(*iii*) The particular manoeuvre, procedure, or crewmember function involved.

(2) Maintain the performance, functional, and other characteristics that are required for approval.

(3) Be modified to conform with any modification to the aeroplane being simulated that results in changes to performance, functional, or other characteristics required for approval.

(4) Be given a daily functional pre-flight check before use.

(5) Have a daily discrepancy log completed by the appropriate instructor or check airman at the end of each training or check flight.

(*b*) The simulation device shall have the same technology for the basic flight instruments (attitude indicator, airspeed, altimeter, heading reference) as those of the aircraft used by the operator.

(1) Operators that have electronic/glass displays shall use simulators that have electronic/glass displays.

(2) Operators that have standard instruments shall use simulators that have standard instruments.

8.10.1.3. Approval of a Flight Simulation Training Device for Credit in Training and Checking.

(*a*) No AOC holder may use a flight simulation training device for training or checking unless that simulator has been specifically approved for the AOC holder in writing by the Authority.

(*b*) No AOC holder may use a simulator for credit in training, recency and checking other than that specified in the Authority's approval.

8.10.1.4. Licence Requirements For PIC

(*a*) No pilot may act as PIC of a of an aircraft, certificated for operation with more than one pilot, in commercial air transportation operations unless he or she holds an Airline Transport Pilot Licence with applicable category, class and type rating for that aircraft.

(*b*) No pilot may act as PIC of an aircraft, certificated for operation for one pilot, in commercial air transportation operations unless he or she holds a Commercial Pilot Licence or an Airline Transport Pilot Licence with applicable category, class and type rating for that aircraft.

(*c*) If instrument privileges are to be exercised, the PIC shall hold an Instrument Rating.

8.10.1.5. Licence Requirements for Co-pilot and Cruise Relief Pilot

(*a*) No pilot may act as co-pilot of an aircraft in commercial air transport operations unless he or she holds either a Commercial Pilot Licence/ Instrument Rating or an Airline Transport Pilot Licence, each with category, class and type ratings, as applicable, for the aircraft operated.

(*b*) No pilot may act as a cruise relief pilot in commercial air transport operations unless he or she holds an Airline Transport Pilot Licence with category, and if applicable, class and type ratings, and has completed all training to serve as PIC with the exception of initial operating experience.

8.10.1.6. Flight Engineer Licence Requirements.

(*a*) No person may act as the flight engineer of an aircraft unless he or she holds a flight engineer licence with the appropriate class rating.

8.10.1.7. One Pilot Qualified to Perform Flight Engineer Functions.

(*a*) The AOC holder shall ensure that, on all flights requiring a flight engineer, there is assigned at least one other flight crewmember qualified to perform the flight engineer duties in the event the flight engineer becomes incapacitated.

8.10.1.8. Persons Qualified to Flight Release.

(*a*) No person may act as a flight dispatcher in releasing a scheduled passenger-carrying commercial air transport operation unless that person—

(1) Holds a flight dispatcher license or an Airline Transport Pilot License ; and

(2) Is currently qualified with the AOC holder for the operation and type of aircraft used.

8.10.1.9. Company Procedures Indoctrination

(*a*) No person may serve nor may any AOC holder use a person as a crewmember or flight operations officer/flight dispatcher unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of the applicable regulations and Operations Manual procedures pertinent to the crewmember or flight operation officer's duties and responsibilities.

(*b*) The AOC holder shall provide a minimum of 40 programmed hours of instruction for company procedures indoctrination training unless a reduction is determined appropriate by the Authority.

(*c*) The knowledge area topics to be covered are contained in IS : 8.10.1.9.

8.10.1.10. Initial Dangerous Goods Training

(*a*) No person may serve nor may any AOC holder use operational personnel unless he or she has completed the appropriate initial dangerous goods curriculum approved by the Authority.

(*b*) Specific course curriculum requirements are contained in IS : 8.10.1.10.

8.10.1.11. Initial Security Training

(*a*) No person may serve nor may any AOC holder use operational personnel unless they have completed the initial security curriculum approved by the Authority.

8.10.1.12. Initial Crew Resource Management.

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer or crewmember unless that person has completed the initial CRM curriculum approved by the Authority.

(*b*) Course curriculum topics are contained in IS : 8.10.1.12.

8.10.1.13. Initial Emergency Equipment Drills.

(*a*) No person may serve nor may any AOC holder use a person as a crewmember unless that person has completed the appropriate initial emergency equipment curriculum and drills for the crewmember position approved by the Authority for the emergency equipment available on the aircraft to be operated.

(*b*) Course curriculum requirements are contained in IS : 8.10.1.13.

8.10.1.14. Initial Aircraft Ground Training

(*a*) No person may serve nor may any AOC holder use a person as a crewmember or flight operations officer unless he or she has completed the initial ground training approved by the Authority for the aircraft type.

(*b*) Initial aircraft ground training for flight crewmembers shall include the pertinent portions of the Operations Manual relating to aircraft-specific performance, mass and balance, operational policies, systems, limitations, normal, abnormal and emergency procedures on the aircraft type to be used. Specific course curriculum requirements for flight crewmembers are contained in IS : 8.10.1.14(*b*).

(*c*) For cabin crewmembers, initial aircraft ground training shall include the pertinent portions of the Operations Manual relating to aircraft-specific configuration, equipment, normal and emergency procedures for the aircraft types within the fleet. Specific course curriculum requirements for cabin crewmembers are contained in IS : 8.10.1.14 (*c*).

(*d*) For flight operations officers, aircraft initial ground training shall include the pertinent portions of the Operations Manual relating to aircraft-specific flight preparation procedures, performance, mass and balance, systems, limitations for the aircraft types within the fleet. Specific course curriculum requirements for flight operations officers are contained in IS : 8.10.1.14(*d*).

8.10.1.15. Initial Aircraft Flight Training

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember unless he or she has completed the initial flight training approved by the Authority for the aircraft type.

(*b*) Initial flight training shall focus on the manoeuvring and safe operation of the aircraft in accordance with AOC holder's normal, abnormal and emergency procedures.

(*c*) An AOC holder may have separate initial flight training curricula, which recognise the experience levels of flight crewmembers, approved by the Authority.

(*d*) Specific flight training curriculum requirements are contained in IS : 8.10.1.15(*a*)(*d*) for pilots, IS : 8.10.1.15(*b*)(*d*) for flight engineers and IS : 8.10.1.15(*c*) for navigators.

8.10.1.16. Initial Specialised Operations Training.

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember unless he or she has completed the appropriate initial specialised operations training curriculum approved by the Authority.

(*b*) Specialised operations for which initial training curricula shall be developed include—

(1) Low minimums operations, including low visibility takeoffs and Category II and III operations ;

(2) Extended range operations ;

(3) Specialised navigation ;

(4) PIC right seat qualification ;

(5) RVSM ; and

(6) RNP.

(*c*) Specific initial specialised operations training curriculum requirements are contained in IS : 8.10.1.16.

8.10.1.17. Aircraft Differences

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer or crewmember on an aircraft of a type for which a differences curriculum is included in the AOC holder's approved training programme, unless that person has satisfactorily completed that curriculum, with respect to both the crewmember position and the particular variant of that aircraft.

(*b*) A general listing of subjects to be covered in aircraft differences training is contained in IS : 8.10.1.17.

8.10.1.18. Reserved.

8.10.1.19. Introduction of new Equipment or Procedures.

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember when that service would require expertise in the use of new equipment or procedures for which a curriculum is included in the AOC holder's approved training programme, unless that person has satisfactorily completed that curriculum, with respect to both the crewmember position and the particular variant of that aircraft.

8.10.1.20. Pilot Proficiency- Aircraft and Instrument Proficiency Checks.

(*a*) No person may serve nor may any AOC holder use a person as a pilot flight crewmember unless, since the beginning of the 6th calendar month before that service, that person has passed the proficiency check prescribed by Authority in the make, and model aircraft on which their services are required.

(*b*) No person may serve nor may any AOC holder use a person as a pilot in IFR operations unless, since the beginning of the 12th calendar month before that service, that pilot has passed the instrument proficiency check prescribed by the Authority.

(*c*) A pilot may complete the requirements of paragraphs (a) and (b) simultaneously in a specific aircraft type.

(*d*) When a pilot-in-command, a co-pilot or a cruise relief pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the Authority shall decide under which conditions the requirements of 8.4.1.14 for each variant or each type of aeroplane can be combined.

(*e*) The manoeuvres for aircraft pilot proficiency and instrument proficiency checks conducted under Part 8 are contained in IS 8.10.1.20 and in Part 2 under the appropriate skill test.

8.10.1.21. Re-establishing Recency Of Experience-flightcrew

(*a*) Pilots :

(1) In addition to meeting all applicable training and checking requirements, a required pilot flight crewmember who, in the preceding 90 days has not made at least three takeoffs and landings in the aircraft in which that person is to serve, shall, under the supervision of a check airman, re-establish recency of experience as follows :

(*i*) Make at least three takeoffs and landings in the aircraft in which that person is to serve or in a qualified simulator.

(*ii*) Make at least one takeoff with a simulated failure of the most critical powerplant, one landing from the minimum ILS authorised for the AOC holder, and one landing to a full stop.

(2) When using a simulator to accomplish any of the takeoff and landing training requirements necessary to re-establish recency of experience, each required flight crewmember position shall be occupied by an appropriately qualified person and the simulator shall be operated as if in a normal in-flight environment without use of the repositioning features of the simulator.

(3) A check airman who observes the takeoffs and landings of a pilot flight crewmember shall certify that the person being observed is proficient and qualified to perform flight duty in operations and may require any additional manoeuvres that are determined necessary to make this certifying statement.

(*b*) Flight Engineer: A flight engineer who in the preceding 6 months has not flown 50 hours flight time with an AOC holder as flight engineer in the appropriate class of aeroplane shall re-establish recency by taking the proficiency check specified in Subsection 8.10.1.23.

(*c*) When a pilot-in-command, a co-pilot or a cruise relief pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the Authority shall decide under which conditions the requirements of 8.4.1.14 for each variant or each type of aeroplane can be combined.

8.10.1.22. Pairing Of Low Experience Pilots

(*a*) If a CP has fewer than 100 hours of flight time in the type aircraft being flown in commercial air transport, and the PIC is not an appropriately qualified check pilot, the PIC shall make all takeoffs and landings in situations designated as critical by the Authority in IS : 8.10.1.22.

(*b*) No PIC or CP may conduct operations for a type aircraft in commercial air transport unless either pilot has at least 75 hours of line operating flight time, either as PIC or CP.

(*c*) The Authority may, upon application by the AOC holder, authorise an exemption for the reduction of the number of hours from paragraph (b) by an appropriate amendment to the operations specifications in any of the circumstances identified in IS : 8.10.1.22.

8.10.1.23. Flight Engineer and Flight Navigatorproficiency Checks.

(*a*) No person may serve nor may any AOC holder use a person as a flight engineer or a flight navigator on an aeroplane unless within the preceding 12 calendar-months he or she has a proficiency check in accordance with the requirements prescribed by the Authority for the skill test in Part 2.

8.10.1.24. Competency Checks-cabin Crewmembers.

(*a*) No person may serve nor may any AOC holder use a person as a cabin crewmember unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check prescribed by the Authority in IS : 8.10.1.24 performing the emergency and other duties appropriate to that person's assignment.

8.10.1.25. Competency Checks-flight Dispatcher.

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check, prescribed by the Authority in IS: 8.10.1.25, performing the flight preparation and subsequent duties appropriate to that person's assignment.

8.10.1.26. Supervised Line Flying-pilots.

(*a*) Each pilot initially qualifying as PIC shall complete a minimum of 10 flights performing the duties of a PIC under the supervision of a check pilot.

(*b*) Each PIC transitioning to a new aircraft type shall complete a minimum of 5 flights performing the duties of a PIC under the supervision of a check pilot.

(*c*) Each pilot qualifying for duties other than PIC shall complete a minimum of 5 flights performing those duties under the supervision of a check pilot.

(*d*) During the time that a qualifying PIC is acquiring operating experience, a check pilot who is also serving as the PIC shall occupy a pilot station.

(*e*) In the case of a transitioning PIC, the check pilot serving as PIC may occupy the observer's seat if the transitioning pilot has made at least two takeoffs and landings in the type aircraft used, and has satisfactorily demonstrated to the check pilot that he or she is qualified to perform the duties of a PIC for that type of aircraft.

8.10.1.27. Supervised Line Flying-Flight Engineers.

(*a*) Each person qualifying as a flight engineer for each aircraft class-piston-engined ; turbopropeller powered, or turbojet powered-shall perform those functions for a minimum of 5 flights under the supervision of a check flight engineer approved by the Authority

8.10.1.28. Supervised Line Experience-Cabin Crewmembers.

(*a*) Each person qualifying as a cabin crewmember shall perform those functions on the following aircraft under the supervision of a check cabin crew member before qualifying as a required crewmember :

(1) Piston-engined or turbo-propeller powered aircraft-for a minimum of 2 flights that must include at least 5hours flown.

(2) Turbojet powered aircraft-for a minimum of 2 flights.

8.10.1.29. Line Observations-Flight Dispatchers.

(*a*) No person may serve nor may any AOC holder use a person as a flight dispatcher unless, since the beginning of the 12th calendar month before that service, that person has observed, on the flight deck, the conduct of two complete flights, comprising at least 5total hours, over routes representative of those for which that person is assigned duties.

8.10.1.30. Line (Route and Area) Checks-Pilot Qualification.

Note : The terms "*line check*" and "*route and area check*" are synonymous.

(*a*) No person may serve nor may any AOC holder use a person as a pilot unless, within the preceding 12 calendar-months, that person has passed a linecheck in which he or she satisfactorily performed his or her assigned duties in one of the types of aircraft he or she is to fly.

(*b*) No person may perform PIC duties over a designated special operational area that requires a special navigation system or procedures or in EDTO operations unless his or her competency with the system and procedures has been demonstrated to the AOC holder within the past 12 calendar-months.

(*c*) Each PIC shall demonstrate operational competency by navigation over the route and area to be flown and the aerodromes to be used as PIC under the supervision of a check pilot and, on a continuing basis, by flights performing PIC duties. This, at a minimum, shall include a PIC demonstration of knowledge in the following :

(1) The terrain and minimum safe altitudes.

(2) The seasonal meteorological conditions.

(3) The search and rescue procedures.

(4) The navigational facilities and procedures, including any long-range navigation procedures, associated with the route along which the flight is to take place.

(5) Procedures applicable to—

(*i*) Flight paths over heavily populated areas or high air traffic density ;

(*ii*) Obstructions ;

(*iii*) Physical layout ;

(*iv*) Lighting, approach aids ;

(*v*) Arrival, departure, holding and instrument approach procedures ; and

(*vi*) Applicable operating minima.

(*d*) Notices to airmen.

8.10.1.31. PIC Low Minimums Authorisation.

(*a*) Until a PIC has 15 flights performing PIC duties in the aircraft type (which included 5 approaches to landing using Category I or II procedures), he or she may not plan for or initiate an instrument approach when the DH or MDA is less than 100 m (300 ft) and the visibility less than 1.5km (1 statute mile).

(*b*) Until a PIC has 20 flights performing PIC duties in the aircraft type (which included 5 approach and landing using Category III procedures), he or she may not plan for or initiate an approach when the DH or MDA is less than 30 m (100 ft) or the visibility is less than 350 m RVR (1200 ft).

8.10.1.32. Designated Special Aerodromes and Heliports-PIC Qualification.

(*a*) The Authority may determine that certain airports, due to items such as surrounding terrain, obstructions, or complex approach or departure procedures, are special aerodromes requiring special aerodrome qualifications and that certain areas or routes, or both, require a special type of navigation qualifications.

(*b*) No person may serve nor may any AOC holder use a person as PIC for operations at designated special aerodromes and heliports unless within the preceding 12 calendar-months—

(*c*) The PIC has been qualified by the AOC holder through a pictorial means acceptable to the Authority for that aerodrome ; or

(1) The PIC or the assigned CP has made a takeoff and landing at that aerodrome while serving as a flight crewmember for the AOC holder.

(2) If the 12 months qualification period required in item (*b*) has expired, the PIC must re-qualify in accordance with the requirements in item (*b*).

(*d*) Designated special aerodrome and heliport limitations are not applicable if the operation will occur—

(1) During daylight hours ;

(2) When the visibility is at least 5 km (3 miles) ; and

(3) When the ceiling at that aerodrome is at least 300 m (1000 ft) above the lowest initial approach altitude prescribed for an instrument approach procedure.

8.10.1.33. Recurrent Training-Flight Crewmembers.

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember unless within the preceding 12 calendar-months that person has completed the recurrent ground and flight training curricula approved by with the Authority.

(*b*) The recurrent ground training shall include training on—

(1) Aircraft systems and limitations and normal, abnormal and emergency procedures ;

(2) Emergency equipment and drills ;

(3) Crew resource management ;

(4) Recognition or transportation of dangerous goods ; and

(5) Security training.

(*c*) The recurrent flight training curriculum shall include—

(1) Manoeuvring and safe operation of the aircraft in accordance with AOC holder's normal, abnormal and emergency procedures ;

(2) Manoeuvres and procedures necessary for avoidance of in-flight hazards ; and

(3) For authorised pilots, at least one low visibility takeoff to the lowest applicable minimum LVTO and two approaches to the lowest approved minimums for the AOC holder, one of which is to be a missed approach.

(*e*) Satisfactory completion of a proficiency check with the AOC holder for the type aircraft and operation to be conducted may be used in lieu of recurrent flight training.

(*f*) Detailed recurrent training requirements for pilots, flight engineers and flight navigators are contained in IS: 8.10.1.33.

8.10.1.34. Recurrent Training and Re-Establishment of Qualifications-Cabin Crewmembers.

(*a*) No person may serve nor may any AOC holder use a person as a cabin crewmember unless within the preceding 12 calendar-months that person has completed the recurrent ground curricula approved by the Authority relevant to the type(s) and/or variant(s) of aircraft and operations to which he or she is assigned.

(*b*) The recurrent ground training shall include training on—

(1) Aircraft-specific configuration, equipment and procedures ;

(2) Emergency and first aid equipment and drills ;

(3) Crew resource management ;

(4) Recognition or transportation of dangerous goods ; and

(5) Security training.

(*c*) Specific normal and emergency programme training requirements for cabin crewmembers are contained in IS : 8.10.1.34.

(*d*) A required cabin crewmember who, due to a period of inactivity, has not met the recurrent training requirements in paragraphs (*a*) through (*c*) shall complete :

(1) If the period of inactivity is up to but not exceeding 24 months, the recurrent ground curricula.

(2) If the period of inactivity is more than 24 months but not exceeding 60 months, the refresher ground curricula contained in IS : 8.10.1.34(*b*)-IS to be provided by DOT.

(3) If period of inactivity is more than 60 months, the initial AOC training programme and competency check specified in Subsection 8.10.1.24.

8.10.1.35. Recurrent Training and Re-Establishment of Qualifications-Flight Operations Officers.

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer unless within the preceding 12 calendar-months that person has completed the recurrent ground curricula approved by the Authority relevant to the type(s) and/or variant(s) of aircraft and positions to which he or she is assigned.

(*b*) Specific requirements for flight operations officers recurrent training are contained in IS : 8.10.1.35.

(*c*) A required flight operations officer who, due to a period of inactivity, has not met the recurrent training requirements in paragraphs (*a*) through (*b*) shall complete :

(1) If the period of inactivity is up to but not exceeding 24 months, the recurrent ground curricula.

(2) If period of inactivity is more than 24 months, the initial AOC training programme and competency check specified in Sub section 8.10.1.25.

8.10.1.36. Instructor Qualifications-Flight Crew, Cabin Crew, Flight Dispatchers.

(*a*) Flight Crew. No AOC holder may use a person nor may any person serve as a flight instructor in an established flight training programme unless, with respect to the aircraft type involved, that person—

(1) Holds the personnel licences and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable ;

(2) Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(3) Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check ; and

(5) Holds the appropriate medical certificate for service as a required crewmember.

(*b*) Flight Instructor - Flight Simulation Training. No person may serve nor may any AOC holder use a person as a Flight Instructor in a flight simulation training device, unless, since the beginning of the 12th calendar month before that service, that person has—

(1) Flown at least 5 flights as a required crewmember for the type of aircraft involved ; or

(2) Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

(*c*) Cabin Crew. No AOC holder may use a person nor may any person serve as an instructor in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person—

(1) Holds the qualification required to serve as a cabin crewmember ;

(2) Has satisfactorily completed the appropriate training phases for the aircraft and position involved, including recurrent training and differences training, that are required to serve as a cabin crewmember ;

(3) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to service as a cabin crewmember ;

(4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check.

(*d*) Flight Dispatcher. No AOC holder may use a person nor may any person serve as an instructor in an established flight operations officer training programme unless, with respect to the aircraft type and position involved, that person—

(1) Holds the licence required to serve as a flight operations officer ;

(2) Has satisfactorily completed the appropriate training phases for the aircraft or position involved, including recurrent training and differences training, that are required to serve as a flight operations officer ;

(3) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a flight operations officer ; and

(4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check.

8.10.1.37. Instructor Training

(*a*) No person may serve nor may any AOC holder use a person as an instructor for flight crew, cabin crew or flight dispatcher, unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

(*b*) Specific training programme requirements for flight crew instructors are contained in IS : 8.10.1.37.

8.10.1.38. Personnel Approved to Conduct Checks.

(*a*) The Authority may approve the following AOC holder personnel to conduct checks when such personnel meet the requirements for the authorised responsibilities, and may be approved for either aircraft or simulator, or both, as applicable, for checking of flight crew—

(1) Check pilot ;

(2) Check flight engineer ;

(3) Check cabin crewmember ; and.

(4) Check flight dispatcher.

(*b*) The authorized duties of check personnel are to—

(1) Conduct initial and recurrent proficiency checks for flight crew and competency checks for cabin crew and flight operations officers,

(2) Certify as satisfactory, the knowledge and proficiency of the flight crew, and the knowledge and competency of the cabin crew and flight operations officers ; and

(3) For all check personnel, supervise operating experience (OE).

