

IACA CS-FTL for EASA NPA 2009-02c

Objective: EASA NPA 2009-02c includes a 3-page CS-FTL Certification Specification to Part-OR Subpart OPS Section VIII on Flight and duty time limitations and rest requirements (see NPA 2009-02c pages 33-35).

The IACA FTL Working Group and IACA Safety Standards Committee jointly decided to propose an alternate Certification Specification CS-FTL.IACA taking into account the conditions as specified in OR.OPS.330.FTL and AMC.OR.OPS.330.FTL(c).

IACA CS-FTL: consolidates all comments of IACA members (2nd column) on the EASA NPA (1st column) as an intermediate step to an IACA proposal (3rd column). The substantiation and justification is added in the 4th column of this CS-FTL.IACA.

The IACA CS-FTL includes at the end a proposal to address the five “blank spots” of EU-OPS, currently addressed at National level.

Attachments:

1. Table A – Basic FDP
2. Table B – Extended FDP
3. Flowchart FDP calculation
4. Memo FDP calculation
5. Graph A - Basic FDP - Comparison between IACA and EASA NPA
6. Graph B - Extended FDP – Comparison between IACA and EASA NPA

IACA CS-FTL for EASA NPA 2009-02c

EASA NPA 2009-02c Part-OR CS-FTL	IACA Comments	Proposal CS-FTL.IACA	Substantiation / Justification
p33 CS FTL.1 Basic Certification Specification for Commercial Air Transport (Aeroplanes)		CS FTL.1 Basic Certification Specification for Commercial Air Transport – Aeroplanes – alternate proposed by IACA	N/A
p33 CS FTL.1.100 Applicability CS FTL.1 constitutes a flight time specification scheme in accordance with OR.OPS.330.FTL and is applicable for commercial air transport operations (aeroplanes) in conjunction with the applicable requirements for flight and duty time limitations and rest requirements.		CS FTL.1.100 Applicability CS FTL.1 constitutes a flight time specification scheme in accordance with OR.OPS.330.FTL and is applicable for commercial air transport operations (aeroplanes) in conjunction with the applicable requirements for flight and duty time limitations and rest requirements.	N/A

