

Application for ETOPS approval

Applicants Statement

The undersigned certifies the following information to be correct and true and that aeroplane system installation, continuing airworthiness of systems, minimum equipment for dispatch, operating procedures and flight crew training comply with the requirements of AIR-OPS ANNEX V SPA.ETOPS , AMC 20-6.		
Name of Nominated person for Operation:	Signature:	Date:
Name of Nominated person for Maintenance:	Signature:	Date:
Name of Nominated person for Training:	Signature:	Date:

1. General

General Information				
1.1	Applicant			
	Aeroplane Registration			
	Aeroplane Manufacturer			
	Aeroplane Type Designation/Model Designation			
	Aeroplane Serial Number			
	Engine Manufacturer			
	Engine Type Designation/Model Designation			
	APU Manufacturer			
	APU Type Designation			
Scope of Application			Yes	No
1.2	1) Application for ETOPS 90 minutes		<input type="checkbox"/>	<input type="checkbox"/>
	3) Application for ETOPS 120 minutes		<input type="checkbox"/>	<input type="checkbox"/>
	5) Application for ETOPS 180 minutes		<input type="checkbox"/>	<input type="checkbox"/>
	6) Application for ETOPS ..... minutes		<input type="checkbox"/>	<input type="checkbox"/>
	7) Initial request for ETOPS approval for aeroplane type/model ref in 1.1		<input type="checkbox"/>	<input type="checkbox"/>
	8) Application for accelerated ETOPS		<input type="checkbox"/>	<input type="checkbox"/>
	9) Application is based on CMP			
Document number:				
Revision number:				
Revision date:				

2. Airworthiness

Type Design Approval for referenced Aeroplane Type Designation		Yes	No
2.1	ETOPS type design approval is reflected in:		
	Aircraft Flight Manual	<input type="checkbox"/>	<input type="checkbox"/>
	Aircraft Flight Manual Supplements	<input type="checkbox"/>	<input type="checkbox"/>
	Type certification Data sheet	<input type="checkbox"/>	<input type="checkbox"/>
	Supplemental Type Certificate	<input type="checkbox"/>	<input type="checkbox"/>
	Other (Description)	<input type="checkbox"/>	<input type="checkbox"/>
	AFM or Supplement shows Airworthiness approval for ETOPS in Minutes:		
Eligibility for referenced Aeroplane Serial Number		Yes	No
2.2	Do you comply with the titles and numbers of all modifications, in addition and changes which were made in order to substantiate the incorporation of the CMP standard in the aeroplane	<input type="checkbox"/>	<input type="checkbox"/>
	CMP compliance list is established	<input type="checkbox"/>	<input type="checkbox"/>

3. Applicants experience and propulsion system reliability (\*)

3.1	Number of months/years of operational experience with specific engine/airframe combination:		
	Total number of long range and/or domestic operations conducted with specific engine/airframe combination:		
	Number of domestic sectors:.....		
	Number of long range sectors:.....		
	Total number of engine/airframe hours and cycles with specific engine/airframe combination:		
	Total operator's airframe fleet hours:..... Total operator's airframe fleet cycles:..... Total operator's engine hours:..... Hours of operator's high time engine:.....		
3.2	In-flight shutdown (IFSD) rate (all causes) including the 12-month rolling average for both the operator and the world fleet (IFSD per 1000 engine flight hours)		
	IFSD rate of operator's fleet:.....		
	IFSD rate of world fleet:.....		
	Unscheduled engine removal rate (URR) for both the operator and the world fleet (URR rate per 1000 engine flight hours)		
	URR of operator's fleet:.....		
	URR of world fleet:.....		
	Records of mean time between failures (MTBF) for major components available? (unit flight hours/number of unit failure)	<input type="checkbox"/>	<input type="checkbox"/>
	Records of APU start and run reliability available?	<input type="checkbox"/>	<input type="checkbox"/>
Records of delays and cancellations, with the causes, by specific aeroplane systems, available	<input type="checkbox"/>	<input type="checkbox"/>	
Records of the following significant operator events available? (including the phase of flight where the event occurred)			
Uncommanded power changes? (surge or rollback)	<input type="checkbox"/>	<input type="checkbox"/>	

