

CIVIL AVIATION AUTHORITY, PAKISTAN

Air Navigation Order

No. : 91.0031

Date : August, 2007

Issue : One

SPECIAL OPERATIONS (HELICOPTER)

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SPECIAL OPERATIONS (HELICOPTER)

1. Authority

- 1.1 This Air Navigation Order (ANO) is issued by the Director General Civil Aviation Authority in pursuance of powers vested in him under Rules 191, 192 and Rule-4 of Civil Aviation Rules 1994.

2. Scope

- 2.1 This ANO deals with the special Helicopter Operations. All Operators / Companies / Firms / Persons shall comply with the instructions contained in this ANO and all other relevant Rules / ANOs concerning Aircraft Operations. This ANO lays down the minimum requirements for Helicopter Emergency Medical Service (HEMS), Mountain / Hill Operations by Helicopters, External Load Operations by Helicopters, Offshore Helicopter Operations.

3. Applicability

- 3.1 This ANO shall apply to all Helicopter Public Transport, charter and aerial works operations and sets the minimum requirements, conditions and obligations for an AOC holder be met in Operations Manual.
- 3.2 Any amendments, additions, alteration and deletion necessitated in ICAO Annex 6, Part-III and CARs would be deemed to be applicable to the operator subject intimation by CAA.
- 3.3 Any Helicopter Operator or person performing special operations in this ANO shall be deemed to be operating under this ANO.

4. Effective Date

- 4.1 This ANO shall come into force with immediate effect.

5. Operator's Obligation

- 5.1 An Operator, prior to commencement of operation shall:
- a) Prepare a Flight Safety Document System (Set of inter-related documentation) that is easily accessible, validated and consistent in use, with organized information necessary for flight and ground

operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

- b) Prepare and submit an operations manual as a part of its flight safety document system for the use and guidance of operations personnel concerned, in English language.

5.2 The Operator shall ensure that:

- a) The contents of the Operations Manual, including all amendments or revisions, do not contravene the conditions contained in the Air Operator Certificate (AOC) or any applicable regulations of CAA and the countries into or over which its aircraft are operated and must have an approval of CAA.
- b) The Structure and contents of the Operations Manual are in accordance with this ANO.

HELICOPTER EMERGENCY MEDICAL SERVICE (HEMS)

6. INTRODUCTION

A helicopter is very versatile machine and its utilization is unlimited in today's modern world. One of the most important tasks of the helicopter is to provide emergency service during urgent situations that necessitate quick evacuation and medical aid. The helicopter in this role provides immediate medical assistance and rapid transportation from site of the medical emergency.

6.1 DEFINITIONS

Congested hostile environment. A hostile environment within a congested area.

Helicopter Emergency Medical Service (HEMS) flight. A flight by a helicopter operating under a HEMS, the purpose of which is to facilitate emergency medical assistance, where immediate and rapid transportation is essential, by carrying:

- (i) Medical personnel; or
- (ii) Medical supplies (equipment, blood, organs, drugs); or
- (iii) Sick or injured persons and other persons directly involved.

Ground emergency service personnel. Any ground emergency service personnel (such as policemen, firemen etc.) involved with HEMS and whose tasks are to any extent pertinent to helicopter operations.

HEMS crew member. A person who is assigned to a HEMS flight for the purpose of attending to any person in need of medical assistance carried in the helicopter and assisting the pilot during the mission. The person is subject to specific training as detailed in 5.2 below.

HEMS operating base. A heliport at which the HEMS crew members and the HEMS helicopter may be on standby for HEMS operations.

HEMS operating site. A site selected by the PIC during a HEMS flight for landing and take off.

Hostile environment. An environment in which:

- a) a safe forced landing cannot be accomplished because the surface is inadequate; or
- b) the helicopter occupants cannot be adequately protected from the elements; or
- c) search and rescue response/capability is not provided consistent with anticipated exposure;
or
- d) there is an unacceptable risk of endangering persons or property on the ground.

Medical passenger. A medical person carried in a helicopter during a HEMS flight, including but not limited to doctors, nurses and paramedics. This passenger shall receive a briefing as detailed in 5.3 below.

Non-congested hostile environment. A hostile environment outside a congested area.