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<p>p33 CS FTL.1.135 Maximum daily Flight Duty Period (FDP)</p> <p>(a) Maximum daily FDP without the use of extensions.</p> <p>The maximum basic daily FDP shall be 13 hours which shall be reduced by 30 minutes for each sector from the third sector onwards and be further reduced (up to a maximum of two hours) when the WOCL is encroached in accordance with the limits specified in the table below:</p> <table><tr><th>Start of FDP</th><th>1 Sector</th><th>2 Sectors</th><th>3 Sectors</th><th>4 Sectors</th><th>5 Sectors or more</th></tr><tr><td>0600 - 1259</td><td>13:00</td><td>13:00</td><td>12:30</td><td>12:00</td><td>11:30</td></tr><tr><td>1300 - 1329</td><td>12:55</td><td>12:55</td><td>12:25</td><td>11:55</td><td>11:25</td></tr><tr><td>1330 - 1359</td><td>12:40</td><td>12:40</td><td>12:10</td><td>11:40</td><td>10:50</td></tr><tr><td>1400 - 1429</td><td>12:25</td><td>12:25</td><td>11:55</td><td>11:25</td><td>09:55</td></tr><tr><td>1430 - 1459</td><td>12:10</td><td>12:10</td><td>11:40</td><td>11:10</td><td>10:40</td></tr><tr><td>1500 - 1529</td><td>11:55</td><td>11:55</td><td>11:25</td><td>10:55</td><td>10:25</td></tr><tr><td>1530 - 1559</td><td>11:40</td><td>11:40</td><td>11:10</td><td>10:40</td><td>10:10</td></tr><tr><td>1600 - 1629</td><td>11:25</td><td>11:25</td><td>10:55</td><td>10:25</td><td>09:55</td></tr><tr><td>1630 - 1659</td><td>11:10</td><td>11:10</td><td>10:40</td><td>10:10</td><td>09:40</td></tr><tr><td>1700 - 0359</td><td>11:00</td><td>11:00</td><td>10:30</td><td>10:00</td><td>09:30</td></tr><tr><td>0400 - 0429</td><td>11:15</td><td>11:15</td><td>10:45</td><td>10:15</td><td>09:45</td></tr><tr><td>0430 - 0459</td><td>11:45</td><td>11:45</td><td>11:15</td><td>10:45</td><td>10:15</td></tr><tr><td>0500 - 0529</td><td>12:15</td><td>12:15</td><td>11:45</td><td>11:15</td><td>10:45</td></tr><tr><td>0530 - 0559</td><td>12:45</td><td>12:45</td><td>12:15</td><td>11:45</td><td>11:15</td></tr></table>	Start of FDP	1 Sector	2 Sectors	3 Sectors	4 Sectors	5 Sectors or more	0600 - 1259	13:00	13:00	12:30	12:00	11:30	1300 - 1329	12:55	12:55	12:25	11:55	11:25	1330 - 1359	12:40	12:40	12:10	11:40	10:50	1400 - 1429	12:25	12:25	11:55	11:25	09:55	1430 - 1459	12:10	12:10	11:40	11:10	10:40	1500 - 1529	11:55	11:55	11:25	10:55	10:25	1530 - 1559	11:40	11:40	11:10	10:40	10:10	1600 - 1629	11:25	11:25	10:55	10:25	09:55	1630 - 1659	11:10	11:10	10:40	10:10	09:40	1700 - 0359	11:00	11:00	10:30	10:00	09:30	0400 - 0429	11:15	11:15	10:45	10:15	09:45	0430 - 0459	11:45	11:45	11:15	10:45	10:15	0500 - 0529	12:15	12:15	11:45	11:15	10:45	0530 - 0559	12:45	12:45	12:15	11:45	11:15	<p>It is not possible to verify the values and the logic of the table, because the original rules are not part of the text. For example: Is the 50% WOCL-correction taken into account?</p> <p>The table is in general more restrictive than EU-OPS subpart Q, sometimes EASA allows a longer FDP:</p> <ul style="list-style-type: none">the actual FDP is not used to calculate the maximum allowable FDP;the sector correction is applied after the WOCL correction;the 50% correction when encroaching the WOCL is not always applied correctly;by using time brackets for reporting on duty times the max. FPD has in some instances been reduced. <p>The safety arguments for the following adjustments are lacking:</p> <ul style="list-style-type: none">The sector correction is reduced from maximum daily FDP after the WOCL-correction (the values in columns 3, 4 and 5 is not correct and contradictory with the EU-OPS 1.135 (a));When calculating the WOCL-correction, a sliding scale is used. This is not taken into account when using brackets of 30 minutes;	<p>CS FTL.1.135 Maximum daily Flight Duty Period (FDP)</p> <p>(a) Maximum daily FDP without the use of extensions</p> <p>The maximum basic daily FDP shall be 13 hours which shall be reduced by 30 minutes for each sector from the third sector onwards and be further reduced (up to a maximum of two hours) when the WOCL is encroached. The calculated Basic FDP is specified in Table A. The start of FDP is expressed in the WOCL time zone as per OR.OPS.010.FTL(o).</p>	<p>Table A has been calculated in accordance and in the sequence of EU-OPS as shown in attached Flowchart.</p> <p>The calculation method to ensure that the Maximum FDP is reduced by 50% of the calculated Basic FDP is explained in attached Memo.</p> <p>The differences between Table A and EASA CS FTL.135(a) are shown in attached Graph A.</p>
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The extension is further reduced to a maximum of four sectors when the WOCL is encroached and to a maximum of two sectors when FDP encroaches the WOCL by more than two hours with the limits specified in table below:</p> <table><tr><th>Start of FDP</th><th>1 Sector</th><th>2 Sectors</th><th>3 Sectors</th><th>4 Sectors</th><th>5 Sectors</th><th>6 Sectors or more</th></tr><tr><td>0600 - 1259</td><td>14:00</td><td>14:00</td><td>13:30</td><td>13:00</td><td>12:30</td><td>Not Allowed</td></tr><tr><td>1300 - 1329</td><td>13:55</td><td>13:55</td><td>13:25</td><td>12:55</td><td>12:25</td><td>Not Allowed</td></tr><tr><td>1330 - 1359</td><td>13:40</td><td>13:40</td><td>13:10</td><td>12:40</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>1400 - 1429</td><td>13:25</td><td>13:25</td><td>12:55</td><td>12:25</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>1430 - 1459</td><td>13:10</td><td>13:10</td><td>12:40</td><td>12:10</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>1500 - 1529</td><td>12:55</td><td>12:55</td><td>12:25</td><td>11:55</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>1530 - 1559</td><td>12:40</td><td>12:40</td><td>12:10</td><td>11:40</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>1600 - 1629</td><td>12:25</td><td>12:25</td><td>11:55</td><td>11:25</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>1630 - 