UNIÓN SINDICAL OBRERA
SECTOR AÉREO

ETF AMENDMENT TO EASA CRD 2010-2014 PROPOSAL

RED : ETF additions
BLUE: ETF edits

DEFINITIONS ORO .FTL.105

EASA DRAFT CRD PROPOSAL:	ETF AMENDMENTS:	ETF COMMENT
'**Accommodation**' means, for the purpose of standby and split duty, a quiet and comfortable place not open to the public with the ability to control light and temperature, equipped with adequate furniture comparable to a 'class 3' in-flight rest facility, with enough capacity to accommodate all crew members present at the same time and with access to food and drink.	'**Accommodation**' means, for the purpose of standby and split duty, a quiet and comfortable place not open to the public with the ability to control light and temperature, equipped with adequate furniture that reclines at least 40° from the vertical and provides leg and foot support to accommodate all crew members present at the same time and with access to food and drink.	**We need a better definition of Accommodation similar to class 3 in-flight rest facilities.**
'**Acclimatised**' : a crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time of his/her point of departure. Where the local time of the place where the duty commences differs more than 2 hours from that at the place where the duty ends the crew member is considered to be acclimatised in accordance with the values in the table below for the calculation of the maximum daily FDP.	'**Acclimatised**' : a crew member is considered to be acclimatised remaining within a 2-hour wide time zone from departing ~~surrounding the~~ local time ~~of his/her point of departure~~. Where the local time of the place where the duty commences differs more than 2 hours from that at the place where the duty ends the crew member is considered to be acclimatised in accordance with the values in the table below for the calculation of the maximum daily FDP.	**The definition of acclimatisation has to be used to determine the maximum FDP.**
'**Augmented flight crew**' means a flight crew which comprises more than the minimum number required to operate the aircraft, allowing each flight crew member to leave his/her assigned post and be replaced by another appropriately qualified flight crew member for the purpose of in-flight rest.	'**Augmented ~~flight~~ crew member**' means a ~~flight~~ crew member which comprises more than the minimum number required to operate the aircraft, allowing each ~~flight~~ crew member to leave his/her assigned post and be replaced by another appropriately qualified ~~flight~~ crew member for the purpose of in-flight rest.	**Augmentation must apply to all crew members, this includes cabin crews.**
'**Break**' means a period of time within an FDP, shorter than a rest period, during which a crew member is free of all tasks within a flight duty period. A break counts as duty. '**Crew member**' means a flight crew, cabin crew or technical crew member. '**Delayed reporting**' means the postponement of a scheduled FDP by the operator before a crew member has left his/her place of rest.		
'**Duty**' means any task that a crew member performs for the operator, including flight duty, administrative work, giving or receiving training, checking, positioning, and some elements of standby.	'**Duty**' means any task that a crew member performs for the operator, including flight duty, administrative work, giving or receiving training, checking, positioning, and ~~some elements of~~ standby.	**Any duties that are performed at the behest of the operator must include ALL duties.**
'**Duty period**' means a period which starts		

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when a crew member is required by an operator to report for or to commence a duty and ends when that person is free from all duties. '**Early start**' means a duty period starting in the period between 05:00 and 06:59 hours in the time zone to which a crew member is acclimatised. '**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.		
'**A single day free of duty**' means, for the purpose of complying with the Council Directive 2000/79/EC of 27 November 2000, a time free of all duties consisting of a single day and two local nights and which may include a rest period as part of the day off. '**Flight time**' means, for aeroplanes and touring motor gliders, the time between an aircraft first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position and all engines or propellers are shut down.	'**A single day free of duty**' means, for the purpose of complying with the Council Directive 2000/79/EC of 27 November 2000, a time at Home Base free of all duties, consisting of a single day and two local nights and which may include a rest period as part of the day off.	**For the European Convention on Human Rights- Right to a family life- a single day free of duty must be at HOME BASE.**
'**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. '**Late finish**' means a duty period finishing in the period between 00:00 and 01:59 hours in the time zone to which a crew member is acclimatised. '**Local day**' means a 24-hour period commencing at 00:00 local time. '**Local night**' means a period of 8 hours falling between 22:00 hours and 08:00 hours local time. '**A single day free of duty**' means, for the purpose of complying with the Council Directive 2000/79/EC of 27 November 2000, a time free of all duties consisting of a single day and two local nights and which may include a rest period as part of the day off. '**Night duty**' means a duty period encroaching any portion of the period between 02:00 and 04:59 hours in the time zone to which the crew is acclimatised. '**Operating crew member**' means a crew member carrying out his/her duties in an aircraft during a flight. **Rest facility**' means a bunk or seat that provides a crew member with a sleep opportunity on board an aircraft : 1. '**Class 1 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 and is located separately from both the flight crew compartment and the passengers cabin in an area that allows the crew member to control	'**Home base**' means the permanent single airport 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.	**A permanent single airport location to avoid Commuting time, this factor can induce fatigue by reducing the time available for rest and extending continuous period of wakefulness associated with FDP(From M. Spencer report). The effect of commuting time on subsequent levels of fatigue has been shown in a diary study of 158 pilots on short-haul routes between the Uk and the continent of Europe(Spencer and Robertson, 2000).** **The word "normally" has no meaning in this context.**

