRM
	Class A facility 17h		

For PEQ 4: all these limitations of maximum FDP may be increased by 1 hour.

PROPOSAL 2
Otherwise, FNAM and EBAA France propose a second solution and asks to replace the proposal with the CAP 371 dispositions:
When carrying out an AEMS flight, the allowable FDP in the company's approved FTL scheme may be increased by up to a maximum of 4 hours, subject to the conditions being met:
Where an FDP is extended under the terms of this provision, a qualified medical attendant must accompany the EMS payload

The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an EMS duty

response

Please, see previous responses.

comment

1125 comment by: *FNAM*

(1)

ISSUE
Due to the specificity of the AEMS and Air Taxi activities, it is essential to allow the extension of FDP due to on-board rest to 4 sectors. As a mitigation, FNAM and EBAA France suggest reducing the extension of the FDP of 30 min from 4 sectors.

PROPOSAL
There is a reduction of 30 minutes between the allowed extended FDP for 1-3 sectors and the allowed extended FDP from 4 sectors and further.

response Please, see previous responses.

comment *1126* comment by: *FNAM*

(9)

ISSUE
FNAM and EBAA France thank the EASA for introducing this possibility.
However, FNAM and EBAA France would like this disposition to be also applicable for the last sector.
Furthermore, FNAM and EBAA France understand the necessity of having a maximum time for the first or last sector of the FDP but a 1h30 limitation is too short. Instead, the mitigation could be introduce thanks to a minimum on-board rest rather than a limitation of time for the sector.

PROPOSAL
Replace the paragraph (9) by the following:
"(9) The first or last sector of an FDP requiring an augmented flight crew may be accomplished with two flight crew members, if the flight crew members have the minimum on-board rest as required."

response Please, see previous responses.

comment *1128* comment by: *FNAM*

ISSUE
Add the notion of "burn off" coming from the CAP 371. The mitigation is included in the proposal.

PROPOSAL
Add the following paragraph:
"To take advantage of this facility the division of duty and rest between those crew members being relieved must be kept in balance. It is unnecessary for the relieving crew member to rest in between the times relief is provided for other crew members. The flight following completion of duty is classed as positioning."

response The comment is not clear.

comment *1165* comment by: *GBAA*

CS FTL.2.205 Flight duty period — air taxi and AEMS Extension of the maximum basic daily FDP due to on-board rest
Does a couch or flat reclined and arranged seats also qualify as class A?
(9) Why not more than 01:30h? Wouldn't it be better that the rest requirements of each crew member needs to be fulfilled with preceding conditions (1)-(8).

response Please, see previous responses.

comment *1297* comment by: *Volkswagen AirService GmbH*

Business aviation aircraft are in general too small to host two full crews. Crew rest area or similar facility is available for single person only. An extension of the maximum extended FDP to 18 h with this facility must be possible. Otherwise the aircraft will not be able to fly their intended long range profiles.

response Noted

comment *1301* comment by: *Volkswagen AirService GmbH*

An extension of 2 hours with one additional crew member is required for our operations. Most business aviation aircraft are not equipped for 2 additional crewmembers and experience shows that 1 additional crewmember is sufficient. The duration of sleep is more important. Having too many people on board just decreases space and increases stress.

response Noted

comment *1378* comment by: *Gama Aviation (UK) Ltd*

Point (6) - With FRMS, the limit should be able to increase by one additional hour to a maximum of 2 hours.

Point (9) - 01h30 should be changed to "if the flight crew members achive the minimium on-board rest required. (There is no scientific justification for a restricted sector length)

response	Please, see previous responses.

comment	*1449* comment by: *European Cockpit Association* Commented text: "Extension of FDP extension with on-board rest" Reference CS FTL.2.205 (6) Comments In this section it is permitted that FDPs extended by 'on-board' rest (which should be in-flight rest – see other comments) be increased by an extra hour if each pilot gets a minimum of 2hr 20mins in the bunk. Given that research on the subject indicates that at most 75% of actual time in the rest facility is usable for FDP extension, which would already not provide for the basic values of FDP extension with in-flight rest this arbitrary extra hour is entirely without foundation. It is a similar measure to the extra hour in CAT FDP extension if one sector is more than 9 hours and there are no more than 2 sectors, which is equally arbitrary and unsupported by scientific advice. The one sector >9hrs provision at least provides for approximately 2hrs 45mins rest per crew member, so 150mins is a significant reduction in standard from even this level. Proposal Remove the extra hour FDP extension on top of in-flight rest FDP extension available if each flight crew member gets 150 mins consecutive rest.
response	Not accepted Not all rules are based on scientific studies. Some are based on good and efficient operators' practices, as well as on experience. It is not clear on what scientific grounds 2hrs 45min is considered a standard, whilst 150 min (2hrs 30 min) is not.

comment	*1467* comment by: *VOLDIRECT* Table 2: FDP start time > 1900: no extensions not allowed. This is a problem for air taxi. Today we are authorized to 11:00 FDP for 1-2 sectors.
response	Please, see previous responses.

comment	*1490* comment by: *Airlec Air Espace / Paul Tiba*

	ISSUE Due to the difference of activities between EMS flights and Air Taxi operations, AIRLEC suggests differentiating the extended limitations of the FDP for Air Taxi and AEMS operations. Besides, additional extensions of the extended maximum basic daily FDP should be described if the operator has a FRM. AIRLEC proposes to replace the proposal with the CAP 371 dispositions: When carrying out an AEMS flight, the allowable FDP in the company's approved FTL scheme may be increased by up to a maximum of 4 hours, subject to the conditions being met: • Where an FDP is extended under the terms of this provision, a qualified medical attendant must accompany the EMS payload • The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an EMS duty CRUCIAL ISSUE Due to the specificity of the AEMS and Air Taxi activities, it is essential to allow the extension of FDP due to on-board rest to 4 sectors. As a mitigation, AIRLEC suggests reducing the extension of the FDP of 30 min from 4 sectors.
response	Please, see previous responses.

comment	*1510* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* (i) change option with one additional flight crew (A) up to 16 hours with class B rest facilities (B) up to 18 hours with class A rest facilities (ii) (A) up to 18 hours with class B rest facilities (B) up to 20 hours with class A rest facilities
response	Please, see previous responses.

comment	*143* comment by: *CAA-NL* **CS FTL.2.205 Flight Duty Period (3) (a)(b) – Air Taxi and AEMS - On-board rest facilities** **Comment:** EASA should consider developing AMC / GM for the specifications for the Class A and B rest facilities for both air taxi and scheduled and charter operations to avoid misunderstanding about the interpretation of the requirement.

response	Noted Specifications for in-flight rest facilities (Class 1, 2 and 3) for scheduled/charter operations are already included in CS FTL.1. Specifications for on-board rest (Class A and B), as proposed with this Opinion under CS FTL.2, relate to air taxi and AEMS operations. There cannot be acceptable means of compliance (AMC) to the certification specifications (CSs) because operators may deviate from the CSs subject to EASA assessment and subsequent competent authority (CA) approval. It is unclear what needs to be further explained in the current standard of Class A and B by means of guidance material (GM).

CS FTL.2.205 p. 24-25

Responses in relation to 'commander's discretion'

comment	*34* comment by: *Serair* Unforeseen circumstances in AEMS operations - commander's discretion. Comments to point (a) Commander's discretion extension shouldn't be more restrictive in AEMS than in CAT or air taxi operations. Our experience in combined types of operations shows that compared with Air taxi or CAT operations, the chances to encounter unforeseen circumstances is higher in AEMs operations. Tipicall unforseen circumstances in AEMS are the delayed reporting of the patient due to it's own condition, the slow processing in airport security checkpoints and lack of planification of medical services. More than once our crew has waited over an 1 hour after positioning due to these unforeseen circumstances. Comments to point (c) Point (c) is not related with commander's discretion, it should be placed in "rest periods" CS.FTL.2.235
response	It should be possible for an operator to anticipate typical delays, and not call them 'unforeseen circumstances'.

The concept of CMD is based on exceptionally needed extensions due to circumstances that cannot be predicted, such as weather conditions, peak traffic, or technical issues. Extensions beyond the FDP limits should not be made frequently or on a regular basis.

The intention behind the use of the term 'unforeseen circumstances' is to prevent operators from continually rostering flight and duty times to their maximum limits and from regularly relying on extensions to achieve their operational goals.

Further, operational experience, hazard identification and risk assessments can be utilised to predict potential disruptions or delays.

The lack of a sound organisational and safety culture within the operator should not be compensated by the frequent use (or misuse) of commander's discretion.

The proposal to make the rule on commander's discretion at least as flexible for air taxi/ATXO operations as in CAT operations is accepted.

comment *454* comment by: *Cat Aviation AG*

as for AirTaxi please refer to our comment under ORO.FTL.205. f) (7) our comment no 449.

response Please, refer to the response to comment #449.

comment *626* comment by: *Transport Malta - Civil Aviation Directorate*

The competent authority has come across several cases where the maximum FDP needed to be extended due to unforeseen circumstances in air taxi operations (e.g. security situation at destination would not allow for overnight stays or to provide for minimum rest).
Suggest text to this effect be included for air taxi operations.

response Accepted

Practical guidance has been included as to what events may constitute 'unforeseen circumstances'.

comment *943* comment by: *Stephanie Selim*

Technical comment-
Extensions proposed for AEMS apply to the maximum basic daily FDP and not the maximum daily FDP. Therefore, it applies to both the basic FDP under ORO.FTL.205(b)(1) and (6), but it excludes the possibility to combine the commander's discretion with split duty and FDP extensions due to on board rest. Moreover, no rationale is given to reduce

	the commander's discretion by one hour compared to air taxi, regular and charter operations. Additionally, commander's discretion may be essential in emergency flight like organ transportation which is characterized by many delays/waiting times. Indeed, in France it is the same medical team who removes the organ and who transplants this organ. So, flight crews who fetch medical team to bring them to the hospital where the organ removal takes place have to wait for the medical team to go to the hospital where the transplantation will take place. Yet, if the medical team has to remove the heart, which is the last organ to be removed, the flight crew will have to wait for hours if all the other organs of the patient have to be removed. The RIA does not take into account this specific kinf of AEMS operation which needs great flexibility. Thus, it is proposed to replace this paragraph of CS FTL.2.205 by ORO.FTL.205(f)(1)(i): "For AEMS operations, **the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 2 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours;** ~~**The maximum basic daily FDP may be increased for AEMS by up to 1 hour unless the flight crew has been augmented, in which case the maximum FDP may be increased by up to 2 hours**~~;
response	Partially accepted CS6 FTL.2.205 applies to commander's discretion in air taxi/AEMS operations where the IFTSS is based on CS FTL.2, and not on point ORO.FTL.205(f)(1)(i). Your statement that the commander's discretion in air taxi/AEMS operations excludes the possibility to combine commander's discretion with FDP extensions due to on-board rest (augmented crew) is not correct. However, allowable extensions have been increased by 1 hour, and the possibility to combine commander's discretion with split duty has been added.
comment	*946* comment by: *Stephanie Selim* (b) Technical comment- According to ORO.FTL.105 'EMS flight' definition, immediate and rapid transport is essential not only for ill or injured persons. Accordingly it is proposed to modify CS FTL.2.205 Unforeseen circumstances in AEMS operations — commander's discretion: "If on the final sector within the FDP the allowed increase of up to **2**~~**1**~~ hour or up to **3**~~**2**~~ hours as applicable is further exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome. If unforeseen circumstances occur just before take-off for the final sector, the allowed increase may only be exceeded **where immediate and rapid transportation is essential as defined in ORO.FTL.105 'EMS fight'** ~~**to transport the patient**~~."
response	Accepted

comment	*948* comment by: *Stephanie Selim* (c) Technical comment – In the case of AEMS, the provision gives the possibility to reduce the rest period following the FDP. However, why is this provision applicable only "away from base" ? Why is it different from scheduled and air taxi operations ?
response	Not accepted. It is not different. AMC1 ORO.FTL.205(f) states that the use of CMD should be avoided at home base. For air taxi/AEMS operations, the entire requirement on CMD is in the CSs, meaning that the operator's IFTSS may deviate from the CSs subject to EASA positive assessment and competent authority (CA) approval.

comment	*1077* comment by: *Rabbit-Air Ltd* Unforseen circumstances do impact flight duty and its needed extension in both EMS and Air Taxi! Air Taxi should be included.
response	Not accepted. CS6 FTL.2.205 'Flight duty period (FDP) — commander's discretion' is applicable to both air taxi and AEMS operations.

comment	*1129* comment by: *FNAM*

FORCE MAJEURE

AEMS and Air Taxi are deeply linked with national health, security and safety. Current French regulation allows, by sovereign decision of the State, to grant derogation as far as national health, security or safety is involved. Such a possibility shall remain for "Force majeure" and be introduced within the IR, in respect of the sovereignty of each Member State facing major health crisis.

For illustrative purposes, the recent missions would not have been possible if this regulation enters into force as it is:

- Hostage taking in Amenas in 2013
- Evacuation of injured journalists in Mossoul in 2016
- Airlift between Guadeloupe and Saint Martin

Therefore, FNAM and EBAA France suggest adding a specific paragraph in this implementing rule allowing pilots to derogate from these requirements in case of Force Majeure as it is already the case in the Current French National Regulation or if the State requisitions an aircraft.

PROPOSAL
For illustrative purposes, in France the following article is applied in case of « Force Majeure» :
"Il peut être dérogé aux limitations mentionnées la présente section dans les conditions suivantes:
1. Vols urgents, dont l'exécution immédiate est nécessaire:
a) Pour prévenir des accidents imminents et organiser des mesures de sauvetage, ou pour réparer des accidents survenus soit au matériel, soit aux installations;
b) Pour assurer le dépannage des aéronefs.
2. Pour assurer l'achèvement d'une période de vol que des circonstances exceptionnelles n'auraient pas permis d'effectuer dans les limites prétablies.
3. Vols exécutés dans l'intérèt de la sûreté ou de la défense nationale ou d'un service public sur ordre du Gouvernement constatant la nécessité de la dérogation; la limite est fixer par le ministre chargé de l'aviation civile."
(Ref : CAC D422-12)

response

Noted

Please, see the response to comment #1029.

comment

1130 comment by: *FNAM*

Attachment #81

(a) ISSUE

The paragraph (a) of this CS proposes a 1 hour commander's discretion for non-augmented flight crew operations. FNAM and EBAA France wonder how this value has been chosen by the Agency since there is no justification within the RIA regarding this matter. Currently in France, the regulation allows a 2 hours commander's discretion, including for non-augmented flight crew operations, with no reported inherent safety issue through experience. This 2 hours commander's discretion is frequently used by non-augmented flight crew operations in case of emergency for the patient.
Safety record and experience show such an allowance demonstrates a high level of safety, with no accident occurrence when the commander's discretion exceeds 1 hour

Besides, in CAT.A FTL regulation, there is a possibility of a commander's discretion of up to 2 hours for non-augmented flight crew and up to 3 hours for augmented flight crew. For augmented flight crew a more than 2 hours commander's discretion is frequently used (Cf. Annex 4).
These dispositions should also be applicable for EMS flights.
Hence, FNAM and EBAA France suggest for AEMS operations a 2 hours commander's discretion for non-augmented flight crew and a 3 hours commander's discretion for augmented flight crew.

PROPOSAL
Change the paragraph (a) to take into account the following dispositions (already accepted for CAT operations):

- Up to 2 hours of commander's discretion for non-augmented flight crew.
- Up to 3 hours of commander's discretion for augmented flight crew.

response

Accepted

comment

1131 comment by: *FNAM*

ISSUE
In the paragraph (b), the extension of the last flight time before take-off is limited to the case of the transportation of a patient. This is not consistent with the definition of EMS flights, which encompasses the following EMS payload (medical personnel, medical supplies such as equipment including the aircraft, blood, organs or drugs, ill or injured persons and other persons directly involved).

Life threatening emergency of a flight is not only conditioned by a patient onboard. It can deal with all the EMS payload defined in ORO.FTL.105 (§29): medical personnel, medical supplies such as equipment including the aircraft, blood, organs or drugs, ill or injured persons and other persons directly involved. Indeed, it may be urgent for the medical staff to come back to the hospital, to ensure the medical material is available for another operation, etc.

The extension of the last flight shall include all the content defined for EMS payload, for

	the present or next EMS operations requiring a quick return to the base without uselessly immobilizing critical material and staff, including the aircraft. That is why FNAM and EBAA France suggest replacing the term patient used in the paragraph (b) by the EMS payload defined in this NPA in the ORO.FTL.105 (§29). PROPOSAL Replace the paragraph (b) by the following: *"(b) If on the final flight time within the FDP the allowed increase under (a) is further exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome. If unforeseen circumstances occur just before take-off on the final flight time, the allowed increase may only be exceeded to transport the MEDICAL PERSONNEL, MEDICAL SUPPLIES SUCH AS EQUIPMENT INCLUDING THE AIRCRAFT, BLOOD, ORGANS OR DRUGS, ILL OR INJURED PERSONS AND OTHER PERSONS DIRECTLY INVOLVED."*
response	Accepted

comment	*1375* comment by: *Gama Aviation (UK) Ltd* Commander's discretion for AEMS operations is not consistant with CAT/ATXO operations for no apparent reason. Suggested Change: (a) Maximum daily FDP may be increased for AEMS by upto **2 hours**, or up to **3 hours** for augmented crew. (b) On final sector, within the the FDP allowed increase of up to **2 hours** or **3 hours** as applicable. Additionally in (b), "patient" should be replaced by **AEMS Payload** for consistency.
response	Accepted The flexibility allowed for under Part-CAT and Subpart Q with regard to commander's discretion is also made available for air taxi/ATXO operations.

comment	*1492* comment by: *Airlec Air Espace / Paul Tiba* ISSUE The paragraph (a) of this CS proposes a 1 hour commander's discretion for non-augmented flight crew operations. AIRLEC wonders how this value has been chosen by the Agency since there is no justification within the RIA regarding this matter. Currently in France, the regulation allows a 2 hours commander's discretion, including for non-augmented flight crew operations, with no reported inherent safety issue through

	experience. This 2 hours commander's discretion is frequently used by non-augmented flight crew operations in case of emergency for the patient. Safety record and experience show such an allowance demonstrates a high level of safety, with no accident occurrence when the commander's discretion exceeds 1 hour. Besides, in CAT.A FTL regulation, there is a possibility of a commander's discretion of up to 2 hours for non-augmented flight crew and up to 3 hours for augmented flight crew. For augmented flight crew a more than 2 hours commander's discretion is frequently used (Cf. Annex 2 – Illustration 3). These dispositions should also be applicable for EMS flights. Hence, AIRLEC suggests for AEMS operations a 2 hours commander's discretion for non-augmented flight crew and a 3 hours commander's discretion for augmented flight crew. PROPOSAL Change the paragraph (a) to take into account the following dispositions (already accepted for CAT operations) • Up to 2 hours of commander's discretion for non-augmented flight crew. • Up to 3 hours of commander's discretion for augmented flight crew. ISSUE In the paragraph (b), the extension of the last flight time before take-off is limited to the case of the transportation of a patient. This is not consistent with the definition of EMS flights, which encompasses the following EMS payload (medical personnel, medical supplies such as equipment including the aircraft, blood, organs or drugs, ill or injured persons and other persons directly involved). Life threatening emergency of a flight is not only conditioned by a patient onboard. It can deal with all the EMS payload defined in ORO.FTL.105 (§29): medical personnel, medical supplies such as equipment including the aircraft, blood, organs or drugs, ill or injured persons and other persons directly involved. Indeed, it may be urgent for the medical staff to come back to the hospital, to ensure the medical material is available for another operation, etc. The extension of the last flight shall include all the content defined for EMS payload, for the present or next EMS operations requiring a quick return to the base without uselessly immobilizing critical material and staff, including the aircraft. That is why AIRLEC suggests replacing the term patient used in the paragraph (b) by the EMS payload defined in this NPA in the ORO.FTL.105 (§29). PROPOSAL Replace the paragraph (b) by the following: "(b) If on the final flight time within the FDP the allowed increase under (a) is further exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome. If unforeseen circumstances occur just before take-off on the final flight time, the allowed increase may only be exceeded to transport the MEDICAL PERSONNEL, MEDICAL SUPPLIES SUCH AS EQUIPMENT INCLUDING THE AIRCRAFT, BLOOD, ORGANS OR DRUGS, ILL OR INJURED PERSONS AND OTHER PERSONS DIRECTLY INVOLVED."
response	Accepted The flexibility allowed for under Part-CAT and Subpart Q with regard to commander's discretion is also made available for air taxi/ATXO operations.

Responses with regard to 'delayed reporting'

comment	*146* comment by: *VistaJet* This feature is unusable in current format. The format is far too complex and tracking this will be nearly impossible in ATXO. The guidance material would be sufficient which will allow the operator to establish solution which works for their operation. Suggest to default to: CS FTL.2.205 Flight duty period (FDP) — air taxi and AEMS — delayed reporting Operator procedures for delayed reporting should: (a) specify a contacting mode; (b) establish minimum and maximum notification times; and (c) avoid interference with sleeping patterns when possible
response	Accepted The text has been simplified.

comment	*227* comment by: *Cat Aviation AG* This is used very rarely in Air Taxi operations. Given the minor usage for AirTaxi, the rule is defined too complex for practical use. There is also the question of contacting a crew. If we define the modes of contact, also define a difference for crew who are still at home or in hotel vs already en-route to the airport and then just 2-3 key points of the limitations on FDP this has. If a crew is still at home or hotel, the delayed reporting has not really a influence on fatigue as crew remains in rest location.
response	Noted Please, refer to the response to comment #146.

comment	*1123* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* This rule is too complex for practical use. Differences should be made when contacting the crew if they stay at home/hotel or at the airport FBO.
response	Noted Please, refer to the response to comment #146.

comment

36 comment by: *Serair*

CS FTL.2.205 (d) (1) Correction

(1) one notification of a delay leads to the calculation of the maximum FDP according to (**3**) or (**4**);

response

Please, refer to the response to comment #146.

comment

114 comment by: *UK CAA*

Page No: 25

Paragraph No: CS FTL.2.205 (d) Flight Duty Period – air taxi and AEMS

Comment: Bullet points under point (d) contain incorrect references. Bullet point 1 and 5 refer to alphabetical rather than numerical references.