1659</td><td>12:10</td><td>12:10</td><td>11:40</td><td>11:10</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>1700 - 2159</td><td>12:00</td><td>12:00</td><td>Not Allowed</td><td>Not Allowed</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>2200 - 0359</td><td>11:45</td><td>11:45</td><td>Not Allowed</td><td>Not Allowed</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>0400 - 0459</td><td>11:45</td><td>11:45</td><td>11:15</td><td>10:45</td><td>Not allowed</td><td>Not allowed</td></tr><tr><td>0500 - 0529</td><td>13:15</td><td>13:15</td><td>12:45</td><td>12:15</td><td>Not Allowed</td><td>Not Allowed</td></tr><tr><td>0530 - 0559</td><td>13:45</td><td>13:45</td><td>13:15</td><td>12:45</td><td>Not Allowed</td><td>Not Allowed</td></tr></table> <p>The maximum number of times that extensions can be used is two in any seven consecutive days. Where an FDP is planned to use an extension, the minimum pre flight and post flight rest periods are increased by two hours, or post flight rest only is increased by four hours. Where the extensions are used for consecutive FDPs the pre and post rest between the two operations run consecutively.</p>	Start of FDP	1 Sector	2 Sectors	3 Sectors	4 Sectors	5 Sectors	6 Sectors or more	0600 - 1259	14:00	14:00	13:30	13:00	12:30	Not Allowed	1300 - 1329	13:55	13:55	13:25	12:55	12:25	Not Allowed	1330 - 1359	13:40	13:40	13:10	12:40	Not Allowed	Not Allowed	1400 - 1429	13:25	13:25	12:55	12:25	Not Allowed	Not Allowed	1430 - 1459	13:10	13:10	12:40	12:10	Not Allowed	Not Allowed	1500 - 1529	12:55	12:55	12:25	11:55	Not Allowed	Not Allowed	1530 - 1559	12:40	12:40	12:10	11:40	Not Allowed	Not Allowed	1600 - 1629	12:25	12:25	11:55	11:25	Not Allowed	Not Allowed	1630 - 1659	12:10	12:10	11:40	11:10	Not Allowed	Not Allowed	1700 - 2159	12:00	12:00	Not Allowed	Not Allowed	Not Allowed	Not Allowed	2200 - 0359	11:45	11:45	Not Allowed	Not Allowed	Not Allowed	Not Allowed	0400 - 0459	11:45	11:45	11:15	10:45	Not allowed	Not allowed	0500 - 0529	13:15	13:15	12:45	12:15	Not Allowed	Not Allowed	0530 - 0559	13:45	13:45	13:15	12:45	Not Allowed	Not Allowed	<p>Following the sequence of the rules, the WOCL has been taken into account at the beginning. Therefore, extensions are not influenced anymore by the WOCL. Per EU-OPS, the maximum daily FDP can be extended by up to one hour per EU-OPS1.1105.1.</p>	<p>CS FTL.1.135 Maximum daily Flight Duty Period (FDP)</p> <p>(b) Maximum daily FDP with the use of extensions.</p> <p>The maximum daily FDP can be extended by up to one hour and this extension is limited to a maximum of 5 sectors. The extension is further limited to a maximum of four sectors when the WOCL is encroached and to a maximum of two sectors when FDP encroaches the WOCL by more than two hours. The calculated Extended FDP are specified in Table B. The start of FDP is expressed in the WOCL time zone as per OR.OPS.010.FTL(o). Flights departing between 22:00 and 05:00 are limited to 11:45.</p> <p>The maximum number of times that extensions can be used is two in any seven consecutive days. Where an FDP is planned to use an extension, the minimum pre flight and post flight rest periods are increased by two hours, or post flight rest only is increased by four hours. Where the extensions are used for consecutive FDPs the pre and post rest between the two operations run consecutively.</p>	<p>Table B has been calculated in accordance and in the sequence of EU-OPS as shown in attached Flowchart. The one hour extension is only added when permitted by the WOCL encroachment of the Basic FDP for the number of sectors.</p> <p>The differences between Table B and EASA CS FTL.135(a) are shown in attached Graph B.</p>
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<p>p33 CS FTL.1.135 Maximum daily Flight Duty Period (FDP) (c) 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 <u>same</u> 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.</p>	<p>The added word 'same' makes this article more restrictive. The safety argument for this adjustment is lacking.</p> <p>Delete the word "same" and add: “(d) For the determination of the maximum FDP of the cabin crew the reporting time of the flight crew shall be assumed to be the reporting time of the cabin crew.”</p>	<p>CS FTL.1.135 Maximum daily Flight Duty Period (FDP) (c) 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 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. (d) For the determination of the maximum FDP of the cabin crew the reporting time of the flight crew shall be assumed to be the reporting time of the cabin crew.</p>	<p>Motivation: Cabin crew shall never be the limiting factor with respect to FDP.</p> <p>If the reporting time of the cabin crew is used to determine the maximum FDP, it could be that in certain instances the cabin crew will still be more restrictive by as much as one hour w.r.t. the flight crew. Eg.: Cc. reports at 04:00; Fc. reports at 05:00. Cc. max FDP will be 11:15 + 01:00 = 12:15 i.e. latest reporting off time 16:15; Fc max FDP will be 12:15 i.e. latest reporting off time 17:15.</p>
<p>p.34 CS FTL.1.140 Flight times and duty periods (a) The total duty periods to which a crew member is assigned shall not exceed: (1) 60 duty hours in any seven consecutive days; (2) 190 duty hours in any 28 consecutive days</p>	<p>To provide flexibility due different reporting times for cabin crew and flight crew in case of unforeseen delays, cabin crew have an additional 5 hours per any seven consecutive days.</p>	<p>CS FTL.1.140 Flight times and duty periods (a) The total duty periods to which a crew member is assigned shall not exceed: (1) 60 (65 for cabin crew) duty hours in any seven consecutive days; (2) 190 (210 for cabin crew) duty hours in any 28 consecutive days</p>	<p>Justification: UK CAP371 Motivation: The safety tasks of flight crew and cabin crew are different: cabin crew are re-active while flight crew more pro-active. Cabin crew shall never be the limiting factor with respect to flight times and duty periods.</p>

