Changes to legislation: There are currently no known outstanding effects for the Commission Regulation (EU) No 83/2014, ANNEX II. (See end of Document for details)

#### ANNEX II

In Annex III to Regulation (EU) No 965/2012, the following Subpart FTL is added:

# SUBPAR**FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS** FTL

### SECTION 1

#### General

# **ORO.FTL.100 Scope**

This Subpart establishes the requirements to be met by an operator and its crew members with regard to flight and duty time limitations and rest requirements for crew members.

## **ORO.FTL.105 Definitions**

For the purpose of this Subpart, the following definitions shall apply:

(1) "acclimatised" means a state in which a crew member's circadian biological clock is synchronised to the time zone where the crew member is. A crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time at the point of departure. When the local time at the place where a duty commences differs by more than 2 hours from the local time at the place where the next duty starts, the crew member, for the calculation of the maximum daily flight duty period, is considered to be acclimatised in accordance with the values in the Table 1.

TABLE 1

Time difference (h) between reference time and local time where the crew member starts the next duty	Time ela	Time elapsed since reporting at reference time							
•	. 40	48-71:59	72 05.50	06 110.50					
	< 48	40-/1.39	72–95:59	96–119:59	≥ 120				
< 4	8 B	D	D	D D	≥ 120 D				
< 4 ≤ 6				+					
	В	D	D	D	D				

"B"

means acclimatised to the local time of the departure time zone,

"D"

means acclimatised to the local time where the crew member starts his/her next duty, and

"X" means that a crew member is in an unknown state of acclimatisation;

- (2) "reference time" means the local time at the reporting point situated in a 2-hour wide time zone band around the local time where a crew member is acclimatised;
- (3) "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 provides a crew member with the possibility to sleep, with enough capacity to accommodate all crew members present at the same time and with access to food and drink;
- (4) "suitable accommodation" means, for the purpose of standby, split duty and rest, a separate room for each crew member located in a quiet environment and equipped with a bed, which is sufficiently ventilated, has a device for regulating temperature and light intensity, and access to food and drink;
- (5) "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 the assigned post, for the purpose of in-flight rest, and to be replaced by another appropriately qualified flight crew member;
- (6) "break" means a period of time within a flight duty period, shorter than a rest period, counting as duty and during which a crew member is free of all tasks;
- (7) "delayed reporting" means the postponement of a scheduled FDP by the operator before a crew member has left the place of rest;
- (8) "disruptive schedule" means a crew member's roster which disrupts the sleep opportunity during the optimal sleep time window by comprising an FDP or a combination of FDPs which encroach, start or finish during any portion of the day or of the night where a crew member is acclimatised. A schedule may be disruptive due to early starts, late finishes or night duties.
  - (a) "early type" of disruptive schedule means:
    - (i) for "early start" a duty period starting in the period between 05:00 and 05:59 in the time zone to which a crew member is acclimatised; and
    - (ii) for "late finish" a duty period finishing in the period between 23:00 and 01:59 in the time zone to which a crew member is acclimatised;
  - (b) "late type" of disruptive schedule means:
    - (i) for "early start" a duty period starting in the period between 05:00 and 06:59 in the time zone to which a crew member is acclimatised; and
    - (ii) for "late finish" a duty period finishing in the period between 00:00 and 01:59 in the time zone to which a crew member is acclimatised;
- (9) "night duty" means a duty period encroaching any portion of the period between 02:00 and 04:59 in the time zone to which the crew is acclimatised;
- (10) "duty" means any task that a crew member performs for the operator, including flight duty, administrative work, giving or receiving training and checking, positioning, and some elements of standby;

