Announcement of Department of Civil Aviation (ADCA)
for the Air Navigation by Aeroplane of AOC holders B.E. 2557 (Issue 2)

By virtue of Article 3 from 3.1 to 3.8 of the RCAB No. 86 for the Air Navigation of Aircraft Given on 30 December B.E. 2552, which specify the AOC holders shall conduct operations in accordance with the requirement prescribed by the DCA in the topics of the Safety Management System of AOC holders, Flight Operations and Flight Operations Approval, Instruments, Equipment and Flight documents, Flight crew member, Manual/Logs and Record, Cabin Crews, Security in aircraft and Aircraft maintenance. Therefor, the DCA has issued the Announcement for the Air Navigation by Aeroplane of AOC holders B.E. 2557 (Issue 2) as follows:

Article 1. This Announcement shall be called “The Announcement of the DCA for the Air Navigation by Aeroplane of AOC holders B.E. 2557 (Issue 2)”.

Article 2. This Announcement shall come into force upon expiration of one day from the date of notification.

Article 3. The ADCA for the Air Navigation by Aeroplane of AOC holders B.E. 2553, Chapter 3 for Aeroplane Instruments, Equipment and Flight Documents shall be replaced with this Announcement.

Chapter 3

Aeroplane Instruments, Equipment and Flight Documents

Article 6. The operator shall operate in accordance with standards established for Aeroplane Instruments, Equipment and Flight Documents as follow:

(1) General

(a) In addition to the minimum equipment necessary for the issuance of a certificate of airworthiness. The operator shall install instruments and equipment including a certified true copy of the Air Operator Certificate and the Operations Specifications and flight documents prescribed in this Chapter in aeroplanes.

(b) The operator shall provide a MEL and an operating and maintenance procedures. A MEL shall be approved by the DCA. The content of an approved MEL cannot be less restrictive than the content of MMEL for that aircraft type.

(c) The operator shall 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 shall include details of the aircraft systems and of the checklists to be used. The design of the manual shall observe Human Factors principles.

(2) All aeroplanes on all flights

(a) An aeroplane shall be equipped with instruments which will enable the flight crew to control the flight path of the aeroplane, carry out any required procedural manoeuvres and observe the operating limitations of the aeroplane in the expected operating conditions.

(b) An aeroplane shall be equipped with:

(b.1) accessible and adequate medical supplies; The details of medical supplies such as Types, Number, Location and Contents is in an Appendix A attached to this Announcement. The Medical supplies should comprise:

(b.1.a) First-aid kits. The number of first-aid kits should be:

Passenger	*First-aid kits*
0 –100	1
101 – 200	2
201– 300	3
301 – 400	4
401 – 500	5
More than 500	6

(b.1.b) universal precaution kits; one universal precaution kit for aeroplanes required to carry cabin crew, two for aeroplanes authorized to carry more than 250 passengers.

(b.1.c) medical kit; one medical kit for aeroplanes authorized to carry more than 100 passengers, on a sector length of more than two hours.

(b.2) portable fire extinguishers of a type which, when discharged, will not cause dangerous contamination of the air within the aeroplane. At least one shall be located in:

(b.2.a) the pilot's compartment; and

(b.2.b) each passenger compartment that is separate from the pilot's compartment;

Any agent used in a built-in fire extinguisher for each lavatory disposal receptacle for towels, paper or waste in an aeroplane for which the individual certificate of airworthiness is first issued on or after 31 December 2011 and any extinguishing agent used in a portable fire extinguisher in an aeroplane for which the individual certificate of airworthiness is first issued on or after 31 December

2016 shall not be of a type listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Eighth Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone La*yer, Annex A, Group II.

