CARC Civil Aviation Regulatory Commission	**Flight Operations Standards Directorate** **Commercial Air Transport Section - Special Approvals - ETOPS Approval** **Accelerated ETOPS Approval Application Attachments Compliance List** Applicable for operators without in-service experience with the candidate airframe/engine combination

• **Operator Name**			
• **Aircraft Type(s)**			
• **AOC Applicant/Holder Focal Point**	**Name**	**Phone No.**	**E-mail**

No	Accelerated ETOPS Operational Approval Application Attachments	JCAR OPS AMC 20-6	OD	YES	NO	NA	Remarks
A	**Operational Demonstration Documents**						
1	**Accelerated ETOPS Operations Approval Plan.** The operator shall submit an Accelerated ETOPS Operations Approval Plan to the Authority six (6) months before the proposed start of ETOPS, the Accelerated ETOPS Operations approval plan shall define						
a	The proposed routes and the ETOPS diversion time necessary to support those routes;	5.1 (A) 1					
b	The proposed one-engine-inoperative cruise speed, which may be area specific depending upon anticipated airplane loading and likely fuel penalties associated with the planned procedures;	5.1 (A) 2					
c	How to comply with the ETOPS Processes listed in paragraph (2);	5.1 (A) 3					
d	The resources allocated to each ETOPS process to initiate and sustain ETOPS operations in a manner that demonstrates commitment by management and all personnel involved in ETOPS continuing airworthiness and operational support;	5.1 (A) 4					
e	Review Gates: A review gate is a milestone of the tracking plan to allow for the orderly tracking and documentation of specific provisions of this section. Normally, the review gate process will start six months before the proposed start of ETOPS and shall continue until at least six months after the start of ETOPS. The review gate process will help ensure that the proven processes comply with the provisions of this AMC and are capable of continued ETOPS operations	5.1 (A) 6					
2	**Operator ETOPS Process Elements.** The operator seeking Accelerated ETOPS Operations Approval shall also demonstrate to the competent authority that it has established an ETOPS process that includes the following ETOPS elements:						
a	Initial and recurrent training and qualification programs in place for ETOPS related personnel, including flight crew and all other operations personnel	5.1 (B) 5					

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b	Compliance with the Flight Operations Program as defined in this AMC	5.1 (B) 6					
c	Proven flight planning and dispatch programs appropriate to ETOPS	5.1 (B) 7					
d	Procedures to ensure the availability of meteorological information and MEL appropriate to ETOPS; and	5.1 (B) 8					
e	Flight crew and dispatch personnel familiar with the ETOPS routes to be flown; in particular the requirements for, and selection of ETOPS en-route alternate aerodromes	5.1 (B) 9					
3	**Process elements Documentation.** Documentation shall be provided for the following elements:						
a	The plan to train the flight and continuing airworthiness personnel to the different ETOPS process elements	5.1 (C) 2					
b	The plan to use proven or manufacturer validated Training and Maintenance and Operations Manual procedures relevant to ETOPS for the airplane for which the operator is seeking Accelerated ETOPS Operations Approval	5.1 (C) 3					
c	Changes to any previously proven or manufacturer validated Training, Maintenance or Operations Manual procedures described above. Depending on the nature of any changes, the operator may be required to provide a plan for validating such changes	5.1 (C) 4					
d	The validation plan for any additional operator unique training and procedures relevant to ETOPS, if any	5.1 (C) 5					
e	The control procedures when a contracted maintenance organization or flight dispatch organization is used	5.1 (C) 7					

