

Restricted to BeCA members

New Flight Time Limitations

BeCA's Guide

February 2016

The new rules & you



*For pilots,
by pilots*

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Introduction

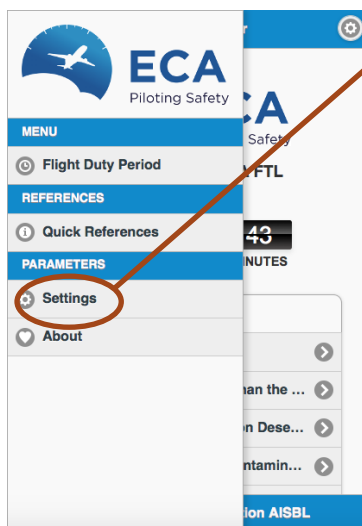
By 18 February 2016, all Belgian Commercial Air Transport (CAT) Operators will need to be compliant with the new EASA Flight Time Limitations (FTL) Regulations. To help you transition smoothly into the new rules, most significant changes that will impact **your daily pilot's life** are summarized in this document.

- The EASA texts can be found here and should be referred to when necessary: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2014:028:0017:0029:EN:PDF> & <http://easa.europa.eu/system/files/dfu/2014-002-R-CS-FTL.1%20-%20Initial%20Issue.pdf>
- For a more concise introduction to the texts, please refer to our "[Quick reference guide](#)".
- Since 15 October 2015 and the entry into force of Regulation 376/2014 on the reporting of occurrences, it is now compulsory to report fatigue. We have therefore produced a guide (based on BALPA's) explaining the most important elements of fatigue reporting.
- We are aware that the new rules are very complex. To help pilots calculate their Flight Duty Period and ensure they always fly within legal limits, BeCA's FTL expert, Didier Moraine, developed, for the European Cockpit Association, a special calculator (see below). It is free, it is easy, it is compatible with most devices and it works online & offline. Please do not forget to download the application from the Android or Apple markets, or to bookmark the webpage www.eurocockpit.be/pages/eu-ftl-calculator-easa-rules!
- Refer to our special webpage (www.beca.be/flight-time-limitations) to download all the material.

Please note that this guide is only informative and that the OM of your airline always prevails. In case of doubts, questions or any issue specific to your airline, about the reporting of fatigue or the interpretation of the new rules, please do not hesitate to contact your BeCA Vice-President.

EU FTL Calculator

Navigation



IMPORTANT!

When you first use it, make sure to apply the correct settings:

- Set your homebase time-zone
- In the "Disruptive schedule type, select "late type", as the Belgian CAA decided - following BeCA's advice - that all Belgian operators will have to apply the late type category.

Settings

Calculate your FDP

Fill in the short form with the reporting date & time, and the time zone. It will automatically calculate your maximum allowed FDP or minimum rest time and provide you with references on extension, in-flight rest & split duty. You can also add a new rotation and duty.

Acclimatization

EASA has introduced the concept of “reference time”, which refers to the local time at the place where the crew member was last acclimatized.

If, after starting a duty acclimatized, you travel through a two-hour time zone (+/-2), are subject to a rest period and then travel through another two hour time zone (+/-2), when you arrive at the second destination you will always be acclimatized. This is true if both journeys are in the same direction, as in two positive time zone changes of two hours.

EASA’s thinking here is that as long as you do not “jump” more than two time zones and have a rest period between each “jump” then you will always remain acclimatized to your local time zone of departure.

Definition

Acclimatization is “a state in which a crew members’ circadian biological clock is synchronized to the time zone where the crew member is”.

Example 1

If you were to:

- Depart from London acclimatized
- Arrive in Athens(+2)and have a rest period
- Depart Athens and arrive in Karachi (+4)

When you depart from Karachi you will be acclimatized as you have not jumped more than two time zones in-between rest periods. Your reference time will be Karachi. Each time you rest you are still acclimatized and the local time in the place in which you report is your reference time.

