

FTL = FLIGHT TIME LIMITATIONS.

EASA regulation ORO.FTL 105 – ORO.FTL 245 OM-A 7.1.4

Describes regulations for all European Operators to follow when building trips, training, rest time at home base and on layovers in such a way as to avoid Fatigue and/or mitigate the offset of the Fatigue.

Rules are very complex and pertain to all types of flying. Short Haul, Long Haul operations for commercial and cargo flights.

We are going to focus on basics that are pertaining to flights we are operating at Norse Atlantic Airways (Long Haul Commercial Operations)

This knowledge will help you understand the patterns the Company follows when building lines, staffing, planning standby, reserve, rest days, and numbers of hours on duty so that Crew Members are “legal” to fly and to avoid Fatigue. The responsibility to know, understand and follow these rules lies with the individual crew members and the company alike.

Let's start with definitions and restrictions we must follow:

Definition of “a day” = a time period starting at 00:00 and finished at 23:59 local time

Definition of “a night” = a time period starting at 22:00 and finished at 06:00 local time

DUTY PERIOD = period when a crew member is required to report for duty, or to commence a duty (reserve, standby etc.), and ends when a person is free of all duties, including post flight duties (30 minutes after the aircraft comes to a rest following landing)

Restrictions:

Maximum of 60 duty hours in any 7 consecutive days

Maximum of 110 duty hours in any 14 consecutive days

Maximum of 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period.

Maximum 2000 passive flight hours in any calendar year. Passive flight hours are part of a DUTY PERIOD because 25% of total hours of Standby duties are part of that 2000 hours allowance.

For example: if a crew member has 60 hours of standby in January with no passive flights (25% of 60=15) by the end of that month crew will have a balance of 1985 passive flight hours for that year. (2000-15=1985)

FLIGHT DUTY PERIOD = commence when crew member is required to report for duty, including a sector (flight) or series of sectors (flights), and finishes when the aircraft comes to a complete rest and engines are shut down.

Restrictions:

Report time for active duty = **90** minutes before departure.

Report time for passive duty (positioning flight) = **60** minutes.

Report time for ground transport = at the departure time.

Maximum FDP for acclimatized crew is 13 hours and can be extended by **1** hour and no more than twice in any 7 consecutive day period.

COMMANDER DISCRETION= in unforeseen circumstances that occur at the start, or after the reporting time. Captain can extend FDP **up to 3** hours with augmented Flight Deck Crew. Extended inflight rest has to be granted and/or service reduced, and crew has to be consulted on their alertness. Commander has to submit a report to the operator and operator reports to the authorities.

The extension of FDP with IN-FLIGHT REST under the provisions of ORO.FTL.205e:

With **ONE** additional flight crew member:

A. up to 14 hours with class 3 rest facilities

B. up to 15 hours with class 2 rest facilities

C. **up to 16** hours with class 1 rest facilities = Boeing 787-8, Boeing 787-9

With **TWO** additional flight crew members:

A. up to 15 hours with class 3 rest facilities

B. up to 16 hours with class 2 rest facilities

C. **up to 17** hours with class 1 rest facilities = Boeing 787-8, Boeing 787-9

Post flight duty shall count as DUTY PERIOD

Calculations of FDP:

The best way to calculate the FDP is to utilize UTC time (Coordinated Universal Time) , also known as ZULU(Military Time), or previously as GMT (Greenwich Mean Time).

UTC is the basis for civil time today. This 24-hour time standard is kept using a highly precise atomic clock combined with the Earth's rotation. UTC is the time standard commonly used across the world.

We need to know the time difference between the airports we fly to and from, and the UTC to calculate FDP correctly.

UTC -4 = East Coast of USA (Miami, Orlando, New York)

For example: UTC 0200 = Miami 2200 (-4 hours)

New York 2300 = UTC 0300 (+ 4 hours)

UTC+2 = NORWAY, FRANCE

For example: UTC 0200= Norway and France 0400 (+2 hours)

Norway, France 2300 = UTC 2100 (-2 hours)

UTC + 1 = LONDON, UK

For example: UTC 0200 = London 0300 (+1 hour)

London 2300 = UTC 2200 (- 1 hour)

Exercise:

Diego and Trista are on JFK- CDG flight

Report time is 1800 LT. Arrival time 0930(+1)

What is the FDP for Diego and Trista?

What is the max. FDP for them, and are they "legal" to fly?

1. Convert times to UTC for easy calculations.

Reporting at 1800 local at JFK = 2200 UTC (+4 from JFK to UTC, UTC-4 to JFK)

Arrival at 0900(+1) local at Paris = 0700 UTC (-2 from Paris to UTC, UTC+2 to Paris)

2. Using **OMA 7.1.8.3 Maximum daily FDP**- acclimatized crew member table,

We know that start of FDP at reference time: 1700-0459 for 1-2 sectors max. daily FDP is 11:00 hours

Time from reporting at 2200 UTC to arrival at 0900 is 11 hours; therefore, Diego and Trista are within the limit and thus "legal" to work this flight. 30 minutes of post flight duties are not part of FDP but DP.

This time doesn't change throughout the year.

FLIGHT TIME =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 are shut down (block to block)

Total flight time when crew is active (operating crew) shall not exceed:

100 hours of flight time in any **28** consecutive days.

