Effective 01-Jan-2017
CAR PART IV
CAR-OPS 1

Sub Part Q
FLIGHT/DUTY TIME AND REST REQUIREMENTS
Sub Part Q  FLIGHT/DUTY TIME AND REST REQUIREMENTS ........................................6

CAR–OPS 1.1100  Applicability ..................................................................................6
CAR–OPS 1.1105  General principles ........................................................................6
CAR–OPS 1.1110  Terminologies ................................................................................7
CAR–OPS 1.1115  Responsibilities of operator and crew members .......................10
  (a) Operator ........................................................................................................10
  (b) Crew Member ................................................................................................10
  (c) GCAA ............................................................................................................10
CAR–OPS 1.1120  Standard provisions applicable to a scheme ............................11
  GM1 to 1.1120(d): ...............................................................................................12
  AMC1 to 1.1120 (d): for Air Carriers ................................................................14
  AMC2 to 1.1120 (d): for non-scheduled and private operators .........................14
  AMC3 to 1.1120(d): for all operator conducting Long range operations (LRO) ....15
CAR–OPS 1.1125  Absolute Limits on Flying Hours .............................................16
CAR–OPS 1.1126  Duty cycle, days off and leave entitlement ................................16
CAR–OPS 1.1127  Additional limits .........................................................................17
  (a) Late finishes/Early starts ..............................................................................17
  (b) Extension of Flying duty period by In-flight relief ......................................20
  (c) Split duty ......................................................................................................21
  (d) Rest period ..................................................................................................22
  (e) Aircraft commander’s discretion to extend a flying duty period ..................23
  (f) Mixed duties ................................................................................................23
  (g) Travelling Time .............................................................................................23
  (h) Positioning ....................................................................................................24
  (i) Delayed Reporting Time in a Single FDP ......................................................24
  (j) Maximum FDP .............................................................................................25
  (k) Limits on Two Flight Crew Long Range Operations ...................................25
CAR–OPS 1.1065  Document storage periods

An operator shall ensure that all records and all relevant operational and technical information for each individual flight, are stored for the periods prescribed in Appendix 1 to CAR–OPS 1.1065.

Appendix 1 to CAR–OPS 1.1065 Document storage periods

An operator shall ensure that the following information/documentation is stored in an acceptable form, accessible to the Authority, for the periods shown in the Tables below.

Note: Additional information relating to maintenance records is prescribed in CARMMaintenance Records.

Table 1 – Information used for the preparation and execution of a flight

<table>
<thead>
<tr>
<th>Information used for the preparation &amp; execution of flight as in CAR–OPS 1.135</th>
<th>3 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational flight plan</td>
<td></td>
</tr>
<tr>
<td>Aeroplane Technical log</td>
<td>24 months after the date of last</td>
</tr>
<tr>
<td>Route specific NOTAM/AIS briefing documentation if edited by the operator</td>
<td>3 months</td>
</tr>
<tr>
<td>Mass and balance documentation</td>
<td>6 months</td>
</tr>
<tr>
<td>Notification of special loads including written information to the commander about dangerous goods</td>
<td>3 months</td>
</tr>
<tr>
<td>Completed Flight Preparations Forms as in CAR-OPS 1.135</td>
<td>3 months</td>
</tr>
</tbody>
</table>

Table 2 – Reports

<table>
<thead>
<tr>
<th>Reports</th>
<th>3 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journey log</td>
<td></td>
</tr>
<tr>
<td>Flight report (s) for recording details of any occurrence, as prescribed in CAR–OPS 1.420, or any event which the commander deems necessary to report/record</td>
<td>3 months</td>
</tr>
<tr>
<td>Reports on exceedances of duty and/or reducing rest periods</td>
<td>3 months</td>
</tr>
<tr>
<td>Fuel and oil records</td>
<td>3 months</td>
</tr>
</tbody>
</table>
### Table 3 – Flight crew records

<table>
<thead>
<tr>
<th>Flight Crew Records</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight, Duty and Rest time</td>
<td>15 months</td>
</tr>
<tr>
<td>Licence</td>
<td>As long as the flight crew member is exercising the privileges of licence for operator</td>
</tr>
<tr>
<td>Conversion training and checking</td>
<td>3 years</td>
</tr>
<tr>
<td>Command course (including checking)</td>
<td>3 years</td>
</tr>
<tr>
<td>Recurrent training and checking</td>
<td>3 years</td>
</tr>
<tr>
<td>Training and checking to operate in either pilot’s seat</td>
<td>3 years</td>
</tr>
<tr>
<td>Recent experience (CAR–OPS 1.970 refers)</td>
<td>15 months</td>
</tr>
<tr>
<td>Route and aerodrome competence (CAR–OPS 1.975)</td>
<td>3 years</td>
</tr>
<tr>
<td>Training and qualification for specific operations when required by CAR–OPS (e.g. ETOPS CATII/III operations)</td>
<td>3 years</td>
</tr>
<tr>
<td>Dangerous Goods training as appropriate</td>
<td>3 years</td>
</tr>
</tbody>
</table>

### Table 4 – Cabin crew records

<table>
<thead>
<tr>
<th>Cabin Crew Records</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight, Duty and Rest Time</td>
<td>15 months</td>
</tr>
<tr>
<td>Initial training, conversion and differences training (including checking)</td>
<td>As long as the cabin crew member is employed by the operator</td>
</tr>
<tr>
<td>Recurrent training and refresher (including checking)</td>
<td>Until 12 months after the cabin crew member has left the employ of the operator</td>
</tr>
<tr>
<td>Dangerous Goods training as appropriate</td>
<td>3 years</td>
</tr>
</tbody>
</table>

### Table 5 – Records for other operations personnel

<table>
<thead>
<tr>
<th>Records for other operations personnel</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Training/qualification records of other personnel for whom an approved training programme is required by CAR–OPS</td>
<td>Last 2 training records</td>
</tr>
</tbody>
</table>

### Table 6 – Other records

<table>
<thead>
<tr>
<th>Other Records</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Records on cosmic and solar radiation dosage</td>
<td>Until 12 months after the crew member has left the employ of the operator</td>
</tr>
<tr>
<td>Quality System records</td>
<td>5 years</td>
</tr>
<tr>
<td>Safety Management System records</td>
<td>5 years</td>
</tr>
<tr>
<td>Dangerous Goods Transport Document</td>
<td>3 months after completion of the flight</td>
</tr>
<tr>
<td>Dangerous Goods Acceptance Checklist</td>
<td>3 months after completion of the flight</td>
</tr>
</tbody>
</table>
CAR–OPS 1.1100 Applicability
The Authority has established the following regulations specifying the limitations applicable to the flight time and flight duty periods for crew members. These regulations also make provision for adequate rest periods to ensure that fatigue occurring either in a flight or successive flights, or accumulated over a period of time due to these and other tasks, does not endanger the safety of a flight.

This subpart is applicable to UAE registered aeroplanes, as well as foreign registered aeroplanes operated under a UAE Air Operators Certificate. In particular;
(a) Commercial Air Transport operations, or operations operated by an air transport undertaking.
(b) Private use operations of turbo-jet and turbo-propeller aeroplanes.

This Subpart is applicable to flight crews and cabin crews only.