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- "duty period" means a period which starts when a crew member is required by an operator to report for or to commence a duty and ends when that person is free of all duties, including post-flight duty;
- "flight duty period ('FDP')" means a period that commences when a crew member is required to report for duty, which includes a sector or a series of sectors, and finishes when the aircraft finally comes to rest and the engines are shut down, at the end of the last sector on which the crew member acts as an operating crew member;
- "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;
- (14) "home base" means the location, assigned by the operator to the crew member, from where the crew member normally starts and ends a duty period or a series of duty periods and where, under normal circumstances, the operator is not responsible for the accommodation of the crew member concerned;
- "local day" means a 24-hour period commencing at 00:00 local time;
- (16) "local night" means a period of 8 hours falling between 22:00 and 08:00 local time;
- "operating crew member" means a crew member carrying out duties in an aircraft during a sector;
- "positioning" means the transferring of a non-operating crew member from one place to another, at the behest of the operator, excluding:
  - the time of travel from a private place of rest to the designated reporting place at home base and vice versa, and
  - the time for local transfer from a place of rest to the commencement of duty and vice versa;
- "rest facility" means a bunk or seat with leg and foot support suitable for crew members' sleeping on board an aircraft;
- (20) "reserve" means a period of time during which a crew member is required by the operator to be available to receive an assignment for an FDP, positioning or other duty notified at least 10 hours in advance;
- "rest period" means a continuous, uninterrupted and defined period of time, following duty or prior to duty, during which a crew member is free of all duties, standby and reserve;
- "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;
- (23) "single day free of duty" means, for the purpose of complying with the provisions of Council Directive 2000/79/EC<sup>(1)</sup>, a time free of all duties and standby consisting of one day and two local nights, which is notified in advance. A rest period may be included as part of the single day free of duty;
- "sector" means the segment of an FDP between an aircraft first moving for the purpose of taking off until it comes to rest after landing on the designated parking position;

- "standby" means a pre-notified and defined period of time during which a crew member is required by the operator to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period;
- (26) "airport standby" means a standby performed at the airport;
- (27) "other standby" means a standby either at home or in a suitable accommodation;
- (28) "window of circadian low ('WOCL')" means the period between 02:00 and 05:59 hours in the time zone to which a crew member is acclimatised.

# **ORO.FTL.110 Operator responsibilities**

# An operator shall:

- (a) publish duty rosters sufficiently in advance to provide the opportunity for crew members to plan adequate rest;
- (b) ensure that flight duty periods are planned in a way that enables crew members to remain sufficiently free from fatigue so that they can operate to a satisfactory level of safety under all circumstances;
- (c) specify reporting times that allow sufficient time for ground duties;
- (d) take into account the relationship between the frequency and pattern of flight duty periods and rest periods and give consideration to the cumulative effects of undertaking long duty hours combined with minimum rest periods;
- (e) allocate duty patterns which avoid practices that cause a serious disruption of an established sleep/work pattern, such as alternating day/night duties;
- (f) comply with the provisions concerning disruptive schedules in accordance with ARO.OPS.230;
- (g) provide rest periods of sufficient time to enable crew members to overcome the effects of the previous duties and to be rested by the start of the following flight duty period;
- (h) plan recurrent extended recovery rest periods and notify crew members sufficiently in advance:
- (i) plan flight duties in order to be completed within the allowable flight duty period taking into account the time necessary for pre-flight duties, the sector and turnaround times;
- (j) change a schedule and/or crew arrangements if the actual operation exceeds the maximum flight duty period on more than 33 % of the flight duties in that schedule during a scheduled seasonal period.

# **ORO.FTL.115** Crew member responsibilities

# Crew members shall:

- (a) comply with point CAT.GEN.MPA.100(b) of Annex IV (Part-CAT); and
- (b) make optimum use of the opportunities and facilities for rest provided and plan and use their rest periods properly.

# **ORO.FTL.120** Fatigue risk management (FRM)

(a) When FRM is required by this Subpart or an applicable certification specification, the operator shall establish, implement and maintain a FRM as an integral part of its management system. The FRM shall ensure compliance with the essential

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- requirements in points 7.f, 7.g and 8.f of Annex IV to Regulation (EC) No 216/2008. The FRM shall be described in the operations manual.
- (b) The FRM established, implemented and maintained shall provide for continuous improvement to the overall performance of the FRM and shall include:
- a description of the philosophy and principles of the operator with regard to FRM, referred to as the FRM policy;
- documentation of the FRM processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;
- (3) scientific principles and knowledge;
- (4) a hazard identification and risk assessment process that allows managing the operational risk(s) of the operator arising from crew member fatigue on a continuous basis;
- a risk mitigation process that provides for remedial actions to be implemented promptly, which are necessary to effectively mitigate the operator's risk(s) arising from crew member fatigue and for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions;
- (6) FRM safety assurance processes;
- (7) FRM promotion processes.
- (c) The FRM shall correspond to the flight time specification scheme, the size of the operator and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in those activities and the applicable flight time specification scheme.
- (d) The operator shall take mitigating actions when the FRM safety assurance process shows that the required safety performance is not maintained.

