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|  | | ΑΙΤΗΣΗ ΓΙΑ ΠΙΣΤΟΠΟΙΗΣΗ ETOPS Application Form for ETOPS Operational Approval (Airworthiness & Operational Approval Conformance Document) | | | | | | | | | | | | | |
| |  |  |  | | --- | --- | --- | | REFERENCES | ISSUE DATE | TITLE | | Reg. (EU) No 965/2012 (As Amended) | 5 October 2012 | Regulation on air operations | | AMC 20-6 | Nov 2018 | Extended Range Operation with Two-Engine Aeroplanes ETOPS Certification and Operation | | ICAO 10085 | 2017 | Extended Diversion Time Operations (EDTO)  Manual | | Type Certificate Holder CMP Manual |  | As applicable  **CMP doc no**: …………………….  **Rev.: …………………………**  **Date: ………………………….**  **HCAA Note** : Refer to CMP Document Nr./Revision number/ Revision date: ) | | | | | | | | | | | | | | | | |
| **ETOPS(or EDTO) is a Two Step Process** | | | | | | | | | | | | | | | |
| **1. Applicant / Operator** | | | | | | | | | | | | | | | |
| **Name** |  | | | | | | | | | | | | | | |
| **Address** |  | | | | | | | | | | | | | | |
| **Tel** |  | | | | | **e-mail** | | | |  | | | | | |
| **Contact person** |  | | | | | | ***e-mail*** | | | |  | | | | |
| **Number of e-paravolo (fee) *(\*)*  :** | | | | | | | | | | | | | | | |
| **Date of Submission :** | | | | | | | | | | | | | | | |
| **2. Aircraft** | | | | | | | | | | | | | | | |
| **Aircraft Type** |  | | | | | | | | | | | | | | |
| **Aircraft S/N** |  | | | **Aircraft Registration** | | | | | | | |  | | | |
| **Engine Manufacturer** |  | | | **Engine Type Designation** | | | | | | | |  | | | |
| **APU Manufacturer** |  | | | **APU Type Designation** | | | | | | | |  | | | |
| **Aircraft is performance class A with MOPSC of 19 or less ???** | | | | **Yes  No** | | | | | | | | | | | |
| **Requested Authorised area of operation;** | | | | | | | | | | | | | | | |
| **Area of operation as defined in the AOC:** | | | | | | | | | | | | | | | |
| **3. Applicant request for :** | | | | | | | | | | | | | | | |
| **Initial request for ETOPS approval for aeroplane type / model referenced Yes**  **No** | | | | | | | | | | | | | | | |
| **Requested ETOPS Time in minutes : ……………………… min. (HCAA Note : Refer to ETOPS minutes requested)** | | | | | | | | | | | | | | | |
| **Application for Accelerated ETOPS : Yes**  **No** | | | | | | | | | | | | | | | |
| **Application for non ETOPS Operational Approval Yes**  **No**  **HCAA Note:** Refer to CAT.OP.MPA.140 (a) (2) “…. for performance class A aeroplanes with an MOPSC of 19 or less, the distance flown in 120 minutes or, subject to approval by the competent authority, up to 180 minutes..” | | | | | | | | | | | | | | | |
| **Application for ETOPS operational Approval based on in service experience with :**  **Same type model : Yes**  **Different type model : ………………………………. Yes**  *(HCAA Note:Refer to different type)* | | | | | | | | | | | | | | | |
| **4. Applicant’s Experience and Propulsion System Reliability** | | | | | | | | | | | | | | | |
| Number of months/years of operational experience with specific engine/airframe combination:  Years: ……………………….. Months: ……………………. | | | | | | | | | | | | | | | |
| 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' engine hours: ……………………………………. | | | | | | | | | | | | | | | |
| In-flight shutdown (IFSD) rate (all causes), including the 12-month rolling average for both operator and the world: ………………………………………………  fleet (IFSD per 1'000 engine flight hours): …………………………………….  IFSD rate of operator's fleet: …………………………………………….  IFSD rate of world fleet: …………………………………………… | | | | | | | | | | | | | | | |
| Unscheduled engine removal rate (URR) for both operator and the world fleet (URR rate per 1'000 engine flight  hours):  URR of operator's fleet: …………………………………….  URR of world fleet: ………………………………………. | | | | | | | | | | | | | | | |
| Records of mean time between failures (MTBF) for major components available:  **Yes** **No** | | | | | | | | | | | | | | | |
| Records of APU start and run reliability available? **Yes** **No** | | | | | | | | | | | | | | | |
| Records of the following significant operator events available? **Yes** **No**   * Uncommanded power changes? (surge or rollback): * Inability to control engine or obtain desired power * In-flight shutdown events | | | | | | | | | | | | | | | |