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B	**Operations Manual Part D – Training Program**						
1	Flight Crew Training. The operator's ETOPS training program shall provide initial and recurrent training for flight crew in accordance with Appendix 6	7.1					
2	An operator shall ensure that prior to conducting ETOPS, each crew member has completed successfully ETOPS training and checking This training shall be type and area specific in accordance with the applicable operational requirements	12.0					
3	The operator shall ensure that crew members are not assigned to operate ETOPS routes for which they have not successfully passed the training	12.0					
4	**Flight Crew Training Program**. The operator's ETOPS training program shall provide initial and recurrent training for flight crew as follows:						
a	**Ground Training.** The ground training of the ETOPS shall be incorporated in conversion and the annual recurrent training programs. The training consist of:						
(1)	**Introduction to ETOPS regulations**						
(a)	Brief overview of the history of ETOPS	App. 6 para 1					
(b)	ETOPS regulations	App. 6 para 1					
(c)	Definitions	App. 6 para 1					
(d)	Approved One-Engine-Inoperative Cruise Speed	App. 6 para 1					
(e)	ETOPS Type Design Approval – a brief synopsis	App. 6 para 1					
(f)	Maximum approved diversion times and time-limited systems capability	App. 6 para 1					
(g)	Operator's Approved Diversion Time	App. 6 para 1					
(h)	Routes and aerodromes intended to be used in the ETOPS area of operations	App. 6 para 1					
(i)	ETOPS Operations Approval	App. 6 para 1					
(j)	ETOPS Area and Routes	App. 6 para 1					
(k)	ETOPS en-route alternates aerodromes including all available let-down aids	App. 6 para 1					
(l)	Navigation systems accuracy, limitations and operating procedures	App. 6 para 1					
(m)	Meteorological facilities and availability of information	App. 6 para 1					
(n)	In-flight monitoring procedures	App. 6 para 1					
(o)	Computerized Flight Plan	App. 6 para 1					

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(p)	Orientation charts, including low level planning charts and flight progress charts usage (including position plotting)	App. 6 para 1					
(r))	Equal Time Point	App. 6 para 1					
(t)	Critical fuel	App. 6 para 1					
(2)	**Normal operations**						
(a)	Flight planning and Dispatch:	App 6 para 2					
	• ETOPS Fuel requirements	App 6 para 2					
	• Route Alternate selection - weather minima	App 6 para 2					
	• Minimum Equipment List – ETOPS specific	App 6 para 2					
	• ETOPS service check and Tech log	App 6 para 2					
	• Pre-flight FMS Set up	App 6 para 2					
(b)	Flight performance progress monitoring	App 6 para 2					
	• Flight management, navigation and communication systems	App 6 para 2					
	• Airplane system monitoring	App 6 para 2					
	• Weather monitoring	App 6 para 2					
	• In-flight fuel management – to include independent cross checking of fuel quantity	App 6 para 2					
(3)	**Abnormal and contingency procedures:**						
(a)	Diversion Procedures and Diversion 'decision making'. Initial and recurrent training to prepare flight crews to evaluate potential significant system failures. The goal of this training shall be to establish crew competency in dealing with the most probable contingencies. The discussion shall include the factors that may require medical, passenger related or non-technical diversions	App 6 para 3					
(b)	Navigation and communication systems, including appropriate flight management devices in degraded modes	App 6 para 3					
(c)	Fuel Management with degraded systems	App 6 para 3					
(d)	Initial and recurrent training which emphasizes abnormal and emergency procedures to be followed in the event of foreseeable failures for each area of operation, including:	App 6 para 3					
	• Procedures for single and multiple failures in flight affecting ETOPS sector entry and diversion decisions. If standby sources of electrical power significantly degrade the cockpit instrumentation to the pilots, then training for approaches with the standby generator as the sole power source shall be conducted during initial and recurrent training	App 6 para 3					
	• Operational restrictions associated with these system failures including any applicable MEL considerations	App 6 para 3					

