



FLIGHT STANDARDS DIRECTORATE  
HQs CIVIL AVIATION AUTHORITY  
JINNAH INTERNATIONAL AIRPORT  
KARACHI – PAKISTAN

HQCAA/5265/53/FS/592

Dated 19<sup>th</sup> November, 2005

Dear Sir,

**ANO 91.0012 (ISSUE THREE)**  
**FLIGHT AND DUTY TIME LIMITATION (FDTL)**

1. Enclosed please find Air Navigation Order No. 91.0012 (Issue Three) on Flight and Duty Time Limitation (FDTL) duly approved by DG CAA with effect from 2<sup>nd</sup> November, 2005, for implementation.
2. CAA Flight Inspectors may plan surprise checks to ensure compliance of the new enforced ANO. This issue supersedes ANO No. 91.0012 (Issue Two).

Yours faithfully.

(CAPT. SHAFQAT MAHMOOD)  
Acting Director Flight Standards

Encl: As stated.

◆ Distribution list overleaf.

**CIVIL AVIATION AUTHORITY, PAKISTAN**

**Air Navigation Order**

**No. : 91.0012**

**Date : 2<sup>nd</sup> November 2005**

**Issue : Three**

**FLIGHT AND DUTY TIME LIMITATIONS (FDTL)**

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**FLIGHT AND DUTY TIME LIMITATIONS (FDTL)**

**1. Authority**

1.1 This Air Navigation Order (ANO) is issued under rules 201, 202 & 206 of the Civil Aviation Rules 1994 (CARs 94) by the Director-General of the Civil Aviation Authority (CM) in pursuance of the powers vested in him under rule-4 of CARs 94.

1.2 Under rule 201 an operator is required to develop a scheme for Flight and Duty Time Limitations (FDTL), under rule- 202 rest periods has to be provisioned and under rule- 206 the operator is required to keep a record of the same. This ANO makes it obligatory on all operators to ensure that daily operations are conducted in conformity with FDTL mentioned hereafter.

**2. Scope**

The FDTL requirements shall ensure that all flight crew members and cabin crew members are receiving adequate rest and the limitations on flight and duty time being duly complied by them.

**3. Purpose**

The purpose of this ANO is to interpret the requirements of ICAO Annex-6 and implement these requirements through Civil Aviation Rules 1994 as they apply to the regulation of flight and duty times, avoidance of fatigue in crew members and record keeping of FDTL.

**4. Applicability**

All operators and/or the service providers (as applicable) shall establish system / procedure for approval by DGCAA for the:

- a) Crew members, limitation on flight times and flight duty periods as well as suitable rest periods that must correspond to the provisions of this ANO;
- b) Flight Operation Officers, limitation on duty period as well as their suitable rest periods.

**5. Effective Date**

This ANO shall come into force with immediate effect.

**6. Definitions**

**6.1 Augmented Crew**

A crew that comprises more than the minimum number required for the operation of the aircraft and in which each crew member can leave his/her post and be replaced by one of the augmented crew holding equal or higher qualification for the post.

**6.2 Crew Compliment:**

a)	Single Crew	<ul style="list-style-type: none"> <li>➤ <b>In the case of Flight Crew, it is:</b> <ul style="list-style-type: none"> <li>• Minimum number of Flight crew for the type, as specified in the Approved Operations Manual</li> </ul> </li> <li>➤ <b>In the case of Cabin Crew, it is:</b> <ul style="list-style-type: none"> <li>• Minimum number of Cabin Crew required for Safety, as specified in the Approved Operations Manual.</li> </ul> </li> </ul>
b)	Multiple Crew	<ul style="list-style-type: none"> <li>➤ <b>In the case of Flight Crew, it is:</b> <ul style="list-style-type: none"> <li>• Single pilot aircraft ----- 2 Captains</li> <li>• Two pilot aircraft ----- 2 Captains + 1 Co-pilot</li> <li>• Three Crew aircraft ---- 2 Captains + 1 Co-pilot + 2 Ft. Engrs</li> </ul> </li> <li>➤ <b>In the case of Cabin Crew, it is:</b> <ul style="list-style-type: none"> <li>• Any additional cabin crew more than the minimum required for the type/configuration of aircraft, as approved</li> </ul> </li> </ul>
c)	Double Crew	<ul style="list-style-type: none"> <li>➤ <b>In case of Flight Crew, it is:</b> <ul style="list-style-type: none"> <li>• Single pilot aircraft ----- 2 Captains</li> <li>• Two pilot aircraft ----- 2 Captains + 2 Co-pilots</li> <li>• Three Crew aircraft ---- 2 Captains + 2 Co-pilots + 2 Ft. Engrs</li> </ul> </li> <li>➤ <b>In the case of Cabin Crew, it is:</b> <ul style="list-style-type: none"> <li>• Twice the number of minimum cabin crew required for the type/configuration of aircraft, as approved</li> </ul> </li> </ul>

