

European Aviation Safety Agency

Report N° IFTSS/2016/010/DK on the notification by the Kingdom of Denmark on its intention to grant an approval for a flight time specification scheme deviating from certain provisions of CS FTL-1 on the basis of Article 22(2) of Regulation (EC) No 216/2008.

A) BACKGROUND

- (1) By letter of 22 August 2016, Denmark's competent authority (hereafter CAA-DK) notified the Agency of its intention to grant an approval derogating from ORO.FTL.235(c) and ORO.FTL.220, on the basis of Articles 14(6) and 22(2) of Regulation (EC) 216/2008¹ (the Basic Regulation).
- (2) The letter explains that Sun-Air (hereafter the operator) applies for an operational practice which they conducted before in full accordance with former rules. The operator intends to operate roster patterns with:
 - a return flight from Cambridge (CBG) to Gothenburg (GOT) and
 - a return flight from Augsburg (AGB) to Marseille (MRS)interrupted by a break on the ground and followed by a reduced rest period during 4 consecutive days.
- (3) The operator quotes the national split duty rules used under Subpart Q:

"If a break exceeds 4 hours and the duration has been given prior to the break commencing, it shall be calculated with 0%."
- (4) The operator's proposed measures and how far they would derogate from the implementing rules laid down in Subpart FTL of Commission Regulation (EU) No 965/2012² are not described.

B) LEGAL FRAMEWORK

- (5) Article 22(2) of the Basic Regulation states the following:

"With regard to flight time limitation:

(a) the Agency shall issue the applicable certification specifications to ensure compliance with essential requirements and, as appropriate, the related implementing rules. Initially, the implementing rules shall include all substantive provisions of Subpart Q of Annex III to Regulation

¹ Regulation (EC) No 216/2008 of 20/02/2008 of the European Parliament and of the Council on common rules in the field of civil aviation and establishing a European aviation Safety Agency and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2003 and Directive 2004/36/EC.

² COMMISSION REGULATION (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council.



(EEC) No 3922/91, taking into account the latest scientific and technical evidence;

- (b) a Member State may approve individual flight time specification schemes which deviate from the certification specifications referred to in point (a). In this case the Member State shall without delay notify the Agency, the Commission and the other Member States that it intends to grant approval for such an individual scheme;*
- (c) upon notification the Agency shall, within one month, assess the individual scheme on the basis of a scientific and medical evaluation. Thereafter the Member State concerned may grant the approval as notified, unless the Agency has discussed the scheme with that Member State and proposed changes thereto. Should the Member State agree with these changes, it may grant the approval accordingly;*
- (d) in the event of unforeseen urgent operational circumstances or operational needs of limited duration and non-repetitive nature, derogations to certification specifications may apply provisionally until the Agency expresses its opinion;*
- (e) should a Member State disagree with the Agency's conclusions concerning an individual scheme, it shall refer the issue to the Commission to decide whether that scheme complies with the safety objectives of this Regulation, in accordance with the procedure referred to in Article 65(3);*
- (f) the contents of individual schemes which are acceptable to the Agency, or on which the Commission has taken a positive decision in accordance with point (e), shall be published."*

(6) The derogation request refers to ORO.FTL.220, which reads:

"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."; and

to ORO.FTL.235(c), which reads:

"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."



- (6) The certification specifications applicable to the type of operation are CS FTL-1³.
CS FTL.1.235(c) reads:

"Reduced rest

- (1) The minimum reduced rest periods under reduced rest arrangements are 12 hours at home base and 10 hours out of base.*
- (2) Reduced rest is used under fatigue risk management.*
- (3) The rest period following the reduced rest is extended by the difference between the minimum rest period specified in ORO.FTL.235(a) or (b) and the reduced rest.*
- (4) The FDP following the reduced rest is reduced by the difference between the minimum rest period specified in ORO.FTL.235(a) or (b) as applicable and the reduced rest.*
- (5) There is a maximum of 2 reduced rest periods between 2 recurrent extended recovery rest periods specified in accordance with ORO.FTL.235(d)."*

- (7) Cumulative duty limits are established in ORO.FTL.210, which reads:

"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."*

C) EVALUATION

- (8) The Agency reviewed the proposal with the help of a panel of experts⁴. The experts were provided in advance with the document submitted by the CAA-DK. The Agency's comments sent to CAA-DK on 26 September 2016 were also distributed to the experts. The experts were invited to comment on the operator's proposal and on the Agency's comments. Additional comments submitted by the operator and a written statement by CAA-DK were distributed prior to a WebEx meeting on 20 October 2016 during which documents and comments were discussed.

