

FTL FAQ

Subject	IR/CS/AMC/GM reference	Question or comment	Answer
Application date	Article 2 CR	Is it possible for individual operators to transition to the new FTL system for the application marked in Article 2 of Regulation 83/2014?	Regulation (EU) 965/2012 as last amended by Regulation (EU) 83/2014 is applicable as from 18 February 2016. Member States, Competent Authorities and Operators may prepare implementing measures of transition so that all requirements are met as from the date of applicability, but until such date, the Regulation is not applicable. During this transition period, operators may implement the new FTL system, provided the individual schemes comply with Subpart Q of EU-OPS and national provisions in force.
Commander's discretion	ORO.FTL.205(f)	Does commander's discretion only need to be used if the maximum FDP will not be complied with? For example: if an 8h FDP is planned and finally lasts 10h30, is there a need to exercise commander's discretion?	Yes. Commander's discretion may be used to modify the limits on flight duty, duty and rest periods in case of unforeseen circumstances in flight operations, which start at or after the reporting time.
Commander's discretion	ORO.FTL.205(f)	How is the maximum FDP after the exercise of commander's discretion calculated? Do I need to consider the reporting time and number of sectors?	Yes. The actually operated number of sectors and the actual reporting time must be considered. Calculations shall be made in accordance with ORO.FTL.205(f)(i), which states that commander's discretion may be used to increase the maximum daily FDP resulting from the application of ORO.FTL.205(b) and (e) or ORO.FTL.220. This means that the commander may, under his/her discretion, increase the values of the tables in point (b)(1) and (2) by 2 hours (3 hours if the flight crew has been augmented).

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<p>Commander's discretion</p>	<p>ORO.FTL.205(f) and CS FTL.1.205</p>	<p>What are the limits for commander's discretion for an extended FDP without in-flight rest ORO.FTL.205(d)?</p>	<p>ORO.FTL.205(f)(1) establishes the envelope within which the commander may decide to modify the limits on flight duty, duty and rest periods.</p> <p>ORO.FTL.205(d)&(e) establish the conditions under which the operator may <i>extend</i> the maximum basic daily FDP. The rule applies in the case of unforeseen circumstances during <i>any</i> FDP, meaning that it is possible to apply commander's discretion to the maximum <i>basic daily</i> FDP <u>within the limits of ORO.FTL.205(f)(1)</u> on a duty with a planned extension according to ORO.FTL.205(d).</p>
<p>Definitions: Acclimatisation</p> 	<p>ORO.FTL.105(1)</p>	<p>How should we determine the state of acclimatisation and rest requirements after for rotations with three or more FDPs, including FDPs in both directions and within the destination time zone?</p>	<p>For rotations with three or more FDPs, a crew member is considered to be acclimatised to the time zone of the reference time for the first 48 hours. After 48 hours of the rotation have elapsed, the crew member is considered to be in an unknown state of acclimatisation. The crew member only becomes acclimatised to the destination time zone if he/she remains in the first arrival destination time zone (either for rest or any duties) for the time established in the table in ORO.FTL.105(1). Should a crew member's rotation include any additional duties that end in a different time zone than his/her first arrival destination's time zone while he/she is considered to be in an unknown state of acclimatisation, then the crew member remains in an unknown state of acclimatisation until he/she:</p> <ul style="list-style-type: none"> • has taken the rest period in accordance with CS FTL.1.235(b)(3) at home base; • has taken the rest period in accordance with CS FTL.1.235(b)(3) at the new location; or • has been undertaking duties starting at and returning to the time zone of the new location until he/she becomes acclimatised in accordance with the values in the table in ORO.FTL.105(1). <p>To determine the state of acclimatisation the two following criteria should be applied:</p> <ul style="list-style-type: none"> ○ the greater of the time differences between the time

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			<p>zone where he/she was last acclimatised or the local time of his/her last departure point and the new location; and</p> <ul style="list-style-type: none"> ○ the time elapsed since reporting at home base for the first time during the rotation. <p>For a rotation with three or more FDPs, the greatest time zone difference from the original reference time should be used to determine the minimum number of local nights of rest to compensate for time zone differences in accordance with the table in CS FTL.1.235(b)(3)(i). If such a rotation includes time zones crossings in both directions the calculation is based on the highest number of time zones crossed in any one FDP during the rotation.</p>
Definitions: Acclimatisation	ORO.FTL.105(1) and (2)	<p>How to calculate acclimatisation on complex rotations? 4 departure places (A, B, C and D). Between A and B there is a 2-hour time difference; between A and C, a 4 hour-time difference; between A and D, a 6-hour time difference. The crew reports for an FDP in A being acclimatised. The reference time is the local time (LT) in A. The crew finishes at and takes the rest at B. Then the same crew reports for a new FDP in B, being already acclimatised to B. Therefore, the reference time is the LT in B. The crew then takes rest at C. After the rest, the crew reports for an FDP in C to finish in D. Where are they considered to be acclimatised when beginning at C? What is the reference time to be taken into account for</p>	<p>ORO.FTL.105(1) states that a crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time at the point of departure. For a series of FDPs, as described in the question, a crew member would be considered to be acclimatised as follows:</p> <p>Day 1: The crew member starts <i>acclimatised</i> at A and finishes at B. The reference time is the local time at A, because the crew member is acclimatised at A and reports at A. The time difference between A and B is 2 hours. That means that after resting at B, the crew will be considered acclimatised at B.</p> <p>Day 2: The crew member reports at B acclimatised to the local time at B for an FDP covering again 2-hour time difference to rest at C. The crew member has now covered 4-hour time difference, but in 2 days. Therefore the crew member is considered to be acclimatised because he/she had time (2 days) to adapt his/her body clock to the local time at C.</p> <p>Day 3 is a repetition of day 2.</p> <p>Day 4: The crew member reports again considered to be <i>acclimatised</i> at D. The</p>