Non-hostile environment. An environment in which:

- a) the surface is suitable for a safe forced landing; and
- b) the helicopter occupants can be adequately protected from the elements;
- c) search and rescue response/capability is provided consistent with anticipated exposure; and
- d) the assessed risk of endangering persons or property on the ground is acceptable.

Note:- Those parts of a congested area satisfying the above requirements are considered non-hostile.

6.2 Operational Requirements

6.2.1 An operator must ensure that the Operations Manual includes a supplement specifying operational considerations specific to HEMS operations. Relevant extracts from the Operations Manual shall be made available to the organization for which the HEMS is being provided.

6.2.2 Performance Class 3 operations shall not be conducted over a hostile environment.

6.2.3 Performance Class 3 operations in non congested hostile environment over hilly terrain with any turbine engine helicopter may be conducted subject to the following conditions:

- (i) Prior CAA approval for type and area of such operations has been obtained;
- (ii) Such operations are performed within the limitations established by the helicopter manufacturer.
- (iii) The maximum certificated seating capacity of the helicopter is less than or equal to six.
- (iv) The operator shall ensure that performance criteria of flight manual are strictly followed and the reliability of the engine and helicopter systems are continuously monitored.

6.3 Take-off and landing-helicopters with an Maximum Takeoff Mass (MTOM) of 5700 kg or less

- 6.3.1 Operations to/from a heliport at a hospital, which is located in a hostile environment, shall be operated as Performance Class 1.
- 6.3.2 Operations to / from a HEMS operating site located in a hostile environment shall be as Performance Class 1. The PIC shall make every reasonable effort to minimize the period during which there would be danger to helicopter occupants and persons on the surface in the event of failure of a power unit.
- 6.3.3 The HEMS operating site must be big enough to provide adequate clearance from all obstructions.
- 6.3.4 Guidance on take-off and landing procedures at previously unsurveyed HEMS operating sites shall be contained in the Operations Manual.

6.4 Take-off and landing-helicopters with an MTOM exceeding 5700 kg.

- 6.4.1 Helicopters conducting HEMS shall be operated in accordance with Performance Class 1 operations.

6.5. THE CREW

- 6.5.1 The Operations Manual shall contain specific criteria for the selection of flight crewmembers for the HEMS task, taking previous experience into account.
- 6.5.2 The minimum experience for PIC conducting HEMS flights shall not be less than
 - a) either 1000 hours pilot-in-command of aircraft of which 500 hours is as pilot-in-command on helicopters;
 - or
 - 1000 hours as copilot in HEMS operations of which 500 hours is as pilot-in-command under supervision; and, 100 hours pilot-in-command of helicopters.
 - b) 500 hours operating experience gained in similar operational environment.

- d) Successful completion of training in accordance with 5.2.

6.6 Recency

All pilots conducting HEMS operations shall have completed a minimum of 30 minutes flight by sole reference to instruments in a helicopter or in a synthetic training device (STD) within the last 6 months.

6.7 Crew composition

6.8 Day flight. The minimum crew by day shall be one pilot and one HEMS crewmember.

6.9 Night Flight. The minimum crew by night shall be two pilots.

6.10. Additional Requirements

The helicopter internal configuration should be suitable for HEMS operations and provide necessary space for approved stretchers and medical equipment.

6.10.1 Helicopter medical equipment

- (i) The installation of all helicopter dedicated medical equipment and, where appropriate, its operation including any subsequent modifications shall be approved by the CAA.

- (ii) An operator shall ensure that procedures are established for the use of portable equipment on board.

6.10.2 Helicopter communication and navigation equipment

Helicopters conducting HEMS flights shall be provided with communications equipment capable of conducting two-way communication with the organization for which the HEMS is being provided and, where possible, to communicate with ground emergency service personnel.

6.10.3 HEMS operating base facilities

- (i) If crew members are required to be on standby with a reaction time of less than 45 minutes, dedicated suitable accommodation shall be provided close to each operating base.

- (ii) At each operating base the pilots shall be provided with facilities for obtaining current and forecast weather information and shall be provided with satisfactory communications with the appropriate ATS unit. Satisfactory facilities shall be available for the planning of all tasks.