Inability to control engine or obtain desired power?	<input type="checkbox"/>	<input type="checkbox"/>
In-flight shutdown events?	<input type="checkbox"/>	<input type="checkbox"/>

#### 4. Maintenance

Continuing airworthiness management exposition (CAME) (*)		
The Applicant is required to establish the following procedures		The procedures are described in CAME
4.1	Procedures to preclude simultaneous actions from being applied to multiple similar elements in any ETOPS critical systems	
	Procedures for the performance of ETOPS pre-departure check for verifying the status of the aeroplane and ensuring that certain critical items are acceptable.	
	Procedures for reviewing and documenting of log books to ensure proper MEL procedures, deferred items and maintenance checks and that system verification procedures have been properly performed.	
The applicant should develop a manual for use by personnel involved in ETOPS. The purpose of the ETOPS-Manual is to identify the supplementary and requirements for ETOPS operations. This manual should contain the following procedures:		
4.2	<b>Engine/APU Oil consumption Monitoring Program:</b> <ol style="list-style-type: none"> <li>Procedures that monitor oil consumption rates for engines and APU for ETOPS and non-ETOPS flights.</li> <li>Procedures for calculating oil consumption rate prior to departure to address any sudden shift in consumption</li> <li>Procedure for monitoring long term data for increasing trends</li> </ol>	
	<b>Engine Condition Monitoring Program</b> <ol style="list-style-type: none"> <li>Procedures for detecting deterioration of engines at an early stage to allow for corrective action before safe operation are affected</li> <li>Parameters to be monitored, method of data collection and corrective action process</li> <li>Procedures for engine limit margin monitoring to ensure that a prolonged single-engine diversion may be conducted without exceeding approved engine limits.</li> </ol>	
	<b>Verification Program after Maintenance</b> <ol style="list-style-type: none"> <li>List of primary systems critical to ETOPS</li> <li>Conditions that require verification flights</li> <li>Procedures for initiating verification actions</li> <li>Procedures that ensure corrective action are taken after engine-shut down and any other significant failure</li> <li>Procedures that identify and reverse adverse trends</li> <li>Procedures that preclude repeat items from occurring</li> <li>Procedures that monitor and evaluate corrective actions</li> <li>Procedures that preclude simultaneous actions from being applied to multiple similar elements in any ETOPS-critical system.</li> </ol>	

	<p><b>Reliability Program</b></p> <ol style="list-style-type: none"> <li>1. Event-oriented program for ETOPS, in addition to the normal reliability program, to allow early identification and prevention of ETOPS problems</li> <li>2. Procedures to ensure reporting of significant individual events (in-flight shut downs, flight diversions or turn back, un-commanded power changes or surges, inability to control the engine or obtain desired power, problems with systems critical to ETOPS and any other event detrimental to ETOPS</li> <li>3. Reporting criteria for the reporting to CAA of events reportable through this program</li> <li>4. Procedures for downgrade / upgrade criteria (diversion time)</li> <li>5. Procedures for monitoring of APU high in-flight start and run capability.</li> </ol>	
	<p><b>Propulsion System Monitoring Program</b></p> <ol style="list-style-type: none"> <li>1. Procedures for the monitoring of propulsion system in-flight shutdown (IFSD) rate, evaluation of sustained trends and corrective actions</li> <li>2. Procedures for the monitoring of long term IFSD trends (12 month moving average)</li> <li>3. Reporting criteria for the assessment of propulsion system reliability and monthly reporting to CAA of results of operators assessment</li> </ol> <p><b>Maintenance Training Program</b></p> <ol style="list-style-type: none"> <li>1. Training programs to ensure each person, including contract personnel, involved in ETOPS is adequately trained on operators ETOPS procedures and is competent to perform his/her duties (ETOPS awareness training)</li> <li>2. Procedures for ensuring that maintenance personnel have completed ETOPS awareness training and have satisfactorily performed ETOPS maintenance tasks under supervision, within the framework of Part 145 approved procedures for personnel authorisation</li> </ol>	
	<p><b>Parts Control Program</b></p> <ol style="list-style-type: none"> <li>1. Procedures that ensure that proper ETOPS parts are used and ETOPS configuration is maintained</li> <li>2. Control procedures for parts pooling and borrowing</li> </ol>	