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		<p>ORO.FTL.205(b)(1)? If after rest at D, the crew begins an FDP from D finishing at A (6h time difference), are they considered acclimatised when beginning at D?, What is the reference time to be taken into account for ORO.FTL.205(b)(1)?</p>	<p>local time at D is the reference time. The FDP between D and A covers 6-hour time difference. The rule considers crossing 6-hour time difference in one day (one FDP) as an FDP inducing time zone de-synchronisation. Therefore, upon return to A (assuming that A is the home base), the rest requirements in CS FTL.1.235(b)(3)(i) are applicable.</p>
<p>Definitions: Acclimatisation</p>	<p>ORO.FTL.105(1)</p>	<p>What happens to the state of acclimatisation of crew members when they return to their home base and take an extended recovery rest period after time zone crossing?</p>	<p>The table in CS FTL.1.235 (b) establishes the minimum number of local nights a rest period must include to compensate for time zone differences.</p> <p>The number of local nights in the table in CS FTL.1.235 (b) are an approximate mirror of the acclimatisation requirements of ORO.FTL.105 (1) table 1. The duration of the rest period is expressed in local nights, because scientific research shows that (re-)acclimatisation takes place during sleep periods.</p> <p>Crew members are assumed to have re-acclimatised to the local time at their home base after having completed a rest period compensating for time zone differences.</p>
<p>Definitions: Disruptive schedule</p>	<p>ORO.FTL.105(8)</p>	<p>Which criteria should be applied to determine whether a duty is disruptive if there is a time zone difference between the reporting point and the place where the duty finishes?</p>	<p>A duty can only be classed as disruptive if a crew member is acclimatised when reporting.</p> <p>The “reference time” as defined in ORO.FTL.105 (2) shall be used to determine the classification of a duty as ‘disruptive’ for the entire duration of the duty. That means, no matter where the duty ends, the local time at the reporting point shall be used as orientation to determine if a duty is ‘disruptive’.</p> <p>For example, in the case of a crew member’s state of acclimatisation becoming unknown during a duty, the crew member is considered to be still acclimatised to the local time of the initial departure time zone in accordance with the values in table 1 of ORO.FTL.105(1) when reporting for the duty. Therefore, the local time of the departure time zone of the initial reporting point (reference time) shall be used to determine the classification of a duty as ‘disruptive’.</p>

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Acclimatisation	GM1 ORO.FTL.205(b)(1)	If the crew member is not acclimatised or in an unknown state of acclimatisation, what is the reference time? In that case, is reference time the local time at the point of the last departure where the crew member was acclimatised?	ORO.FTL.205(b)(1) does not apply to crew members in an unknown state of acclimatisation. For crew members in an unknown state of acclimatisation ORO.FTL.205(b)(2) applies. The maximum daily FDP for crew members in an unknown state of acclimatisation does not depend on the time of the day. The rule assumes that an FDP starting at any time could potentially encroach the window of circadian low (WOCL). Therefore, the maximum FDP is set to be 11 hours at any time unless additional fatigue mitigation is in place (e.g. in-flight rest), in which case the maximum would be 12 hours for an FDP with up to 2 sectors.
Acclimatisation	ORO.FTL.205(b)(3)	Is the maximum daily FDP always 12:00 (1-2 sectors), when crew members are in an unknown state of acclimatisation under fatigue risk management (FRM)?	Table 4 in ORO.FTL.205(b)(3) establishes the limits of the maximum daily FDP when crew members are in unknown state of acclimatisation and the operator has implemented FRM. ORO.FTL.120(b) describes that the FRM shall provide for continuous improvement to the overall performance of the CRM by including amongst other elements: <ul style="list-style-type: none"> • a hazard identification and risk assessment process; • a risk mitigation process that provides for remedial actions; and • FRM safety assurance processes. That means that the maximum FDPs applied in an unknown state of acclimatisation (up to the values in table 4) must be supported by safety data for each route and pairing. Crew pairing means rostered positioning and flights for crew members in one duty period.
Definitions: Accommodation	ORO.FTL.105 (3)	Can an airport crew lounge be considered as “accommodation”? Can a hotel room for several crew members of the same gender be considered as “accommodation”? Real life examples would be helpful.	The definition in ORO.FTL.105 (3) lists criteria for “accommodation”. Airport crew lounges as such are not excluded as long as they fulfil all criteria listed in the definition. Single occupancy is not a criterion. This means that shared hotel rooms, as long as they fulfil all criteria listed in the definition, could be used as accommodation.
Delayed reporting	CS FTL.1.205(d)(1)	Is it possible to inform crew members of a delay without giving the new reporting time?	The delayed reporting time is the reporting time that has been <i>delayed</i> , which means the <i>new</i> reporting time. A concrete (defined) reporting time must be given when the crew member is informed that the delayed reporting procedure is activated.