**6.3 Cabin Crew**

A crew member who performs, in the interest of safety of passengers duties assigned by the operator or the pilot in command of the aircraft but who shall not act as flight crew member

**6.4 Crew member**

A person assigned by an operator to duty on an aircraft during a flight duty period.

**6.5 Deadhead Time**

A time that a crew member spends at the behest of the operator aboard an aircraft without being charged with duties. The same applies to the positioning by surface transportation.

**6.6 Duty Period**

Any continuous period throughout, which a crew member is required by an operator to be on duty, whether on ground or in the air. Where a crew member is required by an operator to be available for duty for two or more periods separated by an interval of less than 12 hours, (10 Hours for Charter, Aerial Work and Flying Schools below

weight category of 5700 kgs) the period shall be deemed continuous starting when the first of the period begins and finishing when the last period ends.

6.7 Flight Crew

A licensed crew member charged with duties essential to the operation 'Of an aircraft during flight duty period.

6.8 Flight Duty Period (FDP)

The total time from the moment a flight crew member commence duty, immediately subsequent to a rest period and prior to making a flight or series of flights to the moment the flight crew member is relieved of all duties having completed such flight or series of flights.

6.9 Flight Time (Aeroplane)

The period of time from the moment at which an aircraft moves under its own power preparatory to take-off until the moment at which it comes to rest after landing;

Note: Flight time as 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 purposes of taking off until it finally stops at the end of the flight.

6.9.1 Flight Time (Helicopter)

The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

6.10 Flight Relief Seat

A comfortable, fully reclining seat, separated and screened from passengers and flight deck, equipped with a call device, sleep restraint, supplemental oxygen, and not subject to distraction from noise generated in the cabin.

6.11 Home Base

The location nominated 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 conditions, the operator is not responsible for the accommodation of the crew member concerned.

6.12 Local Day

A 24 hour period commencing at 00:00 hours local time.

6.13 Local Night

A period of 8 hours falling between 22:00 hours and 06:00 hours local time.

6.14 Operator

A person, organisation, or enterprise engaged in, or offering to engage in, an aircraft operation.

6.15 Rest Period

A period of time on the ground, during which a crew member is relieved of all duties by the operator,

## 6.16 Standby

A defined period during which a crew member might be called for duty within a minimum notice. Standby duty away from the place of rest will be counted towards flight duty time.

## 7. Responsibilities

## 7.1 Responsibility of the Operator

All Operators are responsible to adhere to this ANO on Flight and Duty Time Limitations. Operators are also responsible to roster the crew in such a way so as to provide adequate rest to them prior to operating a flight.

## 7.2 Responsibility of the Crew member

Crew members shall not act as operating crew if they know, or suspect, that their physical or mental condition renders them unfit to operate. Furthermore, they must not fly if they know that they are, or likely to be, in breach of this ANO. Crew members have also the responsibility to make optimum use of the opportunities and facilities for rest provided and for planning and using their rest periods properly in order to minimise incurring fatigue.

## 8. Limitations

An operator shall establish stringent limits of its own and shall not term the limitations provided here in as normal operating hours. This shall prevent crew fatigue, stretching to the limits and shall ultimately prevent frequent application for extensions to FDTL.

