



7. FLIGHT TIME LIMITATIONS

7.1 Flight and Duty Time Limitations and Rest Requirements

7.1.1 General

All information about flight and duty time limitations and rest requirements as well as the rules about exceedances of flight duty time limitations and/or reductions of rest periods are established for all flight and cabin crew members of Turkish Airlines in compliance with national provisions of Turkey including Turkish DGCA SHT-FTL Instruction on Flight and Duty Time Limitations and Resting Requirements for contributing flight safety.

Relevant responsible administrative personnel and crew members that do not comply with the provisions of SHT-FTL Regulation, will be penalized with administrative fines by Turkish DGCA based on Article 143th of Law No. 2920 and/or Regulation for Administrative Fines to be Issued by Turkish DGCA (SHY-İPC).

Taken into consideration the degree of defect, in case of continuation or repetition of contradictions to SHT-FTL Regulation;

- a) Relevant administrative personnel's authorization or certificate of approval can be suspended.
- b) Relevant crew members' license or certificate can be suspended for a maximum of 6 months or completely revoked.

Minimum requirements to become the Senior Vice President, Crew Planning of Turkish Airlines are:

1. Having 5 years planning or 10 years flight experience,
2. Having completed at least a 2 year university program,
3. Having completed a Fatigue Risk Management (FRM) Training Program provided by Turkish Airlines,
4. Having completed a Crew Resource Management (CRM) Training Program provided by Turkish Airlines,
5. Having completed the Flight Time Limitations (FTL) Training Program provided by Turkish DGCA,
6. Having completed the Crew Planning Training Program used by Turkish Airlines,
7. Having no definite conviction for the offenses established by Article 18 of Law No. 2920.

All flights are planned as to be completed within the allowable flight duty period, taking into account the time necessary for all pre-flight duties and all subsequent flights.

Within the scope of Article 7 of SHT-FTL Regulation, "(1) Exceptions to the time limitation rules indicated in the SHT-FTL Regulation may be permitted if operators apply to the General Directorate with detailed rationale. (2) Exceptions regarding state duties, search and rescue activities, natural disasters such as flood, fire, earthquake, etc. may be made within the scope of the permission and / or knowledge of the General Directorate." Crew Planning Directorate shall carry out and direct all granted exceptions as well as inform other directorates accordingly. Both, the individual crew members and Turkish Airlines are responsible for strict observance of these regulations. No crew member begins a flight duty period if it is foreseeable that duty time limitations as stated within this **EK.10.73.001 Operations Manual Part-A, Chapter 7** will be violated.

Apart from flying for Turkish Airlines, no crew member is allowed to fly privately for financial gain, or commercially for a third party without the approval of Turkish Airlines.



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When undertaking duties for more than one operator by the permission of the Turkish Airlines refer to [Subchapter 7.1.5](#) section for details.

7.1.2 Scope

This chapter establishes the requirements to be met by Turkish Airlines and its crew members with regard to flight and duty time limitations and rest requirements for active (with a valid licence and/or certificate) flight and cabin crew members.

7.1.3 Definitions

Acclimatised: A state in which a crew member's circadian biological clock is synchronised to the time zone where the crew member is in accordance with the values in the Table-1.

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: Acclimatisation Table

Time difference (h) between reference time and local time where the crew member starts the next duty	Time elapsed since reporting at reference time				
	< 48	48 - 71:59	72 – 95:59	96 – 119:59	≥ 120
2 < ... < 4	B	D	D	D	D
4 ≤ ... ≤ 6	B	X	D	D	D
6 < ... ≤ 9	B	X	X	D	D
9 < ... ≤ 12	B	X	X	X	D
<p>'B' means acclimatised to the local time of the departure time zone,</p> <p>'D' means acclimatised to the local time where the crew member starts his next duty, and</p> <p>'X' means that a crew member is in an unknown state of acclimatisation.</p>					

A crew member remains acclimatised to the local time of his reference time during 47 hours 59 minutes after reporting no matter how many time zones he has crossed.

The maximum daily FDP for acclimatised crew members is determined by using Table-1 with the reference time of the point of departure. As soon as 48 hours have elapsed, the state of acclimatisation is derived from the time elapsed since reporting at reference time and the number of time zones crossed.



A crew member is considered to be in an unknown state of acclimatisation after the first 48 hours of the rotation have elapsed unless he remains in the first arrival destination time zone (either for rest or any duties) in accordance with the Table-1.

Should a crew member's rotation include additional duties that end in a different time zone than his first arrival destination's time zone while he is considered to be in an unknown state of acclimatisation, then the crew member remains in an unknown state of acclimatisation until he:

- (1) has taken the rest period required by [Subchapter 7.1.15.6](#) at home base;
- (2) has taken the rest period required by [Subchapter 7.1.15.6](#) at the new location; or
- (3) has been undertaking duties starting at and returning to the time zone of the new location until he becomes acclimatised in accordance with the values in the Table-1. To determine the state of acclimatisation, the two following criteria should be applied:
 - (i) the greater of the time differences between the time zone where he was last acclimatised or the local time of his last departure point and the new location; and
 - (ii) the time elapsed since reporting at home base for the first time during the rotation.

The point of departure refers to the reporting point for a flight duty period or positioning duty after a rest period.

The time elapsed since reporting at reference time for operations applying [Subchapter 7.1.15.6](#) 3) (ii) at home base refers to the time elapsed since reporting for the first time at home base for a rotation.

Accommodation: 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.

Adequate furniture for crew member accommodation should include a seat that reclines at least 45° back angle to the vertical, has a seat width of at least 20 inches (50cm) and provides leg and foot support.

Airport Standby: A standby performed at the airport.

Augmented Flight Crew: 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.

Boeing Alertness Model (BAM): Part of the Fatigue Risk Management System (FRMS) which enables Turkish Airlines to predict and control crew fatigue from a scientific point of view.

Break: 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.

Cabin crew member: An appropriately qualified crew member, other than a flight crew or technical crew member, who is assigned by an operator to perform duties related to the safety of passengers and flight during operations.

Call for Roster (CFR): Local day in the roster which a duty may be assigned to a crew member via notification of IVR system or mobile platforms between 17:00 – 23:00 LT on the previous day.



Delayed Reporting: The postponement of a scheduled FDP by the operator before a crew member has left the place of rest.

Disruptive Schedule: 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 for 'early start' a duty period starting in the period between 05:00 and 06:59 or 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.

Dual Base: Dual Base for a crew member is a pair of airports located close by, for whom the crew member considered to be residing within 90 minutes travelling time from both airports. There is no airport positioning time to be calculated for an assigned duty that will start from either of the airports. Therefore, FDP and/or relevant duty limits will start when the crew member starts his duty at any of the two airports determined as dual base.

Duty: 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;

Duty Period: 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.

Eastward-Westward and Westward-Eastward transition: The transition at home base between a rotation crossing 6 or more time zones in one direction and a rotation crossing 4 or more time zones in the opposite direction.