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light, and provides isolation from noise and disturbance ; 2. '**Class 2 rest facility**' means a seat in an aircraft cabin that reclines at least 45° back angle to the vertical, has at least a pitch of 55 inches (137,5 cm), a seat width of at least 20 inches (50 cm) and provides leg and foot support. It is separated from passengers by at least a curtain to provide darkness and some sound mitigation, and is reasonably free from disturbance by passengers or crew members ; 3. '**Class 3 rest facility**' means a seat in an aircraft cabin or flight crew compartment that reclines at least 40° from the vertical, provides leg and foot support and is separated from passengers by at least a curtain to provide darkness and some sound mitigation, and is not adjacent to any seat occupied by passengers. '**Rest period**' means a continuous, uninterrupted and defined period of time, subsequent to and/or prior to duty, during which a crew member is free from all duties. '**Rotation**' is a duty or a series of duties, including at least one flight duty, and rest periods 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.		
'**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, as follows : — airport standby means a standby performed at the airport, which may lead to an assignment of duty without an intervening rest period ; — short-call standby means a standby either at home or in a suitable accommodation, which may lead to an assignment of duty without an intervening rest period ; — long-call standby means a standby during which a crew member receives a notification at least 10 hours before the start of the assigned duty.	'**Standby**' means a rostered and defined period of duty 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, as follows : — airport standby means a standby duty performed at the airport, in accommodation, which may lead to an assignment of duty without an intervening rest period ; — short-call standby means a standby duty either at home or in a suitable accommodation, which may lead to an assignment of duty without an intervening rest period ; - long-call standby means a standby duty at home during which a crew member receives a notification at least 10 hours before the start of the assigned duty excluding time to travel from home to the airport.	**"Standby Duties are unpredictable, aircrews are not able to plan their sleep periods, including snaps" (Cabon scientific report);** **"If a quiet environment is not available for rest, or if a crew member is on immediate readiness, it is unlikely that much benefit would be derived from stand by period, in this case FDP should count in full from the start of standby". (M.Spencer report)** **"There is some evidence that individuals who are on call may suffer a degree of sleep disturbance (Torsvall and Akerstedt, 1988). The proposed reductions in maximum FDP allow for the difficulty in obtaining sufficient rest prior to duty, particularly when the standby period is at a time when sleep is not normally taken." (M.Spencer report)**
Split Duty: definition has been omitted and it has to be put back in	**Split Duty**: split duty must be pre-planned and pre-notified and it shall occur between two flights (opposed to two duties). It cannot be used to extend FDP when delays occur.	**In Cap. 371 there is a definition of Split duty, why not in CRD?**

FATIGUE RISK MANAGEMENT (FRM) ORO.FTL.120; AMC1 ORO.FTL.120 (d)(1); AMC2 ORO.FTL.120 (d)(1);AMC1 ORO.FTL.120(d)(2)(i); AMC1 ORO.FTL.120(d)(2)(ii); AMC1 ORO.FTL.120(d)(2)(iii); AMC1 ORO.FTL.120(d)(3); AMC1 ORO,FTL.120(d)(4);

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ORO.FTL.120 Fatigue risk management (FRM) (a) When FRM is required by an applicable certification, the operator shall establish, implement and maintain FRM as an integral part of its management system. FRM shall ensure compliance with the Essential Requirements 7.g. and 8.f. of Annex IV to Regulation (EC) No 216/2008. (b) When FRM is required by this Regulation, the operator shall establish it in the Operations Manual. (c) The FRM shall : (1) incorporate scientific principles and knowledge ; (2) manage the operational risk(s) of the operator arising from crew member fatigue on an ongoing basis ; (3) ensure that remedial actions, necessary to effectively mitigate the operator's risk(s) arising from crew member fatigue, are implemented promptly ; (4) correspond to the roster system or flight time specification scheme used by the operator ; (5) provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions ; and (6) provide for continuous improvement to the overall performance of the FRM. (d) The FRM shall contain the following (di) components in proportion to the type, size and complexity of the operations and the applicable flight time specification scheme : (1) FRM policy and documentation ; (2) FRM processes addressing : (i) hazard identification, (ii) risk assessment, (iii) risk mitigation ; (3) FRM safety assurance processes ; (4) FRM promotion processes. (e) The operator shall take mitigating actions when the FRM safety assurance process shows that the required safety performance is not maintained.	**ORO.FTL.120 Fatigue risk management (FRM)** ~~(a) When FRM is required by an applicable certification,~~ the operator shall establish, implement and maintain FRM as an integral part of its management system. FRM shall ensure compliance with the Essential Requirements 7.g. and 8.f. of Annex IV to Regulation (EC) No 216/2008. (b) ~~When FRM is required by this Regulation, the operator shall establish it in the Operations Manual.~~ c) The FRM shall : (1) incorporate scientific principles and knowledge ; (2) manage the operational risk(s) of the operator arising from crew member fatigue on an ongoing basis ; (3) ensure that remedial actions, necessary to effectively mitigate the operator's risk(s) arising from crew member fatigue, are implemented promptly ; (4) correspond to the roster system or flight time specification scheme used by the operator ; (5) provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions ; and (6) provide for continuous improvement to the overall performance of the FRM. **(7) Non punitive process** (d) The FRM shall contain the following (di) components in proportion to the type, size and complexity of the operations and the applicable flight time specification scheme : (1) FRM policy and documentation ; (2) FRM processes addressing : (i) hazard identification, (ii) risk assessment, (iii) risk mitigation ; (3) FRM safety assurance processes ; (4) FRM promotion processes. ~~**(e) The operator shall take mitigating actions when the FRM safety assurance process shows that the required safety performance is not maintained.**~~	**ETF :share the member states opinion** **FRM should always be required. FRM is a dynamic technique meant to analyse the event sequences, which could transform a potential hazard in an accident, in order to constantly develop preventive measure and or possible improvements.** **ICAO manual page 1** ***"Both SMS and FRMS rely on the concept of an 'effective safety reporting culture'1 ,where personnel have been trained and are constantly encouraged to report hazards whenever observed in the operating environment. To encourage the reporting of fatigue hazards by all personnel involved in an FRMS, an operator must clearly distinguish between:*** ***• Unintentional human errors, which are accepted as normal part of human behaviorand are recognized and managed within the FRMS; and*** ***• Deliberate violations of rules and established procedures. An***