CAR–OPS 1.1105 General principles
The prime objective of a flight and duty time limitation scheme shall ensure that crew members are adequately rested at the beginning of each flying duty period (FDP), and whilst flying is sufficiently free from fatigue so that they can operate to a satisfactory level of efficiency and safety in all normal and abnormal situations. Aircraft operators are expected to appreciate the relationship between the frequency and pattern of scheduled FDPs and rest periods and time off, and give due consideration to the cumulative effects of long working hours interspersed with minimum rest. Factors to be considered when planning duty periods shall include;
(a) The allocation of work patterns,
   (1) which avoid such undesirable practices as; alternating day/night duties,
   (2) the positioning of crews so that a serious disruption of established sleep/work patterns occur,
   (3) the scheduling of rest periods between 18 and 30 hours especially after long flights crossing multiple time zones.
(b) planning days off and notifying crews well in advance,
(c) Internal consultation to agree basic roster concepts, which ensure adequate rest prior to flight but, within that constraint.
## Terminologies

The FDTL scheme submitted for approval shall adopt the terminologies and terms used in this subpart have the following meanings:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acclimatised</td>
<td>When a crew member has spent 3 consecutive local nights on the ground within a local time zone band, which is two hours wide, and is able to take uninterrupted nights sleep. The crew member will remain acclimatised thereafter until a duty period finishes at a place where local time differs by more than 2 hours from that at the point of departure.</td>
</tr>
<tr>
<td>Augmented flight crew</td>
<td>A flight crew that comprises more than the minimum number required to operate the aeroplane and in which each flight crew member can leave his assigned post and be replaced by another appropriately qualified flight crew member for the purpose of in-flight rest.</td>
</tr>
<tr>
<td>Cabin crew members time on service as operating crew member</td>
<td>Any time that a cabin crew member of an augment cabin crew, is not on actual in-flight rest. [Equivalent to the time at the controls as an Operating Crew Member for flight crew member]</td>
</tr>
<tr>
<td>Cabin Crewmember (CCM)</td>
<td>An appropriately qualified crew member, other than a flight crew member, who is assigned by an operator to perform duty related to safety of flight and passengers during operations of aircraft.</td>
</tr>
<tr>
<td>Commander</td>
<td>The pilot in command: The pilot designated by the operator being in command and charged with the safe conduct of a flight.</td>
</tr>
<tr>
<td>Contactable</td>
<td>A short period of time during the day, other than a day off, during which the operator requires a crew member to be at an agreed location for the purpose of giving notification of a duty period, which will commence not less than 10 hours ahead. The contactable period shall be nominated by the operator and acceptable to the Authority</td>
</tr>
<tr>
<td>Crew member (CM)</td>
<td>A person assigned by an operator to perform duty on an aircraft.</td>
</tr>
<tr>
<td>Day Off</td>
<td>Periods of relaxation free from all duties. A single day off shall include two local nights (minimum of 34 hours period). Consecutive days off shall include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.</td>
</tr>
<tr>
<td>Dispatch Crew</td>
<td>A fully qualified and current flight/cabin crew member authorized to carry out pre-flight duties as defined by an operator.</td>
</tr>
<tr>
<td>Duty</td>
<td>Any task that crew member is required by the Operator to perform, including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue. Administrative work has to be understood as any task that a crew member is required to carry out associated with the business of an AOC holder, which is accepted or approved by GCAA under the regulatory framework.</td>
</tr>
<tr>
<td>Duty Period</td>
<td>A period which starts when flight crew or cabin crew members are required by an Operator to report for or to commence a duty and ends when that person is free from all duties.</td>
</tr>
<tr>
<td>Early Start (ES)</td>
<td>Any duty that is commenced in the period 0500-0659 hours local time.</td>
</tr>
<tr>
<td>Extended Long Range Operations (ELO)</td>
<td>Any augmented (two set of flight crew) operation that involves a sector with planned flight time between 14:01 hours and 16:00 hours, and conducted under a specific variation approved by GCAA on the basis of a risk assessment provided by the operator, that provide a level of safety equivalent to, or better than, that achieved through the prescriptive fatigue management regulations.</td>
</tr>
<tr>
<td>Fatigue</td>
<td>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 crew member’s alertness and ability to safely operate an aircraft or perform safety-related duties.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Flight Crew member (FCM)</td>
<td>A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period such as Pilots and Flight Engineers.</td>
</tr>
<tr>
<td>Flight Duty Period (FDP)</td>
<td>A period which commences when a crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aeroplane finally comes to rest at the end of the last flight on which he/she is a crew member.</td>
</tr>
<tr>
<td>Flight Time / Block Hours — aeroplanes</td>
<td>The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight. Note.—“Flight time” as here defined is synonymous with the term “block to block” time or “chock to chock” time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight.</td>
</tr>
<tr>
<td>FRMS</td>
<td>A data-driven means of continuously monitoring and managing 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.</td>
</tr>
<tr>
<td>FRMS Policy</td>
<td>A required component of an FRMS. THE FRMS Policy must: identify the elements of the FRMS and its scope; reflect the shared responsibility of all stakeholders in the FRMS; state the safety objectives of the FRMS; be signed by the accountable executive of the organisation; be communicated throughout the organisation;</td>
</tr>
<tr>
<td>FTL variation</td>
<td>Any operation conducted outside the limits of the prescriptive FTL regulation, and under a specific approval by the GCAA on the basis of a risk assessment provided by the operator and assessed by GCAA to provide a level of safety equivalent to, or better than, that achieved through the prescriptive fatigue management regulations.</td>
</tr>
<tr>
<td>Late Finish (LF)</td>
<td>A duty is a Late Finish when the duty finishes in the period 0100 to 0159 hours local time</td>
</tr>
<tr>
<td>Local Night (LN)</td>
<td>A period of 8 hours falling between 2200 hours and 0800 hours local time.</td>
</tr>
<tr>
<td>Long Range Operation (LRO)</td>
<td>Any operation that involves a sector with planned flight time greater than 7 hours</td>
</tr>
<tr>
<td>Night Duty (ND)</td>
<td>A duty that finishes, commences or overlaps the period 0200-0459 hours local time</td>
</tr>
<tr>
<td>Operating Crew member (OCM)</td>
<td>a crew member carrying out his/her duties in an aircraft during a flight that is required for the safety of the aeroplane and its occupants, according to their licenses or authorisation.</td>
</tr>
<tr>
<td>Positioning</td>
<td>The practice of transferring crews from place to place as passengers in surface or air transport at the behest of the Operator.</td>
</tr>
<tr>
<td>Reporting Time</td>
<td>The time at which a crew member is required by an operator to report for any duty.</td>
</tr>
<tr>
<td>Rest Period</td>
<td>A continuous and defined subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.</td>
</tr>
<tr>
<td>Rostered/Planned duty</td>
<td>A duty period, or series of duty periods, with stipulated start and finish times, notified by the operator to crews in advance.</td>
</tr>
<tr>
<td>Rostering Period</td>
<td>A number of consecutive weeks, usually 4, but defined by the operator.</td>
</tr>
<tr>
<td>Scheduled Duty</td>
<td>The allocation of a specific flight or flights or other duties to a crew member.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>Sector</td>
<td>Segment of a Flight Duty Period (FDP) between an aircraft first moving for the purpose of taking off until it comes to rest after landing on the designated parking position.</td>
</tr>
<tr>
<td>Split Duty</td>
<td>A flying duty period, which consists of two or more sectors, separated by less than a minimum rest period.</td>
</tr>
<tr>
<td>Standby Duty</td>
<td>A period during which an Operator places constraints on a crew member who would otherwise be off duty. However, it shall not include any time during which an Operator requires a crew member to be contactable for the purpose of giving notification of a duty, which is due to start 10 hours or more ahead.</td>
</tr>
<tr>
<td>Suitable Accommodation</td>
<td>A well furnished bedroom, which is subject to minimum noise, is well ventilated, and has the facility to control the levels of light and temperature.</td>
</tr>
<tr>
<td>Travelling</td>
<td>All time spent by a crew member transiting between the place of rest, and the place of reporting for duty.</td>
</tr>
<tr>
<td><strong>Ultra Long Range Operation (ULR)</strong></td>
<td>Augmented long range operations involving any sector between a specific city pair in which the scheduled planned flight time exceeds 16 hours or the FDP exceeds 18 hours, taking into account mean wind conditions and seasonal changes.</td>
</tr>
<tr>
<td>Unforeseen Operational Circumstance</td>
<td>An unplanned event, such as unforecast weather, equipment malfunction, or air traffic delay that is beyond the control of the operator.</td>
</tr>
<tr>
<td>Week</td>
<td>A period of seven consecutive days starting at any set time and on set day as specified and stated by the Operator.</td>
</tr>
</tbody>
</table>
CAR–OPS 1.1115  Responsibilities of operator and crew members