## 8.1 Flight and Duty Time Limitations

## 8.1.1 Maximum FDTL shall be as follows:

a)	Flight Crew Compliment- Aircraft weight category above 5700 Kgs.	Flight time	Duty period
	(i) Single crew compliment	09 hrs.	11 hrs.
	(ii) Multiple crew compliment	11 hrs.	13 hrs.
	(iii) Double crew	14 hrs.	16 hrs.
b)	Flight Crew Compliment- Aircraft weight category below 5700 Kgs.	Flight time	Duty period
	(i) Agricultural spray	04 hrs.	As in b(iii)
	(ii) Flying School, Aerial Work Operation below 1500 feet above ground level (AGL)		
	A) Without air-conditioning	04 hrs.	As in b(iii)
	B) With air-conditioning	5.5 hrs.	As in b(iii)
	(iii) Charter, Flying School, Aerial Work Operation above 1500 feet above ground level (AGL)		
	A) Single Pilot	06 hrs.	09 hrs.
	B) Two or more Pilots	08 hrs.	12 hrs.
b)	Cabin Crew Compliment	Flight time	Duty period
	(i) Single crew	12 hrs.	16 hrs.
	(ii) Multiple crew (any addition to single crew compliment)		
	(A) An additional 50% of Single Crew	14 hrs.	18 hrs.
	(iii) Double crew	16 hrs.	20 hrs.

Note: Flight Crew undertaking single & two pilot operations within single duty will be governed by the FDTL of flight undertaken at later stage of flying.

- 8.1.2 Extension of FDTL: To avoid inconvenience to passengers, duty period as given in 8.1.1 may be extended by a maximum of 4 hours in the case of unanticipated technical snags, adverse weather conditions or any other unforeseen circumstances beyond the control of the operator, in case if FDTL extension involving flight crew, the flight crew members must not feel fatigued and should feel in good physical/ mental condition to operate a flight. FDTL extension is not applicable at crew base/changeover station. Whenever the duty period gets extended, the rest period for flight crew shall be pro-rata increased by twice the amount of extended period of duty period.
- 8.1.3 In extraordinary circumstances, the Flight and Duty Time Limitations can be extended with the specific approval of the Director General CAA in accordance with the conditions, which the Director General may specify.
- 8.1.4 The time spent in office and/or simulator by a crew member prior to operating a flight will be considered for calculation of Flight Duty Period.
- 8.1.5 Duty commencement/Off (before scheduled departure and after "Blocks On") for RPT Operations:

<b>a) Flight Crew</b>	Duty Start	Duty Off	<b>b) Cabin Crew</b>	Duty Start	Duty Off
International Flight	01 hr.	30 min.	Wide body A/C	1.5 hrs.	30 min.
Domestic Flight	45 min.	15 min	Narrow body A/C	45 min.	30 min

- 8.1.6 In case of official delays after Blocks "On" due to no transportation, immigration \ requirements, refueling and non-availability of rest area etc., it will accumulate towards duty period.
- 8.1.7 Augmented Operations

Operations beyond the scope of single crew compliment shall be undertaken by augmenting the flight crew. An augmented FDP shall only consist of a single sector flight. The following issues must be addressed:

- The quality of the flight relief facilities.
- The qualifications of flight crew members at the controls at all stages of flight should be such that the control and completion of the flight to a safe landing should not be dependent on the return of resting flight crew members to the flight deck.
- The division of duty and rest between flight crew members must be kept in balance.
- The notification of the role of the crew members must be given in advance. (i.e. flight crew member to be operating main crew of relief crew).
- That prior notification of operating relief role must be made available to crews in order for them to take or forgo rest accordingly.
- That full crew integrity be retained. During the Aircraft Commander's period of relief, responsibility for the safe conduct of the flight will be delegated to the Aircraft Commander's relief pilot who must be command qualified.

## 8.2 Cumulative Total Time Limitations

- 8.2.1 Operator shall not permit an aircraft to fly and no crew member shall act as a member of the crew of an aircraft if during the planned flight, any member of the flight crew will accumulate flight time which,
- When added to the flight time accumulated in the seven days period preceding the flight would be in excess of thirty-five hours, or

- b) If added to that accumulated in the thirty days period preceding the flight would be in excess of one hundred hours, or
- c) If added to that accumulated in three hundred and sixty five days period preceding the flight would be in excess of one thousand hours.

8.2.2 The Operator shall not permit an aircraft to fly, nor shall a person act as a member of the crew of an aircraft if during the planned flight the flight and duty time limitations in the approved scheme established by the operator would be exceeded.

### **8.3 Limitation on Number of Landings**

8.3.1 In anyone planned duty period, no crew member of an aeroplane with weight category above 5700 Kgs, shall do or be asked to do more than a total of:

- a) 6 landings in day light in one duty period, or
- b) 4 landings by day 1 landing by night in one duty period, or
- c) 3 landings by day and 2 landings by night in one duty period, or
- d) 2 landings by day and 3 landings by night in one duty period, or
- e) 4 landings by night in one duty period.