(b.3) a seat belt for each seat and restraining belts for each berth; and a safety harness for each flight crew seat. The safety harness for each pilot seat shall incorporate a device which will automatically restrain the occupant's torso in the event of rapid deceleration;

(b.4) means of ensuring that the following information and instructions are conveyed to passengers: when seat belts are to be fastened; when and how oxygen equipment is to be used; restrictions on smoking; location and use of life jackets; and location and method of opening emergency exits.;

(b.5) spare electrical fuses;

(c) An aeroplane shall carry:

(c.1) the operations manual or those parts of it that pertain to flight operations;

(c.2) the flight manual for the aeroplane, or other documents containing performance data and any other information necessary for the operation of the aeroplane within the terms of its certificate of airworthiness, unless these data are available in the operations manual;

(c.3) current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted;

(c.4) a list of passenger, departure airport and destination airport;

(c.5) a list of cargo including weighing data;

(c.6) a journey log book;

(c.7) a certified true copy of the AOC by DCA;

(c.8) an aeroplane noise certificate;

(c.9) a MEL;

(c.10) an operational flight plan;

(c.11) a weather report;

(c.12) a weight & balance report;

(c.13) a NOTAM;

(c.14) an aerodrome information;

(d) Marking of break-in points

If areas of the fuselage suitable for break-in by rescue crews in an emergency are marked on an aeroplane, such areas shall be marked as shown below (see figure following). The colour of the markings shall be red or yellow, and if necessary they shall be outlined in white to contrast with the background. If the corner markings are more than 2 m apart, intermediate lines 9 cm × 3 cm shall be inserted so that there is no more than 2 m between adjacent markings.

(3) Flight recorders

(a) Flight recorders divided into 2 types, viz:

(a.1) Crash protected flight recorders comprise of one or more of the following systems:

(a.1.a) a flight data recorder (FDR),

(a.1.b) a cockpit voice recorder (CVR),

(a.1.c) an airborne image recorder (AIR),

(a.1.d) a data link recorder (DLR),

Image and data link information may be recorded on either the CVR or the FDR.

(a.2) Lightweight flight recorders comprise one or more of the following systems:

(a.2.a) an aircraft data recording system (ADRS),

(a.2.b) a cockpit audio recording system (CARS),

(a.2.c) an airborne image recording system (AIRS),

(a.2.d) a data link recording system (DLRS),

Image and data link information may be recorded on either the CARS or the ADRS.

(b) Flight data recorders and aircraft data recording systems

(b.1) Types I and IA FDR shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation as prescribed in Appendix B (Flight recorders) attached to this Announcement.

(b.2) Types II and IIA FDRs shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power and configuration of lift and drag devices as prescribed in Appendix B (Flight recorders) attached to this Announcement.

(b.3) All FDRs shall be capable of retaining the information recorded during at least the last 25 hours of their operation, except for the Type IIA FDR which shall be capable of retaining the information recorded during at least the last 30 minutes of its operation.

(b.4) Operation

(b.4.a) All turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less for which the application for type certification is submitted to a Contracting State on or after 1 January 2016 shall be equipped with:

(b.4.a.1) a Type II FDR; or

(b.4.a.2) a Class C AIR capable of recording flight path and speed parameters displayed to the pilot(s); or

(b.4.a.3) c) an ADRS capable of recording the essential parameters defined in Table A8-3 of Appendix 8.

(b.4.b) All turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less for which the individual certificate of airworthiness is first issued on or after 1 January 2016 should be equipped with:

(b.4.b.1) a Type II FDR; or

(b.4.b.2) a Class C AIR capable of recording flight path and speed parameters displayed to the pilot(s); or

(b.4.b.3) an ADRS capable of recording the essential parameters defined in Table A8-3 of Appendix 8.

(b.4.c) All aeroplanes of a maximum certificated take-off mass of over 27000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1989 shall be equipped with a Type I FDR.

(b.4.d) All aeroplanes of a maximum certificated take-off mass of over 5700 kg, up to and including 27000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1989, shall be equipped with a Type II FDR.