6.11 Refueling with passengers on board

When the commander considers refueling with passengers on board to be necessary, it can be undertaken with rotors stopped / turning provided the following requirements are met:

- (i) Door(s) on the refueling side of the helicopter shall remain closed;

- (ii) Door(s) on the non-refueling side of the helicopter shall remain open, weather permitting;
- (iii) Fire fighting facilities of the appropriate scale shall be positioned so as to be immediately available in the event of a fire; and
- (iv) Sufficient personnel shall be immediately available to move patients clear of the helicopter in the event of a fire.

6.12. Training and checking

6.12.1 Flight crew members

6.12.2 The flight crew shall have the following additional items of training:

- (i) Meteorological training concentrating on the understanding and interpretation of available weather information;
- (ii) Preparing the helicopter and specialist medical equipment for subsequent HEMS departure;
- (iii) Practice of HEMS departures;
- (iv) The assessment from the air of the suitability of HEMS operating sites;
- (v) The medical effects air transport may have on the patient.

6.13 The proficiency check of the crew shall have the following additional items:

- (a) Proficiency check by day and/or night checks as appropriate including landing and takeoff profiles likely to be used at HEMS operating sites.
- (b) Line checks with special emphasis on the following:
 - (i) Local area meteorology;
 - (ii) HEMS flight planning;
 - (iii) HEMS departure;
 - (iv) The selection from the air of HEMS operating sites;
 - (v) Low level flight in poor weather; and
 - (vi) Familiarity with established HEMS operating sites in operator's area of operation.

6.14 HEMS crew member

The HEMS crew member shall be trained in following additional items:

- (i) Duties in the HEMS role;
- (ii) Navigation (map reading, navigation aid principles and use);
- (iii) Operation of radio equipment;
- (iv) Use of onboard medical equipment;
- (v) Preparing the helicopter specialist medical equipment for subsequent HEMS departure;

- (vi) Instrument reading, warnings, use of normal and emergency check list in assistance of the pilot as required;
- (vii) Basic understanding of helicopter type in terms of location design of normal and emergency systems and equipment;
- (viii) Crew coordination;
- (ix) Practice of response to HEMS call out;
- (x) Conducting refueling and rotors running refueling;
- (xi) HEMS operating site selection and use;
- (xii) Techniques for handling patients, the medical consequences of air transport and some knowledge of hospital casualty reception;
- (xiii) Marshalling signals;
- (xiv) Under slung load operations as appropriate;
- (xv) Winch operations as appropriate;
- (xvi) The dangers to self and others of rotor running helicopters including loading of patients;
- (xvii) The use of the helicopter inter-communications system.

6.15 Medical passengers.

Prior to any HEMS flight, or series of flights, medical passengers shall be briefed on the following:

- (i) Familiarization with the helicopter type(s) operated;
- (ii) Entry and exit under normal and emergency condition both for self and patients;
- (iii) Use of the relevant onboard specialist medical equipment;
- (iv) The need for the commander's approval prior to use of specialized equipment;
- (v) Method of supervision of other medical staff;
- (vi) The use of helicopter intercommunication system; and
- (vii) Location and use of onboard fire extinguishers.

6.16 Ground emergency service personnel

An operator shall take all reasonable measures to ensure that ground emergency service personnel are familiar with the following:

- (i) Two way radio communication procedures with helicopters;
- (ii) The selection of suitable HEMS operating sites for HEMS flights;
- (iii) The physical danger area of helicopters;
- (iv) Crowd control in respect of helicopter operations; and
- (v) The evacuation of helicopter occupants following an on-site helicopter accident.

MOUNTAIN / HILL FLYING OPERATIONS (HELICOPTER)

7. INTRODUCTION

Helicopter flying in the Mountains / hilly terrain requires knowledge of the typical characteristics of Mountains / hilly terrain, the effects of wind and rapidly changing weather conditions etc. that can restrict the operations. Height of the helipads may adversely affect the performance of helicopter especially during take off and landing phases, which also

varies from helicopter to helicopter. There are inherent hazards in the Mountain / Hill flying, which require considerable preparation and planning, a through knowledge of topography. Several accidents have taken place due to intentional or inadvertent flying in the clouds.