(*c*) No person may serve nor may any AOC holder use a person as a check personnel under the AOC holder's crewmember checking and standardisation programme in Nig. CAR Part 9unless that person has :

(1) been identified by name and function and approved in writing by the Authority ; and

(2) successfully completed the AOC holders curricula approved by the Authority for those functions for which he or she is to serve.

(*d*) Once approved, no person may serve nor may any AOC holder use a person as a check personnel for any flight crew, cabin crew or flight operations officer checks unless that person has demonstrated, initially and at least biennially to an Authority inspector, the ability to conduct a check for which he or she is approved.

8.10.1.39. Check Personnel Qualifications

(*a*) Check personnel for flight crew.

(1) No AOC holder may use a person, nor may any person serve as a check personnel in an established flight crew training programme unless, with respect to the aircraft type involved, that person—

(*i*) Holds the personnel licences and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable ;

(*ii*) Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(*iii*) Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(*iv*) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check for check personnel duties ;

(*v*) Holds the appropriate medical certificate if serving as a required flight crewmember ; and

(*vi*) Has been approved by the Authority for the check airman duties involved.

(2) Check Personnel- Simulator. Additional requirements. No person may serve nor may any AOC holder use a person as a check personnel in a flight simulation training device, unless, since the beginning of the 12th calendar month before that service, that person has—

(3) Flown at least 5 flights as a required crewmember for the type of aircraft involved ; or

(4) Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

(*b*) Check Personnel for Cabin Crew.

(1) No AOC holder may use a person, nor may any person serve as a check cabin crewmember in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person—

(*i*) Holds the qualifications required to serve as a cabin crewmember ;

(*ii*) Has satisfactorily completed the appropriate training phases for the aircraft and or position, including recurrent training and differences training, that are required to serve as a cabin crewmember ;

(*iii*) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a cabin crewmember ;

(*iv*) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check for the check personnel duties ; and

(*v*) Has been approved by the Authority for the check cabin crewmember duties involved.

(*c*) Check Personnel for Flight Dispatcher.

(1) No AOC holder may use a person, nor may any person serve as a check flight dispatcher in an established flight dispatcher training programme unless, with respect to the aircraft type or position involved, that person—

(*i*) Holds the licence required to serve as a flight dispatcher ;

(*ii*) Has satisfactorily completed the appropriate training phases for the aircraft and or position, including recurrent training and differences training, that are required to serve as a flight operations officer ;

(*iii*) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a flight operations officer ;

(*iv*) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check for the check flight dispatcher duties involved.

(*v*) Has been approved by the Authority for the check flight dispatcher duties involved.

8.10.1.40. Check Personnel Training.

(*a*) No person may serve nor may any AOC holder use a person for checks unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

(*b*) Specific training programme requirements for check personnel are contained in IS : 8.10.1.40.

8.10.1.41. Single-Pilot Operations Under IFR or at Night-Qualifications, Training, Checking.

(*a*) No person may conduct single-pilot-operations under IFR or at night in commercial air transportation, in accordance with Subpart 8.8.1.30, unless the operation is approved by the Authority and the pilot has at least 50 hours flight time in the aircraft class in which he or she is to serve and of those 50 hours, not less than 10 hours shall be as pilot in command.

(*b*) For single-pilot-operations conducted under IFR :

(1) The pilot shall have at least 25 hours flight time under IFR in the type and class of aircraft in which he or she is to serve.

(2) The 25 hours flight time under IFR referenced in b. (1) may form part of the required 50 hours flight time in aircraft class.

(3) The pilot shall have performed in single-pilot-operations, at least 5 IFR flights including 3 instrument approaches in the class of aircraft in which he or she is to serve within 90 days preceding the flight, or

(4) Within 90 days preceding the flight, the pilot has satisfactorily completed the single-pilot-operation instrument competency check, as prescribed by the Authority, in the class of aircraft in which he or she is to serve.

(*c*) For single-pilot-operations conducted at night :

(1) The pilot shall have performed in single-pilot-operations at least 3 take offs and landings at night in the type and class of aircraft in which he or she is to serve within 90 days preceding the flight, and

(2) Have successfully completed the approved single-pilot-operation training programme prescribed by the Authority.

(*d*) No pilot may serve nor may any AOC holder assign a person to operate an aircraft in single-pilot-operations in commercial air transport unless the pilot has :

(1) Successfully completed the relevant training requirements of Subpart 8.10 applicable to flight crewmembers engaged in commercial air transport ;

(2) Successfully completed the approved single-pilot operations training programme prescribed by the Authority, and

(3) Satisfactorily completed the single-pilot operations checking requirements, as prescribed by the Authority, in the type and class of aircraft in which he or she is to serve.

Note : In addition to successfully completing the relevant training requirements of Subpart 8.10 applicable to flight crewmembers engaged in commercial air transport, additional training for pilots conducting single-pilot-operations at night shall include passenger briefings with respect to emergency evacuation, autopilot management and the use of simplified in-flight documentation.

8.10.1.42. RESERVED

8.10.1.43. Monitoring of Training and Checking Activities.

(*a*) To enable adequate supervision of its training and checking activities, the AOC holder shall forward to the Authority at least 72 hours before the scheduled activity the dates, report times and report location of all—

(1) Training for which a curriculum is approved in the AOC holder's training programme ; and

(2) Proficiency, competency and line checks.

(*b*) Failure to provide the information required by paragraph (a) may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

8.10.1.44. Termination of a Proficiency, Competency or Line Check.

(*a*) If it is necessary to terminate a check for any reason, the AOC holder may not use the crewmember or flight operations officer in commercial air transport operations until the completion of a satisfactory recheck.

8.10.1.45. Recording of Crewmember and Flight Operations Officer Qualifications.

(*a*) The AOC holder shall record in its records maintained for each crewmember and flight operations officer, the completion of each of the qualifications required by this Part.

(*b*) A crewmember or flight operations officermay complete the curricula required by this Part concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately.

8.10.1.46. Reserved

8.10.1.47. Eligibility Period.

(*a*) Crewmembers required to take a proficiency check, test or competency check, or recurrent training to maintain qualification for commercial air transport operations may complete those requirements at any time during the eligibility period.

(*b*) The eligibility period is defined as the three calendar month period including the month-prior, the month-due, and the month-after any due date specified by this sub-section.

(*c*) Completion of the requirement at any time during the period shall be considered as completed in the month-due for calculation of the next due date.

8.10.1.48. Reductions in Requirements

(*a*) The Authority may authorise reductions in, or waive, certain portions of the training requirements of this subpart, taking into account the previous experience of the crewmembers.

(*b*) Any AOC holder request for reduction or waiver shall be made in writing and outline the basis under which the request is made.

(*c*) If the request was for a specific crewmember, the correspondence from the Authority authorising the reduction and the basis for it shall be filed in the record the AOC holder maintains for that crewmember.

(*d*) If approved by the Authority, a person need not complete the programmed hours of flight training for the particular aircraft if he or she :

(1) progresses successfully through flight training,

(2) is recommended by their instructor, and

(3) successfully completes the appropriate flight check with a check person.

(*e*) If approved by the Authority, a person need not complete the programmed hours of cabin crew or flight operations officer training if he or she :

(1) progresses successfully through cabin crew or flight operations officer training,

(2) is recommended by their instructor, and

(3) successfully completes the appropriate competency check with acheck person.

(*f*) Whenever the Authority finds that 20 percent of the checks given at a particular training base during the previous 6 months are unsuccessful, this method of approval will not be used by the AOC holder at that base until the Authority finds that the effectiveness of the training programme has improved.

8.11. Fatigue Management

8.11.1.1. Applicability.

(*a*) This section is applicable to the management of fatigue-related safety risks of crewmembers and flight operations officers/flight dispatchers engaged in commercial air transport flight operations.

8.11.1.2. Managing Fatigue-Related Safety Risks.

(*a*) For the purpose of managing fatigue-related safety risks, an AOC holder shall establish either :

(1) flight time, flight duty period, duty period and rest period limitations that are within the prescriptive fatigue management regulations in Section 8.12 ; or

(2) a Fatigue Risk Management System (FRMS) in compliance with Sub-section 8.11.1.2(*e*) ; or

(3) a FRMS in compliance withSubsection8.11.1.2(*e*) for part of its operations and the requirements of Section8.12 for the remainder of its operations.

(*b*) Where the operator adopts prescriptive fatigue management regulations for part or all of its operations, the Authority may approve, in exceptional circumstances, variations to these regulations on the basis of a risk assessment provided by the operator. Approved variations shall provide a level of safety equivalent to, or better than that achieved through the prescriptive fatigue management regulations.

(*c*) The Authority shall approve an operator's FRMS before it may take the place of any or all of the prescriptive fatigue management regulations. An approved FRMS shall provide a level of safety equivalent to, or better than, the prescriptive fatigue management regulations.

(*d*) Operators using an FRMS must adhere to the following provisions of the FRMS approval process that allows the Authority to ensure that the approved FRMS meets the requirements of Subsection 8.11.1.2(*c*).

(1) Establish maximum values for flight times and/or flight duty period(s) and duty period(s), and minimum values for rest periods that shall be based upon scientific principles and knowledge, subject to safety assurance processes

(2) Adhere to Authority mandates to decrease maximum values and increase in minimum values in the event that the operator's data indicates these values are too high to too low, respectively ; and

(3) Provide justification to the Authority for any increase in maximum values or decrease in minimum values based on accumulated FRMS experience and fatigue-related data before such changes will be approved by the Authority.

(*e*) Operators implementing an FRMS to manage fatigue-related safety risks shall, as a minimum :

(1) Incorporate scientific principles and knowledge within the FRMS ;

(2) Identify fatigue-related safety hazards and the resulting risks on an ongoing basis ;

(3) Ensure that the remedial actions, necessary to effectively mitigate the risks associated with the hazards, are implemented promptly ;

(4) Provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions ; and

(5) Provide for continuous improvement to the overall performance of the FRMS.

(*f*) An operator implementing an FRMS shall integrate the FRMS with the SMS.

8.11.1.3. Duty and Rest Periods.

(*a*) Duty and rest periods for flight crew and cabin crew are contained in IS : 8.11.1.3.

8.12. FLIGHT TIME, FLIGHT DUTY PERIODS, DUTY PERIODS, AND REST PERIODS FOR FATIGUE MANAGEMENT

8.12.1.1. Applicability.

(*a*) This section is applicable to the rest, duty and flight time limitations of crewmembers and flight operations officers/flight dispatchers engaged in commercial air transport flight operations.

8.12.1.2. Duty and Rest Periods-all Crewmembers and Flight Operations Officers.

(*a*) With respect to duty periods—

(1) Persons are considered to be on duty if they are performing any tasks on behalf of the AOC holder, whether scheduled, requested or self-initiated.

(2) If an AOC holder requires a flight crewmember to engage in dead-head transportation for more than 4 hours, one half of that time shall be treated as duty time, unless they are given 10 hours of rest on the ground before being assigned to flight duty.

(3) No AOC holder may schedule :

(*i*) A flight crew member for more than 14 hours of duty, except as prescribed by the Authority.

(*ii*) A cabin crew member for more than 14 consecutive hours of duty, except as prescribed by the Authority.

(*iii*) A flight operations officer/aircraft dispatcher for more than 10 consecutive hours of duty within a 24 consecutive hour period, unless that person is given an intervening rest period of at least 8 hours at or before the end of the 10 hours duty, except in cases where circumstances or emergency conditions beyond the control of the AOC holder require otherwise.

(*A*) Each AOC holder shall establish the daily duty period for a flight operations officer/aircraft dispatcher so that it begins at a time that allows him or her to become thoroughly familiar with existing and anticipated weather conditions along the route before he or she dispatches any aircraft.

(*B*) He or she shall remain on duty until each aircraft dispatched by him or her has completed its flight or has gone beyond his or her jurisdiction or until he or she is relieved by another qualified dispatcher.

(*b*) With respect to rest periods—

(1) The minimum rest period is considered to be 8 consecutive hours.

(2) The minimum rest period for flight crewmembers shall be 9 consecutive hours, unless otherwise prescribed by the Authority.

(3) The AOC holder may exercise the option to reduce a crewmember's rest period within the limitations prescribed under IS : 8.12.1.3.

(4) The AOC holder shall relieve the flight crewmember, flight operations officer/flight dispatcher, or cabin crewmember from all duties for 24 consecutive hours during any 7 consecutive day period.

(5) Time spent in transportation, not local in character, which is required by the AOC holder to position crewmembers to or from flights is not considered part of a rest period.

(6) Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crewmember's home station is not considered part of a rest period.

(7) No AOC holder may assign, nor may any person—

(***i***) Perform duties in commercial air transportation unless that person has had at least the minimum rest period applicable to those duties as prescribed by the Authority ; or

(*ii*) Accept an assignment to any duty with the AOC holder during any required rest period.

8.12.1.3. Duty Aloft-Flight Crew.

(*a*) The Authority will consider all time spent on an aircraft as an assigned flight crewmember or relief flight crewmember, whether resting or performing tasks, to be duty aloft.

(*c*) The Authority will consider a flight crewmember to be on continuous duty aloft unless the flight crewmember receives a rest period of 8 consecutive hours on the ground.

(*d*) Each AOC holder shall provide adequate sleeping quarters, including a berth on the aircraft whenever a flight crewmember is scheduled to be aloft for more than 12 hours during any 24 consecutive hours.

8.12.1.4. Maximum Number of Flight Time Hours-Flight Crew.

(*a*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 8 hours in any 24 consecutive hours.

(*b*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment as a required crewmember for more than 7 flights in commercial air transportation during any period of 18 consecutive hours, whichever comes first.

(*c*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 30 hours in any 7-day period.

(*d*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 100 hours in any 30-day period.

(*e*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time, total flights or duty aloft in commercial flying will exceed the limitations prescribed by the Authority.

(*f*)No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 1000 hours in any 12-calendar month period.

8.12.1.5. Compliance with Scheduling Requirements.

(*a*) The Authority will consider a person in compliance with prescribed standards if that person exceeds flight/duty limitations when—

(1) The flight is scheduled and normally terminates within the prescribed limitations ; but

(2) Due to circumstances beyond the control of the AOC holder (such as adverse weather conditions) are not expected at the time of departure to reach the destination within the scheduled time.

(*b*) The Authority will consider a person in compliance with prescribed duty limitations, if that person exceeds applicable limitations during emergency or adverse situations beyond the control of the AOC holder.

8.12.1.6. Special Flight Duty Schemes.

(*a*) The Authority may approve a special flight duty scheme for an AOC holder.

(*b*) An AOC holder may elect to apply the flight crewmember flight duty and rest requirements to the cabin crewmembers.

8.12.1.7. Flight Time, Duty and Rest Period Records.

(*a*) Each AOC holder shall maintain records for each crew member and flight operations officer/flight dispatcher of flight time, flight duty periods, duty periods, and rest periods for a period of 24 months.

8.13. Flight Release-Commercial Air Transport.

8.13.1.1. Applicability.

(*a*) This Subpart is applicable to an AOC holder and the person designated by the AOC holder to issue a flight release.

8.13.1.2. Qualified Persons Required For Operational Control Functions

(*a*) A qualified person shall be designated by the AOC holder to exercise the functions and responsibilities for operational control of each flight in commercial air transport.

(*b*) For passenger-carrying flights conducted on a published schedule, a licensed and qualified flight operations officer shall be on-duty at an operations base to perform the operational control functions.

(*c*) For all other flights, the Director of Operations and the PIC are the qualified persons exercising operational control responsibilities, and shall be available for consultation before, during and immediately following the flight operation.

(1) The Director of Operations may delegate the functions for initiating, continuation, diversion and termination of a flight to other employees. However, the Director of Operations shall retain full responsibility for these functions.

(*d*) For all flights, the PIC shares in the responsibility for operational control of the aircraft and has the situational authority to make decisions regarding operational control issues in-flight.

(1) Where a decision of the PIC differs from that recommended, the person making the recommendation shall make a record of the associated facts.

8.13.1.3. Functions Associated with Operational Control.

(*a*) The person exercising responsibility for operational control for an AOC holder shall—

(1) Authorise the specific flight operation ;

(2) Ensure that only those operations authorised by the AOC operations specifications are conducted ;

(3) Ensure that an airworthy aircraft properly equipped for the flight is available ;

(4) Specify the conditions under which a flight may be dispatched or released (weather minimums, flight planning, aircraft loading, and fuel requirements ;

(5) Ensure that qualified personnel and adequate facilities are available to support and conduct the flight ;

(6) Ensure that crewmembers are in compliance with the flight and duty time requirements when departing on a flight ;

(7) Provide the PIC and other personnel who perform operational control functions with access to the necessary information for the safe conduct of a flight (such as weather, NOTAMS and aerodrome analysis) ;

(8) Ensure that proper flight planning and preparation is made ;

(9) Ensure that flight locating and flight following procedures are followed ;

(10) Ensure that each flight has complied with the conditions specified for release before it is allowed to depart ;

(11) Ensure that when the conditions specified for a release cannot be met, the flight is either cancelled, delayed, re-routed, or diverted, and

(12) For all flights, ensure the monitoring of the progress of the flight and the provision of information that may be necessary to safety.

Note : See also ICAO Doc 9376, Preparation of an Operations Manual, Chapters 7 and 8.

8.13.1.4. Operational Control Duties

(*a*) For all flights, the qualified person performing the duties of a flight operations officer shall—

(1) Assist the PIC in flight preparation and provide the relevant information required ;

(2) Assist the PIC in preparing the operational and ATC flight plans ;

(3) Sign the dispatch copy of the flight release ;

(4) Furnish the PIC while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight ; and

(5) In the event of an emergency situation which endangers the safety of the aeroplane or persons becomes known first to the flight operations officer/flight dispatcher, action by that persons shall be in accordance with such procedures as outlined in the AOC holder's operations manual. Where necessary, immediately notify the appropriate authorities on the nature of the situation, and if required, a request for assistance.

(*b*) A qualified person performing the operational control duties shall avoid taking any action that would conflict with the procedures established by—

(1) ATC ;

(2) The meteorological service ;

(3) The communications service ; or

(4) AOC holder.

Note : See also ICAO Doc 9376, Preparation of an Operations Manual, Chapters 7 and 8.

8.13.1.5. Contents of a Flight Release/Operational Flight Plan.

(*a*) The dispatch or flight release/operational flight plan shall contain or have attached at least the following information concerning each flight :

(1) Company or organisation name.

(2) Make, model, and registration number of the aircraft being used.

(3) Flight or trip number, and date of flight.

(4) Name of each flight crewmember, cabin crewmember, and PIC.

(5) Departure aerodrome, destination aerodromes, alternate aerodromes, and route.

(6) Minimum fuel supply (in gallons or pounds).

(7) A statement of the type of operation (e.g., IFR, VFR).

(8) The latest available weather reports and forecasts for the destination aerodrome and alternate aerodromes.

(9) Any additional available weather information that the PIC considers necessary.

(*b*) The dispatch or flight release/operational flight plan shall be signed by the PIC and, when applicable, the flight operations officer, and a copy shall be filed with operator or a designated agent. If these procedures are not possible, it shall be left with the aerodrome authority or on record at a suitable place at the point of departure.

Note : See also ICAO Doc 9376, Preparation of an Operations Manual, Chapters 7.

8.13.1.6. Flight Release-Aircraft Requirements.

(*a*) No person may issue a flight release for a commercial air transport operation unless the aircraft is airworthy and properly equipped for the intended flight operation.

(*b*) No person may issue a flight release for a commercial air transport operation using an aircraft with inoperative instruments and equipment installed, except as specified in the MEL approved for the AOC holder for that type aircraft.

(*c*) No person may issue a flight release for a commercial air transport operation using an aircraft unless a maintenance release has been issued for that aircraft.

(*d*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been met.

(*e*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.7. Flight Release-Facilities and Notams.

(*a*) No person may release an aircraft over any route or route segment unless there are adequate communications and navigational facilities in satisfactory operating condition as necessary to conduct the flight safely.

(*b*) The flight operations officer shall ensure that the PIC is provided all available current reports or information on aerodrome conditions and irregularities of navigation facilities that may affect the safety of the flight.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been complied met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

Note : For his or her review of the operational flight plan, the PIC will be provided with all available NOTAMs with respect to the routing, facilities and aerodromes.

8.13.1.8. Flight Release-Weather Reports and Forecasts.

(*a*) No person may release a flight unless he or she is thoroughly familiar with reported and forecast weather conditions on the route to be flown.

(*b*) No person may release a flight unless he or she has communicated all information and reservations they may have regarding weather reports and forecasts to the PIC.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of 8.13.1.5 for operational flight planning have been complied met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.9. Flight Release-in Icing Conditions.

(*a*) No person may release an aircraft, when in their opinion or that of the PIC, the icing conditions that may be expected or are met exceed that for which the aircraft is certified and has sufficient operational de-icing or anti-icing equipment.

(*b*) No person may release an aircraft any time conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, unless there is available to the PIC at the aerodrome of departure adequate facilities and equipment to accomplish the procedures approved for the AOC holder by the Authority for ground de-icing and anti-icing.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been complied met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

Note : ICAO Doc 9640, Manual of Aircraft Ground De-Icing/Anti-Icing, provides additional guidance.

8.13.1.10. Flight Release-Under VFR or IFR

(*a*) No person may release a flight under VFR or IFR unless the weather reports and forecasts indicated that the flight can reasonably be expected to be completed as specified in the release.

8.13.1.11. Flight Release-Minimum Fuel Supply.

(*a*) No person may issue a flight release for a commercial air transport operation unless the fuel supply specified in the release is equivalent to or greater than the minimum flight planning requirements of this Part, including anticipated contingencies.

(*b*) No person may issue a flight release for a commercial air transport operation unless the requirements of 8.13.1.5 for operational flight planning have been met.

(*c*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.12. Flight Release-aircraft Loading And Performance.

(*a*) No person may issue a flight release unless he or she is familiar with the anticipated loading of the aircraft and is reasonably certain that the proposed operation will not exceed the—

(1) Centre of gravity limits ;

(2) Aircraft operating limitations ; and

(3) Minimum performance requirements.