(b.4.e) All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued on or after 1 January 1987 but before 1 January 1989, with a maximum certificated take-off mass of over 5700 kg, except those in

(b.4.f), shall be equipped with an FDR which shall record time, altitude, airspeed, normal acceleration and heading.

(b.4.f) All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued on or after 1 January 1987 but before 1 January 1989, with a maximum certificated take-off mass of over 27000 kg that are of types of which the prototype was certificated by the appropriate national authority after 30 September 1969 shall be equipped with a Type II FDR

(b.4.g) All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 5700 kg shall be equipped with an FDR which shall record time, altitude, airspeed, normal acceleration and heading.

(b.4.h) All aeroplanes of a maximum certificated take-off mass of over 5700 kg for which the individual certificate of airworthiness is first issued after 1 January 2005 shall be equipped with a Type IA FDR.

(b.4.i) All aeroplanes which are required to record normal acceleration, lateral acceleration and longitudinal acceleration for which the application for type certification is submitted to a Contracting State on or after 1 January 2016 and which are required to be fitted with an FDR shall record those parameters at a maximum sampling and recording interval of 0.0625 seconds.

(b.5) The following FDR shall be discontinued:

(b.5.a) The engraving metal foil FDRs;

(b.5.b) The analogue FDRs using frequency modulation (FM);

(b.5.c) The photographic film FDRs;

(b.5.d) The magnetic tape FDRs shall be discontinued by 1 January 2016.

(c) Cockpit voice recorders and cockpit audio recording systems

(c.1) All turbine-engined aeroplanes of a maximum certificated take-off mass of over 2250 kg, up to and including 5700 kg, for which the application for type certification is submitted to a Contracting State on or after 1 January 2016 and required to be operated by more than one pilot shall be equipped with:

(c.1.a) CVR that comply with a standard of European Organization for Civil Aviation Equipment (EUROCAE) Document ED-112 Minimum Operational Performance Specification (MOPS) for Crash Protected Airborne Recorder Systems or other equivalent standard; or

(c.1.b) Cockpit Audio Recording Systems (CARS) that comply with a standard of European Organization for Civil Aviation Equipment (EUROCAE) Document ED-112 Minimum Operational Performance Specification (MOPS) for Light Weight Recorder Systems or other equivalent standard.

(c.2) All aeroplanes of a maximum certificated take-off mass of over 5700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2003 shall be equipped with a CVR capable of retaining the information recorded during at least the last 2 hours of its operation.

(c.3) All aeroplanes of a maximum certificated take-off mass of over 5700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1987 shall be equipped with a CVR.

(c.4) All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 27 000 kg that are of types of which the prototype was

certificated by the appropriate national authority after 30 September 1969 shall be equipped with a CVR.

(c.5) The use of magnetic tape and wire CVRs shall be discontinued by 1 January 2016.

(c.6) All CVRs shall be capable of retaining the information recorded during at least the last 30 minutes of their operation.

(c.7) From 1 January 2016, all CVRs shall be capable of retaining the information recorded during at least the last 2 hours of their operation.

(c.8) An alternate power source shall automatically engage and provide 10 minutes, ±1 minute, of operation whenever aeroplane power to the recorder ceases, either by normal shutdown or by any other loss of power. The alternate power source shall power the CVR and its associated cockpit area microphone components. The CVR shall be locatedas close as practicable to the alternate power source.

(c.9) All aeroplanes of a maximum certificated take-off mass of over 27000 kg for which the application for type certification is submitted to a Contracting State on or after 1 January 2018 shall be provided with an alternate power source, as defined in (c.8), that powers the forward CVR in the case of combination recorders.

(d) Data link recorders (DLR)

All aeroplanes for which the individual certificate of airworthiness is first issued or modified on or after 1 January 2016 which utilize any of the data link communications applications listed in Article 5.1.2 of Appendix 8 and are required to carry a CVR, shall record on a flight recorder the data link communications messages. The minimum recording duration shall be equal to the duration of the

CVR. Data link recording shall be able to be correlated to the recorded cockpit audio.