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b	**Flight simulator Training.** The flight simulator training of the ETOPS shall be incorporated in conversion, command upgrade and recurrent training programs. The training consist of practical training and evaluation on the ETOPS operations to include:						
(1)	Flight preparation	App 6 para1, 2 & 3					
(2)	Flight crew procedures	App 6 para1, 2 & 3					
(3)	ETOPS critical fuel scenario	App 6 para1, 2 & 3					
(4)	In flight diversion procedures	App 6 para1, 2 & 3					
(5)	Use of documentation/charts specific to ETOPS operations	App 6 para1, 2 & 3					
c	**Line Flying Under Supervision.** The line flying under supervision of the ETOPS shall be incorporated in conversion and command upgrade training programs. The training consist of practical training and evaluation on the ETOPS operations to include:						
(4)	During the introduction into service of a new ETOPS type, or conversion of pilots not previously ETOPS qualified where ETOPS approval is sought, a minimum of two ETOPS sectors shall be completed including an ETOPS line check.	App 6 para 4					
d	**Line Check**						
(1)	During the introduction into service of a new ETOPS type, or conversion of pilots not previously ETOPS qualified where ETOPS approval is sought, a minimum of two ETOPS sectors shall be completed including an ETOPS line check.	App 6 para 4					
e	**12 Months Recurrent Training**						
(1)	ETOPS subjects shall also be included in annual refresher training as part of the normal process	App 6 para 4					
5	**Flight Dispatchers Training Program.**						
(a)	The operator's training program in respect to ETOPS shall provide training for operations personnel other than flight crew (e.g. dispatchers), in addition to refresher training in the following areas:	App 6 para 5					
(1)	ETOPS Regulations/Operations Approval	App 6 para 5					
(2)	Airplane performance/Diversion procedures	App 6 para 5					
(3)	Area of Operation	App 6 para 5					
(4)	Fuel Requirements	App 6 para 5					
(5)	Dispatch Considerations MEL, CDL, weather minima, and alternate airports	App 6 para 5					
(6)	Documentation	App 6 para 5					

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C	**Operations Manual**						
1	**Operations Manual Part A**						
a	**Requirements Common to all ETOPS Approval Categories:**						
(1)	Release Considerations	7.1 (ii)					
(a)	Minimum Equipment List (MEL). Airplanes shall only be operated in accordance with the provisions of the approved Minimum Equipment List (MEL)	7.1 (ii) (A)					
(b)	Weather. To forecast terminal and en-route weather, an operator shall only use weather information systems that are sufficient reliable and accurate in the proposed area of operation	7.1 (ii) (B)					
(c)	Fuel. Fuel shall be sufficient to comply with the critical fuel scenario as described in Appendix 4 to this AMC	7.1 (ii) (C)					
(2)	Flight Planning. The effects of wind and temperature at the one-engine-inoperative cruise altitude shall be accounted for in the calculation of equal-time point. In addition to the nominated ETOPS en-route alternates, the operator shall provide flight crews with information on adequate aerodromes on the route to be flown which are not forecast to meet the ETOPS en-route alternate weather minima. Aerodrome facility information and other appropriate planning data concerning these aerodromes shall be provided before commencement of the flight to flight crews for use when executing a diversion	7.1 (iii)					
(3)	En-route Alternate. Appendix 5 to this AMC shall be implemented when establishing the company operational procedures for ETOPS	7.1 (v)					
(4)	Communications Equipment (VHF/HF, Data Link, Satellite Communications). For all routes where voice communication facilities are available, the communication equipment required by operational requirements shall include at least one voice-based system	7.1 (vi					
b	**Specific Requirements for 90 Minutes or Less Diversion Time Approval**						
(1)	The Operator's Approved Diversion Time is an operational limit that shall not exceed either the Maximum Approved Diversion Time or the time-limited system capability minus 15 minutes	7.2.1					
(4)	Minimum Equipment List (MEL) restrictions for 120 minutes ETOPS shall be used unless there are specific restrictions for 90 minutes or less	7.2.1					

