

CIVIL AVIATION AUTHORITY, PAKISTAN

Air Navigation Order
No. : 91.0017
Date : 14th April, 1999
Issue : One

FLIGHT CREW TRAINING REQUIREMENTS & PROCEDURES

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1. Authority

- 1.1 The Air Navigation Order (ANO) contained herein is issued by the Director General (DG) Civil Aviation Authority (CAA) pursuant of the powers vested by Rule 4, Civil Aviation Rules 1994 (CARs 94).

2. Scope

- 2.1. The ANO contained herein shall apply to all Air Carrier and General Aviation Charter operations holding licenses and Air Operator Certificate (AOC) issued under Part XI, CARs 94.

3. Background

- 3.1. The ANO is intended to establish the requirements in order for operators to provide properly trained and qualified flight crew(s) to carry out their duties in accordance with approved training requirements and the AOC holders approved Operations Manual.

4. Effective Date

- 4.1. This ANO shall come into effect on 14th April, 1999.

5. Definitions

- 5.1. "Flight Crewmember" means a licensed crewmember charged with duties essential to the operation of an aircraft during flight time, and any reference to "flight crew" has a corresponding meaning.
- 5.2. "Licensed" means licensed under the appropriate CARs 94 or ANOs in accordance with the PLM.
- 5.3. "Training" means approved ground or flight training programmes for flight crews as appropriate for:
- Initial training;
 - Conversion training;
 - Differences and Familiarization training;
 - Upgrade to Captain training;

- e) Pilot Qualification to Operate in Either Pilots Seat training;
 - f) Recent Experience;
 - g) Route and Aerodrome Competence Qualification training;
 - h) Recurrent training; and
 - i) Checking.
- 5.4. “Record Keeping Requirements” means all operators shall maintain flight crew records to ensure all regulatory requirements of training and checking meet the appropriate CARs 94 and ANOs. The records shall be made available upon request to the CAA and shall indicate the following qualifications of each person assigned flight crew duties:
- a) Date of hire and duty assignment;
 - b) Appropriate CAA license and medical qualification;
 - c) All appropriate checks to verify currency required by CAA regulations;
 - d) Appropriate Flight and Duty Time Limitations required by CARs 94, Operations Specifications, or ANO;
 - e) Records shall be retained throughout the period of employment of each flight crew member and for a further period of 3 months.
- 5.5. “Conversion” means the same as transition, and is the training required for crewmembers who have qualified and served in the same capacity on another aeroplane of the same group.
- 5.6. “Initial Training” means training required for crewmembers who have not qualified and served in the same capacity for that operator.
- 5.7. “Up-Grade Training” means training required for crewmembers who have qualified and served on a particular aeroplane type, before they serve as pilot in command or second in command, respectively, on that aeroplane.
- 5.8. “Familiarization Training” means training required for crewmembers who operate an aeroplane where a change of equipment or significant procedures have changed, requiring the acquisition of additional knowledge.

6. Minimum Requirements

- 6.1. An operator shall ensure that each flight crewmember:
- a) Holds the appropriate valid license and are qualified to conduct the duties he/she is assigned;
 - b) Holds a valid medical assessment appropriate to the flight crewmembers license;
 - c) Shall be capable of speaking, reading, and understanding the English language;
 - d) Is current and qualified and competent to conduct the duties assigned to them;
 - e) Procedures are established, acceptable to the CAA, to prevent the scheduling and crewing together of inexperienced flight crewmembers; and
 - f) Each flight crewmember shall, on each flight, carry a valid flight crew license with appropriate rating(s) and a current medical assessment.

7. Composition Of Flight Crew

- 7.1 An operator shall ensure the composition of the flight crew and the number of flight crewmembers at designated crew stations are both in compliance with and no less than the minimum specified in the Aeroplane Flight Manual.
- 7.2 One pilot amongst the flight crew shall be designated as pilot in command who may delegate the conduct of the flight to another qualified flight crewmember as specified in the Operator's approved Operations Manual.
- 7.3 Charter Class 1 & 2, VIP, VVIP, and Aerial Work shall assign a minimum flight crew of 2 pilots for operations under IFR or at night. For all turbo-propeller aeroplane with a maximum approved passenger seating configuration of more than 9 seats and for all turbo-jet aeroplanes, the minimum flight crew shall be 2 pilots.

8. Training

- 8.1 An operator shall ensure that each flight crewmember successfully completes Initial Training in accordance with the operators approved training programme and Operations Manual.
 - 8.2 An operator shall ensure a flight crewmember completes Conversion Training when changing from one type of aeroplane to another type or class for which a new type or class rating is required.
 - 8.3 An operator shall ensure that a flight crewmember completes Difference Training when operating a variant of an aeroplane of the same type or another type of the same class currently operated; or when a change of equipment and/or procedures on types or variants currently operated, requires additional knowledge and training on an appropriate simulator/training device.
 - 8.4 An operator shall ensure that a flight crewmember completes Familiarization Training when operating another aeroplane of the same type or variant; or when a change of equipment and/or procedures on types or variants currently operated, requires the acquisition of additional knowledge.
- Note:** The operator shall specify in the Operations Manual when such Differences or Familiarization Training is required. This training shall have received CAA Approval.
- 8.5 An operator shall ensure that all second in command flight crew member completes Up-grade to Captain Training prior to duty assignment as pilot in command. A minimal level of experience, acceptable to the CAA, shall be specified in the Operations Manual.
 - 8.6 An operator shall ensure that a flight crewmember who may be assigned to operate in either pilot seat completes the appropriate Training and within the preceding 12 months, as demonstrated proficiency in each Seat he is expected to occupy.