Fatigue: A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness, circadian phase, or workload (mental and/or physical activity) that can impair a crewmember's alertness and ability to safely operate an aircraft or perform safety-related duties.

Flight crew member: A pilot licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Flight Duty Period (FDP): 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 (Block) Time: 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.

FTL: Flight Time Limitations

FTSS: Flight and duty time limitations and rest requirements procedures.

Home Base: 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.

IVR (Interactive Voice Response): The electronic system that automatically notifies reserved duties of flight and cabin crew and their duty changes.

Local Day: A 24-hour period commencing at 00:00 local time.

Local Night: A period of 8 hours falling between 22:00 and 08:00 local time.



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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 is acclimatised.

Operating Crew Member: A crew member carrying out duties in an aircraft during a sector. A person on board an aircraft is either a crew member or a passenger. If a crew member is not a passenger on board an aircraft he should be considered as 'carrying out duties'. The crew member remains an operating crew member during in-flight rest. In-flight rest counts in full as FDP.

Other Standby: A standby either at home or in a suitable accommodation.

Positioning: The transferring of a non-operating crew member from one place to another, at the behest of Turkish Airlines, 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.

Reference Time: 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.

Reserve: A period of time during which a crew member is required by Turkish Airlines to be available to receive an assignment for an FDP, positioning or other duty notified at least 10 hours in advance.

Rest Facility: A bunk or seat suitable for crew members' sleeping on board an aircraft.

Rest Period: 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: 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 Turkish Airlines is no longer responsible for the accommodation of the crew member.

Sector: 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.

Single Day Free of Duty: 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.

Standby: A pre-notified and defined period of time during which a crew member is required by Turkish Airlines to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period;

Suitable Accommodation: 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.

Temporary Accommodation: For the purpose of rest, refers to a room having all the necessary facilities for physiological needs, such as adequate equipment for ventilation, adjustment of temperature and light intensity, and access to food and beverages, with a quiet atmosphere and at least two separate beds where up to two crew members can be accommodated.

Temporary Base: Refers to a location, apart from the main base, determined by an operator, at home or abroad, to ensure continuity of flight operations, where crew members are to be hosted for a temporary period of time, from the start date to the end date of the crew members' flight duty period, during which the operator is obliged to provide the crew



members with suitable accommodation or temporary accommodation and means of subsistence, and where an aircraft from the Turkish Airlines' fleet that meets the minimum requirements is to be deployed.

Window of Circadian Low (WOCL): The period between 02:00 and 05:59 hours in the time zone to which a crew member is acclimatised.

7.1.4 Turkish Airlines' Responsibilities

7.1.4.1 General

Turkish Airlines:

- 1) publishes duty rosters 14 days in advance or minimum 7 days in advance covering the period of minimum 28 days in advance sufficiently to provide the opportunity for crew members to plan adequate rest;
- 2) ensures 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;
- 3) specifies reporting times that allow sufficient time for ground duties;
- 4) takes 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;
- 5) allocates duty patterns which avoid practices that cause a serious disruption of an established sleep/work pattern, such as alternating day/night duties;
- 6) complies with the provisions concerning disruptive schedules according to late type;
- 7) provides 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;
- 8) schedules recurrent extended recovery rest periods and notify crew members sufficiently in advance;
- 9) schedules 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 as specified in [Subchapter 7.1.4.3](#);
- 10) changes 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.
- 11) determines, at the end of each month, the duties that exceeds the maximum FDP on more than 25% of the flight duties. Turkish Airlines categorizes such flight duties that exceeds maximum FDP by 25% in 3 consecutive months as priority flights. Turkish Airlines will alter the series of flights which include such priority flights and/or arrangements regarding flight time will be implemented in case there is no improvement on these rates at the end of 4 consecutive months at the latest.
- 12) sends copy of the non-conformity report to the Turkish DGCA not later than 7 business days after the event in accordance with UOD-2014/11 Circular on Reports to be Sent to the Turkish DGCA Flight Operations Management.
- 13) does not count the medical examination days which are included in rosters of crew members as duty and/or rest period. However, Turkish Airlines plans the minimum rest time after the medical examination days in roster.
- 14) counts vaccination and e-learning activities which are included in rosters of crew members as a duty period.



7.1.4.2 Scheduling

Flight duties and/or other duties are scheduled by Turkish Airlines' Crew Planning Directorate. The final responsibility rests with the Nominated Person for Crew Planning and Accountable Manager.

- 1) Scheduling has an important impact on a crew member's ability to sleep and to maintain a proper level of alertness. When developing a workable roster, Turkish Airlines strikes a fair balance between the commercial needs and the capacity of individual crew members to work effectively. Rosters are developed in such a way that they distribute the amount of work evenly among those that are involved.
- 2) Schedules allow for flights to be completed within the maximum permitted flight duty period and flight rosters take into account the time needed for pre-flight duties, taxiing, the flight- and turnaround times. Other factors to be considered when planning duty periods include:
 - (i) the allocation of work patterns which avoid undesirable practices such as alternating day/night duties, alternating eastward-westward or westward-eastward time zone transitions, positioning of crew members so that a serious disruption of established sleep/work patterns occurs;
 - (ii) Scheduling sufficient rest periods especially after long flights crossing many time zones; and
 - (iii) Preparation of duty rosters sufficiently in advance with planning of recurrent extended recovery rest periods and notification of the crew members well in advance to plan adequate pre-duty rest.

7.1.4.3 Operational Robustness

Turkish Airlines establishes and monitors performance indicators for operational robustness of rosters.

Performance indicators for operational robustness of rosters support Turkish Airlines in the assessment of the stability of its rostering system. Performance indicators for operational robustness of rosters at least measure how often a rostered crew pairing for a duty period is achieved within the planned duration of that duty period. Crew pairing means rostered positioning and flights for crew members in one duty period.

The planning of crew schedules is done according to the limitation defined in this section. The performance indicator for Turkish Airlines is the FDP limits and they are monitored before and through the crew operation and necessary actions are taken in reasonable time frame if possible.

Turkish Airlines can only take the responsibility of the controllable factors which are:

- Scheduled block times
- Scheduled turnaround times
- Known airport and en-route traffic conditions

On the other hand the following factors but not limited to be out of control of Turkish Airlines:

- Adverse weather conditions
- Industrial Action
- Political Unrest / Civil Unrest / Terrorist Activity
- Force Majeure



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- Service / Infrastructure failure of external / Independent agencies e.g. ATC/SITA, etc.
- Reactionary delay / Diversion e.g. medical / Unruly passenger
- etc.