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(2) clearly state the safety objectives of FRM ; (3) be signed by the accountable manager ; (i) be communicated, with visible endorsement, to all the relevant areas and levels of the organisation ; (ii) declare management commitment to effective safety reporting ; (iii) declare management commitment to the provision of adequate resources for FRM ; (iv) declare management commitment to continuous improvement of FRM ; (v) require that clear lines of accountability for management, flight, technical and cabin crews, and all other involved personnel are identified; and (vi)require periodic reviews to ensure it remains relevant and appropriate.		***operator should have processes independent of the FRMS to deal with intentional non-compliance"***
AMC1 ORO.FTL.120 (d) (1) Fatigue risk management (FRM) COMMERCIAL AIR TRANSPORT OPERATORS FRM POLICY The operator should define its FRM policy, with all the elements of FRM clearly identified. (a) The FRM policy should define the scope of FRM in terms of the operations to which it applies. (b) The FRM policy should : (1) reflect the shared responsibility of management, flight crew, cabin crew and technical crew, and other involved personnel; (2) clearly state the safety objectives of FRM ; (3) be signed by the accountable manager ; (i) be communicated, with visible endorsement, to all the relevant areas and levels of the organisation ; (ii) declare management commitment to effective safety reporting ; (iii) declare management commitment to the provision of adequate resources for FRM ; (iv) declare management commitment to continuous improvement of FRM ; (v) require that clear lines of accountability for management, flight, technical and cabin crews, and all other involved personnel are identified; and (vi) require periodic reviews to ensure it remains relevant and appropriate.	**AMC1 ORO.FTL.120 (d) (1) Fatigue risk management (FRM)** COMMERCIAL AIR TRANSPORT OPERATORS FRM POLICY The operator should define its FRM policy, with all the elements of FRM clearly identified. (a) The FRM policy should define the scope of FRM in terms of the operations to which it applies. (b) The FRM policy should : (1) reflect the shared responsibility of management, flight crew, cabin crew and technical crew, and other involved personnel; **The process should be continuously monitored by the national civil aviation authority and EASA**	*ICAO manual 3.4 page 8"The composition of the Fatigue Safety Action Group should reflect the shared responsibility of individuals and management by including representatives of all stakeholder groups (management, scheduling staff, and crew member representatives) and other individuals as needed to ensure that it has appropriate access to scientific and medical expertise. It should operate under Terms of Reference that are included in the FRMS documentation and which specify the lines of accountability between the Fatigue Safety Action Group and the operator's SMS"* Health and safety representatives a natural part of the process it needs definition of the task and education. Directive 89/391/EEC <u>Article 11 and 12</u>
AMC2 ORO.FTL.120 (d) (1) Fatigue risk management (FRM) COMMERCIAL AIR TRANSPORT OPERATORS FRM DOCUMENTATION An operator should develop and keep current FRM documentation that describes and records : (a) FRM policy and objectives ;	**AMC2 ORO.FTL.120 (d) (1) Fatigue risk management (FRM)** COMMERCIAL AIR TRANSPORT OPERATORS FRM DOCUMENTATION An operator should develop and keep current FRM documentation that describes and records that should be sent	

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(b) FRM processes and procedures ; (c)accountabilities, responsibilities and authorities for these processes and procedures ;(d)mechanisms for ongoing involvement of management, flight crew, cabin crew and technical crew members, and all other involved personnel ; (e) FRM training programmes, training requirements and attendance records ; (f) scheduled and actual flight times, duty periods and rest periods with deviations and reasons for deviations ; and (g) FRM outputs including findings from collected data, recommendations, and actions taken.	to authorities' and EASA (a) FRM policy and objectives ; (b) FRM processes and procedures ; (c) accountabilities, responsibilities and authorities for these processes and procedures ; (d)mechanisms for ongoing involvement of management, flight crew, cabin crew and technical crew members, and all other involved personnel ; (e) FRM training programmes, training requirements and attendance records ; (f) scheduled and actual flight times, duty periods and rest periods with deviations and reasons for deviations ; and (g) FRM outputs including findings from collected data, recommendations, and actions taken.	
AMC1 ORO.FTL.120 (d) (2) (i) Fatigue risk management (FRM) COMMERCIAL AIR TRANSPORT OPERATORS IDENTIFICATION OF HAZARDS An operator should develop and maintain three fundamental and documented processes for fatigue hazard identification : *1. Predictive* The predictive process should identify fatigue hazards by examining crew scheduling and taking into account factors known to affect sleep and fatigue and their effects on performance. Methods of examination may include, but are not limited to : (a) operator or industry operational experience and data collected on similar types of operations ; (b) evidence-based scheduling practices ; and (c) bio-mathematical models. *2. Proactive* The proactive process should identify fatigue hazards within current flight operations. Methods of examination may include, but are not limited to : (a) self-reporting of fatigue risks ; (b) crew fatigue surveys ; (c) relevant flight, technical and cabin crew performance data ; (d) available safety databases and scientific studies ; and (e) analysis of planned versus actual time worked. *3. Reactive* The reactive process should identify the contribution of fatigue hazards to reports and events associated with potential negative safety consequences in order to determine how the impact of fatigue could have been minimized. At a minimum, the process may be triggered by any of the following : (a) fatigue reports ; (b) confidential reports ; (c) audit reports ; (d) incidents ; and (e) flight data analysis events. **AMC1 ORO.FTL.120 (d) (2) (ii) Fatigue risk management (FRM)**		

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COMMERCIAL AIR TRANSPORT OPERATORS RISK ASSESSMENT An operator should develop and implement risk assessment procedures that determine the probability and potential severity of fatigue-related events and identify when the associated risks require mitigation. The risk assessment procedures should review identified hazards and link them to : (1) operational processes ; (2) their probability ; (3) possible consequences ; and (4) the effectiveness of existing safety barriers and controls. **AMC1 ORO.FTL.120 (d) (2) (iii) Fatigue risk management (FRM)** COMMERCIAL AIR TRANSPORT OPERATORS RISK MITIGATION An operator should develop and implement risk mitigation procedures that : (1) select the appropriate mitigation strategies ; (2) implement the mitigation strategies ; and (3) monitor the strategies' implementation and effectiveness. **AMC1 ORO.FTL.120 (d) (3) Fatigue risk management (FRM)** COMMERCIAL AIR TRANSPORT OPERATORS FRM SAFETY ASSURANCE PROCESSES The operator should develop and maintain FRM safety assurance processes to : 1. provide for continuous FRM performance monitoring, analysis of trends, and measurement to validate the effectiveness of the fatigue safety risk controls. The sources of data may include, but are not limited to : a. hazard reporting and investigations ; b. audits and surveys ; and c. reviews and fatigue studies ; 2. provide a formal process for the management of change which should include, but is not limited to : a. identification of changes in the operational environment that may affect FRM ; b. identification of changes within the organisation that may affect FRM ; and c. consideration of available tools which could be used to maintain or improve FRM performance prior to implementing changes ; and 3. provide for the continuous improvement of FRM. This should include, but is not limited to : a. the elimination and/or modification of risk controls have had unintended consequences or that are no longer needed due to changes in the operational or organisational environment ; b. routine evaluations of facilities, equipment, documentation and procedures ; and c. the determination of the need to introduce new processes and procedures to mitigate emerging fatigue-related risks. **AMC1 ORO.FTL.120 (d) (4) Fatigue risk management (FRM)** COMMERCIAL AIR TRANSPORT OPERATORS FRM PROMOTION PROCESS FRM promotion processes support the ongoing		

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development of FRM, the continuous improvement of its overall performance, and attainment of optimum safety levels. The following should be established and implemented by the operator as part of its FRM : 1. training programmes to ensure competency commensurate with the roles and responsibilities of management, flight, technical and cabin crew, and all other involved personnel under the planned FRM ; and 2. an effective FRM communication plan that : a. explains FRM policies, procedures and responsibilities to all relevant stakeholders ; and b. describes communication channels used to gather and disseminate FRM-related information.		

