

11 ETOPS training Program

11.0 General

The goal of the KLM ETOPS Training program is to ensure that the personnel involved in ETOPS have knowledge of the ETOPS Procedures of the operator KLM. The KLM ETOPS Training program complies with EASA 20-6 rev02 requirements for flight crews and maintenance personnel.

11.1 KLM ETOPS Training

The KLM operator ETOPS training program requirements are applicable for flight crew, flight dispatchers and maintenance personnel involved with ETOPS.

KLM's technical training department (SPL/GK) is the primary provider of KLM ETOPS Maintenance Training.

Note: In consult with KLM SPL/QA it is possible to authorise third parties to provide KLM ETOPS Maintenance Training.

KLM's flight dispatch department (SPL/OV) is the provider of KLM ETOPS Flight Dispatcher Training.

KLM's flight operations 777/787 and A330 units (SPL/NP and SPL/NJ) are the providers of the KLM Flight Crew Training.

11.1.1 KLM ETOPS Maintenance Training Program.

Initial KLM ETOPS Maintenance training program consists of the following modules:

1. ETOPS General Awareness e-learning module (MyLearning Course nr. GK2BE100)

This e-learning Awareness module is intended for certifying staff and non-certifying staff but it does not authorise personnel to perform actual maintenance tasks on ETOPS systems and/or ETOPS Components installed on the aircraft.

Note: Only after successfully completing the ETOPS General Awareness e-learning module, certifying staff can attend the ETOPS Course module.

2. ETOPS Briefing (KLM Lvl 1/Cat C) classroom module for KLM mechanics (Course nr. GK1BE101)

This classroom training includes the ETOPS Awareness module and is intended for aircraft and shop mechanics who actually work on ETOPS aircraft and/or ETOPS components installed on the aircraft. Course duration: 1 day.

Note: KLM Production Support Planners and Planner/bijstellers are also required to attend this course as this course provides additional information regarding the ETOPS Maintenance Violations policy and procedures.

3. ETOPS Course (KLM Level 2/ Cat A/B training for KLM ground engineers, Course nr. GK1BE102)

This classroom training does not include the ETOPS Awareness module and is intended for KLM certifying staff (ground engineers) who actually work on ETOPS aircraft and/or ETOPS components installed on the aircraft. Course duration: 1 day.

Note: Before attending this course the ETOPS General Awareness e-learning module must have been successfully completed.

ETOPS Briefing or ETOPS Course modules are required to obtain an ETOPS authorisation to perform maintenance tasks on ETOPS systems/components.

4. ETOPS Course for Line Maintenance International Non-KLM/Subcontracted MRO ground engineers/mechanics

This e-learning module is intended for Non-KLM certifying staff and non-certifying staff that are already in the possession of a valid ETOPS autorisation from their own company. This e-learning module will provide the relevant KLM ETOPS procedures for both LMI (outstations) and subcontracted MRO's..

5. ETOPS Practical Training (Part-147).

The EASA AMC20-6 requirement that maintenance personnel that are involved in ETOPS Maintenance tasks have satisfactorily performed ETOPS tasks under supervision, is covered in the Practical Training (PT) of the Part-147 training.

Recurrent KLM ETOPS Maintenance Training is provided as follows:

6. ETOPS recurrent e-learning module. (MyLearning Course nr. GK2BE201)

The e-learning recurrent training includes ETOPS refresh information and relevant ETOPS occurrences/incidents. Interval 2 years for both certifying staff on home and outstations and for non-certifying staff (such as aircraft and shop mechanics, support- and management staff).

Note: If a recurrent subject is more suitable for CT-Classroom ETOPS training this must be arranged.

Note: This recurrent ETOPS training is not mandatory for staff which ETOPS training is limited to the initial ETOPS General Awareness e-learning module.

7. Continuous Training Bulletins (CTB's).

CTB articles will be published to inform the certifying staff with relevant changes in procedures and to provide ETOPS refresh information as required.

11.2 ETOPS Qualified Personnel

11.2.1 ETOPS Qualified Maintenance Personnel

ETOPS Qualified Maintenance Personnel are Aircraft Maintenance Mechanics (AMM), Aircraft Maintenance Technicians (AMT) or Engine Shop Mechanics, who participated in the formal KLM ETOPS Maintenance Training program as described in EEM chapter 11.1 and are in possession of a KLM approval level 1 or KLM authorisation for Cat A or higher (for the applicable ETOPS aircraft or engine type). The Awareness, Briefing and Course Modules can be followed independently from KLM level 1/2, Cat A, Cat B or Cat C type training.