8.3.2 In anyone planned duty period, no crew member of an aeroplane with weight category of 5700 Kgs and below, shall do or be asked to do more than a total of:

- a) 8 landings in day light in one duty period, or
- b) 6 landings by day 2 landing by night in one duty period, or
- c) 4 landings by day and 3 landings by night in one duty period, or
- d) 3 landings by day and 3 landings by night in one duty period, or
- e) 5 landings by night in one duty period.

8.3.3 Limitation on number of landings shall not include landing for the purpose of retrieval of aircraft after diversion.

8.3.4 The restrictions in regard to number of landings during any 24 hours period are not applicable to:

- a) Helicopter operations.
- b) Flying Schools.
- c) Flight crew engaged in training flights. If the training flight is conducted after any commercial operation(s), the number of landings shall not be the limiting 1, factor for calculation of FDTL. In such cases, total flight and duty period shall not be the limiting factor. Whenever any commercial operation is conducted after a training flight, the number of landings and flight and duty time including the training flights shall be considered for calculating FDTL.

### **8.4 Consecutive Night Limitation**

A crew member shall neither be detailed nor undertake any duty between periods embracing 2200 to 0600 hours local time for more than two consecutive nights.

## **9. Variation to FDTL**

Any variation to this scheme of Flight and Duty Time Limitation beyond the scope of an operator may only be permitted by an express authority of DGCAA.

## 10. Rest Period

- 10.1 RPT Air Operator shall provide each Flight crew member of an aircraft with a minimum rest period before each flight duty period which shall not be less than twice the duration of the duty period of previous flight and not less than 12 hours, and shall provide a rest period of not less than twenty-four hours after availing his / her rest period of last flight in each period of seven consecutive days or shall provide rest periods as directed by the Director General CAA.

Note: To avoid inconvenience to passenger on subsequent flight minimum rest period may be reduced to 12 (Twelve) hours with the consent of each flight crew member provided that the crew member does not feel fatigued and feels in good physical/mental condition to operate a flight.

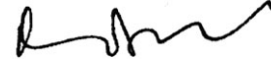
- 10.2 A charter, Aerial Work and Flying School below weight category of 5700 Kgs operator shall provide each flight crew member of an aircraft with a minimum rest period before each flight duty period which shall not be less than twice the duration of flight time of previous flight or 10 Hours, whichever is more, and shall provide a rest period of not less than twenty four hours after availing rest period of last flight in each period of seven consecutive days or shall provide rest period as directed by the Director General CAA.
- 10.3 No operator shall assign any flight crew member to any duty during required rest period.
- 10.4 Any rest period provided under this ANO shall not include time spent as a passenger for as supernumerary crew of an aircraft on a flight made for the purpose of positioning for a subsequent period of duty. The time spent in travel as supernumerary crew 12 hrs (10 hours of Charter, Aerial Work and Flying School below weight category of 5700 Kgs) prior to operating a flight will be considered towards Flight Duty Period for that flight for which he/she is being positioned.
- 10.5 An operator shall not cause or permit any person to fly as a member of a crew if he knows or has reason to believe that, that person is suffering from fatigue to the extent that the safety of the aircraft would be endangered.

## 11. Record Keeping

- 11.1 Operators shall maintain records for duty period, flight time and rest periods of all the crew members that shall include:
- a) For each flight Crew:
    - i) Daily flying hours
    - ii) The beginning, end and duration of each duty or flying duty period,
    - iii) Function performed during the period,
    - iv) Duration of each rest period prior to a flying duty or standby period,
    - v) Weekly, monthly and yearly totals of flight time.
  - b) For each Cabin Crew:
    - i) The beginning, end and duration of each or flying duty period.
    - ii) Duration of each rest period prior to a flying duty or standby period,
    - iii) Weekly, monthly and yearly totals of flighty duty time.
- 1.2 Records on FDTL shall be preserved for at least 24 calendar months from the date of the last relevant entry.

**12. Cancellation**

This ANO supersedes and cancels the Issue –2 of ANO 91-0012 with immediate effect.



**( PERVEZ AKHTER NAWAZ )**  
Air Marshal (Retd)  
Director General  
Civil Aviation Authority

Date: 02 November, 2005