7.1 GENERAL REQUIREMENTS

- 7.1.1 Mountain / Hill flying shall be restricted VFR operations only.
- 7.1.2 The operator shall ensure that the pilot engaged in Mountain / Hill operations has through knowledge of topography, general weather pattern, presence of the mountain waves and planning of entry and exit procedures.
- 7.1.3 A pilot having at least 250 hrs. of hill flying experience on helicopters will be considered experienced in Mountain / Hill operations.

7.2 TRAINING / EXPERIENCE REQUIREMENTS

- 7.2.1 Pilots engaged in regular / irregular operations in the Mountain / Hill area shall undergo training as given below:
 - a) Pilot having no previous experience of Mountain / Hilly flying shall be imparted special training specific to Mountain / Hill operations prior to operate from copilot seat for such operations.
 - b) Pilots having Mountain / Hill flying experience but no experience in the area of intended operations may fly from copilot seat for area familiarization.
 - c) Pilot shall be checked by an examiner before he is cleared to operate as PIC.
 - d) The special training specific to Mountain / Hill operations to be conducted at an approved training school is given at Para 7.5.
 - e) Flying training requirements for regular operations in Mountain / Hilly areas for all categories of pilots having flying experience below 1000 hrs., between 1000 to 2500 hrs and more than 2500 hrs are given at Para 7.6.
 - f) Similarly flying training requirement for irregular operations in Mountain / Hill areas for all categories of pilots as defined in para 7.7.
- 7.3 Pilots required to carry out one time/occasional operations in Mountain / Hilly area shall meet the following requirements:
 - a) Pilots having no experience of flying in Mountain / Hilly terrain is permitted to fly from the copilot seat.
 - b) Pilots having previous experience in Mountain / Hill flying and with more than 250 hrs on type shall operate in the Mountain / Hilly area after a check flight with an examiner or alternatively carry out trial run/landing before operating a flight with passengers on board.

7.4 A pilot engaged in regular and irregular Mountain / Hill operations shall undergo periodical recurrent training once in a year. Proficiency check of such a pilot shall be carried out for the capacity in which he is regularly flying every year by a CAA Inspector or an approved person by CAA.

7.5 Ground Training Syllabus Mountain / Hill Flying

- a) Density altitude and performance considerations.
- b) Effects of decreased air density on engine and airframe.
- c) Type performance Manufacturer’s Flight Manual.
- d) Physiological Effects-lack of oxygen and external horizon.
- e) Mountain winds-convection and air mass stability, wind pattern across prominent features of rounded shape and sharp contours, standing waves, rotor streaming turbulence, ridges, conical hills and valleys.
- f) Transit flying-pre-flight planning, blade stall, engine failure, wind assessment enroute, action when caught in a down draught, ridge crossing and valley flying.
- g) Wind direction finding / assessment.
- h) Reconnaissance, approach, landing and take off techniques.
- i) Winter operations.
- j) Meteorological peculiarities of the area of operations and its effect on helicopter operations.
- k) Helicopter icing.

7.6 Flying Training Requirement For Operations in Mountain / Hilly Areas

REGULAR OPERATIONS*

Category	Pilots with <1000 hrs on helicopters	Pilots with > 1000 hrs but < 2500 hrs on helicopters		Pilots with > 2500 hrs on helicopters	
	Inexperienced pilots	Without previous experience	With previous experience	Without previous experience	With previous experience
Dual	15 hrs. AND	5 hrs. AND	5 hrs. OR	5 hrs. AND	5 hrs. OR
Co-pilot	1000 hrs	250 hrs	100 hrs	100 hrs	25 hrs

7.7 Flying Training Requirement For Operations in Mountain / Hilly Areas

IRREGULAR OPERATIONS**

	Pilots with <1000 hrs on helicopters	Pilots with > 1000 hrs but < 2500 hrs on helicopters		Pilots with > 2500 hrs on helicopters	
Category	Inexperienced pilots	Without previous experience	With previous experience	Without previous experience	With previous experience
Dual	15 hrs. AND	5 hrs. AND	5 hrs. OR	5 hrs. AND	5 hrs. OR
Co-pilot	At least 1000 hrs	At least 500 hrs	250 hrs	At least 250 hrs	50 hrs

* Regular operations means that flights are carried out on regular basis.