IACA CS-FTL for EASA NPA 2009-02c

EASA NPA 2009-02c Part-OR CS-FTL	IACA Comments	Proposal CS-FTL.IACA	Substantiation / Justification
<p>p.34 CS FTL.1.140 Flight times and duty periods</p> <p>(b) The total flight time of the flights on which an individual crew member is assigned as an operating crew member shall not exceed:</p> <p>(1) 100 flight hours in any 28 consecutive days;</p> <p>(2) 900 flight hours in any 12 consecutive calendar months.</p>	<p>This text is more restrictive than EU-OPS Subpart Q text which refers to 900 hrs in a calendar year. The safety argument is lacking.</p> <p>Revert back to EU-OPS text which is in line with the EU Working Time Directive by replacing „any 12 consecutive calendar months“ by „one calendar year“.</p> <p>Due to diverging demand in winter season and summer season no balance possible. IACA carriers are highly subject to seasonal effects, e.g. peak during summer season. The “one calendar year” as in EU-OPS and Working Time Directive (Council Directive 2000/79/EC) reduces the problem to a one-time exercise at the end of the calendar year, i.e. in the winter low season. The EASA proposed “12 consecutive months” present however an unnecessary continuing challenge, also during the summer peak. Note that this summer peak is not driven by the operator, but by the market itself, e.g. hard working families and tax payers going on well deserved summer holidays.</p>	<p>CS FTL.1.140 Flight times and duty periods</p> <p>(b) The total flight time of the flights on which an individual crew member is assigned as an operating crew member shall not exceed:</p> <p>(1) 100 flight hours in any 28 consecutive days;</p> <p>(2) 900 flight hours in a calendar year.</p>	<p>The “900 hours in any 12 consecutive months” are not specified by ICAO and is more restrictive than the EU Working Time Directive EC 2000/79 Clause 9:</p> <p>“Without prejudice to Clause 3, mobile staff in civil aviation shall be given days free of all duty and standby, which are notified in advance, as follows:</p> <p>a) at least seven local days in each calendar month, which may include any rest periods required by law; and</p> <p>b) at least 96 local days in each calendar year, which may include any rest periods required by law.</p> <p>There is no safety justification given for the additional requirement, which will lead to reduced flexibility in particular when planning crew members’ leave.</p> <p>Finally, Certification Specification CS FTL.1.140 (a) and (b)(1) will avoid any intended abuse of the “one calendar year”. The intent is already covered by 1.140 (c).</p>