(e) 6.3.4 Flight recorders

(e.1) ***Installation*** Flight recorders shall be located and installed so as to provide maximum practical protection for the recordings. Flight recorders shall meet the prescribed crashworthiness and fire protection specifications of European Organization for Civil Aviation Equipment (EUROCAE) Documents ED-112 and ED-155 or other equivalent standard.

(e.2) ***Operation***

(e.2.a) Flight recorders shall not be switched off during flight time.

(e.2.b) To preserve flight recorder records, flight recorders shall be deacti vated upon completion of flight time following an accident or incident. The flight recorders shall not be reactivated before their disposition as determined by the investigation committee responsible for the area of occurrence.

(e.2.c) The operator shall establish a requirement in an approved maintenance program for conducting the operational checks and evaluations of recordings from the FDR and CVR. The Procedures for the inspections of the flight recorder systems are given in Appendix B attached to this Announcement. The procedure shall have at least the following details:

(e.2.c.1) Prior to the first flight of the day, the built-in test features for the flight recorders and flight data acquisition unit (FDAU), when installed, shall be monitored by manual and/or automatic checks.

(e.2.c.2) Flight recorder shall have recording system inspection intervals of one year. A flight recorder system shall be considered unserviceable if there is a significant period of poor quality data, unintelligible signals, or if one or more of the mandatory parameters is not recorded correctly. The parameters that necessary

to be recorded in flight recorder system are listed in Appendix B (Flight recorder) attached to this Announcement. A report of the recording system annual inspection shall be retained in accordance with a provision prescribed in Chapter 5.

(e.2.c.3) Calibration of the FDR system shall be:

(e.2.c.3.1) for those parameters which have sensors dedicated only to the FDR and are not checked by other means, recalibration shall be carried out at least every 5 years or in accordance with the recommendations of the sensor manufacturer.

(e.2.c.3.2) when the parameters of altitude and airspeed are provided by sensors that are dedicated to the FDR system, there shall be a recalibration performed as recommended by the sensor manufacturer, or at least every 2 years.

(e.3) Combination recorders

All aeroplanes of a maximum certificated take-off mass of over 15000 kg for which the application for type certification is submitted on or after 1 January 2016, and which are required to be equipped with both a CVR and an FDR, shall be equipped with two combination recorders (FDR/CVR). One recorder shall be located as close to the cockpit as practicable and the other recorder located as far aft as practicable.

(4) All aeroplanes operated as VFR flights

Except VFR flights which are operated as controlled flights shall be equipped in accordance with Article 6 (9). All aeroplanes when operated as VFR flights shall be equipped with:

(a) a magnetic compass;

(b) an accurate timepiece indicating the time in hours, minutes and seconds;

(c) a sensitive pressure altimeter;

(d) an airspeed indicator; and

(5) All aeroplanes on flights over water

(a) All seaplanes include amphibians operated as seaplanes for all flights shall be equipped with:

(a.1) one life jacket, or equivalent individual flotation device which equipped with a means of electric illumination for the purpose of facilitating the location of persons, for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided;

(a.2) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable;

(a.3) one sea anchor (drogue);

(b) Landplanes include amphibians operated as landplanes shall carry one life jacket or equivalent individual flotation device which equipped with a means of electric illumination for the purpose of facilitating the location of persons, for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.

(b.1) when flying over water and at a distance of more than 93 km (50 NM) away from the shore, in the case of landplanes operated in accordance with Article 5 (2) (h) or Article 5 (2) (i);

(b.2) when flying en route over water beyond gliding distance from the shore;

(b.3) when taking off or landing at an aerodrome where the take-off or approach path is so disposed over water.