** Irregular operations means that the flights are carried out for a limited period such as heli skiing etc.

EXTERNAL LOAD OPERATIONS OF HELICOPTER

8. INTRODUCTION

Helicopter is a very versatile machine and can be gainfully deployed in variety of roles. One of the tasks that it can perform is carriage of load externally. In this operation unwieldy load that cannot otherwise be accommodated in the cabin can be carried externally from one place to another. In this role the helicopter can be deployed in various operations such as Wire Stringing, Cable Laying, Pylon Fixing, High Tension Cable Washing, Cargo Sling, Hoist Mining Survey, Fire Fighting, Aerial Photography, Power Line Inspection, Crop Spraying, Pollution Control, Electronic News Gathering etc.

8.1 External Load are Classified as Follows:

8.1.1 **CLASS A.** An external load that cannot be moved freely, cannot be jettisoned and does not extend below the under carriage. Ski-pods, TV camera, survey equipment, crop spraying equipment attached to helicopter will come under this category.

8.1.2 **CLASS B.** An external load that can be jettisoned and is not in contact with surface (land, water etc.) e.g. a normal sling load, mining, surveys, fire fighting equipment, anti pollution pads, a container, part of wrecked car or aircraft, military stores and vehicles.

8.1.3 **CLASS C.** An external load that can be jettisoned and that remains in contact with the land or water or any other surface e.g. wire pulling, cable laying, power line maintenance.

8.1.4 **CLASS D.** Hoisting an external load or person will come under this category.

8.2.

8.2.1 A helicopter shall meet airworthiness and certification requirements for external load equipment.

8.2.2 Operations shall be conducted out of ground effect.

8.2.3 The pilot must be aware of reserve power requirements for operations with external load.

8.2.4 External load operation shall be conducted under VFR conditions only.

8.3 Training Requirements

8.3.1 Ground training

A pilot shall undergo ground training covering the following topics:

- a) Aerodynamic considerations.
- b) Knowledge of sling / hoist equipment, its operation and limitations given in the operation manual.
- c) Preparation of load-sheet, rigging or its attachments.
- d) Emergencies for the particular type of operations.
- e) Operation peculiarities of different terrains, e.g. mountain, off shore, jungle, desert, etc.

8.4 Flying Training

8.4.1 A pilot shall have at least 500 hours PIC experience on type of helicopter. However this may be relaxed in case of a pilot with previous experience on external load operations.

8.4.2 Flying training shall be for specific type of operations.

8.4.3 Flying training shall include the following exercises:

- a) Briefing of Crew, Inspection of Load, sling equipment and jettisoning system.
- b) Hover, take off and landing with external load.
- c) Maneuvering of helicopter in hover, transition and forward flight and delivering of load at predetermined point.
- d) Emergencies including engine failure, unstable flight condition due to undue oscillation of external load, loss of tail rotor effectiveness. These are to be covered on the ground.
- e) The pilot shall be checked by a CAA Inspector or an approved Examiner before carrying out external load operations. A test Performa is attached as Appendix 'A'.

8.5 Initial training

- a) Class A typed load. A pilot without previous experience in external load operations shall undergo a minimum of 1 hour or 5 practices of flight instructions in external load operations. A pilot having previous experience may be cleared for operations, after 0.5 hour or 3 practices. An entry in this regard shall be made in pilot's logbook by the examiner.
- b) Class B & C type load. A pilot who has not conducted Class B and C type of operations earlier shall undergo dual flying instructions under supervision by an approved Examiner for minimum of 2 hours or 10 practices of flight instructions in external load operations. A pilot who has conducted external load operations earlier shall undergo 1 hour or 5 practices of dual instructions. An entry in this regard shall be made in pilot's logbook by the examiner.
- c) Class D type load. A pilot who has not conducted Class D operations (Hoisting) shall undergo flight training of at least 10 hoistings. A pilot who has conducted hoisting operations in the past may be cleared after 5 hoistings and if found fit, be released for independent operation. An entry in this regard shall be made in pilot's logbook by the examiner.

8.6 One time operation.

In case of emergency there may be requirement to carry out external load. In such a case the pilot should satisfy the following:

- a) Class A type load. A pilot having experience on external load operations and meeting the other training requirements is permitted to undertake the task.
- b) Class B, C and D type load. A pilot having previous experience of external load operations and 500 hours PIC experience on type is permitted to undertake the task.