- 8.7 An operator shall ensure that a pilot in command does not operate an aeroplane as pilot in command unless he has carried out at least three take-offs and three landings as pilot flying in an aeroplane or approved flight simulator of the type to be used, in the preceding 90 days.
- 8.8 An operator shall ensure that, prior to being assigned as pilot in command, that pilot has demonstrated to the operator adequate knowledge of the route to be flown and of the aerodrome facilities and procedures to be used. The pilot shall complete an approved Route and Aerodrome Qualification training programme to obtain currency. The period of validity of the route, route segment and aerodrome competence qualification shall be 12 calendar months.
- 8.9 An operator shall ensure that a flight crewmember completes the recurrent ground, flight and emergency training appropriate to the duties assigned by the AOC holder within the time specified.
- 8.10 Each operator shall ensure all flight crewmember checking is accomplished in an approved simulator/training device as stated in the appropriate CARs 94 or ANO. Each flight crewmember shall be checked to verify his/her competence to perform all duties assigned to his/her specific function in accordance with procedures specified in the approved Operations Manual. A flight crewmember shall not perform duties or tasks (CAT 2, ETOPS, NDB, etc), on an aeroplane in which he/she has not been trained and properly authorized in a training folder. The checks required by this paragraph shall be performed by CAA or personnel designated by the CAA to carry out those specific functions.



(AMINULLAH CHAUDRY)
Director General
Civil Aviation Authority
Date: 14.4.1999

**APPENDIX “”A”
TO ANO NO. 91. 0017**

TRAINING

1. An operator shall establish and maintain a ground and flight training programme, which ensure that all flight crewmembers are adequately trained to perform their assigned duties. These training programmes shall be approved by the CAA prior to being utilized by the operator. No amendments to any training programme will be made until after approval for such amendments has received CAA approval.
2. Ground and flight facilities as determined and approved by the CAA shall be provided by the operators. Ground and flight training programmes shall only be taught by properly qualified and CAA approved instructors.
3. The training programme shall consist of ground and flight training in the type(s) of aircraft on which the flight crewmember serves, and shall include training on:
 - a) CARs 94, ANOs, and Director General Directives;
 - b) Appropriate portions of the Company Manual;
 - c) AOC and Operations Specifications;
 - d) Duties and Responsibilities;
 - e) Communication and Coordination with Cabin Crew(s); and
 - f) Appropriate Aircraft Type(s) Training including:
 - 1) Power-plant, Systems, Airframe and Avionics
 - 2) System Malfunctions, Fire or Other Abnormalities
 - g) Appropriate Emergency Training and Drill;
 - h) Appropriate Emergency Evacuation Training and Drill;
 - i) Appropriate Fire/Smoke Training and Drill;
 - j) Appropriate Water Survival Training and Drill;
 - k) Training on Medical Aspects and First Aid;
 - l) Weather and Air Traffic Services;
 - m) Hijacking and Unusual Situations;
 - n) Review of Previous Aircraft Accidents and Incidents pertaining to actual emergency situations;
 - o) Handling of Dangerous Goods;
 - p) Crew Resource Management;
 - q) Windshear Training and Drill;
 - r) And, If applicable the following:
 - 1) ETOPS Training and Drill;
 - 2) RVSM Training;
 - 3) MNPS Training; and
 - 4) CAT II Training and Drill.
4. The elements listed in paragraph 3 (as a minimum) shall be used as a guide in development of the training programmes for Initial and Recurrent programmes.

- a) Recurrent Training for all flight crewmembers shall be conducted as a minimum once each 12 months and shall include an examination to determine competence.

5. Conversion Training

- 5.1. An operator shall ensure all the appropriate elements or components of a different type aircraft are included in conversion training, to include:
 - a) Ground training and checking of aircraft systems, normal, abnormal and emergency procedures;
 - b) Emergency and safety equipment training and checking;
 - c) Aircraft/flight simulator training and checking;
 - d) Line flying under supervision and line check; and
 - e) Other elements or components as required by an operator.

6. Differences and Familiarization Training

- 6.1 An operator shall ensure all the appropriate elements or components of different equipment, equipment location, or safety procedures on currently operated aircraft type(s) or variants shall be included in Differences and Familiarization training programme.