Justification: Clarity

Proposed Text: Bullet point (1) should refer to "according to (3) and (4)" and bullet point (5) should refer to "as an exception to (1) and (2)".

response

Please, refer to the response to comment #146.

comment

425 comment by: *Skyshare Union representing NetJets crew members*

There's an error in CS.FTL.2.205 (d)(1) where it refers to "(c) or (d)" where it means "(3) or (4)".

Independent of the above error, as currently written there is a loophole which would allow operators to get around the max FDP for duties starting late in the day.

We would like to propose that this loophole be closed and the shorter of the two max FDP should apply, as in (d)(4) or else some additional rest should be added both to mitigate the longer than normally safe day and as disincentive to exploit the loophole.. For our operations the impacts is likely negligible as a delayed start will usually mean a whole new plan, and we don't believe NetJets would exploit the loophole deliberately, but for our competitors it's possible this will impact them more.

Reasoning:
CS.FTL.2.205 (d)(3) allows the operator to 'plan' a duty with a report time of 0845 (max FDP 13:45) and then 'delay' the report time to 1244 but still retain the 13:45 max FDP versus the normal 13:00 limit for a duty commencing at 1244.

response	Please, refer to the response to comment #146.

comment	*776* comment by: *AECA helicopteros.* Referred to FTL 205(d)(3)).- Flight Duty Period.- FDP. Air Taxi and AEMS (*d) If the crew member is informed of the delayed reporting time, the FDP is calculated as follows:* *(1) …* *(2) …* *(3) when the delay is less than 4 hours, the maximum FDP is calculated based on the original reporting time and the FDP starts counting at the delayed reporting time* Delete paragraph (3) Justification.- ORO.FTL.205, establish; (*g) Unforeseen circumstances in flight operations — delayed reporting The operator shall establish procedures, in the operations manual, for delayed reporting in the event of unforeseen circumstances, in accordance with the certification specifications applicable to the type of operation.* Why this limitation for AEMS?
response	Noted Please, refer to the response to comment #146.

comment	*861* comment by: *NetJets Europe* **CS FTL.2.205** Netjets support the proposal **CS FTL.2.205(d)(1)** Where it refers to "(c) or (d)" it should refer to "(3) or (4)" instead.
response	Please, refer to the response to comment #146.

comment	*949* comment by: *Stephanie Selim* Editorial comment – The numbering needs to be corrected and should be presented as in CS FTL.1.205(d) **(f)** Unforeseen circumstances in air taxi and AEMS — delayed reporting (**1a**) The operator may delay the reporting time in the event of unforeseen circumstances, if procedures for delayed reporting are established in the operations manual. (**2b**) The operator keeps records of delayed reporting.

(**3c**) Delayed reporting procedures establish a notification time allowing a crew member to remain in his/her suitable accommodation when the delayed reporting procedure is activated.
(**4d**) If the crew member is informed of the delayed reporting time, the FDP is calculated as follows:
(**i1**) one notification of a delay leads to the calculation of the maximum FDP according to (**iiic**) or (**ivd**);
(**ii2**) if the reporting time is further amended, the FDP **start counting** ~~commences~~ 1 hour after the second notification or at the original delayed reporting time if this is earlier;
(**iii3**) when the delay is less than 4 hours, the maximum FDP is calculated based on the original reporting time and the FDP starts counting at the delayed reporting time;
(**iv4**) when the delay is 4 hours or more, the maximum FDP is calculated based on the more limiting of the original or the delayed reporting time and the FDP starts counting at the delayed reporting time;
(**v5**) As an exception to (**ia**) and (**iib**), when the operator informs the crew member of a delay of 10 hours or more in reporting time and the crew member is not further disturbed by the operator, such delay of 10 hours or more counts as a rest period.

response Please, refer to the response to comment #146.

comment *961* comment by: *AESA*

Text "… according to (c) or (d);" must be "… according to (4) or (5);"

response Please, refer to the response to comment #146.

comment *963* comment by: *AESA*

Text "As an exception to (a) and (b)…" must be "As an exception to (1) and (2)…"

response Please, refer to the response to comment #146.

comment *1079* comment by: *Rabbit-Air Ltd*

This rule is too complex. When contacting the crew, difference should be made if they stay at home/hotel or already at the airport. Even though, rest facilities at an airport FBO may vary which may influence waiting time positively or negatively.

response Please, refer to the response to comment #146.

comment *1303* comment by: *Volkswagen AirService GmbH*

	Flexibility in departures is core business of ATXO. Delayed reporting must be possible any time without any consequences on the FDP, as long as notification reaches the crew prior leaving the suitable accomodation. Keep it simple.
response	Please, refer to the response to comment #146.

comment	*1315* comment by: *Volkswagen AirService GmbH* Delayed reporting is core business and must be possible without any constraints if a crew member is notified in time at the hotel or at the home base. (in times = prior leaving)
response	Please, refer to the response to comment #146.

comment	*1377* comment by: *Gama Aviation (UK) Ltd* Section unnecessarily complex and not applicable to ATXO, on demand short notice operations. Suggested Change: Operator procedures for delayed reporting should: (a)Specify a method of contact (b)Establish minimum and maximum notification times (c)Avoid interference with sleeping patterns where possible
response	Please, refer to the response to comment #146.

comment	*1473* comment by: *VOLDIRECT* DELAYED REPORTING: Curent NPA is far to complex to Air Taxi Operations please revert back to GM verssion. Or use the CS. Suggested change: CS FTL.2.205 Flight duty period (FDP) — air taxi and AEMS — delayed reporting Operator procedures for delayed reporting should: (a) specify a contacting mode; (b) establish minimum and maximum notification times; and (c) avoid interference with sleeping patterns when possible Rationale: Rule over complex then not applicapble to on demand operations.
response	Please, refer to the response to comment #146.

comment	*1511* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* General remark: This rule is far too burdensome for a practical use in the industry.
response	Please, refer to the response to comment #146.

comment	*144* comment by: *CAA-NL* **CS FTL.2.205 (d) Flight Duty Period – air taxi and AEMS** **Comment:** Bullet points under point (d) contain incorrect references. Bullet point 1 and 5 refer to alphabetical rather than numerical references.
response	Please, refer to the response to comment #146.

CS FTL.2.210 Cumulative flight times

CS FTL.2.210	p. 25

Responses with regard to 'cumulative duty periods and flight times'

comment	*147* comment by: *VistaJet* CS FTL.2.210 Flight Times and Duty Periods These limits do not seem reasonable. Looking at both the FAA and other international authorities, the limits imposed here, although unlikely to be breached, are far more limiting than anywhere else. I think it is worth re-iterating that creating a level playing field should not be an exclusively European phenomenon. Air carriers, especially on long haul, are competing with global players, not just the European market. The commission should seek not to limit European operators to the point of being non-competitive on the global stage.
response	Accepted The cumulative block hours should be the same as in Subpart Q. Thus, the limits under point ORO.FTL.210 would apply to both scheduled and unscheduled air taxi/AEMS flights.

	Indeed, the scientific study conducted by FRMSc Limited, which was commissioned by the EBAA/ECA, demonstrated that the amount of work in air taxi/AEMS operations is relatively low in terms of cumulative FT, total days free of duty, and consecutive days of duty. However, account should be taken of the fact that the cumulative block hours in air taxi operations in European States allowable under Subpart Q (OPS 1.1100) are: 900 block hours in a calendar year and 100 block hours in 28 consecutive days. Therefore, CS FTL.2.210 has been deleted. The proposal reverts to Subpart Q, thus the limits under point ORO.FTL.210 apply to both scheduled and air taxi/AEMS flights.
comment	*228* comment by: *Cat Aviation AG* conditional on ORO.FTL.2.210. Under normal circumstances based on historic fact, AirTaxi Crew rarely reaches the high hours of total flight time as what scheduled air crew attains. Thus suggest to limit it to 2 defining factors 1) 90 hours in 28 days consecutive days 2) 625 hours in 12 consecutive calendar months
response	Please, refer to the response to comment #147.
comment	*441* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* CS FTL.2.210 The total flight time of the sectors on which an individual crew member in air taxi operations is assigned as an operating crew member under ORO.FTL.210(e) shall not exceed: (1) 100 hours of flight time in any 28 consecutive days (2) 900 hours of flight time in any calender year (3) 1000 hours of flight time in any 12 consecutive calender month *There should be no difference between commercial operators and air taxi. As the impact the flown hours have on fatigue is the same.*
response	Please, refer to the response to comment #147.
comment	*628* comment by: *Transport Malta - Civil Aviation Directorate*

	Clarification request, would an air taxi operator be able to switch between one scheme and another?
response	Noted. As explained in the NPA, the air taxi/AEMS operator needs to choose between CS FTL.1 and CS FTL.2, and then develop its individual FTL scheme based on the chosen set of requirements.

comment	*1127* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* conditional on ORO.FTL.2.210 Based on historic fact, Air Taxi Crew hardly ever reaches the maximum hours of flight time. Suggest to limit it to 2 defininf factors 1) 90 hours in 28 consecutive days 2) 625 hours in 12 consecutive calender months
response	Please, refer to the response to comment #147.

comment	*1132* comment by: *FNAM* Cf. comment 1086 ISSUE It is not explicit whether: • All the CS.FTL.2 requirements shall be applicable "in block"; or • The CS requirements should apply depending on what is said in the implementing rule; or • Cherry-picking is allowed Indeed, two options seem to be presented, one described in ORO.FTL.210(c) and another in CS FTL.2.210. In that way, the CS is a substitution of the IR, which is not the aim and the statute of a CS. The complexity of this proposal may lead to misunderstanding and thus wrong application of the regulation. Therefore, FNAM and EBAA France suggest listing the two options in the CS.FTL.2.210 instead of having one described in the IR and one in the CS. PROPOSAL Rewrite clearly for Air Taxi and AEMS the 2 options in CS.
response	Please, refer to the response to comment #147.

comment	*1133* comment by: *FNAM*

ISSUE
Considering the seasonality of the French AEMS activity, these limits may be a burden to complete properly emergency missions. Additionally, no fatigue justification nor RIA are provided to justify the 20% reduction of ORO.FTL.235(c) limitations.

PROPOSAL
Option 1: Keep only ORO.FTL.235(c) limitations for AEMS operations
OR
Option 2: Modify the CS FTL.2.210 limitations to:
"(1) 100 hours of flight time in any 28 consecutive days;
(2) 625 hours of flight time in any 12 consecutive calendar months."

response Please, refer to the response to comment #147.

comment *1494* comment by: *Airlec Air Espace / Paul Tiba*

#1 ISSUE
It is not explicit whether:
• All the CS.FTL.2 requirements shall be applicable "in block"
• The CS requirements should apply depending on what is said in the implementing rule • Cherry-picking is allowed
Indeed, two options seem to be presented, one described in ORO.FTL.210(c) and another in CS FTL.2.210. In that way, the CS is a substitution of the IR, which is not the aim and the statute of a CS. The complexity of this proposal may lead to misunderstanding and thus wrong application of the regulation.
Therefore, AIRLEC suggests listing the two options in the CS.FTL.2.210 instead of having one described in the IR and one in the CS.
PROPOSAL
Rewrite clearly for Air Taxi and AEMS the 2 options in CS.

#2 ISSUE
Considering the seasonality of the French AEMS activity, these limits may be a burden to complete properly emergency missions. Additionally, no fatigue justification nor RIA are provided to justify the 20% reduction of ORO.FTL.235(c) limitations. PROPOSAL
Option 1: Keep only ORO.FTL.235(c) limitations for AEMS operations
OR
Option 2: Modify the CS FTL.2.210 limitations to:
"(1) 100 hours of flight time in any 28 consecutive days;
(2) 625 hours of flight time in any 12 consecutive calendar months."

response Please, refer to the response to comment #147.

comment *1512* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

	From the point of view of the practice: Air taxi crews hardly ever reach the maximum hours of flight time. Therefore, we propose to limit it to two factors: #1: 90 hours in 28 consecutive days #2: 625 hours in 12 consecutive calender months.
response	Please, refer to the response to comment #147.

CS FTL.2.215 (Positioning)

CS FTL.2.215	p. 25-26

Responses with regard to 'positioning'

comment	*84* comment by: *SHug* should also be applicable to AEMS
response	Accepted CS FTL.2.215 is applicable to both air taxi and AEMS operations.

comment	*229* comment by: *Cat Aviation AG* For simpler application, we suggest for positioning of more than 1 hour or when using 2 modes of transport, FDP is reduced by 30 mins. To instill a penalty for self driving leads to social isolation of crew, if the hotel or airport are in a remote location; it should be the crews' decision, if they like to self-drive in such situations (which are not the norm but an occasional sensible choice) . As this choice is resulting in an FDP penalty, Operators may restrict this option, which leads to less comfort for crew.
response	Partially accepted Positioning is the practice of transferring crew from place to place as passengers on ground or air transport at the request of the operator. Long distances travelled for positioning may be a factor influencing the subsequent onset of fatigue and cannot be crews' decision only. Please, also refer to the response to comment #569 on positioning. If commuting between a crew member's residence and the reporting point (airport, home base or gateway) takes longer than 90 minutes, the crew member should arrange for temporary accommodation nearer to the reporting point.

comment	*267* comment by: *ACM AIR CHARTER*

	CS FTL.2.215 (b) (ii) Please clarify: Only twice the duration of self-driving time in excess of 60 minutes has to be deducted? Example: driving time 1:00h --> Max. daily FDP – 30 min driving time 1:30h --> Max. daily FDP – 60 min (2x30min) driving time 3:00h --> Max. daily FDP – 4h (2x2h) or: Is the operator required to deduct twice the duration of self-driving time IF in excess of 60 minutes, i.e. driving time 1:30h --> Max. daily FDP – 3hrs driving time 3:00h --> Max. daily FDP – 6hrs
response	Please, refer to the response to comment #229.

comment	*442* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* CS FTL.2.215 If an operator positions a crew member, the following shall apply: (a) positioning after reporting but prior to operating shall be counted as FDP but shall noch count as a sector. (b) all time spent on positioning shall count as duty period. *There should not be any addiotnal reduction on the FDP or there should be a differentiation on the booking class of the transport mode e.g. Positioning by plane differentiation between positioning in Economy or business class.* *As well there should be no difference between the positioning of the commercial and charter airlines to air taxi.* *Positioning has again the same impact to all crew members, no matter which plane they are flying.* *Point b (i) and (ii) is not practical for Air taxi operators.*
response	Noted Point ORO.FTL.215 and the definition of 'positioning' apply to any type of operation, including air taxi and AEMS operations; no need to repeat the implementing rule under a CS. FDP reductions may be necessary when positioning time or the use of more than one main mode of transport (excluding taxi ride) has the potential to increase crew fatigue. This is especially relevant for air taxi operations.

According to the FRMSc Limited scientific study conducted for the EBAA and the ECA, which is used as a basis for this rulemaking task, every 1 hour of positioning increases fatigue scores by 0,25. For comparison, 1 hour flight time increases fatigue scores by 0,13.

CS FTL.2.215 does not contain any differentiation between positioning in economy or business class as there is no available evidence to suggest that positioning in business class is less fatiguing than positioning in economy class. If positioning on certain routes and modes of transport and economy class is particularly fatiguing, then the operator should account for this impact.

comment *531* comment by: *ADAC Luftrettung gGmbH*

Question: Does travelling time to the home base count as duty time or FDP?

response Not accepted. This requirement is about self-driving for positioning and not self-driving for commuting between a hotel / private residence and an airport. Please, refer to point ORO.FTL.215 which explains the difference between positioning and travelling.

comment *633* comment by: *Cristina BENZ*

should also be applicable to AEMS

response Accepted

comment *703* comment by: *Captain M Alcaide GVI*

I don´t understand this point, most ATXO pilots drive themself to work, and most conmutes take at least more than 30 min, so that means a reduction on a daily basis? or is it only when out of base? is it different really...the reality again is that an ATXO (or HEMS) pilot live very differently than an airline pilot, but again we all sense fatigue...as any human...and even fully rested fatigue affect humans equally, not working for a week doesn't allow to work for 18 hours in a row in a hostile enviroment.

response Not accepted. This requirement is about *self-driving for positioning* and not *self-driving for commuting* between a hotel / private residence and an airport. Please, refer to point ORO.FTL.215 which explains the difference between positioning and travelling.

comment *862* comment by: *NetJets Europe*

CS FTL.2.215 (a)
NetJets supports the proposal in general however has a couple of comments.

Would a 15-30 minute taxi ride after an airline from a major airport count as a different transport mode?
e.g. Crew positions from EGLL to LFPG then has a taxi for 15 minutes to go to LFPB. In the majority of cases, crew positioning is to major airports and crew are then required to travel to a secondary aerodrome where the aircraft is located. This is normally accomplished by taxi and for close by aerodromes is not more than 15-30 minutes. This also occurs the other way around where a 15min taxi ride is required from the secondary airport to a major airport to position via airline.
Since normal travelling times of 30 minutes is included on the rest periods (e.g. 10 hours minimum rest away from home base is based on 8 hours rest opportunity, 1 hour travelling time (2 x 30 min) and 1 hour for physiological needs), NetJets proposes that a different mode of transport is only accounted for if the time is more than 30 minutes. This would accommodate the short taxi to the secondary airport and also reduce the FDP for long taxi rides (above 30minutes) which we believe is the objective of the requirement.

NetJets also proposes that GM is provided as to when the positioning time starts and ends. Does the positioning end upon airline arrival or should it take into account the disembarking and baggage collection? This has an impact as a 50 minutes airline plus 15 minutes for baggage collection could end up being more than 1 hour. This needs clarification.

Additionally, plese clarify if this is for after reporting but prior to operating?

After reviewing the scientific study, it says that "more than two transport modes"; not more than one (except self-driving), so can CS FTL.2.215 (a) be changed to "more than two transport modes"?

response

The proposal for GM is accepted.

The change in CS FTL.2.215(a) to ‘more than two’ transport modes, one of which obviously includes a taxi ride is not accepted; the purpose of this requirement is to limit the fatiguing effect of positioning where more than one main mode of transport is used. A taxi ride is not ‘main’ mode of transport.

comment

1034 comment by: *Stephanie Selim*

Technical comment –
The CS FTL.2.215 is proposed to be specific to air taxi operations. However, there is no rational to limit it only to this type of operations (apart from the probability of occurrence which seems higher for air taxi operations). The effect on fatigue can be supposed to be similar for all kind of operations.
DGAC suggests that provisions of this CS should be extended to CS 1 too.

response

Accepted

comment	*1036* comment by: *Stephanie Selim* (b)(ii) Editorial comment – To be consistent with CS FTL.2.215(b)(i), 30 minutes should be added: "**30 min plus** twice the duration of the self-driving time in excess of 60 minutes."
response	Noted CS FTL.2.215 has been simplified.

comment	*1134* comment by: *FNAM* ISSUE These dispositions are not specified in CAT.A regulation, therefore, FNAM and EBAA France ask for the suppression of this paragraph. Moreover, the paragraph (a) has no practical sense since if a crew member leaves his home walking, takes a train and then a shuttle to go to the airport, the maximum FDP will always be reduced by 30 minutes. PROPOSAL Suppress this CS.
response	Not accepted Commuting from one's private residence to the home base is not 'positioning' as per given definition.

comment	*1139* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* Too complicated and difficult to overview. Air Taxi Crews often like to have a rental car, mainly in remote areas. This for social reasons and flexibility during their layover. Operator would need to restrict and make crews unhappy. Selfdriving or positioning as passenger should not be distinguished.
response	Not accepted Travelling during a layover is not 'positioning' as per given definition.

comment	*1170* comment by: *GBAA* CS FTL.2.215 (b) Positioning — air taxi operations What is the purpose of the reduction of the FDP "twice the duration of the self-driving time

	in excess of 60 minutes"? Why for all going in the car? A small company cannot afford to have several people on standby. If one crew member due to flying becomes sick, a replacement needs to be organized. The most flexible way is going by car. For instance, the way from Munich to Zürich takes about 4 hours. The new proposal will consume 6.5 hours of FDP which are 2.5 hours more than the current regulation. Even if the crew members are only been driven by a colleague, they are punished with extra 2.5 hours FDP. For what purporse?
response	Not accepted. This requirement is about *self-driving for positioning* and not *self-driving for commuting* between a hotel / private residence and an airport. Please, refer to point ORO.FTL.215 which explains the difference between positioning and travelling.

comment	*1304* comment by: *Volkswagen AirService GmbH* A difference must be implemented between positioning prior to and after a FDP. Otherwise a positioning after duty will decrease the preceeding FDP. As proceedings are usually organized on short notice, it should be mandatory to choose the most save, fast, economical and comfortable method instead of trying to shorten times due to self driving.
response	Not accepted. The difference between positioning prior to and after an FDP is already addressed in the Regulation (see point ORO.FTL.215). Positioning prior to an FDP is considered part of that FDP, but not a sector. Positioning after an FDP is counted only as duty period.

comment	*1373* comment by: *Gama Aviation (UK) Ltd* Further definition of Transport Modes is required. Does this include a taxi from the airport to hotel, or airport bus from airport to hotel? Should be in line with scientific study (FRMSC) and more than <u>two</u> transport modes instead of one.
response	Not accepted A taxi ride from airport to hotel, or an airport bus from airport to hotel, is not positioning but travelling. Please, refer to the definition of 'positioning' in point ORO.FTL.105 (18).

comment	*1513* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* This provisions are much too constraining in real life scenarios and moreover burdensome to control/comply with: Air taxi crews in many cases get themselves rental car. This makes sense particularly when they stay in remote places. Shuold this provision be enacted, operators would be forced to restrict the crews' freedom of movement. Moreover, self-driving or riding as a passenger should not be distinguished.
response	Travelling during a layover is not 'positioning' as per given definition.