Note: Lead Ground Engineers (SPL-C and Hangars) are ETOPS qualified after successfully completing the ETOPS Briefing Module (KLM Level 1 training, course nr. GK1BE101) or the ETOPS Course Module (KLM Level 2, Cat A/B training, course nr. GK1BE102).

Note: Non-ETOPS qualified personnel such as Cabin Mechanics may only work on ETOPS type aircraft on NON-ETOPS Systems and/or NON-ETOPS components. It is never allowed to perform work on ETOPS systems/components by Non-ETOPS qualified personnel.

See E.E.M. 6 for all ETOPS Significant Systems en AMM 05-20-00 for all ETOPS Significant Components.

Note: Only during OJT/PT training it is allowed that Non-ETOPS qualified personnel work under supervision of an ETOPS qualified person.

Note: Accomplishment of NDT Inspections and Servicing of engine and APU oil are not considered as performing actual maintenance tasks on ETOPS Systems and/or ETOPS components. Consequently personnel performing only NDT inspections or only oil servicing tasks on ETOPS aircraft require only the ETOPS Awareness course. Ref. EEM 11.3.1.

Note: KLM Engine Shop Mechanics are ETOPS qualified after successfully completing the ETOPS Briefing Module (KLM Level 1 training, course nr. GK1BE101)

11.2.2 ETOPS Qualified Flight Operations Personnel

ETOPS Qualified Flight operations Personnel are Licensed Flight Dispatchers, who participated in the initial KLM ETOPS training program and in the Dispatcher Qualification training program.

The formal KLM Flight Operations training program consists of a number of modules and a practical work period at the Dispatch-desk under supervision of an already qualified and experienced ETOPS Flight Dispatcher:

1. ETOPS Awareness
2. ETOPS Exposition Manual (EEM)

11.2.3 ETOPS Flight Crew Training

- ETOPS regulations in CBT.
- ETOPS module in LFUS.

11.3 ETOPS Training Program modules

11.3.1 E&M ETOPS General Awareness e-learning module (Course nr. GK2BE100)

Creating general familiarity with ETOPS is achieved by the KLM ETOPS General Awareness course.

Certifying staff as well as non-certifying staff (including staff involved in ETOPS but not physically involved in handling of the ETOPS aircraft and its ETOPS systems) will receive this type of training.

This General Awareness e-learning module is an one-time training and an recurrent training is not required.

The following personnel will also receive the KLM ETOPS Awareness course:

- KLM E&M Management directing staff involved with ETOPS.
- Oil servicing personnel at SPL-C and outstations (handling ETOPS aircraft)
- KLM Engineering including the NDT inspectors level 2 of SPL/CF
- KLM Engine shop personnel (performing activities in shop environment)
- KLM Operations Controllers (OCC/LM)
- KLM material service shop maintenance personnel including Shop Mechanics, AOG Desk, Component Management, Shop Engineers and Planners involved with maintenance and/or handling ETOPS parts. In addition to above subjects additional information is given with regard to specific shop requirements for ETOPS.

Following is summary of the subjects covered in ETOPS Awareness course:

- | | |
|-------------------------------------|--|
| Introduction of ETOPS | - ETOPS Aircraft Documents |
| - Meaning of ETOPS | - ETOPS Airfields |
| - History | - ETOPS Procedure |
| - Summary | - Aircraft Identification |
| Flight examples | - ETOPS Development |
| - Introduction | - Summary |
| - Demonstration route AMS - JFK | ETOPS Exposition Manual |
| - Demonstration route AMS - ALA | - What is the ETOPS Exposition Manual? |
| - Summary | - EEM Chapters |
| Regulations | - EEM Chapter 3 |
| - Evolutions of the rules | - EEM Chapter 4 |
| - Evaluation of the rules | - EEM Chapter 5 |
| - Modification of existing aircraft | - EEM Chapter 6 |
| - Summary | - EEM Chapter 8 |
| Operational Approval | - EEM Chapter 9 |
| - Introduction | - EEM Chapter 11 |
| - Type Design ETOPS Approval | - Summary |
| - Operational ETOPS Approval | - ETOPS Approval Requirements |

Note: Air France Engineering ETOPS awareness is covered by an AFI ETOPS course. The KLM specific ETOPS aspects are covered/monitored by the AFI Central Engineering ETOPS Project Engineer who has to ensure that KLM ETOPS requirements are acknowledged and implemented to support the Configuration, Management & Control (CM&C) activities and responsibilities. Ref. AFI – KLM E&M Procedure Manual PM 3.1.3 page 2.)