IACA CS-FTL for EASA NPA 2009-02c

EASA NPA 2009-02c Part-OR CS-FTL	IACA Comments	Proposal CS-FTL.IACA	Substantiation / Justification
<p>p.34 CS FTL.1.140 Flight times and duty periods (c) The total duty periods and total flight times referred to in (a) and (b) above should be spread as evenly as practicable throughout their respective periods.</p>	<p>The text, not stated in the original EU-OPS subpart Q regulations, is described vaguely and does not have any added value.</p>	<p>CS FTL.1.140 Flight times and duty periods Deleted (c)</p>	<p>The text, not stated in the original EU-OPS subpart Q regulations, is described vaguely and does not have any added value.</p>
<p>p35- CS FTL.1.155 Minimum Rest Period (a) Minimum rest period at home base. The minimum rest period provided before undertaking a flight duty period starting at home base is at least as long as the preceding duty period, or 12 hours, whichever is the greater.</p>	<p>Maintain the wording of EU-OPS EU- OPS 1.1110.1 Rest</p>	<p>CS FTL.1.155 Minimum Rest Period 1. Minimum rest 1.1. The minimum rest which must be provided before undertaking a flight duty period starting at home base shall be at least as long as the preceding duty period or 12 hours whichever is the greater;</p>	<p>EU-OPS 1.1110 Rest</p>
<p>p35 CS FTL.1.155 Minimum Rest Period (b) Minimum rest period away from home base. The minimum rest period provided before undertaking a flight duty period starting away from home base is at least as long as the preceding duty period, or 10 hours, whichever is the greater. The minimum rest period away from home base includes an 8 hour sleep opportunity taking account of travelling and other physiological needs</p>	<p>Maintain the wording of EU-OPS EU- OPS 1.1110.1 Rest</p>	<p>1.2. The minimum rest which must be provided before undertaking a flight duty period starting away from home base shall be at least as long as the preceding duty period or 10 hours whichever is the greater; when on minimum rest away from home base, the operator must allow for an eight hour sleep opportunity taking due account of travelling and other physiological needs;</p>	<p>EU-OPS 1.1110 Rest</p>

IACA CS-FTL for EASA NPA 2009-02c

EASA NPA 2009-02c Part-OR CS-FTL	IACA Comments	Proposal CS-FTL.IACA	Substantiation / Justification
<p>p35 CS FTL.1.155 Minimum Rest Period (c) Recurrent extended recovery rest periods The minimum recurrent extended recovery rest period to compensate for cumulative fatigue is a 36-hour period including two local nights, such that there are never more than 168 hours between the end of one recurrent extended recovery rest period and the start of the next.</p>	<p>There is no definition for “cumulative fatigue”. There is no safety argument to link “recurrent extended recovery “ rest periods with “cumulative fatigue”.</p> <p>To quote the Moebus study on page 27: “Question 10: The effects of the format of rest periods on cumulative fatigue (ref. EU-OPS 1.1110 para 2.1)...In the absence of direct scientific evidence, it is not possible to provide clear guidance on the relationship between cumulative fatigue and the frequency of days off.”</p> <p>Maintain the wording of EU-OPS EU- OPS 1.1110.2 Rest Periods</p>	<p>CS FTL.1.155 Minimum Rest Period (c) Recurrent extended recovery rest periods An operator shall ensure that the minimum rest provided as outlined above is increased periodically to a weekly rest period, being a 36-hour period including two local nights, such that there shall never be more than 168 hours between the end of one weekly rest period and the start of the next. As an exception, the second of those local nights may start from 20:00 hours if the weekly rest period has a duration of at least 40 hours.</p>	<p>EU-OPS 1.1110.2</p> <p>There is no scientifically based argument to link cumulative fatigue and frequency of days off.</p>