³ Certification Specifications and Guidance Material for Commercial Air Transport by Aeroplane – Scheduled and Charter Operations.

⁴ Panel composition IFTSS 2016/010/DK published on Circabc.

(9) The following result from the examination of the documents submitted by CAA-DK to support the proposed deviations:

- The document presented by CAA-DK to support the derogation does not paraphrase or quote the operator's fatigue mitigations provisions. It is not possible to assess from which applicable EU provisions the IFTSS derogates.
- No objective data has been presented to demonstrate that the proposed IFTSS will not produce cumulative sleep loss due to a block of four extended FDPs with reduced rest periods.
- CAA-DK declared in an e-mail to the Agency, dated 10 October 2016, that the operator had not implemented FRM in accordance with ORO.FTL.125 at the date CAA-DK requested the assessment of this derogation. It is therefore unclear how far the operator has come in the process of FRM implementation.
- A fatigue survey conducted by the operator when operating to a scheme similar to that described in the document, i.e. before February 2016, identified fatigue issues in parts of the operator's operation. Information on the implementation and effectiveness of mitigating measures to these fatigue issues is incomplete or lacking. CAA-DK declared in an e-mail to the Agency dated 10 October 2016 that the operator had not included fatigue as risk to be managed in its hazard log as part of its Safety Management System in April 2016.
- The requested scheme does not:
 - assess the likelihood of falling asleep and staying asleep during the breaks provided during the day, i.e. the effectiveness of the break as a fatigue mitigation measure;
 - use bio-mathematical models to predict fatigue;
 - describe how operational delays will be addressed to protect the reduced rest period;
 - specify where crew members are based;
 - the time that is needed to position from the crew members' home base(s) to Augsburg (AGB) or Cambridge (CBG);
 - account for the cumulative duty hours during 7 consecutive days although the operator states that crew members will operate a maximum of 12 sectors and 18 hours during 7 consecutive days. Therefore, it is not possible to verify if the proposed scheme respects the cumulative duty time limit of 60 duty hours in any 7 consecutive days.

D) CONCLUSION

(10) Having reviewed the deviation notified by CAA-DK, the Agency considers that insufficient information has been provided to evaluate whether an equivalent level of safety to that attained by the application of ORO.FTL and CS FTL-1 is achieved by the proposed measures. Specifically, the Agency is of the opinion that:



- A derogation from the applicable EU provisions must be supported by a documented demonstration of the effectiveness of the proposed alternative fatigue mitigations for the operator's actual pairings and individual rosters. The effectiveness of the proposed fatigue mitigations can only be demonstrated through the analysis of objective data on sleep duration, quality and alertness.
- The operator's demonstration of compliance with ORO.FTL.120 should be a prerequisite for a temporary approval with a limited duration to conduct a trial in order to collect objective fatigue data.
- CAA-DK should ensure that such data collection is conducted with the involvement of crew members that are representative of the operator's crew population (crew role, gender, age, roster pattern), including data from all affected home bases.
- CAA-DK should ensure that the operator provides a comprehensive set of information on the proposed flight time specification scheme, including other operator policies or procedures that might have an impact on crew member fatigue (e.g. rostering policy, possibility to request and bid for days off, crew member ground transport, home base, management of operational delays).
- CAA-DK should assess from which elements of the applicable EU legislation the proposed flight specification schemes derogates.
- CAA-DK should ensure that bio-mathematical predictions of fatigue levels, resulting from the pairings and individual rosters the operator intends to operate under the derogation, are assessed against an agreed benchmark scenario before a trial with a limited duration is approved.

28. NOV. 2016

Signed on


Patrick Ky
Executive Director