- 6.2. An operator shall ensure that a flight crew member completes:

- a) Differences training;
 - (1) When operating another variant of an aircraft of the same type or another type of the same class currently operated; or
 - (2) When a change of equipment and/or procedures on types or variants currently operated, requires additional knowledge and training on an appropriate training simulator or device.
- b) Familiarization training;
 - (1) When operating another aircraft of the same type or variant; or
 - (2) When a change of equipment and/or procedures on types or variants currently operated, requires the acquisition of additional knowledge; or
 - (3) New or different equipment installed on the aircraft, shall not be turned on or operated until the required training is completed.

- 6.3. An operator shall specify in the approved Operations Manual when such Differences or Familiarization training is required.

7. Upgrade to Captain Training

- 7.1. An operator shall ensure that for Upgrade to Captain from co-pilot and those joining as Captain as follows:
 - a) A minimum level of experience, acceptable to the CAA, is specified in the approved Operations Manual; and

- b) For multi-crew operations, the pilot completes an appropriate Upgrade to Captain training programme specified in the approved Operations Manual and at least the following:
 - (1) Training in the appropriate flight simulator and/or flying training;
 - (2) An operator proficiency check operating as captain;
 - (3) Captain's responsibilities;
 - (4) Line training, to include the minimum amount of sectors, in command under supervision as specified in the approved Operations Manual;
 - (5) Completion of a Captains line check and route and airdrome competence qualification as prescribed in the CARs 94; and
 - (6) Crew Resource Management training.

8. Pilot Qualification to Operate in Either Pilot Seat

- 8.1. Flight crew members whose duties also require them to operate in the right-hand seat and carry out the duties of co-pilot, or flight crew members required to conduct training or examining duties from the right-hand seat, shall complete additional training and checking as specified in the approved Operations Manual, concurrent with the operators proficiency checks. This additional training and checks must be carried out in the seat to be occupied and shall include:
 - a) An engine failure during take-off;
 - b) A one engine inoperative approach and go-around;
 - c) A one engine inoperative landing; and
 - d) When operating in the right-hand seat, the checks required by the CARs 94 for operating in the left-hand seat must also be valid and current.

Note: When engine-out manoeuvres are carried out in an aircraft, the engine failure shall be simulated.

9. Recent Experience

- 9.1 An operator shall ensure that:
 - a) A pilot in command meets the requirements of CAR 198 (a), (i) through (iv); and
 - b) A second in command meets the requirements of CAR 198 (b).

10. Route and Aerodrome Competence Qualification

- 10.1 An operator shall not utilize a pilot as pilot-in-command of an aeroplane on a route or route segment for which that pilot is not currently qualified until such pilot has complied with the following:
 - a) Each pilot-in-command shall demonstrate to the CAA an adequate knowledge of the route to be flown, and the aerodromes, which are to be used. This shall include knowledge of:

- (1) The terrain and minimum safe altitudes;
 - (2) The seasonal meteorological conditions;
 - (3) The meteorological, communication and air traffic facilities, services and procedures;
 - (4) The search and rescue procedures; and
 - (5) The navigational facilities and procedures, including any long-range navigation procedures, associated with the route along which the flight is to take place; and
- (b) Procedures applicable to flight paths over heavily populated areas and areas of high air traffic density, obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, and applicable operating minima.

Note: That portion of the demonstration relating to arrival, departure, homing and instrument approach procedures shall be accomplished in an appropriate simulator/training device or aeroplane which is adequate for this purpose.

10.2. A pilot-in-command shall have made an actual approach into each aerodrome of landing on the route, accompanied by a pilot who is qualified for the aerodrome, as a member of the flight crew or as an observer on the flight deck, unless:

- a) The approach to the aerodrome is not over difficult terrain and the instrument approach procedures and aids available are similar to those with which the pilot is familiar, and a margin to be approved by the CAA is added to the normal operating minima, or there is reasonable certainty that approach and landing can be made in visual meteorological conditions; or
- b) The descent from the initial approach altitude can be made by day in visual meteorological conditions; or
- c) The CAA qualifies the pilot in command to land at the aerodrome concerned by means of an adequate pictorial presentation; or
- d) The aerodrome concerned is adjacent to another aerodrome at which the pilot in command is currently qualified to land.

10.3. The operator shall maintain a record, sufficient to satisfy the CAA of the qualification of the pilot and of the manner in which such qualification has been achieved.

10.4. An operator shall not continue to utilize a pilot as a pilot-in-command on a route unless, within the preceding 12 months, the pilot has made at least one trip between the terminal points of that route as a pilot member of the flight crew, or as a check pilot, or as an observer on the flight deck. In the event that more than 12 months has elapsed in which a pilot has not made such a trip on a route in close proximity and over similar terrain, prior to again serving as a pilot-in-command on that route, that pilot shall re-qualify in accordance with paragraph 10.1 and 10.2.

11. Checking

- 11.1 An operator shall ensure that piloting technique and the ability to execute emergency procedures is checked in such a way as to demonstrate the pilots competence. Where the operation may be conducted under instrument flight rules, an operator shall ensure that the pilots competency to comply with such rules is demonstrated to either a check pilot of the operator or to the CAA. Such checks shall be performed twice within any period of one year. Any two such checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement.
- 11.2. Where authorized by the CAA, specified flight checks shall be conducted in an approved simulator or training device.