CS FTL.2.220 (Split duty)

CS FTL.2.220 p. 26

Responses with regard to 'split duty'

comment	*148* comment by: *VistaJet* The way the new split duty function has been structured is very good, however the only addition which would really enhance this function is to allow operators to use this function post planning phase in the case of unforseen circumstances. For example, after the first sector there is a significant passenger delay, crew could be put into an airport hotel and make use of the exended ground time to rest. This would provide a bit more operational flexibility.
response	Accepted Please, refer to the response to comment #1040.

comment	*197* comment by: *Premium Jet AG* Unforeseen circumstances should be incorporated due to the kind of operation. Meaning split in postplanning pahse and operational phase.
response	Please, refer to the response to comment #1040.

comment	*230* comment by: *Cat Aviation AG*

	it would be helpful if we can apply split duty also during operation phase and post operation. AirTaxi "schedules" change frequent and during a trip and we should be able to make use of this option in the most flexible and efficient way.
response	Please, refer to the response to comment #1040.

comment	*242* comment by: *ACM AIR CHARTER* (g) Please clarify: 1. Does that mean that the time enroaching the WOCL does not reduce the 50% extension of the basic maximum FDP and, if spent in a suitable accomodation? 2. Does it mean the time exceeding 6 hours is in all cases not to be considered, even if spent in suitable accomodation.
response	Noted Since suitable accommodation is always required for a single break of 6 hours or longer, or when encroaching on the WOCL, the exception provided for under this paragraph creates confusion and would otherwise make FDP calculations very complex, if the combined duration of all breaks is taken into account; it has, therefore, been removed.

comment	*630* comment by: *Transport Malta - Civil Aviation Directorate* We Suggest amendment to clarify break may be in a suitable accommodation or on board the aircraft as proposed in notes.
response	Accepted Please, refer to the response to comment #242.

comment	*704* comment by: *Captain M Alcaide GVI* 30 minutes minimum time for post and preflight duties and travelling is totally out of reality. I fly a Gulfstream 650 and I can assure you that post and preflight duties only cover more than that, if you have to add transport... If an operator can extend the maximum daily FDP up to 50% of the combined duration of the breaks, days can be really long for a crew.... I don't see the safety rationale behind, only the practical profit Operator cause
response	Noted 30 minutes is the minimum time; actual times are based on operator observations and included in the OM. The safety benefit is that the break is part of the FDP (i.e. it does not

	pause the FDP) and the crew member has a rest opportunity on the ground, on board or in a suitable accommodation, which may be used for restorative sleep.
comment	*867* comment by: *NetJets Europe* **CS FTL.2.220** NetJets supports the Split duty proposal in general however has a comment on point (g) **CS FTL.2.220 (g)** Item (g) needs to be clarified as it has been interpreted as requiring suitable accommodation when the total combined break time is greater than 6 hours in order to use the extension. NetJets suggests deleting the second part of the sentence as suitable accommodation is always required for breaks above 6 hours or encroach the WOCL, or changing it to: *"an operator may extend the basic maximum daily FDP specified in CS FTL.2.205 by up to 50 % of the combined duration of all breaks on the ground, with the exception of the individual break time exceeding 6 hours or encroaching the WOCL if spent in other than suitable accommodation"*
response	Please, refer to the response to comment #242.
comment	*1045* comment by: *Stephanie Selim* Editorial comment – To be consistent with CS FTL.1.220: "~~**The following applies in the case of split duty with one or more breaks on the ground in air taxi and AEMS operations:**~~ **The increase of limits on flight duty, under the provisions of ORO.FTL.220, complies with the following:**"
response	Accepted
comment	*1046* comment by: *Stephanie Selim* (f) Editorial comment – To be consistent with CS FTL.1.220: "an extension of the maximum basic daily FDP due to split duty **cannot be** ~~**is not**~~ combined with an extension due to on-board rest;
response	Accepted
comment	*1135* comment by: *FNAM*

Cf. comments 1089

ISSUE
The rule needs to allow split in post planning phase or in operation phase.
Besides, when a split duty is added, the operator recalculates the maximum FDP from the initial reporting time including the extension due to the split duty. Within this new legal framework, the operator can change the flight times scheduled after the break(s) of the split duty.
Due to the activity, there is a possibility of doing it several times (several breaks are allowed).
As a mitigation, in terms of fatigue, there is no change compared to if it had been scheduled from the beginning.
The crew member has all the time spent in the break of the split duty to anticipate the fatigue for the next flight times.

PROPOSAL
Add the following paragraph:
"By way of derogation from ORO.FTL.110(a), for AEMS and Air Taxi operations, a split duty may be scheduled at any point in time including after reporting time by successively adding one or more break(s). When a break is added within the initial FDP, the operator recalculates the maximum FDP taking into account the duration of the break(s) and the operator can change the flight times scheduled after the break(s) of the split duty."

RATIONALE:
As a mitigation, in terms of fatigue, there is no change compared to if it had been scheduled from the beginning.
The crew member has all the time spent in the break of the split duty to anticipate the fatigue for the next flight times.
Thus, the mitigation is included in the proposal.

response

Please, refer to the response to comment #1040.

comment

1136 comment by: *FNAM*

ISSUE
Cf. comment 1091
FNAM and EBAA France suggest coming back to the break definition. In any case, a break has to be taken on the ground. Therefore, the wording "break on the ground" is unnecessary and should be replaced by the sole wording "break" since it may only lead to misunderstanding.

PROPOSAL
Replace the wording "break on the ground" by *"break".*

response

Not accepted

	'Break on the ground' is already used in point ORO.FTL.220, prior to the introduction of air taxi/AEMS operations.
comment	*1137* comment by: *FNAM* (f) ISSUE The paragraph (f) is unclear and needs to be rephrased. When a crew member is on on-board rest, considering the extension of the FDP with augmented flight crew, the on-board rest does not count for split duty for this given crew member. PROPOSAL Rephrase the paragraph (f).
response	Not accepted The same is used in CS FTL.1.220 and there are no claims it is unclear.
comment	*1175* comment by: *GBAA* CS FTL.2.220 (e) Split duty — air taxi operations and AEMS What does suitable accommodation mean? Acc. to ORO.FTL.105 Definitions (4), "'suitable accommodation' means, for the purpose of standby, split duty and rest, a separate room for each crew member located in a quiet environment and equipped with a bed, which is sufficiently ventilated, has a device for regulating temperature and light intensity, and access to food and drink." So far, a regular hotel room would fulfil all requirements. However, the last point implies that the operator is paying for food and drinks which is not true. This topic has to be cleaned up of misunderstandings. What about a room at a small bed and breakfast (B&B) during the day or even during night? There won't be any food available… CS FTL.2.220 (g) Split duty — air taxi operations and AEMS The new proposal constrain the possibilities for split duties during the night compared to the existing regulations. E.g. a trip with 2 legs from 2000h-2400h and 1030-1200h flight time. **New proposal** Checkin 1900h with max. FDP of 11h Flight 2000h-2400h Check-out 0:30h until 0030h 9h break for a check-in at 0930h -> FDZ will increase by 4.5h to 15:30h or until 10:30h Check-in 0930h Flight cancelled, since FDZ runs out at the time of departure!!!! **Existing in Germany** Checkin 1900h with max. duty of 18h and block time of 10h

	Flight 2000h-2400h, 4h block Flight 1030h-1200h, 1,5h block Check-out 1230h, 1730h duty Ok! **Existing in Austria** Checkin 1900h with max. FDP of 13h, WOCL is not considered during the break Flight 2000h-2400h Check-out 0:30h until 0030h 9h break, more than 6 hours counts for 1 hour of FDZ Check-in 0930h Flight 1030h-1200h, 1,5h block Check-out 1230h Total FDZ = 1+4+0.5+1+1+1.5+0.5 = 9.5h, another 3.5 hours left!!! ==> Although time for sleep from 0100h until 0830h is given, the new proposal does not leave enough room for flexibility.
response	Noted A split duty break that encroaches on the window of circadian low (WOCL) with a suitable accommodation provided allows for the extension of the maximum FDP.

comment	*1206* comment by: *Danish Aviation Association* CS.FTL.2.200 Split Duty: In case of unforseen circumstances should it be possible to split in post planning or operations phase.
response	Please, refer to the response to comment #1040.

comment	*1277* comment by: *Volkswagen AirService GmbH* Our operations has applied national duty time regulations for a long time without any issues. This included the ability to extend the maximum daily FDP to 18 hours with at least a minimum of 3 hours on-ground rest period. (g) effectively limits us to a maximum extended FDP of only 17 hours. This reduces our operational capabilities.
response	Not accepted. It is not clear how paragraph (g) limits your maximum FDP to 17 hours. In fact, according to paragraph (g), an extension of the maximum daily FDP by 50 % of the combined duration of all breaks is allowed.

comment	*1305* comment by: *Volkswagen AirService GmbH*

	Referring to 220 (c): Rather than applying fixed times it should be possible to log the actual times. The operator shall describe in his operations manual to apply actual times without having to define specific values.
response	Not accepted CS FTL.2.220(c) states that the **minimum** total time for post- and pre-flight duties and travelling is 30 minutes. The operator may apply whatever method for the actual times as long as these actual times do not fall below the minimum time established here.

comment	*1380* comment by: *Gama Aviation (UK) Ltd* For AEMS operations, split duty should be allowed in the operational and post planning phases due to unforseen circumstances.
response	Please, refer to the response to comment #1040.

comment	*1447* comment by: *European Cockpit Association* Commented text: “Split duty, breaks on the ground” References ORO.FTL.220 (a) (2) CS FTL.2.220 (a) & (b) CS FTL.2.220 no. 27 ECA Comment: The CS2 introduces the idea of multiple breaks on the ground between different sectors being available to add together for the purposes of a split duty FDP extension. There is no scientific basis for this suggestion, indeed scientific advice previously received by EASA advocates “limiting the fragmentation of sleep as afar as possible” in order for it to provide meaningful rest. This ‘split-split duty’ enables the complete opposite of that advice, providing only fragmented rest opportunities that should not be usable for the extension of FDP under split duty. Proposal: Only one continuous and undisturbed break in an FDP should be available for the extension of that FDP under split duty. The ‘split-split duty’ must be prohibited.
response	Not accepted The scientific advice about limiting the fragmentation of sleep as far as possible refers to the sleep opportunity in any 24-hr period; this proposal preserves an uninterrupted 8-hr sleep period in any 24-hr period. As regards breaks in the context of split duty, they are mostly performed during the day due to delays.

	If the WOCL is encroached, the break must be taken in suitable accommodation. The break does not 'pause' the FDP.

comment	*1523* comment by: *General Aviation Manufacturers Association / Hennig* The proposal's shift from the current nationally regulated framework for "split duty" may significantly impact operations between certain city pairs. While the concept of "split duty" is in itself a positive mechanism to extend duty days, EASA may have underestimated the impact on how current operations are conducted in the shift to the pan-European regulatory framework. GAMA requests that EASA to review the proposed concept for split duty (which we recommend be maintained) but ensure that there is a full understanding of the local issues that may arise based on the existing approach at the Member State level. GAMA is concerned that the NPA may not have fully considered the impact on operations and the resulting cost to the operator to maintain operations.
response	Noted Local issues are typically dealt with by the operator's IFTSS, applying for deviations from the applicable CSs or for exemptions from the implementing rules (IRs).

GM CS FTL.2.220(c) p. 26

comment	*49* comment by: *Wolfgang Zellhuber* With several hundred aerodromes/operating sites in Europe and several thousands around the world it is impossible to establish and specify (as required by CS FTL.2.220(c)) post,-pre-flight duty and travelling times for every possible aerodrome and aerodrome conditions. e.g. at EDDM: Pending on the actual parking situation at the aerodrome itself you may experinece different ground transportation time on the airside of the aerodrome, variable between 3 and 25 minutes. How should an operator know about these circumstances if a parking position of an aeroplane is established approximately 10 minutes before arriving at EDDM? And EDDM is an aerodrome with almost perfect infrastructure. Even well experienced pilots, working in the ATXO for several know one thing: ATXO operator will never know, how situations develop an a day-to-day-basis, or even on an hour-to-hour-basis. During summer time you may wait at Nice/LFMN some hours to get fuel. The next day fuel will arrive within seconds. Please give the operator some helping hand (GMs) on how to establish a - in your opinion -compliant procedure.
response	Noted

This text is meant to serve an average case. It does not imply that the operator must establish post- and pre-flight duty times for each aerodrome. This will be clarified in the related GM.

CS FTL.2.225 (Standby)

CS FTL.2.225	p. 26-27

Responses in relation to 'standby'

comment	*71* comment by: *Rega / Swiss Air-Ambulance* **2. CS FTL.2.225 (b)(3)** (page 27 of 70 NPA 2017-17) Existing proposed CS FTL.2.225 (b)(3): … for the purpose of CS.FTL.2.210(a) …; **Question of the writer referring to CS FTL.2.225 (b)(3):** Shoudn't it say **ORO**.FTL.2.210(a) instead of CS.FTL.2.210(a) in this context? · The link to CS.FTL.2.210(a) does not make sense as CS FTL.2.210 deals with maximum flight time and not with standby duty limitations: · Be aware that also in the following pages of NPA 2017-17 CS FTL.2.210 are referenced: o Page 32 of 70; o Page 33 of 70.
response	Accepted

comment	*72* comment by: *Rega / Swiss Air-Ambulance* **3. CS FTL.2.225 (b)(4)** (page 27 of 70 NPA 2017-17) Existing proposed CS FTL.2.225 (b)(4): standby is followed by not less than 10 hours of rest period; **Adaption requested by the writer for CS FTL.2.225 (b)(4):** standby is followed by not less than **8 (eight)** hours of rest period; Justification: · The **raison d'être** of any AEMS (and HEMS) operator and therefore flight crew member is standby. This to be able to provide medical assistance to people in need according to ORO.FTL.105 and the definition "EMS flight" (29); · It must be expected that EASA understands that flight crew members are assigned by the operator for some 20 to 40% of their duty days as standby days without being called for an FDP. The rest of the duty days are consumed by FDP or office/training/positioning/etc. duties; · A flight crew member assigned for AEMS standby other than airport standby does per se not suffer from so called cumulative fatigue; · To certain amount social (family) activities can be performed during standby other than airport duty;

· A flight crew member serving e.g. several days of consecutive standby duty other than airport (at home) has the opportunity to go to bed immediately(!) after standby other than airport standby ceases at home;
· That means that pre-rest period duties like having a light meal, changing to nightdress, taking a shower, etc. can and shall be done before the end of the preceding period of standby other than airport standby;
· Logically commuting has not to be taken into account;
· As the maximum duration of standby other than airport standby is 16 hours (see CS FTL.2.225 (b)(1)) I do stress that the rest period following standby other than airport standby shall be … **not less than 8 hours** … instead of the NPA proposed 10 hours;
· Mathematically and logically the maximum 16 hours of standby other than airport standby added by the recommended 8 hours of rest period result in a total of 24 hours and therefore fit perfectly into a 24 hour calendar day;
· Otherwise 16 added by 10 hours result in 26 hours and throw the flight crew member out of the 24 hour window of time that defines a calendar day.

response

Accepted

Based on scientific evidence and advice, a minimum of 8 hours' sleep opportunity should be included in the crew rest period while the crew is at the operating base.

Please, see also the response to comment #1004.

comment

73 comment by: *Rega / Swiss Air-Ambulance*

4. CS FTL.2.225 (b)(6) (page 27 of 70 NPA 2017-17)

Existing proposed CS FTL.2.225 (b)(6): if standby ceases within the first 6 hours, the maximum FDP counts from reporting;

Adaption requested by the writer for CS FTL.2.225 (b)(6):

if standby ceases within the first **8 (eight)** hours, the maximum FDP counts from reporting;

Justification:
· The **raison d'être** of any AEMS (and HEMS) operator and therefore flight crew member is standby. This to be able to provide medical assistance to people in need according to ORO.FTL.105 and the definition "EMS flight" (29);
· For a flight crew member not being called for an AEMS mission it can be assumed that this individual flight crew member has ample of time to rest in the morning as long as his/her body clock allows;
· During standby other than airport standby the individual flight crew member is able to rest and to fulfill at least to a certain amount at home social duties at his/her discretion until called to report for a FDP;
· Assuming that standby other than airport standby commences e.g. at 05:00 local time (LT) and the (average) response time is 90 minutes and fully appreciating

Table 1 under CS FTL.2.205 Flight duty period (FDP) – air taxi and AEMS (page 22 of 70) will lead again and again to situations where a flight crew checking-in at e.g. 15:00 LT has not enough FDP remaining to conduct even an AEMS mission within the Europe theater of operation.
This, as a serious AEMS operator assigns 90 minutes between reporting at the designated reporting point and subsequent take-off for the purpose of an AEMS flight;
· Conclusion: The remaining period of FDP is simply not enough to seriously conduct even an AEMS mission within the Europe theatre of operation.

response

Accepted

CS FTL.2.225(b)(6), (7), (8), (9) and (10) have been deleted.

The mitigation measure already available under '(2) The operator's standby procedures are designed to avoid that the combination of standby and FDP leads to more than 18 consecutive hours awake time' allows for the control of the FDP length.

comment

74 comment by: *Rega / Swiss Air-Ambulance*

5. CS FTL.2.225 (b)(7) (page 27 of 70 NPA 2017-17)

Existing proposed CS FTL.2.225 (b)(7): if standby ceases after the first 6 hours, the maximum FDP is reduced by the amount of standby time exceeding 6 hours;
Adaption requested by the writer for CS FTL.2.225 (b)(7): if standby ceases after the first **8 (eight)** hours, the maximum FDP is reduced by the amount of standby time exceeding **8 (eight)**;

Justification:
· The adapted paragraph CS FTL.2.225 (b)(7) is in line with the adapted paragraph CS FTL.2.225 (b)(6);
· For details, refer to my comments made under comment 4. CS FTL.2.225 (b)(6) (previous page).

response

Noted. CS FTL.2.225(b)(7) has been deleted.

comment

75 comment by: *Rega / Swiss Air-Ambulance*

6. CS FTL.2.225 (b)(8) (page 27 of 70 NPA 2017-17)

Existing proposed CS FTL.2.225 (b)(8): if the FDP is extended due to on-board rest according to CS FTL.2.205(e) or split duty according CS FTL.2.220, the 6 hours of points (6) and (7) are extended to 8 hours;

Adaption requested by the writer for CS FTL.2.225 (b)(8):

~~if the FDP is extended due to on-board rest according to CS FTL.2.205(e) or split duty according CS FTL.2.220, the 6 hours of points (6) and (7) are extended to 8 hours;~~
è Delete CS FTL.2.225 (b)(8)

Justification:
· The **raison d'être** of any AEMS (and HEMS) operator and therefore flight crew member is standby. This to be able to provide medical assistance to people in need according to ORO.FTL.105 and the definition "EMS flight" (29);
· For a flight crew member not being called for an AEMS mission it can be assumed that this individual flight crew member has ample of time to rest in the morning as long as his/her body clock allows;
· During standby other than airport standby the individual flight crew member is able to rest and to fulfill at least to a certain amount at home social duties at his/her discretion until called to report for a FDP;
· Considering that a flight crew member assigned for standby other than airport standby has at home the unrestricted possibility to rest at his/her discretion whenever deemed necessary, it makes absolutely no sense to limit the FDP that is extended due to on board rest according to CS FTL.2.205(e);
· This with respect to CS FTL.2.205 (2) where it is stipulated that for FDP extended due to on-board rest the following conditions must be met:
  - (... 2 consecutive hours for those flight crew members at control during the last landing ...);
· Conclusion:
  - Delete CS FTL.2.225 (b)(8) in total without replacement as it restricts unnecessarily and unjustified the application of a FDP extended due to on-board rest after standby other than airport standby;
  - This as the mitigation per se is the possibility for on-board rest during the AEMS mission with augmented flight crew;
  - Otherwise medium- to long-range AEMS missions with augmented flight crew using the possibility for on-board rest will not be possible anymore over night;
  - Referring to the **adopted** CS FTL.2.225 (b)(6) & (7) (see above) the extension of FDP in case of split duty according CS FTL.2.220 is no more necessary.

response

Accepted. CS FTL.2.225(b)(8) has been deleted.

comment

76 comment by: *Rega / Swiss Air-Ambulance*

7. CS FTL.2.225 (b)(10) (page 27 of 70 NPA 2017-17)

Existing proposed CS FTL.2.225 (b)(10): if a crew member is undisturbed and is able to remain at his/her place of rest between 13:00 and 17:00 at the local time where the crew member is acclimatized, the time spent before 13:00 does not reduce the maximum FDP.