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c	**Specific Requirements for Diversion Time above 90 Minutes up to 180 Minutes Approval.** The Operator's Approved Diversion Time is an operational limit that shall not exceed either the Maximum Approved Diversion Time, or the time-limited system capability minus 15 minutes						
(1)	Additional Considerations for aircraft with 120 minutes Maximum Approved Diversion Time. In the case of an aircraft approved for 120 minutes Maximum Approved Diversion Time, an operator may request an increase in the operator's approved diversion time for specific routes provided:	7.2.2 (i)					
(a)	The requested Operator's Approved Diversion Time does not exceed either 115% of the Maximum Approved Diversion Time or the time-limited system capability minus 15 minutes	7.2.2 (i) 1					
(b)	The airplane fuel carriage supports the requested Operator's Approved Diversion Time	7.2.2 (i) 2					
(2)	Additional Considerations for aircraft with 180 minutes Maximum Approved Diversion Time. In the case of an aircraft certified for 180 minutes Maximum Approved Diversion Time, an operator may request an increase in the operator's approved diversion time for specific routes provided:	7.2.2 (ii)					
(a)	The requested Operator's Approved Diversion Time does not exceed either 115% of the Maximum Approved Diversion Time or the time-limited system capability minus 15 minutes	7.2.2 (ii) 1					
(b)	The airplane fuel carriage supports the requested Operator's Approved Diversion Time diversion time	7.2.2 (ii) 2					
(c)	It can be shown that the resulting routing will not reduce the overall safety of the operation	7.2.2 (ii) 3					
(d)	Such increases will require the Agency to assess overall type design including time-limited systems, demonstrated reliability; and the development of an appropriate MEL related to the diversion time required	7.2.2 (ii) 4					

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d	**Flight Preparation and In-flight Procedures.** The operator shall establish pre-flight planning and dispatch procedures for ETOPS and they shall be listed in the Operations Manual. These procedures shall include						
(1)	**Communication and Navigation Facilities.** For releasing an airplane on an ETOPS flight, the operators shall ensure that:						
(a)	Communications facilities are available to provide under normal conditions of propagation at all planned altitudes of the intended flight and the diversion scenarios, reliable two-way voice and/or data link communications	App.4 para 3		☐	☐	☐	
(b)	Visual and non-visual aids are available at the specified alternates for the anticipated types of approaches and operating minima	App.4 para 3		☐	☐	☐	
(2)	**Fuel and Oil Supply**						
(a)	**Critical Fuel Reserve**						
	• In establishing the critical fuel reserves, the applicant is to determine the fuel necessary to fly to the most critical point (at normal cruise speed and altitude, taking into account the anticipated meteorological conditions for the flight) and execute a diversion to an ETOPS en-route alternate under the conditions outlined in this Appendix, the Critical Fuel Scenario below	App.4 para 4		☐	☐	☐	
	• These critical fuel reserves shall be compared to the normal applicable operational requirements for the flight. If it is determined by this comparison that the fuel to complete the critical fuel scenario exceeds the fuel that would be on board at the most critical point, as determined by applicable operational requirements, additional fuel shall be included to the extent necessary to safely complete the Critical Fuel Scenario. When considering the potential diversion distance flown account shall be taken of the anticipated routing and approach procedures, in particular any constraints caused by airspace restrictions or terrain	App.4 para 4		☐	☐	☐	

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(b)	**Critical Fuel Scenario**						
	• The airplane is required to carry sufficient fuel taking into account the forecast wind and weather to fly to an ETOPS route alternate assuming the greater of: - A rapid decompression at the most critical point followed by descent to a 10,000 ft or a higher altitude if sufficient oxygen is provided in accordance with the applicable operational requirements - Flight at the approved one-engine-inoperative cruise speed assuming a rapid decompression and a simultaneous engine failure at the most critical point followed by descent to a 10,000 ft or a higher altitude if sufficient oxygen is provided in accordance with the applicable operational requirements - Flight at the approved one-engine-inoperative cruise speed assuming an engine failure at the most critical point followed by descent to the one-engine-inoperative cruise altitude	App.4 para 4		☐	☐	☐	
	• Upon reaching the alternate, hold at 1500 ft above field elevation for 15 minutes and then conduct an instrument approach and landing	App.4 para 4		☐	☐	☐	
	• Add a 5% wind speed factor (i.e., an increment to headwind or a decrement to tailwind) on the actual forecast wind used to calculate fuel in the greater of (1), (2) or (3) above to account for any potential errors in wind forecasting. If an operator is not using the actual forecast wind based on wind model acceptable to the competent authority, allow 5% of the fuel required for (1), (2) or (3) above, as reserve fuel to allow for errors in wind data. A wind aloft forecasting distributed worldwide by the World Area Forecast System (WAFS) is an example of a wind model acceptable to the competent authority	App.4 para 4		☐	☐	☐	
	• If an APU is one of the required power sources, then its fuel consumption shall be accounted for during the appropriate phases of flight	App.4 para 4		☐	☐	☐	
	• Additional fuel consumptions due to any MEL or CDL items shall be accounted for during the appropriate phases of flight, when applicable	App.4 para 4		☐	☐	☐	