(*b*) No person may issue a flight release for a commercial air transport operation unless any load carried is properly distributed and safely secured.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of § 8.13.1.5 for operational flight planning have been met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.13. Flight Release-Amendment or Re-Release en Route.

(*a*) Each person who amends a flight release while the flight is en route shall record that amendment.

(*b*) No person may amend the original flight release to change the destination or alternate aerodrome while the aircraft is en route unless the flight preparation requirements for routing, aerodrome selection and minimum fuel supply are met at the time of amendment or re-release.

(*c*) No person may allow a flight to continue to an aerodrome to which it has been released if the weather reports and forecasts indicate changes that would render that aerodrome unsuitable for the original flight release.

(*d*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been met.

(*e*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.14. Flight Release-with Airborne Weather Radar Equipment.

(*a*) No person may release a large aircraft carrying passengers under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar, may reasonably be expected along the route to be flown, unless the airborne weather radar equipment is in satisfactory operating condition.

(*b*) No person may issue a flight release for a commercial air transport operation unless the requirements of 8.13.1.5 for operational flight planning have been met.

(*c*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.14. Corporate Aviation Operations.

8.14.1.1. Applicability.

(*a*) This subpart prescribes additional requirement for corporate aviation operation involving aircraft that are operated by pilots employed for the purpose of flying the aircraft.

(*b*) The term "aircraft" - is used to indicate that a corporate aviation operation using a mix of aircrafts and helicopters is be subject to this Sub-part as long as at least one aeroplane is involved.

(*c*) An operation involving an aeroplane with a seating configuration of more than 9 passenger seats should be conducted in accordance with this Section.

(*d*)(1) aeroplanes with a maximum certificated take-off mass exceeding 5700 kg ; or

(2) aeroplanes equipped with one or more turbojet engines

8.14.1.2. General.

(*a*) Compliance With Laws, Regulations And Procedures.

(1) An operator shall ensure that all employees comply with the laws, regulations and procedures prescribed in these regulations.

(2) An operator shall ensure that all pilots are familiar with the laws, regulations and procedures, pertinent to the performance of their duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto. The operator shall ensure that other members of the flight crew are familiar with such of these laws, regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aircraft.

(3) The pilot-in-command is responsible for operational control. An operator shall describe the operational control system in the operations manual and identify the roles and responsibilities of those involved with the system.

(4) An operator shall ensure that the pilot-in-command has available on board the aircraft all the essential information concerning the search and rescue services in the area over which the aircraft will be flown.

(5) An operator shall ensure that flight crew members demonstrate the ability to speak and understand the language used for aeronautical radiotelephony communications as specified in part 2 of this regulation.

8.14.1.3. Safety Management System.

(*a*) An operator shall establish and maintain a safety management system that is appropriate to the size and complexity of the operation.

(*b*) The safety management system shall as minimum include :

(1) A process to identify actual and potential safety hazards and assess the associated risks ;

(2) A process to develop and implement remedial action necessary to maintain an acceptable level of safety ; and

(3) Provision for continuous monitoring and regular assessment of the appropriateness and effectiveness of safety management activities.

8.14.2. Flight Operations.

8.14.2.1. Operating Facilities.

An operator shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

8.14.2.2. Operational Management.

(1) Operator notification—

(*a*) If an operator has an operating base in a State other than the State of Registry, the operator shall notify the State in which the operating base is located.

(*b*) Upon notification in accordance with 8.14.2.2 (a), safety and security oversight shall be coordinated between the State in which the operating base is located and the State of Registry.

8.14.2.3. Operations Manual.

(*a*) An operator shall provide, for the use and guidance of personnel concerned, an operations manual containing all the instructions and information necessary for operations personnel to perform their duties. The operations manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date. All such amendments or revisions shall be issued to all personnel that are required to use this manual. The operations manual shall be approved by the Authority in accordance with IS : 8.14.2.3.

8.14.2.4. Operating Instructions-General.

(*a*) An operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole.

(*b*) An operator should issue operating instructions and provide information on aircraft climb performance to enable the pilot-in-command to determine the climb gradient that can be achieved during the departure phase for the existing take-off conditions and intended take-off technique. This information should be included in the operations manual.

8.14.2.5. In-Flight Simulation of Emergency Situations.

(*a*) An operator shall ensure that when passengers are being carried, no emergency or abnormal situations shall be simulated.

8.14.2.6. Checklists

(*a*) Checklists shall be used by flight crews prior to, during and after all phases of operations, and in emergencies, to ensure compliance with the operating procedures contained in the aircraft operating manual and the aircraft flight manual or other documents associated with the certificate of airworthiness and otherwise in the operations manual, are followed. The design and utilization of checklists shall observe Human Factors principles.

8.14.2.7. Minimum Flight Altitudes.

(*a*) An operator shall specify, for flights which are to be conducted in accordance with the instrument flight rules, the method of establishing terrain clearance altitudes.

8.14.2.8. Aerodrome Operating Minima.

(*a*) An operator shall ensure that no pilot-in-command operates to or from an aerodrome using operating minima lower than those prescribed by the Authority for that aerodrome in which it is located, except with the specific approval of the Authority.

8.14.2.9. Fatigue Management Programme.

(*a*) An operator shall establish and implement a fatigue management programme that ensures that all operator personnel involved in the operation and maintenance of aircraft do not carry out their duties when fatigued. The programme shall address flight and duty times and be included in the operations manual.

8.14.2.10. Passengers.

(*a*) An operator shall ensure that passengers are made familiar with the location and use of :

(1) seat belts ;

(2) emergency exits ;

(3) life jackets, if the carriage of life jackets is prescribed ;

(4) oxygen dispensing equipment, if the provision of oxygen for the use of passengers is prescribed ; and

(5) other emergency equipment provided for individual use, including passenger emergency briefing cards

(*b*) An operator shall ensure that all persons on board are aware of the location and general manner of use of the principal emergency equipment carried for collective use.

(*c*) An operator shall ensure that in an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.

(*d*) An operator shall ensure that during take-off and landing and whenever considered necessary, by reason of turbulence or any emergency occurring during flight, all passengers on board an aircraft are secured in their seats by means of the seat belts or harnesses provided.

8.14.2.11. Flight Preparation.

(*a*) The operator shall develop procedures to ensure that a flight is not commenced unless :

(1) The aircraft is airworthy, duly registered and that appropriate certificates with respect thereto are on board the aircraft ;

(*b*) The instruments and equipment installed in the aircraft are appropriate, taking into account the expected flight conditions ;

(*c*) Any necessary maintenance has been performed in accordance with Sub-part 8.14.10

(*d*) The mass of the aircraft and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected ;

(*e*) any load carried is properly distributed and safely secured ; and

(*f*) the aircraft operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.

8.14.2.12. Operational Flight Planning.

(*a*) An operator shall specify flight planning procedures to provide for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned. These procedures shall be included in the operations manual.

8.14.2.13. Alternate Aerodromes.

(*a*) Take-off alternate aerodrome

(1) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

(2) The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure :

(*i*) Aircrafts having two engines. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed ; and

(*ii*) Aircraft having three or more engines. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

(*b*) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

8.14.2.14. Refuelling with Passengers on Board.

(*a*) An aircraft shall not be refuelled when passengers are embarking, on board or disembarking unless it is properly attended by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

(*b*) When refuelling with passengers embarking, on board or disembarking, two-way communication shall be maintained by the aircraft's intercommunication system or other suitable means between the ground crew supervising the refuelling and the qualified personnel on board the aircraft.

8.14.2.15. Oxygen Supply

(*a*) A flight to be operated at flight altitudes at which the atmospheric pressure in personnel compartments will be less than 10,000 ft shall not be commenced unless sufficient stored breathing oxygen is carried to supply :

(1) All crew members and 10 per cent of the passengers for any period in excess of 30 minutes that the pressure in compartments occupied by them will be between 10,000 ft and 13,000 ft ; and

(2) The crew and passengers for any period that the atmospheric pressure in compartments occupied by them will be less than 13,000 ft.

(*b*) A flight to be operated with a pressurized aircraft shall not be commenced unless a sufficient quantity of stored breathing oxygen is carried to supply all the crew members and passengers, as is appropriate to the circumstances of the flight being undertaken, in the event of loss of pressurization, for any period that the atmospheric pressure in any compartment occupied by them would be less than 10,000 ft. In addition, when an aircraft is operated at flight altitudes at which the atmospheric pressure is less than 25,000 ft, or which, if operated at flight altitudes at which the atmospheric pressure is more than 25,000 ft and cannot descend safely within four minutes to a flight altitude at which the atmospheric pressure is equal to 13,000 ft, there shall be no less than a 10-minute supply for the occupants of the passenger compartment.

8.14.3. In-Flight Procedures.

8.14.3.1. Instrument Approaches.

(*a*) In the aircraft operating manual an operator shall include operating procedures for conducting instrument approaches.

8.14.3.2. Use of Oxygen.

(*a*) All flight crew members, when engaged in performing duties essential to the safe operation of an aircraft in flight, shall use breathing oxygen continuously whenever the circumstances prevail for which its supply has been required in 8.14.2.15

(*b*) All flight crew members of pressurized aircrafts operating above an altitude where the atmospheric pressure is less than 25,000 ft shall have available at the flight duty station a quick-donning type of oxygen mask which will readily supply oxygen upon demand.

8.14.3.3. Aeroplane Operating Procedures for Noise Abatement.

(*a*) Noise abatement procedures specified by an operator for any one aircraft type should be the same for all aerodromes.

8.14.3.4. Aircraft Operating Procedures for Rates of Climb and Descent.

(*a*) The pilot in command shall consider using appropriate procedures to ensure that a rate of climb or descent of less than 8 m/s or 1 500 ft/min (depending on the instrumentation available) is achieved throughout the last 300m (1000 ft) of climb or descent to the assigned altitude or flight level, when made aware of another aircraft at or approaching an adjacent altitude or flight level Unless otherwise specified in an air traffic control instruction, to avoid unnecessary airborne collision avoidance system (ACAS II) resolution advisories in aircraft at or approaching adjacent altitudes or flight levels.

8.14.3.5. Duties of Pilot-in-Command.

(*a*) The pilot-in-command shall ensure that the checklists specified in 8.14.6 are complied with in detail.

(*b*) The pilot-in-command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aircraft, resulting in serious injury or death of any person or substantial damage to the aircraft or property. In the event that the pilot-in-command is incapacitated the operator shall take the forgoing action.

(*c*) The pilot-in-command shall be responsible for reporting all known or suspected defects in the aircraft, to the operator, at the termination of the flight.

(*d*) The pilot-in-command shall be responsible for the journey log book or the general declaration containing the following information :

(1) Aircraft nationality and registration ;

(2) Date ;

(3) Crew member names and duty assignments ;

(4) Departure and arrival points and times ;

(5) Purpose of flight ;

(6) Observations regarding the flight ; and

(7) Signature of the pilot-in-command.

8.14.5. Cabin Baggage (Take-off and Landing)

(*a*) An operator shall specify procedures to ensure that all baggage carried onto an aircraft and taken into the passenger cabin is adequately and securely stowed.

8.14.6. Aircraft Performance Operating Limitations.

(*a*) An aircraft shall be operated in compliance with the terms of its certificate of airworthiness and within the approved operating limitations contained in its flight manual.

(*b*) The State of Registry shall take such precautions as are reasonably possible to ensure that the general level of safety contemplated by these provisions is maintained under all expected operating conditions, including those not covered specifically by the provisions of this part.

(*c*) A flight shall not be commenced unless the performance information provided in the flight manual indicates that the Standards of 8.14.4 to 8.14.8 can be complied with for the flight to be undertaken.

(*d*) In applying the regulations in this Part, account shall be taken of all factors that significantly affect the performance of the aircraft (such as : mass, operating procedures, the pressure altitude appropriate to the elevation of the aerodrome, temperature, wind, runway gradient and condition of runway, *i.e*. presence of slush, water and/or ice, for landplanes, water surface condition for seaplanes). Such factors shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which may be provided in the scheduling of performance data or in the comprehensive and detailed code of performance in accordance with which the aircraft is being operated.

8.14.6.1. Mass Limitations.

(*a*) The mass of the aircraft at the start of take-off shall not exceed the mass at which 8.14.6 is complied with, nor the mass at which 8.14.7 and 8.14.8 are complied with, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is envisaged in applying 8.14.7 and 8.14.8 and, in respect of alternate aerodromes, 8.14.5(*c*) and 8.14.8.

(*b*) In no case shall the mass at the start of take off exceed the maximum take off mass specified in the flight manual for the pressure altitude appropriate to the elevation of the aerodrome, and if used as a parameter to determine the maximum take off mass, any other local atmospheric condition.

(*c*) In no case shall the estimated mass for the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the maximum landing mass specified in the flight manual for the pressure altitude appropriate to the elevation of those aerodromes, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.

(*d*) In no case shall the mass at the start of take-off, or at the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the relevant maximum masses at which compliance has been demonstrated with the applicable noise certification in Part 16, of Nig. CARs 2012 Volume 2, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the Authority of the State in which the aerodrome is situated.

(*e*) Take-off. The aircraft shall be able, in the event of a critical engine failing at any point in the take-off, either to discontinue the take-off and stop within either the accelerate-stop distance available or the runway available, or to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aircraft is in a position to comply with 8.14.7.

(*f*) In determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aircraft prior to take-off.

8.14.6.7. Enroute-One Engine Inoperative.

(*a*) The aircraft shall be able, in the event of the critical engine becoming inoperative at any point along the route or planned diversions there from, to continue the flight to an aerodrome at which the regulation of 8.14.8 can be met, without flying below the minimum obstacle clearance altitude at any point.

8.14.6.8. Landing.

(*a*) The aircraft shall, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

8.14.7. Aeroplane Instruments, Equipment And Flight Documents.

8.14.7.1. General.

(*a*) Where a master minimum equipment list (MMEL) is established for the aircraft type, the operator shall include in the operations manual a minimum equipment list (MEL) approved by the State of Registry of the aircraft which will enable the pilot-in-command to determine whether a flight may be commenced or continued from any intermediate stop should any instrument, equipment or systems become inoperative.

(*b*) An operator should provide operations staff and flight crew with an aircraft operating manual, for each aircraft type operated, containing the normal, abnormal and emergency procedures relating to the operation of the aircraft. The manual should be consistent with the aircraft flight manual and checklists to be used. The design of the manual should observe Human Factors principles.

8.14.7.2. Aircraft on all Flights.

(*a*) All aircraft operating under this Part shall be equipped with the required instruments, communication and navigation equipment as prescribed in Part 7 of these regulations and appropriate to the type of flight operation being conducted and the route being flown.

8.14.8. Aeroplane Maintenance.

8.14.8.1. Operator's Maintenance Responsibilities.

(*a*) An operator shall comply with the requirements of 8.13.5.

(*b*) An operator should ensure that all maintenance personnel receive initial and continuation training acceptable to the State of Registry and appropriate to their assigned tasks and responsibilities. This should include Human Factors and coordination with other maintenance personnel and flight crew.

8.14.8.2. Operator's Maintenance Control Manual.

(*a*) An operator shall provide a maintenance control manual, approved by the Authority as specified in 8.14.8.1, for the use and guidance of maintenance and operations personnel.

8.14.8.3. Maintenance Programme.

(*a*) An operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance programme, approved by the Authority or acceptable to the State of Registry, containing the information required by 8.14.8.2. The design and application of the operator's maintenance programme shall observe Human Factors principles according to the State of Registry's guidance material.

(*b*) Copies of all approved amendments to the maintenance programme shall be furnished promptly to all organizations or persons to whom the maintenance programme has been issued.

8.14.8.4. Continuing Airworthiness Information.

(*a*) An operator of an aircraft of a maximum certificated take-off mass in excess of 5 700 kg shall, as prescribed by the State of Registry, ensure that the information resulting from maintenance and operational experience with respect to continuing airworthiness, is transmitted as required in Part of these regulations.

8.14.8.5. Maintenance Release.

(*a*) A maintenance release shall be completed and signed, as prescribed by the State of Registry, to certify that the maintenance work has been performed in accordance with the maintenance programme or other data and procedures acceptable to the State of Registry. Aircraft registered in Nigeria shall comply with the requirement of Nig. CARs 8.3.

(*b*) A maintenance release shall contain a certification including :

(1) Basic details of the maintenance performed ;

(2) The date such maintenance was completed ;

(c) When applicable, the identity of the approved maintenance organization ; and

(*d*) The identity of the person or persons signing the release.

8.14.9. AEROPLANE FLIGHT CREW

8.14.9.1. Composition of the Flight Crew.

(*a*) Designation of pilot-in-command.

An AOC holder shall designate for each flight a pilot to act as pilot-in-command.

(*b*) Flight engineer

When a separate flight engineer's station is incorporated in the design of an aircraft, the flight crew shall include at least one flight engineer especially assigned to that station, unless the duties associated with that station can be satisfactorily performed by another flight crew member, holding a flight engineer licence, without interference with regular duties.

8.14.9.2. Flight Crew Member Emergency Duties.

(*a*) An operator shall, for each type of aircraft, assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation. Recurrent training in accomplishing these functions shall be contained in the operator's training programme and shall include instruction in the use of all emergency and life-saving equipment required to be carried, and drills in the emergency evacuation of the aircraft.

8.14.9.3. Flight Crew Member Training Programmes.

(*a*) An operator shall establish and maintain a training programme that is designed to ensure that a person who receives training acquires and maintains the competency to perform assigned duties, including skills related to human performance. Ground and flight training programmes shall be established, either through internal programmes or through a training services provider, and shall include or make reference to a syllabus for those training programmes in the company operations manual. The training programme shall include training to competency for all equipment installed.

8.14.9.4. Qualifications.

(*a*) Flight crew member licensing

(1) An operator shall :

(*i*) Ensure that each flight crew member assigned to duty holds a valid licence issued by the State of Registry, or if issued by another Contracting State, rendered valid by the State of Registry ;

(*ii*) Ensure that flight crew members are properly rated ; and

(*iii*) Be satisfied that flight crew members are competent to carry out assigned duties.

(*b*) The operator of an aircraft equipped with an airborne collision avoidance system (ACAS II) shall ensure that each flight crew member has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collisions.

(*c*) Recent experience - pilot-in-command

(1) An operator shall not assign a pilot to act as pilot-in-command of an aircraft unless that pilot has made at least three take-offs and landings within the preceding 90 days on the same type of aircraft or in a flight simulator approved for the purpose.

(*b*) Recent experience-co-pilot.

(1) An operator shall not assign a co-pilot to operate at the flight controls of an aircraft during take-off and landing unless that pilot has made at least three take-offs and landings within the preceding 90 days on the same type of aircraft or in a flight simulator approved for the purpose.

(*e*) Pilot proficiency checks

(1) An operator shall ensure that piloting technique and the ability to execute emergency procedures is checked periodically in such a way as to demonstrate the pilot's competence. Where the operation may be conducted under the instrument flight rules, an operator shall ensure that the pilot's competence to comply with such rules is demonstrated to either a check pilot of the operator or a representative of the State issuing the pilot licence.

8.14.10. Flight Operations Officer/Flight Dispatcher.

(*a*) An operator shall ensure that any person assigned as a flight operations officer/flight dispatcher is trained and maintains familiarization with all features of the operation which are pertinent to their duties, including knowledge and skills related to Human Factors.

8.14.10. Manuals, Logs and Records.

8.14.10.1. Operator's Maintenance Control Manual.

(*a*) An operator's maintenance control manual provided in accordance with 8.14.5.2, which may be issued in separate parts, should be developed according to the State of Registry's guidance material, and should at a minimum contain information about :

(1) The means for complying with the procedures required by 8.14.5.1 ;

(2) The means of recording the names and duties of the person or persons required by 8.14.5.1 ;

(3)The maintenance programme required by 8.14.5.2 ;

(4)The methods used for the completion and retention of the operator's maintenance records required by 8.14.5.5 ;

(5) The procedures for complying with the service information reporting requirements of Part 5.5.1.4 of these regulations.

(6) The procedures for implementing action resulting from mandatory continuing airworthiness information ;

(7) A system of analysis and continued monitoring of the performance and efficiency of the maintenance programme, in order to correct any deficiency in that programme ;

(8) The aircraft types and models to which the manual applies ;

(9) The procedures for ensuring that unserviceabilities affecting airworthiness are recorded and rectified ; and

(10) Procedures for advising the State of Registry of significant in-service occurrences.

8.14.10.2. Maintenance Programme.

(*a*) A maintenance programme for each aircraft as required by8.16.5 shall contain the following information :

(1) Maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilization of the aircraft ;

(2) When applicable, a continuing structural integrity programme ;

(3) Procedures for changing or deviating from a) and b) above as approved by the State of Registry ; and

(4) When applicable and approved by the State of Registry, condition monitoring and reliability programme descriptions for aircraft systems, components and engines.

(*b*) Maintenance tasks and intervals that have been specified as mandatory in approval of the type design, or approved changes to the maintenance programme, shall be identified as such.

(*c*) The maintenance programme shall be based on maintenance programme information made available by the State of Design or by the organization responsible for the type design, and any additional applicable experience.

8.14.10.3. Flight Recorder Records.

(*a*) The operator/owner of the aircraft, or in the case where it is leased, the lessee, shall ensure, to the extent possible, in the event the aircraft becomes involved in an accident or incident, the preservation of all related flight recorder records and, if necessary, the associated flight recorders, and their retention in safe custody pending their disposition as determined by the Accident Investigation Bureau.

8.14.11. Cabin Crew

8.14.11.1. Assignment Of Emergency Duties.

(*a*) The requirement for cabin crew for each type of aircraft shall be determined by the operator, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aircraft, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. The operator shall assign these functions for each type of aircraft.

8.14.11.2. Cabin Crew at Emergency Evacuation Stations.

(*a*) When cabin crew are required by the Authority, each cabin crew member assigned to emergency evacuation duties shall occupy a seat provided in accordance with Part 7 of these regulations during take-off and landing and whenever the pilot-in-command so directs.