In such case, the maximum FDP is only reduced by the amount of standby after 17:00 in excess of 6 hours (or 8 hours for augmented crew or split duty);

Adaption requested by the writer for CS FTL.2.225 (b)(8):

if a crew member is undisturbed and is able to remain at his/her place of rest between 13:00 and 17:00 at the local time where the crew member is acclimatized, the time spent before 13:00 does not reduce the maximum FDP. In such case, the maximum FDP is only reduced by the amount of standby after 17:00 in excess of 6 hours ~~**(or 8 hours for augmented crew or split duty)**~~**. The rest period under point (4) may be reduced by the 4 hours of rest resulting of the time between 13:00 and 17:00 where the crew member has had the possibility for rest;**

Justification:
· Referring to my comments number six (above) the slashed sentence above ~~(or 8 hours for augmented crew or split duty)~~ shall be deleted in order to be congruent;
· As a crew member is able to rest between 13:00 and 17:00 it shall be understood that that this 4 hours are not considered standby other than airport standby duty according CS FTL.2.225 (b)(1);
· Saying this it must be understood that the maximum standby other than airport standby period of time according CS FTL.2.225 (b)(1) may result in an end of the standby other than airport standby duty that is conflicting with a 24 hours calendar day and the emphasis to keep the crew member concerned in a 24 hours routine (16 hours of standby other than airport standby followed by 8 hours rest period);
· Therefore, the rest period according CS FTL.2.225 (b)(4) may be reduced to not less than 4 hours.

response

Partially accepted. CS FTL.2.225(b)(6), (7), (8), (9) and (10) have been deleted.

comment

80 comment by: *SHug*

(b)(1):
The maximum duration of standby other than airport standby is 16 hours. This limit may be extended by the number of hours between 23:00 and 07:00 ~~**or between 13:00 to 17:00**~~ during which the crew member is undisturbed and is able to remain at his/her place of rest at the local time where the crew member is acclimatised, if the standby encompasses that period;

justification: in reality it is not possible to sleep the hours from 13:00 until 17:00 and therefore the extension by this time period increases fatigue risk

(b)(10):
"In such case, the maximum FDP is only reduced by the amount of standby after 17:00 ~~**in excess of 6 hours (or 8 hours for augmented crew or split duty);**~~"

justification: without this change, this point would counteract the target of mitigating fatigue risks and would allow the operator to avoid the need of compensating long standbytimes.

response	Partially accepted. CS FTL.2.225(b)(10) has been deleted.

comment	*115* comment by: *UK CAA* **Page No:** 27 **Paragraph No:** CS FTL.2.225(b)(11) Standby – air taxi and AEMS **Comment:** It is recommended that EASA considers developing a general AMC or GM for all types of operation on the term "reasonable time". **Justification:** Clarity on the term "reasonable time" and its application within the determination of "response time". **Proposed Text:** AMC or GM text - "Operator's standby procedures should detail the "response time" such that it reflects: sufficient allowance for the crew member to prepare themselves for work (physiological needs) from the time they receive the operators call to leaving the place of rest; and, the contracted allowance for travelling time from place of rest to reporting point, or where that is not detailed, the travelling time guidance that the operator references in their scheme. This may mean that the response time is different for reporting from standby at home and when away from base."
response	Accepted

comment	*149* comment by: *VistaJet* The standby function is very complex and again very difficult to verify compliance. A major issue here is the duty penalty. With duty hours already reduced, and with the significant amount of positioning as a passenger in ATXO, the penalty should never be more than 25% standby counting towards duty. As the rotation model includes a consolidated "off" block, crew are never on extended standby periods without having a long off period to compensate.
response	Please, see the response to comment #73.

comment	*198* comment by: *Premium Jet AG* Point 4: needs to be corrected to 8h because of suitable location - physical needs could have been covered during standby. Point 3: What happens if standby starts in middle of period (e.g. 0500). Please clarify.

response | Please, see previous responses relating to 'standby'.

comment | *239* comment by: *Cat Aviation AG*

Standby at home or in hotel should not affect FDP - as crew can fully relax in a quiet and familiar environment. Standby is a larger part of what in a way defines AirTaxi operations, up to 40% of their duty days are on standby with no call for duty. It needs to be noted, that crew are fully paid for that time. In this time crew has ample rest to manage their fatigue and circadian clock. Therefore and by logical and mathematical calculation, the required rest following a standby duty should be 8 hours (16hrs sby + 8hrs rest = 24 hour day). Standby at home should not impose a penalty on FDP. The 25% of standby duty counting as Duty time is fair.

response | Please, see previous responses relating to 'standby'.

comment | *245* comment by: *Thomas Henselmann*

(4) Stanby rest should be reduced to 8h when at home or hotel.

response | Please, see previous responses relating to 'standby'.

comment | *426* comment by: *Skyshare Union representing NetJets crew members*

We would like to propose that the definition of 'response time' is changed to mean the time interval between activation and leaving the place of rest, and the percentages amended as follows:

Response time of 60 minutes or more - 25%

Response time of 30-59 minutes - 50%

Response time of under 30 minutes - 100%

Reasoning:

All standby other than at the airport follows the same rules, regardless whether at home or at a hotel on tour. The percentage of standby other than at the airport (i.e. standby at home or hotel standby) that counts towards duty limits depends on the 'response time' which is defined as the time from activation to reporting at the airport. The shorter the response time the higher the percentage. This is presumably designed to protect a crew with a shorter response time, which is unable to rest as efficiently. However, the real factor that determines how efficiently one can rest is the time interval between activation and leaving the place of rest (as opposed to arriving at the reporting place).

For our current 45 minutes to leave the hotel plus an assumed 30 minutes traveling time from hotel to FBO, this means that under the proposed Air Taxi FTL regime hotel standby would count 50% towards limits rather than the current 25%. However for a hotel with less than 15 minutes traveling time to FBO that would be 100%. Conversely for hotels further away than 45 minutes the 25% applies. In each of these cases, the time limit from activation to leaving the place of rest is 45 minutes so the ability of the crew to rest and the impact on fatigue is identical so it makes little sense the duty counts 100% or 25% depending on the travelling time.

response

Partially accepted

The time to reach the designated reporting point from a private place of rest (e.g. one's private residence) is the travelling time for which the crew member bears responsibility. Crew members should consider arranging for temporary accommodation closer to their home base if the travelling time from their residence to the home base exceeds 90 minutes (GM1 ORO.FTL.200). To arrive at work fit for duty and not exhausted due to long hours of travelling to the airport of departure, crews are advised to arrange for temporary accommodation (hotel room, rented apartment or the like). This is the main reason why a response time of 90 minutes or more will only be accounted at 25 %, and response times of less than 90 minutes are rated at higher percentages.

Unlike travelling time, however, the time for a local transfer from a place of rest (hotel) to the designated reporting point is typically the operator's responsibility. Indeed, it makes no sense to penalise the crew member's standby duty times by applying a lower percentage just because the operator did not manage to arrange for a rest facility closer to the airport.

These two situations and associated responsibilities need to be balanced, as well as arranging for a rest facility closer to the reporting point and shorter travelling / local transfer times should be incentivised.

Therefore, the percentages and definition of response time, proposed with NPA 2017-17, remain unchanged, but new guidance material (GM2 CS.FTL.2.225) recommends that when arranging for a local transfer from the crew member's standby location to the designated reporting point, the operator should avoid transfers that exceed 90 minutes and, if possible, should provide suitable accommodation at or near the crew's designated reporting point. This GM mirrors the recommendation addressed to crew members (GM1 ORO.FTL.200).

comment

443 comment by: *Air Hamburg Luftverkehrsgesellschaft mbH*

CS FTL.2.225 Standby

(b) Standby other than airport standby:

	Standby is very common for air taxi operators. If standy is at a accomodation (home or hotel) it should count as rest period. All pilots should have the possibility to rest during their standby time, they should not be disturbed or assigned to any duty during this time. *Therefore the maximum standby time should be increased to 24 hours, given a suitable accomodation with rest facilities, and suitable fatigue training in how to rest even during day time.* *If contacted they should have a suitable time period to report to the airport, according to airport, and aircraft time.* *There is also a difference if crews are contacted passively, meaning by email, company app, ect. than with an active contact, i.e. telephone call.* *If crews are contacted passively the will not be woken up during their rest period, meaning no disturbance, which implies same recover from fatigue as no contact at all.* *In case crew is actively disturbed during their rest, duty or flight duty period will begin.*
response	Accepted

comment	*634* comment by: *Cristina BENZ* (b)(1): The maximum duration of standby other than airport standby is 16 hours. This limit may be extended by the number of hours between 23:00 and 07:00 or between 13:00 to 17:00 during which the crew member is undisturbed and is able to remain at his/her place of rest at the local time where the crew member is acclimatised, if the standby encompasses that period; justification: in reality it is not possible to sleep the hours from 13:00 until 17:00 and therefore the extension by this time period increases fatigue risk (b)(10): "In such case, the maximum FDP is only reduced by the amount of standby after 17:00 in excess of 6 hours (or 8 hours for augmented crew or split duty);" justification: without this change, this point would counteract the target of mitigating fatigue risks and would allow the operator to avoid the need of compensating long standbytimes.
response	Please, see previous responses relating to ‘standby’.

comment	*705* comment by: *Captain M Alcaide GVI* The phrase "the FDP counts from start of the FDP" is poorly worded... So the idea is to have a crew 4 hours at airport stand by followed by 14 hours duty....so 16 hours in a row....flying a machine around...I can't see the increase in safety in this operation...taking into account the lack of standardization on ATXO crews. I'd say this jeopardizes safety.
response	Noted

	Cases, as in the example given, are recognised as potentially leading to increased fatigue levels and are, therefore, mitigated by a cap of 16 hours combined duration of airport standby and assigned FDP. Aircrew should be able to spend airport standby in a crew room or other accommodation.
comment	*706* comment by: *Captain M Alcaide GVI* So home standby begins day in day out (just for 10 hours) for a week in example, and every day a crew might be alerted for a duty that would imply at least 18 hours of awake time (how do you control times at home??? how do you control undisturbed rest) This is all clearly a way for operators to maximize their flexibility BUT surely not and increase in safety... I understand it's really difficult to regulate but I can't see any safety improvements...Operators will use it to increase their commercial reach...
response	Noted. The requirement for 18 hours awake time is not a target to be reached at any time. It includes responsibilities for operators (to establish their policies and procedures for verification), and also for crew members to maximise the use of rest opportunities for recuperative sleep.
comment	*778* comment by: *AECA helicopteros.* Which criteria apply in the event that the standby period takes place in the home of the pilot? Can in this case be extended up to 24 hours ?.
response	Please, refer to CS FTL.2.225(b)(1).
comment	*779* comment by: *AECA helicopteros.* (b) (3) the reference to the CS FTL 2.210 (a) is not correct, because (a) does not exist in CS FTL 2.210
response	Accepted. The correct reference was point ORO.FTL.210(a). Please, see also previous responses relating to ‘standby’.
comment	*811* comment by: *Babcock Mission Critical Services Limited* CS FTL.2.225 Standby — air taxi operations and AEMS (b)(3)

	This articles refers for "the purpose of CS.FTL.2.210 (a), but that point of the CS hasn't got an (a) or (b). It refers just to air taxi ops. This appears to be a typographical error by EASA. The reference to “CS.FTL.2.210 (a)”, should read “ORO.FTL.210 (a)”.
response	Accepted. The correct reference was point ORO.FTL.210(a). Please, see also previous responses relating to ‘standby’.

comment	*868* comment by: *NetJets Europe* **CS FTL.2.225 (b)(3) and CS FTL.2.225 (c)** NetJets comments that the response time concept is not compatible for air taxi operations. e.g. travelling time has an influence on response time where 15 minutes travelling time could mean 60 minutes response time while a travelling time of 45 minutes could mean a response time of 90 minutes. NetJets believes that the response times and the counting of different percentages towards the cumulative duty limits is applicable to AEMS where they have different levels of response times. NetJets proposes that for Air Taxi operations, standby other than airport standby should only count 25% towards the cumulative duty limits.
response	Noted Please, refer to the response to comment #426. Air taxi operators may choose to apply only 25 % with a response time of 90 minutes, the other options being inappropriate for their operations.

comment	*1049* comment by: *Stephanie Selim* Editorial comment – To be consistent with CS FTL.1.225: “~~**The limits on flight duty, duty and rest periods in air taxi operations or AEMS are modified in accordance with the following:**~~ **The modification of limits on flight duty, duty and rest periods under the provisions of ORO.FTL.225 complies with the following:**”
response	Accepted

comment	*1080* comment by: *Rabbit-Air Ltd*

	When using Standby at home or in the hotel there is no need for a penalty in FDP. Required rest should be 8 hrs (like "Reserve").
response	Please, see previous responses relating to 'standby'.

comment	*1138* comment by: *FNAM* Attachment #82 ISSUE: The paragraph (a)(2)(ii) is not clear: the maximum combined duration of airport standby and assigned FDP has to be extendable to a 24 hours period (Cf. Annex 5). PROPOSAL: Rephrase the paragraph (a)(2)(ii) to make it clear that the maximum combined duration of airport standby and assigned FDP may be extendable to a 24 hours period.
response	Please, see previous responses relating to 'standby'.

comment	*1140* comment by: *FNAM* Attachment #83 ISSUE: This paragraph (b)(1) is unclear and needs to be rephrased. 1/ The maximum duration of standby other than airport standby has to be extendable to a 24 hours period (Cf. Annex 5). 2/ Besides, the paragraph (b)(1) should be rephrased: It is not clear if the wording "if the standby encompasses that period" refers to: • Both periods: [23:00 to 07:00] and [13:00 to 17:00] • The period [23:00 to 07:00] • The period [13:00 to 17:00] PROPOSAL: Rewrite the paragraph (b)(1) to: • Make it clear that the maximum duration of standby other than airport standby is extendable to a 24 hours period • Clarify the wording "if the standby encompasses that period" to highlight the fact that it refers to both periods:[23:00 to 07:00] and [13:00 to 17:00]
response	Please, see previous responses relating to 'standby'.

comment	*1141* comment by: *FNAM* ISSUE: (b)(3) FNAM and EBAA France do not understand why these values have been chosen and would like to take up the disposition of the CAT.A FTL regulation. Besides, the paragraph CS.FTL.2.210(a) does not exist. PROPOSAL Replace the paragraph (3) by the following: *"(3) 25 % of time spent on standby other than airport standby counts as duty time for the purpose of ORO.FTL.210;"*
response	Please, see previous responses relating to 'standby'.

comment	*1142* comment by: *FNAM* ISSUE: Air Taxi operators need to be able to lower the 10h rest period to 8h if: • the standby is made at a suitable location (home/hotel); and • the stand is followed by another standby Indeed, the pilot physiological needs had been covered during the standby and so, the pilot does not need additional time to the 8h of sleep duty. PROPOSAL: Modify (b)(4): *"(3) The standby is followed by a minimum rest period:* *(a) Air Taxi* *(i) Not less than 8 hours if:* • *The standby is made at a suitable location (home/hotel); and* • *The standby is followed by another standby* *(ii) Not less than 10 hours in the other cases"*
response	Please, see previous responses relating to 'standby'.

comment	*1144* comment by: *FNAM* Attachment #84 ISSUE: For AEMS operations, consecutive period of standby are required. Due to the life-threatening missions and the low probability to have several consecutive missions, it

should be possible for the operators to verify ex-post Standby that the crew have not been disturbed. In that way, the 12 hours of sleep opportunity between 23:00 and 07:00 and 13:00 and 17:00 should count as a rest period, as the crew member are already fully rested (Cf. Annex 5).

PROPOSAL: Modify (b)(4)
"(1) The standby is followed by a minimum rest period:
(a) For Air Taxi: {...}
(b) For AEMS:
(i) The minimum rest period is reduced by the time when the crew member is undisturbed and had
sleep opportunities if:

- *The standby is taken in suitable accommodation; and*
- *The standby is followed by another standby; and*
- *Either or both of the following:*
  - *The crew member was undisturbed during the period [23:00 to 07:00];*
  - *The crew member was undisturbed during the period [13:00 to 17:00];*

(ii) Not less than 10 hours in the other cases"

response

Please, see previous responses relating to 'standby'.

comment

1148 comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart*

Standby at home or in a hotel should not affect FDP due to the fact that crew can fully relax in a quiet and familiar environment. It is the crews responsibility to manage their fatique and circadian clock. When applying standby at home or in a hotel, there is no need for a penalty in FDP. Required rest should be 8 hours.

response

Please, see previous responses relating to 'standby'.

comment

1308 comment by: *Volkswagen AirService GmbH*

If standby (other than at airport) does not lead to a duty, it must be possible to add the next stby period without rest. Otherwise we have to proceed crews to the aircraft position (off base) just to have crews in standby for an early departure or additional flight. This is not possible due to required man power & costs involved.

response | Partially accepted

Standby in suitable accommodation is followed by not less than 10 hours of rest period, unless during the standby period a sleep opportunity of not less than 8 hours is provided in suitable accommodation, between 22:00 and 08:00, during which the aircrew member is undisturbed and is able to remain at their place of rest at the local time where the aircrew member is acclimatised.

comment | *1309* comment by: *Volkswagen AirService GmbH*

(b)(3) referenced CS.FTL.2.210(a) does not exist. Maybe Error?

response | Please, see previous responses relating to 'standby'.

comment | *1310* comment by: *Volkswagen AirService GmbH*

Standby is different in ATXO from charter or scheduled operations. We do not stand by only for a particular flight. We are on standby in a general manner for any type of duty. Stby is a regular service in ATXO. CS FTL 2.225 does not reflect this fact.
If standby (other than at airport) does not lead to a duty, it must be possible to add the next stby period without rest. Otherwise we have to proceed crews to the aircraft position (off base) just to have crews in standby for an early departure or additional flight. This is not possible due to required man power & costs involved.

response | Please, see previous responses relating to 'standby'.

comment | *1329* comment by: *Babcock Mission Critical Services Limited*

CS FTL.2.225 Standby – AEMS (b) (1)
We don´t agree that standby other than airport facility limits to 16 hours. We understand that rostering a standby at home, close to the airport, must allow at least 7 consecutive days.

If we see at what it is said for HEMS, in CS FTL.3.225, this limitation refers to a standby in an HEMS operating base which does not equal as to be at home. What´s the difference in fatigue between be at an airport with suitable accommodation and to be in an HEMS operating base?

Any case, this interpretation will affect to the Flight times and duty periods described in ORO.FTL.210. So if there is no consideration of change, we don´t agree with the times periods in 7/14/28 consecutive days

We recommend to describe a standby at home / hotel (suitable accommodation), when it is placed close to the base (not more than 1 hour) and limit the maximum period of standby to 7 consecutive days.

We urge EASA to reconsider its position on counting Standby as duty, as described in the report submitted to EASA (Mission Critical Services Notice of Proposed Amendment 2017-17 Response Considerations, Fletcher et al, Integrated Safety Support, February 2018).

response Please, see previous responses relating to 'standby'.

comment *1374* comment by: *Bartosz Fibingier*

"CS FTL.2.225(b)(3) Time spent on standby duty counts as duty time for the purpose of CS.FTL.2.210(a)" - CS FTL.2.210(a) has not been presented in this proposal. The proposed text of CS FTL.2.210 includes points from (1) to (3) only.

CS FTL.2.210 Flight times and duty periods — air taxi operations
The total flight time of the sectors on which an individual crew member in air taxi operations is assigned as an operating crew member under ORO.FTL.210(e) shall not exceed:
(1) 80 hours of flight time in any 28 consecutive days;
(2) 210 hours of flight in any 84 consecutive days; and
(3) 625 hours of flight time in any 12 consecutive calendar months.

In the context of proposed CS FTL.2.210, text presented in CS FTL.2.225(b)(3) has no sense. CS FTL.2.210 refers to flight time, and CS FTL.2.225(b)(3) refers duty time which is two different things. If the intention is to increase the flight time (CS FTL.2.210), that should be clearly stated CS FTL.2.225(b)(3).

By the way, all CS's proposed in the text of this NPA lack dot between CS and FTL, so dot in the text of CS FTL.2.225(b)(3) should be removed.

response Please, see previous responses relating to 'standby'.

comment *1381* comment by: *Gama Aviation (UK) Ltd*

(3) Should be in line with CAT ops. **Suggest:** Time spent on standby other than airport standby counts as 25% duty time.

(4) Operators should be able to lower to 8 hours if the standby is made at a suitable location (home/hotel) and if followed by another standby (The physioloical needs having been covered during the standby)

response	Please, see previous responses relating to 'standby'.

comment	*1450* comment by: *European Cockpit Association* Commented text: "Standby" References *CS FTL 2.225 (b) (1), (9) & (10)* *CS FTL.2.225 no.28* Comments: The concept is introduced here of any hours spent on standby between 1300-1700 not counting towards the standby duration or FDP if called out. It appears to represent a supposedly guaranteed and enforced nap between these hours (in a functioning home setting), so claiming that they are spent actively resting. This idea is unworkable in practice and it will not be possible to gain or enforce a 4 hour nap in the middle of the day, making this concept nothing more than a route to excuse dangerously long awake-times on standby and call-out. The idea was repeatedly floated in CAT FTL discussions and rejected then. Proposal: Include all time between 1300 and 1700 as normal standby.
response	Please, see previous responses relating to 'standby'.

comment	*1452* comment by: *European Cockpit Association* Commented text: CS FTL 2.225 (b) (3) (i) & (ii) ECA Comment: Factoring of standby time to 25% for cumulative duty purposes, makes it unlimited in reality. Considering the mathematics against any cumulative duty limit, or even the 2000hr annual working time limit (taking into account legal minimum leave and day off requirements) factoring by 25% allows the entire life of the individual, when both asleep and awake, to be spent on standby. Even a factoring by 50% would only just have an effect, but making a difference only if very onerous periods of standby are combined with other duty. Operations under the CS2 regime involve very significant periods of standby, making this a much more serious issue than in CAT. Proposal: ECA recommends deletion of 25% factoring, and the only factoring levels permitted being 100% or 75%.
response	Please, see previous responses relating to 'standby'.

comment	*1514* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* Again an impractical prescriptive rule by its nature: Standby at home or in a hotel should not affect FDP, due to the fact that a crew can in any case relax in a quiet and familiar environment. It is upon the crews' self-responsibility to manage their fatigue and circadian rythm. When applying standby at home or in a hotel, there must be no room for any penalty in FDP. As a general rule: Required rest should be set at 8 hours.
response	Please, see previous responses relating to ‘standby’.

CS FTL.2.230 (Reserve)

CS FTL.2.230	p. 27-28

Responses in relation to 'reserve'.

comment	*22* comment by: *Benedikt Steiner* CS FTL.2.230 Reserve - air taxi operations comment: this Reserve must be available also for AEMS and therfore the title should be changed as follows CS FTL.2.230 Reserve - air taxi and AEMS
response	Accepted

comment	*38* comment by: *Flying Group Luxembourg* One important change to NPA 2017-17 is required to avoid losing all flexibility of planning without creating an increased workload for crew by an abnormally high Standby and its consequences on family life and duty. The proposed change is concerning "Reserve" as per CS FTL 2.230 out of NPA 2017-17. I provide you with the Rationale, and the new proposed text (adding a paragraph). If you agree, could you bring this to EASA's attention? It will definitely have more weight and be beneficial to all of us and have more weight… **Rationale** In Air Taxi operations, having a crew on a 10 hour minimum notification time as per (e), prevents a flexible planning that goes beyond a crew intensive Airport Standby and other Standby. Indeed, a Crew having had a normal night of sleep, being at home under a "Reserve" Status, would not be plannable if a Commercial opportunity arises and a Crew is needed. This is the essence of unscheduled Air Taxi, being responsive to unforeseen Commercial opportunities in a cost-effective way (well-balanced Aircraft to Crew ratio). Being on Reserve means that the crewmember is available to fly but is not obliged to stay at a Standby location. The crewmember will most of the time be at home or doing activities while maintaining fit to fly. The original text under (e) suggests that, under some conditions, provided the crew had 8 hours of sleep, being notified 2 hours before actually going to bed at 22:00 Hours, the well-rested crew would be able to report at i.e. 08:00 Hrs. at the reporting point.