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(c)	**Icing**						
	• Correct the amount of fuel obtained in critical fuel scenario above taking into account the greater of: - The effect of airframe icing during 10% of the time during which icing is forecast (including ice accumulation on unprotected surfaces, and the fuel used by engine and wing anti-ice during this period) - Fuel for engine anti-ice, and if appropriate wing anti-ice for the entire time during which icing is forecast	App.4 para 4		☐	☐	☐	
	• The operator shall have a program established to monitor airplane in-service deterioration in cruise fuel burn performance and including in the fuel supply calculations sufficient fuel to compensate for any such deterioration. If there is no data available for such a program the fuel supply shall be increased by 5% to account for deterioration in cruise fuel burn performance	App.4 para 4		☐	☐	☐	
(3)	**Alternate Aerodromes**						
(a)	To conduct an ETOPS flight, the ETOPS en-route alternate aerodromes, shall meet the weather requirements of planning minima for an ETOPS en-route alternate aerodromes contained in the applicable operational requirements. ETOPS planning minima apply until dispatch. The planned en-route alternates for using in the event of propulsion system failure or airplane system failure(s) which require a diversion shall be identified and listed in the cockpit documentation (e.g. computerized flight plan) for all cases where the planned route to be flown contains an ETOPS point	App.4 para 5		☐	☐	☐	
(b)	**Selection of en-route alternate aerodromes.** For an aerodrome to be nominated as an ETOPS en-route alternate for the purpose of this AMC, it shall be anticipated that at the expected times of possible use it is an adequate ETOPS aerodrome that meets the weather and field conditions defined in the paragraph below titled 'Dispatch Minima – En-Route Alternate Aerodromes' or the applicable operational requirements. To list an aerodrome as an ETOPS en-route alternate, the following criteria shall be met:	App.5 para 1		☐	☐	☐	

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	• The landing distances required as specified in the AFM for the altitude of the aerodrome, for the runway expected to be used, taking into account wind conditions, runway surface conditions, and airplane handling characteristics, permit the airplane to be stopped within the landing distance available as declared by the aerodrome authorities and computed in accordance with the applicable operational requirements	App.5 para 1					
	• The aerodrome services and facilities are adequate to permit an instrument approach procedure to the runway expected to be used while complying with the applicable aerodrome operating minima	App.5 para 1					
	• The latest available forecast weather conditions for a period commencing at the earliest potential time of landing and ending one hour after the latest nominated time of use of that aerodrome, equals or exceeds the authorized weather minima for en-route alternate aerodromes as provided for by the increments listed in Table 1 of this Appendix (para (b) below). In addition, for the same period, the forecast crosswind component plus any gusts shall be within operating limits and within the operators maximum crosswind limitations taking into account the runway condition (dry, wet or contaminated) plus any reduced visibility limits	App.5 para 1					
	• In addition, the operator's program shall provide flight crews with information on adequate aerodromes appropriate to the route to be flown which are not forecast to meet en-route alternate weather minima. Aerodrome facility information and other appropriate planning data concerning these aerodromes shall be provided to flight crews for use when executing a diversion	App.5 para 1					
(c)	**Dispatch minima – en-route alternate aerodromes**	App.5 para 2					
	• An aerodrome may be nominated as an ETOPS en-route alternate for flight planning and release purposes if the available forecast weather conditions for a period commencing at the earliest potential time of landing and ending one hour after the latest nominated time of use of that aerodrome, equal or exceed the criteria required below (The below criteria for precision approaches are only to be applied to Category 1 approaches)	App.5 para 2					
	- Precision approach. For ceiling authorized DH/DA plus an increment of 200 ft and for visibility authorized visibility plus an increment of 800 meters	App.5 para 2					
	- Non precision approach or circling approach. For ceiling authorized DH/DA plus an increment of 400 ft and for visibility authorized visibility plus an increment of 1500 meters	App.5 para 2					