8.14.11.3. Protection of Cabin Crew During Flight.

(*a*) Each cabin crew member shall be seated with seat belt or, when provided, safety harness fastened during take-off and landing and whenever the pilot-in-command so directs.

8.14.11.4. Training.

(*a*) An operator shall ensure that a training programme is completed by all persons before being assigned as a cabin crew member.

(*b*) An operator shall establish and maintain a cabin crew training programme that is designed to ensure that persons who receive training acquire the competency to perform their assigned duties and includes or makes reference to a syllabus for the training programme in the company operations manual. The training programme should include Human Factors training.

8.14.12. Security Programme

8.14.12.1. Security Programme.

(*a*) Any person engaged in Corporate Aviations Operations using aircraft with a maximum take-off mass greater than 5700 kg, shall establish, implement and maintain a written operator security programme that meets the requirements of the Authority.

PART 8—IMPLEMENTING STANDARDS

For ease of reference, the number assigned to each implementing standard corresponds to its associated regulation. For example, IS : 8.2.1.5 would reflect a standard required in Subsection 8.2.1.5.

PART 8—IMPLEMENTING STANDARDS

IS : 8.5.1.21. METEOROLOGICAL OBSERVATIONS.

Note-The procedures for making meteorological observations on board aircraft in flight and for recording and reporting them are contained in *annex* 3, the PANS-ATM (Doc 4444) and the appropriate regional supplementary procedures (Doc 7030).

IS : 8.5.1.29. PASSENGER HEALTH AND SAFETY.

(*a*) A communicable disease could be suspected and require further evaluation if a person has a fever (temperature 38°C/100°F or greater) that is associated with certain signs or symptoms such as :

(*i*) appearing obviously unwell,

(*ii*) persistent coughing,

(*iii*) impaired breathing,

(*iv*) persistent diarrhoea,

(*v*) persistent vomiting,

(*vi*) skin rash,

(*vii*) bruising or bleeding without previous injury or

(*viii*) irrational behaviour.

(*b*) Handling of the sick passenger.

Cabin crewmember assigned to attend to the sick passenger shall be relieved of other duties during the flight.

The cabin crewmember assigned to attend to the sick passenger shall put on appropriate protective apparel

(*c*) Isolation of the sick passenger.

The sick passenger shall be isolated from any further contact with the rest of the passengers and crew

(*d*) The Pilot In Command report to Air Traffic Control shall include the following :

(*i*) Aircraft Identification.

(*ii*) Departure Aerodrome

(*iii*) Destination Aerodrome.

(*iv*) Estimated Time of Arrival.

(*v*) Number of persons on board.

(*vi*) Number of suspected case(s) on board ; and

(*vii*) Nature of the public health risk, if known

(*e*) The Pilot in Command shall complete the General Declaration form and submit copies to the Authority and the Port Health Authority.

IS : 8.7.2.2(*B*) GENERAL-ROTORCRAFT CLASS 1, 2, AND 3
CODE OF PERFORMANCE

(*a*) The following guidance material is the basis of the code of helicopter performance referenced in Part 8, Subpart : 8.7.2-Aircraft Used in Commercial Air Transport.

(*b*) Definitions :

(1) Category A. With respect to helicopters, means a multi-engined helicopter designed with engine and system isolation features and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

(2) Category B. With respect to helicopters, means a single engine or multi-engined helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed

(*c*) General guidance :

(1) Helicopters operating in performance Classes 1 and 2 should be certificated in

Category A

(2) Helicopters operating in performance Class 3 should be certificated in either Category A or Category B (or equivalent)

(3) Except as permitted by the appropriate Authority :

(*i*) Take-off or landing from/to heliports in a congested hostile environment should only be conducted in performance Class 1.

(*ii*) Operations in performance Class 2 should only be conducted with a safe forced landing capability during take-off and landing.

(*iii*) Operations in performance Class 3 should only be conducted in a non-hostile environment

(4) The Authority may grant a waiver from the provisions of (3) (*i*) (*ii*) and (*iii*) upon receiving a commercial air transport operator's application for waiver and undertaking a risk assessment of the operational conditions proposed, including :

(*i*) The type of operation and the circumstances of the flight ;

(*ii*) The area/terrain over which the flight is being conducted ;

(*iii*) The probability of a critical power-unit failure and the consequence of such an event ;

(*iv*) The procedures to maintain the reliability of the power-unit(s) ;

(*v*) The training and operational procedures to mitigate the consequences of the critical power-unit failure ; and

(*vi*) Installation and utilisation of a usage monitoring system.

IS : 8.7.2.3. SINGLE AND MULTI-ENGINE AEROPLANE OPERATIONS

(*a*) In addition to the requirements in outlined under Subsection8.7.2.3, an AOC holder seeking approval from the Authority to operate single-engine turbine-powered aeroplanes at night and/or in IMC shall comply with the additional requirements of this implementing standard.

(*b*) An AOC holder shall not operate single-engine, turbine-powered aeroplanes at night and/or in IMC unless the following airworthiness and operational requirements have been satisfied by the operator and approved by the Authority.

(1) Turbine Engine Reliability.

(2) Turbine engine reliability shall be shown to have a power loss rate of less than 1 per 100000 engine hours.

Note : Power loss in this context is defined as any loss of power, the cause of which may be traced to faulty engine or engine component design or installation, including design or installation of the fuel ancillary or engine control systems.

(*c*) The operator shall be responsible for engine trend monitoring.

(*d*) To minimize the probability of in-flight engine failure, the engine shall be equipped with :

(1) An ignition system that activates automatically, or is capable of being operated manually for take-off and landing, and during flight, in visible moisture

(2) A magnetic particle detection or equivalent system that monitors the engine, accessories gearbox, and reduction gearbox, and which includes a flight deck caution indication ; and

(3) An emergency engine power control device that permits continuing operation of the engine through a sufficient power range to safely complete the flight in the event of any reasonably probable failure of the fuel control unit.

(*e*) Systems and Equipment. Single-engine turbine-powered aeroplanes approved to operate at night and/or in IMC shall be equipped with the following systems and equipment intended to ensure continued safe flight and to assist in achieving a safe forced landing after an engine failure, under all allowable operating conditions :

(1) Two separate electrical generating systems, each one capable of supplying all probable combinations of continuous in-flight electrical loads for instruments, equipment and systems required at night and/or in IMC ;

(2) A radio altimeter ;

(3) An emergency electrical supply system of sufficient capacity and endurance, following loss of all generated power, to as a minimum :

(*i*) Maintain the operation of all essential flight instruments, communication ; and

(*ii*) Navigation systems during a descent from the maximum certificated altitude in a glide configuration to the completion of a landing ;

(*iii*) Lower the flaps and landing gear, if applicable ;

(*iv*) Provide power to one pitot heater, which must serve an air speed indicator clearly visible to the pilot ;

(*v*) Provide for operation of the landing light specified in (*e*)(10) below ;

(*vi*) Provide for one engine restart, if applicable ; and

(*vii*) Provide for the operation of the radio altimeter ;

(4) Two attitude indicators, powered from independent sources ;

(5) A means to provide for at least one attempt at engine re-start ;

(6) Airborne weather radar ;

(7) A certified area navigation system capable of being programmed with the positions of aerodromes and safe forced landing areas, and providing instantly available track and distance information to those locations ;

(8) For passenger operations, passenger seats and mounts which meet dynamically-tested performance standards and which are fitted with a shoulder harness or a safety belt with a diagonal shoulder strap for each passenger seat ;

(9) In pressurised aeroplanes, sufficient supplemental oxygen for all occupants for descent following engine failure at the maximum glide performance from the maximum certificated altitude to an altitude at which supplemental oxygen is no longer required ;

(10) A landing light that is independent of the landing gear and is capable of adequately illuminating the touchdown area in a night forced landing ; and

(11) An engine fire warning system.

(*f*) Minimum Equipment List (MEL). An AOC holder shall develop an MEL approved by the Authority that is appropriate to the type of single-engine turbine-powered aeroplane operated specifying the operating equipment required for night and/or IMC operations, and for day/VMC operations.

(*g*) Aeroplane Flight Manual (AFM) Information. The AFM shall include limitations, procedures, approval status and other information relevant to operations by single-engine turbine-powered aeroplanes at night and/or in IMC.

(*h*) Event Reporting. An AOC holder operating turbine-powered aeroplanes at night and/or in IMC shall report all significant failures, malfunctions or defects to the Authority who in turn will notify the State of Design.

(*i*) Operator Planning. Each AOC holder operating single-engine turbine-powered aeroplanes at night and/or in IMC shall take account of all relevant information in the assessment of intended routes or areas of operations, including the following :

(1) The nature of the terrain to be overflown, including the potential for carrying out a safe forced landing in the event of an engine failure or major malfunction ;

(2) Weather information, including seasonal and other adverse meteorological influences that may affect the flight ; and

(3) Other criteria and limitations as specified by the Authority.

(*j*) Each AOC holder shall identify aerodromes or safe forced landing areas available for use in the event of engine failure and the position of these shall be programmed into the area navigation system.

Note 1 : A '*safe*' forced landing in this context means a landing in an area at which it can reasonably be expected that it will not lead to serious injury or loss of life, even though the aeroplane may incur extensive damage.

Note 2 : Operation over routes and in weather conditions that permit a safe forced landing in the event of an engine failure, as specified in Sub-section 8.8.1.30(*a*) is not required for aeroplanes approved in accordance with Sub-section 8.8.1.30(*a*)(1). The availability of forced landing areas at all points along a route is not specified for these aeroplanes because of the very high engine reliability, additional systems and operational equipment, procedures and training requirements specified in this implementing standard.

(*k*) Flight Crew Experience, Training and Checking.

(1) No person may serve and no AOC holder shall use a flight crewmember in single-engine turbine-powered aeroplanes engaged in commercial air transport unless he or she has completed the appropriate flight crewmember training as specified in this Part and approved by the Authority.

(2) The AOC holder's approved flight crew training and checking shall be appropriate to night and/or IMC operations by single engine turbine-powered aeroplanes, covering normal, abnormal and emergency procedures and, in particular, engine failure, including descent to a forced landing in night and/or in IMC conditions.

(*l*) Route Limitations Over Water.

(1) An AOC holder shall not conduct over water operations using single-engine turbine-powered aeroplanes operating at night and/or in IMC except in areas of operation or over specific routes identified in the AOC holder's operation specifications.

(2) No AOC holder may conduct over water operations using single-engine turbine-powered aeroplanes operating at night and/or in IMC except in accordance with procedures approved by the Authority in the AOC holder's operations manual for over water operations covering flight beyond gliding distance from an area suitable for a safe forced landing/ ditching having regard to the characteristics of the aeroplane, seasonal weather influences, including likely sea state and temperature, and the availability of search and rescue services.

(*m*) Operator Certification or Validation.

(1) An AOC holder applying for operations specifications granting authorisation to conduct single-engine turbine-powered aeroplane operations at night and/or in IMC shall demonstrate to the Authority consistent with Part 9 Air Operator Certification & Administration, the ability to conduct operations by single-engine turbine-powered aeroplanes at night and/or in IMC through a certification and approval process specified by the Authority.

IS : 8.8.1.7. Instrument Approach Operating Minima

(*a*) Each operator establishing aerodrome-operating minima shall have its method for determining such minima approved by the Authority.

(*b*) Each operator's method for determining aerodrome-operating minima shall accurately account for—

(1) The type, performance and handling characteristics of the aircraft ;

(2) The composition and experience of the flight crew ;

(3) The dimensions and characteristics of the runways selected for use ;

(4) Aircraft equipment used for navigation and aircraft control during the approach to landing and the missed approach ;

(5) Obstacles in the approach and missed approach areas and the obstacle clearance altitude/height for the intended instrument approach procedures ;

(6)The means used to determine and report meteorological conditions ; and

(7) The obstacles in the climb out areas and the necessary clearance margins.

(8) The adequacy and performance of the available visual and non-visual ground aids.

(9) The declared distances, for helicopters.

IS : 8.8.1.9. CATEGORY II AND III MANUAL

(*a*) Application for approval. An applicant for approval of a Category II or III manual or an amendment to an approved Category II manual shall submit the proposed manual or amendment to the Authority. If the application requests an evaluation programme, it shall include the following :

(1) The location of the aircraft and the place where the demonstrations are to be conducted.

(2) The date the demonstrations are to commence (at least 10 days after filing the application).

(*b*) Contents. Each Category II or III manual must contain :

(1) The registration mark, make, and model of the aircraft to which it applies.

(2) A maintenance programme.

(3) The procedures and instructions related to recognition of DH, use of runway visual range (RVR) information, approach monitoring, the decision region (the region between the middle marker and the decision height), the maximum permissible deviations of the basic ILS indicator within the decision region, a missed approach, use of airborne low approach equipment, minimum altitude for the use of the autopilot, instrument and equipment failure warning systems, instrument failure, and other procedures, instructions, and limitations that may be found necessary by the Authority.

Note 1 : Category II approval is required to prior to obtaining Category III approval.

Note 2 : ICAO Doc 9365, Manual on All Weather Operations, provides additional guidance.

IS : 8.8.1.28. INTERCEPTION OF CIVIL AIRCRAFT

(*a*) Nigeria shall observe the following principles regarding the interception of civil aircraft.

(1) Interception of civil aircraft will be undertaken only as a last resort.

(2) If undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome.

(3) Practice interception of civil aircraft will not be undertaken.

(4) Navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established.

(5) In the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

Note : In the unanimous adoption by the 25th Session (Extraordinary) of the ICA0 Assembly on 10 May 1984 of Article 3 bis to the Convention on International Civil Aviation, the Contracting States have recognised that "*every State must refrain from resorting to the use of weapons against civil aircraft in flight*."

(*b*) Nigeria shall ensure that :

(1) A standard method has been established and made available to the public for the manoeuvring of aircraft intercepting a civil aircraft that is designed to avoid any hazard for the intercepted aircraft.

(2) Provision is made for the use of secondary surveillance radar or ADS-B, where available, to identify civil aircraft in areas where they may be subject to interception.

(*c*) The PIC of an aircraft that is intercepted by another aircraft shall immediately :

(1) Follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in item (*e*) below.

(2) Notify, if possible, the appropriate air traffic services unit.

(3) Attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz.

(4) If equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

(5) If equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate air traffic services unit.

(*d*) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

(*e*) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

(*f*) Radio communication during interception. If radio contact is established during interception but communication in a common language is not possible, the PIC of each involved aircraft shall attempt to convey instructions, acknowledgement of instructions and essential at information by using the phrases and pronunciations in Table 1below and transmitting each phrase twice :

Table 1

Phrases for use by INTERCEPTING aircraft			Phrases for use by INTERCEPTED aircraft		
Phrase	Pronunciation 1	Meaning	Phrase	Pronunciation 1	Meaning
CALL SIGN	KOL SA-IN	What is your call sign?	CALL SIGN (call sign)2	KOL SA-IN (call sign)	My call sign is (call sign)
FOLLOW	FOL-LO	Follow me	WILCO	VILL-KO	Understood Will comply
DESCEND	DEE-SEND	Descend for landing	CAN NOT	KANN NOTT	Unable to comply
YOU LAND	YOU LAAND	Land at this aerodrome	REPEAT	REE-PEET	Repeat your instruction
PROCEED	PRO-SEED	You may proceed	AM LOST	AM LOSST	Position unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK3	HI-JACK	I have been hijacked
			LAND. (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE-SEND	I require descent

1. In the second column, syllables to be emphasised are underlined.

2. The call sign required to be given is that used in radiotelephone, communications with air traffic services units and corresponding to the aircraft identification in the flight plan.

3. Circumstances may not always permit, nor make desirable, the use of the phrase "*HIJACK*".

(*g*) The signals in Table 2shall be used by the pilots of each involved aircraft in the event of interception. Signals initiated by intercepting aircraft and responses by intercepted aircraft.

Table 2

Series	*Intercepting Aircraft Signal*	*Meaning*	*Intercepted Aircraft Responds*	*Meaning*
1	DAY or NIGHT ¾ Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left, (or to the right in the case of a helicopter) on the desired heading. *Note* : Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1. *Note* : If the intercepting aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft each time it passes the intercepted aircraft.	You have been intercepted. Follow me.	DAY or NIGHT ¾Rocking aircraft. flashing navigational lights at irregular intervals and following.	Understood, will comply.
2	DAY or NIGHT ¾ An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT ¾Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT ¾ Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover hear to the landing area.	Land at this aerodrome.	DAY or NIGHT ¾Lowering landing gear (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

(*g*) The signals in Table 2shall be used by the pilots of each involved aircraft in the event of interception. Signals initiated by intercepting aircraft and responses by intercepted aircraft.

Table 2

Series	*Intercepting Aircraft Signal*	*Meaning*	*Intercepted Aircraft Responds*	*Meaning*
4	DAY or NIGHT–Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300m (1000ft) but not exceeding 600m (2000ft) (in the case of a helicopter, at a height exceeding 50m (170ft) but not exceeding 100m (330ft) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT—If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses he Series 1 signals prescribed for intercepting aircraft. If it is decided to release the incepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT—Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply. In distress.	DAY or NIGHT—Use Series 2 signals prescribed for intercepting aircraft.	
6	DAY or NIGHT ¾ Irregular flashing of all available lights.		DAY or NIGHT—Use Series 2 signals prescribed for intercepting aircraft.	Understood

IS : 8.8.1.33. Remotely Piloted Aircraft (RPA).

(*a*) Nigeria Operator's Application Form to operate Remotely Piloted Aircraft (RPA) within (NIGERIA).

Application Form for Remotely Piloted Aircraft Operations by a (NIGERIA) Operator
(*To be completed by a foreign operator for an approval to conduct operations in NIGERIA*)

Section 1. Applicant information	
1*a*. Operator, or if applicable, Company registered name and trading name if different. Address : mailing address ; telephone ; fax; and e-mail.	2. Pilot(s) of remote aircraft. Address : mailing address ; telephone; fax ; and e-mail.
1*b*. RPA operator certificate number:	2*b*. Remote pilot licence number(s) for each pilot :
3. Insurance Information : Name of Insurer and address, including telephone : fax and e-mail.	

Section 2 : Aircraft identification

1. Aircraft registration number : .....

2. Aircraft identification to be used in radiotelephony, if applicable : .....

3. Aircraft type : .....

4. Aircraft description (eg. Engines, propellers, wing span) : .....

5. Aircraft controlled via

☐ Line of sight

☐ Satellite

☐ Computer program

☐ Other.....

6. Aircraft equipment (eg. Sprayers,-camera, type, live feed or photographs) : .....

7. If camera equipped, aircraft camera transmission destination :

☐ Operator/Company home base

☐ Other (identify) : .....

8. Frequency band to be used : .....

9. Aircraft radio station licence number, if applicable : .....

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Section 3. Description of intended operation

1. Proposed type(s) of operation :

☐ Aerial mapping ; ☐ Aerial surveying ; ☐ Aerial photography ; ☐ Aerial advertising

☐ Aerial surveillance and inspection ; ☐ Forest fire management ; ☐ Meterological service

☐ Search and rescue ; ☐ Accident/incident investigation ;

☐ Cargo, indicate type of cargo : .....

Is cargo classified as dangerous goods : ☐ yes ; ☐ no

Is payload internal ☐ or external ☐

☐ Other : .....

.....

2. Flight Rules : ☐ VFR ; ☐ IFR ; ☐ IMC ; ☐ VLOS (Visual Line of Sight)

3. Dates/Geographic areas/description of intended operations and proposed route structure :

a. Date(s) of intended flight (dd/mm/yyyy) : .....

b. Point of departure : .....

c. Destination : .....

d. Route to be followed : .....

e. Cruising speeds(s) : .....

f. Cruising level(s)/altitude : .....

g. Duration/frequency of flight : .....

h. Emergency set down sites along proposed route : .....

i. For emergency landings :

1. responsible person for aircraft recovery : .....

2. responsible person for clean up if impact occurs : .....

j. Emergency contact telephone numbers : .....

Section 4. RPA Characteristics

1. RPA Characteristics :

(*a*) Type of aircraft :

(*b*) Maximum certificated take-off mass :

(*c*) Number of engines :

(*d*) Take-off and landing requirements :

(*e*) Detect and avoid capabilities :

(*f*) Number and location of remote pilot stations as well as handover procedures between remote pilot stations, if applicable :

(*g*) payload information/description :

(*h*) Visual control for takeoff and/or landing or takeoff and landing handled through camera on board

2. Performance characteristics :

(*a*) Operating speeds : .....

(*b*) Typical and maximum climb rates : .....

(*c*) Typical and maximum descent rates : .....

(*d*) Typical and maximum turn rates : .....

(*e*) Maximum aircraft endurance : .....

(*f*) Other, such as limitations for wind, icing, precipitation : .....

4. Communications, Navigation and Surveillance capabilities

a. Aeronautical safety communications frequencies and equipment :

(*i*) ATC communications, including any alternate means of communication : .....

(*ii*) Command and control links (C2) including performance parameters and designated operational coverage area ; .....

iii. Communications between remote pilot and RPA observer, if applicable ; .....

b. Navigation equipment ; and .....

c. Surveillance equipment (e.g. SSR transponder, ADS-B out). .....

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5. Emergency procedures :

(*a*) Communications failure with ATC : .....

(*b*) C2 failure : .....

(c) Remote pilot RPA observer communications failure, if applicable : .....

(d) Satellite failure, if applicable : .....

(e) Recovery during unplanned landings : .....

(f) Communication procedure with local law enforcement in case of impact : .....

Atach copies of the following, in English translation if original documents are not in the English language :

* Insurance certificate ;

* Noise certification document issued in accordance with ICAO *Annex* 16 ;

* Operator security programme ; and

* Proposed flight plan to be filed with ATC

Signature of Applicant : Date (dd/mm/yyyy) : Name and title :

Section 5 to be completed by the CAA

Evaluated by (name and office) : CAA decision :

0 Approval granted 0 Not approved

Remarks :

Signature of CAA representative : Date (dd/mm/yyyy) :

IS : 8.8.2.11. Universal Aviation Signals.