8.7 Recurrent Training

- a) A pilot who has not conducted an external load operation in the last 12 months preceding the date of operations shall be checked by an examiner before permitting him for independent operations.
- b) A pilot who has not carried out external load operation in the last 24 months shall undergo full training as prescribed for initial training.
- c) A pilot who is often called upon to undertake such mission shall carry out at least one flight of one-hour duration in a period of 12 months to maintain currency.

Note: The recurrent training shall be required for all types of operations except for one time emergent conditions

OFF SHORE OPERATIONS (HELICOPTER)

9. INTRODUCTION

Flying to offshore platforms and floating decks present its peculiar difficulties. The limited size of the heli-decks surrounded by obstacles, hot gases and varying winds and rapidly changing meteorological conditions pose a great challenge to pilots. In addition pitching, rolling and heaving experienced while landing on floating decks require a very high degree of skill and accuracy in flying. Offshore flying requirement is continuous and is undertaken in all weather conditions – by days as well as by night. Offshore flying is a specialized operation and therefore, pilots engaged in this role are required to be given specific role oriented training.

9.1. Co-Pilot

Before being a co-pilot in offshore operations a pilot shall meet the following pre-requisite requirements:

- i) The pilot should have undergone a Multi Crew Co-operation Course, a type rating course and 20 hours instrument flying experience, simulated or actual; and
- ii) Should undertake Offshore Conversion Training with an instructor as defined in the operator’s Operations Manual. Offshore Conversion Training shall be an in depth training covering all aspects of take off and landing on all available types of heli-decks and moving vessels present in the operation area.

9.2 Before being released for operation, a check flight shall be conducted by a CAA Flight Inspector or an approved examiner. The check shall be recorded in the pilot log book and training records.

9.3 Thereafter the pilot shall continue to fly as a co-pilot in offshore until he reached the level defined in the Para 3 in order to be eligible for a pilot-in-command training course at the operator’s discretion, taking into account his previous pilot experience.

9.4 REQUIREMENTS FOR OFFSHORE COMMAND TRAINING COURSE

<u>With less 1000 H, 100 H Multi</u>	<u>Between 1000 and 2500 H 500 H Multi</u>	<u>More than 2500 H 500 H Multi</u>
750 H* CP multi offshore 200 H on type	500 H CP multi offshore, 100 H on type	500 H CP multi offshore, 100 H on type,
Instrument rating**, 100H IMC	Instrument rating**, 100 H IMC	Instrument rating**, 100H IMC
+ 1 Monsoon	+ 1 Monsoon	+ 1 Monsoon
If 100 H offshore	If 100 H offshore	If 100 H offshore
Instrument rating**, 100H IMC	Instrument rating**, 100H IMC	Instrument rating**, 100 IMC
600 H* CP multi offshore 100 H on Type	400 H CP multi offshore, 100 H on Type	400 H CP multi offshore, 100 H on Type

* In any case he shall not have less than 1000 H Helicopter total time before he undertakes the offshore command course.

* IFR rating must be obtained prior to the final PIC check with CAA Flight Inspector or an approved examiner.

9.5 For pilots having a large previous experience in multi engine, multi pilot and IFR the following criteria shall be applicable:

Helicopter of less than 5,700 kg CPL (H) and current IR.	Helicopter of more than 5,700 kg ATPL (H) and current IR.
2000 h helicopter, 500 H multi of which 200 as PIC, 200 H IFR	2000 H helicopter, 500 H multi of which 200 as PIC, 200 H IFR
300 H Offshore of which 100 H on type	300 H Offshore of which 100 H on type
OR	OR
1500 H Helicopter of which 500 H as PIC, 300 H multi of which 200 H as PIC, 200 H IFR	1500 H Helicopter of which 500 H as PIC, 500H Multi of which 300 H as PIC, 200 H IFR
500 H Offshore of which 100 H on type	500 H Offshore of which 100 H on Type