# **ORO.FTL.125** Flight time specification schemes

- (a) Operators shall establish, implement and maintain flight time specification schemes that are appropriate for the type(s) of operation performed and that comply with Regulation (EC) No 216/2008, this Subpart and other applicable legislation, including Directive 2000/79/EC.
- (b) Before being implemented, flight time specification schemes, including any related FRM where required, shall be approved by the competent authority.
- (c) To demonstrate compliance with Regulation (EC) No 216/2008 and this Subpart, the operator shall apply the applicable certification specifications adopted by the Agency. Alternatively, if the operator wants to deviate from those certification specifications in accordance with Article 22(2) of Regulation (EC) No 216/2008, it shall provide the competent authority with a full description of the intended deviation prior to implementing it. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating that the requirements of Regulation (EC) No 216/2008 and of this Subpart are met.
- (d) For the purpose of point ARO.OPS.235(d), within 2 years of the implementation of a deviation or derogation, the operator shall collect data concerning the granted deviation or derogation and analyse that data using scientific principles with a view to

assessing the effects of the deviation or derogation on aircrew fatigue. Such analysis shall be provided in the form of a report to the competent authority.

### SECTION 2

# Commercial Air Transport Operators

### **ORO.FTL.200** Home base

An operator shall assign a home base to each crew member.

# ORO.FTL.205 Flight duty period (FDP)

- (a) The operator shall:
- (1) define reporting times appropriate to each individual operation taking into account ORO.FTL.110(c);
- (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 concerned, reduce the actual FDP and/or increase the rest period in order to eliminate any detrimental effect on flight safety.
- (b) Basic maximum daily FDP.
- (1) The maximum daily FDP without the use of extensions for acclimatised crew members shall be in accordance with the following table:

TABLE 2

Maxim	um daily	FDP —	- Acclim	atised c	rew mer	nbers			
Start	1–2	3	4	5	6	7	8	9	10
of	Sector	s Sector	s Sector	s Sector	s Sector	rs Sector	rs Sector	s Sector	s Sectors
FDP									
at									
referei time	ace								
0600– 1329	13:00	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00
1330– 1359	12:45	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00
1400– 1429	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00
1430– 1459	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00
1500– 1529	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
1530– 1559	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00
1600– 1629	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00

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1630– 1659	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00	09:00
1700– 0459	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00	09:00
0500- 0514	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
0515- 0529	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00
0530- 0544	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00
0545- 0559	12:45	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00

(2) The maximum daily FDP when crew members are in an unknown state of acclimatisation shall be in accordance with the following table:

TABLE 3

### Crew members in an unknown state of acclimatisation

Maximum daily FDP according to sectors								
1–2	3	4	5	6	7	8		
11:00	10:30	10:00	09:30	09:00	09:00	09:00		

(3) The maximum daily FDP when crew members are in an unknown state of acclimatisation and the operator has implemented a FRM, shall be in accordance with the following table:

TABLE 4

# Crew members in an unknown state of acclimatisation under FRM

The values in the following table may apply provided the operator's FRM continuously monitors that the required safety performance is maintained.

Maximum daily FDP according to sectors								
1–2	3	4	5	6	7	8		
12:00	11:30	11:00	10:30	10:00	09:30	09:00		

(c) FDP with different reporting time for flight crew and cabin crew.

Whenever cabin crew requires more time than the flight crew for their pre-flight briefing for the same sector or series of sectors, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew. The difference shall not exceed 1 hour. 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.

- (d) Maximum daily FDP for acclimatised crew members with the use of extensions without in-flight rest.
- (1) The maximum daily FDP may be extended by up to 1 hour not more than twice 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.
- When extensions are used for consecutive FDPs, the additional pre- and post-flight rest between the two extended FDPs required under subparagraph 1 shall be provided consecutively.
- (3) The use of the extension shall be planned in advance, and shall be limited to a maximum of:
  - (i) 5 sectors when the WOCL is not encroached; or
  - (ii) 4 sectors, when the WOCL is encroached by 2 hours or less; or
  - (iii) 2 sectors, when the WOCL is encroached by more than 2 hours.
- (4) 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.
- (5) Flight time specification schemes shall specify the limits for extensions of the maximum basic daily FDP in accordance with the certification specifications applicable to the type of operation, taking into account:
  - (i) the number of sectors flown; and
  - (ii) WOCL encroachment.
- (e) Maximum daily FDP with the use of extensions due to in-flight rest

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 specifications 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.
- (f) 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 or after the reporting time, shall comply with the following:
  - (i) the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 2 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours;
  - (ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and

- (iii) the rest period following the FDP may be reduced but can never be less than 10 hours.
- (2) In case of unforeseen circumstances which could lead to severe fatigue, the commander shall 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 members on their alertness levels before deciding the modifications under subparagraphs 1 and 2.
- (4) The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his or 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 by the operator 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.
- (g) Unforeseen circumstances in flight operations delayed reporting

The operator shall establish procedures, in the operations manual, for delayed reporting in the event of unforeseen circumstances, in accordance with the certification specifications applicable to the type of operation.