Assuming the same crew is on Reserve, and the opportunity arises in the early morning, this same crew would only be available 10 hours after notification, in this same condition earliest at 16:00Hrs. It is obvious that applying CS FTL 2.230 under its current form would lead to a more fatigued crew, which cannot be the intent.

Proposed amendment
CS FTL.2.230 Reserve — air taxi operations
The operator assigns duties to a crew member on reserve under the provisions of ORO.FTL.230 complying with the following:

a. An assigned FDP after reserve counts from the reporting time.
b. Reserve times do not count as duty period for the purpose of ORO.FTL.210 and ORO.FTL.235.
c. The operator specifies a number of consecutive reserve days within the limits of ORO.FTL.235(d).
d. To protect an 8-hour sleep opportunity, the operator rosters a period of 8 hours, taking into account fatigue management principles, for each reserve day during which a crew member on reserve is not contacted by the operator.
e. Minimum notification time for any duty is 10 hours that may include the 8-hour sleep opportunity under
f. The Notification time for Flight duty can be reduced to 2 hours if the notification occurs after an acclimated local night, provided:

1. the Crew had 8 hours of uninterrupted sleep
2. the Crewmember is available to report in the next two hours, else
3. the reporting time will take into account the physical needs of the crew and the expected travelling time from the Crew's location to the Reporting point.

g. Reserve time does not count as recurrent extended recovery rest.

response

Not accepted

The essence of reserve is the long notification time of more than 10 hours. Reserve is actually a type of standby with long notification time compared to standby in suitable accommodation where there is no specification as to how early the crew member should be notified.

The well-established principle in air taxi and AEMS operations of transforming pilot readiness into a duty applies here as well. Reserve does not count towards cumulative limits or rest, exactly because of the long notification and, consequently, response time.

Reserve may be used by operators that need it in addition to other standby options. Should the operator wish a shorter notification time, it can use the option of standby in suitable accommodation.

comment

81 comment by: *SHug*

This paragraph shall also be applicable to AEMS

response	Accepted

comment	*150* comment by: *VistaJet* CS FTL 2.230 Reserve This is what most ATXO operators will be using as it most closely resembles the state of "readiness" that crews are on during a rotation, and this is the same for almost all ATXO operators. When crews are on rotation, but no flights are scheduled, they are able to perform daily activities unrestricted and no minimum response time is specified, or made compulsory. So this basically a "reserve" function. However, should a trip come up and the crew accept then the 10hrs should not be a limit. For example, if the crew are at breakfast and are asked if they can accept a trip for a departure in a couple of hours, they should be allowed to go. There is little sense in delaying the trip 10hrs, potentially giving them a long haul flight at the end of the day after they have been awake since breakfast. Reserve is very useful, and with a minor modification would be what all ATXO operators use for crew who are on rotation, but have no trips scheduled. <u>Suggest to amend point (e) to read;</u> - Minimum notification time for any duty is 10hrs that may include the 8-hour sleep opportunity under (d) **unless the crew member is contacted and accepts the duty via passive contact.** This will protect crew who are in rest, but allow crew who are in a well rested state to accept the trip sooner than 10hrs, which is far beneficial from a safety and commercial point of view.
response	Please, refer to the response to comment #38.

comment	*199* comment by: *Premium Jet AG* Please add passive contact and include the AEMS.
response	Noted. The method of communication should be agreed between the crew member and the operator and should take fatigue management principles into account.

comment	*246* comment by: *Thomas Henselmann*

	(e) notification time should be reduced when accepted by the crew, not affecting sleep. (contact via non audible methods, e.g.email, sms..)
response	Please, refer to the response to comment #38.

comment	*456* comment by: *Cat Aviation AG* AirTaxi has no regular schedules or rosters and reserve days rostered are not applicable to us. Reserve days are a typical commercial scheduled operations tool.
response	Please, refer to the response to comment #38.

comment	*635* comment by: *Cristina BENZ* This paragraph shall also be applicable to AEMS
response	Correct

comment	*707* comment by: *Captain M Alcaide GVI* This is a new concept and might be a good one, I don't understand the first phrase "the operator assigns duties to a crew member on reserve..." as I understand reserve is a situation other that duty or stand by without any obligation but to be activated in a certain time frame. So it should refer as "the operator assigns a reserve to a crew member..."
response	Accepted

comment	*780* comment by: *A, #813, ECA helicopteros.* Why AEMS are excluded from Reserve, having regulation for Air Taxi and HEMS? Means that we won´t be able to apply this concept (Reserve) in AEMS.
response	‘Reserve’ is also applicable to AEMS operations.

comment	*813* comment by: *Babcock Mission Critical Services Limited* What about reserve for AEMS? We recommend the same described for HEMS.

	In addition, amend proposed CS.FTL.2.230 to include AEMS
response	'Reserve' is also applicable to AEMS operations.

comment	*869* comment by: *NetJets Europe* **CS FTL.2.230** Netjets supports the proposal in general, with a suggestion for item (e) **CS FTL.2.230 (e)** Netjets suggests item (e) is ammended to add at the end "... *unless crew is contacted via passive contact and has accepted the duty*".
response	Please, refer to the responses to comments #38 and #199.

comment	*976* comment by: *AESA* CS FTL.2.230 doesn't include the concept "reserve" for AEMS operations. On the other hand, "reserve" is defined in CS FTL.3.230 for HEMS operations. What is the reason?
response	'Reserve' is also applicable to AEMS operations.

comment	*1052* comment by: *Stephanie Selim* (d) Technical comment- In air taxi and AEMS operation, the possibility of passive notifications should be introduced. In that case, the passive notification is not considered as a contact as referred in CS.FTL.2.230(d), and therefore, a passive notification can be sent at any time during the 8-hours sleep opportunity. The proposal is: "(d) To protect an 8-hour sleep opportunity, the operator rosters a period of 8 hours, taking into account fatigue management principles, for each reserve day during which a crew member on reserve is not contacted **by active mean** by the operator." A new GM is also proposed.
response	Please, refer to the response to comment #199.

comment	*1082* comment by: *Rabbit-Air Ltd* No reserve applies to small operators.

response	Please, refer to the response to comment #38.

comment	*1146* comment by: *FNAM* (e) ISSUE: If the notification of an assignment for any duty is non-intrusive, the 10 hours should start counting from the notification time. This is what is done in real life and this should be added in the paragraph (e). PROPOSAL Replace the paragraph (e) by the following: *"(e) Minimum notification time for any duty is 10 hours that may include the 8-hour sleep opportunity under (d). If the notification of an assignment for any duty is done on a passive-mode, the 10 hours start counting from the notification time."* RATIONALE: If this sentence is not added, the principle of Reserve will never be used by operators.
response	Not accepted In all cases, the notification time starts counting from the moment the crew member has been notified. Point (e) has nothing to do with your proposal; it specifies that during the notification time (which is not less than 10 hours), the crew member may have an 8-hour sleep opportunity. This sleep opportunity does not 'pause' the notification time.

comment	*1151* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* Air Taxi has no regular schedules or rosters and reserve days. Reserve day rosters are not applicable to Air Taxi operators.
response	Noted. Operators are not forced to apply 'reserve' if they do not use it.

comment	*1192* comment by: *GBAA* CS FTL.2.230 (c)/(f) Reserve — air taxi operations (c) The operator specifies a number of consecutive reserve days within the limits of ORO.FTL.235(d). (f) Reserve time does not count as recurrent extended recovery rest. GM1 ORO.FTL.230 Reserve RECURRENT EXTENDED RECOVERY REST

	In a small operation with only a couple of pilots, the flexibility to react on changes needs to be given. Pilots can become sick or simply needs to have an extended rest for more than one day, although they were planned to be available or on reserve. Other pilots need to jump in. The probability to be called in for duty is low, but needs to be possible. The reserve can take up to the entire month and it impairs a lot to assign every 8th day firmly scheduled since the replacement rotation might take longer. Potentially on that day with the planned extended rest time, a flight might take place. In Germany and Austra, there is currently a requirement that 96 so called "einzelne dienstfreie Tage" or "single days free of duty" at home (!) need to be provided per year, or 8 per month, plus 28 days of vacation. Usually, these 8 single days free of duty are planned as a block and the remaining days are currently planned as standby at home. If the standby is not activated it will count as rest time. In essence, this standby days at home are reserve days. Why can't inactivated reserve days be regarded as rest time? So, instead of having 2x1 and 2x2 day off somewhere in the world, it would be better to have a certain amount (maybe 8) days off a home and the reserve days be available during the remaining days within 10 hours. Otherwise, the extended rest period will be changed a lot of time and the spare time is very hard to plan for each crew member. Moreover, crew members have chosen such a non-scheduled business aviation operation as their lifestyle. Why is this flexible scheme pressed into the scheduled aviation world?
response	Not accepted Reserve cannot count towards rest time, because the recuperative rest period must be free of any duty or readiness for duty. The rest period under Subpart ORO.FTL (which is a safety requirement) may or may not overlap with the single day free of duty.

comment	*1311* comment by: *Volkswagen AirService GmbH* There is no difference between a rest time off base and a reserve. Reserver makes no sense unless it is used to shorten the rest time at home.
response	Please, refer to the responses to comments #38 and #119.

comment	*1379* comment by: *Gama Aviation (UK) Ltd* Ammend to include AEMS operations in Reserve.
response	Noted. ‘Reserve’ is also applicable to AEMS operations.

comment	*1398* comment by: *Bartosz Fibingier*

CS FTL.2.230 (f) higher level of flexibility should be reconsidered.

For example, in case of being in reserve for the 3 days, a crew member will fill no negative effect of being in reserve the unless the suitable location is provided.

In many CAT ATX OPS, crew members are flying in the scheme: 2 weeks ON and 1 or 2 weeks OFF. Taking into account reality of ATX OPS on many occasions pilots do not perform any flight in 7 days after which extended recovery rest is mandatory.

Please consider following proposal:
Update to a ORO.FTL.235(d) Recurrent extended recovery rest periods

(a) Flight time specification schemes shall specify recurrent extended recovery rest periods to compensate for cumulative fatigue. The minimum recurrent extended recovery rest period shall be 36 hours, including 2 local nights.
(b) The time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period shall not be more than 168 hours.
(c) The recurrent extended recovery rest period shall be increased to: (1) 2 local days twice every month, or (2) in case of CAT ATX and AEMS OPS, extended recovery rest period increased to 168 hours once every month.
(d) In case of CAT ATX and AEMS OPS using mainly the standby or reserve time in flight time specification schemes, time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period mentioned in letter (b) may be extended by 24 hours for every 48 consecutive hours between any duty periods.

response

Noted

Please, refer to point ORO.FTL.235(d).

When applying an individual scheme including block of duties followed by a block of days-off, the operator may roster an ERRP longer than 36 hours (which is, in principle, a minimum value).

comment

1515 comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

Note that ATXO have no regular schedules nor rosters nor reserve days. Reserve day-rosters are generally not applicable to ATXO.

response

Noted. Operators are not forced to apply ‘reserve’ if they do not use it.

comment

116 comment by: *UK CAA*

Paragraph No: GM1 CS FTL.2.230(d) – Reserve – air taxi operations

Comment: This guidance should be considered as applicable to the ORO for all types of operations.

Justification: Consistency

Proposed Text: GM1 CS FTL.2.230 (d) becomes GM3 ORO.FTL.230

response

Accepted

The proposed text will be duplicated under both CS FTL.1 and CS FTL.2.

The reference to 8-hour sleep opportunity exists only in the CS text.

comment

708 comment by: *Captain M Alcaide GVI*

Curiously enough free of duty days are not mentioned in the document so it might seem that operators can schedule as duty, stand by and reserve every day ("surrounding days") of their crews.

response

Subpart ORO.FTL of Regulation (EU) No 965/2012 contains safety requirements for sufficient rest periods.

The rest period is a period free of all duties, reserve and standby. In addition to Regulation (EU) No 965/2012, the Working Time Directive (Council Directive 2000/79/EC) applies as transposed in members states national regulations. It contains requirements for days-off.

CS FTL.2.235 (Rest)

CS FTL.2.235 p. 28-29

Responses in relation to 'rest'

comment

19 comment by: *Aliparma/FOPh*

(c) REDUCED REST

1) the minimum reduced rest period under reduced rest arrangements at home base are 12 hours or 10 hours when the travelling time to residence, temporary accomodation or suitable accomodation is less than 30 minutes from the Home base.

1a) the minimum reduced rest period under reduced rest arrangements out of home base are 10 hours

response

Not accepted.

ORO.FTL.235(a) and (b) prescribes minimum rest requirements. ORO.FTL.235(c) deals with arrangements that may allow for a shorter rest period than that specified in ORO.FTL.235(a) and (b). In all cases the duration of rest period is guaranteed and does not depend on the time for travel.

comment

23 comment by: *Benedikt Steiner*

The note (ii) on page 29 of 70 must be canceled as it opens the door the ignore the table on top of this page.

response

Not accepted

Note (ii) does not cancel the table. Note (ii) is about the minimum rest away from home base and applies together with note (i). The derogation provided under note (ii) may apply when the home base is a stopover in a rotation and not the end of the rotation (when (i) will apply anyway).

Please, note that the derogation under note (ii) can only be used once between two recurrent extended recovery rest periods (i.e. once in 7 days), if the operator provides suitable accommodation to the crew member at the home base.

Please, note too that after a maximum of a 7-day mission (168 hours) and up to 60 cumulative duty hours, the crew member must take an extended recovery rest period in any case.

comment

35 comment by: *Joeri Meeus*

The text of the table is not inline with the previous sentence (last sentence of page 28).
The table on page 29 state : Time elapsed (h) between reporting for the first duty period involving ....

The should be, to be in line with the previous sentence rephased into :
Time elapsed (h) between reporting for the first **Flight** duty period involving ....

response

Not accepted

The first flight that crosses four one-hour time zones may be a positioning flight that is not an FDP, but a duty period. A positioning flight with such time difference can also negatively impact on the crew member's acclimatisation status.

comment

82 comment by: *SHug*

(b)(2)

(ii) Away from home base, if an FDP involves a 4-hour time difference or more, the minimum rest between this FDP and the following FDP is at least as long as the preceding duty period, or 14 hours, whichever is greater. ~~By way of derogation from point (b)(2)(i) and only once between 2 recurrent extended recovery rest periods as specified in ORO.FTL.235(d), the minimum rest provided under this point (b)(2)(ii) may also apply to home base if the operator provides suitable accommodation to the crew member~~

justification:
This would give the operator the possibility to always ignore the time zone difference compensation in the table under point (b)(2)(i) just by offering a hotelroom at home base. This would greatly increase the fatique risk and destroy the flight crew members social life at home.

response

Please, refer to the response to comment #23.

comment

117 comment by: *UK CAA*

Page No: 29

Paragraph No: CS FTL.2.235, (b) (3) – Rest periods – air taxi and AEMS

Comment: The text of the definition of eastward / westward transition has been changed such that it significantly affects the application of the requirement. The requirement was based on the fatigue science developed to manage the combination of significant directional time zone changes and was developed to apply to any sequence of these types of rotations. It is strongly recommended that the original definition as quoted in the CRD 2010-14 and as applicable to CS FTL.1 is retained.

Justification: These changes affect the application of the requirement and goes against the development of the requirement within the original Subpart FTL rulemaking process. This will generate confusion and incorrect application of this requirement to manage significant directional time zone changes in either direction or either sequence of rotations.

Proposed Text: Amend to read: “Eastward-Westward and Westward-Eastward transition means the transition at home base between a rotation crossing 6 or more time zones in one direction and a rotation crossing 4 or more time zones in the opposite direction.”

response

Not accepted

EASA and national competent authorities have found that the previous ‘unofficial’ definition proposed in CRD 2010-14 was not entirely based on fatigue science.

First of all, the table in CS FTL.2.235 does not indicate any direction of the rotation, following which a rest to compensate an at least 4-hour time zone difference should be provided. This means that the minimum of 4 hours’ difference to the reference time applies

to any direction of the rotation and the proposal to treat one of them differently (i.e. only if crossing 6 or more time zones) in the case of combinations is not substantiated.

Second and most important, the rest to compensate a time zone difference of 4 hours or more in the case of a transition between a rotation in one direction and a rotation in the opposite direction stems from scientific results that show that the adaptation after eastbound flights is slower than after westbound flights. This means that a rotation with a 6-hour TZC eastwards followed by a rotation with a 4-hour TZC westwards will be more fatiguing than a rotation with a 6-hour TZC westwards followed by a rotation with a 4-hour TZC eastwards. According to the proposed text, this combination is equivalent in terms of fatigue. There is no scientific evidence to substantiate this equivalence.

comment

133 comment by: *VistaJet*

CS FTL.2.235(a)(2) Rest Periods is excessive for rotational style operations especially long haul.

The very definition of long haul means that the flight will encroach on one for the parameters (early start/night/late finish) on every duty. Again the effects of international operations are addressed during the "OFF" block where crew have a consolidated block to recover.

Along with all the other restrictions imposed with this NPA operators will be severly impacted by this. ATXO in this NPA is already having to accept, lower hour limitations and duty limitations.

It is understood that disruptive schedules create fatigue however in the short term this can be addressed by adding an increment to the rest period immediately after the duty, after which the effects of long term fatique are dealt with during the OFF block.

Would suggest adding 3Hrs to the minimum rest following an early start, late finish or night duty with the extended rest remaining 36hrs with 2 local nights.

response

Not accepted

CS FTL.2.235(a)(2) is about disruptive duties, four or more in a row, following which the cumulative fatigue increases at a higher rate than following a single disruptive duty. Therefore, cumulative fatigue is mitigated by a longer-extended recovery rest.

comment

151 comment by: *VistaJet*

CS FTL2.235 Rest Periods (b)(2)

This table is extracted from CS FTL1.235 and has no place in ATXO. ATXO does not perform scheduled out and back flights on a perpetual roster. ATXO flights are a rotation of

	successive flights which may go in any direction. A typical on haul rotation will take crew progressively around the world or randomly in any direction. This table does not make provision for complex operations or progressive re-acclimatisation. This is an attempt at one size fits all which is exactly what this CS was meant to avoid, not embrace.
response	Not accepted The table in CS FTL2.235(b)(2) provides for compensatory rest at home base regardless of the progressive re-acclimatisation during complex rotations. The term 'rotation' is defined in CS FTL2.235(b)(1). Acclimatisation is addressed by point ORO.FTL.105(1) and related guidance material (GM).

comment	*152* comment by: *VistaJet* CS FTL2.235 Rest Periods (b)(3) Again this is directly from CS FTL1.235 incorporated for scheduled airlines on out and back trips, with a perpetual roster. Not for complex ATXO with block roster pattern. Suggest to remove.
response	Not accepted Please, refer to previous responses in the section, in particular to comment #151.

comment	*153* comment by: *VistaJet* CS FTL2.235 (c) Reduced Rest Point (7) There is absolutely not reason to put an arbitrary flight time limit on the preceding 7 days leading up to the reduced rest even. It is conceivable in long haul to do 2 x 12 hour flights on day 1 and 2 then not fly for a couple of days, then require a crew to do a 3hr flight followed by a reduced rest period in order to execute another 3 hour flight the next day. Under this point it would not be possible to complete this flight even though it is clear to see that there is no safety implication. There is no scientific data backing the decision to impose a 24Hr flight limit in this restriction. Suggest to remove.

response	Accepted

comment	*200* comment by: *Premium Jet AG* Table should be amended in following topics: Remove max time reference, maybe acclimisation and bio rythm could be taken into account. Rework Home Base due to different ops models in business aviation.
response	Not accepted Please, refer to previous responses in the section, in particular to comment #151.

comment	*325* comment by: *Thomas Henselmann* Table doesn`t refelct actual acclimatisation status of the flight crew, since it only accounts for return flights. Limiting Air Taxi operations without benifit towards fatigue.
response	Not accepted Please, refer to previous responses in the section, in particular to comment #151.

comment	*326* comment by: *Thomas Henselmann* (7) Flight time is not the only contributing factor, suggest to remove this point.
response	Accepted

comment	*431* comment by: *Skyshare Union representing NetJets crew members* One impact of the reduction in min rest from 11 to 10 hours is that it will not allow us to seek a proper evening meal and still have 8 hours available for sleep (10 hours includes 8 hours for sleep, 1 hour travelling time, leaving only1 hour for 'physiological needs' which is the time it takes us to wake, shower, dress, check out and take breakfast). This makes the scheduled nutrition opportunity all the more important. Currently, the nutrition opportunity is often scheduled at an unrealistic time, including before crew food is delivered, immediately after breakfast and so on. If an evening meal is to be impossible the nutrition opportunity needs to be realistically scheduled and we would like enhanced protection compared to what is proposed. For example, if rest time allocated is to be less than 11 hours, a nutrition opportunity must be provided within 4 hours of the end of the preceding duty, with food available.
response	Partially accepted

	Nutrition opportunities should not interfere with, or further reduce, sleep.

comment	*444* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* CS FTL.2.235 (a) Disruptive Schedules: *(1) Rest periods according to ORO.FTL235 a and b shall be maintained. However, is suitable accomodation at home base is provided the minimum rest can be reduced to 10 hours.* (b) Time zone differences *As many air taxi operators have no fixed base for all their pilots, but operate with an open base concept the minimum rest after passing 4 or more hours time zone difference within the beginning and the end of one flight duty period the rest time should be increased to 14 hours or the preceeding duty period, whichever is greater.* *If during one rotation time zone rest applied more than twice the recurrent extended recovery rest period shall be increased to a minimum of 60 hours including 3 local nights.* (c) Reduced rest: *Rest can be reduced by up to 2 hours, but never less than 9 hours. If reduced rest is planned the following FDP shall not be more than the given rest period or maximum FDP according to ORO.FTL.205, whichever is less.* *Reduced rest can only be applied twice in 7 consecutive days.* *If reduced rest is planned the following rest period shall be increased by the time the previous rest period was reduced by.*
response	Noted Point ORO.FTL.235 is applicable to all types of operations as this is the implementing rule. It provides the legal grounds for the development of CSs for different types of operations.

comment	*567* comment by: *Cat Aviation AG* Table not applicable nor useful to biz model of AirTaxi. Flights often proceed continuously in one direction of time zone differences and not return to home base. Thus table does not reflect that crew is acclimatized progressively during the trip. A penalty of 5 local nights after a 12hrs time zone difference is not taking into account, that often crew rests at location for 1 week, and then return to home base. Why would crew need 5 rest nights after a week of no duties? Suggest to find a simple way to account for time zone differences.
response	Not accepted

	Flights may not return to home base, but the crew member returns to home base. Please, refer to previous responses in the section, as well as to the section on 'home base'.

comment	*568* comment by: *Cat Aviation AG* (3) this must be clearer defined. How or when this east-west or west-east transition applies. If a crew starts a duty away from homebase, after it had 5 days rest at that "away" location, then why not applying the normal rest calculation between 2 flights at home base, if a suitable location is provided? Especially if prior and post those flights east-west and west-east, crew had plenty of rest.
response	Noted. Please, refer to previous responses in that section. Fatigue science has proven that time zone crossings in general expose flight crew members to a greater sense of disorientation or jet lag than employees in other modes of transportation. Alternating rotations without re-synchronisation at home base can be not only very fatiguing and pose a risk to safety but can also lead to health issues.

comment	*570* comment by: *Cat Aviation AG* This CS.2. is more restrictive than ORO.FTL.235 "reduced rest". what is the rationale? suggest to remove at least point 4,5,7.
response	Not accepted The combination of reduced rest, long flight times and time zone crossings potentially leads to higher fatigue risk than in the cases where these are isolated assignments.

comment	*636* comment by: *Cristina BENZ* (b)(2) (ii) Away from home base, if an FDP involves a 4-hour time difference or more, the minimum rest between this FDP and the following FDP is at least as long as the preceding duty period, or 14 hours, whichever is greater. By way of derogation from point (b)(2)(i) and only once between 2 recurrent extended recovery rest periods as specified in ORO.FTL.235(d), the minimum rest provided under this point (b)(2)(ii) may also apply to home base if the operator provides suitable accommodation to the crew member justification: This would give the operator the possibility to always ignore the time zone difference compensation in the table under point (b)(2)(i) just by offering a hotelroom at home base.