7.1.5 Crew Member Responsibilities

Crew members shall:

- 1) comply with:
 - comply with all flight and duty time limitations (FTL) and rest requirements applicable to their activities.
 - when undertaking duties for more than one operator by the permission of the Turkish Airlines:
 - maintain his individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; and
 - provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.
 - The crew member shall not perform duties on an aircraft:
 - if he knows or suspects that he is suffering from fatigue or feels otherwise unfit, to the extent that the flight may be endangered.
- 2) Make optimum use of the opportunities and facilities for rest provided and plan and use their rest periods properly.

7.1.6 Fatigue Risk Management (FRM)

See [EK.10.21.001 Safety Management Manual Chapter 5 Fatigue Risk Management System](#).

7.1.7 Home Base

Turkish Airlines assigns a home base to each crew member.

- 1) The home base is a single airport location assigned with a high degree of permanence.
- 2) In the case of a change of home base, the first recurrent extended recovery rest period prior to starting duty at the new home base is increased to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is positioning.
- 3) Turkish Airlines home bases are as follows:
 - Istanbul Airport (LTFM/IST)
 - Istanbul Sabiha Gökçen Airport (LTFJ/SAW)
 - Istanbul Atatürk Airport (LTBA/ISL)
 - Esenboğa Airport (LTAC/ESB)
 - Antalya Airport (LTAI/AYT)



- 4) According to the exemption granted by the Turkish DGCA, Istanbul Airport (LTFM/IST) and Istanbul Sabiha Gökçen Airport (LTFJ/SAW) may be assigned as dual base for B737 and A320 flight crew and cabin crew members under the following conditions (notwithstanding items 1 and 2 above):
- Crew members who do not reside in the provinces of Adalar, Çatalca, Silivri, Büyükçekmece, Beylikdüzü, Avclar and Şile are considered to be able to travel to both airports at or under 90 minutes, therefore are regarded as eligible for such dual base assignment. Crew members are responsible for submitting their current residence information or changes in such information. Turkish Airlines is responsible for tracking and updating the residence information submitted by the crew members.
 - A rest period of minimum 48 hours, including minimum two local nights will be provided for crew members during transitions (before and after the transition). Off days, leave days (annual leave, casual leave, etc.), off time with no assigned duty and off time planned from a CFR duty may be counted as a part of such minimum rest period.
 - Such transition will be planned once in a calendar month and shall be planned for a maximum of 6 days in a row for B737 and A320 flight crew members.
 - In the context of this exemption, for crew members who are assigned to the airport which is situated in the other continent compared to their residences, the rest time after a flight duty shall be planned to be 4 hours more than the minimum rest requirements. If the flight duty is extended due to unforeseen circumstances (delay, divert, etc.), the extra 4 hours may be reduced.
 - The rest periods between such flights will be planned, taking the increased time spent during travel for duty into account, to a high degree as possible.
 - Transportation will be assigned to crew members for flights, at all times during the transition upon request of the crew member. The request for transportation shall be made by the crew member 1 day prior to the assigned flight duty. If transportation is requested, the departure time from IST to SAW or SAW to IST will be 90 minutes prior to reporting time for the flight duty period and will take the crew member back at the end of the duty.
 - When a flight duty is assigned from the transitioned airport during a standby duty other than airport standby duty, the response time between the call and reporting time will be 240 minutes.
 - Flight duty period will start at the transitioned airport as per the crew members' roster or the flight duty notification.
 - Flights, which are planned or notified with a ground positioning time, are not within the scope of this exemption (i.e. IST-BUS-SAW-BUS-IST).
 - For the flights within this exemption, reporting shall be made:
 - via the AQD System> 2.4 CREW PLANNING IRREGULARITY REPORT in case of non-conformance to related rules or procedures or
 - via sending an e-mail to CREWCOCKPIT@THY.COM for problems encountered and operational improvement suggestions.

7.1.7.1 Travelling Time

Crew members should consider making arrangements for temporary accommodation closer to their home base if the travelling time from their residence to their home base usually exceeds 90 minutes.



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7.1.7.2 Airport Positioning Time

In case the crew planned for a flight duty or an airport standby duty from/to a station in his home city which is not his home base station then;

- The time for positioning from/to the home base to/from the other station will be regarded as positioning.
- Flight duty period starts at the crew's home base airport.
- In case the crew asks for it, Turkish Airlines will provide a shuttle from/to home base and other station.
- Positioning time from/to the home base to/from the other station will be defined and stored in **Crew Management System (CMS)** to be published/included in monthly and daily rosters accordingly.

Positioning time between Istanbul Sabiha Gokcen Airport and Istanbul Airport is at least 90 minutes. Planned positioning times will be included in the roster.

In case the crew planned for a flight duty or an airport standby duty from/to a station which is not in his home city; the same rules defined above will be valid.

7.1.8 Flight Duty Periods (FDP)

Turkish Airlines has

- 1) defined reporting times in [Subchapter 7.1.8.1](#);
- 2) establishes procedures in [Subchapter 7.1.8.2](#) specifying how the commander will, 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.

7.1.8.1 Reporting Time Procedure

7.1.8.1.1 Reporting Periods for Flight Crew Other Than Freighter Flights

Table-2: Reporting Periods for Flight Crew (freighter is excluded)

Duty type / Fleet	Flight Duty Start Station	NARROW BODY	WIDE BODY
First leg active, with passenger flights	LTFM	01:15	01:30
First leg active, with passenger flights	LTBA	01:00	01:30
First leg active, with passenger flights	LTFJ	01:00	01:30
First leg active, with passenger flights	Other	01:00	01:00
Simulator	All	01:00	01:00
First leg active, Aircraft Positioning Flights – Non Revenue (ferry/delivery/demo)	All	01:00	01:00
First leg crew positioning (deadhead)	All	01:00	01:00
Split duty	All	01:00	01:00



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7.1.8.1.2 Reporting Periods for Cabin Crew

Table-3: Reporting Periods for Cabin Crew

Duty type / Fleet	Flight Duty Start Station	NARROW BODY	WIDE BODY
First leg active, with passenger flights	LTFM	01:15	01:30
First leg active, with passenger flights	LTBA	01:00	01:30
First leg active, with passenger flights	LTFJ	01:00	01:30
First leg active, with passenger flights	Other	01:00	01:00
First leg active, Aircraft Positioning Flights – Non Revenue (ferry/delivery/demo)	All	01:00	01:00
First leg crew positioning (deadhead)	All	01:00	01:00
Split duty	All	01:00	01:00

7.1.8.1.3 Reporting Periods for Flight Crew for Freighter Flights

Table-4: Reporting Periods for Freighter Flights

Duty Type / Fleet	Flight Crew
First leg active	01:00
First leg crew positioning (deadhead)	01:00
Split duty	01:00

7.1.8.2 Reduce the Actual FDP and/or Increase the Rest Period

In the event of unforeseen circumstances such as the increased stress level and the fatigue of the crew members and the emerge of suspicion for the safe continuation of the flight operations with reference to the flight safety requirements, the Commander shall decide to end the flight duty earlier than the planned ending time after consulting all crew members.