If you now depart Karachi after a rest period and report for a flight to Perth (+7)

Once you arrive in Perth, Karachi is the last place

in which you were acclimatized as the time zone change is now over two hours, therefore Karachi is still your reference time. Referring to Table 1 - when you next report for duty to depart from Perth, you must calculate the time difference between Perth and the last place that you were acclimatized to ‘reference time’ (Karachi) which is 3 hours, for example. Take that information and enter it in the left column of Table 1.

You now need to calculate the right hand side of the table which is the time elapsed since reporting at reference time (Karachi).

a) If it is less than 48 hours, then you are still acclimatized to Karachi.

b) If it is 48 hours or more, you are acclimatized to Perth.

Table 1

Time difference between reference time and local time where crew member starts the next duty	Time elapsed since reporting at reference time				
	< 48	48 - 71:59	72 - 95:59	96 - 119:59	≥ 120
< 4	B	D	D	D	D
≥ 4 - ≤ 6	B	X	D	D	D
> 6 - ≤ 9	B	X	X	D	D
> 9 and ≤ 12	B	X	X	X	D

B = acclimatized to the local time of the departure zone

D = acclimatized to the local time where the crew member starts their next duty

X = the crew member is in an unknown state of acclimatization

Example 2

If you were to

- Depart London acclimatized
- Arrive in New York (-5)

Your reference time is still London as that is the last place that you were acclimatized. When you next report for duty to depart you must calculate if you are acclimatized to New York. Enter Table 1 with a difference in time of 5 hours. Then follow the table to the right. If the time elapsed since reporting in London is:

- a) Less than 48 hours then you are still acclimatized to London.
- b) 48-71:59 then you are in an unknown state of acclimatization.
- c) 72 hours or more then you are acclimatized to New York and the local time there is now your reference time.

Imagine that you have had minimum rest in New York and then depart (un-acclimatized) to Honolulu (-11 from London).

When you arrive in Honolulu your reference time is still London as that was the last place in which you were acclimatized.

Now enter Table 1, the time difference between London (reference time) and Honolulu is 11 hours. Follow the table to the right. You can see that when you next report to depart Honolulu, if time elapsed since reporting in London is between 48-119:59 hours then you are still in an unknown state of acclimatization. If it has been 120 hours or more then you would be considered acclimatized to Honolulu.

Once the acclimatized state of the crew member is clear, the relevant FDP tables should be referred to in order to find the maximum allowable FDP.

Delayed reporting

The operator may delay the reporting time in the event of unforeseen circumstances. Delayed reporting procedures establish a notification time allowing a crew member to remain in his/her suitable accommodation when the delayed reporting procedure is activated.

When the crew member is notified, a new concrete reporting time will be given.

In such a case, the FDP is calculated as follows:

- Delay > 4 hours: max FDP is based on the original reporting time and the FDP starts counting at the delayed reporting time;
- Delay $\geq$ 4 hours: max FDP is calculated based on the more limiting of the original or the delayed reporting time and the FDP starts counting at the delayed reporting time.

In order to avoid some of the potential issues associated with a rolling delay, EASA have added a provision where, should it be necessary to further adjust the initial delayed report time, the FDP starts counting 1 hour after the second notification or at the original reporting time, if that is earlier.

As an exception: when the operator informs the crew member of a delay of 10 hours or more in reporting time and the crew member is not further disturbed by the operator, such a delay of 10 hours counts as a rest period.

Standby

- 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.
- Standby shall always be followed by a rest period.
- A crew member should not be assigned an FDP starting after a standby period has ended.

The Home Standby daily duty limit has been raised from 12 to 16 hours.

Any FDP must start ticking after 6 hours on home standby / 4 hours on airport standby or at report.

EASA have included an 'AWAKE TIME' section which states that continuous operation in excess of 18 hours should be avoided.

Standby other than airport standby

25% of time spent on standby other than airport standby counts as duty time.

Maximum duration is 16 hours. If standby ceases within the first 6 hours, the maximum FDP counts from reporting.

Standby ceases when the crew member reports at the designated reporting point.

When a crew member is assigned a duty, the rest period will now only be calculated from the time an individual reports for their FDP.

The response time between call and reporting time established by the operator will allow the crew member to arrive from his/her place of rest to the designated reporting point within a reasonable time.