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Disruptive schedules	CS FTL.1.235(a)(1)	The rule for transition between late finish/night duty and early start says that the rest between the FDPs needs to include a local night. Does this mean that the rule only applies if the Late Finish/night duty and the early duty are FDP's?	No. There are different scenarios. ORO.FTL.105(8) defines 'early start' as "a <i>duty</i> period starting in the period between 05:00 and 05:59 (for disruptive schedule of 'early type') in the time zone to which a crew member is acclimatized. Further specifications can be found in CS FTL.1.235(a). CS FTL.1.235(a) (1) mitigates the acute disruption of the sleep pattern by prescribing 1 local night of rest at home base between two FDPs when transitioning from a late finish/night duty to an early start. CS FTL.1.235(a) (2), on the other hand, provides for additional rest after a block of working days with a disruptive roster. The extended recovery rest under CS FTL.1.235(a)(2) should be extended to 60 hours if a crew member performs 4 or more night duties, early starts or late finishes between 2 extended recovery rest periods.
Duty / De-briefing and post flight duty	ORO.FTL.105 ORO.FTL.210	How should briefings and debriefings during conversion/line checks be accounted for?	'Duty', 'flight duty' and 'flight duty period' are defined in ORO.FTL.105(10),(11) & (12). In accordance with the definition of duty, conversion/line training is duty. Any duty (including the briefing for training purposes) after reporting for a duty that includes a sector or a series of sectors until 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, is considered flight duty period. <i>Post flight</i> duties, on the other hand (including debriefings also for training purposes), are considered as duty period.
Duty / post flight	AMC1 ORO.FTL.210(c)	Must the operator keep records where the time when the crew finish post-flight duties is reported to take into account the actual post-flight duties when they are longer than the period established by the operator in the OM?	No. The operator must, however, be able to demonstrate compliance with all requirements. In order to do so, the operator needs to implement a system to demonstrate based on what data or operational experience the minimum time period for post-flight duties has been specified. Since rest or shortened rest could potentially be a fatigue hazard, the operator needs to put in place a monitoring system also for this element under its SMS obligations.

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Duty at the office	ORO.FTL.235	<p>If a crew member spends one day in the office, what should be the duration of the rest before reporting for a flight?</p> <p>Complementary question: time spent at the office = predetermined or actual time?</p>	<p>The minimum rest period at home base <i>“shall be at least as long as the preceding duty period, or 12 hours, whichever is greater.”</i>. In accordance with ORO.FTL.105(10) <i>“‘duty’ means any task that a crew member performs for the operator, including flight duty, administrative work, giving or receiving training and checking, positioning, and some elements of standby;”</i>. Time spent at the office is duty time.</p>
FDP	ORO.FTL.205 (d)	<p>It is not clear why the ORO.FTL.205 (b) title includes ‘Basic maximum daily FDP’, however throughout the ORO.FTL.205 up to point (e) the term ‘Maximum daily FDP’ is used instead of ‘Basic maximum daily FDP’. Interestingly, ORO.FTL.205(d)(4) includes an additional term ‘Maximum basic daily FDP’, which is not on the definitions list of the regulation.</p>	<p>“Basic maximum daily FDP” and “maximum basic daily FDP” mean the same. Both terms refer to a basic value of FDP which is un-extended and is the root for further FDP extensions.</p> <p>The “maximum daily FDP” refers to derivations from the basic table i.e. when the 'basic maximum daily FDP' (or maximum basic daily FDP) is extended under certain conditions.</p> <p>In ORO.FTL.220 SPLIT DUTY basic maximum daily FDP is also mentioned. It is the 'basic maximum daily FDP' from the table in ORO.FTL.205 (b) that may be extended due to a break on the ground.</p>
FDP extension In-flight rest	ORO.FTL.205 (d) ORO.FTL.205 (e)	<p>Is it possible to roster 2 extended FDPs without in-flight rest and 1 extended FDP with in-flight rest in 7 consecutive days?</p>	<p>Yes, the limit of two in 7 consecutive days of ORO.FTL.205(d)(1) applies to the use of extensions <i>without</i> in-flight rest, not to extensions due to in-flight rest.</p>

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<p>Flight time specification scheme / Air Taxi Ops</p>	<p>CR Art. 1 (1) and Art. 8 (2) ORO.FTL.125</p>	<p>An Air Taxi Operator has both an aeroplane with less than 19 seats and one aeroplane with more than 20 seats. What FTL regulation shall the crew who is flying both types follow?</p>	<p>To operate CAT operations with aeroplanes of more than 19 seats, the operator must demonstrate compliance with ORO.FTL.125. ORO.FTL.125 instructs operators to establish, implement and maintain flight time specification schemes that are appropriate for the type(s) of operation performed and that comply with Regulation (EC) 216/2008. The aim of the requirements is to ensure that crew members are able to operate at a satisfactory level of alertness. Fatigue is not only accrued during one day and during the duty hours. It is always a set of factors that contribute to fatigue. Crew member fatigue is a hazard with ‘memory’. In other words, the fatigue accrued during an operation in one fleet might impact on the performance of a crew member when conducting the following flight in the other fleet. Therefore, from a fatigue management perspective, it makes sense to apply <i>one</i> flight and duty time and rest requirements scheme consistently to pilots in such operations.</p> <p>The operator’s flight time specification scheme should take account of the fact that several aircraft types are operated and, more importantly, it should be considered if the operation at hand is an on demand operation.</p>
<p>Flying activities outside an AOC</p>	<p>ORO.FTL.115 ORO.FTL.210 ORO.FTL.235</p>	<p>If a crew member is also CRI/CRE, TRI/TRE, how is activity spent on testing, training (not for his/her operator) accounted for?</p> <p>More generally, how should any crew member activity outside the scope of an AOC be taken into account for rest calculation purposes?</p>	<p>Flying activities such as training and testing conducted outside of the scope of an AOC have an impact on fatigue. To control excessive awake times, leading to transient fatigue, a crew member must respect the minimum rest in accordance with ORO.FTL.235 before reporting for any FDP performed inside an AOC.</p> <p>Cumulative fatigue is accrued not only during CAT activities but also during other flying activities. Therefore, to control cumulative fatigue, in accordance with CAT.GEN.MPA.100, the crew members shall: “[...] (ii) <i>provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.</i>” This requirement is also included in Part-NCC (NCC.GEN.105(f)(2)). ORO.FTL.210 establishes the applicable FTL requirements for cumulative flight times and duty periods. This requirement is also reflected in ORO.FTL.115, which instructs crew members to “<i>make optimum use of</i></p>