In such cases the Commander may also decide to increase the rest period what is applicable to the previous flight duty.

Unforeseen circumstances can be defined as but are not limited to:

- Emergencies
- Technical malfunctions/issues,
- Sick passenger(s),



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- Crew member incapacitation,
- Unruly passenger(s),
- Adverse weather which is not forecasted at the start of the FDP, etc.

When Commander decides to reduce the actual FDP or increase the rest period, he shall use available means to contact IOCC about his decision in a timely manner to minimize the effects on the operation. If the decision is made during the flight, he may use ACARS, SATCOM, VHF or HF to contact IOCC when the workload permits during times other than the critical phases of flight. If he is on the ground, he may also use the default numbers in the mobile phone which is supplied in the captain's folder. This will allow IOCC to take the necessary measures and coordinate with relevant departments of the company.

Commander's decision to use above discretions shall be considered as part of the Turkish Airline's safety objective.

In both cases a fatigue report shall be filled by the Commander via AQD system.

7.1.8.3 Basic Maximum Daily Flight Duty Period

7.1.8.3.1 The Maximum Daily FDP Without the Use of Extensions for Acclimatised Crew Members

Without the use of extensions for acclimatised crew members the maximum daily FDP is defined the following Table-5:

Table-5: The maximum daily FDP for Acclimatised 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
06:00-13:29	13:00	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00
13:30-13:59	12:45	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00
14:00-14:29	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00
14:30-14:59	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00
15:00-15:29	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
15:30-15:59	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00
16:00-16:29	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00
16:30-16:59	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00	09:00
17:00-04:59	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00	09:00
05:00-05:14	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
05:15-05:29	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00
05:30-05:44	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00
05:45-05:59	12:45	12:15	11:45	11:15	10:45	10:15	09:15	09:15	09:00



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7.1.8.3.2 The Maximum Daily FDP When Crew Members are in an Unknown State of Acclimatisation

The maximum daily FDP when crew members are in an unknown state of acclimatisation in accordance with the following Table-6:

Table-6: Maximum daily FDP according to sectors

1-2	3	4	5	6	7	8
11:00	10:30	10:00	9:30	09:00	09:00	09:00

The maximum daily FDP when crew members are in an unknown state of acclimatisation and the Turkish Airlines has implemented a FRM, will be in accordance with the following Table-7. The values in the following table may apply provided the Turkish Airlines' FRM continuously monitors that the required safety performance is maintained.

Table-7: Crew members in an unknown state of acclimatisation under FRM

1-2	3	4	5	6	7	8
12:00	11:30	11:00	10:30	10:00	09:30	09:00

7.1.8.4 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 may not exceed 1 hour. The maximum daily FDP for cabin crew is based on the time at which the flight crew report for their FDP, but the FDP starts at the reporting time of the cabin crew.

For reporting times, refer to [Subchapter 7.1.8.1](#).

7.1.8.5 Night duty

Night duties comply with the following:

- 1) When establishing the maximum FDP for consecutive night duties, the number of sectors is limited to 4 sectors per duty.
- 2) The Turkish Airlines applies 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 in accordance with [Subchapter 7.1.8.5.1](#).

7.1.8.5.1 Appropriate Fatigue Risk Management

- 1) When rostering night duties of more than 10 hours (referred to below as 'long night duties'), it is critical for the crew member to obtain sufficient sleep before such duties when he is adapted to being awake during day time hours at the local time where he is acclimatised. To optimise alertness on long night duties, the likelihood of obtaining sleep as close as possible to the start of the FDP should be considered, when rostering rest periods before long night duties, by providing sufficient time to the crew member to adapt to being awake during the night. Rostering practices leading to extended wakefulness before reporting for such duties should be avoided. Fatigue risk management principles that could be applied to the rostering of long night duties may include:
 - (i) avoiding long night duties after extended recovery rest periods
 - (ii) progressively delaying the rostered ending time of the FDPs preceding long night duties;



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- (iii) starting a block of night duties with a shorter FDP; and
- (iv) avoiding the sequence of early starts and long night duties.

2) Fatigue risk management principles may be applied to the rostering of long night duties by means of:

- (i) Turkish Airlines or industry operational experience and data collected on similar operations;
- (ii) evidence-based scheduling practices; and
- (iii) bio-mathematical models,

which is detailed in [EK.10.21.001 Safety Management Manual, 5.2.2.1. Predictive Hazard Identification](#) section.

7.1.8.6 Extension without In-Flight Rest

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 (Table-8) 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.
- 2) 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) Turkish Airlines' Flight time specification schemes specifies the limits for extensions of the maximum basic daily FDP as specified in Table-8, taking into account:
 - (i) the number of sectors flown; and
 - (ii) WOCL encroachment.

The extension of FDP without in-flight rest under the provisions of 5) is limited to the values specified in the Table-8 below.

Table – 8: Maximum daily FDP with extension

Starting Time of Flight Duty Period (FDP)	1-2 Sectors (Based on Time)	3 Sectors (Based on Time)	4 Sectors (Based on Time)	5 Sectors (Based on Time)
06:00-06:14	Not Allowed	Not Allowed	Not Allowed	Not Allowed
06:15-06:29	13:15	12:45	12:15	11:45



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06:30-06:44	13:30	13:00	12:30	12:00
06:45-06:59	13:45	13:15	12:45	12:15
07:00-13:29	14:00	13:30	13:00	12:30
13:30-13:59	13:45	13:15	12:45	Not Allowed
14:00-14:29	13:30	13:00	12:30	Not Allowed
14:30-14:59	13:15	12:45	12:15	Not Allowed
15:00-15:29	13:00	12:30	12:00	Not Allowed
15:30-15:59	12:45	Not Allowed	Not Allowed	Not Allowed
16:00-16:29	12:30	Not Allowed	Not Allowed	Not Allowed
16:30-16:59	12:15	Not Allowed	Not Allowed	Not Allowed
17:00-17:29	12:00	Not Allowed	Not Allowed	Not Allowed
17:30-17:59	11:45	Not Allowed	Not Allowed	Not Allowed
18:00-18:29	11:30	Not Allowed	Not Allowed	Not Allowed
18:30-18:59	11:15	Not Allowed	Not Allowed	Not Allowed
19:00-03:59	Not Allowed	Not Allowed	Not Allowed	Not Allowed
04:00-04:14	Not Allowed	Not Allowed	Not Allowed	Not Allowed
04:15-04:29	Not Allowed	Not Allowed	Not Allowed	Not Allowed
04:30-04:44	Not Allowed	Not Allowed	Not Allowed	Not Allowed
04:45-04:59	Not Allowed	Not Allowed	Not Allowed	Not Allowed
05:00-05:14	Not Allowed	Not Allowed	Not Allowed	Not Allowed
05:15-05:29	Not Allowed	Not Allowed	Not Allowed	Not Allowed
05:30-05:44	Not Allowed	Not Allowed	Not Allowed	Not Allowed
05:45-05:59	Not Allowed	Not Allowed	Not Allowed	Not Allowed



7.1.8.7 Extension with In-Flight Rest (augmentation)

In-flight rest facilities fulfil the following minimum standards:

- **“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.