900 hours of flight time in **any calendar year** = January 1st- December 31st

1000 hours of flight time in any **12 consecutive calendar months**, e.g., June 2022- June 2023

Now we will focus on **REST TIME**. There are several categories of rest:

Minimum Rest at **HOME BASE**:

A) the minimum **Recurrent Extended Recovery Rest Period** (after the trip) shall be **36** hours, including **2** local nights. In addition, the time between the end of one RERRP and the start of the next RERRP shall not be more than 168 hours. That means that every 7 days ($168:24=7$) crew member has to have one day free of all duties. It can be during layover or at home.

B) the minimum **Reduced Rest at home base** (during the pairing) shall be at least as long as the preceding duty period, or **12** hours, whichever is greater. This applies if the operator provides suitable accommodation to the crew member at home base.

For example: if your base is FLL, and this is your pairing (trip): FLL-OSL-FLL-LGW-FLL, after the flight from OSL to FLL you could have a 12-hours layover in FLL even though it is your base, providing that the company booked you a hotel room and your Per diem is being covered continuously until the end of that pairing (trip).

Minimum rest **AWAY from Home Base**:

A) the minimum rest **is as long as the preceding duty period, or 14 hours**, whichever is greater.

B) the **minimum reduced rest** is **10** hours, and the following rest period must be extended by the difference between the minimum rest period and the reduced rest. There must be 8 hours reserved for sleep opportunities in addition to the time for traveling and physiological needs. The subsequent rest period has to be increased.

There is a maximum of 2 reduced rest periods between 2 Recurrent Extended Recovery Rest Period.

INFLIGHT REST

A) **Nutritional breaks:** during the FDP exceeding 6 hours, there shall be the opportunity for a meal and drink. If the FDP encompasses the regular meal windows (e.g., if FDP starts at 11:00 hours and ends at 22:00 hours, two meals opportunities should be given

B) **Inflight rest:** the minimum in-flight rest period is a consecutive 90-minute period for each crew member, and 120 minutes for the flight crew members at control during landing. 90 minutes rest period is to be utilized for FDP up to 14:30 hours, after that rest time increases by 15 additional minutes for every additional 30 minutes of FDP.

All time spent in the rest facility is counted as FDP.

The minimum rest at the destination is at least as long as the preceding duty period, or 14 hours, whichever is greater.

A crew member does not start a positioning sector (flight) to become part of the operating crew on the same flight.

For example: crew cannot fly passive OSL-LGW to continue as an active crew member on flight LGW-JFK the same day. Crew member can fly passive flight after the active duty.

There must be 4 crew members in the cabin at all times during the cruising for the purpose of inflight breaks.

Calculation of inflight breaks step by step:

1. After the completion of the inflight service check what time it is at the destination (by looking at the monitors in the cabin or by asking flight deck crew).
2. Determine when the second service should commence (based on the landing time at destination).
3. Calculate the time difference between the second service and current time.
4. Deduct 5 to 10 minutes for switch time and divide what left by 2 for 2 breaks.

For example: landing in LAX at 1600 local time; second service at 1400; present time 1000.

1400 hours – 1000 hours = 4 hours' time total to do breaks

4 hours – 10 minutes to switch = 3 hours 50 minutes: 2 = 1 hour 55 minutes each break

First break 1005-1200

Second break 1205-1400

In case there are 3 breaks, follow the steps and subtract 15 minutes from total time (step 4) to allow 5 minutes between each break for switch time.

The European FTL regulation addresses verity of **RESERVE DUTIES**. All of them must be in the roster.

Rosters should be published 14 days in advance. Company should keep records of duties assigned to all crew members for a period of 24 months.

RESERVE= the minimum "at least 10 hours" between the notification of an assignment for any duty and reporting for that duty during reserve may include the period of 8 hours during which a crew member on reserve is not contacted by the operator. Reserve period that does not result in a duty period may not retrospectively be considered as a part of a Recurrent Extended Recovery Rest Period (RERRP).

Reserve does not count as Duty Period.

STANDBY=shall be in the roster. The start and the end time of standby shall be defined and notified in advance to crew members concerned to provide them with the opportunity to plan adequate rest.

The maximum duration of standby other than airport standby is 16 hours. The combination of standby and FDP cannot lead to more than 18 hours awake time. 25% of time spent on standby other than airport standby counts as Duty Time. Standby ceases when the crew member reports at the designated reporting point.

If standby ceases **within** the first 6 hours, the maximum FDP counts from reporting.

If standby ceases **after** the first 6 hours, the maximum FDP counts is reduced by the amount of standby time exceeding 6 hours.

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

AIRPORT STANDBY=shall count **IN FULL** as DP, and the FDP shall count **IN FULL** of the time airport duty reporting time. Airport standby shall be in the roster with specification of the beginning and ending time. The operator shall provide accommodations to the crew member on airport standby, and sufficient notification period to protect a sleep opportunity between the call for duty and the assigned FDP.

FTL regulations are set to manage the risk of fatigue. Part of that management is training program.

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.

This training shall follow a training program 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.

For more information about FTL visit EASA ORO FTL., CS FTL., GM 1.CS.FTL., and AMC1.ORO.FTL.