FLIGHT TIME SPECIFICATION SCHEMES ORO.FTL.200
FLIGHT DUTY PERIOD (FDP) ORO. FTL. 210; CS FTL.1.210; Gm1 ORO.FTL. 210(a)(1); GM1 CS. FTL.1.210(4); ORO.FTL.215
POSITIONING ORO.FTL.220

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ORO.FTL.200 Flight time specification schemes (a) Without prejudice to 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, operators shall establish, implement and maintain flight time specification schemes which are appropriate for the type(s) of operation performed, which comply with Regulation (EC) No 216/2008 and this Subpart. (b) Before being implemented, flight time specification schemes shall be approved by the competent authority. (c) In establishing compliance with Regulation (EC) No 216/2008 and this Subpart, the operator may follow the applicable Certification Specifications developed by the Agency. If the operator wants to deviate from these Certification Specifications when establishing its flight time specification scheme, it shall provide the competent authority with an assessment demonstrating that the requirements of Regulation (EC) No 216/2008 and of this Subpart are met. **ORO.FTL.210 Flight duty period (FDP)** (a) The operator shall (1) define reporting times appropriate to the operation ; (2) establish procedures specifying how the commander shall — in case of special circumstances which could lead to severe fatigue, and after consultation with the crew members affected — reduce the actual FDP and/or increase the rest period in order to eliminate any detrimental effect on flight safety ; and (3) require the commander to submit a		

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report whenever an FDP is increased beyond the maximum at his/her discretion, or when a rest period is reduced below the minimum, in actual operation. Where the increase of an FDP or the reduction of a rest period exceeds 1 hour, the operator shall send a copy of the report, together with its comments, to the competent authority, no later than 28 days after the event. (b) Basic maximum daily FDP. (1) The maximum daily FDP without the use of extensions for acclimatised crew members shall comply with the following table :	(b) Basic maximum daily FDP. (1) The maximum daily FDP ~~without the use of extensions~~ for acclimatised crew members shall comply with the following table : (concept of extension must be rejected, except under commanders discretion, as Moebus report and scientists do not accept this concept)	**In principle we reject the concept of FDP extensions but under rare circumstances it may be permissible. A define Break must be provided within the Flight Duty period and no more than 3 sectors (Capt 371 Section C, Annex F, page 2, 1.3, level 2; rules for both flight crews and cabin crews must be identical in the CRD)**
Maximum daily FDP — Acclimatised crew members (2) The maximum FDP when crew members are in an unknown state of acclimatisation shall comply with the following table : **Maximum daily FDP- Acclimatised crew members(Table)** **Sector Reduction**: Expected EASA CRD proposal: from 3rd sector: 30 min as for all following sectors, until 10th **FDP at Night:** (see table) 17.00-04.14: max FDP=11 hrs	**Sector Reduction:** Sector reduction must start as of 2nd sector (all 3 scientists agree on this) or: as of 45 min from 2nd sector (as in Cap 371), or as 30 min from 2nd sector + 45 min from 4th sector (as 3 scientist reports). The number of sectors shall be reduce to max 5. **FDP at Night:** (see table) 17.00-04.14: max FDP=10 hrs (In line with 3 scientific reports)	**We do not believe that there is enough scientific evidence nor has there been enough scientific work undertaken that addresses our belief that the number of sectors flown should be limited. *(M Spencer page 6 3.5.4)* Until there is conclusive evidence that reducing FDP by only 30 minutes correlates to degradation in alertness levels at the same linear rate as up to 4 sectors, we assert that there should be a limit of 5 sectors.**
Maximum daily FDP — Crew members in an unknown state of acclimatisation **(3) FDP with different reporting time for flight crew and cabin crew.** In cases where cabin crew require more time than the flight crew for their pre-flight briefing for the same flight or series of flights, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew as long as the difference does not exceed 60 minutes. The maximum daily FDP for cabin crew shall be based on the time at which the flight crew report for their FDP, but the FDP shall start at the reporting time of the cabin crew. (c) Maximum daily FDP with the use of extensions without in-flight rest. (1) The maximum daily FDP may be extended by up to 1 hour up to two times in any 7 consecutive days. In that case : (i) the minimum pre-flight and post-flight rest periods shall be increased by 2 hours ; or (ii) the post-flight rest period shall be increased by 4 hours. (2) The use of the extension shall be planned in advance, and shall be limited to a maximum of : (i) 5 sectors ; or	**Maximum daily FDP — Crew members in an unknown state of acclimatisation** (3) **FDP with different reporting time for flight crew and cabin crew.** In cases where cabin crew require more time than the flight crew for their "technical" pre-flight briefing for the same flight or series of flights, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew as long as the difference does not exceed 60 minutes. The maximum daily FDP for cabin crew shall be based on the time at which the flight crew report for their FDP, but the FDP shall start at the reporting time of the cabin crew, the use of different reporting time shall not be combined with Extended FDP, Reduce Rest and Split Duty, or result in a planned FDP of 14 hrs or more.	**The science is unclear and inconclusive *(CRD-page 40 285)* Therefore greater caution and a safer approach should be adopted. Differing report times are hard to justify however we would offer our addition as fair mitigation. *(MOEBUS page 39 'conclusions')*. Under the current proposal there is scope for an operator to combine a 1 hour FDP extension with different reporting times to extend cabin crew duties, cynically and contrary to the aim of the scheme.**

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(ii) 4 sectors, when the WOCL is encroached ; or (iii) 2 sectors, when the FDP encroaches the WOCL by more than 2 hours. (3) Extension of the maximum basic daily FDP without in-flight rest shall not be combined with extensions due to in-flight rest or split duty in the same duty period.(4) Where the extensions are used for consecutive FDPs, the additional pre and postflight rest between the two extended FDPs shall be provided consecutively. (5) Flight time specification schemes shall specify the limits for extensions of the maximum basic daily FDP in accordance with the Certification Specification applicable to the type of operation, taking into account : (i) the number of sectors flown ; and (ii) WOCL encroachment. (d) Maximum daily FDP with the use of extensions due to in-flight rest. (1) Flight time specification schemes shall specify the conditions for extensions of the maximum basic daily FDP with in-flight rest in accordance with the Certification Specification applicable to the type of operation, taking into account : (i) the number of sectors flown ; (ii) the minimum in-flight rest allocated to each crew member ; (iii) the type of in-flight rest facilities ; and (iv) the augmentation of the basic flight crew. (e) Unforeseen circumstances in flight operations — commander's discretion (1) 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 the reporting time shall comply with the following : (i) the maximum basic daily FDP which results after applying (b) and (c) and ORO.FTL.225 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; (ii) if on the final sector within an FDP unforeseen circumstances occur after takeoff and result in the permitted increase being exceeded, the flight may continue to the planned destination or alternate ; (iii) the rest period following an FDP may be reduced but never below 10 hours. (2) The commander shall, in case of unforeseen circumstances which could lead to severe fatigue, reduce the actual flight duty period and/or increase the rest period in order to eliminate any detrimental effect on flight safety. (3) The commander shall consult all crew		