1) The extension of FDP with in-flight rest complies with the following:

- (i) The FDP is limited to 3 sectors; and
- (ii) 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 controls during the last landing.
 - For a particular flight, total time of the takeoff plus the landing is considered to be 60 minutes. Commander is responsible to plan the actual rest periods which assure the above specified minimum in-flight rest periods.
 - In-flight rest periods allocated in order to optimise the alertness of those flight crew members at control during landing.

2) The maximum daily FDP may be extended due to in-flight rest for flight crew:

- (i) 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; or
 - C. Up to 16 hours with class 1 rest facilities;
- (ii) 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; or
 - C. Up to 17 hours with class 1 rest facilities.

3) The minimum in-flight rest for each cabin crew member is in accordance with the following Table- 9:



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Table-9: Maximum Extended FDP

Maximum Extended FDP	Minimum in-flight rest (hours)		
	Class 1	Class 2	Class 3
Up to 14:30hours	1:30	1:30	1:30
14:31 – 15:00 hours	1:45	2:00	2:20
15:01 – 15:30 hours	2:00	2:20	2:40
15:31 – 16:00 hours	2:15	2:40	3:00
16:01 – 16:30 hours	2:35	3:00	Not allowed
16:31 – 17:00 hours	3:00	3:25	Not allowed
17:01 – 17:30 hours	3:25	Not allowed	Not allowed
17:31 – 18:00 hours	3:50	Not allowed	Not allowed

- 4) The limits specified in 2) may be increased by 1 hour for FDPs that include 1 sector of more than 9 hours of continuous flight time and a maximum of 2 sectors.
- 5) All time spent in the rest facility is counted as FDP.
- 6) The minimum rest at destination is at least as long as the preceding duty period, or 14 hours, whichever is greater.
- 7) A crew member does not start a positioning sector to become part of this operating crew on the same flight.
- 8) Turkish Airlines, with the approval of Turkish DGCA, may schedule an extra cruise relief pilot as an additional (3rd or 4th) flight crew member to avoid probable fatigue and/or to increase flight safety for the flights which normally can be planned with lesser number of flight crew members.

In such case, in his monthly schedule or during duty notification by Crew Planning Directorate, the extra pilot for the flight will be clearly informed about his duty that he will be acting only as an extra cruise relief pilot. This extra cruise relief pilot will relieve other pilots only during cruise phase and will not be at the controls during take-off/departure and approach/landing phases of flight. In case this extra pilot is a Commander, he shall be less senior than the Designated Commander of the flight.

Use of this extra relief pilot cannot be used for the extension of FDP.

A business class seat (if the aeroplane has business class configuration) without the necessity of meeting Class 3 rest facility requirements will be allocated for the extra cruise relief pilot.

Flight crew pairings during the flight must always be in compliance with the requirements of [Subchapter 4.1.1.8 \(B\)](#) according to the phase of the flight.



7.1.8.8 Unforeseen Circumstances

7.1.8.8.1 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, comply with the following:
 - (i) The maximum daily FDP which results after applying points [Subchapters 7.1.8.3](#) and [7.1.8.7](#) or [7.1.12](#) 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) The maximum basic daily FDP that results after applying [Subchapter 7.1.8.3.1](#) should be used to calculate the limits of commander's discretion, if commander's discretion is applied to an FDP which has been extended under the provisions of [Subchapter 7.1.8.6](#).
- 3) 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 in accordance with procedure in [Subchapters 7.1.8.2](#).
- 4) The commander consults all crew members on their alertness level before deciding the modifications under subparagraphs 1) and 2).
- 5) The commander submits a report to Flight Operations Directorate when an FDP is increased or a rest period is reduced at his discretion via AQD system.
- 6) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which Turkish Airlines adds its comments and sends to the Turkish DGCA not later than 28 days after the event in accordance with UOD-2014/11 Circular on Reports to be Sent to the Turkish DGCA Flight Operations Management.
- 7) When a Commander exercises his discretion on extending FDP and/or reducing rest time, he shall comply with the requirements (i.e. maximum time to be extended, reporting) stated under this subchapter.

After taking into consideration the fatigue and stress levels of the crew, if the Commander decides that continuation of the FDP/reduction of the rest period has a negative effect on the safety of the flight, he shall elect not to extend FDP and/or reduce the rest time.
- 8) If the sector/series of the sectors is/are effected after such decision not to extend FDP/reduce rest time, the Commander shall contact his Fleet Management for coordination with the Crew Planning Directorate.
- 9) In such case, a fatigue report shall be filled by the Commander via AQD system.
- 10) Turkish Airlines takes into consideration the shared responsibility of management, flight and cabin crew in the case of unforeseen circumstances. 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. Turkish Airlines assesses on a regular basis the series of pairings where commander's discretion has been exercised in order to be aware of possible inconsistencies in their rostering.



- 11) The Turkish Airlines' policy on commander's discretion states the safety objectives, especially in the case of an extended FDP or reduced rest and takes due consideration of additional factors that might decrease a crew member's alertness levels, such as:
- (i) WOCL encroachment;
 - (ii) Weather conditions;
 - (iii) Complexity of the operation and/or airport environment;
 - (iv) Aeroplane malfunctions or specifications;
 - (v) Flight with training or supervisory duties;
 - (vi) Increased number of sectors;
 - (vii) Circadian disruption; and
 - (viii) Individual conditions of affected crew members (time since awake, sleep-related factor, workload, etc.).
- 12) When unforeseen circumstances dictate that there will be a possibility that maximum FDP limit will be exceeded, Commander may elect to use or not to use his discretion to extent the FDP. After assessing alertness levels of the crew members, final decision rests with the Commander. For assessing the alertness levels, the Commander may contact Crew Planning Directorate to discuss Boeing Alertness Model (BAM) values of the crew members. Before the start of an FDP or even after an FDP has started, circumstances may rise which could lead to exceedance of FDP limit. Immediately after Commander estimates that an FDP limit exceedance is probable, he shall pass this information to the IOCC. Timely communication with IOCC might provide time to take adequate operational measures, if possible, to keep the FDP within limits. However, even after the measures taken by IOCC, due to additional operational reasons, if it becomes clear that the FDP will be exceeded, Commander shall decide whether to extend or not to extend the FDP on his discretion. It is utmost important for the Commander to make his decision in a timely manner in order to prevent negative effect on the operation.