A crew member shall not fly, and an operator shall not require that crew member to fly, if either has reason to believe that he/she is suffering, or is likely to suffer while flying, from such fatigue as may endanger the safety of the aircraft or of its occupants. In addition:

(a) Operator

It is the responsibility of the operator to prepare duty rosters sufficiently in advance to provide the opportunity for crews to plan adequate pre-duty rest. Operators shall establish minimum periods of notification of duty for operating crews, or where this not practicable due to the nature of the operation, shall establish in advance minimum periods of notification of days off, during which a crew member will not be required for any duties.

Training of rostering staff shall include guidance on the effects of disturbing circadian rhythms and sleep deprivation. Away from base the operator shall provide for crew members both the opportunity and facilities for adequate pre-flight rest, in suitable accommodation. When an operator employs a crew member on an irregular basis, then that employer shall ensure that the crew member satisfies the provision of the approved scheme. Furthermore, operators shall satisfy themselves that crew members, who undertake other employment, if allowed by the operator, still have the opportunity to enjoy adequate pre-flight rest.

(b) Crew Member

Responsibility for preventing the onset of fatigue cannot rest on the operator alone. Crew members shall ensure that they are not in breach of the operator’s scheme. They shall make optimum use of the opportunities and facilities for rest provided, and plan and use their rest periods properly. Crew members are reminded that they are not entitled to act as an operating crewmember of an aircraft if they know or suspect that their physical or mental condition renders them temporarily unfit so to act.

(c) GCAA

The GCAA may grant variations to the requirements in this Subpart in accordance with the applicable processes and in consultation with the operator. Each operator will have to demonstrate to the GCAA, on the basis of a risk assessment, that its request for a variation produces and maintains during actual operations, an equivalent level of safety.

Such variations FTL will be designed in accordance with the operational experience of each operator, and taking into account other relevant factors such as current scientific knowledge, as well as including appropriate risk controls mechanisms.
CAR–OPS 1.1120 Standard provisions applicable to a scheme

(a) Subject to the maxima and minima specified in this subpart, it is incumbent on the operator to establish maximum FDPs and minimum rest periods appropriate to the nature of flight operations undertaken.

(b) An operator of an aircraft shall have a scheme for the regulation of flight and duty times of crews. The scheme shall be approved by the Authority and be included in the Operations Manual for the benefit of all crew members and the staff concerned with the preparation and day to day management of rostering and scheduling.

(c) Although operators must plan their schemes in accordance with the requirements, it is recognised that the standard provisions will not necessarily satisfy every type of operation. In these circumstances operators may apply for FTL Variation to the standard provisions at least 30 days, or as otherwise agreed, before the date of the intended operation. Consideration will only be given where an operator can show that any proposal will ensure a better or equivalent level of protection against fatigue than the basic requirements.

(d) Approval of FTL Variation by GCAA:
The GCAA may grant variations to the FTL requirements contained in this Subpart provided the operator demonstrates to the GCAA, on the basis of a risk assessment, that an equivalent level of safety is ensured. GCAA may impose additional requirements prior to the approval of the variations to the prescriptive scheme. A validation flight may be conducted by the GCAA before or after the issuance of each route FTL variation scheme.

Note:
Any existing approved Flight Time Variation to the prescriptive scheme shall remain in force until the time a re-assessment is required. Such re-assessment shall be conducted considering the AMC or GM to 1.1120(d).
The application and approval process sequentially are as follows:

(i) Submission of an operational plan by the operator including the Fatigue Risk Assessment/Trials and Validation. These will involve the following:
   - Authorization to commence trial by the GCAA.
   - Validation by the GCAA.

A validation flight will be conducted after the issuance of each route FTL variation scheme.

The aim of this validation is to assess the implementation and effectiveness of the preventive and mitigating risk controls, as well to gather operational data and information relevant to the FTL variation standards adequacy.

(ii) Validation results and final approval by the GCAA.

**Note:** The GCAA will conduct an ongoing safety oversight which may include Validation Flights. The aim of this validation is to assess the implementation and effectiveness of the preventive and mitigating risk controls, as well to gather operational data and information relevant to the FTL variation standards adequacy.

Such variations to the FTL should be designed in accordance with the operational experience of each operator, and procedures accepted by the GCAA and taking into account other relevant factors such as current scientific knowledge, as well as including appropriate risk controls mechanisms. The following elements may be considered to develop a risk assessment:

1. **Scientific and Technical considerations.**

   AOC holders should consider general scheduling principles based on fatigue science, at the time of planning, issuance, amendment and analysis of crew rosters. Below are included some of those principles:

   a. The perfect schedule for the human body is daytime duties with unrestricted sleep at night. Anything else is a compromise.

   b. The circadian body clock does not adapt fully to altered schedules such as night work. It does adapt progressively to a new time zone, but full adaptation usually takes longer than the 24-48 hours of most layovers.

   c. Whenever a duty period overlaps a crewmember’s usual sleep time, it can be expected to restrict sleep. Examples include early duty start times, late duty end times, and night work.

   d. The more that a duty period overlaps a crewmember’s usual sleep time, the less sleep the crewmember is likely to obtain. Working right through the usual night time sleep period is the worst case scenario.

   e. Night duty also requires working through the time in the circadian body clock cycle when self-rated fatigue and mood are worst and additional effort is required to maintain alertness and performance.

   f. Across consecutive duties with restricted sleep, crewmembers will accumulate a sleep debt and fatigue-related impairment will increase.

   g. To recover from sleep debt, crewmembers need a minimum of two full nights of sleep in a row, when they are fully adapted to the local time zone. The frequency of rest periods should be related to the rate of accumulation of sleep debt.
2. Safety Case.
For each AOC holder intending to apply for a FTL variation, a “safety case” for risk assessment is set on the basis of the assessment that demonstrate an acceptable level of alertness of the crew during the whole FDP, as well unforeseen circumstances for extended FDP scenarios considered in the variation limits (unforeseen circumstances may be based on their in-service experiences and likely scenarios). Therefore the related provided facilities should been assessed and monitoring:

(a) Inflight rest facilities, as CRC or alternatives one in case of unforeseen circumstances.
(b) Suitable accommodation during layover.