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members on their alertness levels before deciding these modifications. (4) The operator shall require the commander to submit a report to the operator when an FDP is increased or a rest period is reduced by his/her discretion. (5) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which the operator shall add its comments, shall be sent to the competent authority not later than 28 days after the event. (6) The operator shall implement a non-punitive process for the use of the discretion described under this provision and shall describe it in the Operations Manual.		
ORO.FTL.215 Flight times and duty periods (a) The total duty periods to which a crew member may be assigned shall not exceed : (1) 60 duty hours in any 7 consecutive days ; (2) 110 duty hours in any 14 consecutive days ; and (3) 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout this period.	**ORO.FTL.215 Flight times and duty periods** (a) The total duty periods to which a crew member may be assigned shall not exceed : (1) 60 duty hours in any 7 consecutive days ; (2) 100 duty hours in any 14 consecutive days ; and (3) 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout this period.	**Protection against poor operator practice and repeated incidences of working 7 days with 1 day off on the 8th day. FRMS will not be robust enough to mitigate fatigue.**
(b) The total flight time of the flights on which an individual crew member is assigned as an operating crew member shall not exceed : (1) 100 hours of flight time in any 28 consecutive days ; and (2) 900 hours of flight time in any calendar year ; and (3) 1 000 hours of flight time in any 12 consecutive calendar months. (c) Post-flight duty shall count as duty. The operator shall specify in its Operations Manual the minimum time period for post-flight duties.	(b) The total flight time of the flights on which an individual crew member is assigned as an operating crew member shall not exceed : (1) 100 hours of flight time in any 28 consecutive days ; and (2) 900 hours of flight time in any calendar year ; and (3) 1000 hours of flight time in any 365 consecutive days. (c) Post-flight duty shall count as FDP ~~duty.~~ The operator shall specify in its Operations Manual the minimum time period for post-flight duties.	**This proposal can be manipulated leading to more hours flown than the minimum safe flying hours per annum. This clearly allows exploitation of the scheme and needs to be amended and brought into line with ICAO if the proposal is to fulfil its mandate.**
ORO.FTL.220 Positioning If operators assign crew members to positioning, the following shall apply : (a) Positioning after reporting but prior to operating shall be counted as FDP but shall not count as a sector. (b) All time spent on positioning shall count as duty time.	**ORO.FTL.220 Positioning** If operators assign crew members to positioning, the following shall apply : (a) Positioning after reporting but prior to operating shall be counted as FDP but shall not count as a sector. (b) All time spent on positioning shall count as duty time, and if the duty period is to exceed the relevant FDP and normal post flight duty period. The occasions should be limited in any 28 consecutive days. (c) The total duty period including the positioning does not exceed an additional 33% of the relevant FDP.	**Without limits on <u>positioning</u> after operating, a crew member could endure long duties such that will render them so fatigued that they are incapable of protecting their own life in the event of an emergency i.e. donning O2 masks in the event of decompression during deep sleep. The crew would also be incapable of operating safely should the Commander require a crew member to assist in an emergency i.e. disruptive passenger(s) in need of restraint.**
CS FTL.1.210 Flight duty period (FDP) **1 — Night duties** For consecutive night duties, the number of sectors is limited to 4 sectors per duty. **2 — Extension of FDP without in-flight rest** The extension of FDP without in-flight rest under the provisions of ORO.FTL.210(c)(5)		

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is limited to the values specified in the table below. **Maximum daily FDP with extension** **3 — Extension of FDP due to in-flight rest** (a) The extension of FDP with in-flight rest under the provisions of ORO.FTL.210(d) complies with the following (1) the FDP is limited to 3 sectors ; (2) the minimum in-flight rest period is a consecutive 90-minute period for each crew member and 2 consecutive hours for those flight crew members at control during landing. (b) The maximum daily FDP may be extended due to in-flight rest for flight crew : (1) with one additional flight crew member : (i) up to 14 hours with class 3 rest facilities; (ii) up to 15 hours with class 2 rest facilities ; (iii) up to 16 hours with class 1 rest facilities ; (2) with two additional flight crew members : (i) up to 15 hours with class 3 rest facilities; (ii) up to 16 hours with class 2 rest facilities ; (iii) up to 17 hours with class 1 rest facilities ; (c) The limits in (b) may be increased by 1 hour for FDPs that include 1 sector of over 9 hours continuous flight time and a maximum of 2 sectors. (d) The minimum in-flight rest for each cabin crew member is : (1) 33 % of the planned extended FDP if the in-flight rest is taken in class 3 rest facilities ; (2) 25 % of the planned extended FDP if the in-flight rest is taken in class 2 rest facilities ; and (3) 20 % of the planned extended FDP if the in-flight rest is taken in class 1 rest facilities. (e) All time spent in the rest facility is counted as FDP. (f) The minimum rest at destination is at least as long as the preceding duty period, or 14 hours, whichever is greater. (g) A crew member does not start a positioning sector to become part of this operating crew on the same flight. **4 — Unforeseen circumstances in actual flight operations — Delayed reporting** (a) The operator may delay the reporting time in the event of unforeseen circumstances, if procedures for delayed reporting are established in the Operations Manual. In such a case, if the crew member is informed of the delayed reporting time before leaving his/her place of rest, the FDP is calculated as follows : (1) 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 ; (2) when the delay is 4 hours or more, the maximum FDP is calculated based on the		