IACA CS-FTL for EASA NPA 2009-02c

EASA NPA 2009-02c Part-OR CS-FTL	IACA Comments	Proposal CS-FTL.IACA	Substantiation / Justification
<p>p35 CS FTL.1.160 Unforeseen circumstances in actual flight operations – discretion by pilot in command</p> <p>(a) The conditions for the modification of the limits on flight duty, duty and rest periods by the pilot in command in the case of unforeseen circumstances in actual flight operations, and after the reporting time, should comply with the following:</p> <p>(1) The maximum basic daily FDP which results after applying CS FTL.1.135 <u>(b) and (c)</u> may not be increased by more than two 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;</p> <p>(2) The maximum basic daily FDP which results after applying CS FTL.1.135 <u>(b), (c) and (d)</u> may not be increased by more than one hour unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 2 hours;</p> <p>(3) If on the final sector within a FDP unforeseen circumstances occur after take off that will result in the permitted increase being exceeded,</p>	<p>Should be <u>(a) and (c)</u>. OPS 1.1120.1 does not specify who shall made the decision to extend, but only specifies such decision shall be acceptable to the PIC. The EASA NPA specifies this decision shall be made by the PIC. The operator shall still be able to propose extensions to the PIC, subject to PIC's acceptance.</p> <p>Should be <u>(b) and (c)</u>. CS FTL.1.160 references to CS FTL.1.135 are wrong (e.g. CS FTL.1.135 (d) does not exist).</p>	<p>CS FTL.1.160 Unforeseen circumstances in actual flight operations – discretion by pilot in command</p> <p>Maintain wording of EU-OPS 1.1120, but replacing the reference to "1.1105.1.3" by "maximum basic FDP of 13 hours".</p>	<p>EU-OPS 1.1120.1.1 clearly refers to 1.1105.1.3 i.e. maximum basic FDP of 13 hours.</p> <p>The (ab)use of the discretion by the PIC is monitored: EU-OPS 1.1120.1.3.2. requires the PIC whenever the increase of a FDP or reduction of a rest period exceeds one hour, to file a report, to which the operator must add his comments, and provide to the Competent Authority no later than 28 days after the event. Last but not least, such events will also be considered under the operator's FRMS, part of its SMS.</p>

IACA CS-FTL for EASA NPA 2009-02c

<p>the flight may continue to the planned destination or alternate;</p> <p>(4) In the event of such circumstances, the rest period following the FDP may be reduced but never below the minimum rest period defined in CS FTL.1.155 (b).</p> <p>(b) The pilot in command should consult all crew members before deciding these modifications</p>	<p>Replace “such” by “unforeseen”. If not, (4) will not be possible if the PIC has not extended the previous FDP. PIC should be able to reduce rest period without necessarily having increased the previous FDP.</p>		
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IACA CS-FTL for EASA NPA 2009-02c

open items EU-OPS ("blank spots")	Proposal	Substantiation / Justification						
1.1105.6 Extended FDP (split duty) 6.1. The Authority may grant approval to an operation based on an extended FDP including a break, subject to the provisions of Article 8. 6.2. Each operator will have to demonstrate to the Authority, using operational experience and taking into account other relevant factors, such as current scientific knowledge, that its request for an extended FDP produces an equivalent level of safety.	<p>When an FDP consists of two or more sectors - of which one can be a positioning journey counted as a sector - but separated by less than a minimum rest period, then the FDP will be extended by the amounts indicated below:</p> <table><tr><td>Consecutive hours Rest</td><td>Maximum Extension of the FDP</td></tr><tr><td>Less than 3</td><td>NIL</td></tr><tr><td>3 – 11</td><td>A period equal to half the consecutive hours rest taken, but no greater than 5 hours.</td></tr></table> <p>The rest period shall not include the 30 minute allowed for post flight duties, nor the 60 minutes standard report time for pre-flight duties. However, the captain may, at his discretion, amend this time depending upon local circumstances but will not reduce it to less than a minimum total of 30 minutes. When the rest period is 6 hours or less it will suffice if a quiet and comfortable place, not open to the public, is available. If rest is taken in the aircraft on the ground, the crew must have adequate control of the temperature and power units. The passengers must not be on board. If the rest period is more than 6 consecutive hours, then suitable accommodation will be provided by the Company.</p>	Consecutive hours Rest	Maximum Extension of the FDP	Less than 3	NIL	3 – 11	A period equal to half the consecutive hours rest taken, but no greater than 5 hours.	UK (CAP371)
Consecutive hours Rest	Maximum Extension of the FDP							
Less than 3	NIL							
3 – 11	A period equal to half the consecutive hours rest taken, but no greater than 5 hours.							