5. Operations

<b>Operating Practices and Procedures (*)</b>		
	<p>The applicant must institute ETOPS operating practices and procedures. These practices and procedures should cover the following subjects:</p>	<p>ETOPS operating practices and procedures described in the OM (add manual reference, chapter and subchapter)</p>
5.1	<ol style="list-style-type: none"> <li>1. Flight planning procedures (ETOPS status of aeroplane, review of technical log, use of Minimum Equipment List (MEL), external inspection, etc.</li> </ol>	
	<ol style="list-style-type: none"> <li>2. En-route procedures (cross checking procedures to identify navigation</li> </ol>	

	errors, selection of other navigation aids in case of loss of RNAV capability, use of INS/IRS navigation systems without automatic radio navigation updating, use of GPS, notification of ATC of navigation equipment problems, contingency procedures, etc.), minimum equipment at the ETOPS entry point, alternate routings, position check before entering ETOPS airspace, alternate aerodromes, performance data, fuel and oil supply, etc.	
	3. Fuel and Oils supply for ETOPS	
	4. Procedures with respect to flight crew response to abnormal situations (response to non-normal events, etc.)	
	5. Post-flight procedures (technical-log entries, defects description, etc.)	
<b>Flight crew training and qualification (*)</b>		
5.2	The applicant is required to establish the following (covering the subjects under 5.1)	Description in the OM (add manual reference chapter and sub-chapter)
	Flight crew qualification requirements	
	Description of initial and recurrent training, checking and training syllabi.	

## 6. Application Package

Documentation to be submitted to the CAA		Submitted	
		Yes	No
6.1	Compliance statement which shows how the criteria of AMC OPS 1.245 (a)(2), para 2.b. have been satisfied (Manufacturers assistance may be required (*))	<input type="checkbox"/>	<input type="checkbox"/>
6.2	Continuing airworthiness management exposition (CAME) (*)	<input type="checkbox"/>	<input type="checkbox"/>
6.3	Flight crew ETOPS long range training programmes and syllabi for initial and recurrent training (OM-D or stand-alone Training Manual) (*)	<input type="checkbox"/>	<input type="checkbox"/>
6.4	Operation manuals and checklists that include ETOPS operation practices and procedures (OM-A and/or OM-B and/ or OM-C and/or stand-alone ETOPS Manual etc.) (*)	<input type="checkbox"/>	<input type="checkbox"/>
6.5	Minimum Equipment List (MEL) that include items pertinent to ETOPS operations (*)	<input type="checkbox"/>	<input type="checkbox"/>
6.6	Sections of the AFM or AFM supplements that document ETOPS airworthiness approval	<input type="checkbox"/>	<input type="checkbox"/>
6.7	ETOPS Manual	<input type="checkbox"/>	<input type="checkbox"/>
6.8	Supplements and revisions to the existing Maintenance Program and Maintenance Procedures	<input type="checkbox"/>	<input type="checkbox"/>

**Completion of form:** Each relevant Box should be completed with a (X). Items marked with an asterisk (\*) to be completed only for first aeroplane of each aeroplane type / model in operators fleet. Where form must be completed by referring to a document of applicant's documentation system, add manual reference, chapter and sub-chapter. Please ensure all applicable areas are completed.

## 7. For official CAA use only

Subject	Responsible	Signature/Date
1. Application Form for ETOPS operation application package checked for completeness	FOD	
2. Airworthiness approval granted	AWD	
3. Operational approval granted (AOC Annex)	FOD	
4. ETOPS approval process administratively completed (OPS update, exchange of Certificates)	FOD	