(*a*) Distress signals. The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested :

*Note*1 : None of the provisions in this section shall prevent the use, by an aircraft in distress, of any means at its disposal to attract attention, make known its position and obtain help.

Note 2 : For full details of telecommunication transmission procedures for the distress and urgency signals, see ICAO *Annex* 10, Volume II, Chapter 5.

Note 3 : For details of the search and rescue visual signals, see ICAO *Annex* 12.

(1) A signal made by radiotelegraphy or by any other signalling method consisting of the group SOS (***— — — ***) in the Morse Code.

(2) A signal sent by radiotelephony consisting of the spoken word MAYDAY.

(3) Rockets or shells throwing red lights, fired one at a time at short intervals.

(4) A parachute flare showing a red light.

Note : Article 41 of the ITU Radio Regulations (Nos. 3268, 3270 and 3271 refer) provides information on the alarm signals for actuating radiotelegraph and radiotelephone auto-alarm systems: 3268 The radiotelegraph alarm signal consists of a series of twelve dashes sent in one minute, the duration of each dash being four seconds and the duration of the interval between consecutive dashes one second. It may be transmitted by hand but its transmission by means of an automatic instrument is recommended. 3270 The radiotelephone alarm signal consists of two substantially sinusoidal audio frequency tones transmitted alternately. One tone shall have a frequency of 2200 Hz and the other a frequency of 1300 Hz, the duration of each tone being 250 milliseconds. 3271 The radiotelephone alarm signal, when generated by automatic means, shall be sent continuously for a period of at least thirty seconds but not exceeding one minute; when generated by other means, the signal shall be sent as continuously as practicable over a period of approximately one minute.

(*b*) The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance :

(1) The repeated switching on and off of the landing lights ; or

(2) The repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

(*c*) The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight :

(1) A signal made by radiotelegraphy or by any other signalling method consisting of the group XXX.

(2) A signal sent by radiotelephony consisting of the spoken words PAN, PAN.

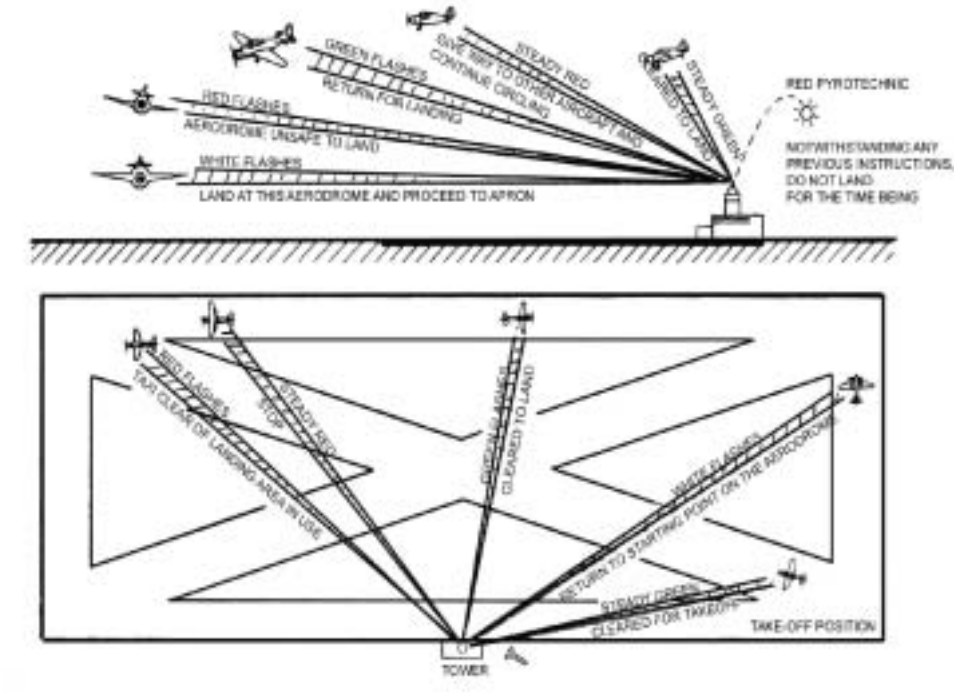
(*d*) Visual signals used to warn an unauthorised aircraft. By day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars will indicate to an unauthorised aircraft that it is flying in or about to enter a restricted, prohibited, or danger area, and that the aircraft is to take such remedial action as may be necessary.

(*e*) Signals for aerodrome traffic. Aerodrome controllers shall use and pilots shall obey the following light and pyrotechnic signals :

		From Aerodrome Control to :	
Light		Aircraft in flight	Aircraft on the ground
Directed towards aircraft concerned	Steady green.	Cleared to land.	Cleared for takeoff.
(See Figure 1.1)	Steady red.	Give way to other aircraft and continue circling.	Stop
	Series of green flashes.	Return for landing.*	Cleared to taxi.
	Series of red flashes.	Aerodrome unsafe, do not land.	Taxi clear of landing area in use.
	Series of white flashes	Land at this aerodrome and proceed to apron*.	Return to starting point on the aerodrome
	Red pyrotechnic	Notwithstanding any previous instructions, do not land for the time being	

* Clearances to land and to taxi will be given in due course.

Figure 8.1



(*f*) Pilots shall acknowledge aerodrome controller signals as follows :

(1) When in flight—

(*i*) During the hours of daylight by rocking the aircraft's wings.

Note : This signal should not be expected on the base and final legs of the approach.

(*ii*) During the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

(*g*) When on the ground—

(1) During the hours of daylight by moving the aircraft's ailerons or rudder.

(2) During the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

(*h*) Aerodrome authorities shall use the following visual ground signals during the following situations :

(1) Prohibition of landing. A horizontal red square panel with yellow diagonals (Figure 8.2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.

Figure 8.2

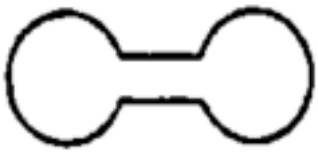
(2) *Need for special precautions while approaching or landing* : A horizontal red square panel with one yellow diagonal (Figure 8.3) when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions must be observed in approaching to land or in landing.

Figure 8.3

(3) *Use of runways and taxiways* :

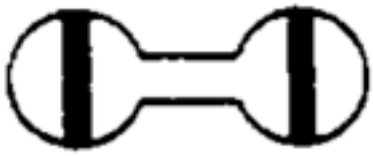
(*i*) A horizontal white dumb-bell (Figure 8.4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

Figure 8.4.



(*ii*) The same horizontal white dumb-bell as in Figure 8.4, but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 8.5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways.

Figure 8.5



(4) *Closed runways or taxiways* : Crosses of a single contrasting colour, yellow or white (Figure 8.6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

Figure 8.6

(5) *Directions for landing or takeoff* :

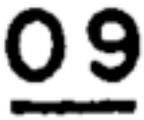
(*i*) A horizontal white or orange landing T (Figure 8.7) indicates the direction to be used by aircraft for landing and rake-off, which shall be in a direction parallel to the shaft of the T towards the cross arm.

Note : When used at night, the landing T is either illuminated or outlined in white coloured lights.

Figure 8.7

(*ii*) A set of two digits (Figure 8.8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for takeoff, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.

Figure 8.8

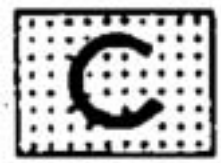


(6) *Right-hand traffic* : When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure 8.9) indicates that turns are to be made to the right before landing and after takeoff.

Figure 8.9

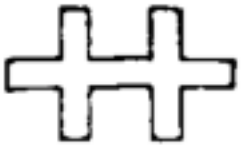
(7) *Air traffic services reporting office* : The letter C displayed vertically in black against a yellow background (Figure 8.10) indicates the location of the air traffic services reporting office.

Figure 8.10



(8) *Glider flights in operation* : A double white cross displayed horizontally (Figure 8.11) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

Figure 8.11



(9) The following marshalling signals shall be used from a signalman to an aircraft.

Note : These signals are designed for use by the signalman, with hands illuminated as necessary to facilitate observation by the pilot, and facing the aircraft in a position.

(10) For fixed-wing aircraft, the signalman shall be positioned forward of the left-wing tip within view of the pilot and, for helicopters, where the signalman can best be seen by the pilot.

Note 1 : The meaning of the relevant signals remains the same if bats, illuminated wands or torchlights are held.

Note 2 : The aircraft engines are numbered, for the signalman facing the aircraft, from right to left (i.e. No. I engine being the port outer engine).

Note 3 : Signals marked with an asterisk are designed for use to hovering helicopters.

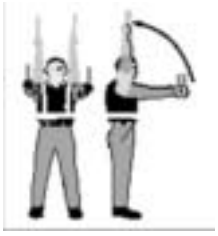
(11) Prior to using the following signals, the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft might otherwise strike.

Note : The design of many aircraft is such that the path of the wing tips, engines and other extremities cannot always be monitored visually from the flight deck while the aircraft is being manoeuvred on the ground.

1. Wingwalker/guide.

Raise right hand above head level with wand pointing up ; move left-hand wand pointing down toward body.

Note : This signal provides an indication by a person positioned at the aircraft wing tip to the pilot/ marshaller/ push-back operator that the aircraft movement on/off a parking position would be unobstructed.



2. Identify gate

Raise fully extended arms straight above head with wands pointing up.

3. Proceed to next signalman or as directed by tower/ ground control

Point both arms upward ; move and extend arms outward to sides of body and point with wands to direction of next signalman or taxi area.

4. Straight ahead

Bend extended arms at elbows and move wands up and down from chest height to head.

5(*a*) Turn left (from pilot's point of view)

With right arm and wand extended at a 90-degree angle to body, make "come ahead" signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

5(*b*) Turn right (from pilot's point of view)

With left arm and wand extended at a 90-degree angle to body, make "come ahead" signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

6(*a*) Normal stop

Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.

6(*b*) Emergency stop

Abruptly extend arms and wands to top of head, crossing wands.

7(*a*) Set brakes

Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. Do not move until receipt of "thumbs up" acknowledgement from flight crew.

7(*b*) Release brakes

Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. Do not move until receipt of "thumbs up" acknowledgement from flight crew

8(*a*) Chocks inserted

With arms and wands fully extended above head, move wands inward in a "jabbing" motion until wands touch. Ensure acknowledgement is received from flight crew.

8(*b*) Chocks removed

With arms and wands fully extended above head, move wands outward in a "jabbing" motion. Do not remove chocks until authorised by flight crew.

9. Start engine(s)

Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.

10. Cut engines

Extend arm with wand forward of body at shoulder level ; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.

11. Slow down

Move extended arms downwards in a "*patting*" gesture, moving wands up and down from waist to knees.

12. Slow down engine(s) on indicated side

With arms down and wands toward ground, wave either right or left wand up and down indicating engine(s) on left or right side respectively should be slowed down.

13. Move back

With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6(*a*)
or 6(*b*).

14 (*a*) Turns while backing (for tail to starboard)

Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.

14 (*b*) Turns while backing (for tail to port)

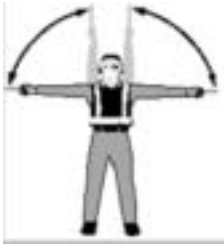
Point right arm with wand down and bring left arm from overhead vertical position to horizontal forward position, repeating left-arm movement.

15. Affirmative/all clear

Raise right arm to head level with wand pointing up or display hand with "thumbs up"; left arm remains at side by knee.

16. Hover

Fully extend arms and wands at a 90-degree angle to sides.



17. Move upwards

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upwards. Speed of movement indicates rate of ascent.

18. Move downwards

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downwards. Speed of movement indicates rate of descent.

19(*a*) Move horizontally left (from pilot's point of view)

Extend arm horizontally at a 90-degree angle to right side of body. Move other arm in same direction in a sweeping motion.

19(*b*) Move horizontally right (from pilot's point of view)

Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.

20. Land

Cross arms with wands downwards and in front of body.

21. Fire

Move right-hand wand in a "*fanning*" motion from shoulder to knee, while at the same time pointing with left-hand wand to area of fire.

22. Hold position/stand by

Fully extend arms and wands downwards at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.

23. Dispatch aircraft

Perform a standard salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until aircraft has begun to taxi.

24. Do not touch controls (technical/servicing communication signal)

Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.

25. Connect ground power (technical/servicing communication signal)

Hold arms fully extended above head; open left hand horizontally and move finger tips of right hand into and touch open palm of left hand (forming a "*T*"). At night, illuminated wands can also be used to form the "*T*" above head.

26. Disconnect power (technical/servicing communication signal)

Hold arms fully extended above head with finger tips of right hand touching open horizontal palm of left hand (forming a "*T*") ; then move right hand away from the left. Do not disconnect power until authorised by flight crew. At night, illuminated wands can also be used to form the "*T*" above head.

27. Negative (technical/servicing communication signal)

Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with "thumbs down"; left hand remains at side by knee.

28. Establish communication via interphone (technical/servicing communication signal)

Extend both arms at 90 degrees from body and move hands to cup both ears.

29. Open/close stairs (technical/servicing communication signal)

With right arm at side and left arm raised above head at a 45-degree angle, move right arm in a sweeping motion towards top of left shoulder.

Note : This signal is intended mainly for aircraft with the set of integral stairs at the front.

(*i*) Signals from the pilot of an aircraft to a signalman.

(1) The PIC or CP shall use the following signals when communicating with a signalman :

Note 1 : These signals are designed for use by a pilot in the cockpit with hands plainly visible to thesignalman, and illuminated as necessary to facilitate observation by the signalman.

Note 2 : The aircraft engines are numbered in relation to the signalman facing the aircraft, from right to left (i.e. No. I engine being the port outer engine).

(2) Brakes engaged : Raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.

(3) Brakes released. Raise arm, with fist clenched, horizontally in front of face, then extend fingers.

Note : The moment the fist is clenched or the fingers are extended indicates, respectively, the moment of brake engagement or release.

(4) Insert chocks : Arms extended, palms outwards, move hands inwards to cross in front of face.

(5) Remove chocks : Hands crossed in front of face, palms outwards, move arms outwards.

(6) Ready to start engine(s) : Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

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Table of Cruising Levels

IS : 8.8.3.4.—(*a*) The cruising levels at which a flight or a portion of a flight is to be conducted shall be in terms of :

(1) Flight levels, for flights at or above the lowest usable flight level or, where applicable, above the transition altitude ;

(2) Altitudes, for flights below the lowest usable flight level or, where applicable, at or below the transition altitude.

(*b*) The PIC shall observe the following cruising levels in areas where, on the basis of regional air navigation agreement and in accordance with conditions specified therein, a vertical separation minimum (VSM) of 300 m (1000 ft) is applied between FL 290 and FL 410 inclusive :*

TRACK**												
From 000 Degrees to 179 Degrees***						From 180 Degrees to 359 Degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
	Altitude			Altitude			Altitude			Altitude	
FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet
-90	—	—	—	—	—	0	—	—	—	—	—
10	300	1000	—	—	—	20	600	2000	—	—	—
30	900	3000	35	1050	3500	40	1200	4000	45	1350	4500
50	1500	5000	55	1700	5500	60	1850	6000	65	2000	6500
70	2150	7000	75	2300	7500	80	2450	8000	85	2600	8500
90	2750	9000	95	2900	9500	100	3050	10000	105	3200	10500
110	3350	11000	115	3500	11500	120	3650	12000	125	3800	12500
130	3950	13000	135	4100	13500	140	4250	14000	145	4400	14500
150	4550	15000	155	4700	15500	160	4900	16000	165	5050	16500
170	5200	17000	175	5350	17500	180	5500	18000	185	5650	18500
190	5800	19000	195	5950	19500	200	6100	20000	205	6250	20500
210	6400	21000	215	6550	21500	220	6700	22000	225	6850	22500
230	7000	23000	235	7150	23500	240	7300	24000	245	7450	24500
250	7600	25000	255	7750	25500	260	7900	26000	265	8100	26500
270	8250	27000	275	8400	27500	280	8550	28000	285	8700	28500
290	8850	29000				300	9150	30000			
310	9450	31000				320	9750	32000			
330	10050	33000				340	10350	34000			
350	10650	35000				360	10950	36000			
370	11300	37000				380	11600	38000			
						400	12200	40000			
410	12500	41000				430	13100	43000			
450	13700	45000				470	14350	47000			
490	14950	49000				510	15550	51000			
etc.	etc.	etc.				etc.	etc.	etc.			

* Except when, on the basis of regional air navigation agreements, a modified table of cruising levels based on a nominal vertical separation minimum of 300 m (1000 ft) is prescribed for use, under specified conditions, by aircraft operating above FL 410 within designated portions of the airspace.

** Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

*** Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

(*c*) The PIC shall observe the following cruising levels in other areas not specified in item (*a*) above.

TRACK**											
From 000 Degrees to 179 Degrees***						From 180 Degrees to 359 Degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
	Altitude			Altitude			Altitude			Altitude	
FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet
-90	—	—	—	—	—	0	—	—	—	—	—
10	300	1000	—	—	—	20	600	2000	—	—	—
30	900	3000	35	1050	3500	40	1200	4000	45	1350	4500
50	1500	5000	55	1700	5500	60	1850	6000	65	2000	6500
70	2150	7000	75	2300	7500	50	2450	8000	85	2600	8500
90	2750	9000	95	2900	9500	100	3050	10000	105	3200	10500
110	3350	11000	115	3500	11500	120	3650	12000	125	3800	12500
130	3950	13000	135	4100	13500	140	4250	14000	145	4400	14500
150	4550	15000	155	4700	15500	160	4900	16000	165	5050	16500
170	5200	17000	175	5300	17500	180	5500	18000	185	5650	18500
190	5800	19000	195	950	19500	200	6100	20000	205	6250	20500
210	6400	21000	215	6550	21500	220	6700	22000	225	6850	22500
230	7000	23000	235	7150	23500	240	7300	24000	245	7450	24500
250	7600	25000	255	7750	25500	260	7900	26000	265	8100	26500
270	8250	27000	275	8100	27500	280	8550	28000	285	8700	28500
290	8850	29000	300	9150	30000	310	9450	31000	320	9750	32000
330	10050	33000	340	10350	34000	350	10650	35000	360	10950	36000
370	11300	37000	380	11600	38000	390	11900	39000	400	12200	40000
410	12500	41000	420	12500	42000	430	13100	43000	440	13400	44000
450	13700	45000	460	14000	46000	470	14350	47000	480	14650	48000
490	14950	49000	500	15250	50000	510	15550	51000	520	15850	52000
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

**Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

***.Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

Note 1 : ICAO Doc 9574, Manual on the Implementation of a 300 m (1000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive, contains guidance material relating to vertical separation.

Note 2 : ICAO Doc 8168, Procedures for Air Navigation Services, contains guidance for the system of flight levels.

IS : 8.10.1.9.—(*a*) Each AOC holder shall ensure that all operations personnel are provided company indoctrination training that covers the following areas : Company Procedures Indoctrination.

(1) AOC holder's organisation, scope of operation, and administrative practices as applicable to their assignments and duties.

(2) Appropriate provisions of these regulations and other applicable regulations and guidance materials.

(3) Contents of the AOC holder's certificate and operations specifications (not required for cabin crew).

(4) AOC holder policies and procedures.

(5) Crew member and flight operations officer duties and responsibilities.

(6) AOC holder testing programme for alcohol and narcotic psychoactive substances.

(7) Applicable crew member manuals.

(8) Appropriate portions of the AOC holder's Operations Manual.

IS : 8.10.1.10.—(*a*) Each AOC holder shall establish, maintain, and have approved by the Authority, staff training programmes, as required by the Technical Instructions. Initial Dangerous Goods Training.

(*b*) Each AOC holder not holding a permanent approval to carry dangerous goods shall ensure that-

(1) Staff who are engaged in general cargo handling have received training to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column I of Table I to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how to identify such goods.

(2) Crew members, passenger handling staff, and security staff employed by the AOC holder who deal with the screening of a passengers and their baggage, have received training which covers as a minimum, the areas identified in Column 2 of Table I to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify them and what requirements apply to the carriage of such goods by passengers.

Table 1

Areas of Dangerous Goods Training	1	2
General Philosophy	x	x
Limitations on Dangerous Goods in Air Transport	x	x
Package Marking and Labelling	x	x
Dangerous Goods in Passengers Baggage		x
Emergency Procedures		x

Note : "*x*" indicates an area to be covered.

(*c*) Each AOC holder holding a permanent approval to carry dangerous goods shall ensure that :

(1) Staff who are engaged in the acceptance of dangerous goods have received training and are qualified to carry out their duties which covers as a minimum, the areas identified in Column I of Table 2 to a depth sufficient to ensure the staff can take decisions on the acceptance or refusal of dangerous goods offered for carriage by air.

(2) Staff who are engaged in ground handling, storage and loading of dangerous goods have received training to enable them to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column 2 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them.

(3) Staff who are engaged in general cargo handling have received training to enable them to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column 3 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them.

(4) Flight crew members have received training which covers as a minimum, the areas identified in Column 4 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how they should be carried on an aircraft.

(5) Passenger handling staff ; security staff employed by the operator who deal with the screening of passengers and their baggage; and crew members other than flight crew members, have received training which covers as a minimum, the areas identified in Column 5 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and what requirements apply to the carriage of such goods by passengers or, more generally, their carriage on an aircraft.

(*d*) Each AOC holder shall ensure that all staff who requires dangerous goods training receives recurrent training at intervals of not longer than 2 years.

(*e*) Each AOC holder shall ensure that records of dangerous goods training are maintained for all staff trained in accordance with paragraph (*d*).

(*f*) Each AOC holder shall ensure that its handling agent's staff are trained in accordance with the applicable column of Table 1 or Table 2

Table 2

Areas of Training	1	2	3	4	5
General Philosophy	x	x	x	x	x
Limitations on Dangerous Goods in the Air Transport	x	x	x	x	x
Classification and List of Dangerous Goods	x	x		x	
General Packing Requirements and Packing Instructions	x				
Packaging Specifications Marking	x				
Package Marking and Labelling	x	x	x	x	x
Documentation from the Shipper	x				
Acceptance of Dangerous Good, Including the Use of a Checklist	x				
Loading, Restrictions on Loading and Segregation	x	x	x	x	
Inspections for Damage or Leakage and Decontamination Procedures	x	x			
Provision of Information to Commander	x	x		x	
Dangerous Goods in Passengers' Baggage	x			x	x
Emergency Procedures	x	x		x	x

Note : "*x*" indicates an area to be covered.