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more limiting of the original or the delayed reporting times and the FDP starts 4 hours after the original reporting time ; (3) when the delay is 10 hours or more, the time between the original and the delayed reporting time counts as a rest period. **GM1 ORO.FTL.210 Flight Duty Period** (a) Scheduling has an important impact on a crew member's ability to sleep and to maintain a proper level of alertness. When developing a workable roster, the operator should strike a fair balance between the commercial needs and the capacity of individual crew members to work effectively. Rosters should be developed in such a way that they distribute the amount of work evenly among those that are involved. (b) Schedules should allow for flights to be completed within the maximum permitted flight duty period and flight rosters should take into account the time needed for pre-flight duties, taxiing, the flight and turnaround times. Other factors to be considered when planning duty periods should include : (1) the allocation of work patterns which avoid undesirable practices such as alternating day/night duties, alternating eastward-westward or westward-eastward time zone transitions, positioning of crew members so that a serious disruption of established sleep/work patterns occurs ; (2) scheduling sufficient rest periods especially after long flights crossing many time zones ; (3) preparation of duty rosters sufficiently in advance with planning of recurrent extended recovery rest periods and notification of the crew members well in advance to plan adequate pre-duty rest. **AMC1 ORO.FTL.235 (b) Minimum rest periods** The time allowed for physiological needs should be 1 hour. Consequently, if the travelling time to the suitable accommodation is more than 30 minutes, the operator should increase the rest period by twice the amount of difference of travelling time above 30 minutes.		

REST PERIODS ORO.FTL.235; CS FTL.1.235; AMC1 ORO. FTL.235(b);AMC1 CS FTL.1.235 (2) (b) (i); AMC1 CS FTL.1.235(2)(c)

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ORO.FTL.235 Rest periods (a) Minimum rest period at home base. The minimum rest period provided before undertaking an FDP starting at home base Shall : (1) be at least as long as the preceding duty period, or 12 hours, whichever is greater ; or (2) comply with (b), if the operator provides	**ORO.FTL.235 Rest periods** (a) Minimum rest period at home base. The minimum rest period provided before undertaking an FDP starting at home base Shall : (1) be at least as long as the preceding duty period, or 12 hours, whichever is greater ; or	

a suitable accommodation to the crew member. (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. (c) Reduced rest By derogation from (a) and (b), flight time specification schemes may reduce the minimum rest periods taking into account the following elements in accordance with the Certification Specification applicable to the type of operation : (1) the minimum reduced rest period ; (2) the increase of the subsequent rest period ; and (3) the reduction of the FDP following the reduced rest. (d) Recurrent extended recovery rest periods 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, such that there shall never be more than 168 hours between the end of one recurrent extended recovery rest period and the start of the next. The recurrent extended recovery rest period shall be increased to 2 days twice every 28 days. e) Flight time specification schemes shall specify additional rest periods to compensate for : (1) the effects of time zone differences and extensions of the FDP ; (2) additional cumulative fatigue due to disruptive schedules ; and (3) a change of home base.	(2) comply with (b), if the operator provides a suitable accommodation to the crew member for no more than once in a month. (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. (c) ~~Reduced rest~~ ~~By derogation from (a) and (b), flight time specification schemes may reduce the minimum rest periods taking into account the following elements in accordance with the EASA Certification Specification proposed procedure for FTL ,applicable to the type of operation :~~ ~~(1) the minimum reduced rest period ;~~ ~~(2) the increase of the subsequent rest period ; and~~ ~~(3) the reduction of the FDP following the reduced rest.~~ (d) Recurrent extended recovery rest periods 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, such that there shall never be more than 168 hours between the end of one recurrent extended recovery rest period and the start of the next. The recurrent extended recovery rest period shall be increased to 2 days twice every 28 days.e) Flight time specification schemes shall specify additional rest periods to compensate for : (1) the effects of time zone differences and extensions of the FDP ; (2) additional cumulative fatigue due to disruptive schedules ; and (3) a change of home base. (4) the effect of cumulative flight hours within an FDP.	**As a principle, all rules needs a limitation to avoid excessive increasing of cumulative fatigue.** **EASA Certification Specification Proposed procedure has not been approved by EASA Management Board yet, this will mean that we are discussing the possibility of reducing rest without any transparency of the rule that will be apply.** **The requirements for minimum rest are designed to provide crew members with the opportunity to report for duty in fully rested state. This is not possible if the rest period is reduced, the impact on sleep is more severe than that associated with early morning start times (M.Spencer report).**
CS FTL.1.235 Minimum rest period **1 — Disruptive schedules** (a) When a transition at home base is planned from a late finish/night duty to an early start, the rest period between the 2 FDPs includes 1 local night. (b) For a crew member performing 4 or more night duties, early starts or late finishes between 2 extended recovery rest periods as defined in ORO.FTL.235(d), the second extended recovery rest period is extended to 60 hours. **2 — Time zone differences** (a) The operator monitors rotations and		**The present CRD rules take account of the time zone effect differences , but do not take account of the fatigue due to exposure to long consecutive hours of flight . No scientific expertise has been developed on this , although we believe that fatigue increases exponentially (not in a linear manner) after several consecutive flight or flight duty hours. Consequently when an FDP encompasses less than 4 time zones , there is no rest**

combinations of rotations in terms of their effect on crew fatigue, and adapts the crew schedules if necessary. (b) Time zone differences are compensated by additional rest, as follows: (1) At home base, if an FDP encompasses 4 time zones or more, the minimum rest is as specified in the following table and includes at least 2 local nights. **Minimum rest at home base to compensate for time zone differences** **Duration of rotation** **(hours)** **Maximum TZ** **crossed** **during** **rotation** < 60 ≥ 60 5 36 36 6 36 36 7 36 42 8 36 48 9 36 54 10 40 60 11 44 66 12 48 72 (2) Away from home base, if the FDP encompasses 4 time zones or more, the minimum rest provided is at least as long as the preceding duty period, or 14 hours, whichever is greater. Notwithstanding (b)(1), this provision may also apply to home base if the operator provides suitable accommodation to the crew. (3) In case of an Eastward-Westward or Westward-Eastward transition, a local night of rest at home base in addition to the rest periods established in (b)(1) is provided between alternating rotations.	~~**Minimum rest at home base to compensate for time zone differences**~~ ~~**Duration of rotation (hours)**~~ ~~**Maximum TZ crossed during rotation** < 60 ≥ 60~~ ~~5 36 36~~ ~~6 36 36~~ ~~7 36 42~~ ~~8 36 48~~ ~~9 36 54~~ ~~10 40 60~~ ~~11 44 66~~ ~~12 48 72~~	**compensation due to exposure to long consecutive flight hours i.e. all flights to Africa are penalised.** **French rules in the civil aviation code , (Decree D 422- 5) says: after a flight time or series of flight time of more than 6 hours , the rest is of minimum 3 times the length of the flight time , and after a flight time of more than 8 hours , the rest is of minimum 4 times the length of the flight time. These values can be reduced at layovers but the difference between minimum rest and reduced rest is restored at layover and is added to the minimum 36H home base rest.** **The CRD proposed rule on minimum rest is less restrictive than the French rules.**