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			<p><i>the opportunities and facilities for rest provided and plan and use their rest periods properly.”</i>. In addition, it should be noted that the limits and standards already established in Council Directive 2000/79/EC are applicable and should be respected for mobile staff in civil aviation. In conclusion, any potentially fatiguing professional activity, regardless if undertaken within or outside an AOC, should be taken into account for rest calculation.</p>
Flying activities outside an AOC	<p>ORO.FC.100 ORO.FTL.115 ORO.FTL.210 ORO.FTL.235</p>	<p>Do all activities falling in the remit of the basic regulation ((EC) No 216/2008) have to be considered for duty time calculations? Let us take the example of a crew member working in a company with an AOC that is also an Approved Training Organization: should activities performed by a person for the ATO be considered for duty time limitations and rest requirements when that same person also acts as an operating crew member on a commercial flight of that same company?</p>	<p>NCC.GEN.105(f)(2) instructs crew members to <i>“provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements”</i>. The scope of Subpart FTL is to establish the requirements to be met by an operator and its crew members with regard to flight and duty time limitations and rest requirements for crew members. The rule specifies cumulative limits for flight time and for duty periods without specifying in which type of operation the hours are accrued.</p>
FRM	<p>CS FTL.1.235(b)(5)</p>	<p>Does the requirement to monitor combinations of rotations require an approved FRM in accordance with ORO.FTL.120?</p>	<p>ORO.GEN.200(a)(3) instructs operators to implement and maintain a management system that includes the identification of aviation safety hazards entailed by the activities of the operator, their evaluation and the management of associated risks, including taking actions to mitigate the risk and verify their effectiveness. This rule does not necessarily require an approved FRM as described in ORO.FTL.120 to monitor the fatigue risks arising from combinations of rotations. Using the operator’s management system tools might be sufficient depending on the complexity of the operation.</p>

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Home base	CS FTL.1.200 (b)	Should the recurrent extended recovery rest including 3 local nights to compensate for a home base change be taken at the new home base or at the old home base?	ORO.FTL.115(b) instructs crew members to make optimum use of the opportunities [...] for rest [...]. Under GM1 CS FTL.1.200, crew members should make arrangements for temporary accommodation closer to their home base if their travelling time from their residence to their home base usually exceeds 90 minutes.
Home base change	CS FTL.1.200(b)	Is it correct to understand that if a recurrent extended recovery rest has not been increased to 72h incl. 3 local nights, the home base has not been changed for the purpose of Subpart FTL?	<p>If a crew member is asked to report at a reporting point other than his/her home base without having fulfilled the requirements for a home base change, the provisions for reporting out of home base apply. The requirements are according to CS FTL.1.200:</p> <p>(a) the home base is a single airport location;</p> <p>(b) the first extended recovery rest period prior to starting duty at the new home base is increased to 72 hours, including 3 local nights.</p> <p>ORO.FTL.105(14) defines 'home base', stating that the operator is not responsible for the accommodation of the crew member at the home base. Furthermore, ORO.FTL.235 establishes the different minimum rest requirements for a rest periods at the home base and away from home base.</p> <p>Consequently, if a crew member is asked to report at a reporting point, this reporting point is considered to be 'away from home base' unless a change of home base has been completed with its increased extended recovery rest.</p>
Individual flight time specification schemes approval	ARO.OPS.235 ORO.FTL.125	May a competent authority give ONE approval for an individual flight specification scheme to be used by three different operators with three AOCs?	<p>ORO.MLR.100(a) instructs the operator to establish an operations manual (OM) in accordance with point 8.b of Annex IV to Regulation (EC) 216/2008. Limitations applicable to flight time, flight duty time and rest periods for crew members must be specified in the OM.</p> <p>To obtain an AOC, operators shall demonstrate to the competent authority that they comply with (amongst others) Part-ORO.</p> <p>In accordance with ORO.FTL.125 (b), flight time specification schemes, before being implemented, including any related FRM where required, shall be approved by the competent authority.</p> <p>Each operator needs its own approval. To what extent data from other operations may be used to demonstrate that the requirements of</p>