IACA CS-FTL for EASA NPA 2009-02c

open items EU-OPS ("blank spots")	Proposal	Substantiation / Justification
<p>1.1110.1.3 rest compensation time zone differences</p> <p>1.3. An operator will ensure that effects on crew members of time zone differences will be compensated by additional rest, as regulated by the Authority subject to the provisions of Article 8.</p>	<p>In case of a time zone difference of 4 hours or more between the start and the end of the FDP :</p> <p>(a) At home base, the minimum rest (1.1) must be increased by the time zone difference between the home base and the out station from where the FDP started. Minimum rest shall be at least 16 hours.</p> <p>(b) Away from home base, the minimum rest as defined in EU-OPS 1.1110.1.2 shall be increased by 4 hours.</p>	<p>NL</p> <p>NL</p>
<p>1.1110.1.4. reduced rest</p> <p>1.4.1. Notwithstanding 1.1 and 1.2 and subject to the provisions of Article 8, the Authority may grant reduced rest arrangements.</p> <p>1.4.2. Each operator will have to demonstrate to the Authority, using operational experience and taking into account other relevant factors, such as current scientific knowledge, that its request for reduced rest arrangements produces an equivalent level of safety.</p>	<p>The Competent Authority may grant reduced rest arrangements - at least 10 hours - at home base and out-of-home base. Each operator will have to demonstrate to the Competent Authority, using operational experience and taking into account other relevant factors, such as current scientific knowledge, that its request for reduced rest arrangements produces an equivalent level of safety.</p>	<p>EU-OPS 1.1110.1.1.4.</p>

IACA CS-FTL for EASA NPA 2009-02c

open items EU-OPS ("blank spots")	Proposal	Substantiation / Justification															
<p>1.1115 Extension of flight duty period due to in-flight rest (augmented crew)</p> <p>1. Subject to the provisions of Article 8 and providing each operator demonstrates to the Authority, using operational experience and taking into account other relevant factors such as current scientific knowledge, that its request produces an equivalent level of safety:</p> <p>1.1. Flight crew augmentation The Authority shall set the requirements in connection with the augmentation of a basic flight crew for the purpose of extending the flight duty period beyond the limits in OPS 1.1105 above.</p>	<p>1.1. Flight Crew Augmentation</p> <p>1.1.1 In case of a basic flight crew augmentation, the maximum FDP as mentioned in OPS 1.1105 may be extended according to following table:</p> <table border="1" data-bbox="659 561 1724 902"> <thead> <tr> <th data-bbox="659 561 1014 662">Rest facility on board</th><th colspan="2" data-bbox="1014 561 1724 662">Maximum FDP extension</th></tr> <tr> <th data-bbox="659 662 1014 797"></th><th data-bbox="1014 662 1369 797">Augmented flight crew Ops 1.1095 1.1</th><th data-bbox="1369 662 1724 797">Basic flight crew + 2 flight crew members</th></tr> </thead> <tbody> <tr> <td data-bbox="659 797 1014 833">Bunk</td><td data-bbox="1014 797 1369 833">4 hours</td><td data-bbox="1369 797 1724 833">5 hours</td></tr> <tr> <td data-bbox="659 833 1014 868">Seat class A</td><td data-bbox="1014 833 1369 868">3 hours</td><td data-bbox="1369 833 1724 868">4 hours</td></tr> <tr> <td data-bbox="659 868 1014 902">Seat class B</td><td data-bbox="1014 868 1369 902">2 hours</td><td data-bbox="1369 868 1724 902">3 hours</td></tr> </tbody> </table> <p><u>Bunk</u> = a facility on board an aircraft screened from the cockpit and passenger cabin, which can be darkened and in which horizontal rest can be enjoyed.</p> <p><u>Seat class A</u> = a seat not in the cockpit, screened from the passengers by at least a curtain, which is at least as wide and has more pitch than an economy class seat, with minimal 40° recline and has a fully integrated leg- and footrest. Adjacent seat(s), not separated by an aisle, may only be occupied by another crew member.</p> <p><u>Seat class B</u> = an economy class passenger seat, not in the cockpit, screened from the passengers by at least a curtain. Adjacent seat(s), not separated by an aisle, may only be occupied by another crew member.</p> <p>1.1.2 Under the responsibility of the commander a scheme for in-flight rest will be drawn up. The number of hours rest for each member of the flight crew will be at least equal to 50% of the extension of the FDP with a minimum rest of 1 hour.</p> <p>1.1.3 Extensions for flights with more than 4 sectors are not allowed.</p>	Rest facility on board	Maximum FDP extension			Augmented flight crew Ops 1.1095 1.1	Basic flight crew + 2 flight crew members	Bunk	4 hours	5 hours	Seat class A	3 hours	4 hours	Seat class B	2 hours	3 hours	<p>NL</p>
Rest facility on board	Maximum FDP extension																
	Augmented flight crew Ops 1.1095 1.1	Basic flight crew + 2 flight crew members															
Bunk	4 hours	5 hours															
Seat class A	3 hours	4 hours															
Seat class B	2 hours	3 hours															