| **PART 1 Airworthiness**  **SPA.ETOPS.105 ETOPS operational approval**: To obtain an ETOPS operational approval from the competent authority, the operator shall provide evidence that: (a) the aeroplane/engine combination holds an ETOPS type design and reliability approval for the intended operation;  **GM1 SPA.ETOPS.105 ETOPS operational approval**  AMC 20-6 provides further criteria for the operational approval of ETOPS.  **Appendix 3 to AMC 20-6 – Operational Limitations**  ISSUE OF THE ETOPS OPERATIONS APPROVAL BY THE COMPETENT AUTHORITY  k. The plan for establishing compliance with the build standard required for Type Design Approval, e.g. CMP document compliance.  **AMC20-6 :5.1 B** The operator seeking Accelerated ETOPS Operations Approval should also demonstrate to the competent authority that …1. Airframe/engine combination and engine is in compliance to ETOPS Type Design Build Standard (CMP); | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| 1. **Type Design Approval** | | | | | | | | | | | | | | | |
| ***5.1 The ETOPS type design approval is reflected in: (\*)*** | | | | | | | | | | | | | | | |
| **Type Certificate** | | | **Yes** | **No** | | | | |  | | | | | | |
| **Type Certificate Data sheet** | | | **Yes** | **No** | | | | |  | | | | | | |
| **AFM** | | | **Yes** | **No** | | | | |  | | | | | | |
| **Supplement Type Certificate** | | | **Yes** | **No** | | | | |  | | | | | | |
| **AFM supplement** | | | **Yes** | **No** | | | | |  | | | | | | |
| **Service Bulletin** | | | **Yes** | **No** | | | | |  | | | | | | |
| **Service Letter** | | | **Yes** | **No** | | | | |  | | | | | | |
| **Other (specify)** | | | **Yes** | **No** | | | | |  | | | | | | |
| **HCAA Note:** Applicant to attach the evidence | | | | | | | | | | | | | | |
| ***5.2 Other Operational Approvals held by the Applicant (\*)*** | | | | | | | | | | | | | | | |
| **RNAV 1; Yes** **P-RNAV:****Yes** **RNP 4: Yes**  **RNAV 10: Yes**  **A-RNP: Yes** | | | | | | | | | | | | | | | |
| **RNP 1/RNP 2: Yes**  **RNP APCH — LNAV minima: Yes**  **RNP APCH — LNAV/VNAV minima : Yes** | | | | | | | | | | | | | | | |
| **RNP APCH — LPV minima: Yes**  **RNP 2 oceanic: Yes**  **RNP 10: Yes** | | | | | | | | | | | | | | | |
| **RNP 10: Yes**  **MNPS : Yes**  **LVO: Yes**  **RVSM: Yes** | | | | | | | | | | | | | | | |
| **Other: Yes  ………………………………… (HCAA Note: Refer to any other approval held by the applicant)** | | | | | | | | | | | | | | | |
| **HCAA Note 1**:-  **Note 2:** -Applicant to Attach the evidence | | | | | | | | | | | | | | | |
| **6. Aircraft Compliance with related CMP requirements for ETOPS** | | | | | | | | | | | | | | | |
| **Airframe (Parts/SBs/etc) : Yes** **No**  **Engines (Parts/SBs/etc) : Yes** **No** | | | | | | | | | | | | | | | |
| ***7.*Applicant *ETOPS Manual (Refer to AMC 20-6 /App.8/Par.4)*** | | | | | | | | | | | | | | | |
| The applicant should develop a manual for use by personnel involved in ETOPS. The purpose of the ETOPS  Manual is to identify the supplementary procedures and requirements for ETOPS operations. This manual should contain the following procedures: | | | | | | | | | | | | | | | |
| **7.1 Engine/APU Oil Consumption Monitoring Program** | | | | | | | | | | | | | | | |
| Engine/APU Oil Consumption Monitoring Program Procedures that monitor oil consumption rates for engines and APU for ETOPS and non-ETOPS flights.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for calculating oil consumption rate prior to departure to address any sudden shift in consum-ption.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for monitoring of long term data for increasing trends. **Yes** **No** | | | | | | | | | | | | | | | |
| **7.2 Engine Condition Monitoring Program *(Refer to AMC 20-6 /App.8/Par.3.2.5)*** | | | | | | | | | | | | | | | |
| Procedures for detecting deterioration of engines at an early stage to allow for corrective action before safe  operation are affected. **Yes** **No** | | | | | | | | | | | | | | | |
| Parameters to be monitored, method of data collection and corrective action process.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for engine limit margin monitoring to ensure that a prolonged single-engine diversion may  be conducted without exceeding approved engine limits. **Yes** **No** | | | | | | | | | | | | | | | |
| Engine Condition monitoring  ECM performed in house YES □ NO □  ECM is contracted YES □ NO □  ***HCAA Note*** *: If ECM is contracted applicant to provide Contract)* | | | | | | | | | | | | | | | |