(c) In addition to the equipment prescribed in Article 6 (5) (a) or Article 6 (5) (b) whichever is applicable. Aeroplanes shall carry equipment for making the pyrotechnical distress signals and life-saving rafts with such life-saving equipment including means of sustaining life, in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency when flying en route on long-range over-water as follow:

(c.1) when flying over water at more than a distance corresponding to 120 minutes at cruising speed or 740 km (400 NM), away from land suitable for making an emergency landing in the case of aeroplane operated in accordance with Article 5 (2) (h) or Article 5 (2) (i).

(c.2) when flying more than 30 minutes or 185 km (100 NM), away from land suitable for making an emergency landing by aeroplane other than prescribed in Article 6 (5) (c) (c.1).

(d) All aeroplanes, when operate in accordance with Article 6 (5) (c) (c.1) or (c.2) with a maximum certificated take-off mass of over 27000 kg, on, 1 January 2018 shall have a securely attached underwater locating device, that meet the SAE AS6254 standard, operating at a frequency of 8.8 kHz. This device shall operate for a minimum of 30 days and shall not be installed in wings or empennage.

(6) All aeroplanes on flights over designated land areas

Aeroplanes, when operated across land areas which have been designated by the State concerned as areas in which search and rescue would be especially difficult, shall be equipped with such signalling devices and life-saving equipment (including means of sustaining life) as may be appropriate to the area overflown.

(7) All aeroplanes on high altitude flights

(a) An aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 700 hPa (10000 ft) in personnel compartments shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies in accordance with the requirement in Chapter 2, Article 4 (13) (i) (i.1).

(b) An aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 700 hPa (10000 ft) but which is provided with means of maintaining pressures greater than 700 hPa in personnel compartments shall be provided with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies in accordance with the requirement in Chapter 2, Article 4 (13) (i) (i.2)

(c) Pressurized aeroplanes intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa (25000 ft) shall be equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurization.

(d) An aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa, or which, if operated at flight altitudes at which the atmospheric pressure is more than 376 hPa, cannot descend safely within 4 minutes to a flight altitude at which the atmospheric pressure is equal to 620 hPa , shall be provided with automatically deployable oxygen equipment to

satisfy the requirements of Chapter 2, Article 4 (13) (i) (i.2). The total number of oxygen dispensing units shall exceed the number of passenger and cabin crew seats by at least 10 per cent.

(8) All aeroplanes in icing conditions

All aeroplanes shall be equipped with suitable de-icing and/or anti-icing devices when operated in circumstances in which icing conditions are reported to exist or are expected to be encountered.

(9) All aeroplanes operated in accordance with IFR

(a) All aeroplanes when operated in accordance with the IFR, or when the aeroplane cannot be maintained in a desired attitude without reference to one or more flight instruments, shall be equipped with:

(a.1) a magnetic compass;

(a.2) an accurate timepiece indicating the time in hours, minutes and seconds;

(a.3) two sensitive pressure altimeters;

(a.4) an airspeed indicating system with means of preventing malfunctioning due to either condensation or icing;

(a.5) a turn and slip indicator;

(a.6) an attitude indicator (artificial horizon);

(a.7) a heading indicator (directional gyroscope);

(a.8) a means of indicating whether the power supply to the gyroscopic instrument is adequate;

(a.9) the outside air temperature;

(a.10) a rate-of-climb and descent indicator;

(a.11) a standby Attitude Indicator;

(b) All aeroplanes of a maximum certificated take-off mass of over 5700 kg shall be fitted with an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the PIC. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument panel that the attitude indicator(s) is being operated by emergency power.

(10) All aeroplanes when operated at night

All aeroplanes when operated at night shall be equipped with:

(a) all equipment specified in Article 6 (9);

(b) the lights required by Appendix C (Light to be displayed by Aeroplanes) of this Announcement;

(c) two landing lights or a single landing light having two separately energized filament.

(d) illumination for all instruments and equipment that are essential for the safe operation of the aeroplane that are used by the flight crew;

(e) lights in all passenger compartments;

(f) an independent portable light for each crew member station.