IACA CS-FTL for EASA NPA 2009-02c

<p>1.1115 Extension of flight duty period due to in-flight rest (augmented crew)</p> <p>1.2. Cabin crew</p> <p>The Authority shall set the requirements in connection with the minimum in-flight rest by cabin crew member(s) when the FDP goes beyond the limitations in OPS 1.1105 above.</p>	<p>1.2 Cabin Crew Augmentation</p> <p>1.2.1 In case of a rest opportunity during the flight, the maximum FDP as mentioned in OPS 1.1105 may be extended according to following table:</p> <table><tr><td>Rest facility on board</td><td>Maximum FDP extension</td></tr><tr><td>Bunk</td><td>6 hours</td></tr><tr><td>Seat class A</td><td>4 hours</td></tr><tr><td>Seat class B</td><td>3 hours</td></tr></table> <p>1.2.2 Under the responsibility of the commander a scheme for in-flight rest will be drawn up. The number of hours rest for each member of the cabin crew will be at least equal to 50% of the extension of the FDP with a minimum rest of 1 hour.</p>	Rest facility on board	Maximum FDP extension	Bunk	6 hours	Seat class A	4 hours	Seat class B	3 hours	<p>NL</p>
Rest facility on board	Maximum FDP extension									
Bunk	6 hours									
Seat class A	4 hours									
Seat class B	3 hours									

IACA CS-FTL for EASA NPA 2009-02c

open items EU-OPS ("blank spots")	Proposal	Substantiation / Justification
<p>1.1125.2.1 standby other than airport</p> <p>2. Other forms of standby (including standby at hotel)</p> <p>2.1. Subject to the provisions of Article 8, all other forms of standby shall be regulated by the Authority, taking into account the following:</p> <p>2.1.1. All activity shall be rostered and/or notified in advance.</p> <p>2.1.2. The start and end time of the standby shall be defined and notified in advance.</p> <p>2.1.3. The maximum length of any standby at a place other than a specified reporting point shall be determined.</p> <p>2.1.4. Taking into account facilities available for the crew member to rest and other relevant factors, the relationship between the standby and any assigned flight duty resulting from the standby shall be defined.</p> <p>2.1.5. The counting of standby times for the purposes of cumulative duty hours shall be defined.</p>	<p>(1) Standby duty must be counted as flight duty period if the standby period and the flight duty period are not interrupted by a rest period in accordance with OPS 1.1110 and</p> <ol style="list-style-type: none"> 1. either no quiet room with sleeping accommodation is available to the crew member during the standby period, 2. or a quiet room with sleeping accommodation is available to the crew member during the standby period, but the standby period is less than two hours, unless the standby period is served at the end of a rest period. <p>(2) If a quiet room with sleeping accommodation is available to the crew member, the standby period may be deemed to be a break.</p> <p>(3) A standby period following a rest period during which the crew member has the opportunity to sleep in his or her own home or in appropriate accommodation may be counted by the operator as a rest period. The same applies to such a standby period prior to a rest period.</p>	<p>GE</p>