

route, (either direct or via approved point-to-point circuits) between each airplane and the certificate holder, and between each airplane and the appropriate air traffic services, except as specified in § 121.351(c).

(b) For ETOPS where voice communication facilities are available, voice communications must be provided. The certificate holder must consider potential routes and altitudes necessary for diversion to ETOPS alternates in determining whether voice communication facilities are available. Where voice communication facilities are not available or is of poor quality, and voice communication is not possible, communications using alternative systems must be substituted.

(c) For ETOPS beyond 180 minutes the certificate holder must have an additional communication system that is capable of providing immediate satellite based voice communications of landline telephone-fidelity. The system must provide communication capability between the flight crew and air traffic services and the flight crew and the certificate holder. The certificate holder must consider potential routes and altitudes necessary for diversion to ETOPS alternates in determining whether immediate, satellite based voice communications are available. Where immediate, satellite based voice communications are not available, or are of poor quality, communications using alternative systems must be substituted.

20. Amend § 121.135(b) by:

a. Redesignating paragraphs (b)(10) through (b)(22) as paragraphs (b)(11) through (b)(23);

b. Redesignating paragraphs (b)(23) and (b)(24) as paragraphs (b)(25) and (b)(26); and

c. Adding paragraphs (b)(10) and (b)(24) as follows:

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* * * * *

(b) * * *

(10) For ETOPS, airplane performance data to support all phases of these operations.

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(24) For flag and supplemental operations, a passenger recovery plan applicable to each approved en route alternate airport listed in the air carrier's operations specifications.

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21. Amend § 121.161 by revising paragraph (a) and adding paragraph (d) to read as follows:

§ 121.161 Airplane limitations: Type of route.

(a) No certificate holder may operate a turbine engine powered airplane over

a route that contains a point farther than 60 minutes flying time from an adequate airport for airplanes with two engines, or 180 minutes flying time from an adequate airport for airplanes with more than two engines, (in still air at normal cruising speed with one engine inoperative) or within an area designated by the Administrator as an Area of ETOPS Applicability unless approved by the Administrator in accordance with Appendix O of this part. The polar areas are designated as areas of ETOPS applicability. ETOPS must be authorized in the certificate holder's operations specifications.

* * * * *

(d) Unless authorized by the Administrator, based on the character of the terrain, the kind of operation or the performance of the airplane to be used, no certificate holder may operate a reciprocating engine powered airplane over a route that contains a point farther than 60 minutes flying time (in still air at normal cruising speed with one engine inoperative) from an adequate airport.

22. Add § 121.374 to read as follows:

§ 121.374 ETOPS maintenance elements.

Each certificate holder authorized to conduct ETOPS under Appendix O must have a maintenance program that includes the following:

(a) *Configuration, maintenance, and procedures (CMP) compliance.* A system to ensure compliance with the minimum requirements set forth in the Configuration, Maintenance and Procedures (CMP) for each airframe and engine combination, or the Type Design document for each airframe and engine combination. Any CMP changes necessary for continued safe ETOPS flights will be mandated through the Airworthiness Directive procedures pursuant to part 39 of this chapter.

(b) *Continuous airworthiness maintenance program (CAMP).* Develop and follow a continuous airworthiness maintenance program based on the manufacturers maintenance program or one currently approved for the operator and supplemented for ETOPS for each airframe and engine combination. The program must include the following:

(1) *ETOPS pre-departure service check.* A check that must be accomplished immediately prior to an ETOPS flight and certified complete by an ETOPS qualified maintenance person.

(2) *Dual maintenance.* (i) Procedures to preclude ETOPS dual maintenance.

(ii) Procedures to use if ETOPS dual maintenance cannot be avoided.

(3) *Verification program.* Procedures for corrective action to an ETOPS maintenance significant system.

(4) *Task identification.* Identify ETOPS specific procedures or tasks that must be accomplished or verified by ETOPS qualified personnel.

(5) *Centralized maintenance control procedures.* Establish and document procedures for centralized Maintenance Control related to ETOPS.

(6) *ETOPS program document.* Develop a document for use by personnel involved in ETOPS. All ETOPS requirements, including supportive programs, procedures, duties and responsibilities, must be identified in this document and submitted for approval to the CHDO. This document is not required to be inclusive but must at least reference the maintenance programs and clearly define where they are located in the certificate holder's document system. Changes to the ETOPS document must be submitted to the CHDO and approved before such changes may be adopted.

(7) *ETOPS parts control.* Develop an ETOPS parts control program to ensure the proper identification of parts to maintain the ETOPS configuration.

(8) *Reliability program.* Develop an ETOPS reliability program, or supplement the existing reliability program. The program must be event-oriented and incorporate reporting procedures for significant events detrimental to ETOPS flights.

(i) In addition to the reporting requirements in § 121.703, the following items must be reported within 72 hours to the CHDO:

(A) In-flight shutdowns.

(B) Diversions or turnback.

(C) Uncommanded power changes or surges.

(D) Inability to control the engine or obtain desired power.

(E) Problems with systems critical to ETOPS.

(F) Any other event detrimental to ETOPS.

(ii) The certificate holder must conduct an investigation into the cause of the occurrence of any event listed in § 121.703 and paragraph (b)(8)(i) of this section in conjunction with manufacturers and submit findings and description of corrective action to the CHDO. The report must be submitted in the manner prescribed by § 121.703(e). The corrective action must be acceptable to the CHDO.

(c) *Propulsion system monitoring.* (1) If the IFSD rate computed on a 12-month rolling average exceeds the following values, the certificate holder, in conjunction with the CHDO, must