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			Regulation (EC) 216/2008 and Subpart FTL are met must be decided on a case by case basis. In addition, ORO.FTL.125(d) instructs the operator to collect data concerning the granted derogation or deviation.
In-flight rest	CS FTL.1.205(b)	<p>Comments and clarification regarding the following example would be welcome:</p> <p>A crew (Pilot 1 + Pilot 2) begins an FDP at A, flying a 2h sector to B. At B a Pilot 3 joins the crew (could also be positioned from A to B in the same flight). The augmented crew continues flying a 8,5h sector from B to C, during that sector Pilot 2 has enough in-flight rest. At C Pilot 1 leaves the crew composition (is positioned from C to D) and Pilots 2 and 3 continue flying a 2h sector from C to D.</p> <p>The only pilot that makes use of in-flight rest extension is Pilot 2, so he/she will be the only pilot applying the 14 h minimum rest at destination (CS FTL.1.205(c)(6)).</p>	<p>The conditions to extend an FDP due to in-flight rest are established in ORO.FTL.205(e).</p> <p>Point (iv) requires the augmentation of the basic flight crew to be taken into account. CS FTL.1.205(c)(2) gives the maximum duration of extended FDPs with an augmented crew. The maximum duration of the FDP is established for the entire flight crew, not for individual crew members. The crew is considered a unit for the calculation of the maximum FDP. This is underpinned by (c)(7) <i>“A crew member does not start a positioning sector to become part of this flight crew on the same flight.”</i>.</p>
Night duties	CS FTL.1.205(a)(2)	Is it necessary to have an approved FRM to operate long night duties (FDP over 10hrs)?	No. The CS does not require a fully fletched and approved fatigue risk management in accordance with ORO.FTL.120 to operate long night duties. CS FTL.1.205(a)(2) instructs the operator to apply <i>appropriate fatigue risk management</i> to actively manage the fatiguing effect of night duties of more than 10 hours in relation to the surrounding duties and rest periods. The meaning of <i>appropriate fatigue risk management</i> is explained in GM1 CS FTL.1.205(a)(2). The complexity of the operation and the related rostering system will determine how this needs to be implemented.

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Consecutive night duties	CS FTL.1205(a)(1)	What does 'consecutive' mean in the context of the requirements and limits of CS FTL.1.205?	Consecutive is referring to two night duties only separated by a rest period. Two night duties would not be considered as consecutive if there is recurrent extended recovery rest between them or they are separated by rest periods surrounding a non-night duty.
Non-revenue flights / FTL	ORO.FTL.100	How should ferry flights performed by crew members of a given operator be accounted for? DP or FDP? Case 1: CAT flight then ferry flight Case 2: Ferry flight then CAT flight	Annex I to Reg. 965/2012 does not define 'ferry flight'. Crew members performing any activity within the scope of the BR (as opposed to private flying for leisure/fun) are subject to Subpart FTL when they conduct activities within the scope of an AOC.
Non-revenue flights / FTL	ORO.FTL.100	Complementary question: when a ferry flight counts as FDP, does it count as a sector?	Crew members performing any activity within the scope of the BR (as opposed to private flying for leisure/fun) are subject to Subpart FTL when they conduct activities within the scope of an AOC. If a 'ferry flight' is conducted within the scope of an AOC, it counts as FDP and sector.
Operational robustness	ORO.FTL.110(j)	How should operational robustness be assessed?	AMC1 ORO.FTL.110(j) instructs the operator to establish and monitor performance indicators for operational robustness of rosters. GM1 ORO.FTL.110(j) explains the purpose of the rule and specifies what those performance indicators should at least measure.
Planned extensions	ORO.FTL.205(d)(1) and (d)(3)	Must extensions be included in the roster? Is the limitation to twice in any 7 days limited to planned duties? Is it possible to plan more than 2 extensions in 7 days, taking into account that the extension is only actually used twice? When an extension is used in a FDP coming from standby, how can it be considered as "planned in advance"?	Requirements for rosters are reflected in the operator responsibilities in ORO.FTL.110. ORO.FTL.110(a) instructs the operator to publish duty rosters in a way that enables crew members to plan adequate rest. To what level of detail information should be given to crew members depends on the type of operation. Operators must demonstrate how the chosen system fulfils the requirements of ORO.FTL.110. This demonstration could be supported by the application of an operator's SMS processes to its rostering system. ORO.FTL.205(d)(3) does not require the inclusion of the extended FDP in the roster. It does, however, require the advanced planning of the extension as opposed to an extension following unforeseen circumstances taking place during the operation (after the reporting time), which is regulated under (f) of the same paragraph.

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Positioning	ORO.FTL.215	Shall a positioning between active sectors count as a sector for a pilot?	No. According to ORO.FTL.215, positioning prior to operating should shall count as FDP but shall not count as sector. A positioning sector between in that respect is positioning after reporting and prior to operating.
Positioning / reporting point	ORO.FTL.215	Does positioning begin when the crew member arrives at the airport/train station or when the aeroplane/train leaves?	Positioning begins after reporting at the designated reporting point. In accordance with ORO.FTL.105(14) 'home base' means 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. ORO.FTL.200 instructs operators to assign a home base to crew members. This requirement is refined for CAT operations by aeroplane – Scheduled and Charter Operations in CS FTL.1.200(a). The home base is a single <i>airport</i> location [...]. Positioning therefore starts when the crew member reports at his/her home base <i>airport</i> or, outside the home base, at the designated reporting point.
Positioning for purposes other than operating	ORO.FTL.105(18) ORO.FTL.215	How should time spent to travel from the place of rest or home base to a simulator (when outside the base) be taken into account?	Any transfer of a non-operating crew member from one place to the other at the behest of the operator is positioning. Travel from a crew member's private place of rest to the reporting point at home base and vice versa, and local transfers from a place of rest to the commencement of duty and vice versa are excluded. In accordance with ORO.FTL.215 positioning after reporting but prior to operating shall count as FDP. All time spent on positioning shall count as duty.
Record keeping	ORO.FTL.245	Do records required in ORO.FTL.245 have to reflect planned or actual FDP, DP and rest?	Planned rosters may differ substantially from achieved rosters. In order to ensure appropriate oversight of FTL by the competent authority, operators shall maintain (for a period of 24 months) records of the actual values of flight times, FDP, rest periods and days free of all duties. According to AMC1 ORO.FTL.110(j) on operational robustness,