	This would greatly increase the fatique risk and destroy the flight crew members social life at home.
response	Please, refer to the response to comment #23.

comment	*709* comment by: *Captain M Alcaide GVI* In case number one, a crew might have a 14 hours day, begining their day at 0900 (they departed home at 0800) for a Madrid Zurich Amsterdam Madrid finished at 2300 (getting home an hour after, I can tell that's almost imposible in this type of aviation) and begin again at 1000 (leaving home at 0900) for another 1100 hour day up to three sectors, not standardized as in an airline, but flying from Madrid to London City and then to Brussels and then to Malaga.... and that's a safer operation.... I still don't see how flying unscheduled might support a longer operation in a safer way than an airline, and ONLY (that's the only rationale I find behind this NPA) because this is only made twice a month...can fatigue be prevented as an ON/OFF switch? can fatigue be prevented for having more time off? or you can be tired even if you are on your first day of work after a week off? Fatigue is not prevented through the lack of duties for some times, fatigue must be prevented when on the job and I cannot see how if you extend work hours in a usually more demanding job as ATXO is compared to airlines.
response	Noted

comment	*710* comment by: *Captain M Alcaide GVI* I think there should be a difference in (ii). Regarding the time difference, only takes into account from 4 hours on and I think it is different (as it is stated on the preceding table for rest at home base) based on time lapse. So it should be specified over 4 hours (14 hours rest) and over 6 hours at least (16 hours rest), not only over 4.
response	The minimum rest prior to the FDP is at least as long as the preceding duty period, or 14 hours, whichever is greater. Please, also refer to the response to comment #23.

comment	*871* comment by: *NetJets Europe* **CS FTL.2.235 (a)** NetJets supports the proposal **CS FTL.2.235 (b)** As a general comment, this is complex to monitor and to comply with correctly for air taxi operations as air taxi operations do not necessarily operate to and back.

response	Please, refer to previous responses in this section, and in particular to comment #151.

comment	*1055* comment by: *Stephanie Selim* (a)(1)(ii) Technical comment – It is noted that the second FDP limitation is the same for two-pilot and single pilot operations.
response	Noted CS FTL.2.235 is not applicable to single-pilot operations.

comment	*1056* comment by: *Stephanie Selim* (b)(2)(i) Table - Editorial comment – It is suggested to simplify the title of the table to avoid having an incomplete sentence and to be consistent with the provision which refers to “home base”: “Table Minimum consecutive local nights of rest at **home base** ~~**initial reference time of the first FDP involving at least a 4-hour time difference to the reference time**~~ to compensate for time zone differences” Moreover, column 2, line 1, add the word "flight" in "for the first **flight** duty period"
response	Accepted

comment	*1059* comment by: *Stephanie Selim* (c) Technical comment – This subsection CS FTL.2.235(c) seems to apply to both air taxi and AEMS operations whereas ORO.FTL.235(c1) refers only to air taxi. It is noted that CS FTL.2.235(c) does not comply with ORO.FTL.235(c).
response	Accepted

comment	*1084* comment by: *Rabbit-Air Ltd* Table: Table is not applicable to Air Taxi. Missions are often planned through increasing time zones, giving the crew the oportunity to gradually adopt the time shift. Further last mission for several days but only flying to the destination and few days later flying to home base with lots of rest days in between. This topic should be simplified.

response	Please, see previous responses to comments in this section.

comment	*1085* comment by: *Rabbit-Air Ltd* (c) : more restrictive, why?
response	Please, see previous responses to comments in this section.

comment	*1147* comment by: *FNAM* (b) The following comment for Air Taxi may be extended to AEMS operations. ISSUE This table is not applicable for Air Taxi operations as it makes complex rotations. This table is only applicable on return flights. Badly written and doesn't take into account progressive acclimatization. PROPOSAL Remove or amend the table. In particular get rid of the Maximum time reference in the table. Need to consider instead acclimatization / body clock. Home base reference need to be sorted out because do not apply to all business aviation operations.
response	Please, see previous responses to comments in this section.

comment	*1149* comment by: *FNAM* ISSUE The total flight time limitation is not based on scientific data. The EASA's proposals should refer to the scientific study and, in that way, remove the limitation. PROPOSAL Remove (7)
response	Please, see previous responses to comments in this section.

comment	*1150* comment by: *FNAM*

ISSUE
Cf. Comment 1098
The scope of this point is unclear and may lead to misunderstanding.
Indeed:
On the one hand, the paragraph ORO.FTL.235(c1) refers to certification specifications for Air Taxi and is only applicable for Air Taxi.
On the other hand, the corresponding certification specification is applicable for Air Taxi and AEMS operations.
Thus, there are two different reduced rest AEMS dispositions :

- In ORO.FTL.235(c)
- In CS FTL.235(c)

Therefore, there is a need to clarify the scope of the paragraph (c) and (c1) or to withdraw the paragraph (c1).

PROPOSAL

- Suppress the paragraph (c1)

OR

- Change the scope of paragraph (c): "(c) [...] except for AEMS and Air Taxi operations "; AND
- Add in the scope of the paragraph (c1) the AEMS operations

response

Please, see previous responses to comments in this section.

comment

1161 comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart*

Table is not applicable to Air Taxi. Missions are often planned through increasing time zones, giving the crew the opportunity to gradually adapt the time shift. A penalty of 5 local nights after a 12 hours time zone difference is not taking into account, that often crew rest at location for 1 week and than return to home base. There is no reason for the crew having 5 nights rest after a week of no duties? Topic should be simplified.

response

Please, see previous responses to comments in this section.

comment

1197 comment by: *GBAA*

CS FTL.2.235 (a) Rest periods — air taxi and AEMS - Disruptive schedules
This rule is way too complicated and actually not applicable. The air taxi is per definition non-scheduled! All flights are arranged within hours or days. It is very hard to track all of

	the mentioned conditions. In addition, there are usually lots of rest times in between the flights to compensate for the early and late flights. CS FTL.2.235 (b) Rest periods — air taxi and AEMS - Time zone differences Just to confirm that flights with a stop-over at the home base with the necessary rest time during the rotation (e.g. for 14 days) is still regarded as rest time during rotation. So, there is no need for extra days off? After the rotation ends, the minimum rest time as specified applies.
response	Please, see previous responses to comments in this section.

comment	*1335* comment by: *ENAC* Point(3) There are no scientific evidences proving that crossing less than 6 time zones in the first rotation in any direction can provide enough acclimatization for taking another rotation in the opposite direction with no limit of time zones, after resting at home base less than 3 nights. Furthermore, scientific studies have proven that rotations eastward require more rest at home base compared with rotations westward. This provision is not taken into consideration in the CS. We suggest to delete the specific numbers 6 and 4 relating to the time zones and re-edit point (3) as (2) (iii) in order to relate the eastward-westward and vice-versa provisions under 4 time zones as in points (2) (i) and (2) (ii). We also propose to emend the CS FTL.1.235 in the same way since amendment of CS FTL.1.235 is not included in this NPA. Furthermore, the provision prescribes 3 nights of rest “at home base”. We propose to amend the CS in order to prescribe 3 nights independently if the rest is taken place at home base or in other locations.
response	Accepted

comment	*1382* comment by: *Gama Aviation (UK) Ltd* Table not applicable to ATXO/AEMS due to reference to rotations which not all operators use. Table is poorly worded and does not account for progressive acclimatisation.
response	Please, see previous responses to comments in this section.

comment	*1385* comment by: *Gama Aviation (UK) Ltd*

	Point (7) is not supported by the scientific data and should be removed as unnecessarily restrictive for ATXO.
response	Please, see previous responses to comments in this section.

comment	*1461* comment by: *European Cockpit Association* Commented text: "Disruptive Schedules" Reference: *CS FTL.2.235 (a)* ECA Comment: The provisions here effectively permit 7 continuous days of disruptive schedules despite this being some of the most fatiguing type of operation. In the EASA CAT FTL rulemaking process the Agency stated that it accepted the advice of its 3 scientific advisers and several Member States that after consecutive disruptive schedules the minimum rest period should contain 3 local nights. Although EASA did not follow this statement in the rules, it should nonetheless be followed here. ECA also believes that an extended rest period should be required after 4 consecutive disruptive schedule duties, as suggested for CAT operations. Proposal: Permit a maximum of 4 consecutive disruptive schedule duties, and require a minimum rest period of 3 local nights after any block of disruptive schedules.
response	Noted Unlike scheduled flights, most of air taxi/AEMS missions are organised around blocks 'on duty' and blocks 'off duty'. Those off-duty block periods usually contain more than 3 local nights. In addition, the cumulative limit of 60 duty hours in any period of 7 consecutive days, and the 'extended' recovery rest period for every 7 days, still applies to air taxi/AEMS missions.

comment	*1516* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* The table provided is not applicable to ATXO and again is much too complicated. Note that ATXO-missions are often planned through various timezones, providing the crew the chance to gradually adapt to the time shift. A penalty of five local nights after a 12 hours time zone difference is not taking into account, that often crews get to rest at a location e.g. for a full week and it is after this break that they return to their home base. There is no compelling reason why a crew should have five nights of additional rest time after a being off duty for a full week. We strongly advise to reconsider this.
response	Please, see previous responses in this section.

comment	*1524* comment by: *General Aviation Manufacturers Association / Hennig* GAMA is concerned that the proposal to introduction of a requirement for a rest period at home base following a change in time zones may significantly increase required crews for a typical operator that frequently crosses time zones (see, CS FTL.2.235 (b)). GAMA requests that EASA review the impact and associated cost on those operators that conduct operations that crosses multiple time zones to avoid, because significant changes in required flight crews should be expected if the proposed requirement for a home base rest period is advanced.
response	Please, see previous responses to comments in this section.

Draft AMC/GM — Subpart FTL

3.3. Draft AMC/GM - Subpart FTL - SECTION 1 p. 42

Responses in relation to 'GM1 ORO.FTL.105(1) "ACCLIMATISED"'

comment	*1063* comment by: *Stephanie Selim* General editorial comment – Reference to CS FTL will need to be updated according to their final numbering. For instance GM1 ORO.FTL.105 (1) Definitions ACCLIMATISED (d)(1) and (2): the reference to "CS FTL.235(b)(3)" should be replaced by "CS FTL.1.235(b)(3) and CS FTL.2.235(b)(2)".
response	Noted GM1 ORO.FTL.105(1) has been deleted, since now the definition explains better the acclimatisation status.

comment	*575* comment by: *Cat Aviation AG* Refer to comments under CS.FTL.2.235 (b) (2)- table for acclimatization has to be redone, simplified and taking into account nature of biz aviation.
response	Noted

comment	*1095* comment by: *Rabbit-Air Ltd* Simplify table
response	Noted

Responses in relation to 'GM1 ORO.FTL.105(17) "OPERATING CREW MEMBER"'

comment	*1517* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* Note: All crew members on a flight carrying out safety-relevant duties, must be considered as part of the operating crew of the aircraft. Other individuals must be classified as passengers.

response	Not accepted Load masters also carry out safety-relevant duties but are not subject to Subpart ORO.FTL. In addition, there may be other crew members, such as assistants to unaccompanied children, who carry out non-safety-critical duties.

comment	*576* comment by: *Cat Aviation AG* Definition should be aligned. This NPA is drafted under the aspects of safety and therefore all crew members on a flight and carrying out **safety relevant duties**, are considered operating crew, others are considered a passenger.
response	Please, refer to the response to comment #1517.

comment	*1177* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* Definition must be aligned. The NPA is drafted under the aspects of safety and therefore all crew members on a flight carrying out **safety relevant duties**, are considered operating crew, others are considered as passenger.
response	Please, refer to the response to comment #1517.

Responses in relation to 'AMC1 ORO.FTL.110(a)'

comment	*202* comment by: *Premium Jet AG* Please add: The operator should establish a procedure for the notification of roster changes that minimises the disruption to the crew member's ability to obtain appropriate sleep and rest.
response	Accepted

comment	*1313* comment by: *Volkswagen AirService GmbH* This is not possible in ATXO due to the nature of on-demand flights. Rosters might show intended duties, but specific duties (all of them) are not predictable at all. This would increase man power beyond economical reasonability. Many duties (availability) are spent at home or at the hotel.

response	Noted AMC1 ORO.FTL.110(a) applies to scheduled operations. For air taxi/AEMS operations (see AMC2 ORO.FTL.110(a)), as a minimum, the roster should contain the extended recurrent rest period (ERRP).

Responses in relation to 'AMC2 ORO.FTL.110(a)'

comment	*154* comment by: *VistaJet* AMC2 ORO.FTL.110(a) The requirement to roster extended rest 7 days in advance is a major issue in ATXO. In ATXO Crew have a set roster period of "On" and "OFF". The most common pattern being 2 weeks on, 2 weeks off, published up to a year in advance. During the "ON" pattern extended rest needs to be notified in advance, but with no limit. Crew availablity during the "on" pattern cannot be limited by having to roster the extended rest 7 days in advance. For example: A crew are rostered on an aircraft for 2 weeks. On day 2 the aircraft goes AOG and is down for 3 days. It is imperitive that these non-productive days can be classed as extended rest as long as the crew have been notified as such. If not the aircraft will be down for 3 days, only available for another 2 days before being unavailable for another 2 days due to crew in extended rest. This is not acceptable on any level. Suggest to change to; "Extended recovery rest periods should be published in advance"
response	Not accepted A 7-day advance notification does not prevent an operator from introducing changes to the rostered ERRP when circumstances so require, as in the example given. Therefore, an additional AMC is proposed to deal with roster changes both in scheduled and in on-demand operations.

comment	*327* comment by: *Thomas Henselmann*

	For Air Taxi Operations scheduled flight rosters do not apply, so extended recovery rest periods have to be provided according actual flight schedule with short notice.
response	Noted In air taxi operations, strategic rosters are typically prepared and they can be notified to crew members in advance. Please, also refer to the response comment #154.

comment	*571* comment by: *Cat Aviation AG* Assignment of rosters for crew can be published 7 days in advance, that is OK. As commented on earlier, in AirTaxi there is a lot of standby at home or hotel, which results in no duty. Crew is getting ample rest. Suggestion is that Operator has a solid FRM, allowing for flexible planning with the ad-hoc business and at the same time assuring, enough crew rest is provided. Schedule changes are common and operator should retain that option of flexibility as long as the pre- and post flight rest to crew are granted. We should also define the mode of crew contact, so as not to interfere in rest time, which will assure robustness of schedule. As a side note, labour laws in most countries also prescribe a minimum for rest to be granted and communicated (not just for crew but for all employees).
response	Noted Please, refer to the response comment #154.

comment	*816* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* AMC2 ORO.FTL.110(a) *Rostered extended recovery rest periods should be announced beforehand.* Air Taxi companies should have the possibility to use extended recovery rest periods once they occure within the 168 hours time frame. It is quite often, that the crews have extended rests caused by the booking situation. Air Taxi companies would loose their flexibility and income if they can't use those spontaneous extended rests.
response	Please, refer to the response to comment #154.

comment	*1092* comment by: *Rabbit-Air Ltd* (EBAA comment) 10 days in advance seem to be too long. Usually in the last week before a mission begins there are quite some changes maybe impacting scheduling. Suggestion is to publish not later than 5 days in advance.

response	Please, refer to the response to comment #154.

comment	*1198* comment by: *GBAA* AMC2 ORO.FTL.110(a) Operator responsibilities PUBLICATION OF ROSTERED REST PERIODS IN AIR TAXI, AEMS AND HEMS OPERATIONS In an operation where the rotation usually lasts 14 days and the sold flights are take place within hours, there is no possibility to plan extended rest times reliably ahead of time. Of course, the rule ORO.FTL.235(d) is monitored and controlled, but to plan seriously in advance is not possible. If there are two consecutive nights without any duty, this period will become an extended rest period and the 168h period is reset. The result is a permanent change of when the extended rest times take place.
response	Please, refer to the response to comment #154.

comment	*1314* comment by: *Volkswagen AirService GmbH* Not possible in ATXO due to nature of on-demand flights. Rosters might show intended duties but position of the extended recovery rest periodes must be flexible according actual performed tasks. Makes no sense with regard to FRMS. This rule might lead into a proceeding in order to grant the recovery rest even though (eg.) a flight to home base might result in a much greater recovery.
response	Please, refer to the response to comment #154.

comment	*1475* comment by: *VOLDIRECT* PUBLICATION OF ROSTERED REST PERIODS IN AIR TAXI, AEMS AND HEMS OPERATIONS Rostered extended recovery rest periods should be published at least 7 days in advance. This is not possible in AIR TAXI where the customer demand is fast moving and last-minute known. Suggested change: AMCx ORO.FTL.110 Operator responsibilities - "PUBLICATION OF ROSTERS (CAT OPERATIONS OTHER THAN AIR TAXI OPERATIONS) The operator should roster a minimum of 3 days off per calendar month at least 10 days in advance. The operator should establish a procedure for the notification of roster changes that minimises the disruption to the crew member's ability to obtain appropriate sleep and rest.

response	Noted Days-off are not subject to this Regulation whereas rest periods, including extended recurrent rest periods (ERRPs), are.

comment	*1525* comment by: *General Aviation Manufacturers Association / Hennig* GAMA is concerned that the proposed requirement to publish extended recovery rest periods seven days in advance does not consider the existing and socially accepted working scheme of 14 days on / 14 days off in the air taxi industry. This is an existing practice within the industry and enacting a requirement as proposed in AMC2 ORO.FTL.110(a) would force significant changes to this approach to scheduling. GAMA recommends that EASA revisit this proposed requirement in context of the practices long in use within the air taxi operator industry.
response	Please, refer to the response to comment #154.

Responses in relation to 'AMC1 ORO.FTL.125(a)'

comment	*896* comment by: *Stephanie Selim* Technical comment – Under new AMC1 ORO.FTL.125(a), the following question needs to be addressed: does CS FTL.1.205(c) apply to two-pilot operations only or both single and two-pilot operations ? If it applies to single pilot operation, an augmented flight crew with one additional pilot may lead to have a maximum FDP higher than the FDP derived from two-pilot operations.
response	Noted CS FTL.1 applies to single-pilot operations along with the implementing rules. For the time being, single-pilot configuration excludes augmented crew operations. Hence, no extensions of the FDP are allowed due to augmented crew as well as due to operator's extensions.

comment	*1068* comment by: *Stephanie Selim* (a) Technical comment – CS FTL.1 should be reassessed for single pilot operations. See technical comments on ORO.FTL.205(e) and CS FTL.1.205(c).
response	Accepted

Please, see also the response to comment #896.