(11) Pressurized aeroplanes when carrying passengers — weather radar

Pressurized aeroplanes when carrying passengers should be equipped with operative weather radar whenever such aeroplanes are being operated in areas where thunderstorms or other potentially hazardous weather conditions, regarded

as detectable with airborne weather radar, may be expected to exist along the route either at night or under instrument meteorological conditions.

(12) All aeroplanes operated above 49000 ft — radiation indicator

All aeroplanes intended to be operated above 49000 ft shall carry equipment to measure and indicate continuously the dose rate of total cosmic radiation being received and the cumulative dose on each flight. The display unit of the equipment shall be readily visible to a flight crew member.

(13) A document attesting Noise Certification

The operator shall provide a document attesting noise certification on the aeroplanes. the document attesting noise certification shall have data in English language.

(14) Mach number indicator

All aeroplanes with speed limitations expressed in terms of Mach number shall be equipped with a Mach number indicator.

(15) Aeroplanes required to be equipped with ground proximity warning systems (GPWS)

(a) All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5700 kg or authorized to carry more than 9 passengers shall be equipped with a GPWS which provides the warnings of unsafe terrain clearance in accordance with Article 6 (15) (d), and a forward looking terrain avoidance function.

(b) All piston-engined aeroplanes of a maximum certificated take-off mass in excess of 5700 kg or authorized to carry more than 9 passengers shall be equipped with a GPWS which provides the warnings in accordance with Article 6 (15) (d) (d.1) and Article 6 (15) (d) (d.3) including warning of unsafe terrain clearance and a forward-looking terrain avoidance function.

(c) A GPWS shall provide automatically a timely and distinctive warning to the flight crew when the aeroplane is in potentially hazardous proximity to the earth's surface.

(d) A GPWS shall provide warnings of the following circumstances:

(d.1) excessive descent rate;

(d.2) excessive terrain closure rate;

(d.3) excessive altitude loss after take-off or go-around;

(d.4) unsafe terrain clearance while not in landing configuration:

(d.4.1) gear not locked down;

(d.4.2) flaps not in a landing position;

(d.5) excessive descent below the instrument glide path;

(16) Aeroplanes carrying passengers — cabin crew seats

All aeroplanes shall be equipped with a forward or rearward facing (within 15 degrees of the longitudinal axis of the aeroplane) seat, fitted with a safety harness for the use of each cabin crew member. Cabin crew seats shall be located near floor level and other emergency exits as required by Chapter 6, Article 10 (1).

(17) Emergency locator transmitter (ELT)

(a) All aeroplanes authorized to carry more than 19 passengers shall be equipped with at least one automatic ELT or two ELTs of any type. Except aeroplane prescribed in Article 6 (17) (b).

(b) All aeroplanes authorized to carry more than 19 passengers for which the individual certificate of airworthiness is first issued after 1 July 2008 shall be equipped with at least two ELTs, one of which shall be automatic.

(c) All aeroplanes authorized to carry 19 passengers or less shall be equipped with at least one ELT of any type. Except aeroplane prescribed in Article 6 (17) (d).

(d) All aeroplanes authorized to carry 19 passengers or less for which the individual certificate of airworthiness is first issued after 1 July 2008 shall be equipped with at least one automatic ELT.

(e) ELT equipment carried shall operate simultaneously 121.5 MHz and 406MHz.

(18) Aeroplanes required to be equipped with an airborne collision avoidance system (ACAS II)

All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5700 kg or authorized to carry more than 19 passengers shall be equipped with an ACAS II.

(19) Aeroplanes required to be equipped with a pressure-altitude reporting transponders

All aeroplanes shall be equipped a pressure-altitude reporting transponder with a data source that provides pressure-altitude information with a resolution of 7.62 m (25 ft), or better.

(20) Microphones

All flight crew members required to be on flight deck duty shall communicate through boom or throat microphones below the transition level/altitude.