3. Select and implement preventive and mitigating controls. Following controls and mitigations are considered:
(a) The aircraft chosen for the route has the best available on-board crew rest facilities.
(b) All crewmembers flying the new operation receive specific education on personal and organizational strategies for managing fatigue on the operation. This includes discussion on how to make best use of in-flight and layover sleep opportunities.
(c) Sufficient flight crew to ensure that a single captain does not have sole command responsibility for entire flight.
(d) There is a clear policy on the distribution of inflight rest opportunities, so that crewmembers can plan how best to use them.
(e) Each crewmember has sufficient rest opportunities in flight.
(f) Meals may be taken by the flight crew on the flight deck, in order to maximize the amount of time for sleep during in-flight rest periods.
(g) The layover hotel has been carefully vetted to ensure that it provides adequate facilities for sleep, eating, and exercise.
(h) A procedure is implemented between the Operator and the layover hotel to provide notification of delays without having to wake crewmembers.
(i) There are clear procedures on the management of flight delays.
(j) There are clear procedures on the management of flight diversions.

4. The following common parameters are to be considered in the application for variation for singular or cluster of routes:
(a) Time zone
(b) Departure time windows
(c) FDP extensions
(d) Operational complexity
(e) Crew composition
(f) Rest type facility
AMC1 to 1.1120 (d): for Air Carriers
APPLICATION AND APPROVAL PROCESS
The application and approval process should start with the submission of an operational plan by the operator including the following documentation:
(a) FTL Variation scheme (sample to be discussed with GCAA)
(b) On-board crew rest scheme, including extended FDPs and delayed scenarios
(c) Risk assessment exercise focus on the crew members’ ability to operate the aircraft or perform safety-related duties during the whole FDP.
(d) A contingency plan for flights to UAE from outstation with Depleted Crew Complement

FTL VARIATION SCHEME
The FTL VARIATION SCHEME should consider the following:
(a) Pre-flight Rostering Requirements:
   All crew members should be acclamatised prior to operating a flight or a standby when departing from home base.
(b) A scheme should be established by the Operator to:
   (i) provide guidance to the crew on the expected pre-flight preparations and in flight rest period.
   (ii) provide guidance to the crew on the minimum rest when away from base.
   (iii) provide guidance to the crew on the minimum rest between consecutive flights.
   (iv) determine the maximum number of pairings per calendar month.
   (v) determine the requirement for replacement of crew due to flight disruptions at home base or away from base.
   (vi) determine the crew compliment and composition.

AMC2 to 1.1120 (d): for non-scheduled and private operators
The non-scheduled or the private operator should ensure that the following documents to be submitted:
(a) Two years historical data for Pilots & Cabin Crew in terms of their duty and flying hours.
(b) Two years historical data for Pilots & Cabin Crew days off.
(c) Two years historical data for Pilots & Cabin Crew un-flown days.
(d) Two years historical data for the aircraft hours as per the fleet.
(e) A Comparison table of the regulation and the proposed changes, reason for the change, reference from an international regulation if any.
(f) A Safety Case that includes a risk assessment to ensure a better or equivalent level of protection against fatigue than the basic requirements.
(g) An official request for the variation quoting full responsibility for the request.
(h) An appropriate monitoring, reliability and oversight mechanism is included.
(i) After the issuance of the FTL variation approval, will conduct an inflight FTL variation assessment or survey the crew members.
(j) The approval letter is valid for six months subject to variation assessment results and the crew feedback.
AMC3 to 1.1120(d): for all operator conducting Long range operations (LRO)

   The Operations Manual should contain specific instructions to ensure that the flight meets the following requirements:
   (a) LRO Pre-flight and In-flight Rest Planning
       A scheme should be established to provide guidance to the crew on the expected pre-flight preparations and in-flight rest to be taken. Flight crew are to be appropriately rested for the LRO flight.
   (b) LRO pre-flight Rostering Requirements:
       Prior to operating a LRO flight or a LRO Standby departing UAE, all crew members should be scheduled for 02 days off including 03 local nights of rest in base.
   (c) LRO Flight Rest Period Away from Base
       In the LRO Rostered Duty Assignment, the scheduled period free of flying duties away from base should be at least 48 hours.
   (d) Post LRO Rostered Duty Assignment Rest At Base Before embarking on the Next Flight:
       All crewmembers should be scheduled for a minimum of 2 days off including 03 local nights of rest in base upon completion of a LRO pairing followed by any other duty or a LRO pairing.
   (e) Each crew member should not be rostered more than 02 LRO Pairings/calendar month.
   (f) Cabin crew should be provided with a minimum in flight rest period of (3 1/2) hours for any LRO flight.

2. Flight Disruptions
   (a) At base:
       Delayed flights will require a replacement of Crew if the projected FDP would exceed total of 22:00 hours.
   (b) Standby Crew
       At outstation, the LRO flight crew may be called to operate an LRO FDP after achieving a rest period of at least 24 hours including one local night provided the Commander and one other crew have met the rest requirement of paragraph 1 (c) above.
       The flight crew if has been called out for the LRO FDP will be deemed to have completed a LRO pairing and should be given the rest provided in paragraph 1 (d) above.

3. Crew compliment and composition
   (a) Flight Crew compliment and composition
       LRO is based on the formula Number of doors X 1.5 Each LRO flight is to be operated by no less than four (4) pilots of whom two (2) qualified pilot-in-command.
       The duty flight crew should comprise at least two pilots of which one crewmember is pilot-in-command qualified.

4. Cabin Crew Complement and Composition
   i. Each LRO flight is to be operated with a Cabin Crew complement using the following formula:
       (Number of aircraft doors X 1.5) = Cabin Crew Complement.
   ii. The required crew complement should include at least two Senior Cabin Crew Members for each LRO sector with at least one Senior Cabin Crew Member on duty at all times.

5. Approved routes variations will be incorporated into the operator approved scheme, and included in OMA.
6. Authorizations for operating FTL variations will be inserted in the AOC holder Operations Specifications, broken down by routes or cluster of routes, as appropriate.

Note: Unless otherwise specified in this Subpart Q, the UK Civil Aviation Authority document Civil Aviation Publication, CAP 371 or any other superseding publication may be used as additional guidance in the process of assessment of operator schemes.
CAR-OPS 1.1125  Absolute Limits on Flying Hours
(a) No person shall act as an operating crew member of the flight crew of an aircraft if at the beginning of the flight the aggregate of all his previous flight times;
   (1) during the period of 28 (twenty eight) consecutive days expiring at the end of the day on which the flight begins exceeds 100 (one hundred) block hours: or
   (2) during the period of 12 (twelve months) expiring at the end of the previous month exceeds 900 (nine hundred) block hours:
(b) The maximum cumulative duty hours for Flight crew of an aeroplane shall not exceed;
   (1) 55 hours in any 7 consecutive days, but may be increased to 60 hours, when rostered duty covering a series of duty periods, once commenced, is subject to unforeseen delays.
   (2) 95 hours in any 14 consecutive days, and;
   (3) 190 hours in any 28 consecutive days.

CAR-OPS 1.1126  Duty cycle, days off and leave entitlement
Crew member;
(a) shall not be on duty more than 7 consecutive days between days off, but may be positioned, and operate only, under unforeseen circumstances, when any other prescriptive flight time or duty cumulative limits are not exceeded, to the usual operating base on the eighth day, provided they are then allocated at least 2 consecutive days off, and
(b) shall have 2 consecutive days off in any consecutive 14 days following the previous 2 consecutive days off, and
(c) shall have a minimum of 7 days off in any consecutive 28 days, and
(d) shall have an average of at least 8 days off in each consecutive 28 day period, averaged over three (3) such periods.
(a) Late finishes/Early starts

The conditions set in this paragraph only apply when a crew member is acclimatised.