STAND BY ORO. FTL. 230; CS FTL.1.230; GM1 CS FTL.1.230

EASA DRAFT CRD PROPOSAL	ETF AMENDMENTS	ETF COMMENT
ORO.FTL.230 Standby If operators assign crew members to standby, the following shall apply in accordance with the Certification Specification applicable to the type of operation : (a) Standby shall be roistered and the start and end time of standby shall be defined and notified in advance to the affected crew members to provide them with the opportunity to plan adequate rest. (b) Flight time specification schemes shall specify the following elements : (1) the maximum duration of any standby ; (2) the impact of standby on the maximum FDP that may be assigned resulting from standby, taking into account facilities provided to the crew member to rest, and other relevant factors such as the need for immediate readiness of the crew member, the interference of standby with sleep and/or sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP ; (3) the basic minimum rest period following standby which does not lead to assignment	**ORO.FTL.230 Standby** If operators assign crew members to standby, the following shall apply in accordance with the Certification Specification applicable to the type of operation : (a) Standby shall be roistered and the start and end time of standby shall be defined and notified in advance to the affected crew members to provide them with the opportunity to plan adequate rest. (b) Flight time specification schemes shall specify the following elements : (1) the maximum duration of any standby ; (2) the impact of standby on the maximum FDP that may be assigned resulting from standby, taking into account facilities provided to the crew member to rest, and other relevant factors such as the need for immediate readiness of the crew member,	

EASA DRAFT CRD PROPOSAL	ETF AMENDMENTS	ETF COMMENT
on an FDP ; (4) how time spent on standby shall be counted for the purpose of cumulative duty hours. **CS FTL.1.230 Standby** The modification of limits on flight duty, duty and rest periods under the provisions of ORO.FTL.230 complies with the following : **1 — Airport standby** (a) A crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period.(b) Where airport standby does not lead to assignment on a flight duty, it is followed by a rest period as specified in ORO.FTL.235. (c) Airport standby counts in full as duty time. (d) If an assigned FDP starts during the airport standby, the following applies : (1) if no accommodation is provided to the crew member, the FDP counts in full from the start of the standby reporting time ; (2) if accommodation is provided to the crew member, the FDP counts from the start of the FDP. The maximum FDP is reduced by any time spent on standby in excess of 4 hours or between 23:00 hours and 07:00 hours. **2 — Other standby** (a) For short-call standby the following applies : (1) the maximum time for short-call standby is 12 hours ; (2) short-call standby times count as 25 % of duty time for the purpose of ORO.FTL.215 ; (3) a short-call standby that does not lead to assignment of a duty is followed by a rest period in accordance with ORO.FTL.235 ; (4) if a call to report for a duty occurs within the first 6 hours of the short-call standby the maximum FDP counts from reporting ; (5) if a call to report for a duty occurs after the first 6 hours of the short-call standby the maximum FDP is reduced by the amount of short-call standby time exceeding 6 hours ; and (6) the standby ceases when the crew member reports at the designated reporting point ; (7) the response time between call and reporting time established by the operator allows the crew member to arrive from his/her place of rest to the designated reporting place within a reasonable time. (b) For long-call standby an assigned FDP counts from the reporting time. Standby times do not count as duty time for the purpose of ORO.FTL.215 and ORO.FTL.235.	the interference of standby with sleep and/or sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP ; (3) the basic minimum rest period following standby which does not lead to assignment on an FDP ; (4) how time spent on standby shall be counted for the purpose of cumulative duty hours. **CS FTL.1.230 Standby** The modification of limits on flight duty, duty and rest periods under the provisions of ORO.FTL.230 complies with the following : **1 — Airport standby** (a) A crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period.(b) Where airport standby does not lead to assignment on a flight duty, it is followed by a rest period as specified in ORO.FTL.235. (c) Airport standby counts in full as duty time. (d) If an assigned FDP starts during the airport standby, the following applies : ~~(1) if no accommodation is provided to the crew member, the FDP counts in full from the start of the standby reporting time ;~~ (2) if accommodation is provided to the crew member, the FDP counts from the start of the FDP. The maximum FDP is reduced by any time spent on standby in excess of 2 hours or between 23:00 hours and 07:00 hours. In all cases the most limiting FDP from either the start time of the airport standby or the report time of the flying duty should be applied. **2 — Other standby** (a) For short-call standby the following applies : (1) the maximum time for short-call standby is 12 hours ; (2) short-call standby times count as 25 % of duty time for the purpose of ORO.FTL.215 ; (3) a short-call standby that does not lead to assignment of a duty is followed by a rest period in accordance with ORO.FTL.235 ; (4) if a call to report for a duty ~~occurs within~~ is in the first 4 hours of the short-call standby the maximum FDP counts from reporting ; (5) if a call to report for a duty occurs after the first 4 hours of the short-call standby the maximum FDP is reduced by the amount of short-call standby time	**It is of crucial importance that Aircrews are required to have high levels of alertness and cognitive performances to ensure safety, standby without accommodation will not ensure this requirement. Scientists reports agree on the fact that standby has to be in accommodation or suitable accommodation. Stand by should be counted regarding cumulative limits.** **The most limiting FDP should be applied because there is a scientifically justifiable reason for each FDP i.e. Waking in the WOCL or flying into the WOCL. Therefore the most limiting FDP is the minimum safe standard to prevent fatigue.** **"If the start or end of standby interferes with regular sleeping times and lead to later bed times or earlier wake-up times flight duty time limits have to be reduced by two times the lost hours of sleep applying the equivalent rationale used for in-flight-rest (Gundel report)".**

EASA DRAFT CRD PROPOSAL	ETF AMENDMENTS	ETF COMMENT
	exceeding 4 hours **The most limiting FDP should be applied** ; and (6) the standby ceases when the crew member reports at the designated reporting point ; (7) the response time between call and reporting time established by the operator allows the crew member to arrive from his/her place of rest to the designated reporting place within a reasonable time. (b) For home long-call standby an assigned FDP counts from the reporting time. Standby times ~~do not~~ count as duty time for the purpose of ORO.FTL.215 and ORO.FTL.235. The number of Home Long-Call stand by in 7 consecutive days has to be defined, as also the minimum rest between one Home Long–call and the next one.	**The lack of a maximum duration could lead to excessive or unlimited stand by time, the rest after standby must be planned.**