9.6 **Command Training will consist of the following:**

- a) A Ground Training course covering at least the following:-
 - i) Flight Manual / Technical Manuals
 - ii) Operations Manual including CRM, Dangerous Goods Course.
 - iii) Area competency check.
 - iv) Aeronautical publications – ASC’s, ANO’s, CAR, AIP, etc.
 - v) Local procedures and instructions.
- b) Flying Training:
 - i) 100 hours on fixed decks, jack up rigs, tied down floaters, floaters and productions platforms. Before being cleared as PIC in offshore operations, the pilot under training must have carried out a minimum of 15 landings on fixed platforms / jacks up rigs, 5 on floaters with a CAA Inspector or an approved instructor.
 - ii) A Pilot shall perform at least one specific offshore simulator training, essentially covering engine failure during take off and landings on heli-decks. The simulator shall be of level C/D if a FFS or level 2/3 if a FTD. This training shall be recorded in pilot training records.
 - iii) He does undertake 20 offshore flights within the oil field on all types of landing sites as “Pilot-in-Command under supervision” (PICUS) with a company senior captain.
 - iv) An independent flying test shall be conducted in accordance with the format specified in Appendix ‘B’ and shall be cleared to operated as PIC offshore operations after a satisfactory check by CAA Inspector or an approved examiner, who will make an entry in the pilot’s log book to this effect.
 - v) Pilots engaged in regular night offshore operations shall carry out at least 5 take offs and landings on helidecks

- and one route-flying sortie by night, in the preceding 6 months.
- vi) Proficiency check of a pilot shall be carried out for the capacity in which he is regularly flying.
 - vii) A pilot engaged in offshore operations on regular operations shall undergo periodical recurrent training as given in relevant CAR's, ANO's and Company Operations Manual.

9.7 Introduction of new Helicopter Type

When introducing a new helicopter type in his fleet an operator shall qualify his experienced offshore pilots on that type. The Commander shall have not less than 500 H offshore PIC and the co-pilots 200 H offshore in that Group of helicopters in which the new type falls. The initial training shall be carried out to the manufacturer standards. In addition after the type rating qualification, the offshore qualification of the Commander shall be performed as PICUS for 50 H.

-Sd-

(FAROOQ RAHMATULLAH)
Director General
Civil Aviation Authority
Pakistan

Dated August, 2007.

APPENDIX ‘A’

TEST PROFORMA – EXTERNAL LOAD OPERATIONS

Company _____	Date of check _____
Name of Pilot _____	Block time (D/N) _____
License No. _____	Location _____
Date of last check _____	Type of Helicopter _____
Examiner _____	Registration _____

	Pilot Proficiency
A. Ground Checks	
1. Status on ground training	
2. Performance and limitations sling operation	
3. Preparation of load, rigging or its attachments	
4. Emergency procedures e.g. engine failure, control of flight during oscillation of external load, loss of tail rotor effectiveness	
B. Flight Preparation	
1. Weather situation	
a. Weather charts	
b. Forecasts	
c. Winds and temperatures	
2. Flight planning	
a. Fuel calculation	
b. Performance calculation	
c. Payload calculation with external load	
3. Pre-flight inspection including load, sling equipment and jettisoning system	
4. Use of checklist	
5. Engine starting procedures	
6. Cockpit check after starting	
7. Departure briefing	
8. Navigation systems set-up	
9. Hover, take off and landing with external load	

APPENDIX 'B'

PERFORMA – OFFSHORE FLYING ROUTE CHECK

Company _____	Date of check _____
Name of Pilot _____	Block time (D/N) _____
License No. _____	Location _____
Date of last check _____	Type of Helicopter _____
Examiner _____	Registration _____

	Pilot Proficiency
A. Ground Checks	
1. Status on recurrent training	
2. Performance and limitations	
3. Mass & Balance	
4. Emergency procedures	
B. Preflight	
1. Flight planning	
2. Pre-flight inspection	
3. Passenger briefing	
4. Use of checklist	
5. Engine starting procedures	
6. Cockpit check after starting	
7. Departure briefing	
8. Navigation systems set-up	
9. Taxi	
C. En-route	
1. Navigation – use of navigation systems	
2. Altitude selection	
3. Fuel management	
4. Position reporting	
D. Approach & Landing	
1. Pre-landing checks	
2. Approach selection – FP and NFP	
3. Deck clearance	
4. Final Approach	
5. Missed approach and aborted landing in case of engine failure	