1. Sleep deprivation, leading to the onset of fatigue, can arise if an Operating Crew Member is required to report early for duty on a number of consecutive days. Therefore, not more than 3 consecutive duties that occur in any part of the period 0100 to 0659 hours local time can be undertaken, nor will there be more than 4 such duties in any 7 consecutive days. Any run of consecutive duties (Late Finishes or Nights or Early Starts) can only be broken by a period of not less than 34 consecutive hours free from such duties. This 34 consecutive hours may include a duty that is not an Early, Late or Night duty.

However, Operating Crew Members who are employed on a regular early morning duty for a maximum of 5 consecutive duties will work to the following:

(i) The minimum rest period before the start of such a series of duties will be 24 hours.
(ii) The duty will not exceed 9 hours, irrespective of the sectors flown.
(iii) At the finish of such a series of duties, Operating Crew Members will have a minimum of 63 hours free of all duties.

2. Should any duties be scheduled to be carried out within any part of the period 0200 to 0459 hours local time, for a minimum of 2 and a maximum of 3 consecutive nights, then Operating Crew Members will finish the duty preceding this series of duties by 2100 hours local time before covering the block of consecutive night duties, such that the Operating Crew Members can take a rest period during a local night.

**NOTE:** Operators may replace the above paragraph with one of the following choices, either Options A and B OR Options B and C. The operator may roster Operating Crew Members for either 2 or 3 consecutive nights, but must ensure that the duty preceding this series of duties finishes by 2359 hours local time (2 nights) or 2100 hours local time (3 nights) as appropriate. If it is preferred to retain the present contents then attention must be paid to the notes attached to the Options listed (below). These notes list the actions to be followed in the event that duty is inadvertently extended beyond the cut-off times (i.e. 2100 or 2359 hours).

**Option A**

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the Operating Crew Members can take a rest period during a local night. If the duty immediately prior to the 3 consecutive night duties extends beyond 2100 hours local time and the individual Operating Crew Member is willing to continue with the planned roster, (i.e. 3 consecutive night duties) then provided that duty preceding this series of duties finishes no later than 2359 hours local time, the schedule may continue.

**NOTE:** 1: Under this Option, if the operating Crew member chooses not to continue the planned roster (after finishing duty between 2100 and 2359 hours local time) then only the planned first and second night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

**NOTE:** 2: Under this Option, if the duty finishes after 2359 hours local time, then only the first of the 3 consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.
Option B - 2 consecutive night duties
Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 2 consecutive nights, then Operating Crew Members will finish the duty preceding this series of duties by 2359 hours local time before commencing the block of 2 consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: Under this Option in the event of 2359 hours being exceeded, then only the first of the 2 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option C - 3 consecutive night duties
Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: 1. Under this Option in the event of 2100 hours being exceeded, then only the first of the 3 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

NOTE: 2. In all cases the limits in paragraph 1 and 2 or must not be exceeded (i.e. maximum of 3 consecutive nights and 4 in 7 consecutive days).

2.1 However, Operating Crew Members who are employed on a regular night duty for a maximum of 5 consecutive nights will work to the following:
   (i) The minimum rest period before the start of such a series of duties will be 24 hours.
   (ii) The duty will not exceed 8 hours, irrespective of the sectors flown.
   (iii) At the finish of such a series of duties crew members will have a minimum of 54 hours free of all duties.
2.1.1 Options for night operations

If an operator elects to roster 4 or 5 consecutive night duties, then the criteria laid down in paragraph 2.1 must be complied with and must form part of the approved FTL scheme. Operators are reminded that the normal days off requirements must be met (i.e. the 54 hours off between two blocks of 5 nights is only 1 proper day off). However, if operators find that this part of the Scheme is too restrictive then one of the following options may be employed but, if used, must be fully complied with:

(i) When crew are employed on duty for a total of 20 hours or less during 5 consecutive night duties, (i.e. maximum duty each night is 4 hours) the 54 hours free from all duties will meet the "Days Off" requirements for each 28 consecutive day period. Any positioning flights must be completed within the 20 hours duty.

(ii) When crew are employed on duty for a total of more than 20 hours but not more than 40 hours during 5 consecutive night duties, the first 54 hours (between week 1 and week 2) may be counted as 2 "Days Off". For the 28 consecutive day period that starts on the first night of the first duty, crew must be given a minimum of a further 5 "Days Off" (average of a further 6 days). Any positioning flights must be completed within the 40 hours duty.

(iii) When crew are employed on duty which requires full use of 40 hours duty during 5 consecutive night duties plus a maximum of 3 hours positioning (pre- and post-total) then:

(a) allowable flying hours (month and year) will be reduced to the following:
   1) a maximum of 75 hours in any 28 consecutive days with a maximum of 60 hours in 28 consecutive days averaged over three 28 day periods, and;
   2) 600 hours in any 12 consecutive months.

(b) a minimum of 9 "Days Off" in any 28 consecutive days will be granted;

(c) any increase in duty over 40 hours during the block of 5 consecutive night duties is to be added to the subsequent 54 hours rest period which may not be reduced.

2.1.2 General rules

To be applied when an operator utilises i), ii) or iii) of paragraph 2.1.1

(i) The exercise of "Commander's Discretion" is limited to 1 hour per night with a total of 2 hours allowed during any 5 consecutive night cycle. Any duty worked in excess of 40 hours by use of "Commander's Discretion" must also be added to the subsequent 54 hours rest which may not be reduced.

(ii) The absolute maximum duty permitted during a block of 5 consecutive night duties is 45 hours (40 hours, plus 3 hours positioning, plus 2 hours "Commander's Discretion", as per paragraphs 2.1.1 iii) and 2.1.2 i) above).

(iii) Crew cannot be rostered for more than 8 hours per night, except when working to paragraph 2.1.1 iii) above.

(iv) Split duties and extension of FDP by in-flight rest are not permitted.

(v) "Commander's Discretion" to reduce rest is not permitted.

**NOTE:** For 5 consecutive earlys, the same rule as in 2.1.2 i) above applies (i.e. maximum 1 hour discretion per day and a total of 2 hours in the 5 day cycle).
3. **Air Taxi/Sole Use Charter - Interrupted Rest**

   If, prior to the start of an FDP, a crew member's rest period is interrupted for operational reasons between 2300 and 0700 hours local time, the following shall apply:

   If the disturbance happens earlier than 1 hour before the planned departure from the crew member's place of rest, the time elapsed between that disturbance and the departure time from the place of rest minus 1 hour, shall count as part of the subsequent FDP.

   **NOTE:** The phrase 'operational reasons' applies to such actions as contacting the customer, checking weather, liaison with ATC or any action pertaining to the planned flight. It is anticipated that operators with a 24 hour support organisation will provide these services or crew, leaving their crew members undisturbed.

(b) **Extension of Flying duty period by In-flight relief**

   (i) When any additional Operating Crew Member is carried to provide in-flight relief with the intent of extending an FDP, that individual shall hold qualifications which are equal or superior to those held by the crew member who is to be rested. To take advantage of this facility the division of duty and rest between crew members must be kept in balance. It is unnecessary for the relieving crew member to rest in between the times relief is provided for other crew members.

   (ii) When in-flight relief is utilized, there must be for the crew members resting, a comfortable reclining seat reclining more than 40 degrees and provide foot, legs and arm rests, or a crew rest compartment with a bunk or equivalent flat-bed first or business class seat, separated by at least a side seat (where possible) from any passenger and screened from the flight deck,

   (iii) As a contingency procedure in case of unforeseen circumstances that make the accepted in-flight rest facility unserviceable, an equivalent rest facility according the configuration/layout of the passenger cabin has to be assigned to the affected crew member.