Airport standby

A crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period.

Airport standby shall count in full duty as duty period.

The operator shall provide accommodation to the crew member on airport standby.

Any combination of Airport Standby and associated FDP is limited to 16 hours.

The rest period shall be calculated from reporting till the end of the duty.



Reserve

EASA have introduced the concept of Reserve where an Operator can place a restriction on a Pilot to be contactable in order for the Operator to assign a duty which will start not less than ten hours later.

Reserve cannot be included in a rest period and it is a duty day. Unused Reserve days remain as duty days and cannot be counted retrospectively as days off.

Under EASA you could technically be on Reserve for a 24-hour period as long as the Operator identifies an 8-hour sleep opportunity.

The operator will define the maximum number of consecutive reserve days.

Flight Duty Period

Total duty periods shall be spread as evenly as practicable and shall not exceed:

- 60 duty hours in any 7 consecutive days;
- 110 duty hours in any 14 consecutive days; and
- 190 duty hours in any 28 consecutive days.

Post flight duty shall count as duty period.

Total flight time shall not exceed:

- 100 hours of flight time in any 28 consecutive days;
- 900 hours of flight time in any calendar year; and
- 1000 hours of flight time in any 12 consecutive calendar months.

Maximum FDP for crew members in an “unknown state of acclimatization”

(See table 1)

1-2 sectors	3 sectors	4 sectors	5 sectors	6 sectors	7 sectors	8 sectors
11:00	10:30	10:00	09:30	09:00	09:00	09:00

When specific identified trip patterns are continuously monitored within FRM, these limits can be lowered.

At this stage no Belgian operator has an approved FRM under EASA FTL requirements.

Maximum Daily FDP for acclimatized crew members

Start of FDP at reference time	1-2 Sectors	3 Sectors	4 Sectors	5 Sectors	6 Sectors	7 Sectors	8 Sectors	9 Sectors	10 Sectors
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
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

FDP - Pre-planned Operator extensions twice per week

Under the new EASA Regulations, FDP extensions pre-planned by the Operator will be allowed up to a maximum of one hour, twice per week. These extensions are not for the purpose of unforeseen circumstances.

Maximum daily FDP with extension

Start of FDP	1-2 Sectors (in hours)	3 Sectors (in hours)	4 Sectors (in hours)	5 Sectors (in hours)
0600-0614	Not allowed	Not allowed	Not allowed	Not allowed
0615-0629	13:15	12:45	12:15	11:45
0630-0644	13:30	13:00	12:30	12:00
0645-0659	13:45	13:15	12:45	12:15
0700-1329	14:00	13:30	13:00	12:30
1330-1359	13:45	13:15	12:45	Not allowed
1400-1429	13:30	13:00	12:30	Not allowed
1430-1459	13:15	12:45	12:15	Not allowed
1500-1529	13:00	12:30	12:00	Not allowed
1530-1559	12:45	Not allowed	Not allowed	Not allowed
1600-1629	12:30	Not allowed	Not allowed	Not allowed
1630-1659	12:15	Not allowed	Not allowed	Not allowed
1700-1729	12:00	Not allowed	Not allowed	Not allowed
1730-1759	11:45	Not allowed	Not allowed	Not allowed
1800-1829	11:30	Not allowed	Not allowed	Not allowed
1830-1859	11:15	Not allowed	Not allowed	Not allowed
1900-0559	Not allowed	Not allowed	Not allowed	Not allowed

FDP - Extension of FDP due to in-flight rest

In a similar way to current legislation, the new EASA FTL rules allow for an FDP to be extended through in-flight rest. The key elements to the new rule are that:

- the FDP is limited to 3 sectors;
- the minimum in-flight rest period is a consecutive 90-minute period for each crew member and 2 consecutive hours for the flight crew members at control during landing;
- the minimum rest at destination is at least as long as the preceding duty period, or 14 hours, whichever is greater (this rest may not be reduced).

EASA have also closed a couple of known loop-holes, namely:

- 'All time spent in the rest facility is counted as FDP'; and
- 'A crew member does not start a positioning sector to become part of this operating crew on the same flight.'