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			operators should establish and monitor performance indicators for operational robustness rosters. This can only be done if operators keep records of both, planned and achieved rosters.
Recurrent extended recovery rest / reduction	ORO.FTL.205(f)	Can the extended recovery rest period be reduced with commander's discretion? (down to 10h?)	No. ORO.FTL.235(d) states that <i>in any case</i> 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. ORO.FTL.205(f) specifies the conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time. An extension to the 168 hours between two recurrent extended recovery rest periods is not foreseen by this Article.
Recurrent extended recovery rest / re-planning	ORO.FTL.110(a)	Is re-planning of a rest allowed (not in the case of reserve)? For example: 56h extended recovery rest period is planned, but only 38h including 2 local nights required from a regulatory standpoint. Case 1: before the rest has begun Case 2: after the rest has begun	Yes, provided that re-planning of rest (and duty) is completed and notified <i>before</i> the rest period has started and the re-planning practices do not conflict with a crew member's opportunity to plan adequate rest. ORO.FTL.110(a) instructs the operator to publish duty rosters sufficiently in advance to provide the opportunity for crew members to plan adequate rest. ORO.FTL.105(21) states that 'rest period' means a continuous, <i>uninterrupted and defined</i> period of time, following duty or prior to duty, during which a crew member is free of all duties, standby and reserve. An operator's procedures for re-planning should demonstrably describe by which means the opportunity for crew members to plan adequate rest is provided in the case of re-planning. If re-planning takes place <i>during</i> the recurrent extended recovery rest period, a full uninterrupted rest period of 36 hours including 2 local nights must be respected after the interruption.
Recurrent extended recovery rest periods / Increase of	ORO.FTL.235(d)	Is commander's discretion compatible with the infringement of the 168h limit between extended recovery rest periods.	No. The 168-hour limit between two recurrent extended recovery rest periods is not amongst the parameters, which, according to ORO.FTL.205(f), may be modified by the commander. That means that the 168h between two extended recovery rest periods may not be increased under commander's discretion.

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interval between two under commander's discretion			
Recurrent extended recovery rest periods / Increase of interval between two	ORO.FTL.235(d)	<p>Can the 168h limit between two extended recovery rest be augmented outside commander's discretion? For example, if a crew member reports in Paris on Monday at 7am and ends a series of flights in Singapore on Sunday at 20pm; he/she should be given his/her extended recovery rest period in Singapore but might be willing to come back to his/her base, hence infringing the 168h limit through positioning (besides, this positioning could also be better for acclimatisation purposes). Does it have to be treated as a derogation if the crew member agrees (or asks) for this positioning, having in mind safety is not at risk?</p>	<p>Any derogation from the rules outside the commander's discretion detailed in ORO.FTL.235(d) is only possible if flexibility provisions of Article 14 of Regulation (EC) 216/2008 are duly applied.</p>
Re-planning / retrospective	ORO.FTL.230	<p>Can a reserve, during which no flight was assigned, be considered as a day off afterwards?</p>	<p>This Regulation does not address working time. However, ORO.FTL.230(a) states that reserve must be in the roster. The meaning of '<i>including reserve in the roster</i>' is explained in GM1 ORO.FTL.230(a). Therefore, a reserve period that does not result in a duty period may not retroactively be considered as part of a recurrent extended recovery rest period.</p>
Re-planning after reporting	ORO.FTL.205(f)	<p>Can a flight be re-planned after crew members have reported?</p>	<p>This Regulation only addresses flight time limitations and rest requirements. In accordance with ORO.FTL.205(f), it is the commander's discretion to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight</p>

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			operations, which start at or after the reporting time.
Reporting times	ORO.FTL.110(c)	Can reporting times for flight crew members reporting for the same FDP be different? (Outside the case of augmented crew which is dealt with in the regulation)	Reporting times must comply with ORO.FTL.110(c) and ORO.FTL.205(a)(1). The maximum FDP is restricted by the crew member who has reported first. The minimum reporting times, which have been defined by the operator in the operations manual for specific types of operations, shall always apply.
Reporting times	ORO.FTL.110(c)	In Spain we have a National regulation that establishes minimum reporting times depending on the aircraft type and operation. Can this National regulation be maintained, and operators be obliged to comply with it? Do we need to understand this National regulation as an AltMoc and process it as established in Regulation (EU) 965/2012 for AltMoc?	According to the primacy of EU Law, national rules no longer apply. Alternative Means of Compliance (Alt MoC) may be used by the competent authority under the conditions of ARO.GEN.120. Any AltMoC must be notified to the Agency. Annex I (9) of Reg. (EU) 965/2012 defines 'alternative means of compliance'.
Reserve	CS FTL 1.230(d)	Should the period of 8 hours run consecutively or is it possible to define two different periods? Can these hours be during daytime?	A period of 8 hours are 8 consecutive hours.
Reserve	CS FTL 1.230(b)	Is there any rest requirement after a reserve if there is no assignment for a duty period during the reserve?	In accordance with CS FTL.1.230(b), reserve times do not count as duty period for the purpose of ORO.FTL.210 and ORO.FTL.235. That means that there is no requirement for a minimum rest period after reserve if no duty has been assigned.
Reserve and Standby	ORO.FTL.105(20) and (25)	According to reserve and standby definitions, the only way to receive an assignment is either being on reserve or standby. Is there any other option/situation where the operator can contact a crew member to assign	'Reserve' and 'standby' allow for ad hoc assignments. Initially, the operator assigns duties by publishing a roster. A roster may be changed, however, rostered duties need to be published in a way that allows crew members to plan adequate rest.