   **Note:** GCAA, on individual operator application, will accept an exception for the minimum condition in-flight rest facilities for cabin crew, on listed aircrafts without certified Crew Rest Compartment, if: Reserved seats for resting are located in an exclusive row for cabin crew, without any passenger seated, and seats should be able to be reclined. The row location has to be notified to GCAA and subject to its acceptance.

   (iv) A total in-flight rest of less than three hours does not allow for the extension of an FDP, but where the total in-flight rest, which need not be consecutive, is three hours or more, then the permitted FDP may be extended as follows:
   - If rest is taken in a bunk or equivalent flat bed seat: A period equal to one half of the total rest taken, provided that the maximum FDP permissible shall be 18 hours or 19 hours in the case of Cabin Crew Member
   - If rest is taken in a seat: A period equal to one third of the total rest taken, provided that the maximum FDP permissible shall be 15 hours or 16 hours in the case of Cabin Crew Member.
(c) Split duty
(i) When an FDP consists of two or more sectors/duties, of which one can be a positioning journey counted as a sector, but separated by less than a minimum rest period, then the FDP may be extended beyond that permitted by the amounts indicated below:

<table>
<thead>
<tr>
<th>Consecutive Hours</th>
<th>Maximum Extension of FDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 3 hours</td>
<td>Nil</td>
</tr>
<tr>
<td>3 to 10 hours</td>
<td>A period equal to half of the consecutive hours taken.</td>
</tr>
</tbody>
</table>

(ii) The rest period shall not include the time allowed for immediate post-flight duties and pre-flight duties, a minimum total of 30 minutes. The actual time allowed shall be specified by the operator. When the rest period is 6 hours or less it will suffice if a quiet and comfortable place, not open to the public, if provided with a comfortable reclining seats [reclining more than 40 degrees and provide foot and leg rest], or bunk are available. If the rest period is more than 6 consecutive hours, then suitable accommodation must be provided.

(iii) When rest is taken in the aircraft on the ground,
   a) In-flight rest facilities acceptable standards are applicable, and
   b) Minimum standards of noise, temperature, light and ventilation are to be specified in the Operations Manual. Such arrangements will only be permitted when the Operating Crew have adequate control of the temperature and ventilation within the aircraft, and passengers are not on board.

AC CAR-OPS 1.1127(c)(iii): FAA Advisory Circular AC 121-31 provides an acceptable standards
(d) Rest period

(i) The aircraft operator must notify all crew members in good time of a flying duty period so that sufficient and uninterrupted pre-flight rest can be obtained. When away from base the operator must provide the crew with the opportunity and the facilities for adequate pre-flight rest. The operator must provide suitable accommodation. When flights are carried out at such short notice that it is impracticable for an operator to arrange suitable accommodation, then this responsibility devolves to the aircraft commander.

(ii) The minimum rest period which must be provided before undertaking a flying duty period shall be:

1. at least as long as the preceding duty period, or
2. 12 hours
3. whichever is the greater.

(iii) When away from base, in the case when the rest period earned by a crew member is 12 hours, and suitable accommodation is provided by the operator, then that rest period may be reduced by one hour. In such circumstances, if the travelling time between the aerodrome and the accommodation is more than 30 minutes each way then the rest period must be increased by the amount the total time spent travelling exceeding one hour. The room allocated to the crew member must be available for occupation for a minimum of 10 hours. This sub-paragraph does not apply to rest periods that exceed 12 hours.

(iv) Exceptionally at home base, individual crew members may be asked to exercise their discretion to reduce rest by up to a maximum of one hour but only to a minimum of 12 hours for flight crew and 11 hours for cabin crew. If discretion is used, it is the responsibility of the operator and the crew member to inform the commander of the flight immediately following the rest period, that a reduced rest period has been taken.

(v) If the preceding duty period, which includes any time spent on positioning, exceeded 8 hours, then the ensuing rest period must include a local night.

(vi) The rest period following a sequence of reduced rest and then an extended FDP, cannot be reduced.

(vii) After being called out from a standby duty the length of minimum rest shall be determined by the length of standby duty, plus any time spent on positioning, and any FDP completed.

(viii) Crew members who inform an operator that they are having difficulty in achieving adequate pre-flight rest must be given the opportunity to consult an aviation medical specialist.
(e) Aircraft commander’s discretion to extend a flying duty period.
   (i) An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, extend an FDP beyond that permitted in paragraph 1.1127(j), provided he is satisfied that the flight can be made safely. The extension shall be calculated according to what actually happens, not on what was planned to happen. An extension of 3 hours is the maximum permitted, except in cases of emergency (see Note 1).
   (ii) The operator’s scheme shall include guidance to aircraft commanders on the limits within which discretion may be exercised, and shall include specific limits to which a commander may extend the flying duty period. In a Flying Duty Period involving 2 or more sectors up to a maximum of 2 hours discretion may be exercised prior to the first and subsequent sectors. On a single sector flight and immediately prior to the last sector on a multi-sector flight, a commander may utilise the full amount of discretion authorised by the operator.
   (iii) A commander may exercise discretion to extend an FDP following a reduced rest period, only exceptionally, and then only to the extent necessary to allow for unforeseen circumstances that become apparent during the last sector.
   (iv) Whenever a commander extends an FDP, it shall be reported to his employer on a Discretion Report Form, either in the format of Appendix A or on a form acceptable to the GCAA. If the extension is greater than 2 hours, or when exercised after any reduced rest period, then the operator shall submit the commander’s written report, together with the operator’s comments to the GCAA, within 14 days of the aircraft's return to base.

   NOTES:  
   1 In respect of an extension of a flying duty period, an emergency is a situation which in the judgement of the commander presents a serious risk to the health or safety of crew and passengers, or endangers the lives of others (includes security reasons).
   2 Discretion reports may be used by the GCAA to assess the realism of particular schedules

(f) Mixed duties
   (i) When a crew member is required to report for duty in advance of the stipulated report time for a scheduled flight, to carry out a task at the behest of the company, then the time spent on that task shall be part of the subsequent FDP.
   (ii) Mixed Simulator and Aircraft Flying
   (iii) When a Flight Crew Member flies in the simulator, either on a check or training flight, or as a Training Captain or Instructor, and then within the same Duty Period flies as a Flight Crew Member on a public transport flight, all the time spent in the simulator is counted in full towards the subsequent FDP. Simulator flying does not count as a sector, but the FDP allowable is calculated from the report time of the simulator detail.

(g) Travelling Time
   (i) Travelling time, other than that time spent on positioning, does not count as duty.
   (ii) When crew members are required to travel from their home to an aerodrome other than the one from which they normally operate, any travelling time over and above the journey time from home to the usual operating aerodrome shall be classed as positioning. Notional times for any additional travelling shall be agreed between the operator and the GCAA.
(h) Positioning

(i) All time spent on positioning at the behest of the company shall count as Duty Time, but positioning does not count as a sector when calculating the FDP. In these circumstances the FDP commences not later than the time at which the Operating Crew Member reports for the positioning journey, or positions in accordance with paragraph g.2.

(ii) If, after a Positioning journey, the Operating Crew Member spends less than a minimum rest period at suitable accommodation provided by the company, and then carries out an FDP, the positioning will be counted as a sector if a split duty is claimed when calculating the allowable FDP. If it is not, a split duty FDP will not be used.

(i) Delayed Reporting Time in a Single FDP

(i) When an Operating Crew Member is informed of a delay to the reporting time due to a changed schedule, before leaving the place of rest, the FDP shall be calculated as follows. When the delay is less than 4 hours, the maximum FDP allowed shall be based on the original report time and the FDP shall start at the actual report time. Where the delay is 4 hours or more, the maximum FDP shall be based on the more limiting time band of the planned and the actual report time; and the FDP starts 4 hours after the original report time.