(21) Forward-looking wind shear warning system

All turbo-jet aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than 9 passengers shall be equipped with a forward-looking wind shear warning system.

(22) All aeroplanes operated by a single pilot under the IFR or at night

All aeroplanes operated by a single pilot under the IFR or at night shall be equipped with:

(a) a autopilot that has at least altitude hold and heading select modes;

(b) a headset with a boom microphone or equivalent;

(c) means of displaying charts that enables them to be readable in all ambient light conditions.

(23) Communication equipment

An aeroplane shall be provided with radio communication equipment capable of:

(a) conducting two-way communication for aerodrome control purposes;

(b) receiving meteorological information at any time during flight;

(c) conducting two-way communication at any time during flight with aeronautical station on specified frequencies.

(d) conducting two-way communication by using emergency frequency 121.5 MHz.

(e) enable it to operate in accordance with the prescribed RCP type(s), when operate within an airspace prescribed in ICAO Manual on RCP (Doc 9869).

(24) Navigation equipment

An aeroplane shall be provided with navigation equipment which will enable it to proceed in accordance with its operational flight plan and the requirements of air traffic services, except navigation for flights under the VFR.

(25) Electronic navigation data

An operator shall not employ electronic navigation data products that have been processed for application in the air and on the ground unless the operator has procedures for ensuring that the process applied and the products delivered have met acceptable standards of integrity and that the products are compatible with the intended function of the equipment that will use them.

(26) Instrument Landing System, Precision Approach Landing Category I, II, III, RVSM, RNP, RNAV, MNOS and PBN

All aeroplanes operated under ILS, Precision Approach Landing Category I, II, III and operated within an area of RVSM, RNP, RNAV, MNPS and PBN shall be equipped with the instruments/equipment or operating systems in accordance with ADCA on the operation approval for RVSM, RNP, MNPS and ILS CAT II, III

(27) ETOPS

All aeroplanes operated under ETOPS shall be equipped with the instruments/equipment or operating systems in accordance with ADCA on the operation approval for ETOPS.

(28) Head-Up Displays (HUD)

All aeroplanes that installed HUD or enhanced vision systems (EVS) shall be in accordance with a standard and shall be approved by the DCA before use.

(29) Electronic flight bags (EFBs)

All aeroplanes that installed EFB shall be in accordance with a standard and the operational use of EFB function shall be approved by the DCA before use.

Article 4. The wording in the Chapter 5, Article 9 (3), Manuals Logs and Records, of the ADCA for Air Navigation by Aeroplane of AOC holders B.E. 2553, given on 24 August B.E. 2553, shall be repealed.

Article 5. The wording in Chapter 8, Article 12, Aeroplane Maintenance, of the ADCA for Air Navigation by Aeroplane of AOC holders B.E. 2553, given on 24 August B.E. 2553, shall be repealed and replaced with the following wording.

Chapter 8
Aeroplane Maintenance

Article 12. The operators shall operate in accordance with standards established for the Aeroplane Maintenance as follow:

(1) Operator's maintenance responsibilities

(a) Operators shall be responsible for maintenance to ensure that, in accordance with procedures acceptable to the DCA as follow:

(a.1) each aeroplane they operate is maintained in an airworthy condition;

(a.2) the operational and emergency equipment necessary for an intended flight is serviceable; and

(a.3) the certificate of airworthiness of each aeroplane they operate remains valid.

(b) An operator shall not operate an aeroplane unless it is maintained and released to service by an organization approved in accordance with Article 12 (7) or by the holder of an aircraft maintenance license or by the holder of a pilot license which has been authorized by the operator in accordance with a procedure approved by the DCA. Notwithstanding, the holder of a pilot license shall have the privileges for release to service only after a maintenance before flight or a preventive maintenance which no defect found and no part replacement during maintenance.

(c) An operator shall employ a person or group of persons to ensure that all maintenance is carried out in accordance with the general maintenance manual and the maintenance program approved by the DCA.