In-flight rest should be taken during the cruise phase of flight.

The minimum required crew shall always remain on duty.

Maximum extended daily FDP under in-flight rest

Rest facility	+ 1 flight crew member	+ 2 flight crew member
Class 3	14 hours	15 hours
Class 2	15 hours	16 hours
Class 1	16 hours	17 hours

These limits may be increased by 1 hour for FDPs that include 1 sector of more than 9 hours of continuous flight time and maximum of 2 sectors.

- '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 passenger cabin in an area that allows the crew member to control light, and provides isolation from noise and disturbance;
- '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;
- '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.

Minimum in-flight rest for each cabin crew member

Maximum extended FDP	Minimum in-flight rest		
	Class 1	Class 2	Class 3
...up to 14:30	1:30	1:30	1:30
14:31 - 15:00	1:45	2:00	2:20
15:01 - 15:30	2:00	2:20	2:40
15:31 - 16:00	2:15	2:40	3:00
16:01 - 16:30	2:35	3:00	
16:31 - 17:00	3:00	3:25	
17:01 - 17:30	3:25	Not allowed	
17:31 - 18:00	3:50		

FDP - Overnight FDP

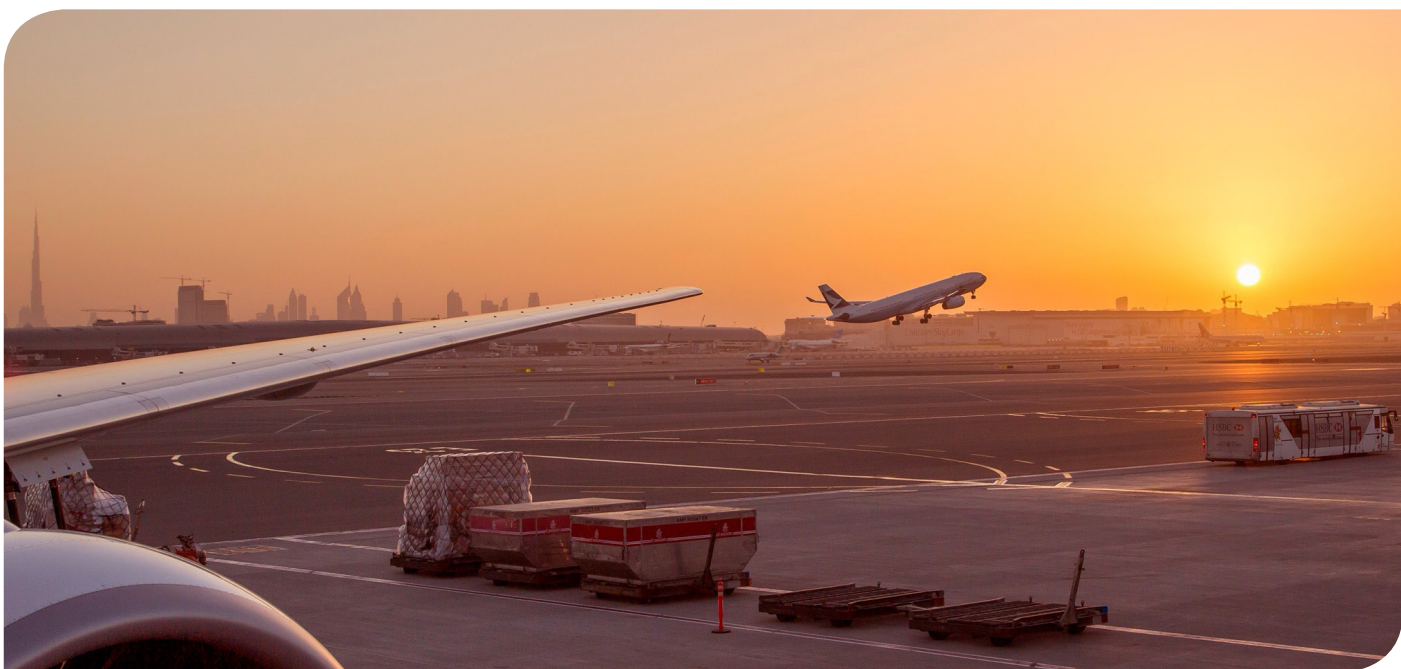
The new FTL rules allow for a 2-sector, 11-hour maximum FDP to be conducted overnight. Eleven hours could also have been planned under Subpart Q but this was only allowable for a single sector flight.