(ii) When an operator informs a crew member before leaving the place of rest of a delay in reporting time of 10 hours or more ahead, and that crew member is not further disturbed by the operator until a mutually agreed hour, then that elapsed time is classed as a rest period. If, upon the resumption of duty, further delays occur, then the appropriate criteria in this paragraph and paragraph 1 above shall be applied to the re-arranged reporting time.
(j) Maximum FDP

(i) An operator shall specify standard reporting times that realistically reflect the time for safety related ground duties as approved by the GCAA. Pre-flight duties are part of the FDP; a minimum of 30 minutes duty will be allowed for post-flight activities. The time spent between reporting for a flight and the completion of post-flight tasks determines the length of the subsequent rest period. If this "period" for post FDP duties is routinely exceeded then the post FDP duty period stated in the scheme must be revised to better represent the actual time taken.

(ii) A non-standard reporting time designed to take advantage of an increased FDP from a more favourable time band, must not be used.

(iii) Table A applies when the FDP starts at a place where the crew member is acclimatised; Table B applies at other times:

<table>
<thead>
<tr>
<th>Local Time of Start</th>
<th>Sectors - Crewmember in an Acclimated State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>06:00 – 07:59</td>
<td>13:00</td>
</tr>
<tr>
<td>08:00 – 12:59</td>
<td>14:00</td>
</tr>
<tr>
<td>13:00 – 17:59</td>
<td>13:00</td>
</tr>
<tr>
<td>18:00 – 21:59</td>
<td>12:00</td>
</tr>
<tr>
<td>22:00 – 05:59</td>
<td>11:00</td>
</tr>
</tbody>
</table>

Table B Two or more Flight Crew - Not Acclimatised

<table>
<thead>
<tr>
<th>Length of preceding rest (hours)</th>
<th>Sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Up to 18 or over 30</td>
<td>13:00</td>
</tr>
<tr>
<td>Between 18 and 30</td>
<td>11:30</td>
</tr>
</tbody>
</table>

**NOTE:** The practice of inserting a short duty into a rest period of between 18 and 30 hours. In order to produce a rest period of less than 18 hours, thereby taking advantage of the longer FDP contained in Table B, is not permitted.

(k) Limits on Two Flight Crew Long Range Operations

**Note.** This paragraph does not apply to cabin crew

When an aeroplane flight crew is only two pilots, the allowable FDP shall be calculated as follows. A sector scheduled for more than 7 hours is considered as a multi-sector flight, as below:

<table>
<thead>
<tr>
<th>Scheduled Sector Length / Times</th>
<th>Acclimatized</th>
<th>Not Acclimatized</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:01 to 9:00</td>
<td>2 sectors</td>
<td>4 sectors</td>
</tr>
<tr>
<td>9:01 to 11:00</td>
<td>3 sectors</td>
<td>4 sectors</td>
</tr>
<tr>
<td>Over 11 hours</td>
<td>4 sectors</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

The appropriate table (A or B) is then entered with the start time of the duty period and the 'modified' number of sectors, to determine the allowable FDP.

When an additional, current, type rated pilot is an Operating Crew Member, then these limits do not apply and the permissible FDP is determined by entering Table A or B with time of start and the actual sectors planned.
AC CAR-OPS 1.1127(c)(iii)
FAA Advisory Circular AC 121-31 provides an acceptable standards.

IEM CAR-OPS 1.1127(e)(i)
the maximum allowable FDP should be determined by the planned block times and factored number of sectors as applicable. The factored number of sectors should be increased by the additional number of sectors in case of a diversion.

CAR–OPS 1.1130 Ultra long range operations (Reserved)
(a) ULR operations shall not be conducted unless in accordance with the prescribed terms as approved by the Authority. All ultra long range operations shall be approved on the basis of city pairing.

(b) An Air Carrier shall have an established Fatigue Risk Management System in place for ULR.

(c) An Air Transport Operator, or applicable Private Operator, shall establish a Steering Committee, or Fatigue Risk Management System, for ULR.

(d) When in-flight relief is utilised, there shall be for the flight or cabin crew member who is resting, a comfortable bunk, separated and screened from the flight deck and passengers equipped with ability to control humidity, temperature and lighting.

Note: Unless otherwise specified, the General Civil Aviation Authority document Civil Aviation Advisory Publication, CAAP 14 and its applicable parts with associated amending notices, shall be the guidelines and basis of assessment of operator ULR operations.

CAR–OPS 1.1135 Cabin crew requirements
The limitations, which shall be applied to cabin crew, are those applicable to flight crew members, but with the following differences:

(a) A FDP can be 1 hour longer than that permitted for flight crew. The FDP and limits set on early starts for cabin crew shall be based on the time at which the flight crew report for their FDP. Cabin crew FDP shall start at the report time of the Cabin Crew
(b) The minimum rest period which will be provided before undertaking a flying duty period shall be:
   1) at least as long as the preceding duty period less 1 hour; or
   2) 11 hours;
   whichever is the greater.
(c) The combined sum of standby time and subsequent FDP can be 1 hour longer than that permitted to flight crew.
(d) The maximum duty hours for cabin crew shall not exceed;
   1) 60 hours in any 7 consecutive days, but may be increased to 65 hours, when a rostered duty covering a series of duty periods, once commenced, is subject to unforeseen delays,
   2) 105 hours in any 14 consecutive days, and
   3) 210 hours in any 28 consecutive days.
(e) No Cabin Crew Member shall act as an Operating Crew Member of an aircraft if at the beginning of the flight the aggregate of all his/her previous flight times;
   1) during the period of 28 (twenty eight) consecutive days expiring at the end of the day on which the flight begins exceeds 100 (one hundred) Block Hours or
   2) during the period of 12 (twelve months) expiring at the end of the previous month exceeds 1000 (one thousand) Block hours.
(f) Notwithstanding (d) and (e), the following shall be considered:

(1) For crews that exclusively operate short and medium haul routes:

No Cabin Crew Member shall act as an Operating Crew Member of an aircraft if at the beginning of the flight the aggregate of all his/her previous flight times;

(i) during the period of 28 (twenty eight) consecutive days expiring at the end of the day on which the flight begins exceeds 120 (one hundred and twenty) Block Hours or during the period of 12 (twelve months) expiring at the end of the previous month exceeds 1200 (one thousand and two hundred) Block hours

(ii) The Cabin crew members who fly above 100 block hours in 28 consecutive days and/or 1000 block hours in 12 consecutive months shall fulfill the following conditions:

A. Minimum of 8 days-off in any 28 consecutive days
B. A total of 26 days-off in any 84 consecutive days
C. A total of 104 days off in any consecutive 12 month period excluding annual leave entitlement.

(iii) The maximum Duty Hours for Cabin Crew members shall not exceed;

A. 60 hours in any 7 consecutive days, but may be increased to 65 hours, when a rostered duty covering a series of duty periods, once commenced, is subject to unforeseen delays,
B. 105 hours in any 14 consecutive days,
C. 200 hours in any 28 consecutive days.
D. 600 hours in any 84 consecutive days

(2) For crews that operate long hauls or mixed long, medium and short haul routes:

(i) Subset 1:

No Cabin Crew Member shall act as an Operating Crew Member of an aircraft if at the beginning of the flight the aggregate of all his/her previous flight times;

A. during the period of 28(twenty eight) consecutive days expiring at the end of the day on which the flight begins exceeds 115 (one hundred and fifteen) Block Hours or during the period of 12 (twelve months) expiring at the end of the previous month exceeds 1200 (one thousand and two hundred) Block hours

B. The Cabin crew members who fly above 100 block hours in 28 consecutive days and/or 1000 block hours in 12 consecutive months shall fulfill the following conditions:

- Minimum of 8 days-off in any 28 consecutive days
- A total of 26 days-off in any 84 consecutive days period (if two or more 14 consecutive days periods exceeds 100 block hours each one)
- A total of 94 days off in any consecutive 12 month period excluding annual leave entitlement.