11.3.2 E&M ETOPS Briefing Mechanics (level 1 / Cat C) / ETOPS Course (level 2 / CAT A/B))

The KLM ETOPS Briefing and Course Modules cover all aspects of ETOPS and how to correctly apply all the procedures developed to support operation of KLM ETOPS aircraft under ETOPS rules.

Both modules will cover following subjects:

- ETOPS Significant Systems.
- CMP and Aircraft Maintenance Programme including ETOPS Maintenance tasks.
- Preflight Inspections / Daily checks (ETOPS pre-departure service check)
- ETOPS MEL.
- Oil Consumption Monitoring program.
- Engine Condition Monitoring program.
- Propulsion Monitoring Program.ETOPS Ground/Flight verification program after maintenance.
- ETOPS Maintenance Violation/Configuration Violation procedures.
- Parts and Configuration Control Program.
- ETOPS Reliability Program.
- ETOPS Exposition Manual.

Note: The KLM ETOPS Maintenance Training program contains an ETOPS Briefing and an ETOPS Course module. The ETOPS briefing qualifies personnel (limited to level 1 / Cat C) and the ETOPS course qualifies personnel (level 2 & Cat A/B) for ETOPS within KLM. Both ETOPS modules provide all relevant and applicable ETOPS procedures for the ground engineer and the mechanic.

Note: It is not possible to qualify mechanics (level 2) or ground engineers (Cat A/B) for ETOPS by means of the ETOPS Briefing course.

11.3.3 Flight Operations ETOPS Awareness Module

- ETOPS regulations
- ETOPS flight preparation
- In-flight procedures and assistance
- Example of ETOPS Flight Preparation and flight plan

11.3.4 Flight Operations ETOPS Exposition Manual Module

- EEM Chapters 1, 2, 4 and 12.

11.3.5 Flight Operations ETOPS Recurrent Module

- Dispatch training and part of Dispatch re-current training.
- Interval: 2 years.

11.4 ETOPS Training Responsibilities

The head of Technical Training Department (SPL/GK) is responsible for:

- Development of the ETOPS Training curricula.
- Initial training of ETOPS Qualified personnel and for administrating the general familiarity with ETOPS.
- Maintaining ETOPS training records and for maintaining the list of currently qualified ETOPS personnel.

Note: For KLM ETOPS Qualified Maintenance Personnel this is delegated to the Centrale Personeels Registratie department CPR, SPL/VO. For KLM ETOPS Qualified Flight Operations Personnel this is delegated to the Vlucht Hulpdiensten department, SPL/OL.

The responsibility for assuring that ETOPS qualified maintenance personnel is available to perform the required tasks lies with the individual Maintenance Production Unit's and departments responsible for the ETOPS line stations.

11.5 ETOPS Qualified Personnel - Task requirements

11.5.1 ETOPS Qualified Maintenance Personnel

The following tasks require ETOPS Qualified Maintenance Personnel:

- Oversee or accomplish non-routine line- and base maintenance on an ETOPS aircraft.
- Accomplish the KLM Preflight Inspection or Daily Check
- Accomplish "A", "C" and "IL" /"D" Check Maintenance on ETOPS Significant Systems and Components.
- Assure that policy and procedures covered in this ETOPS Exposition Manual are adhered to.

11.5.2 ETOPS Qualified Flight Operations Personnel

The following tasks are performed by ETOPS Qualified Flight Operations Personnel:

- The flight preparation including the issue of a company flightplan valid for a flight under ETOPS rules. Included in this flightplan calculation are the critical fuel scenario, EEP, PETS between the suitable ERAs that cover the route and the EXP.
- The technical status of the aircraft is taken into account through interpretation of the FIRDA ETOPS status page and the deficiency telex messages.
- The selection of enroute airports based on KLM adequacy and NOTAM information taken into account for the suitability.
- Minimum weather as per BOM 8.5 (similar as AMC 20-6 Appendix 3 table 1).
- Briefing of the crew on the relevant aspects as encountered in the preparation and any item that may be of importance to the safe and economical conduct of the flight execution.
- In-Flight assistance as requested by the cockpit crew and as per KLM rules and policies for Dispatch.

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