| **7.3 Verification Program after Maintenance (Refer to AMC 20-6 /App.8/Par.3.2.6)** | | | | | | | | | | | | | | | |
| List of primary systems critical to ETOPS.  **Yes** **No** | | | | | | | | | | | | | | | |
| Conditions that require verification flights.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for initiating verification actions.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures that ensure corrective action are taken after engine shut-down and any other significant  failure.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures that identify and reverse adverse trends  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures that preclude repeat items from occurring.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures that monitor and evaluate corrective actions.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures that preclude simultaneous actions from being applied to multiple similar elements in any ETOPS-critical system.  **Yes** **No** | | | | | | | | | | | | | | | |
| **7.4 Reliability Program *(Refer to AMC 20-6 /App.8/Par.3.2.5)*** | | | | | | | | | | | | | | | |
| Event-oriented program for ETOPS, in addition to the normal reliability program, to allow early identification and prevention of ETOPS problems  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures to ensure reporting of significant individual events (in-flight shut-downs, flight diversions or turnback,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.  **Yes** **No** | | | | | | | | | | | | | | | |
| Reporting criteria for the reporting to the HCAA of events reportable through this program.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for down-grade / up-grade criteria (diversion time)  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for monitoring of APU high altitude in-flight start and run capability.  **Yes** **No** | | | | | | | | | | | | | | | |
| **7.5 Propulsion System Monitoring Program** | | | | | | | | | | | | | | | |
| Procedures for the monitoring of propulsion system inflight shutdown (IFSD) rate, evaluation of sustained trends and corrective actions.  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for the monitoring of long term IFSD trends (12 month moving average).  **Yes** **No** | | | | | | | | | | | | | | | |
| Reporting criteria for the assessment of propulsion system reliability and monthly reporting to the HCAA of results of operator's assessment.  **Yes** **No** | | | | | | | | | | | | | | | |
| The engine condition monitoring programme should describe the parameters to be monitored, method of data collection and corrective action process.  **Yes** **No** | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **7.6 Maintenance Training Program *(Refer to AMC 20-6 /App.8/Par.5. and 5.1)*** | | | | | | | | | | | | | | | |
| Training programs to ensure each person, including contract personnel, involved in ETOPS is adequately trained on operator’s ETOPS procedures and is competent to perform his/her duties (ETOPS awareness training).  **Yes** **No** | | | | | | | | | | | | | | | |
| Procedures for ensuring that maintenance personnel have completed ETOPS awareness training and have satisfactorily performed ETOPS maintenance tasks under supervision, within the framework of the Part -145 approved procedures for personnel Authorisation.  **Yes** **No** | | | | | | | | | | | | | | | |
| Applicant to ensure that the personnel involved in the continuing airworthiness management of the aircraft have knowledge of the ETOPS procedures of the operator.  **Yes** **No** | | | | | | | | | | | | | | | |
| Applicant to ensure that that maintenance personnel that are involved in ETOPS maintenance tasks: Have completed an ETOPS training programme and have satisfactorily performed ETOPS tasks under supervision, **Yes** **No** | | | | | | | | | | | | | | | |
| **7.7 Parts Control Program** | | | | | | | | | | | | | | | |
| Procedures that ensure that proper ETOPS parts are used and ETOPS configuration is maintained.  **Yes** **No** | | | | | | | | | | | | | | | |
| Control procedures for parts pooling and borrowing  **Yes** **No** | | | | | | | | | | | | | | | |
| **8.ETOPS Maintenance program** | | | | | | | | | | | | | | | |