HOME BASE ORO.FTL.205 ; CS FTL.1.205; GM1 CS FTL.1.205

EASA DRAFT CRD PROPOSAL	ETF AMENDMENTS	ETF COMMENT
ORO.FTL.205 Home base An operator shall assign a home base for each crew member. **CS FTL.1.205 Home base** (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 or FDP. **GM1 CS FTL.1.205 Home Base** Crew members should consider making arrangements for temporary accommodation closer to their home base if the travelling time from their residence to their home base usually exceeds 90 minutes.	**ORO.FTL.205 Home base** An operator shall assign a home base with a high degree of permanency for each crew member. **CS FTL.1.205 Home base** (a) The home base is a single airport location assigned with a high degree of permanence. (b) In the case of an exceptional 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 shall be counted as positioning or FDP. **GM1 CS FTL.1.205 Home Base** Crew members should consider making arrangements for temporary accommodation closer to their home base at the time before it is required to report for duty, if the travelling time from their residence to their home base usually exceeds 90 minutes.	**Higher degree of permanency is required to avoid commuting that may shorten sleep periods. "The sleep related component in fatigue does not show full recovery at the time of reporting (Gundel report)".** **Long commuting times may compromise the opportunity for sleep, in particular if schedule rest is close to minimum rest. 8 hrs of sleep in the usual accommodation at home base before commencing flight duty is required by crew members and by humans normally.**

SPLIT DUTY ORO.FTL.225; CS FTL.1.225; GM1 CS FTL.1.225(b):

EASA DRAFT CRD PROPOSAL	ETF AMENDMENTS	ETF COMMENT
	ORO.FTL.225 Split duty	

EASA DRAFT CRD PROPOSAL	ETF AMENDMENTS	ETF COMMENT
ORO.FTL.225 Split duty (a) Flight time specification schemes shall specify the following elements for split duty in accordance with the Certification Specification applicable to the type of operation : (1) the minimum duration of a break on the ground ; (2) by derogation from ORO.FTL.210 (b), the possibility to increase the FDP taking into account the duration of the break on the ground, and facilities provided to the crew member to rest and other relevant factors. (b) The break on the ground shall count in full as FDP. (c) Split duty shall not follow a reduced rest. **CS FTL.1.225 Split duty** The increase of limits on flight duty, under the provisions of ORO.FTL.225, complies with the following : (a) The break on the ground within the FDP has a minimum duration of 3 consecutive hours. (b) The break excludes the time for post and pre-flight duties and travelling time which are counted for a minimum of 30 minutes. (c) The maximum FDP specified in ORO.FTL.210(b) may be increased by up to 50 % of the break. (d) Suitable accommodation is provided for a break of 6 hours or more, and for a break that encroaches the WOCL. (e) In all other cases : (1) accommodation is provided ; and (2) any time of the actual break exceeding 6 hours or any time of the break that encroaches the WOCL does not count for the extension of the FDP. (f) Split duty cannot be combined with in-flight rest.	(a) Flight time specification schemes shall specify the following elements for split duty in accordance with the Certification Specification applicable to the type of operation : (1) the maximum number in 28 days. (2) the minimum duration of a single break on the ground; (3) by derogation from ORO.FTL.210 (b), the possibility to increase the FDP taking into account the duration of the break on the ground, and facilities provided to the crew member to rest and other relevant factors. (b) The single break on the ground shall count in full as FDP. It is (c) Split duty shall not proceed and follow a reduced rest. **CS FTL.1.225 Split duty** The increase of limits on flight duty, under the provisions of ORO.FTL.225, complies with the following : (a) The single break on the ground within the FDP has a minimum duration of 3 consecutive hours. (b) The single break excludes the time for post and pre-flight duties and travelling time which are counted for a minimum of 30 minutes. (c) The maximum FDP specified in ORO.FTL.210(b) may be increased by up to 50 % of the single break. (d) Suitable accommodation is provided for all ~~a~~ single break ~~of 6 hours or more, and for~~ or if a break ~~that~~ encroaches the WOCL. ~~(e) In all other cases :~~ ~~(1) accommodation is provided ; and~~ ~~(2) any time of the actual break exceeding 6 hours or any time of the break that encroaches the WOCL does not count for the extension of the FDP.~~ (f) Split duty cannot be combined with in-flight rest, FDP programmed extensions and with Commanders Discretion.	For definitions: Split Duty; A pre notified flying duty period which consisits of two or more sectors, separated by less than a minimum rest period. Refer to; Provision of scientific expertise. 3.6 pg 17 & 26 also, Mick Spencer; 7.1 – 7.5, 10.2. Additionally; refer to Colgan Air Crash, investigation, recommendations and subsequent amendments to FTL scheme regarding using an A/C for rest. **Split duty combined with reduce rest must induce to a significant sleep debt. It seems like if rest reduction and /or split duty, if may occur during an unfavourable time of the day, that crews will not be enough rest prior to the time of reporting for FDP.**

NUTRITION ORO.FTL.240; AMC1 ORO FTL. 240.

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ORO.FTL.240 Nutrition (a) A meal and drink opportunity shall occur in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds 6 hours. (b) An operator shall specify in its Operations Manual how the crew member's nutrition during FDP is ensured.	**-ORO.FTL.240 Nutrition** (a) A meal and drink opportunity shall occur in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds 6 hours. (b) An operator shall specify in its Operations Manual how the crew member's nutrition during FDP is ensured.	A mealbreak every 5 hour(6hour) ?Minimum duration of 20 minutes and a short break every second hour Nutrition and fluid is a major contribution to prevent fatigue during a day at work. 20 minute meal opportunity must be

EASA DRAFT CRD PROPOSAL	ETF AMENDMENTS	ETF COMMENTS
AMC1 ORO.FTL.240 Nutrition 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 two meals should be provided and two meal opportunities 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.	move AMC: **AMC1 ORO.FTL.240 Nutrition to ORO ORO.FTL.240 Nutrition** 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 two meals should be provided and two meal opportunities 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	guaranteed if the duty period exceeds 5 hours The meal should be consumed during the era of peace (give Crew a short recovery during long working hours) Purpose to reduce fatigue and give the body recovery. "As Cabin Crew while standing and walking, need to have a high level of alertness, awareness and need to be responsive to any situation that may arise (this can be physically and mentally demanding). Therefore Cabin Crew need to have small breaks and full meal breaks which are protected isolated from any other duties."