(2) General Maintenance Manual (GMM)

(a) The operator shall provide a GMM for the use and guidance of maintenance and operational personnel concerned. The design of the manual shall observe Human Factors principles.

(b) The operator shall submit a GMM to the DCA for approval. The contents in a GMM and a method for approval shall be in accordance with a designated in a notification, by the DCA.

(c) The GMM shall be amended as necessary to keep the information contained therein up to date. If major amendment has been done, the operator shall submit the amendment details to the DCA for approval before use.

(d) The operator shall send a GMM together with all amendments and/or revisions to it to all operator organizations, the DCA and the State of Registry without delay.

(3) Aeroplane Maintenance programme

(a) The operator shall provide an aeroplane maintenance programme for the use and guidance of maintenance and operational personnel concerned for maintenance of an aeroplane. The contents in an aeroplane maintenance programme and a method for approval shall be in accordance with a designated in a notification, by the DCA.

(b) The operator shall submit an aeroplane maintenance programme to the DCA for approval. , approved by the DCA, containing the information required by Chapter 5, Article 9 (3). The design and application of the operator’s maintenance programme shall observe Human Factors principles.

(c) The maintenance programme shall be amended as necessary to keep the information contained therein up to date. If major amendment has been done, the operator shall submit the amendment details to the DCA for approval before use.

(d) The operator shall send an aeroplane maintenance programme together with all amendments and/or revisions to it to all operator organizations and the DCA without delay.

(4) Maintenance records

(a) An operator shall ensure that the following records are kept for the periods mentioned in Article 12 (4) (a):

(a.1) the total time in service (hours, calendar time and cycles, as appropriate) of the aeroplane and all life-limited components;

(a.2) the current status of compliance with all mandatory continuing airworthiness information;

(a.3) appropriate details of modifications and repairs;

(a.4) the time in service (hours, calendar time and cycles, as appropriate) since the last overhaul of the aeroplane or its components subject to a mandatory overhaul life;

(a.5) the current status of the aeroplane's compliance with the maintenance programme; and

(a.6) the detailed maintenance records to show that all requirements for the signing of a maintenance release have been met.

(b) The records in Article 12 (4) (a.1) to (a.5) shall be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in Article 12 (4) (a.6) for a minimum period of one year after the signing of the maintenance release

(c) In the event of a temporary change of operator, the records shall be made available to the new operator. In the event of any permanent change of operator, the records shall be transferred to the new operator.

(5) Continuing airworthiness information

(a) The operator of an aeroplane over 5700 kg maximum certificated take-off mass shall monitor and assess maintenance and operational experience with respect to continuing airworthiness and provide the information as prescribed in the ADCA for Service Difficulty Reporting System. Notwithstanding, the mentioned system shall have details concerning the reporting to the state of registry.

(b) The operator of an aeroplane over 5700 kg maximum certificated take-off mass shall obtain and assess continuing airworthiness information and recommendations available from the organization responsible for the type design and shall implement resulting actions considered necessary in accordance with the ADCA on Airworthiness Directive.

(6) Modifications and repairs

All modifications and repairs shall comply with the relevant provisions contained in the ADCA for Maintenance, Preventive Maintenance, Rebuilding and Alteration. Procedures shall be established to ensure that the substantiating data supporting compliance with the mentioned the ADCA.

(7) Maintenance release

(a) A maintenance release shall be completed and signed to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data and the procedures described in the operator’s GMM.

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

(b.1) basic details of the maintenance carried out including detailed reference of the approved data used;

(b.2) the date such maintenance was completed;

(b.3) the identity of the person or persons signing the release.

In this regard, the details of operations shall be in accordance with the ADCA for Maintenance, Preventive Maintenance, Rebuilding and Alteration.

Given on this 12th day of May B.E. 2557

Woradej Hanpraseart
Director General
Department of Civil Aviation