| Maintence program in order to :  - preclude simultaneous actions from being applied to multiple similar elements in any ETOPS-critical system. **Yes** **No**  -include an ETOPS pre-departure service check for verifying the status of the aeroplane and ensuring that certain critical items are acceptable  **Yes** **No**  - include 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. **Yes** **No** | | | | | | | | | | | | | | | |
| **9. Cargo Fire Suppression Time** | | | | | | | | | | | | | | | |
| Refer to fire suppression time capability in minutes  Time:…………………………. (minutes) | | | | | | | | | | | | | | | |
| **10. Radio communication and intercommunication capability:** | | | | | | | | | | | | | | | |
| VHF : **Yes**  SAT Comm: **Yes**  CPDLC: **Yes**  HF : **Yes**  ADS-B: **Yes** | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **11. Operator MEL** | | | | | | | | | | | | | | | |
| The applicant has to prepare an MEL in order to identify ETOPS related items.  **Yes** **No** | | | | | | | | | | | | | | | |
| **12. Validation of Applicant procedures ( Refer to AMC 20-6 /Chapter III/Section 4/5)** | | | | | | | | | | | | | | | |
| -The Accelerated ETOPS approval process includes the following phases: | | | | | | | | | | | | | | | |
| -Application phase | | | | | | | | | | | | | | | |
| -Validation of the operator’s ETOPS processes | | | | | | | | | | | | | | | |
| -Validation of Operator ETOPS Continuing Airworthiness and Operations Capability | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Part 2 Operation**  **EU 965/Annex V / SPA.ETOPS.100/:**  In commercial air transport operations, two-engined aeroplanes shall only be operated beyond the threshold distance determined in accordance with CAT.OP.MPA.140 if the operator has been granted an ETOPS operational approval by the competent authority.  **SPA.ETOPS.105 ETOPS operational approval**  To obtain an ETOPS operational approval from the competent authority, the operator shall provide evidence that:  **(b) a training programme for the flight crew members and all other operations personnel involved in**  **these operations has been established and the flight crew members and all other operations**  **personnel involved are suitably qualified to conduct the intended operation;**  **………………………………………………………….**  **(d) operating procedures have been established.** | | | | | | | | | | | | | | |
| **13. Operation Manual Part A** | | | | | | | | | | | | | | |
| **Description of ETOPS.** | | | | | | | | | | | | | | |
| Definitions of :  - Extended Operations.  - aerodrome.  -Approved one-engine inoperative cruise speed.  -Threshold distance/time.  -Adequate ETOPS en-route alternate.  -Equal time points.  -Rule distance/time.  -ETOPS segment.  -ETOPS significant system.  -Maximum approved diversion time.  -Dispatch.  **Yes** **No** | | | | | | | | | | | | | | |
| **14. Qualifications.** | | | | | | | | | | | | | | |
| * Crew qualifications. * ETOPS qualified dispatcher personnel. * ETOPS qualified operations staff.   **Yes** **No** | | | | | | | | | | | | | | |
| **15. Training (Initial and Recurrent) and Checking.** | | | | | | | | | | | | | | |
| * Flight crew training and Operations * Manuals. Flight crew currency requirements.   **Yes** **No** | | | | | | | | | | | | | | |
| **16. ETOPS Flight Preparation and Planning.** | | | | | | | | | | | | | | |
| * Aircraft serviceability and MEL. * Communication and navigation facilities. * Critical fuel scenario. * Critical fuel reserve. * ETOPS alternate aerodrome selection. * ETOPS alternate planning minima. * Pre-dispatch and post-dispatch weather minima. * Computerised flight plan. * Delayed dispatch. * Maintenance check (pre-departure service check). * Verification flights.   **Yes** **No** | | | | | | | | | | | | | | |
| **17. Flight Crew Procedures.** | | | | | | | | | | | | | | |
| * Crew responsibilities. * Flight documentation/chart handling. * Fuel management Including critical fuel scenario. * Weather monitoring. * Change of routing. * Diversion decision-making. Icing. * Crew workload management.   **Yes** **No** | | | | | | | | | | | | | | |
| **18. Operation Manual Part B** | | | | | | | | | | | | | | |
| * ETOPS Fuel Planning. | | | | | | | | | | | | | | |
| * MEL/CDL. | | | | | | | | | | | | | | |
| * Aeroplane Systems. | | | | | | | | | | | | | | |