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	• When determining the usability of an Instrument Approach (IAP), forecast wind plus any gusts shall be within operating limits, and within the operators maximum crosswind limitations taking into account the runway condition (dry, wet or contaminated) plus any reduced visibility limits. Conditional forecast elements need not be considered, except that a PROB 40 or TEMPO condition below the lowest applicable operating minima shall be taken into account	App.5 para 2					
	• When dispatching under the provisions of the MEL, those MEL limitations affecting instrument approach minima shall be considered in determining ETOPS alternate minima	App.5 para 2					
(d)	**En-route alternate aerodrome planning minima – advanced landing systems**	App.5 para 2					
	• The increments required by Table 1 are normally not applicable to Category II or III minima unless specifically approved by the Authority	App.5 para 2					
	• Approval will be based on the following criteria: Aircraft is capable of engine-inoperative Cat II/III landing; and Operator is approved for normal Cat II/III operations	App.5 para 2					
	• The competent authority may require additional data (such as safety assessment or in-service records) to support such an application. For example, it shall be shown that the specific airplane type can maintain the capability to safely conduct and complete the Category II/III approach and landing, in accordance with EASA CS-AWO, having encountered failure conditions in the airframe and/or propulsion systems associated with an inoperative engine that would result in the need for a diversion to the route alternate aerodrome	App.5 para 2					
	• Systems to support one-engine inoperative Category II or III capability shall be serviceable if required to take advantage of Category II or III landing minima at the planning stage	App.5 para 2					
(4)	**In-flight re-planning and post-dispatch weather minima**						
(a)	An airplane whether or not dispatched as an ETOPS flight may not re-route post dispatch without meeting the applicable operational requirements and satisfy by a procedure that dispatch criteria have been met. The operator shall have a system in place to facilitate such re-routes	App.5 para 3					
(b)	Post-dispatch, weather conditions at the ETOPS en-route alternates shall be equal to or better than the normal landing minima for the available instrument approach	App.5 para 3					

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(5)	**Delayed dispatch.**						
(a)	If the dispatch of a flight is delayed by more than one hour, pilots and/or operations personnel shall monitor weather forecasts and airport status at the nominated en-route alternates to ensure that they stay within the specified planning minima requirements until dispatch	App.4 para 7		☐	☐	☐	
(6)	**Diversion decision making**						
(a)	Operators shall establish procedures for flight crew, outlining the criteria that indicate when a diversion or change of routing is recommended whilst conducting an ETOPS flight. For an ETOPS flight, in the event of the shutdown of an engine, these procedures shall include the shutdown of an engine, fly to and land at the nearest aerodrome appropriate for landing. Factors to be considered when deciding upon the appropriate course of action and suitability of an aerodrome for diversion may include but are not limited to:	App.4 para 8		☐	☐	☐	
	• Aircraft configuration/weight/systems status	App.4 para 8		☐	☐	☐	
	• Wind and weather conditions en route at the diversion altitude	App.4 para 8		☐	☐	☐	
	• Minimum altitudes en route to the diversion aerodrome	App.4 para 8		☐	☐	☐	
	• Fuel required for the diversion	App.4 para 8		☐	☐	☐	
	• Aerodrome condition, terrain, weather and wind	App.4 para 8		☐	☐	☐	
	• Runways available and runway surface condition	App.4 para 8		☐	☐	☐	
	• Approach aids and lighting	App.4 para 8		☐	☐	☐	
	• RFFS* capability at the diversion aerodrome	App.4 para 8		☐	☐	☐	
	• Facilities for aircraft occupants - disembarkation & shelter	App.4 para 8		☐	☐	☐	
	• Medical facilities	App.4 para 8		☐	☐	☐	
	• Pilot's familiarity with the aerodrome	App.4 para 8		☐	☐	☐	
	• Information about the aerodrome available to the flight crew	App.4 para 8		☐	☐	☐	
(b)	Contingency procedures shall not be interpreted in any way that prejudices the final authority and responsibility of the pilot-in-command for the safe operation of the airplane	App.4 para 8		☐	☐	☐	
(c)	for an ETOPS en-route alternate aerodrome, a published RFFS category equivalent to ICAO category 4, available at 30 minutes notice, is acceptable	App.4 para 8		☐	☐	☐	