Only 4 sectors per duty are allowed for consecutive night duties.

Night Duty: a duty period encroaching any portion of the period between 02:00 and 04:59 in the time zone to which the crew member is acclimatized.

The Operator should apply 'appropriate fatigue risk management to actively manage the fatiguing effect of night duties of more than 10 hours in relation to the surrounding duties and rest periods'.

EASA have identified key areas that they wish to continuously review. This is one of those areas. February 2019 is when EASA will first report on the results of the review.'



Rest Periods

At home base

Basic minimum rest at home base remains the same under EASA's new FTL rules:

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.

Nonetheless, an Operator may now be able to reduce the rest at home base to 10 hours if they provide suitable accommodation.

This applies only if the crew member does not rest at his/her residence and should be planned in advance.

In the past, a reduction of 1 hour has been possible but only to a minimum of 12 hours for flight crew. Furthermore this could have only taken place if the individual agreed to exercise their discretion.

Reduced rest

The minimum reduced rest periods under reduced rest arrangements are 12 hours at home base and 10 hours out of base.

Reduced rest is used under fatigue risk management.

Recurrent extended recovery rest period (RERR)

The regulation increases and improves the rules for the so-called “weekly rest”, now called “recurrent extended recovery rest period”(RERR).

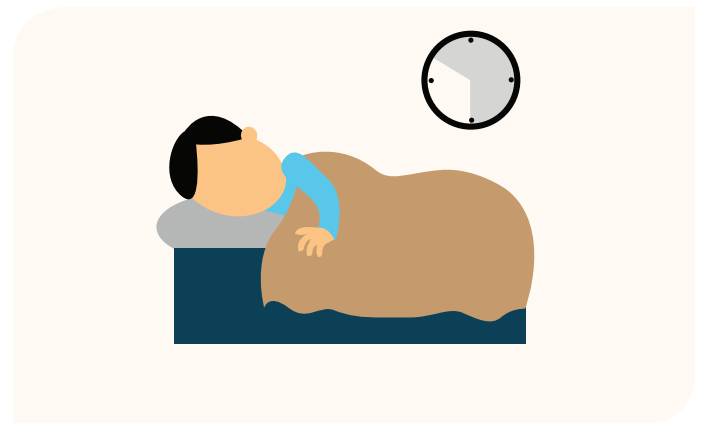
The rule itself requires 36 hours and two local nights to be planned after a maximum period of 168 hours from the previous RERR period. EASA has also included an additional rule that requires an Operator to plan an extended RERR period of 2 local days, twice per month.

Away from home base

Minimum rest away from home base has been reduced in a similar way and could now also be as low as 10 hours, or as long as the preceding duty (if greater).

However, the EASA rule does highlight that an 8-hour sleep opportunity has to be planned.

The new regulation also could allow an Operator to request a derogation to further reduce the minimum rest rule detailed above under approved FRM.



Special rest provisions for: Disruptive schedules - Late finishes / Early starts

Following BeCA's advice, the Belgian CAA decided that all Belgian operators will have to apply the late type category. This category is defined as:

- 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 acclimatized; and
- 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 acclimatized;

"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.

EASAs FTL regulations have no restrictions on the maximum of consecutive late finishes and early starts within the block of work. However some provisions are made:

- If a transition from a late finish/night duty to an early start is planned at home base, the rest period between the 2 FDPs includes 1 local night.
- If a crew member performs 4 or more night duties, early starts or late finishes between 2 extended recovery rest periods, the second extended recovery rest period is extended to 60 hours.