7.1.8.8.2 Delayed Reporting

Turkish Airlines may delay the reporting time in the event of unforeseen circumstances regarding to delayed reporting procedure specified in [Subchapter 7.1.8.8.2.1](#). Turkish Airlines keeps records of delayed reporting. Delayed reporting procedures establish a notification time allowing a crew member to remain in his suitable accommodation when the delayed reporting procedure is activated. In such a case, if the crew member is informed of the delayed reporting time, the FDP is calculated as follows:

- 1) one notification of a delay leads to the calculation of the maximum FDP according to 3) or 4);
- 2) if the reporting time is further amended, the FDP starts counting 1 hour after the second notification or at the original delayed reporting time if this is earlier;
- 3) when the delay is less than 4 hours, the maximum FDP is calculated based on the original reporting time and the FDP starts counting at the delayed reporting time;
- 4) when the delay is 4 hours or more, the maximum 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;



- 5) as an exception to 1) and 2), when Turkish Airlines informs the crew member of a delay of 10 hours or more in reporting time and the crew member is not further disturbed by Turkish Airlines, such delay of 10 hours or more counts as a rest period.
- 6) when Turkish Airlines informs the crew member of a delay of 10 hours or more in reporting time and the crew member is not further disturbed by Turkish Airlines, such delay of 10 hours or more counts as a rest period.

	Max FDP calculation	FDP start time
First notification Delay < 4 Hours	Based on original reporting time	At delayed reporting time
First notification Delay ≥ 4 Hours	Based on more limiting of original reporting time or delayed reporting time	At delayed reporting time
Second notification	Based on first delayed reporting time	1 hour after second notification time or original delayed reporting time if earlier
Delayed Reporting ≥ 10 hours	Max FDP Calculation	FDP Start Time
Delay ≥10 hrs	Based on delayed reporting time	At delayed reporting time

7.1.8.8.2.1 Notification and Delayed Reporting Procedure

When a flight start time update affecting a crew's flight duty start time;

- If there are 10 hours or more time to the informed flight duty start time or changes in the duties then the change in the start time is not regarded as a delayed reporting but a regular notification.
- If there are more than 90 minutes to the informed flight duty start time, then the Crew is regarded as “at home” and Crew Planning Directorate notifies him about the update. The Crew is obliged to check his telephone and e-mail before leaving his accommodation, and in case he got a message or a call he have to get the details of the notification and behave accordingly.
- If there are 90 minutes or less to the informed flight duty start time, then the Crew is regarded as “may have left his home”. So Crew Planning Directorate calls and informs him about the update:
 - If the crew declares that he is at home then continues her/his rest and reports in for the updated flight duty.
 - If he is already on the way, then he comes to the airport and be on airport standby, he may be reassigned to another duty.



7.1.9 Flight Times and Duty Periods

7.1.9.1 Duty Periods

The total duty periods to which a crew member may be assigned to 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
- 4) 2.000 duty hours in any calendar year.

7.1.9.2 Flight Times

The total flight time of the sectors on which an individual crew member is assigned as an operating crew member to not exceed:

- 1) 100 hours of flight time in any 28 consecutive days;
- 2) 900 hours flight time in any calendar year;
- 3) 1000 hours of flight time in any 12 consecutive calendar months.

7.1.9.3 Post Flight Duty

Post flight duty counts as duty period.

7.1.9.3.1 Post Flight Duty Periods for Flight Crew Other Than Freighter Flights

Table-10: Post Flight Duty Periods For Flight Crew (freighter is excluded)

Duty type / Fleet	NARROW BODY	WIDE BODY
Last leg active, with passenger flights	00:30	00:30
Simulator	01:00	01:00
Last leg active, Aircraft Positioning Flights – Non Revenue (ferry/delivery/demo)	00:15	00:15
Last leg crew positioning (deadhead)	00:00	00:00
Split duty	00:15	00:15



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7.1.9.3.2 Post Flight Duty Periods for Cabin Crew

Table-11: Post Flight Duty Periods for Cabin Crew

Duty type / Fleet	NARROW BODY	WIDE BODY
Last leg active, with passenger flights	00:30	00:30
Last leg active, Aircraft Positioning Flights – Non Revenue (ferry/delivery/demo)	00:15	00:15
Last leg crew positioning (deadhead)	00:00	00:00
Split duty	00:15	00:15

7.1.9.3.3 Post Flight Duty Periods for Flight Crew for Freighter Flights

Table-12: Post Flight Duty Periods for Flight Crew for Freighter Flights

Duty Type / Fleet	Flight Crew
Last leg active	00:30
Last leg crew positioning (deadhead)	00:00
Split duty	00:15

The commander may increase this minimum time to account for unforeseen circumstances. In this case, flight crew shall correct the duty time via [crewduty system](#).

7.1.10 Days off

Flight and cabin crew members are to be given days free of all duty and standby, which are notified in advance, as follows:

- 1) At least 7 local days in each calendar month, which may include any rest periods; and
- 2) At least 96 local days in each calendar year, which may include any rest periods.
- 3) The number of local days may be reduced pro rata in case of paid or unpaid leave periods, sickness or part time employment.

7.1.11 Positioning

If Turkish Airlines positions a crew member, the following applies:

- 1) Positioning is not counted as a sector. But, positioning after reporting but prior to operating is counted as FDP but does not count as a sector;
- 2) All time spent on positioning counts as duty period;



7.1.12 Split Duty

The increase of limits on flight duty complies with the following:

- 1) The break on the ground within the FDP has a minimum duration of 3 consecutive hours;
- 2) The break on the ground counts in full as FDP;
- 3) Split duty does not follow a reduced rest;
- 4) The break excludes the time allowed for post and pre-flight duties and travelling;
- 5) The pre-flight duty times for split duty are defined in [Subchapter 7.1.8.1](#). The post-flight duty times for split duty are defined in [Subchapter 7.1.9.3](#). The transport times for the hotels will be defined and stored in **Crew Management System (CMS)** to be included in scheduling process according to information received from station representatives for the layover hotels' distance/time.
- 6) If the suitable accommodation is provided, the maximum FDP specified in [Subchapter 7.1.8.3](#) may be increased by up to 50% of the break;
- 7) In all other cases:
 - (i) accommodation is provided; and
 - (ii) the maximum FDP specified in [Subchapter 7.1.8.3](#) may be increased by up to 50% of the break. But, 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.
- 8) Split duty cannot be combined with in-flight rest;

7.1.13 Standby and Duties at the Airport

Turkish Airlines assigns crew members to standby or to any duty at the airport, the following applied to Turkish Airlines operations;

- 1) Standby and any duty at the airport in the roster and the start and end time of standby defined and notified in advance to the crew members concerned to provide them with the opportunity to plan adequate rest;
- 2) A crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period;
- 3) Airport standby counts in full as duty period for the purpose of points [Subchapter 7.1.9](#) and [Subchapter 7.1.15](#);
- 4) Any duty at the airport counts in full as duty period and the FDP counts in full from the reporting time;
- 5) Turkish Airlines provides suitable accommodation to the crew member on airport standby. If the accommodation is not provided, [Subchapter 7.1.13.1](#) 2) is not valid and in case of an assigned FDP starts during airport standby; the FDP counts from the start of the standby.
- 6) The minimum rest period following standby which does not lead to assignment of an FDP is as much as the specified minimum rest period at Home Base in [Subchapter 7.1.15](#);
- 7) If airport or other standby initially assigned is reduced by Turkish Airlines during standby that does not lead to an assignment to a flight duty period, the minimum rest requirements specified in [Subchapter 7.1.15](#) applies;