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(7)	**In-flight monitoring.**						
(a)	During the flight, the flight crew shall remain informed of any significant changes in conditions at designated ETOPS en-route alternate aerodromes. Prior to the ETOPS Entry Point, the forecast weather, established airplane status, fuel remaining, and where possible field conditions and aerodrome services and facilities at designated ETOPS en-route alternates are to be evaluated. If any conditions are identified which could preclude safe approach and landing on a designated en-route alternate aerodrome, then the flight crew shall take appropriate action, such as re-routing as necessary, to remain within the operator's approved diversion time of an en-route alternate aerodrome with forecast weather to be at or above landing minima. In the event this is not possible, the next nearest en-route alternate aerodrome shall be selected provided the diversion time does not exceed the maximum approved diversion time. This does not override the pilot in command's authority to select the safest course of action	**App.4 para 9**					
(8)	**Airplane performance data**						
(a)	The operator shall ensure that the Operations Manual contains sufficient data to support the critical fuel reserve and area of operations calculation	App.4 para 10					
(b)	The following data shall be based on the information provided by the (S) TC holder. The requirements for one-engine-inoperative performance en-route can be found in the applicable operational requirements	App.4 para 10					
	• Detailed one-engine-inoperative performance data including fuel flow for standard and non-standard atmospheric conditions and as a function of airspeed and power setting, where appropriate, covering:	App.4 para 10					
	- Drift down (includes net performance)	App.4 para 10					
	- Cruise altitude coverage including 10,000 feet	App.4 para 10					
	- Holding	App.4 para 10					
	- Altitude capability (includes net performance)	App.4 para 10					
	- Missed approach	App.4 para 10					

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	• Detailed all-engine-operating performance data, including nominal fuel flow data, for standard and non-standard atmospheric conditions and as a function of airspeed and power setting, where appropriate, covering:	App.4 para 10					
	- Cruise (altitude coverage including 10,000 feet); and	App.4 para 10					
	- Holding. It shall also contain details of any other conditions relevant to extended range operations which can cause significant deterioration of performance, such as ice accumulation on the unprotected surfaces of the airplane, Ram Air Turbine (RAT) deployment, thrust reverser deployment, etc. The altitudes, airspeeds, thrust settings, and fuel flow used in establishing the ETOPS area of operations for each airframe/engine combination shall be used in showing the corresponding terrain and obstruction clearances in accordance with the applicable operational requirements	App.4 para 10					
(9)	**Operational flight plan**						
(a)	The type of operation (i.e. ETOPS, including the diversion time used to establish the plan) shall be listed on the operational flight plan as required by the applicable operational requirements	App.4 para 11					
e	**Operational Limitations**						
(1)	**Area of operation.** An operator is, when specifically approved, authorized to conduct ETOPS flights within an area where the diversion time, at any point along the proposed route of flight, to an adequate ETOPS en-route alternate aerodrome, is within the operator's approved diversion time (under standard conditions in still air) at the approved one-engine-inoperative cruise speed	App 3 para 1					
(2)	**Operator's approved diversion time.** The procedures established by the operator shall ensure that ETOPS is only planned on routes where the Operator's Approved Diversion Time to an Adequate ETOPS en-route alternate Aerodrome can be met	App 3 para 2					
(3)	**Issue of the ETOPS operations approval by the competent authority.** The approval issued by the Competent Authority for ETOPS operations shall be based on the following information provided by the operator:	App 3 para 3					