Special rest provisions for: Time zone differences

Minimum local nights of rest **at home base** to compensate for time zone differences, when a rotation involves a 4-hour time difference or more:

Maximum time difference (h) between reference time and local time where a crew member rests during a rotation	Time elapsed (h) since reporting for the first FDP in a rotation involving at least 4-hour time difference to the reference time			
	< 48	48 - 71:59	72 - 95:59	≥ 96
≤ 6	2	3	3	3
> 6 and ≤ 9	2	3	3	4
> 9 and ≤ 12	2	3	4	5

Away from home base, if an FDP involves a 4-hour time difference or more, the minimum rest following that FDP is at least as long as the preceding duty period, or 14 hours, whichever is greater.

By way of derogation and only once between 2 recurrent extended recovery rest periods, the rest away from home base may be applied at the home base if the operator provides suitable accommodation to the crew member.

In case of an Eastward-Westward or Westward-Eastward transition, at least 3 local nights of rest at home base are provided between alternating rotations.

The monitoring of combinations of rotations shall be conducted under the operator's management system provisions.

Discretion

The EASA regulations maintain the concept of Commander's Discretion, whereby an extension to a Flying Duty Period (FDP) or a reduction/increase to a rest period is permitted under certain conditions and circumstances. The use of Commander's Discretion is in the sole gift of the commander on the day however, this does not imply a sanction to override the legitimate fatigue concerns of any operating crew-member. The amount of discretion that can be exercised has been clarified.



If you are operating under the basic FTL table for acclimatized crew then the commander can elect to extend an FDP up to a maximum of two hours.

If you are operating under the extended FDP table then the maximum amount of Commander's Discretion that can be used is one hour.

The commander may also elect to reduce (or increase) a rest period following an FDP but never below ten hours.

Of course, only the commander can make the decision to extend an FDP on the day but EASA regard this as a shared responsibility between pilots, management and cabin crew.

The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his own discretion. Where the increase of an FDP or reduction of a rest period exceeds one hour, a copy of the report will be sent by the operator to the competent authority.

The operator shall implement a non-punitive process for the use of the discretion.

Discretion concerns duties in case of unforeseen circumstances in flight operations, which start at or after the reporting time.

The exercise of commander's discretion should be considered exceptional and should be avoided at home base and/or company hubs where standby or reserve crew members should be available.

One significant change to the discretion rule is that should "unforeseen circumstances" occur after take-off on the final sector of an FDP, the maximum allowed discretion can be exceeded in order that the flight can continue to its planned destination. This is one to watch as it could be open to "interpretations" by Operators as once the aircraft has departed on the last sector there is now no finite limit on the length of the FDP.

When a maximum FDP is exceeded or a rest period reduced at Commander's discretion, EASA will require a copy of the report to be sent to the competent authority when the amount of discretion used exceeds one hour.

Finally, EASA have now stipulated a figure of 33% as the trigger to change a commercial schedule and/or crew pairing, if the basic FDP is regularly being exceeded.

Split duty

The break on the ground within the FDP has a minimum duration of 3 consecutive hours.

The break excludes the time allowed for post and pre-flight duties and travelling. The minimum total time for post and pre-flight duties and travelling is 30 minutes. The operator specifies the actual times in its operations manual.

The maximum FDP specified may be increased by up to 50 % of the break.

Suitable accommodation is provided either for a break of 6 hours or more or for a break that encroaches the window of circadian low (WOCL).

In all other cases:

- accommodation is provided; and
- 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.

Split duty cannot be combined with in-flight rest.

“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;

“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 (should include a seat that reclines at least 45° back angle to the vertical, has a seat width of at least 50cm and provides leg and foot support) 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.

Fatigue Risk Management System

Fatigue Risk Management System (FRMS) is a significant area within the current trend for ‘self regulation’ where a national regulator allows airlines to essentially police themselves to a high degree. In theory, if done correctly, this has the potential to provide mutual benefit to Operators and crews alike. However, to do it correctly is likely to require an Operator to invest substantially in the process. The self-regulatory aspect of it, in our view, also provides the potential for commercial exploitation that some Operators may find hard to resist. Such schemes are fundamentally driven by data (and thus would succumb to the old phrase ‘garbage in = garbage out’).