C. The maximum Duty Hours for Cabin Crew members shall not exceed;

- 60 hours in any 7 consecutive days, but may be increased to 65 hours, when a rostered duty covering a series of duty periods, once commenced, is subject to unforeseen delays,
- 115 hours in any 14 consecutive days, and
- 200 hours in any 28 consecutive days.
- 555 hours in any 84 consecutive days
(ii) Subset 2

No Cabin Crew Member shall act as an Operating Crew Member of an aircraft if at the beginning of the flight the aggregate of all his/her previous flight times;

A. during the period of 28 (twenty eight) consecutive days expiring at the end of the day on which the flight begins exceeds 120 (one hundred and twenty) Block Hours or during the period of 12 (twelve months) expiring at the end of the previous month exceeds 1200 (one thousand and two hundred) Block hours.

B. The Cabin crew members who fly above 100 block hours in 28 consecutive days and/or 1000 block hours in 12 consecutive months shall fulfil the following conditions:
   - Minimum of 8 days-off in any 28 consecutive days
   - A total of 26 days-off in any 84 consecutive day period (if two or more 28 consecutive day periods exceeds 100 block hours each one)
   - A total of 100 days off in any consecutive 12 month period excluding annual leave entitlement.

C. The maximum Duty Hours for Cabin Crew members shall not exceed;
   - 60 hours in any 7 consecutive days, but may be increased to 65 hours, when a rostered duty covering a series of duty periods, once commenced, is subject to unforeseen delays,
   - 115 hours in any 14 consecutive days;
   - 200 hours in any 28 consecutive days; and
   - 600 hours in any 84 consecutive days.

CAR–OPS 1.1140 Records to be Maintained

(See Appendix 1 to CAR-OPS 1.1065)

(a) Records for the flight, duty and rest periods of all staff shall be kept for a period of at least 15 months from the date of the last relevant entry. These records shall include;

   (1) For each crew member:
      - The beginning, end and duration of each duty or FDP, and function performed during the period. In addition;
        (i) Duration of each rest period prior to a FDP or standby duty period, and
        (ii) Dates of days off, and
        (iii) 7 Consecutive day totals of duty
        (iv) 14 consecutive day totals of duty
        (v) 28 consecutive day totals of duty
        (vi) The 12 consecutive month totals of duty
        (vii) 28-day and 12 consecutive months Block Hour durations

   (2) For each flight crew member:
      (i) Daily, 7 consecutive day period flying hours, in addition to (a)(1) above.

   (3) In case of augmented crew and in-flight rest is performed:
      (i) For the aircraft Commander, the beginning, end and duration of each Block Time.
      (ii) For all other Flight Crew Members, the beginning, end and the duration of each Block Time expressed, as the time at the controls as an Operating Crew Member.
      (iii) For cabin crew, beginning, end and the duration of each Block Time expressed as the time on service as Operating Crew member.

(b) Additionally, operators shall retain all aircraft commander’s discretion reports of extended FDPs, extended flying hours, and reduced rest periods for a period of at least 6 months after the event.
Appendix A Commander’s Discretion Report - Extension of Flying Duty Period/Flying Hours

Part A
Operator Aircraft Type: ___________________________ Flight Number: ___________________________
Commander: ___________________________ Date: ___________________________

Note:
• If discretion exercised for part crew or individuals state name(s) and operating capacity below.
• An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, extend an FDP beyond the Allowable FDP.

Part B Voyage Details:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Crew acclimatised</td>
</tr>
<tr>
<td>2</td>
<td>Length of preceding rest – 18 to 30 hrs/under</td>
</tr>
<tr>
<td>3</td>
<td>18 or over 30 Hrs. Hrs. Mins Allowable FDP from Table A or B</td>
</tr>
<tr>
<td>4</td>
<td>Split duty: actual time off</td>
</tr>
<tr>
<td>5</td>
<td>In-flight relief (more than 03 hours); rest taken</td>
</tr>
<tr>
<td>6</td>
<td>Revised allowable FDP</td>
</tr>
</tbody>
</table>

Voyage Details

<table>
<thead>
<tr>
<th>Schedule(Planned)</th>
<th>Actual</th>
<th>Crew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place UTC Local</td>
<td>UTC Local No. Rank Name</td>
<td></td>
</tr>
<tr>
<td>Duty to start</td>
<td>Duty started 1</td>
<td></td>
</tr>
<tr>
<td>Depart</td>
<td>Departed 2</td>
<td></td>
</tr>
<tr>
<td>Arrive</td>
<td>Arrived 3</td>
<td></td>
</tr>
<tr>
<td>Depart</td>
<td>Departed 4</td>
<td></td>
</tr>
<tr>
<td>Arrive</td>
<td>Arrived 5</td>
<td></td>
</tr>
<tr>
<td>Depart</td>
<td>Departed 6</td>
<td></td>
</tr>
<tr>
<td>Arrive</td>
<td>Arrived 7</td>
<td></td>
</tr>
<tr>
<td>Depart</td>
<td>Departed 8</td>
<td></td>
</tr>
<tr>
<td>Arrive</td>
<td>Arrived 9</td>
<td></td>
</tr>
<tr>
<td>Depart</td>
<td>Departed 10</td>
<td></td>
</tr>
<tr>
<td>Arrive</td>
<td>Arrived 11</td>
<td></td>
</tr>
<tr>
<td>FDP to end</td>
<td>FDP ended 12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actual FDP 13</td>
<td></td>
</tr>
</tbody>
</table>
**Appendix B Commander's Discretion Report - Reduction of Rest**

**Note:**
All times to be recorded as date/time six-figure groups, expressed in both UTC and Local time.

<table>
<thead>
<tr>
<th>Part A</th>
<th>Operator</th>
<th>Aircraft Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flight Number</td>
<td>Commander</td>
</tr>
<tr>
<td></td>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
If discretion exercised for part crew or individuals state name(s) and operating capacity below.

<table>
<thead>
<tr>
<th>Part B</th>
<th></th>
<th>UTC</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Last duty started</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Last duty ended</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Calculated earliest next available</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actual start of next FDP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rest earned</td>
<td>Hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rest period reduced by</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crew affected:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Planned FDP</th>
<th>Actual FDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowed FDP</td>
<td>Extension</td>
</tr>
<tr>
<td>Length of preceding rest</td>
<td>Time over 06 hours spent on Stand-by</td>
</tr>
<tr>
<td>Was the FDP preceded by Stand-by-duty?</td>
<td>YES</td>
</tr>
</tbody>
</table>

**Note:**

If rest is taken in a bunk (Up to 18 Hrs.).
A period equal to one half of the total of rest taken, provided that the FDP shall not exceed (*) hours; (*) hours in the case of cabin crew.

If rest is taken in a seat (Up to 15 Hrs.).
A period equal to one third of the total of rest taken, provided that the FDP permissible shall not exceed (*) hours; (*) hours in the case of cabin crew.

Extension of Flying Duty Period by Split Duty (3 – 10)
A period equal to half the consecutive hours rest taken