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- 8) If a minimum rest period as specified in [Subchapter 7.1.15](#) is provided before reporting for the duty assigned during the standby, this rest time period does not count as standby duty;

7.1.13.1 Airport Standby

- 1) If not leading to the assignment of an FDP, airport standby is followed by a rest period as specified in [Subchapter 7.1.15](#).
- 2) If an assigned FDP starts during airport standby, the following applies:
 - (i) The FDP counts from the start of the FDP. The maximum FDP is reduced by any time spent on standby in excess of 4 hours;
 - (ii) The maximum combined duration of airport standby and assigned FDP is 16 hours;
 - (iii) The maximum duration of airport standby at Turkish Airlines is 12 hours.

7.1.13.2 Standby Other Than Airport Standby

- 1) The maximum duration of standby other than airport standby is 16 hours;
- 2) Turkish Airlines standby procedures are designed to ensure that the combination of standby and FDP do not lead more than 18 hours awake time.
- 3) 25 % of time spent on standby other than airport standby counts as duty time for the purpose of [Subchapter 7.1.9.1](#).
- 4) Standby is followed by a rest period in accordance with [Subchapter 7.1.15](#).
- 5) Standby ceases when the crew member reports at the designated reporting point;
- 6) If standby ceases within the first 6 hours, the maximum FDP counts from reporting;
- 7) If standby ceases after the first 6 hours, the maximum FDP is reduced by the amount of standby time exceeding 6 hours;
- 8) If the FDP is extended due to in-flight rest according to [Subchapter 7.1.8.7](#) or to split duty according to [Subchapter 7.1.12](#), the 6 hours of paragraph 6) and 7) are extended to 8 hours;
- 9) If standby starts between 23:00 and 07:00, the time between 23:00 and 07:00 does not count towards the reduction of the FDP under 6), 7) and 8) until the crew member is contacted by the Turkish Airlines; and
- 10) The response time between call and reporting time established by the Turkish Airlines allows the crew member to arrive from his place of rest to the designated reporting point within a reasonable time.
- 11) If a crew member receives an assignment during standby other than airport standby, the actual reporting time at the designated point is used for the purpose of [Subchapter 7.1.15](#).

7.1.13.2.1 Standby Other Than Airport Standby Notification

Crew who is on other standby should be well rested, physically and mentally ready for taking a duty and reachable through the other standby period unless any other notification given by the Crew Planning Directorate.

Through the other standby period any duty assignment, shortening the standby period will be advised to the crew by Crew Planning Directorate via telephone and a complimentary e-mail may be sent.



The duty start time of the assigned duty or flight duty should be within the standby period. Through the operation, because of unforeseen circumstances, such as but not limited to a crew's illness at the last second, the flight duty start time may be as late as start of actual flight time for some of the crew. All crew members are responsible for minimizing delay of the flight.

When the crew receives the other standby notification, he should be at the reporting point within 90 minutes. Crew members should consider making arrangements for temporary accommodation closer to their home base if the travelling time from their residence to their home base usually exceeds 90 minutes.

7.1.14 Reserve

Turkish Airlines assigns duties to crew members on reserve, the following requirements applies to Turkish Airlines type of operation;

- 1) Reserve shall be in the roster;
- 2) An assigned FDP counts from the reporting time;
- 3) 24 hours are specified for Turkish Airlines as maximum duration of any single reserve period;
- 4) 7 days are as the maximum number of consecutive reserve days within the limits of [Subchapter 7.1.15.4](#).
- 5) Reserve times do not count as duty period for the purpose of Flight Times and Duty Periods and Rest period;
- 6) The minimum 'at least 10 hours' between the notification of an assignment for any duty and reporting for that duty during reserve includes the period of 8 hours during which a crew member on reserve is not contacted by Turkish Airlines;
- 7) Including reserve in a roster, also referred to as "rostering", implies that a reserve period that does not result in a duty period does not retrospectively be considered as part of a recurrent extended recovery rest period and following the publishing of monthly rosters, a new reserve duty planning may be notified to the crew;
- 8) To protect an 8-hour sleep opportunity, Turkish Airlines rosters a period of 8 hours, taking into account fatigue management principles, for each reserve day during which a crew member on reserve is not contacted by Turkish Airlines.

7.1.15 Rest Periods

7.1.15.1 Minimum Rest Period at Home Base.

- 1) The minimum rest period provided before undertaking an FDP starting at home base at least as long as the preceding duty period, or 12 hours, whichever is greater.
- 2) By way of derogation from point (1), the minimum rest provided under point [Subchapter 7.1.15.2](#) applies if Turkish Airlines provides suitable accommodation to the crew member at home base.

Turkish Airlines may apply the minimum rest period away from home base during a rotation which includes a rest period at a crew member's home base. This applies only if the crew member does not rest at his residence, or temporary accommodation, because Turkish Airlines provides suitable accommodation.



7.1.15.2 Minimum Rest Period away from Home Base or Temporary Base

The minimum rest period provided at suitable accommodation before undertaking an FDP starting away from home base or temporary base at least as long as the preceding duty period, or 10 hours, whichever is greater. This period includes an 8-hour sleep opportunity in addition to the time for travelling and physiological needs.

The time allowed for physiological needs should be 1 hour. Consequently, if the travelling time to the suitable accommodation is more than 30 minutes, Turkish Airlines increase the rest period by twice the amount of difference of travelling time above 30 minutes. The transport times for the hotels will be defined and stored in Crew Management System (CMS) to be included in scheduling process according to information received from station representatives for the layover hotels' distance/time.

The minimum rest period provided at temporary accommodation before undertaking an FDP starting away from home base or at temporary base at least as long as the preceding duty period, or 12 hours, whichever is greater.

7.1.15.3 Reduced Rest

By derogation from points [Subchapters 7.1.15.1](#) and [Subchapter 7.1.15.2](#) 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 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 [Subchapters 7.1.15.1](#) and [Subchapter 7.1.15.2](#) and the reduced rest.
- 4) The FDP following the reduced rest is reduced by the difference between the minimum rest period specified in [Subchapters 7.1.15.1](#) and [Subchapter 7.1.15.2](#) 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 [Subchapter 7.1.15.4](#).

7.1.15.4 Recurrent Extended Recovery Rest Periods

The minimum recurrent extended recovery rest period is 36 hours, including 2 local nights, and in any case the time between the end of one recurrent extended recovery rest period and the starts of the next extended recovery rest period is not more than 168 hours.