They rely on data, usually in the form of fatigue reports to monitor, develop and improve the process. In order to provide accurate data an airline needs to be operating a ‘Just Culture’ where crew have confidence in their ability to honestly report fatigue without risk of retribution. Without a ‘Just Culture’ environment FRMS systems are doomed from the outset. The exclusion, altering or removal of data from the FRMS process could lead to the false validation of the management process or model thus masking a potentially serious safety problem.

We believe that fatigue reporting will need to become almost second nature in the new era of EASA FTL. We need to get used to the reporting process. Where that process is lacking or the culture is questionable, we will seek to address such concerns via your company councils.

A Fatigue Risk Management System (FRMS) has been defined by ICAO as “a data-driven means of continuously monitoring and maintaining fatigue related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness”.

FRMS is a Fatigue Risk Management System that is designed to complement an Operator’s SMS (Safety Management System). It is a sub section concentrating specifically on the management of fatigue and is fundamentally data driven.

Currently no Belgian operator has an EASA FTL compliant FRMS. You will notice that EASA FTL makes reference to FRM also. This appears discreetly different to FRMS and so is understandably confusing.

Necessary requirements for an FRMS System

- A Company FRM policy.
- A safety reporting culture (just culture).
- An FSAG or steering group (Fatigue Safety Action group).
- Employee education.
- An investigatory process for examining incidents.
- Process-how the whole system works, audits and improves.
- Internal and external review mechanisms.
- A tri-partite approach including all stakeholders – Operator, Crew and Regulator.

Potential benefits and Pitfalls of FRMS

Potential benefits

The ability to operate outside hard FTL rules if done properly – this may allow an Operator to tailor a scheme to their individual needs e.g. night freight, low-cost etc. Operating outside normal FTL limits requires alleviations or derogations.



Pitfalls

- Could be subject to manipulation for commercial gain.
- Requires the reporting culture to be 'just' and robust.
- Under reporting can lead to false validation of fatigue modeling. This may vindicate a flawed system. It is vital that employees are engaged for this reason.
- Fatigue science requires updating periodically
 - there is a need to understand the longer term effects of operating under FTL alleviations. This may not be at the forefront of an Operator's agenda.

Reporting fatigue

Over the next year, the fatigue reporting practice of pilots is set to become critically important. This is principally due to the effect of “Performance Based Regulation” (PBR). EASA and the National Aviation Authorities (NAAs) have the intention to rely increasingly on this approach, which in essence allows the Operator greater freedom to manage safety as they wish, provided they can produce the evidence to support what they are doing. FRMS is just one

type of PBR and in FRMS “the evidence (or data)” is mostly the fatigue reports from the pilots. A new EU Occurrence Reporting Regulation will be applied in Belgium from 15 November 2015. This regulation has the ambition of strengthening ‘just culture’ arrangements. However, because the provisions are somewhat ambiguous, as indeed is the concept of ‘just culture’, it really only represents a small move in the right direction.