(*g*) An AOC holder shall provide dangerous goods training manuals which contain adequate procedures and information to assist personnel in identifying packages marked or labelled as containing hazardous materials including—

(1) Instructions on the acceptance, handling, and carriage of hazardous materials.

(2) Instructions governing the determination of proper shipping names and hazard classes.

(3) Packaging, labelling, and marking requirements.

(4) Requirements for shipping papers, compatibility requirements, loading, storage, and handling requirements.

(5) Restrictions.

Initial Crew Resource Management Training.

IS : 8.10.1.12.—(*a*) Each AOC holder shall ensure that the flight operations officers and all aircraft crew members have CRM training as part of their initial and recurrent training requirements.

(1) A CRM training programme shall include—

(2) An initial indoctrination/awareness segment ;

(3) A method to provide recurrent practice and feedback ; and

(*b*) A method of providing continuing reinforcement.

(1) Curriculum topics to be contained in an initial CRM training course include—

(2) Communications processes and decision behaviour.

(3) Internal and external influences on interpersonal communications.

(4) Barriers to communication.

(5) Listening skills.

(6) Decision-making skills.

(7) Effective briefings.

(8) Developing open communications.

(9) Inquiry, advocacy, and assertion training.

(10) Crew self-critique.

(11) Conflict resolution.

(12) Team building and maintenance.

(13) Leadership and followship training.

(14) Interpersonal relationships.

(15) Workload management.

(16) Situational awareness.

(17) How to prepare, plan and monitor task completions.

(18) Workload distribution.

(19) Distraction avoidance.

(20) Individual factors.

(21) Stress reduction.

Initial Emergency Equipment Drills

IS : 8.10.1.13.—(*a*) Each aircraft crew member shall accomplish emergency training during the specified training periods, using those items of installed emergency equipment for each type of aircraft in which he or she is to serve.

(*b*) During initial training, each aircraft crew member shall perform the following one-time emergency drills—

(1) Protective Breathing Equipment (PBE)/Firefighting Drill.

(*i*) Locate source of fire or smoke (actual or simulated fire).

(*ii*) Implement procedures for effective crew co-ordination and communication, including notification of flight crew members about fire situation.

(*iii*) Don and activate installed PBE or approved PBE simulation device.

(*iv*) Manoeuvre in limited space with reduced visibility.

(*v*) Effectively use the aircraft's communication system.

(*vi*) Identify class of fire.

(*vii*) Select the appropriate extinguisher.

(*viii*) Properly remove extinguisher from securing device.

(*ix*) Prepare, operate and discharge extinguisher properly.

(*x*) Utilise correct firefighting techniques for type of fire.

(2) Emergency Evacuation Drill.

(*i*) Recognise and evaluate an emergency.

(*ii*) Assume appropriate protective position.

(*iii*) Command passengers to assume protective position.

(*iv*) Implement crew co-ordination procedures.

(*v*) Ensure activation of emergency lights.

(*vi*) Assess aircraft conditions.

(*vii*) Initiate evacuation (dependent on signal or decision).

(*viii*) Command passengers to release seatbelts and evacuate.

(*ix*) Assess exit and redirect, if necessary; to open exit, including deploying slides and commanding helpers to assist.

(*x*) Command passengers to evacuate at exit and run away from aircraft.

(*xi*) Assist special need passengers, such as handicapped, elderly, and persons in a state of panic.

(*xii*) Actually exit aircraft or training device using at least one of the installed emergency evacuation slides.

Note : The crew member may either observe the aeroplane exits being opened in the emergency mode and the associated exit slide/raft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions.

(*c*) Each aircraft crew member shall accomplish additional emergency drills during initial and recurrent training, including actual performance of the following emergency drills—

(1) Emergency Exit Drill.

(*i*) Correctly preflight each type of emergency exit and evacuation slide or slideraft (if part of cabin crew member's assigned duties).

(*ii*) Disarm and open each type of door exit in normal mode.

(*iii*) Close each type of door exit in normal mode.

(*iv*) Arm each type of door exit in emergency mode.

(*v*) Open each type of door exit in emergency mode.

(*vi*) Use manual slide inflation system to accomplish or ensure slide or slideraft inflation.

(*vii*) Open each type of window exit.

(*viii*) Remove eSCCMpe rope and position for use.

(2) Hand Fire Extinguisher Drill.

(*i*) Preflight each type of hand fire extinguisher.

(*ii*) Locate source of fire or smoke and identify class of fire.

(*iii*) Select appropriate extinguisher and remove from securing device.

(*iv*) Prepare extinguisher for use.

(*v*) Actually operate and discharge each type of installed hand fire extinguisher.

Note 1 : Fighting an actual or a simulated fire is not necessary during this drill.

Note 2 : The discharge of Halon extinguishing agents during firefighting drills in not appropriate, unless a training facility is used that is specifically designed to prevent harm to the environment from the discharged Halon. When such facilities are not used, other fire extinguishing agents that are not damaging to the environment should be used during the drills.

(*vi*) Utilise correct firefighting techniques for type of fire.

(*vii*) Implement procedures for effective crew co-ordination and communication, including notification of flight crew members about the type of fire situation.

(3) Emergency Oxygen System Drill.

(*i*) Preflight and operation of portable oxygen devices.

(*ii*) Actually operate portable oxygen bottles, including masks and tubing.

(*iii*) Verbally demonstrate operation of chemical oxygen generators or installed oxygen supply system.

(*iv*) Prepare for use and operate oxygen device properly, including donning and activation.

(*v*) Administer oxygen to self, passengers, and to those persons with special oxygen needs.

(*vi*) Utilise proper procedures for effective crew co-ordination and communication.

(*vii*) Manually open each type of oxygen mask compartment and deploy oxygen masks.

(*viii*) Identify compartments with extra oxygen masks.

(*ix*) Implement immediate action decompression procedures.

(*x*) Reset oxygen system, if applicable.

(*xi*) Preflight and operation of PBE.

(*xii*) Activate PBE.

Note : Several operators equip their aircraft with approved PBE units that have approved storage pouches fastened with two metal staples at one end. However, considerations of practicality and cost compel operators to use a less durable storage pouch that lacks the staple fasteners for training purposes. As a result, pilots and cabin crew members have been surprised that opening the pouch furnished on board requires more force than opening the training pouch. The Authority should require crew member training that includes the appropriate procedures for operating PBE. In those cases where pouches with staples are used for storage of the PBE unit, special emphasis in training should highlight the difference between the training pouch and the onboard pouch. The training pouch may be easy to open, but the approved, onboard pouch may require as much as 28 pounds of force to overcome the 2 staple fasteners.

(4) Flotation Device Drill.

(*i*) Preflight flotation device, if appropriate.

(*ii*) Don and inflate life vests.

(*iii*) Remove and use flotation seat cushions, as installed.

(*iv*) Demonstrate swimming techniques using a seat cushion, as installed.

(5) Ditching Drill, if applicable.

Note : During a ditching drill students shall perform the "prior to impact" and "*after impact*" procedures for a ditching, as appropriate to the specific operator's type of operation.

(*i*) Implement crew co-ordination procedures, including briefing with captain to obtain pertinent ditching information and briefing cabin crew members.

(*ii*) Co-ordinate time frame for cabin and passenger preparation.

(*iii*) Adequately brief passengers on ditching procedures.

(*iv*) Ensure cabin is prepared, including the securing of carry-on baggage, lavatories, and galleys.

(*v*) Demonstrate how to properly deploy and inflate slideraft.

(*vi*) Demonstrate how to properly deploy and inflate liferafts, if applicable.

(*vii*) Remove, position and attach sliderafts to aircraft.

(*viii*) Inflate rafts.

(*ix*) Use eSCCMpe ropes at overwing exits.

(*x*) Command helpers to assist.

(*xi*) Use slides and life vests or seat cushions as flotation devices.

(*xii*) Remove appropriate emergency equipment from aircraft.

(*xiii*) Board rafts properly.

(*xiv*) Initiate raft management procedures (i.e., disconnecting rafts from aircraft, applying immediate first aid, rescuing persons in water, salvaging floating rations and equipment, deploying sea anchor, tying rafts together, activating or ensuring operation of emergency locator transmitter).

(*xv*) Initiate basic survival procedures (i.e., removing and utilising survival kit items, repairing and maintaining raft, ensuring protection from exposure, erecting canopy, communicating location, providing continued first aid, providing sustenance).

(*xvi*) Use heaving line to rescue persons in water.

(*xvii*) Tie sliderafts or rafts together.

(*xviii*) Use life line on edge of slideraft or life raft as a handhold.

(*xix*) Secure survival kit items.

(*d*) Each aircraft crew member shall accomplish additional emergency drill requirements during initial and recurrent training including observing the following emergency drills—

(1) Liferaft Removal and Inflation Drill, if applicable.

(*i*) Removal of a liferaft from the aircraft or training device.

(*ii*) Inflation of a liferaft.

(2) Slideraft Transfer Drill.

(*i*) Transfer of each type of slideraft pack from an unusable door to a usable door.

(*ii*) Disconnect slideraft at unusable door.

(*iii*) Redirect passengers to usable slideraft.

(*iv*) Installation and deployment of slideraft at usable door.

(3) Slide and Slideraft Deployment, Inflation, and Detachment Drill.

(*i*) Engage slide girt bar in floor brackets, if applicable.

(*ii*) Arm slide for automatic inflation.

(*iii*) Inflate slides with and without quick-release handle (manually and automatically).

(*iv*) Disconnecting slide from the aircraft for use as a flotation device.

(*v*) Arm sliderafts for automatic inflation.

(*vi*) Disconnecting slideraft from the aircraft.

(4) Emergency Evacuation Slide Drill :

(*i*) Open armed exit with slide or slideraft deployment and inflation.

(*ii*) Egress from aircraft via the evacuation slide and run away to a safe distance.

Initial Aircraft Ground Training-flight Crew.

IS : 8.10.1.14(*B*)—(*a*) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown. Instructions shall include at least the following general subjects :

(1) AOC holder's dispatch, flight release, or flight locating procedures.

(2) Principles and methods for determining mass and balance, and runway limitations for takeoff.

(3) AOC holder's operations specifications, authorisations and limitations.

(4) Adverse weather recognition and avoidance, and flight procedures which shall be followed when operating in the following conditions :

(*i*) Icing.

(*ii*) Fog.

(*iii*) Turbulence.

(*iv*) Heavy precipitation.

(*v*) Thunderstorms.

(*vi*) Low-level windshear and microburst.

(*vii*) Low visibility.

(*viii*) Contaminated runways.

(*ix*) West African meteorology

(5) Normal and emergency communications procedures and navigation equipment including the AOC holder's communications procedures and ATC clearance requirements.

(6) Navigation procedures used in area departure, en route, area arrival, approach and landing phases, to include visual cues prior to and during descent below DH or MDA.

(7) Approved crew resource management training.

(8) Air traffic control systems, procedures, and phraseology.

(9) Aircraft performance characteristics during all flight regimes, including :

(*i*) The use of charts, tables, tabulated data and other related manual information.

(*ii*) Normal, abnormal, and emergency performance problems.

(*iii*) Meteorological and mass limiting performance factors (such as temperature, pressure, contaminated runways, precipitation, climb/runway limits).

(*iv*) Inoperative equipment performance limiting factors (such as MEL/CDL, inoperative antiskid).

(*v*) Special operational conditions (such as unpaved runways, high altitude aerodromes and drift down requirements).

(10) Normal, abnormal and emergency procedures on the aircraft type to be used.

(*b*) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including at least the following aircraft systems (if applicable) :

(1) Airframe.

(*i*) Aircraft

(*ii*) Aircraft dimensions, turning radius, panel layouts, cockpit and cabin configurations.

(*iii*) Other major systems and components or appliances of the aircraft.

(*iv*) Operating limitations.

(*v*) Approved aircraft flight manual.

(2) Powerplants.

(*i*) Basic engine description.

(*ii*) Engine thrust ratings.

(*iii*) Engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features.

(3) Electrical.

(*i*) Sources of aircraft electrical power (such as engine driven generators, APU generator, external power, etc.).

(*ii*) Electrical buses.

(*iii*) Circuit breakers.

(*iv*) Aircraft battery.

(*v*) Standby power systems.

(4) Hydraulic.

(*i*) Hydraulic reservoirs, pumps, accumulators; filters, check valves, interconnects and actuators.

(*ii*) Other hydraulically operated components.

(5) Fuel.

(*i*) Fuel tanks (location and quantities).

(*ii*) Engine driven pumps.

(*iii*) Boost pumps.

(*iv*) System valves and crossfeeds.

(*v*) Quantity indicators.

(*vi*) Provisions for fuel jettisoning.

(6) Pneumatic.

(*i*) Bleed air sources (APU, engine or external ground air).

(*ii*) Means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices.

(7) Air conditioning and pressurisation.

(*i*) Heaters, air conditioning packs, fans, and other environmental control devices.

(*ii*) Pressurisation system components such as outflow and negative pressure relief valves.

(*iii*) Automatic, standby, and manual pressurisation controls and annunciators.

(8) Flight controls.

(*i*) Primary controls (yaw, pitch, and roll devices).

(*ii*) Secondary controls (leading/trailing edge devices, flaps, trim, and damping mechanisms).

(*iii*) Means of actuation (direct/indirect or fly by wire).

(*iv*) Redundancy devices.

(9) Landing gear and brakes.

(*i*) Landing gear extension and retraction mechanism including the operating sequence of struts, doors, and locking devices, and brake and antiskid systems, if applicable.

(*ii*) Steering (nose or body steering gear).

(*iii*) Bogie arrangements.

(*iv*) Air/ground sensor relays.

(*v*) Visual downlock indicators.

(10) Ice and rain protection.

(*i*) Rain removal systems.

(*ii*) Anti-icing and/or deicing system(s) affecting flight controls, engines, pitot static and other probes, fluid outlets, cockpit windows, and aircraft structures.

(11) Equipment and furnishings.

(*i*) Exits.

(*ii*) Galleys.

(*iii*) Water and waste systems.

(*iv*) Lavatories.

(*v*) Cargo areas.

(*vi*) Crew member and passenger seats.

(*vii*) Bulkheads.

(*viii*) Seating and/or cargo configurations.

(*ix*) Non-emergency equipment and furnishings.

(12) Navigation equipment.

(*i*) Flight directors.

(*ii*) Horizontal situation indicator.

(*iii*) Radio magnetic indicator.

(*iv*) Navigation receivers (GPS, ADF, SDF/LDA, VOR, TACAN,LORAN-C, RNAV, Marker Beacon, DME)as required for the flight operations to be conducted.

(*v*) Inertial systems (INS, IRS).

(*vi*) Functional displays.

(*vii*) Fault indications and comparator systems.

(*viii*) Aircraft transponders.

(*ix*) Radio altimeters.

(*x*) Weather radar.

(*xi*) Cathode ray tube or computer generated displays of aircraft position and navigation information.

(13) Auto flight system.

(*i*) Autopilot.

(*ii*) Autothrottles.

(*iii*) Flight director and navigation systems.

(*iv*) Automatic approach tracking.

(*v*) Autoland.

(*vi*) Automatic fuel and performance management systems.

(14) Flight instruments.

(*i*) Panel arrangement.

(*ii*) Flight instruments (attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments).

(*iii*) Instrument power sources, and instrument sensory sources (e.g., pitot static pressure).

(15) Display systems.

(*i*) Weather radar.

(*ii*) Other cathode ray tube (CRT) or computer generated displays (e.g., checklist, vertical navigation or longitudinal navigation displays).

(16) Communication equipment.

(*i*) VHF/HF/SAT COM radios.

(*ii*) Audio panels.

(*iii*) Inflight interphone and passenger address systems.

(*iv*) Voice recorder.

(*v*) Air/ground passive communications systems (ACARS).

(17) Warning systems.

(*i*) Aural, visual, and tactile warning systems (including the character and degree of urgency related to each signal).

(*ii*) Warning and caution annunciator systems (including airborne collision avoidance, ground proximity and takeoff configuration warning systems).

(18) Fire protection.

(*i*) Fire and overheat sensors, loops, modules, or other means of providing visual and/or aural indications of fire or overheat detection.

(*ii*) Procedures for the use of fire handles, automatic extinguishing systems and extinguishing agents.

(*iii*) Power sources necessary to provide protection for fire and overheat conditions in engines, APU, cargo bay/wheel well, cockpit, cabin and lavatories.

(19) Oxygen.

(*i*) Passenger, crew, and portable oxygen supply systems.

(*ii*) Sources of oxygen (gaseous or solid).

(*iii*) Flow and distribution networks.

(iv) Automatic deployment systems.

(*v*) Regulators, pressure levels and gauges.

(*vi*) Servicing requirements.

(20) Lighting.

(*i*) Cockpit, cabin, and external lighting systems.

(*ii*) Power sources.

(*iii*) Switch positions.

(*iv*) Spare light bulb locations.

(21) Emergency equipment.

(*i*) Fire and oxygen bottles.

(*ii*) First aid and medical kits.

(*iii*) Liferafts and life preservers.

(*iv*) Crash axes.

(*v*) Emergency exits and lights.

(*vi*) Slides and sliderafts.

(*vii*) ESCCMpe straps or handles.

(*viii*) Hatches, ladders and movable stairs.

(22) Auxiliary Power Unit (APU).

(*i*) Electric and bleed air capabilities.

(*ii*) Interfaces with electrical and pneumatic systems.

(*iii*) Inlet doors and exhaust ducts.

(*iv*) Fuel supply.

(23) Performance.

(*c*) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including at least the following aircraft systems integration items :

(1) Use of checklist.

(*i*) Safety checks.

(*ii*) Cockpit preparation (switch position and checklist flows).

(*iii*) Checklist callouts and responses.

(*iv*) Checklist sequence.

(2) Flight planning.

(*i*) Preflight and in-flight planning.

(*ii*) Performance limitations (meteorological, mass, and MEL/CDL items).

(*iii*) Required fuel loads.

(*iv*) Weather planning (lower than standard takeoff minimums or alternate requirements).

(3) Display systems.

(*i*) Weather radar.

(*ii*) CRT displays (checklists, vertical navigation or longitudinal navigation displays).

(4) Navigation and Communications systems.

(*i*) Preflight and operation of applicable receivers.

(*ii*) Onboard navigation systems.

(*iii*) Flight plan information input and retrieval.

(5) Autoflight/flight directors.

(*i*) Autopilot.

(*ii*) Autothrust.

(*iii*) Flight director systems, including the appropriate procedures, normal and abnormal indications, and annunciators.

(6) Cockpit familiarisation.

(*i*) Activation of aircraft system controls and switches to include normal, abnormal and emergency switches.

(*ii*) Control positions and relevant annunciators, lights, or other caution and warning systems.

(*d*) Each AOC holder shall ensue that initial ground training for flight crew consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) For pilots and flight engineers—

(*i*) Piston-engined aeroplane-64 hours.

(*ii*) Turbropropeller-powered aeroplane-80 hours.

(*iii*) Turbo-jet aeroplane-120 hours.

(*iv*) Helicopter-64 hours.

(*v*) Powered-lift-80 hours.

(*vi*) Other aircraft-64 hours.

(2) For flight navigators-

(*i*) Piston-engined aircraft-16 hours.

(*ii*) Turbropropeller-powered aircraft-32 hours.

(*iii*) Turbojet-aircraft-32 hours.

Initial Aircraft Ground Training-cabin Crew Members.

IS : 8.10.1.14(*C*)—(*a*) Each AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the type of operations conducted and aircraft flown, including at least the following general subjects, if applicable :

(1) Aircraft familiarisation.

(*i*) Aircraft characteristics and description.

(*ii*) Flightdeck configuration.

(*iii*) Cabin configuration.

(*iv*) Galleys.

(*v*) Lavatories.

(*vi*) Stowage areas.

(2) Aircraft equipment and furnishings.

(*i*) Cabin crew member stations.

(*ii*) Cabin crew member panels.

(*iii*) Passenger seats.

(*iv*) Passenger service units and convenience panels.

(*v*) Passenger information signs.

(*vi*) Aircraft markings.

(*vii*) Aircraft placards.

(*viii*) Bassinets and bayonet tables.

(3) Aircraft systems.

(*i*) Air conditioning and pressurisation system.

(*ii*) Aircraft communication systems (call, interphone and passenger address).

(*iii*) Lighting and electrical systems.

(*iv*) Oxygen systems (flight crew, observer and passenger).

(*v*) Water system.

(*vi*) Entertainment and convenience systems.

(4) Aircraft exits.

(*i*) General information.

(*ii*) Exits with slides or sliderafts (preflight and normal operation).

(*iii*) Exits without slides (preflight and normal operations).

(*iv*) Window exits (preflight).

(5) Crew member communication and co-ordination.

(*i*) Authority of PIC.

(*ii*) Routine communication signals and procedures.

(*iii*) Crew member briefing.

(6) Routine crew member duties and procedures.

(*i*) Crew member general responsibilities.

(*ii*) Reporting duties and procedures for specific aircraft.

(*iii*) Pre-departure duties and procedures prior to passenger boarding.

(*iv*) Passenger boarding duties and procedures.

(*v*) Prior to movement on the surface duties and procedures.

(*vi*) Prior to takeoff duties and procedures applicable to specific aircraft.

(*vii*) Inflight duties and procedures.

(*viii*) Prior to landing duties and procedures.

(*ix*) Movement on the surface and arrival duties and procedures.

(*x*) After arrival duties and procedures.

(*xi*) Intermediate stops.

(7) Passenger handling responsibilities.

(*i*) Crew member general responsibilities.

(*ii*) Infants, children, and unaccompanied minors.

(*iii*) Passengers needing special assistance.

(*iv*) Passengers needing special accommodation.

(*v*) Carry-on stowage requirements.