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(a)	Specification of the particular airframe/engine combinations, including the current approved CMP document required for ETOPS as normally identified in the AFM	App 3 para 3					
(b)	Authorized area of operation	App 3 para 3					
(c)	Minimum altitudes to be flown along planned and diversionary routes	App 3 para 3					
(d)	Operator's Approved Diversion Time	App 3 para 3					
(e)	Aerodromes identified to be used, including alternates, and associated instrument approaches and operating minima	App 3 para 3					
(f)	The approved maintenance and reliability program for ETOPS	App 3 para 3					
(g)	Identification of those airplanes designated for ETOPS by make and model as well as serial number and registration	App 3 para 3					
(h)	Specification of routes and the ETOPS diversion time necessary to support those routes	App 3 para 3					
(i)	The one-engine-inoperative cruise speed, which may be area specific, depending upon anticipated airplane loading and likely fuel penalties associated with the planned procedures	App 3 para 3					
(j)	Processes and related resources allocated to initiate and sustain ETOPS operations in a manner that demonstrates commitment by management and all personnel involved in ETOPS continued airworthiness and operational support	App 3 para 3					
(k)	The plan for establishing compliance with the build standard required for Type Design Approval, e.g. CMP document compliance	App 3 para 3					
2	**Minimum Equipment List (MEL).**	App.4 para 2					
a	The system redundancy levels appropriate to ETOPS shall be reflected in the Master Minimum Equipment List (MMEL). An operator's MEL may be more restrictive than the MMEL considering the kind of ETOPS operation proposed, equipment and in-service problems unique to the operator. Systems and equipment considered to have a fundamental influence on safety may include, but are not limited to, the following:	App.4 para 2					
(1)	Electrical	App.4 para 2					
(2)	Hydraulic	App.4 para 2					
(3)	Pneumatic	App.4 para 2					
(4)	Flight instrumentation, including warning and caution systems	App.4 para 2					
(5)	Fuel	App.4 para 2					
(6)	Flight control	App.4 para 2					
(7)	Ice protection	App.4 para 2					

No	Accelerated ETOPS Operational Approval Application Attachments	JCAR OPS AMC 20-6	OMA	YES	NO	NA	Remarks
(8)	Engine start and ignition	App.4 para 2					
(9)	Propulsion system instruments	App.4 para 2					
(10)	Navigation and communications, including any route specific long range navigation and communication equipment	App.4 para 2					
(11)	Auxiliary power-unit	App.4 para 2					
(12)	Air conditioning and pressurization	App.4 para 2					
(13)	Cargo fire suppression	App.4 para 2					
(14)	Engine fire protection	App.4 para 2					
(15)	Emergency equipment	App.4 para 2					
(16)	Systems and equipment required for engine condition monitoring	App.4 para 2					
b	In addition, the following systems are required to be operative for dispatch for ETOPS with diversion times above 180 minutes:	App.4 para 2					
(1)	Fuel Quantity Indicating System (FQIS)	App.4 para 2					
(2)	APU (including electrical and pneumatic supply to its designed capability), if necessary to comply with ETOPS requirements	App.4 para 2					
(3)	Automatic engine or propeller control system	App.4 para 2					
(4)	Communication system(s) relied on by the flight crew to comply with the requirement for communication capability	App.4 para 2					

- **Assessment Result**

☐ **Satisfactory** ☐ **Unsatisfactory**

- **Remarks**

Flight Operations Inspector Name	Signature	Date