## ORO.FTL.210 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 that period.
- (b) The total flight time of the sectors 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;
- (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 period. The operator shall specify in its operations manual the minimum time period for post-flight duties.

## **ORO.FTL.215** Positioning

If an operator positions a crew member, the following shall apply:

- (a) positioning after reporting but prior to operating shall be counted as FDP but shall not count as a sector;
- (b) all time spent on positioning shall count as duty period.

# **ORO.FTL.220 Split duty**

The conditions for extending the basic maximum daily FDP due to a break on the ground shall be in accordance with the following:

- (a) flight time specification schemes shall specify the following elements for split duty in accordance with the certification specifications applicable to the type of operation:
  - (1) the minimum duration of a break on the ground; and
  - (2) the possibility to extend the FDP prescribed under point ORO.FTL.205(b) taking into account the duration of the break on the ground, the 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.

# ORO.FTL.225 Standby and duties at the airport

If an operator assigns crew members to standby or to any duty at the airport, the following shall apply in accordance with the certification specifications applicable to the type of operation:

- (a) standby and any duty at the airport shall be in the roster and the start and end time of standby shall be defined and notified in advance to the crew members concerned to provide them with the opportunity to plan adequate rest;
- (b) a crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period;
- (c) airport standby shall count in full as duty period for the purpose of points ORO.FTL.210 and ORO.FTL.235;
- (d) any duty at the airport shall count in full as duty period and the FDP shall count in full from the airport duty reporting time;
- (e) the operator shall provide accommodation to the crew member on airport standby;
- (f) flight time specification schemes shall specify the following elements:
  - (1) the maximum duration of any standby;
  - the impact of the time spent on standby on the maximum FDP that may be assigned, 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
    - sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP;
  - (3) the minimum rest period following standby which does not lead to assignment of an FDP;
  - (4) how time spent on standby other than airport standby shall be counted for the purpose of cumulative duty periods.

### **ORO.FTL.230** Reserve

If an operator assigns crew members to reserve, the following requirements shall apply in accordance with the certification specifications applicable to the type of operation:

- (a) reserve shall be in the roster:
- (b) flight time specification schemes shall specify the following elements:
  - (1) the maximum duration of any single reserve period;

(2) the number of consecutive reserve days that may be assigned to a crew member.

# **ORO.FTL.235** Rest periods

- (a) Minimum rest period at home base.
- (1) The minimum rest period provided before undertaking an FDP starting at home base shall be at least as long as the preceding duty period, or 12 hours, whichever is greater.
- By way of derogation from point (1), the minimum rest provided under point (b) applies if the operator provides suitable accommodation to the crew member at home base.
- (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 points (a) and (b), flight time specification schemes may reduce the minimum rest periods in accordance with the certification specifications applicable to the type of operation and taking into account the following elements:

- (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, and in any case the time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period shall not be more than 168 hours. The recurrent extended recovery rest period shall be increased to 2 local days twice every month.

- (e) Flight time specification schemes shall specify additional rest periods in accordance with the applicable certification specifications 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.

### **ORO.FTL.240** Nutrition

- (a) During the FDP there shall be the opportunity for a meal and drink in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds 6 hours.
- (b) An operator shall specify in its operations manual how the crew member's nutrition during FDP is ensured.

## ORO.FTL.245 Records of home base, flight times, duty and rest periods

- (a) An operator shall maintain, for a period of 24 months:
- (1) individual records for each crew member including:
  - (i) flight times;
  - (ii) start, duration and end of each duty period and FDP;
  - (iii) rest periods and days free of all duties; and
  - (iv) assigned home base;
- (2) reports on extended flight duty periods and reduced rest periods.
- (b) Upon request, the operator shall provide copies of individual records of flight times, duty periods and rest periods to:
- (1) the crew member concerned; and
- (2) to another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.
- (c) Records referred to in point CAT.GEN.MPA.100(b)(5) in relation to crew members who undertake duties for more than one operator shall be kept for a period of 24 months.

## **ORO.FTL.250** Fatigue management training

- (a) The operator shall provide initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned.
- (b) This training shall follow a training programme established by the operator and described in the operations manual. The training syllabus shall cover the possible causes and effects of fatigue and fatigue countermeasure.

(1) OJ L 302, 1.12.2000, p. 57.

# **Changes to legislation:**

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