(*vi*) Passenger seating requirements.

(*vii*) Smoking and no smoking requirements.

(8) Approved Crew Resource Management (CRM) training for cabin crew members.

(*b*) Each AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the type of operations conducted and aircraft flown, including at least the following aircraft specific emergency subjects, if applicable :

(1) Emergency equipment.

(*i*) Emergency communication and notification systems.

(*ii*) Aircraft exits.

(*iii*) Exits with slides or sliderafts (emergency operation).

(*iv*) Slides and sliderafts in a ditching.

(*v*) Exits without slides (emergency operation).

(*vi*) Window exits (emergency operation).

(*vii*) Exits with tailcones (emergency operation).

(*viii*) Cockpit exits (emergency operation).

(*ix*) Ground evacuation and ditching equipment.

(*x*) First aid equipment.

(*xi*) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE).

(*xii*) Firefighting equipment.

(*xiii*) Emergency lighting systems.

(*xiv*) Universal precaution kits

(*xv*) Automated external defibrillators

(*xvi*) Additional emergency equipment.

(2) Emergency assignments and procedures.

(*i*) General types of emergencies specific to aircraft, including crew coordination and communication.

(*ii*) Emergency communication signals and procedures.

(*iii*) Rapid decompression.

(*iv*) Insidious decompression and cracked window and pressure seal leaks.

(*v*) Fires.

(*vi*) Ditching.

(*vii*) Ground evacuation.

(*viii*) Unwarranted evacuation (i.e., passenger initiated).

(*ix*) Illness or injury.

(*x*) Abnormal situations involving passengers or crew members.

(*xi*) Hijacking and acts of unlawful interference.

(*xii*) Bomb threat.

(*xiii*) Turbulence.

(*xiv*) Other unusual situations including an awareness of other crew members' assignments and functions as they pertain to the cabin crew member's own duties.

(*xv*) Previous aircraft accidents and incidents.

(3) Aircraft specific emergency drills.

(*i*) Emergency exit drill.

(*ii*) Hand fire extinguisher drill.

(*iii*) Emergency oxygen system drill.

(*iv*) Flotation device drill.

(*v*) Ditching drill, if applicable.

(*vi*) Liferaft removal and inflation drill, if applicable.

(*vii*) Slideraft pack transfer drill, if applicable.

(*viii*) Slide or slideraft deployment, inflation, and detachment drill, if applicable.

(*ix*) Emergency evacuation slide drill, if applicable.

(*c*) Each AOC holder shall ensure that initial ground training for a cabin crew member includes a competency check given by the appropriate supervisor or ground instructor to determine his or her ability to perform assigned duties and responsibilities.

(*d*) Each AOC holder shall ensure that initial ground training for cabin crew members consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) Piston-engined-8 hours.

(2) Turbopropeller-powered-8 hours.

(3) Turbo-jet-16 hours.

(4) Other aircraft, including, if applicable, helicopter and powered lift-8 hours.

Initial Aircraft Ground Training-flight Operations Officer

IS : 8.10.1.14(*D*)—(*a*) Each AOC holder shall provide initial aircraft ground training for flight operations officers that include instruction in at least the following subjects :

(1) General dispatch subjects :

(*i*) Appropriate regulations.

(*ii*) Operations Manual of the AOC holder.

(*iii*) Operations specifications of the AOC holder.

(*iv*) Weather reports: interpretation, available sources, actual and prognostic, seasonal variations.

(*v*) Communications, to include normal and emergency.

(*vi*) Meteorology including West African meteorology, to include effects on radio reception.

(*vii*) Adverse weather.

(*viii*) Notices to airmen.

(*ix*) Navigational charts and publications.

(*x*) Joint dispatcher/pilot responsibilities.

(*xi*) ATC co-ordination procedures.

(*xii*) Familiarisation with operations area, including classes of airspace and special areas of navigation.

(*xiii*) Characteristics of special aerodromes.

(2) Aircraft characteristics :

(*i*) Aircraft specific flight preparation.

(*ii*) Aircraft operating and performance characteristics.

(*iii*) Navigation equipment, including peculiarities and limitations.

(*iv*) Instrument approach and communication equipment.

(*v*) Emergency equipment.

(*vi*) AFM or RFM provisions applicable to the aircraft duties.

(*vii*) MEL/CDL.

(*viii*) Applicable equipment training.

(3) Operations procedures:

(*i*) Adverse weather phenomena (wind-shear, clear air turbulence and thunderstorms).

(*ii*) Mass and balance computations and load control procedures.

(*iii*) Aircraft performance computations, to include takeoff weight limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations.

(*iv*) Flight planning procedures, to include route selection, flight time, and fuel requirements analysis.

(*v*) Dispatch release preparation.

(*vi*) Crew briefings.

(*vii*) Flight monitoring procedures.

(*viii*) MEL and CDL procedures.

(*ix*) Manual performance of all required procedures in case of the loss of automated capabilities.

(*x*) Training in appropriate geographic areas.

(*xi*) ATC and instrument procedures, ground hold and central flow control procedures.

(*xii*) Radio/telephone procedures.

(4) Abnormal and emergency procedures.

(*i*) Assisting flight crew in an emergency.

(*ii*) Alerting of appropriate governmental, company and private agencies.

(5) Crew resource management.

Note : IS 8.10.1.12 contains CRM training items.

(6) Dangerous goods.

Note : IS 8.10.1.10 contains dangerous goods training items.

(7) Security.

Note : ICAO Doc 9811, Manual on the Implementation of the Security Provisions of *Annex* 6, Chapter 3, provides additional guidance.

(8) Differences training.

Note : IS 8.10.1.17 contains items on differences training.

(*b*) Each AOC holder shall ensure that initial ground training for flight operations officers includes a competency check given by an appropriately qualified dispatch supervisor or ground instructor that demonstrates the required knowledge and abilities.

(*c*) Each AOC holder shall ensure that initial ground training for flight operations officers consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) Piston-engined aircraft-30 hours.

(2) Turbropropeller-powered aircraft-40 hours.

(3) Turbo-jet aircraft-40 hours.

Initial Aircraft Flight Training

IS : 8.10.1.15.—(*a*) Each AOC holder shall ensure that pilot initial flight training includes at least the following training and practice in procedures related to the carrying out of pilot duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as appropriate to the category and class of aircraft, and as approved by the Authority.

Note : The flight training events for pilots listed in this IS are generic in nature for a type-rated aeroplane training curriculum conducted in a FSTD. All of the events may not apply to all aircraft (eg: one engine inoperative landing for mutli-engine versus single engine aeroplanes) or may differ in the requirements for a similar event (*eg* : taxi for aeroplane, helicopter, and seaplane).Additional training events may need to be added, changed or deleted for aircraft based on aircraft category or class.

(1) Preparation.

(*i*) Aircraft pre-flight done by external walk around, unless the use of pictorial display is authorised by the Authority.

(*ii*) Pre-taxi procedures

(*iii*) Performance limitations.

(*iv*) Surface operation.

(*v*) Pushback.

(*vi*) Powerback taxi, if applicable to the type of operation to be conducted.

(*vii*) Starting.

(*viii*) Taxi

(*ix*) Pre-take-off checks.

(2) Take-off.

(*i*) Normal.

(*ii*) Crosswind.

(*iii*) Rejected.

(*iv*) Power failure after V1.

(*v*) Lower than standard minimum, if applicable to the type of operation to be conducted.

(3) Climb.

(*i*) Normal.

(*ii*) One-engine inoperative during climb to en route altitude.

(4) En route.

(*i*) Steep turns.

(*ii*) Approaches to stalls (take-off, en route, and landing configurations).

(*iii*) Inflight powerplant shutdown.

(*iv*) Inflight powerplant restart.

(*v*) High speed handling characteristics.

(5) Descent.

(*i*) Normal.

(*ii*) Maximum rate.

(6) Approaches.

(*i*) VFR procedures.

(*ii*) Visual approach with 50% loss of power of available powerplants.

(*iii*) Visual approach with slat/flap malfunction.

(*iv*) IFR precision approaches (ILS normal and ILS with one-engine inoperative).

(*v*) IFR non-precision approaches (NDB normal and VOR normal).

Note : Non-precision approach with one engine inoperative may include LOC backcourse procedures, SDF/LDA, GPS, TACAN and circling approach procedures, as applicable to the operator's authorisations.

(*vi*) *Note* : Simulator shall be qualified for training/checking on the circling manoeuvre.

(*vii*) Missed approach from precision approach.

(*viii*) Missed approach from non-precision approach.

(*ix*) Missed approach with powerplant failure.

(7) Landings.

(i) Normal with a pitch mistrim (small aircraft only).

(*ii*) Normal from precision instrument approach.

(*iii*) Normal from precision instrument approach with most critical engine inoperative.

(*iv*) Normal with 50% loss of power of available powerplants.

(*v*) Normal with flap/slat malfunction.

(*vi*) Rejected landings.

(*vii*) Crosswind.

(*viii*) Manual reversion/degraded control augmentation.

(*ix*) Short/soft field (small aircraft only).

(*x*) Glassy/rough water (seaplanes only).

(*xi*) Auto-rotation (helicopter only)

(8) After landing.

(*i*) Parking.

(*ii*) Emergency evacuation.

(*iii*) Docking, mooring, and ramping (seaplanes only).

(9) Other flight procedures during any airborne phase.

(*i*) Airborne Collision Avoidance System: use and avoidance maneuvers

(*ii*) Holding.

(*iii*) Ice accumulation on airframe.

(*iv*) Air hazard avoidance.

(*v*) Windshear/mircoburst.

(10) Normal, abnormal and alternate systems procedures during any phase.

(*i*) Pneumatic/pressurisation.

(*ii*) Air conditioning.

(*iii*) Fuel and oil.

(*iv*) Electrical.

(*v*) Hydraulic.

(*vi*) Flight controls.

(*vii*) Anti-icing and deicing systems.

(*viii*) Autopilot.

(*ix*) Flight management guidance systems and/or automatic or other approach and landing aids.

(*x*) Stall warning devices, stall avoidance devices, and stability augmentation systems.

(*xi*) Airborne weather radar.

(*xii*) Flight instrument system malfunction.

(*xiii*) Communications equipment.

(*xiv*) Navigation systems.

(11) Emergency systems procedures during any phase.

(*i*) Aircraft fires.

(*ii*) Smoke control.

(*iii*) Powerplant malfunctions.

(*iv*) Fuel jettison.

(*v*) Electrical, hydraulic, pneumatic systems.

(*vi*) Flight control system malfunction.

(*vii*) Landing gear and flap system malfunction.

(*b*) Each AOC holder shall ensure that flight engineer flight training includes at least the following training and practice in procedures related to the carrying out of flight engineer duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as approved by the Authority.

Note : The flight training events for flight engineers listed in this IS are generic in nature for a type-rated aeroplane training curriculum. Additional training events may need to be added, changed or deleted. The events listed are typically conducted in a FSTD, except as noted, and may be conducted in aircraft when appropriate

(1) Preparation.

(*i*) Airplane preflight.

(*ii*) Logbook procedures.

(*iii*) Safety checks.

(*iv*) Cabin/interiors.

(*v*) Exterior Walkaround.

(*vi*) Servicing/deicing.

(*vii*) Use of Oxygen.

(2) Ground Operations.

(*i*) Performance Data.

(*a*) TO/LND Data.

(*b*) Airport Analysis.

(*c*) Mass and Balance.

(*ii*) Use of Checklist.

(*a*) Panel setup.

(*iii*) Starting.

(*a*) External power.

(*b*) External Air.

(*c*) APU.

(*iv*) Communications.

(*a*) Station Procedures.

(*b*) ACARS.

(*v*) Taxi.

(3) Takeoff.

(*i*) Powerplant Control.

(*ii*) Flaps/landing gear.

(*iii*) Fuel management.

(*iv*) Other Systems Operation.

(*v*) Aircraft Performance.

(*vi*) Checklist Completion.

(4) Climb.

(*i*) Powerplant control.

(*ii*) Fuel Management.

(*iii*) Pressurisation.

(*iv*) Electrical System.

(*v*) Air Conditioning.

(*vi*) Flight Controls.

(*vii*) Other Systems.

(5) En Route.

(*i*) Powerplant Operation.

(*ii*) Fuel Management.

(*iii*) Performance Management.

(*iv*) High Altitude Performance.

(*v*) Other Systems Operation.

(6) Descent.

(*i*) Powerplant operation.

(*ii*) Other Systems Operation.

(*iii*) Performance Management.

(7) Approach.

(*i*) Landing Data.

(*ii*) Landing Gear Operation.

(*iii*) Flat/Slat/Spoiler Operation.

(*iv*) Approach Monitoring.

(8) Landings.

(*i*) Powerplant Operation.

(*ii*) Aircraft Configuration.

(*iii*) System Operation.

(*a*) Emergency Evacuation.

(9) Procedures During Any Ground or Airborne Phase.

(*i*) Cockpit Equipment.

(*ii*) Flap Slats/Gear.

(*iii*) Powerplant.

(*iv*) Pressurisation.

(*v*) Pneumatic.

(*vi*) Air-Conditioning.

(*vii*) Fuel and Oil.

(*viii*) Electrical.

(*ix*) Hydraulic.

(*x*) Flight Controls.

(*xi*) Anti-Icing and Deicing.

(*xii*) Other Checklist Procedures.

(*c*) Each AOC holder shall ensure that flight navigator training includes at least the following training and practice in procedures related to the carrying out of flight navigator duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as approved by the Authority.

(1) Initial flight training for flight navigators must include flight training and a flight check that is adequate to ensure the crew member's proficiency in the performance of his or her assigned duties.

(2) The flight training and check specified in paragraph (1) must be performed—

(*i*) In-flight or in an appropriate flight simulation training device ; or

(*ii*) In commercial air transport operations, if performed under the supervision of a qualified flight navigator instructor and navigator check airman/designed examiner, as applicable.

(*d*) Each AOC holder shall ensure that initial flight training for pilots and flight engineers consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) For one pilot in either an aircraft or flight simulation training devices—

(*i*) Piston-engined aircraft-PIC : 14 hours ; CP : 14 hours ; and FE : 12 hours.

(*ii*) Turbropropeller-powered aircraft-PIC : 15 hours ; CP : 15 hours ; and FE : 12 hours.

(*iii*) Turbo-jet aircraft-PIC : 20 hours ; CP : 16 hours ; and FE ; 12 hours.

(*iv*) Other aircraft-PIC and CP : 14 hours.

(2) For two pilots in a flight simulation training device—

(*i*) Piston-engined aircraft-PIC : 24 hours ; CP : 24 hours ; and FE : 20 hours.

(*ii*) Turbropropeller-powered aircraft-PIC : 24 hours ; CP : 24 hours ; and FE : 20 hours.

(*iii*) Turbo-jet aircraft-PIC : 28 hours ; CP : 28 hours ; and FE : 20 hours.

(*iv*) Other aircraft-PIC and CP : 24 hours.

Note : Training times in item (*d*) of this IS are higher than in 14 CFR and are taken from the FAA national norms in FAA Order 8900.1.

Initial Specialised Operations Training.

IS : 8.10.1.16.—(*a*) Each AOC holder shall provide initial specialised operations training to ensure that each pilot and flight operations officer is qualified in the type of operation in which he or she serves and in any specialised or new equipment, procedures, and techniques, such as :

(1) Long-range navigation.

(*i*) Knowledge of specialised navigation procedures, such as MNPS, NPAC.

(*ii*) Knowledge of specialised equipment, such as INS, LORAN, GPS.

(2) CAT II and CAT III approaches.

(3) Special equipment, procedures and practice.

(4) A demonstration of competency.

(5) Low visibility takeoff operations.

(*i*) Runway and lighting requirements.

(*ii*) Rejected takeoffs at, or near, V1 with a failure of the most critical engine.

(*iii*) Taxi operations.

(*iv*) Procedures to prevent runway incursions under low visibility conditions.

(6) Extended range operations with two engine aeroplanes.

(7) Approaches using on-board radar.

(8) Autopilot instead of Co-pilot.

Aircraft Differences.

IS : 8.10.1.17.—(*a*) Each AOC holder shall provide aircraft differences training for flight operations officers when the operator has aircraft variances within the same type of aircraft, which includes at least the following :

(1) Operations procedures—

(*i*) Operations under adverse weather phenomena conditions, including clear air turbulence, windshear, and thunderstorms.

(*ii*) Mass and balance computations and load control procedures.

(*iii*) Aircraft performance computations, to include takeoff mass limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations.

(*iv*) Flight planning procedures, to include route selection, flight time, and fuel requirements analysis.

(*v*) Dispatch release preparation.

(*vi*) Crew briefings.

(*vii*) Flight monitoring procedures.

(*viii*) Flight crew response to various emergency situations, including the assistance the aircraft flight operations officer can provide in each situation.

(*ix*) MEL and CDL procedures.

(*x*) Manual performance of required procedures in case of the loss of automation capabilities.

(*xi*) Training in appropriate geographic areas.

(*xii*) ATC and instrument procedures, to include ground hold and central flow control procedures.

(*xiii*) Radio/telephone procedures.

(2) Emergency procedures—

(*i*) Actions taken to aid the flight crew.

(*ii*) AOC holder and Authority notification.

*Note*1 : The FAA Flight Standardisation Board, the Transport Canada and JAA Joint Operations Evaluation Board have a harmonised process and their reports are a source for differences training.

Note 2 : ICAO Doc 9376, Preparation of an Operations Manual, contains guidance material to design flight crew training programmes.

Note 3 : ICAO Doc 9379, Manual of Procedures for the Establishment of a State's Personnel Licensing System, contains guidance of a general nature on cross-crew qualification, mixed-fleet flying and cross-credit.

Aircraft and Instrument Proficiency Check-pilot.

IS : 8.10.1.20.—(*a*) Aircraft and instrument proficiency checks for PIC and CP must include the following operations and procedures listed in the appropriate skill test in Part 2, on each type or variant of type of aircraft.

(*b*) The oral and flight test phases of a proficiency check should not be conducted simultaneously.

(*c*) When the check pilot determines that an applicant's performance is unsatisfactory, the check pilot may terminate the flight test immediately or, with the consent of the applicant, continue with the flight test until the remaining events are completed.

(*d*) If the check must be terminated (for mechanical or other reasons) and there are events which still need to be repeated, the check pilot shall issue a letter of discontinuance, valid for 60 days, listing the specific areas of operation that have been successfully completed.

(*e*) Satisfactory completion of a proficiency check following completion of an approved air carrier training programme for the particular type aircraft, satisfies the requirement for an aircraft type rating skill test if—

(1) That proficiency check includes all manoeuvres and procedures required for a type rating skill test.

(2) Proficiency checks are to be conducted by a check pilot approved by the Authority.

(*f*) The PIC proficiency check given in accordance with Part 8 may be used to satisfy the proficiency requirements of Part 2 to act as a PIC.

(*g*) The CP proficiency check given in accordance with Part 8 may be used to satisfy the proficiency requirements of Part 2 to act as a CP.

(*h*) The AOC holder may combine recurrent training with the AOC holder's proficiency check if approved to do so by the Authority.

Pairing of Low Experience Pilots.

IS : 8.10.1.22.—(*a*) Situations designated as critical by the Authority at special aerodromes designated by the Authority or at special aerodromes designated by the AOC holder include—

(1) The prevailing visibility value in the latest weather report for the aerodrome is at or below 1200 m (3/4 statute mile).

(2) The runway visual range for the runway to be used is at or below 1200m (4000 ft).

(3) The runway to be used has water, snow, slush or similar conditions that may adversely affect aircraft performance.

(4) The braking action on the runway to be used is reported to be less than "*good*".

(5) The crosswind component for the runway to be used is in excess of 15 knots.

(6) Windshear is reported in the vicinity of the aerodrome.

(7) Any other condition in which the PIC determines it to be prudent to exercise the PIC's prerogative.

(*b*) Circumstances which would be routinely be considered for deviation from the required minimum line operating flight time include—

(1) A newly certified AOC holder does not employ any pilots who meet the minimum flight time requirements ;

(2) An existing AOC holder adds to its fleet a type aircraft not before proven for use in its operations ; or

(3) An existing AOC holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the aircraft operated from that domicile.

Note : ICAO Doc 9376, Preparation of an Operations Manual, provides additional guidance.

Competency Checks-Cabin Crew-members.

IS : 8.10.1.24.—(*a*) A check cabin crewmember, approved by the Authority, shall conduct competency checks for cabin crewmembers in the following areas to demonstrate that each candidate's competency level is sufficient to successfully perform assigned duties and responsibilities.

(1) Emergency Equipment, as applicable :

(*i*) Emergency communication and notification systems.

(*ii*) Aircraft exits.

(*iii*) Exits with slides or sliderafts (emergency operation).

(*iv*) Slides and sliderafts in a ditching.

(*v*) Exits without slides (emergency operation).

(*vi*) Window exits (emergency operation).

(*vii*) Exits with tailcones (emergency operation).

(*viii*) Cockpit exits (emergency operation).

(*ix*) Ground evacuation and ditching equipment.

(*x*) First aid equipment.

(*xi*) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE).

(*xii*) Firefighting equipment.

(*xiii*) Emergency lighting systems.

(*xiv*) Additional emergency equipment.

(2) Emergency procedures-

(*i*) General types of emergencies specific to aircraft.

(*ii*) Emergency communication signals and procedures.

(*iii*) Rapid decompression.

(*iv*) Insidious decompression and cracked window and pressure seal leaks.

(*v*) Fires.

(*vi*) Ditching.

(*vii*) Ground evacuation.

(*viii*) Unwarranted evacuation (*i.e*., Passenger initiated).

(*ix*) Illness or injury.

(*x*) Abnormal situations involving passengers or crew members.

(*xi*) Turbulence.

(*xii*) Other unusual situations.

(3) Emergency drills-

(*i*) Location and use of all emergency and safety equipment carried on the aeroplane.

(*ii*) The location and use of all types of exits.

(*iii*) Actual donning of a lifejacket where fitted.

(*iv*) Actual donning of protective breathing equipment (PBE).

(*v*) Actual handling of fire extinguishers.