The recurrent extended recovery rest period increases to 2 local days twice every month.

7.1.15.5 Disruptive Schedules

- 1) If a transition from a late finish/night duty to an early start is planned at home base or temporary base, the rest period between the 2 FDPs includes 1 local night;
- 2) If a crew member performs 4 or more night duties, early starts or late finishes between 2 extended recovery rest periods as defined in [Subchapter 7.1.15.4](#), the second extended recovery rest period is extended to 60 hours;



7.1.15.6 Time Zone Differences

- 1) For the purpose of compensation for the effects of time zone differences and extensions of the FDP, 'rotation' is a series of duties, including at least one flight duty, and rest period out of home base, starting at home base and ending when returning to home base for a rest period where the Turkish Airlines is no longer responsible for the accommodation of the crew member.
- 2) Turkish Airlines monitors rotations and combinations of rotations in terms of their effect on crew member fatigue, and adapts the rosters as necessary.
- 3) Time zone differences are compensated by additional rest, as follows and the time elapsed since reporting for a rotation involving at least a 4-hour time difference to the reference time stops counting when the crew member returns to his home base for a rest period during which Turkish Airlines is no longer responsible for the accommodation of crew member.
 - (i) At home base or temporary base, if a rotation involves a 4 hour time difference or more, the minimum rest is as specified in the following Table-13.

Table-13: Time Zone Differences

Minimum local nights of rest at home base or temporary base to compensate for time zone differences				
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
4≤...≤6	2	2	3	3
6<...≤9	2	3	3	4
9<...≤12	2	3	4	5

- (ii) Away from home base or temporary 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 from point (i) and only once between 2 recurrent extended recovery rest periods as specified in [Subchapter 7.1.15.4](#), the minimum rest provided under this point (ii) may also apply to home base or temporary base if Turkish Airlines provides suitable accommodation to the crew member.

The time elapsed since reporting for a rotation involving at least a 4-hour time difference to the reference time stops counting when the crew member returns to his home base or temporary base for a rest period during which Turkish Airlines is no longer responsible for the accommodation of crew member.

For a rotation with three or more FDPs, the greatest time zone difference from the original reference time should be used to determine the minimum number of local nights of rest to compensate for time zone differences in



accordance with the table in [Subchapter 7.1.15.6](#) 3)(i). If such a rotation includes time zones crossings in both directions the calculation is based on the highest number of time zones crossed in any one FDP during the rotation.

- 4) In case of an Eastward-Westward or Westward-Eastward transition, at least 3 local nights of rest at home base or temporary base is provided between alternating rotations.
- 5) The monitoring of combinations of rotations is conducted under the Turkish Airlines management system provisions.

7.1.16 Nutrition

The procedures regarding nutrient intake are stated in [PR.01.70.012 Procedure for Meal, Accommodation and Travel Allowances of Aircrew On Flight Duties](#).

7.1.17 Records of Home Base, Flight Times, Duty and Rest Periods

- 1) Turkish Airlines maintains, for a period of 24 months:
 - (i) Individual records for each crew member including:
 - a) flight times;
 - b) start, duration and end of each duty period and FDP;
 - c) rest periods and days free of all duties; and
 - d) assigned home base or temporary base;
 - (ii) Reports on extended flight duty periods and reduced rest periods.
- 2) Upon request, Turkish Airlines provides copies of individual records of flight times, duty periods and rest periods to:
 - (i) The crew member concerned; and
 - (ii) To another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.
- 3) Records referred to in EASA and Turkish DGCA regulations as depicted in [Subchapter 2.1.5.5](#) Storage of Personnel Records in relation to crew members who undertake duties for more than one operator kept for a period of 24 months.

7.1.18 Fatigue Management Training

- 1) Turkish Airlines provides initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned.
- 2) This training follows a training programme established by the Turkish Airlines and described in the operations manual. The training syllabus covers the possible causes and effects of fatigue and fatigue countermeasure.
- 3) For details, see [EK.10.21.001 Safety Management Manual Subchapter, 5.4.1. Fatigue Training Program](#).



7.1.18.1 Training Syllabus Fatigue Management Training

The training syllabus contains the following:

- 1) applicable regulatory requirements for flight, duty and rest;
- 2) the basics of fatigue including sleep fundamentals and the effects of disturbing the circadian rhythms;
- 3) the causes of fatigue, including medical conditions that may lead to fatigue;
- 4) the effect of fatigue on performance;
- 5) fatigue countermeasures;
- 6) the influence of lifestyle, including nutrition, exercise, and family life, on fatigue;
- 7) familiarity with sleep disorders and their possible treatments;
- 8) where applicable, the effects of long range operations and heavy short range schedules on individuals;
- 9) the effect of operating through and within multiple time zones; and
- 10) the crew member responsibility for ensuring adequate rest and fitness for flight duty.
- 11) For details, see [EK.10.21.001 Safety Management Manual, Subchapter 5.4.1. Fatigue Training Program](#).



7.1.19 Call for Roster (CFR)

- 1) For Call for Roster (CFR) of the next day, published in their rosters or previously notified, crew members shall check their duty notification via calling IVR system and/or via checking mobile platforms (Crewduty/Crewweb/Roster) between 17:00 and 23:00 Turkish local time. Crew on duty, unable to reach above mentioned systems between 17:00 LT and 23:00 LT, shall learn their duties via calling Crew Call Center after 23:00 LT.
- 2) A reminder message via an e-mail shall be sent to the crew starting from 17:00 LT, at the day before their planned CFR.
- 3) The start of duty to be assigned from CFR shall not be before 05:00 LT.
- 4) CFR does not count as duty period for the purpose of Flight Times and Duty Periods unless a duty is assigned. If no duty has been assigned from a CFR then the CFR day shall be evaluated as a day off which cannot be counted as required number of days off per [Subchapter 7.1.10](#).
- 5) An assigned FDP counts from the reporting time.
- 6) 7 days are the maximum number of consecutive CFR days within the limits of [Subchapter 7.1.15.4](#).
- 7) A standby duty shall not be assigned from a CFR.
- 8) A check flight for the flight crew member to be checked or a LIFUS flight for the flight crew member who is in the LIFUS phase shall not be assigned from a CFR.
- 9) The CFR shall be in the roster. Apart from flight duties; e-learning, meeting, office, seminar duties etc. can be assigned from a CFR. Following the publishing of monthly rosters, a new CFR may be notified to the crew.
- 10) CFR shall only be planned at home base or temporary base.
- 11) In case no duty is assigned from a CFR, the resulting time off period or the day off is considered as part of the recurrent extended recovery rest period for fulfilling the provisions of [Subchapter 7.1.15.4](#) and [Subchapter 7.1.4.1 \(8\)](#). Following the CFR notification of the rest period, recurrent extended recovery rest period starts from 00.00 LT on the next day or at the end of the previous duty, whichever comes later.