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		a duty except when a crew member is on reserve or standby?	
Rest after standby	CS FTL.1.225	What is the basis for rest calculation after a standby followed by an FDP? Is it the reporting time for standby or the “actual reporting time” for the assigned FDP?	Standby other than airport standby counts (partly) as duty for the purpose of ORO.FTL.210 <i>only</i> . If a crew member receives an assignment during standby other than airport standby, the actual reporting time at the designated reporting point should be used for the purpose of ORO.FTL.235.
Rest to compensate for time zone differences	CS FTL.1.235(b)(4)	What does Eastward-Westward or Westward-Eastward transition mean?	‘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.
Reduced rest	CS FTL.1.235(c)(5)	Is it possible to apply reduced rest to two consecutive rest periods? Will then the reduced limit of the second rest stay at 12/10 hours or should the previous reduction be added?	Reduced rest is only possible under FRM. The FRM need to provide data demonstrating how an equivalent level of alertness is achieved with consecutive reduced rest periods. In any case, a maximum of 2 reduced rest periods between 2 recurrent extended recovery rest periods is allowed. In addition, all the other provisions of CS FTL.1.235 apply.
Reduced rest	CS FTL.1.235(c) CS FTL.1.235(b)(3)(ii)	Is it possible to reduce the 14h rest following an FDP involving a 4-hour or more away from home base?	No. CS FTL.1.235(b)(ii) does not foresee a reduction of the rest period to compensate for time zone crossing. ORO.FTL.235 (c) describes the conditions under which the minimum rest periods established in ORO.FTL.235 (a) and (b) may be reduced. ORO.FTL.235 (e) establishes the rest periods to compensate the effects of time zone crossing. Additional rest periods to compensate the effects of time zone crossing shall be specified in flight time specification schemes.
Roster	AMC1 ORO.FTL.110(a)	Is it necessary to include in the roster the specific time when the duty begins and finishes? Is it possible to make changes to a published roster in less than 14 days in advance?	Yes. Additional elements might be needed to enable an appropriate planning of individual fatigue management for crew members depending on the type of operation. Yes, provided that the operators with ORO.FTL.110(a). Operators must demonstrate their system fulfils the requirement ORO.FTL.110(a). This demonstration could be supported by the application of an operator’s

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			<p>SMS processes to its rostering system.</p> <p>There is no IR that forbids the communication of changes to a published roster. On the other hand, all other rules, i.e. those concerning rest before an FDP, need to be observed.</p>
Roster publication	AMC1 ORO.FTL.110(a)	<p>Many European airline operators today publish the monthly rosters around the 22nd-27th the month prior. In average, crew thus know the content of a calendar day some 15 to 20 days prior (spanning from some 7 to 35 days “horizon”).</p> <p>Is this seen as fulfilling the requirement in the AMC of “Rosters should be published 14 days in advance?”</p>	<p>According to AMC1 ORO.FTL.110(a), rosters should be published 14 days in advance. This requirement is an <i>AMC</i> to ORO.FTL.110(a). The AMC is <i>one</i> example of how operators could demonstrate compliance with this rule. The rule instructs the operator to publish rosters <i>sufficiently</i> in advance to provide the opportunity for crew members to <i>plan</i> adequate rest. In accordance with ORO.GEN.120, an operator could use an alternative means of compliance.</p> <p>It is therefore possible to use an alternative system to publishing rosters 14 days in advance, provided the operator has demonstrated that the requirements of ORO.FTL.110(a) are met with this alternative system.</p>
Split duty	ORO.FTL. 220	Is it possible to have more than one Split duty within one FDP?	ORO.FTL.220 lays down the conditions for extending the basic daily FDP due to <u>a break</u> on the ground.
Split duty	CS FTL.1.220 (b)	Are the 30 minutes for post and pre-flight duties as well as travelling counted in total or 30 min for postflight duties, 30 min for travelling after post flight duties, 30 min for travelling before pre-flight duties and 30 min for pre-flight duties?	CS FTL.1.220(b) instructs the operator to specify actual times for post and pre-flight duties and for travelling in its operations manual. The minimum for the <u>total</u> is 30 minutes. The operator must demonstrate how travelling in both directions, and post and pre-flight duties are accomplished in the time defined in the OM.
Split duty	CS FTL.1.220	For split duties, can several breaks be implemented?	ORO.FTL.220 establishes the conditions for extending the basic maximum FDP due to <u>a break</u> on the ground.