FDP Comparison Table

**Only valid for European flights (2-hour-wide time zones)*

Source: BALPA

	One Sector		Two Sectors		Three Sectors		Four Sectors		Five Sectors	
Start of FDP (local time)	EASA	with EXT	EASA	with EXT	EASA	with EXT	EASA	with EXT	EASA	with EXT
0600-0614	13:00		13:00		12:30		12:00		11:30	
0615-0629	13:00	13:15	13:00	13:15	12:30	12:45	12:00	12:15	11:30	11:45
0630-0644	13:00	13:30	13:00	13:30	12:30	13:00	12:00	12:30	11:30	12:00
0645-0659	13:00	13:45	13:00	13:45	12:30	13:15	12:00	12:45	11:30	12:15
0700-0759	13:00	14:00	13:00	14:00	12:30	13:30	12:00	13:00	11:30	12:30
0800-1159	13:00	14:00	13:00	14:00	12:30	13:30	12:00	13:00	11:30	12:30
1200-1259	13:00	14:00	13:00	14:00	12:30	13:30	12:00	13:00	11:30	12:30
1300-1329	13:00	14:00	13:00	14:00	12:30	13:30	12:00	13:00	11:30	12:30
1330-1359	12:45	13:45	12:45	13:45	12:15	13:15	11:45	12:45	11:15	
1400-1429	12:30	13:30	12:30	13:30	12:00	13:00	11:30	12:30	11:00	
1430-1459	12:15	13:15	12:15	13:15	11:45	12:45	11:15	12:15	10:45	
1500-1529	12:00	13:00	12:00	13:00	11:30	12:30	11:00	12:00	10:30	
1530-1559	11:45	12:45	11:45	12:45	11:15		10:45		10:15	
1600-1629	11:30	12:30	11:30	12:30	11:00		10:30		10:00	
1630-1659	11:15	12:15	11:15	12:15	10:45		10:15		09:45	
1700-1729	11:00	12:00	11:00	12:00	10:30		10:00		09:30	
1730-1759	11:00	11:45	11:00	11:45	10:30		10:00		09:30	
1800-1829	11:00	11:30	11:00	11:30	10:30		10:00		09:30	
1830-1859	11:00	11:15	11:00	11:15	10:30		10:00		09:30	
1900-2159	11:00		11:00		10:30		10:00		09:30	
2200-2259	11:00		11:00		10:30		10:00		09:30	
2300-2359	11:00		11:00		10:30		10:00		09:30	
0000-0359	11:00		11:00		10:30		10:00		09:30	
0400-0414	11:00		11:00		10:30		10:00		09:30	
0415-0429	11:00		11:00		10:30		10:00		09:30	
0430-0444	11:00		11:00		10:30		10:00		09:30	
0445-0459	11:00		11:00		10:30		10:00		09:30	
0500-0514	12:00		12:00		11:30		11:00		10:30	
0515-0529	12:15		12:15		11:45		11:15		10:45	
0530-0544	12:30		12:30		12:00		11:30		11:00	
0545-0559	12:45		12:45		12:15		11:45		11:15	

Six Sectors		Seven Sectors		Eight Sectors		Nine Sectors		Ten Sectors		
EASA	with EXT	EASA	with EXT	EASA	with EXT	EASA	with EXT	EASA	with EXT	Start of FDP (local time)
11:00		10:30		10:00		09:30		09:00		0600-0614
11:00		10:30		10:00		09:30		09:00		0615-0629
11:00		10:30		10:00		09:30		09:00		0630-0644
11:00		10:30		10:00		09:30		09:00		0645-0659
11:00		10:30		10:00		09:30		09:00		0700-0759
11:00		10:30		10:00		09:30		09:00		0800-1159
11:00		10:30		10:00		09:30		09:00		1200-1259
11:00		10:30		10:00		09:30		09:00		1300-1329
10:45		10:15		09:45		09:15		09:00		1330-1359
10:30		10:00		09:30		09:00		09:00		1400-1429
10:15		09:45		09:15		09:00		09:00		1430-1459
10:00		09:30		09:00		09:00		09:00		1500-1529
09:45		09:15		09:00		09:00		09:00		1530-1559
09:30		09:00		09:00		09:00		09:00		1600-1629
09:15		09:00		09:00		09:00		09:00		1630-1659
09:00		09:00		09:00		09:00		09:00		1700-1729
09:00		09:00		09:00		09:00		09:00		1730-1759
09:00		09:00		09:00		09:00		09:00		1800-1829
09:00		09:00		09:00		09:00		09:00		1830-1859
09:00		09:00		09:00		09:00		09:00		1900-2159
09:00		09:00		09:00		09:00		09:00		2200-2259
09:00		09:00		09:00		09:00		09:00		2300-2359
09:00		09:00		09:00		09:00		09:00		0000-0359
09:00		09:00		09:00		09:00		09:00		0400-0414
09:00		09:00		09:00		09:00		09:00		0415-0429
09:00		09:00		09:00		09:00		09:00		0430-0444
09:00		09:00		09:00		09:00		09:00		0445-0459
10:00		09:30		09:00		09:00		09:00		0500-0514
10:15		09:45		09:15		09:00		09:00		0515-0529
10:30		10:00		09:30		09:00		09:00		0530-0544
10:45		10:15		09:45		09:15		09:00		0545-0559



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