| * Non-normal Procedures (Navigation failures/ Action to be taken on ETOPS-significant system failure/ Low fuel scenario/ Crew incapacitation) .   **Yes** **No** | | | | | | | | | | | | | | |
| **19. Operation Manual Part C** | | | | | | | | | | | | | | |
| * ETOPS Areas and Routes. * Approved area of operation. * ETOPS en-route alternates. * Performance restrictions and weather * minima for en-route alternates. * Meteorological facilities/information. * Low altitude cruise information.   - Route minimum diversion altitudes.  - MSA restrictions.  - Route-specific oxygen requirements.  **Yes** **No** | | | | | | | | | | | | | | |
| **20. Operation Manual Part D (Training Content)** | | | | | | | | | | | | | | |
| **20a. General:**  • ETOPS overview.  • ETOPS regulations.  • ETOPS type design approval.  • Definitions.  • Approved one-engine inoperative speed.  • Maximum approved diversion time.  • Operator's approved diversion time.  • ETOPS area of operation.  • ETOPS routes.  • ETOPS alternate aerodromes and weather minima.  • Navigation systems accuracy, limitations and operating procedures.  • Meteorological facilities and information.  • In-flight monitoring and procedures.  • Computerised flight plan.  • Charts and position plotting.  • Equal time point.  • Critical fuel.  **Yes** **No** | | | | | | | | | | | | | | |
| **20.b. Normal procedures:**  • Flight planning and dispatch.  • ETOPS fuel requirements.  • Route alternate selection - weather minima.  • MEL - equipment-specific.  • ETOPS service check and technical log.  • Pre-flight FMS set-up.  • Flight performance progress monitoring.  • Flight management, navigation and communication systems.  • Aeroplane system monitoring.  • Weather monitoring.  • In-flight fuel management (to include independent cross-checking of fuel quantity).  **Yes** **No** | | | | | | | | | | | | | | |
| **20c. Non-normal procedures:**  • Diversion procedures and diversion 'decision- making'.  • Navigation and communication systems,including appropriate flight management  devices in degraded modes.  • Fuel management with degraded systems.  • Procedures for single and multiple failures in flight affecting ETOPS sector entry and  diversion decisions.  • Operating on standby power.  • Operational restrictions associated with system failures including any applicable MEL considerations.  **Yes** **No** | | | | | | | | | | | | | | |
| **20.d Outline of training syllabus to include:**  ETOPS regulations  Operational approval  Aeroplane performance  Diversion procedures  Area of operation  Fuel requirementsDispatch considerations: MEL, CDL, weather minima and alternate airports  Delayed dispatch  Documentation  **Yes** **No** | | | | | | | | | | | | | | |
| **21. Validation of Applicant procedures ( Refer to AMC 20-6 /Chapter III/Section 4/5)** | | | | | | | | | | | | | | |
| -The Accelerated ETOPS approval process includes the following phases:  -Application phase  -Validation of the operator’s ETOPS processes  -Validation of Operator ETOPS Operations Capability  **Yes** **No** | | | | | | | | | | | | | | |
| **Documents to be submitted** | | | | | | | | | | | | | | |
| HCAA note: Operator to refer the parts submitted | | | | | | | | | | | | | | | |
| **Note 1** : (\*) Items marked with one asterisk the required evidence must be submitted for each aircraft applying for PBN approval .  **Note 2 : (\*\*)** Items marked with two asterisks may not be submitted provided that the evidences required have been submitted to HCAA / D2 in a previous application for PBN operational approval of the same type and have not been modified. | | | | | | | | | | | | |  |  | |
| **20 . Applicant Compliance statement** | | | | | | | | | | | | | | | |
| **I hereby declare that all documentation and information submitted have been verified and found in compliance with Regulation (EC) No EU 965 , its Implementing Rules and all other applicable requirements / procedures.** | | | | | | | | | | | | | | | |
| **Continuing Airworthiness Manager**  **(name)** | | | | |  | | | **(Signature)**  **Date** | | | | | | | |
| **CAMO Quality Manager**  **(name)** | | | | |  | | | **(Signature)**  **Date** | | | | | | | |
| **Flight Operation Manager**  **(name)** | | | | |  | | | **(Signature)**  **Date** | | | | | | | |
| **Flight Training Manager**  **(name)** | | | | |  | | | **(Signature)**  **Date** | | | | | | | |