(4) Crew Resource Management—

(*i*) Decision-making skills.

(*ii*) Briefings and developing open communication.

(*iii*) Inquiry, advocacy, and assertion training.

(*iv*) Workload management.

(5) Dangerous goods—

(*i*) Recognition of and transportation of dangerous goods.

(*ii*) Proper packaging, marking, and documentation.

(*iii*) Instructions regarding compatibility, loading, storage and handling characteristics.

(6) Security—

(*i*) Hijacking.

Competency Checks - Flight Operations Officer.

IS : 8.10.1.25.—(*a*) A check flight operations officer, approved by the Authority, shall conduct competency checks for flight operations officers in at least the following areas to demonstrate that each candidate's competency level is sufficient to successfully perform assigned duties and responsibilities.

(1) Use of communications systems including the characteristics of those systems and the appropriate normal and emergency procedures ;

(2) Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes ;

(3) The NOTAM system ;

(4) Navigational aids and publications ;

(5) Joint dispatcher-pilot responsibilities ;

(6) Characteristics of appropriate airports ;

(7) Prevailing weather phenomena and the available sources of weather information ;

(8) Air traffic control and instrument approach procedures ; and

(9) Approved dispatcher resource management (DRM) initial training.

Recurrent Training-flight Crew.

IS : 8.10.1.33.—(*a*) Each AOC holder shall establish a recurrent training programme for all flight crew members in the AOC holder's Operations Manual and shall have it approved by the Authority.

(*b*) Each flight crew member shall undergo recurrent training relevant to the type or variant of aircraft on which he or she is certified to operate and for the crew member position involved.

(*c*) Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.

(*d*) Each AOC holder shall ensure that flight crew member recurrent ground training includes at least the following :

(1) General subjects.

(*i*) Flight locating procedures.

(*ii*) Principles and method for determining mass/balance and runway limitations.

(*iii*) Meteorology to ensure practical knowledge of weather phenomena including the principles of frontal system, icing, fog, thunderstorms, windshear, and high altitude weather situations.

(*iv*) ATC systems and phraseology.

(*v*) Navigation and use of navigational aids.

(*vi*) Normal and emergency communication procedures.

(*vii*) Visual cues before descent to MDA.

(*viii*) Accident/incident and occurrence review.

(*ix*) Other instructions necessary to ensure the pilot's competence.

(2) Aircraft systems and limitations—

(*i*) Normal, abnormal, and emergency procedures.

(*ii*) Aircraft performance characteristics.

(*iii*) Engines and,if applicable, propellers.

(*iv*) Major aircraft components.

(*v*) Major aircraft systems (i.e., flight controls, electric, hydraulic and other systems as appropriate).

(3) Ground icing and de-icing procedures and requirements.

(4) Emergency equipment and drills.

(5) Every 12 months—

(*i*) Location and use of all emergency and safety equipment carried on the aeroplane.

(*ii*) The location and use of all types of exits.

(*iii*) Actual donning of a lifejacket where fitted.

(*iv*) Actual donning of protective breathing equipment.

(*v*) Actual handling of fire extinguishers.

(6) Every 3 years—

(*i*) Operation of all types of exits.

(*ii*) Demonstration of the method used to operate a slide, where fitted.

(*iii*) Fire-fighting using equipment representative of that carried in the aeroplane on an actual or simulated fire.

Note : With Halon extinguishers, an alternative method acceptable to the Authority may be used.

(*iv*) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment.

(*v*) Actual handling of pyrotechnics, real or simulated, where fitted.

(*vi*) Demonstration in the use of the life-raft(s), where fitted.

(*vii*) An emergency evacuation drill.

(*viii*) A ditching drill, if applicable.

(*ix*) A rapid decompression drill, if applicable.

(7) Crew resource management—

(*i*) Decision-making skills.

(*ii*) Briefings and developing open communication.

(*iii*) Inquiry, advocacy, and assertion training.

(*iv*) Workload management.

(*v*) Situational awareness.

(8) Dangerous goods—

(*i*) Recognition of and transportation of dangerous goods.

(*ii*) Proper packaging, marking, and documentation.

(*iii*) Instructions regarding compatibility, loading, storage and handling characteristics.

(9) Security—

(*i*) Hijacking.

(*ii*) Disruptive passengers.

(*e*) Each AOC holder shall verify knowledge of the recurrent ground training by an oral or written examination.

(*f*) Each AOC holder shall ensure that pilot recurrent flight training include at least the following :

Note : Flight training may be conducted in an appropriate aircraft, adequate flight simulation training device (FSTD), or in a combination of aircraft and FSTD, as approved by the Authority.

(1) Preparation—

(*i*) Visual inspection (use of pictorial display authorised).

(*ii*) Pre-taxi procedures.

(2) Ground operation—

(*i*) Performance limitations.

(*ii*) Cockpit management.

(*iii*) Securing cargo.

(*iv*) Pushback.

(*v*) Powerback taxi, if applicable.

(*vi*) Starting.

(*vii*) Taxi.

(*viii*) Pre-takeoff checks.

(3) Takeoff—

(*i*) Normal.

(*ii*) Crosswind.

(*iii*) Rejected.

(*iv*) Power failure after V1.

(*v*) Powerplant failure during second segment.

(*vi*) Low Visibility Takeoff Operations.

(4) Climb—

(*i*) Normal.

(*ii*) One-engine inoperative climb to en route altitude.

(5) En route—

(*i*) Steep turns.

(*ii*) Approaches to stalls (takeoff, en route, and landing configurations).

(*iii*) Inflight powerplant shutdown.

(*iv*) Inflight powerplant restart.

(*v*) High speed handling characteristics.

(6) Descent—

(*i*) Normal.

(*ii*) Maximum rate.

(7) Approaches—

(*i*) VFR procedures.

(*ii*) Visual approach with 50% loss of power of available powerplants.

(*iii*) Visual approach with slat/flap malfunction.

(*iv*) IFR precision approaches (ILS normal and ILS with one-engine inoperative).

(*v*) IFR non-precision approaches (NDB normal and VOR normal).

(*vi*) Non-precision approach with one engine inoperative (LOC backcourse, SDF/LDA, GPS, TACAN and circling approach procedures).

Note : A Flight Simulation Training Device shall not be used for training/checking on the circling manoeuvre unless it has been qualified for circling manoeuvres. The operator must be approved to conduct circling manoeuvres by the Authority to participate in that training and checking.

(*vii*) Missed approach from precision approach.

(*viii*) Missed approach from non-precision approach.

(*ix*) Missed approach with powerplant failure.

(8) Landings—

(*i*) Abnormal with a pitch mistrim (small aircraft only).

(*ii*) Abnormal from precision instrument approach.

(*iii*) Abnormal from precision instrument approach with most critical engine inoperative.

(*iv*) Abnormal with 50% loss of power of available powerplants.

(*v*) Abnormal with flap/slat malfunction.

(*vi*) Rejected landings.

(*vii*) Crosswind.

(*viii*) Short/soft field (small aircraft only).

(*ix*) Glassy/rough water (seaplanes only).

(*x*) Auto-rotation (helicopter only).

(9) After landing—

(*i*) Parking.

(*ii*) Emergency evacuation.

(*iii*) Docking, mooring, and ramping (seaplanes only).

(10) Other flight procedures during any airborne phase—

(*i*) Airborne Collision Avoidance System: use and avoidance maneuvers

(*ii*) Holding.

(*iii*) Ice accumulation on airframe.

(*iv*) Air hazard avoidance.

(*v*) Windshear/microburst.

(11) Normal, abnormal and alternate systems procedures during any phase—

(*i*) Pneumatic/pressurisation.

(*ii*) Air conditioning.

(*iii*) Fuel and oil.

(*iv*) Electrical.

(*v*) Hydraulic.

(*vi*) Flight controls.

(*vii*) Anti-icing and deicing systems.

(*viii*) Flight management guidance systems and/or automatic or other approach and landing aids.

(*ix*) Stall warning devices, stall avoidance devices, and stability augmentation systems.

(*x*) Airborne weather radar.

(*xi*) Flight instrument system malfunction.

(*xii*) Communications equipment.

(*xiii*) Navigation systems.

(*xiv*) Autopilot.

(*xv*) Approach and landing aids.

(*xvi*) Flight instrument system malfunction.

(12) Emergency systems procedures during any phase—

(*i*) Aircraft fire.

(*ii*) Smoke control.

(*iii*) Powerplant malfunctions.

(*iv*) Fuel jettison.

(*v*) Electrical, hydraulic, pneumatic systems.

(*vi*) Flight control system malfunction.

(*vii*) Landing gear and flap system malfunction.

(*g*) Each AOC holder shall ensure that flight engineer recurrent flight training includes at least the flight training specified in IS : 8.10.1.15(*b*).

(*h*) Each AOC holder shall ensure that flight navigator recurrent training includes enough training and an in-flight check to ensure competency with respect to operating procedures and navigation equipment to be used and familiarity with essential navigation information pertaining to the AOC holder's routes that require a flight navigator.

(*i*) The AOC holder may combine recurrent training with the AOC holder's proficiency check if approved by the Authority.

(*j*) Recurrent ground and flight training curricula may accomplished concurrently or intermixed, but completion of each of these curricula shall be recorded separately.

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Recurrent Normal and Emergency Training-cabin Crew Members.

IS : 8.10.1.34.—(*a*) Each AOC holder shall establish and have approved by the Authority a recurrent training programme for all cabin crew members.

(*b*) Each cabin crew member shall undergo recurrent training in evacuation and other appropriate normal and emergency procedures and drills relevant to his or her assigned positions and the type(s) and/or variant(s) of aircraft on which he or she operates.

(*c*) Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.

(*d*) Each AOC holder shall ensure that, every 12 months, each cabin crew member receive recurrent training in at least the following :

(1) Emergency equipment, if applicable—

(*i*) Emergency communication and notification systems.

(*ii*) Aircraft exits.

(*iii*) Exits with slides or sliderafts (emergency operation).

(*iv*) Slides and sliderafts in a ditching.

(*v*) Exits without slides (emergency operation).

(*vi*) Window exits (emergency operation).

(*vii*) Exits with tailcones (emergency operation).

(*viii*) Cockpit exits (emergency operation).

(*ix*) Ground evacuation and ditching equipment.

(*x*) First aid equipment.

(*xi*) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE)).

(*xii*) Firefighting equipment.

(*xiii*) Emergency lighting systems.

(*xiv*) Additional emergency equipment.

(2) Emergency procedures—

(*i*) General types of emergencies specific to aircraft.

(*ii*) Emergency communication signals and procedures.

(*iii*) Rapid decompression.

(*iv*) Insidious decompression and cracked window and pressure seal leaks.

(*v*) Fires.

(*vi*) Ditching.

(*vii*) Ground evacuation.

(*viii*) Unwarranted evacuation (i.e., passenger initiated).

(*ix*) Illness or injury.

(*x*) Abnormal situations involving passengers or crew members.

(*xi*) Turbulence.

(*xii*) Other unusual situations.

(3) Emergency drills.

(4) Every 12 months—

(*i*) Location and use of all emergency and safety equipment carried on the aeroplane.

(*ii*) The location and use of all types of exits.

(*iii*) Actual donning of a lifejacket where fitted.

(*iv*) Actual donning of protective breathing equipment(PBE).

(*v*) Actual handling of fire extinguishers.

(5) Every 3 years—

(*i*) Operation of all types of exits.

(*ii*) Demonstration of the method used to operate a slide, where fitted.

(*iii*) Fire-fighting using equipment representative of that carried in the aeroplane on an actual or simulated fire.

Note : With Halon extinguishers, an alternative method acceptable to the Authority may be used.

(*iv*) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment.

(*v*) Actual handling of pyrotechnics, real or simulated, where fitted.

(*vi*) Demonstration in the use of the life-raft(s), where fitted.

(*vii*) An emergency evacuation drill.

(*viii*) A ditching drill, if applicable.

(*ix*) A rapid decompression drill, if applicable.

(6) Crew resource management—

(*i*) Decision-making skills.

(*ii*) Briefings and developing open communication.

(*iii*) Inquiry, advocacy, and assertion training.

(*iv*) Workload management.

(7) Dangerous goods—

(*i*) Recognition of and transportation of dangerous goods.

(*ii*) Proper packaging, marking, and documentation.

(*iii*) Instructions regarding compatibility, loading, storage and handling characteristics.

(8) Security—

(*i*) Hijacking.

(*ii*) Disruptive passengers.

(*e*) Each AOC holder shall verify knowledge of the recurrent training by an oral or written examination.

(*f*) An AOC holder, if approved by the Authority, may administer each of the recurrent training curricula concurrently or intermixed, but shall record completion of each of these curricula separately.

Recurrent Training-flight Operations Officer.

IS : 8.10.1.35.—(*a*) Each AOC holder shall establish and maintain a recurrent training programme, approved by the Authority and established in the AOC holder's Operations Manual, to be completed annually by each flight operations officer.

(*b*) Each flight operations officer shall undergo recurrent training relevant to the type(s) and/or variant(s) of aircraft and the operations conducted by the AOC holder, and that training shall consist of at least the following hours of instruction—

(1) Piston-engined aircraft-8 hours.

(2) Turbopropeller-powered aircraft-10 hours.

(3) Turbo-jet aircraft-20 hours.

(4) Other aircraft to includerotorcraft-10 hours.

(*c*) Each AOC holder shall have all recurrent training conducted by a qualified flight dispatcher instructor.

(*d*) An AOC holder shall ensure that, every 12 months, each flight operations officer receives recurrent training in the subjects required for initial training listed in IS : 8.10.1.14*D* in sufficient detail to ensure competency in each specified area of training. Operators may choose to provide in-depth coverage of selected subjects on any one cycle of training. In such cases the operator's training programme must cover all the subjects to the detail required for initial qualification within three years.

(*e*) Each AOC holder shall verify knowledge of the recurrent training by an oral or written examination.

(*f*) An AOC holder shall record completion of the required training.

Instructor Training.

IS : 8.10.1.37.—(*a*) Flight crew instructor training.

(1) No operator may use a person, nor may any person serve as flight instructor in a training programme unless :

(*i*) That person has satisfactorily completed initial or transition flight instructor training ; and

(*ii*) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check personnel.

(2) An AOC holder may accomplish the observation check for a flight instructor, in part or in full, in an aircraft or a flight simulation training device.

(3) Each AOC holder shall ensure that initial ground training for flight instructors includes the following—

(*i*) Flight instructor duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of :

(*v*) Improper and insufficient training ; and

(*vi*) Personal characteristics of an applicant that could adversely affect safety.

(*vii*) Appropriate corrective action in the case of unsatisfactory checks.

(*viii*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.

(*ix*) Except for holders of existing flight instructor licences :

(*a*) The fundamental principles of the teaching-learning process ;

(*b*) Teaching methods and procedures ; and

(*c*) The instructor-student relationship.

(4) Each AOC holder shall ensure that the transition ground training for flight instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the flight instructor is in transition.

(5) Each AOC holder shall ensure that the initial and transition flight training for flight instructors includes the following :

(*i*) The safety measures for emergency situations that are likely to develop during instruction.

(*ii*) The potential results of improper, untimely, or non-execution of safety measures during instruction.

(*iii*) For pilot flight instructor (aircraft):

(*a*) Inflight training and practice in conducting flight instruction from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence as an instructor ; and

(*b*) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction.

(6) For flight engineer instructors and flight navigator instructors, in-flight training to ensure competence to perform assigned duties.

(7) An AOC holder may accomplish the flight training requirements for flight instructors in full or in part in flight or in a flight simulation training device, as appropriate.

(8) An AOC holder shall ensure that the initial and transition flight training for flight instructors (flight simulation training device) includes the following :

(*i*) Training and practice in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight instruction required by this part. This training and practice shall be accomplished in full or in part in a flight simulation training device.

(*ii*) Training in the operation of flight simulation training devices, to ensure competence to conduct the flight instruction required by this Part.

(*b*) Cabin crew instructor training.

(1) No operator may use a person, nor may any person serve as cabin instructor in a training programme unless:

(*i*) That person has satisfactorily completed initial or transition cabin instructor training ; and

(*ii*) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check airman.

(2) An AOC holder may accomplish the observation check for a cabin instructor, in part or in full, in an aircraft or a cabin simulation training device.

(3) Each AOC holder shall ensure that initial ground training for cabin instructors includes the following—

(*i*) Cabin instructor duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of:

(*A*) Improper and insufficient training ; and

(*B*) Personal characteristics of an applicant that could adversely affect safety.

(*v*) Appropriate corrective action in the case of unsatisfactory checks.

(*vi*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft, as applicable.

(*vii*) Except for existing cabin instructors :

(*A*) The fundamental principles of the teaching-learning process ;

(*B*) Teaching methods and procedures ; and

(*C*) The instructor-student relationship.

(4) Each AOC holder shall ensure that the transition ground training for cabin instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft, as appropriate to which the cabin instructor is in transition.

(5) Each AOC holder shall ensure that the initial and transition flight training for cabin instructors includes the following :

(*i*) The safety measures for emergency situations that are likely to develop during instruction.

(*ii*) The potential results of improper, untimely, or non-execution of safety measures during instruction.

(*c*) Flight operations officer instructor training.

(1) No operator may use a person, nor may any person serve as flight operations officer instructor in a training programme unless :

(*i*) That person has satisfactorily completed initial or transition flight operations officer instructor training ; and

(*ii*) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check flight operations officer.

(2) An AOC holder may accomplish the observation check for a flight operations officer instructor, in part or in full, in a flight operations centre.

(3) Each AOC holder shall ensure that initial ground training for flight operations officer instructors includes the following :

(*i*) Flight operations officer instructor duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of :

(*A*) Improper and insufficient training ; and

(*B*) Personal characteristics of an applicant that could adversely affect safety.

(*v*) Appropriate corrective action in the case of unsatisfactory checks.

(*vi*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures for the aircraft or position involved.

(*vii*) Except for holders of existing flight operations officer instructor licences :

(4) The fundamental principles of the teaching-learning process ;

(5) Teaching methods and procedures ; and

(*i*) The instructor-student relationship.

(6) Each AOC holder shall ensure that the transition ground training for flight operations officer instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft or position involved to which the flight operations officer instructor is in transition.

(7) Each AOC holder shall ensure that the initial and transition training for flight operations officer instructors includes the following :

(*i*) The safety measures for emergency situations that are likely to develop during instruction in a flight operations centre.

(*ii*) The potential results of improper, untimely, or non-execution of safety measures during instruction in a flight operations centre.

IS : 8.10.1.40.—(*a*) Training for check personnel-general.

Check Personnel Training.

(1) No operator may use a person, nor may any person serve as a check personin a training programme unless, with respect to the aircraft type involved, that person has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as PIC, flight engineer, navigator, cabin crewmember, or flight operations officer,as applicable.

(2) Each AOC holder shall ensure that initial ground training for check personnel includes :

(*i*) Check personnel duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of :

(*v*) Improper and insufficient training.

(*vi*) Personal characteristics of an applicant that could adversely affect safety.

(*A*) Appropriate corrective action in the case of unsatisfactory checks.

(*B*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.

(3) Transition ground training for all check personnel, shall include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the check person is in transition.

(*b*) Training for check personnel of flight crew.

(1) For check pilots, each AOC holder shall ensure that the initial and transition flight training includes :

(*i*) Training and practice in conducting flight evaluations (from the left and right pilot seats for pilot check airmen) in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks.

(*ii*) The potential results of improper, untimely or non-execution of safety measures during an evaluation.

(*iii*) The safety measures (to be taken from either pilot seat for check pilot) for emergency situations that are likely to develop during an evaluation.

(2) For checkflight engineers and check flight navigators, each AOC holder shall ensure training to ensure competence to perform assigned duties to include :

(*i*) The safety measures for emergency situations that are likely to develop during a check.

(*ii*) The potential results of improper, untimely or non-execution of safety measures during a check.

(3) Each AOC holder shall ensure that the initial and transition flight training for check personnel (simulator) includes :

(*i*) Training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the checks required by this part (this training and practice shall be accomplished in a flight simulation training device).

(*ii*) Training in the operation of flight simulation training devices, to ensure competence to conduct the checks required by this Part.

(4) An AOC holder may accomplish flight training for check personnel, in full or in part in an aircraft or in a flight simulation training device, as appropriate.

(5) The AOC holder shall record the training in each individuals training record maintained by the AOC holder.

(*c*) Training for check cabin crew members.

(1) For check cabin crewmembers, each AOC holder shall ensure that the training includes :

(*i*) The safety measures for emergency situations that are likely to develop during a check ; and

(*ii*) The potential results of improper, untimely or non-execution of safety measures during a check.

(*d*) Training for check flight operations officers.

(1) For check flight operations officers, each AOC holder shall ensure that the training includes :

(*i*) The safety measures for emergency situations that are likely to develop during a check ; and

(*ii*) The potential results of improper, untimely or non-execution of safety measures during a check.

(*e*) The AOC holder shall record the training in each individuals training record maintained by the AOC holder.

Duty and Rest Periods.

IS : 8.12.1.3.—(*a*) Each AOC holder, scheduling official and crew member shall use the following tables as appropriate, to consolidate all scheduling and actual event requirements with respect to crew member flight time, duty and rest periods for commercial air transport operations.

Note : Each Contracting State is required to have flight and duty time regulations. The domestic flight operations times in Tables 1 and 2 are from the United States and are used as an example.

Table 1

Conditions Required for Flight Crew Member Rest Reduction			
Flight Deck Duty Period (Hours)	Normal Rest Period (Hours)	Authorised Reduced Rest Period (Hours)	Next Rest Period if Reduction Taken
Less than 8	9	8	10
8-9	10	8	11
9 or more	11	9	12

Table 2

Conditions Required for Cabin Crew Member Rest Reduction				
Scheduled Duty Period (Hours)	Extra Cabin Crew Members Required	Normal Rest Period Hours	Authorised Reduced Rest Period (Hours)	Next Rest Period if Reduction Taken
14 or less	0	9	8	10
14-16	1	12	10	14
16-18	2	12	10	14
18-20	3	12	10	14