Responses in relation to 'GM1 ORO.FTL.200'

comment	*390* comment by: *Joachim J. Janezic (Institute for Austrian and International Aviation law)* To GM1 ORO.FTL.200: Even if this is GM only, we would like to express our astonishment and surprise about the fact that EASA is willing to advise adult human beings (pilots and HEMS-CM) how they should arrange the conduct of life of themselves and their families. This is not only interference with their private and family life but even more an expression of not realizing and accepting the limits of EASA's scope which is "aviation safety" – nothing more, nothing less.
response	Not accepted This proposal is about *aviation safety*. It does not regulate people's social life. Crews are not required to change their residence. For the sake of safety of flight operations, in order to arrive at work fit for duty and not exhausted due to long hours of travelling to the airport of departure, crews are advised to arrange for temporary accommodation (hotel room, rented apartment, or the like).

comment	*540* comment by: *ADAC Luftrettung gGmbH* This paragraph suggests to arrange for accommodation close to base for a crew member who is living more than 90 minutes away from his assigned home base. This is contradicting the fundamental right of free movement. Also the new regulation may lead to have shifts at the base. This will lead to more travelling time and this also leads to less spare time for pilot, which is needed for recreation.
response	Not accepted EASA does not see how using temporary accommodation closer to the base during days on contradicts the fundamental right of free movement. Please, see the response to comment #390.

comment	*561* comment by: *Rüdiger Neu* Hier wird empfohlen, dass ein Besatzungsmitglied, wenn es weiter als 90 Minuten von der Station entfernt wohnt, sich vor Ort eine Unterkunft besorgt. Dies ist ein Eingriff in die Grundrechte, auch wenn es sich nur um eine Empfehlung handelt. Man möchte hiermit die Regelung, welche Arbeitnehmer stark einschränkt, legitimieren.

response	Please, see the response to comment #390.

comment	*731* comment by: *ADAC* Diese Regelung stellt einen Eingriff in Grundrechte dar und ist justiziabel.
response	Please, see the response to comment #390.

comment	*752* comment by: *DRF-Luftrettung* This paragraph suggests to arrange for accommodation close to base for a crew member who is living more than 90 minutes away from his assigned home base. This is contradicting the fundamental right of free movement.
response	Please, see the responses to comments #390 and #540.

comment	*1202* comment by: *GBAA* GM1 ORO.FTL.200 Home base TRAVELLING TIME Does rule does not make any sense since the location of the aircraft is important. If the aircraft is located at the home base, then this remark makes sense, but if the aircraft is located in different places, the location of the home base is irrelevant.
response	Noted This is addressed to crew members, not to operators, and concerns travelling from own residence to home base where the CM reports for duty or for positioning. If the location of the aircraft and the location of home base differ, the operator shall arrange for positioning, not for travelling. Please, see also the responses to comments #390 and #540.

comment	*1425* comment by: *Bartosz Fibingier* Use of the word "should" implies it should be an AMC, and not a GM. In case GM is used intentionally, the text should be rephrased to indicate its informatory (not obligatory) purpose. Many EU NAAs is using GMs as a basis to issue findings to the operators.

response	Please, see previous responses to comments in this section.

comment	*1435* comment by: *FinnHEMS Oy* This is not convinient in a country of long distances like Finland where most pilots live in the south and more than half of the bases are situated longer than 500km from crew members' homes, the longest base beeing 1000km away. SUGGESTION: Delete this GM
response	Please, see previous responses to comments in this section. Typically, EMS bases provide for suitable accommodation for crew members. Then, this GM would not be needed. For cases where the base is situated 500 km away from the crew member's residence, the operator may arrange for crew positioning and account this as duty.

Responses in relation to 'AMC1 ORO.FTL.225 and GM1 ORO.FTL.225'

comment	*817* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* AMC1 ORO.FTL.225 Standby see comments to CS.FTL.2.225
response	Please, see the responses to comments related to CS FTL.2.225.

comment	*879* comment by: *NetJets Europe* AMC1 ORO.FTL.225 NetJets supports the proposal, however, it is NetJets understanding that the provision of AMC1 ORO.FTL.225 (b) will allow for a standby period followed by minimum rest as per ORO.FTL.235 and then followed by another standby period. Under this provision, then the first standby would not be counted as standby. If this is the case, then NetJets suggests adding GM to explain this scenario. NetJets also suggests that point (b) needs to be clarified if this is applicable to airport standby as well. The reason is, that airport standby in accommodation is not the same as standby other than airport where suitable accommodation is available.
response	Accepted Clarification has been provided.

comment	*1359* comment by: *European Cockpit Association* Commented text: *(b) If a minimum rest period as specified in ORO.FTL.235 is provided before reporting for the duty assigned during the standby, this time period should not count as standby duty.* ECA Comment: unclear: Either the pilot is on standby, then it cannot possibly be rest time, or the pilot is on rest - which makes it imposiible to be on standby - standby and rest have to exclude themselves!
response	Correct. The rest period puts an end to the standby period.

comment	*1407* comment by: *Swiss Air-Ambulance Rega* Here, an awake time of 18 hours is mentioned, so the rule leaves a lot of leeway.

response

Noted

The operator needs to include in the OM specific procedures designed to avoid excessive awake times. Chapter 7 of the operator's OM is subject to approval by the competent authority.

comment

178 comment by: *Marc Rothenhäusler*

Hier wird von einer Wachzeit von 18h gesprochen davon sind wir mit 15:30Uhr weit davon entfernt!

response

Please, refer to the response to comment #1407.

comment

562 comment by: *Rüdiger Neu*

Hier wird von einer Wachzeit von 18 Stunden gesprochen, somit lässt die Regelung doch noch sehr viel Spielraum.

response

Please, refer to the response to comment #1407.

comment

1360 comment by: *European Cockpit Association*

Commented text:
GM1 ORO.FTL.225 Standby
Scientific research shows that continuous awake time in excess of 18 hours can reduce the alertness and should be avoided.

ECA comment:
This is an important factor to avoid fatigue in flight operation and should be a more prescriptive rule, at least a CS!

response

Please, refer to the response to comment #1407.

comment

1430 comment by: *Bartosz Fibingier*

GM1 ORO.FTL.225 Standby AWAKE TIME Scientific research shows that continuous awake time in excess of 18 hours can reduce the alertness and should be avoided.

1) it should be either GM2 or it should be combined with GM1 ORO.FTL.225 Standby on page 44.
2) at the end of the sentence "if possible" should be added.

	Use of the word "should" implies it should be an AMC, and not a GM. In case GM is used intentionally, the text should be rephrased to indicate its informatory (not obligatory) purpose. Many EU NAAs is using GMs as a basis to issue findings to the operators.
response	Please, refer to the response to comment #1407.

comment	*1471* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)* EASA should specify which scientific study this GM refers to.
response	Please, refer to ICAO Doc 9966 for more information about the impact of continuous time awake on crew member alertness and performance. The longer an individual remains awake, the worse their alertness and performance become. This is due to an increasing homeostatic pressure for sleep associated with the longer period of wakefulness. Sleep is the only way to reverse the effects of extended wakefulness.

Responses in relation to 'GM1&2 ORO.FTL.230'

comment	*1083* comment by: *Stephanie Selim* DGAC would like to add a new AMC ORO.FTL.230 "passive notification" linked with our comment on ORO.FTL.230 and our proposal of new GM ORO.FTL.230 : AMC ORO.FTL.230 "passive notification" "In the case of passive notification during the 8-hour sleep opportunity, a minimum duration between the end of this 8-hour period and the reporting hour should be defined by the operator."
response	Not accepted In principle, during 'reserve', a duty is assigned with a minimum of 10 hours' advance notification. Otherwise, it would be 'standby'. According to your proposal, the notification (passive or active) may be sent during the sleep period; this means less than 10 hours in advance of assigned duty. While asleep, the crew member cannot plan the duration of their sleep in order to match operator's expectations.

	Therefore, the notification (passive or active) should be sent before the 8-hour sleep opportunity, so that the crew member becomes aware of the upcoming duty and plan their sleep period accordingly.
comment	*577* comment by: *Cat Aviation AG* Reserve duties are not planned or of much relevance in AirTaxi operatoins, as not reflecting the actual businesss model.
response	Noted Operators are not forced to apply ‘reserve’ if they do not use it.
comment	*1433* comment by: *Bartosz Fibingier* Use of the word "should" implies it should be an AMC, and not a GM. In case GM is used intentionally, the text should be rephrased to indicate its informatory (not obligatory) purpose. Many EU NAAs is using GMs as a basis to issue findings to the operators.
response	Noted
comment	*578* comment by: *Cat Aviation AG* no reserve duties in AirTaxi and thus no notification in advance requirement. Not coherent with AirTaxi business model.
response	Operators that do not apply ‘reserve’ do not need to use this GM.
comment	*820* comment by: *Air Hamburg Luftverkehrsgesellschaft mbH* ORO.FTL.230 Reserve see comments to CS.FTL.2.225
response	Please, see the responses to comments in relation to CS FTL.2.225.
comment	*1100* comment by: *Rabbit-Air Ltd*

	N/A to small operator. No reserve exists.
response	Operators that do not apply 'reserve' do not need to use this GM.

comment	*123* comment by: *UK CAA* **Page No:** 45 **Paragraph No:** GM1 ORO.FTL.230 Reserve, RECURRENT EXTENDED RECOVERY REST **Comment:** The reassignment of this GM now means that this would be the third GM to ORO.FTL.230. The reference to the 3rd GM should be amended as proposed below. **Justification:** Clarity. **Proposed Text:** Amend to read: 'GM**3** ORO.FTL.230 Reserve'
response	Noted Point ORO.FTL.230 does not contain any reference to notification; therefore, all GM that was initially transposed from CS FTL.1.230 to the implementing rule should be transposed to the relevant CSs (i.e. CS FTL.1.230 and CS FTL.2.230) where they belong.

comment	*1076* comment by: *Stephanie Selim* DGAC would like to add a new GM to ORO.FTL.230 "passive notification" linked with our proposal of new AMC ORO.FTL.230 and our comment on CS.FTL2.230 : Proposal of a new GM for passive notification: "PASSIVE NOTIFICATION – Passive notification is a form of notification during reserve that will not disturb a crew member who is sleeping ~~a crew member can avoid~~. Examples of passive notification means are email or a visit to the operator's website
response	Not accepted Please, refer to the response to comment #1083.

comment	*1193* comment by: *GBAA* CS FTL.2.230 (c)/(f) Reserve — air taxi operations (c) The operator specifies a number of consecutive reserve days within the limits of ORO.FTL.235(d). (f) Reserve time does not count as recurrent extended recovery rest. GM1 ORO.FTL.230 Reserve RECURRENT EXTENDED RECOVERY REST

	In a small operation with only a couple of pilots, the flexibility to react on changes needs to be given. Pilots can become sick or simply needs to have an extended rest for more than one day, although they were planned to be available or on reserve. Other pilots need to jump in. The probability to be called in for duty is low, but needs to be possible. The reserve can take up to the entire month and it impairs a lot to assign every 8th day firmly scheduled since the replacement rotation might take longer. Potentially on that day with the planned extended rest time, a flight might take place. In Germany and Austra, there is currently a requirement that 96 so called "einzelne dienstfreie Tage" or "single days free of duty" at home(!) need to be provided per year, or 8 per month, plus 28 days of vacation. Usually, these 8 single days free of duty are planned as a block and the remaining days are currently planned as standby at home. If the standby is not activated it will count as rest time. In essence, this standby days at home are reserve days. Why can't inactivated reserve days be regarded as rest time? So, instead of having 2x1 and 2x2 day off somewhere in the world, it would be better to have a certain amount (maybe 8) days off a home and the reserve days be available during the remaining days within 10 hours. Otherwise, the extended rest period will be changed a lot of time and the spare time is very hard to plan for each crew member. Moreover, crew members have chosen such a non-scheduled business aviation operation as their lifestyle. Why is this flexible scheme pressed into the scheduled aviation world?
response	Not accepted 'Reserve' is not 'standby'. Neither 'reserve' nor 'standby' can be retroactively accounted for a rest period. Days-off under the 'single days free of duty' rule are not rest periods, although a rest period may be included in a day-off. Rest periods need to be evenly distributed within a month or year and not planned as a block as this is against the fatigue management principles.

Responses in relation to 'GM1 ORO.FTL.235'

comment	*1102* comment by: *Rabbit-Air Ltd* Unlike Subpart Q this regulation increases likelyhood of "negative social impact". Small operators loose flexibility, complex tables make it almost impossible to grant customer's plans, crews are more restricted in different ways. This could result in turning down business because flexibility is lost, resulting in staff reduction.
response	Noted

Impact assessment

Ib. CRD table of comments and responses — impact assessment (AEMS and air taxi operations)

comment	*1406* comment by: *Dr Adam Fletcher* The data provided in this section is seriously inadequate to justify the content of the document, both scientifically and from a risk-based point of view. Much of the data is aged, such at the 2012 data in Table 1. There are much more relevant and up to date data available. For example, my team and I have been working closely with a range of Babcock Mission Critical Services operations, in seven countries in Europe, for the past two years collecting sleep, fatigue, performance and other data. By the end of our 2018 program of work we will have collected more than 5,000 days and nights of data in EMS operations, both fixed-wing and rotary-wing. This sort of data could be shared, in a deidentified way, with permission from Babcock management.
response	Noted The fact that the number of annual missions dates back to 2012 does not change the IA from an FTL perspective. Table 1 is a snapshot of the business activity of year 2012 that justified the regulatory proposal. If this activity has increased during the next years, this would further support taking regulatory action for the harmonisation of the FTL schemes across the EU, especially as regards cross-border AEMS missions.

comment	*1440* comment by: *Bartosz Fibingier* Values presented by Poland in Table 3.1 should be given, as well, in a bigger context. It needs to be marked that 4 operators out of 5 mentioned in the Survey are/were as well ATOs. Which are/were operating the same single pilot aircrafts for both training as well as for CAT ATX-OPS and local flights (i.e. sightseeing flights). The overall impact on the statistics is that mixed Training and CAT operations lowers the overall duty time (as training flights do not have such constraints to record all the duty time) but increase overall flight time (by adding training and local flights). It is as well worth mentioning, that in the majority of those operations, pilots are not scheduled specifically for CAT duty but on many occasions, availability of the pilot is established on-the-spot immediately after the client requests a flight. Often those are ATO instructors additionally qualified for the CAT OPS.
response	Noted The statistics for Poland show the total number of flight hours and not the overall duty time. The total number of flight hours, regardless of how they have been accumulated, is relevant for the assessment of pilot fatigue. A training flight does not contribute less to pilot fatigue than a flight with passengers onboard.

comment	*579* comment by: *Cat Aviation AG* Option 0 states "a negative social impact" is to be expected if no change and all remains status quo under Subpart Q. We would disagree with this point, as historically no negative social impact for the majority of operators' crew exist. To the contrary, if we start to limit freedom of hotel location selection and self-driving transport mode to crews, this has a higher negative social impact. Unhappy crew might have a negative impact on safety.
response	Noted The proposal does not limit the freedom for flight crews to select a hotel location or the mode of transport for self-driving. A negative social impact is to be expected because flight crews may not easily change from air taxi / AEMS operations to scheduled and charter operations due to the rolling 1 000-flight-hours-per-12-consecutive-calendar-months limit.

comment	*1110* comment by: *Rabbit-Air Ltd* Unlike Subpart Q this regulation increases likelyhood of "negative social impact". Small operators loose flexibility, complex tables make it almost impossible to grant customer's plans, crews are more restricted in different ways. This could result in turning down business because flexibility is lost, resulting in staff reduction.
response	Noted The NPA explains sufficiently clear that Subpart Q is not appropriate for AEMS and air taxi operations.

comment	*1500* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* The Swiss Business Aviation Association (SBAA) shares the conclusion of EASA that a fully prescriptive approach would lead to a negative economic impact on operators engaged in ATXO. However, SBAA strongly differs from the conclusion drawn by EASA, stating at the same time minor positive economic impacts if a flexible approach is pursued. Actually, the opposite is the case. As stated before with regards to several sections of the NPA, the practical handling of the proposed changes to the rules would certainly lead to a prohibitive rise in economic burdens on the side of the operators engaged in ATXO. Calculations of our association have turned out that the workforce at the level of the single operator would need to rise in the magnitude +50% in crew members to be compliant with the new rules as laid out in the NPA. These calculations do not take into account that the needed augmentation in the flying workforce cannot be regarded as a stand-alone factor: In order to comply with the proposed regulation, the single operator must also calculate with a reinforcement of its "back office", as planning (*ex ante* an operation) and controlling (*ex post* an operation) has to assure compliance at any given time. These tasks are generally performed by the flight operations department of the single air taxi operator-company. This means that, should the proposed rules be enacted as proposed in the NPA, the operator companies would be faced not only with the need to beef up their overall

workforce but in any case also with the need to introduce new internal and external compliance mechanisms and processes, which in turn create the need for additional training of the crews and the operations personnel, thus accelerating the spiral of rising overhead costs for the single air taxi operator. Having said this, the impacts cannot be regarded as "minor positive" for ATXO companies, but must be judged as overall highly negative from the point of view of the representatives of business aviation operators.
As such, the statement *"It may reasonably be assumed that for air taxi and AEMS operators, it will also take approximately 2000 working hours to develop and document an individual flight time specification scheme that deviates from the certification specifications as has been reported by CAT aeroplane scheduled and charter operators. However, these are one-off costs."* (as stated in section 4.4.4.2 Air taxi and AEMS, see p. 64/70) could not possibly be further from the reality for operators engaged in ATXO.
Our association strongly questions this one-sided and unsubstantiated estimate. The assumption that the projected *"2000 working hours"* are *"one-off costs"*is disputed by our association, e.g. because this number does not take into account the staff training required to implement new (and complex) rules within an organization. Instead our association calculates with as least double the overall number of working hours stated in the NPA that would be needed to implement a new scheme, as proposed in the new regulation. This estimate does not take into account the external costs generated by suppliers of a business aviation company (e.g. project management, expert advisory, accounting support, legal advice).

response Noted

There is no evidence, and the IA did not conclude, that the economic impact would be '… in the magnitude +50% in crew members to be compliant with the new rules as laid out in the NPA.'

As regards the 2 000 hours, these may only be needed if the IFTSS deviates from CS FTL.2 for AEMS operations. Should the IFTSS remain within the certification specifications, no such impact is expected.

comment *1518* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

The Swiss Aerodromes Association (SAA) has a genuine interest in supporting the business aviation, which carries out ATXO. We are highly sceptical of the approach taken by EASA with this NPA and consider its content to be highly prescriptive by its nature. The assumptions about the impacts laid out in the respective section of the NPA seem doubtful to us. We specially question the assumptions on the burdens, which ATXO companies might face under the rules proposed by the NPA. We fear that - specially ATXO companies operating from Switzerland, with its generally high operating costs - would greatly suffer under the new set of rules of the NPA. Therefore, we strongly recommend to seriously reconsider enacting such endangering rules to an ever important branch of aviation.

response Noted

	EASA has received no evidence that air taxi operators 'would greatly suffer under the new set of rules of the NPA'.

comment	*156* comment by: *VistaJet* So from the conclusion we gather that a flexible approach is the most beneficial stance on all accounts. NPA 2017-17 is a highly complex, overly rigid FTL scheme further mandating the implementation of FRMS. The additional manpower and systems required to operate within compliance of this NPA and fully implement FRMS is significant and will have a major impact on all operators. The scheme does not allow flexibility for an international operator such as VistaJet to apply seperate restrictions to the short haul European fleet, as aposed to the long-haul global fleet, and everything in-between. The FTL was designed for Schedule CAT operations and relies heavily on the concept of home base, with a perpetual roster of "out and back" rotations. ATXO does not work like this. Operators use a forecast "on pattern/off pattern" methedology where crew need to be available and flexible for the ON pattern, and then have a consolidated OFF pattern where cumulative fatigue and time zone crossing effects are addressed. This also allow optimum social patterns for crew as the pattern can be forecast indefinately. In addition, the aircraft are not based anywhere, and crew will keep migrating around the world. Progressive acclimatisation is not catered for under this NPA, neither is the rotation methedology. Finally, a main objective of this NPA is to create a level playing field among European Operators. This is incredibly short sighted as ATXO operators are not protected by freedoms of the air in the same manor as scheduled airlines. Operators have to face competition from all global players and therefore need to remain commercially competitive on a global scale, not a European one. This NPA if implemented as is, will most certainly drive operators such as ourselves, to move the long range fleet outside of Europe. This is far from beneficial for Operators or the EU community alike, but may be necessary to remain competitive. We hope that our concerns are taken seriously and the Agency seriously consider finding a more flexible approach for regulating FTLs.
response	Noted NPA 2017-17 explains clearly the benefits compared to the 2008 Subpart Q requirements, which are not suitable to modern air taxi and AEMS operations. The proposal is based on

data and duty tables established by scientists, and the scientific study was commissioned by the EBAA/ECA.

It does not mandate FRMS generally.

comment *210* comment by: *Cat Aviation AG*

We absolutely support the notion, that safety is the driving factor in creating or adjusting regulations. Reviewing this NPA, one is lead to believe that the key importance of what Air Taxi operations stands for is lost or misunderstood. This business model exists, due to its flexibility for the passengers using this mode of transport. Air Taxi crew are flying a fraction of time compared to commercialy scheduled operating crew, seen on a monthly, yearly or daily basis of FDP or DP. Air Taxi crew often remain a few days up to a week at a destination with the passenger, thus resting on site 4-7 days, before undertaking the next flight duty. On average an air taxi crew member accummulates a total duty time (DP) of 300-400hrs a year (compared to airliners with 900-1000hrs DP). As derived from traffic figures in 2011, BA traffic accounts for 7% of all traffic.
The fatigue survey study was conducted amongst a small number of pilots or operators, in our opinion not enough to be a representative figure on scientific research.
Amongst the accident reports received during 5 years (2012-2017), none could be identified as being clearly caused by fatigue. Overall many of the suggested new regulations in this NPA are overly complicated, not practical to be applied in everyday operation. This could lead to more mistakes in the planning process due to Human Factor (HF) issues and misinterpretation of the rule.
Rules should be established in a clear, practical and easy to apply manner to maintain and enhance the overall safety aspects.
We would argue that the impact this NPA has on the economical & social aspects are hardly *minor positive or minor*, but rather *negative* in financial and social aspects. We foresee a heavy financial impact, as more crew would be needed to retain similar flexibility as currently available under Subpart Q. Per our calculation an estimation of 50% more headcount are required. Having to control Crews' rest location to minimise the positioning time penalty, means less favorable hotel location for crews (near airports isof cities = negative social impact). More crews needed to maintain flexibility of the trips leads to less well geared teamwork (they barely meet) less flying hours for pilots might also lead to be a safety concern. Air Taxi flexibility is further limited by increased restrictions to airport access and scarce slot availabilities.
To put it rather direct and critical, if the HNI's and multinational companies, no longer see the benefit of using Air Taxi services, due to prohibitive costs or too restricted flexibility, the impact on Swiss operators and business' economy is major.

response Noted

EASA does not share the view that the scientific study (Attachment IV to NPA 2017-17) on fatigue conducted by FRMSc Limited ‘was conducted amongst a small number of pilots or operators...’ and ‘not enough to be a representative figure on scientific research’.