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Split duty	CS FTL.1.220(d)	Should suitable accommodation be provided for a split duty when crew members are in an unknown state of acclimatisation?	ORO.FTL.220(a)(2) requires flight time specification schemes to take into account 'other relevant factors' when specifying the possibility to extend the basic maximum daily FDP. The element of acclimatisation is not mentioned explicitly in CS FTL.1.220. CS FTL.1.220 (d) does, however, make reference to the window of circadian low (WOCL). The intent of providing suitable accommodation during a break encroaching the WOCL is to increase the likelihood of achieving and sustaining sleep during that time of day. If crew members are in an unknown state of acclimatisation it is not possible to determine their individual WOCL. Therefore, suitable accommodation should be provided for any split duty when crew members are in an unknown state of acclimatisation.
Standby	CS FTL.1.225	Why does CS FTL.1.225 (a) not stipulate the maximum duration of airport standby?	The maximum duration of airport standby is defined indirectly by the limits of the combined duration of airport standby and FDP.
Standby	ORO.FTL.225(a) GM1 CS FTL.1.225(a)	Can a standby be finished before the planned "end time notified in advance", after a notification during the standby (saying that there will be no assignment) and the rest period be initiated at the time of the notification of the new standby end?	Yes. According to ORO.FTL.225(a), a time period with a start and end time, during which a crew member must be available to be contacted to receive an assignment, must be defined. A crew member could, however, during the standby period, be notified that standby ceases. CS FTL.1.225 establishes further conditions. GM1 CS FTL.1.225(a) explains that a minimum rest period according to ORO.FTL.235 should be provided after the notification of the advanced end of the standby period.

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Standby	CS FTL.225(a)(2)(ii)	We understand that the cap of 16 hours is not applicable when airport standby is followed by an FDP with in-flight rest. Does that mean that there is no cap for that kind of situation?	The conditions to extend an FDP due to in-flight rest are established in ORO.FTL.205(e). Conditions for extending the basic maximum daily FDP due to a break on the ground (split duty) are established in ORO.FTL.220. The cap of 16 hours is only applicable for FDPs following the requirements in ORO.FTL.205(b) basic maximum daily FDP <i>without</i> the use of in-flight rest and (d) extended daily FDP <i>without the use of in-flight rest</i> . If other mitigating measures, such as in-flight rest or a break on the ground are provided, the cap of 16 hours in CS FTL.1.225(a)(2)(ii) does not apply.
Standby	CS FTL.1.225(b)	How is the time spent on standby other than airport before the assignment takes place considered? How is the time between notification and reporting considered?	According to CS FTL.1.225(b)(3), 25% of time spent on standby counts as <i>cumulative</i> duty. If no rest period, as specified in ORO.FTL.235, is provided between receiving the notification for an assignment and reporting, 25% of the time spent on standby (including the time between receiving the assignment and reporting) count as <i>cumulative</i> duty. Time between notification and reporting is considered standby. If a rest period is provided between notification and reporting, only the time spent on standby until the notification of the assignment is counted as 25% cumulative duty.
Standby	CS FTL.1.225	Can a standby be modified from “standby other than airport standby” to “airport standby” during the standby (pilot in “home standby” is required to go to the airport to continue on “airport standby”)? What limits must be used?	According to the definition of standby in ORO.FTL.105(25), during a standby period any duty may be assigned. That includes airport standby. CS FTL.1.225(b) establishes the limits for assignments when a crew member is on standby other than airport standby. If the assignment during standby other than airport standby is airport standby and the crew member receives an assignment during the airport standby, the limitations in both paragraphs need to be applied and the most restrictive limits for each case needs to be observed. That means, e.g. if the standby other than airport standby is commuted to airport standby after a crew member has already spent more than 6 hours on standby other than airport standby, the FDP must be reduced by any time spent on standby other than airport standby in excess of 6 hours. In accordance with CS FTL.1.225(b)(2), the operator designs procedures

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			ensuring that the combination of standby and FDP do not lead to more than 18 hours awake time. This also applies for the case of commuting standby other than airport standby to airport standby.
Standby	CS FTL.1.225	Is it possible to assign an FDP with a reporting time after the planned standby period has finalised during standby other than airport standby?	A crew member should not be assigned an FDP starting after the standby period has ended. CS FTL.1.225(b)(5) states that standby ceases when the crew member reports. Point (4) states that standby is followed by a rest period. A rest period should therefore start at the rostered end of standby. The extension of a standby period beyond the rostered finishing time is not foreseen in the rule.
Standby / Duty at the airport	ORO.FTL.225(d)	Why is there no CS for duty at the airport?	There is no need to specify any elements in CS for duty at the airport. All elements are given in ORO.FTL.225(d).
Standby followed by an FDP	CS FTL.1.225(b)(2)	How shall an operator expect a crew member to use whole or part of a standby for sleep when there are disturbance factors like difficulty to fall asleep, disturbed sleep due to sick children, waking-up by external noise, etc.?	According to CS FTL.1.225(b)(2), the operator <i>designs</i> its standby procedures in a certain way. The expectation is on the design of the procedure, not on the individual crew member. The expectation on the crew member is to follow the procedure to the best of his/her abilities and in good faith at all times.
Standby	CS FTL.1.225(b)(2)	Would a nap during the cruise phase without leaving the position in the flight crew compartment break the 18-hour awake time?	No. <u>A nap may only be used to overcome unexpected fatigue. The use of controlled rest should trigger a fatigue report.</u> According to CAT.OP.MPA.210(a)(3), <i>during all phases of flight each flight crew member required to be on duty in the flight crew compartment shall remain alert. If a lack of alertness is encountered, appropriate countermeasures shall be used. If unexpected fatigue is experienced, a controlled rest procedure, organised by the commander, may be used if workload permits. Controlled rest taken in this way shall not be considered to be part of a rest period for purposes of calculating flight time limitations nor used to justify any extension of the duty period.</i>

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			<p>Under CS FTL.1.225(b)(2), the operator designs standby procedures in a way that makes unexpected fatigue unlikely by avoiding excessive awake times. The frequent use of controlled rest after having been called from standby other than airport standby could indicate that the standby procedure does not fulfil the expectation to avoid excessive awake times.</p>
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