	The proposal is based on data and duty tables established by scientists, and the scientific study was commissioned by the EBAA/ECA.

comment	*1023* comment by: *European Cockpit Association* We believe that "Option 0 – No policy change" would work quite well for most Member States, although ECA agrees, that there is room and need for improvement. We do recognize that "Option 1 – Flexible approach" would have the benefit of forcing the operators to demonstrate a safe operation. This will be quite costly and not practicable for many small operators and would also at the end lead to significant barriers of entry. This approach will also have a negative social impact as well as a more than "medium" negative economic impact. "Option 2 – Fully prescriptive approach" would, as stated in the NPA, have a "Positive low benefits" for safety pertaining to the risk of fatigue. ECA disagrees with this statement. For many operators/member states the envisioned safety benefits to guard against fatigue could be nullified due to the extra amount of duty days and commuting, which in itself is causing extra stress and fatigue that would be introduced. Furthermore, the regulation would have a negative impact on the service in way too many other cases. As already mentioned above, it will have a negative impact on social aspects for the "customers" (i.e. the patients - due to a lowered availability of the service), the public and the crew members. This approach would force many operators to raise their staffing significantly. This additional staffing would raise the costs remarkably. Also, due to the lack of suitably experienced, qualified crew members with the proper attitude cockpit personal available for hiring, this could lead to accepting lowered standards and a lack of recency (the same amount of missions would have to be flown by a substantially higher number of crew members). In ECA's view, the above suggested approach with some understood and (scientifically) proven rules, as the basics for avoiding fatigue (like cumulative/minimum limits 2000hrs/year, 190hour/28days, min time available for sleep, min days off-duty in a period) - should be the basis of any air-operation and therefore be an implementing rule. On the other hand most of the other regulations should be AMC/guidance material to give local authorities the possibility to use their knowledge and experience to find a safe regulation, serving the needs of their HEMS/rescue system. This approach would have the positive benefit of raising safety levels, with minor social and economic impact.
response	Noted The duty tables for air taxi and AEMS operations have been jointly constructed by the EBAA and ECA.

ECA did not disagree with the conclusions and recommendations of the scientific study (Attachment IV to NPA 2017-17) on fatigue conducted by FRMSc Limited and commissioned by the EBAA/ECA. The scientific findings, supported by the EBAA/ECA, form the foundation for this proposal.

comment

1479 comment by: *GBAA*

In Germany and Austria, the option 1 reduces the guaranteed days off. In these two countries, you will get at least 96 days off without duty and at least 28 days of vacation. I haven't seen something like this in option 1; just 6 days per month and nothing else. Why is the social impact then negative with option 0 and positive with option 1? It is acutally vice versa!

response

Noted

Nothing in the proposal reduces the days-off or annual-leave days as established by the Working Time Directive (COUNCIL DIRECTIVE 2000/79/EC of 27 November 2000 concerning the European Agreement on the Organisation of Working Time of Mobile Workers in Civil Aviation concluded by the Association of European Airlines (AEA), the European Transport Workers' Federation (ETF), the European Cockpit Association (ECA), the European Regions Airline Association (ERA) and the International Air Carrier Association (IACA))

comment

1501 comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart*

The Swiss Business Aviation Association (SBAA) is asked to provide its overall conclusion on the proposed rules, as stated in the current NPA. As an organization with the goal of protecting our members' interests, we cannot support the notion that the rules, as designed in the current NPA will produce a benefit for operators engaged in ATXO. The reason the NPA fails to fulfill the expectaions of our industry stems from the fact that the proposed rules were drafted without taking into account the basic constraints, economic mechanisms and operational peculiarities under which our industry operates.
Whereas our association unconditionally welcomes the enhancement of the general safety-level in aviation, the NPA clearly fails in delivering on this unquestioned goal. Instead, the NPA pursues - even without intention - a rather prescriptive approach, leading to unbearable burdens on the operators, were the new rules to be enacted as laid out in the NPA. A gross weakness of the NPA is also the fact that there is no estimate on the impact of the proposed rules on the member states. This renders the regulatory impact assessment of the NPA inconclusive, or at least ambiguous. As a bottom line, our association rejects, in spite of the good intention to increase overall safety, the NPA in its current form and content. Finally, we generally question the gains in aviation safety by producing rules that are complex. Our notion is the opposite: More paperwork leads to less safety.

response	Noted Your statements deliberately neglect the numerous scientific studies and analyses this proposal builds upon.

comment	*1154* comment by: *Rabbit-Air Ltd* As a small corporate operator flying under an AOC we were keen on awaiting the NPA concerining FTL schemes for Air taxi charter and AEMS operators. But analyzing the outcome of these FTL schemes is not acceptable to the corporate and taxi charter operation. **The "old" FTL scheme of EU-OPS subpart Q is by far a better regulation framework than the new ones under CS-FTL2 and ORO Part FTL.** We all of the aviation community / Industry are striving for the same goals: Safety First, then efficiency and effectivity. We all know that Fatigue and unstable rosters can have negative side effects on flight operation and flight safety. But the proposed regulations and FTL schemes to follow, if realized will lead to a lot of Businessjet operator cancelling their AOC's and changing to NCC OPS, which is really not what we are looking for here is what is not considered by this NPA: • Corporate operators / Business aviation crews have total different mission scenarios than Airlines have, thus rosters are not seasonal, 14 days rosters, or monthly rosters are often used • Those kind of flight activities have different rest time availabilities, i.e. transatlantic flights with several days of layovers without any flights, then further flights to other continents not returning to home base quite on the contrary to classical airline flights, so the Time zone difference tables are not reflecting this at all • Average yearly business jet production hours in the industry are about 350 to 400 hours. Very often Pilots produce average maximum 150 to 200 flight hours per year!! Not to be comparable with Airline Industry where a lot of pilots reach 900 hours per year. • Overall the table presented in CS-FTL2 and ORO.FTL are not practicable at all, even with Planning software modules dispatchers and Roster/ Mission planning department will have huge problems to plan Businessjet rotations within this high complex, complicated FTL regulaiton framework. It will be prone to mistakes during the planning process. • The whole FTL regulation for air taxi charter, corporate aviaton and AEMS operations should be adaptable to their individual mission profiles and using a taylored and from the respective NAA approved FRMS scheme allowing a stable and safe but still flexible Flight Operation for the Businessaviation. These schemes should be based upon operational statistical data by the individual operator and be approved after consultation with the Competent authority by an AltMoc, for instance.

response	Noted NPA 2017-17 clearly explains the benefits compared to the 2008 Subpart Q requirements, which are not suitable to modern air taxi and AEMS operations. The duty tables for air taxi and AEMS operations have been jointly constructed by the EBAA and ECA.

comment	*1519* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)* The Swiss Aerodromes Association is an advocate for a strong decentralized aviation in Europe. As such, we cannot support the notion that the rules, as designed in the current NPA will produce a benefit for operators engaged in ATXO. We therefore reject this NPA and strongly suggest to reconsider the impacts on the business aviation, which represents an important factor to many renowned companies all over the world and to all economies of the various EASA member states.
response	Noted Your statements deliberately neglect the numerous scientific studies and analyses this proposal builds upon.

comment	*124* comment by: *UK CAA* **Page No:** 68 **Paragraph No:** 4.6 Monitoring and evaluation **Comment:** The intent of the monitoring and evaluation of the regulations is supported. However, NAA's will need more active support from EASA to be able to deliver the data required. Also, this list of information would be relevant to all Subpart FTL operations and we believe EASA should consider the wider application of this type of data collection. It is strongly recommended that EASA should consider developing a clear communication plan and supportive activities and guidance to enable this requirement to be successful. **Justification:** To ensure consistency of data from all NAA's, EASA will need to run workshops, provide standardised templates and guidance to enable the operators and NAA's to provide the information requested. If EASA does not actively support the NAA's, the data it receives will be extremely variable and inconsistent across countries. This could generate a misleading picture of the application and impact of the regulations.
response	Accepted

	As in the case of FTL in the area of scheduled and charter operations, EASA will organise workshops, provide standardised templates and guidance to enable operators and NAAs implement the rules.

comment	*1410* comment by: *Dr Adam Fletcher* These criteria need a major rethink for the EMX/ATXO sector. For example, the list includes factors that are largely irrelevent (e.g. time zone crossing). It completely misses absolutely critical variables and factors (e.g. the amount of standby relative to flying and other duty, the prevalence of standby that allows for valuable rest versus standby that demands a high state of readiness, and the prevalence of seasonal versus fixed bases). Also, some metrics could mislead (e.g. fatigue reports would ideally be increasing over time as reporting culture improves, especially if fatigue management is a new concept for a operation).
response	Noted Please, refer to the numerous scientific studies and analyses this proposal builds upon.

comment	*1477* comment by: *GBAA* 4.1.6 Air Taxi Why do you put air taxi operation on the same level as scheduled airline operations? They are completely different in the way they are conducted. In air taxi operation, you will find hardly anybody with more than 500 block hours per year, while the scheduled airline pilots fill their maximum 900 hours by the end of October each year. Plus, the passengers have a completely different expectation in both worlds. Just compare air taxi operations with car taxi operation where a driver leaves the place without you, because he needs to have some rest now... I can hardly believe that you being the passenger won't be upset with some guys **doing nothing but waiting** for you the entire day and the eventually leave without you. You cannot compare that with the scheduled airlines.
response	Noted

comment	*1500* comment by: *SBAA Swiss Business Aviation Association / Helene Niedhart* The Swiss Business Aviation Association (SBAA) shares the conclusion of EASA that a fully prescriptive approach would lead to a negative economic impact on operators engaged in ATXO. However, SBAA strongly differs from the conclusion drawn by EASA, stating at the same time minor positive economic impacts if a flexible approach is pursued. Actually, the

opposite is the case. As stated before with regards to several sections of the NPA, the practical handling of the proposed changes to the rules would certainly lead to a prohibitive rise in economic burdens on the side of the operators engaged in ATXO. Calculations of our association have turned out that the workforce at the level of the single operator would need to rise in the magnitude +50% in crew members to be compliant with the new rules as laid out in the NPA. These calculations do not take into account that the needed augmentation in the flying workforce cannot be regarded as a stand-alone factor: In order to comply with the proposed regulation, the single operator must also calculate with a reinforcement of its "back office", as planning (*ex ante* an operation) and controlling (*ex post* an operation) has to assure compliance at any given time. These tasks are generally performed by the flight operations department of the single air taxi operator-company. This means that, should the proposed rules be enacted as proposed in the NPA, the operator companies would be faced not only with the need to beef up their overall workforce but in any case also with the need to introduce new internal and external compliance mechanisms and processes, which in turn create the need for additional training of the crews and the operations personnel, thus accelerating the spiral of rising overhead costs for the single air taxi operator. Having said this, the impacts cannot be regarded as "minor positive" for ATXO companies, but must be judged as overall highly negative from the point of view of the representatives of business aviation operators. As such, the statement *"It may reasonably be assumed that for air taxi and AEMS operators, it will also take approximately 2000 working hours to develop and document an individual flight time specification scheme that deviates from the certification specifications as has been reported by CAT aeroplane scheduled and charter operators. However, these are one-off costs."* (as stated in section 4.4.4.2 Air taxi and AEMS, see p. 64/70) could not possibly be further from the reality for operators engaged in ATXO. Our association strongly questions this one-sided and unsubstantiated estimate. The assumption that the projected *"2000 working hours"* are *"one-off costs"* is disputed by our association, e.g. because this number does not take into account the staff training required to implement new (and complex) rules within an organization. Instead our association calculates with as least double the overall number of working hours stated in the NPA that would be needed to implement a new scheme, as proposed in the new regulation. This estimate does not take into account the external costs generated by suppliers of a business aviation company (e.g. project management, expert advisory, accounting support, legal advice).

response | Please, refer to the response to comment #262.

comment | *1518* | comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

The Swiss Aerodromes Association (SAA) has a genuine interest in supporting the business aviation, which carries out ATXO. We are highly sceptical of the approach taken by EASA with this NPA and consider its content to be highly prescriptive by its nature. The assumptions about the impacts laid out in the respective section of the NPA seem doubtful to us. We specially question the assumptions on the burdens, which ATXO companies might face under the rules proposed by the NPA. We fear that - specially ATXO companies

	operating from Switzerland, with its generally high operating costs - would greatly suffer under the new set of rules of the NPA. Therefore, we strongly recommend to seriously reconsider enacting such endangering rules to an ever important branch of aviation.
response	Please, refer to the response to comment #262.

comment	*156* comment by: *VistaJet* So from the conclusion we gather that a flexible approach is the most beneficial stance on all accounts. NPA 2017-17 is a highly complex, overly rigid FTL scheme further mandating the implementation of FRMS. The additional manpower and systems required to operate within compliance of this NPA and fully implement FRMS is significant, and will have a major impact on all operators. The scheme does not allow flexibility for an international operator such as VistaJet to apply seperate restrictions to the short haul European fleet, as aposed to the long haul global fleet, and everything in-between. The FTL was designed for Schedule CAT operations and relies heavily on the concept of home base, with a perpetual roster of "out and back" rotations. ATXO does not work like this. Operators use a forecast "on pattern/off pattern" methedology where crew need to be available and flexible for the ON pattern, and then have a consolidated OFF pattern where cumulative fatigue and time zone crossing effects are addressed. This also allow optimum social patterns for crew as the pattern can be forecast indefinately. In addition, the aircraft are not based anywhere, and crew will keep migrating around the world. Progressive acclimatisation is not catered for under this NPA, neither is the rotation methedology. Finally, a main objective of this NPA is to create a level playing field among European Operators. This is incredibly short sighted as ATXO operators are not protected by freedoms of the air in the same manor as scheduled airlines. Operators have to face competition from all global players and therefore need to remain commercially competitive on a global scale, not a European one. This NPA if implemented as is, will most certainly drive operators such as ourselves, to move the long range fleet outside of Europe. This is far from beneficial for Operators or the EU community alike, but may be necessary to remain competitive. We hope that our concerns are taken seriously and the Agency seriously consider finding a more flexible approach for regulating FTLs.

response	Noted

comment	*210* comment by: *Cat Aviation AG* We absolutely support the notion, that safety is the driving factor in creating or adjusting regulations. Reviewing this NPA, one is lead to believe that the key importance of what Air Taxi operations stands for is lost or misunderstood. This business model exists, due to its flexibility for the passengers using this mode of transport. Air Taxi crew are flying a fraction of time compared to commercialy scheduled operating crew, seen on a monthly, yearly or daily basis of FDP or DP. Air Taxi crew often remain a few days up to a week at a destination with the passenger, thus resting on site 4-7 days, before undertaking the next flight duty. On average an air taxi crew member accummulates a total duty time (DP) of 300-400hrs a year (compared to airliners with 900-1000hrs DP). As derived from traffic figures in 2011, BA traffic accounts for 7% of all traffic. The fatigue survey study was conducted amongst a small number of pilots or operators, in our opinion not enough to be a representative figure on scientific research. Amongst the accident reports received during 5 years (2012-2017), none could be identified as being clearly caused by fatigue. Overall many of the suggested new regulations in this NPA are overly complicated, not practical to be applied in everyday operation. This could lead to more mistakes in the planning process due to Human Factor (HF) issues and misinterpretation of the rule. Rules should be established in a clear, practical and easy to apply manner to maintain and enhance the overall safety aspects. We would argue that the impact this NPA has on the economical & social aspects are hardly *minor positive or minor*, but rather *negative* in financial and social aspects. We foresee a heavy financial impact, as more crew would be needed to retain similar flexibility as currently available under Subpart Q. Per our calculation an estimation of 50% more headcount are required. Having to control Crews' rest location to minimise the positioning time penalty, means less favorable hotel location for crews (near airports isof cities = negative social impact). More crews needed to maintain flexibility of the trips leads to less well geared teamwork (they barely meet) less flying hours for pilots might also lead to be a safety concern. Air Taxi flexibility is further limited by increased restrictions to airport access and scarce slot availabilities. To put it rather direct and critical, if the HNI's and multinational companies, no longer see the benefit of using Air Taxi services, due to prohibitive costs or too restricted flexibility, the impact on Swiss operators and business' economy is major.
response	Noted

comment	*1519* comment by: *Swiss Aerodromes & GASCO (General Aviation Steering Committee Switzerland)*

	The Swiss Aerodromes Association is an advocate for a strong decentralized aviation in Europe. As such, we cannot support the notion that the rules, as designed in the current NPA will produce a benefit for operators engaged in ATXO. We therefore reject this NPA and strongly suggest to reconsider the impacts on the business aviation, which represents an important factor to many renowned companies all over the world and to all economies of the various EASA member states.
response	Please, refer to the response to comment #262.

comment	*740* comment by: *Captain M Alcaide GVI* I don't think those numbers are right, 102 air taxi aircraft in Spain?? Although I have access to the EBAA I have never recibed a survey coming from them....I have been flying a Gulfstream for a Spanish corporation since 2007. So is it a good study? should it be used???
response	Noted

comment	*849* comment by: *Yorkshire Air Ambulance* Information regarding Wiltshire Air Ambulance is no longer correct and should be removed.
response	Noted

comment	*78* comment by: *Rega / Swiss Air-Ambulance* **9. Option 1 – Flexible approach** (page 65 of 70 NPA 2017-17) By mistake only HEMS and air taxi is mentioned in the whole chapter. **Question of the writer referring to Option 1 – Flexible approach:** Why did EASA forget to mention AEMS along with air taxi in the context of individual flight time specification schemes? Urs Nagel Member of EASA RMT.0346 Rega Swiss Air-Ambulance

	P.O. Box 1414 CH-8058 Zuerich Switzerland +41 79 401 95 01 urs.nagel@rega.ch
response	Noted

comment	*1023* comment by: *European Cockpit Association* We believe that "Option 0 – No policy change" would work quite well for most Member States, although ECA agrees, that there is room and need for improvement. We do recognize that "Option 1 – Flexible approach" would have the benefit of forcing the operators to demonstrate a safe operation. This will be quite costly and not practicable for many small operators and would also at the end lead to significant barriers of entry. This approach will also have a negative social impact as well as a more than "medium" negative economic impact. "Option 2 – Fully prescriptive approach" would, as stated in the NPA, have a "Positive low benefits" for safety pertaining to the risk of fatigue. ECA disagrees with this statement. For many operators/member states the envisioned safety benefits to guard against fatigue could be nullified due to the extra amount of duty days and commuting, which in itself is causing extra stress and fatigue that would be introduced. Furthermore, the regulation would have a negative impact on the service in way too many other cases. As already mentioned above, it will have a negative impact on social aspects for the "customers" (i.e. the patients - due to a lowered availability of the service), the public and the crew members. This approach would force many operators to raise their staffing significantly. This additional staffing would raise the costs remarkably. Also, due to the lack of suitably experienced, qualified crew members with the proper attitude cockpit personal available for hiring, this could lead to accepting lowered standards and a lack of recency (the same amount of missions would have to be flown by a substantially higher number of crew members). In ECA's view, the above suggested approach with some understood and (scientifically) proven rules, as the basics for avoiding fatigue (like cumulative/minimum limits 2000hrs/year, 190hour/28days, min time available for sleep, min days off-duty in a period) - should be the basis of any air-operation and therefore be an implementing rule. On the other hand most of the other regulations should be AMC/guidance material to give local authorities the possibility to use their knowledge and experience to find a safe regulation, serving the needs of their HEMS/rescue system. This approach would have the positive benefit of raising safety levels, with minor social and economic impact.
response	Please, refer to the response to comment #262.

comment	*1154* comment by: *Rabbit-Air Ltd*
	As a small corporate operator flying under an AOC we were keen on awaiting the NPA concerining FTL schemes for Air taxi charter and AEMS operators. But analyzing the outcome of these FTL schemes is not acceptable to the corporate and taxi charter operation. **The "old" FTL scheme of EU-OPS subpart Q is by far a better regulation framework than the new ones under CS-FTL2 and ORO Part FTL.** We all of the aviation community / Industry are striving for the same goals: Safety First, then efficiency and effectivity. We all know that Fatigue and unstable rosters can have negative side effects on flight operation and flight safety. But the proposed regulations and FTL schemes to follow, if realized will lead to a lot of Businessjet operator cancelling their AOC's and changing to NCC OPS, which is really not what we are looking for here is what is not considered by this NPA: • Corporate operators / Business aviation crews have total different mission scenarios than Airlines have, thus rosters are not seasonal, 14 days rosters, or monthly rosters are often used • Those kind of flight activities have different rest time availabilities, i.e. transatlantic flights with several days of layovers without any flights, then further flights to other continents not returning to home base quite on the contrary to classical airline flights, so the Time zone difference tables are not reflecting this at all • Average yearly business jet production hours in the industry are about 350 to 400 hours. Very often Pilots produce average maximum 150 to 200 flight hours per year!! Not to be comparable with Airline Industry where a lot of pilots reach 900 hours per year. • Overall the table presented in CS-FTL2 and ORO.FTL are not practicable at all, even with Planning software modules dispatchers and Roster/ Mission planning department will have huge problems to plan Businessjet rotations within this high complex, complicated FTL regulaiton framework. It will be prone to mistakes during the planning process. • The whole FTL regulation for air taxi charter, corporate aviaton and AEMS operations should be adaptable to their individual mission profiles and using a taylored and from the respective NAA approved FRMS scheme allowing a stable and safe but still flexible Flight Operation for the Businessaviation. These schemes should be based upon operational statistical data by the individual operator and be approved after consultation with the Competent authority by an AltMoc, for instance.
response	Noted

comment	*1411* comment by: *Swiss Air-Ambulance Rega*

	In our opinion, the implementation would lead to a reduction in safety, excessive rise of the overall HEMS operating costs and the danger of social tension due to the risk of lower salaries. Therefore, we propose to deny the mandatory implementation of the EASA FTL and support option 0 of the NPA 2017-17 as stated on page 67 article 4.5 and alternatively give the suggestions stated below. Suggestion: Due to different operating structures (state vs. commercial or charity funded organizations), different tasks & responsibilities defined by the state and the different geographical environment within the EASA territory, a one-size-fits-all approach does not work and it should be left to the national authorities to regulate FTL (closeness to operators, practical knowledge of operations). E.g. Switzerland has a FTL regulation in place since 1990, which has proven itself as effective and efficient in regards to safety and quality For cross border operations, member states should regulate FTL with bilateral agreements.
response	Noted

comment	*1410* comment by: *Dr Adam Fletcher* These criteria need a major rethink for the EMX/ATXO sector. For example, the list includes factors that are largely irrelevent (e.g. time zone crossing). It completely misses absolutely critical variables and factors (e.g. the amount of standby relative to flying and other duty, the prevalence of standby that allows for valuable rest versus standby that demands a high state of readiness, and the prevalence of seasonal versus fixed bases). Also, some metrics could mislead (e.g. fatigue reports would ideally be increasing over time as reporting culture improves, especially if fatigue management is a new concept for a operation).
response	Noted