

- (1) In-flight shutdowns.
- (2) Uncommanded power changes or surges.
- (3) Inability to control the engine or obtain desired power.
- (4) Problems with systems critical to ETOPS.

(5) Any other event detrimental to ETOPS.

(b) The certificate holder must conduct an investigation into the cause of the occurrence of any event listed in § 135.415, § 135.417, or paragraph (8)(a) above in conjunction with manufacturers and submit findings and corrective action to the CHDO. The report must be submitted in the manner prescribed by section 135.415(e). If the CHDO determines that additional corrective action is necessary, the certificate holder must implement the corrective action.

(c) *Propulsion system monitoring.*

The certificate holder, in conjunction with the CHDO, must

(1) establish criteria as to what action is to be taken when adverse trends in propulsion system conditions are detected and

(2) investigate common cause effects or systemic errors and submit the findings to the CHDO within 30 days.

(d) *Engine condition monitoring.*

The certificate holder must establish an Engine Condition Monitoring program to detect deterioration at an early stage to allow for corrective action before safe operation is affected.

(1) This program must describe the parameters to be monitored, method of data collection and corrective action process.

(2) The program must ensure that engine limit margins are maintained so that a prolonged engine inoperative diversion may be conducted without exceeding approved engine limits (for example, rotor speeds, exhaust gas temperatures) at all approved power levels and expected environmental conditions.

(e) *Oil consumption monitoring.*

The certificate holder must establish an engine oil consumption monitoring program to ensure that there is enough oil to complete any ETOPS flight. The operator's consumption limit must not exceed the manufacturer's recommendations. The program must consider the amount of oil added at the departing ETOPS stations with reference to the running average consumption. The monitoring must be continuous up to and including oil added at the ETOPS departure station. The APU must be included if an APU is required for ETOPS.

(f) *APU in-flight start program.*

If APU in-flight start capability is required for ETOPS, the certificate holder must have a cold soak in-flight APU start and run reliability program acceptable to the Administrator.

(g) *Maintenance training.*

The certificate holder must review the airplane and engine combination

maintenance training program with the CHDO to ensure that it adequately supports ETOPS training requirements. The certificate holder must develop additional ETOPS specific training that focuses on the special nature of ETOPS and is required for all personnel involved in ETOPS. This training is in addition to the operator's accepted maintenance training program to qualify individuals for specific airplanes and engines.

(h) *Procedural changes.*

Any substantial changes to the maintenance or training procedures established to qualify for ETOPS must be submitted to the CHDO and approved before they may be adopted.

(i) *Reporting.*

For each airplane authorized to conduct ETOPS, the certificate holder shall report on a quarterly basis operating hours and cycles for each engine and airframe to the CHDO and to the airplane and engine manufacturer.

Issued in Washington, DC, on November 7, 2003.

James Ballough,

Director, Flight Standards Service.

[FR Doc. 03-28407 Filed 11-10-03; 2:26 pm]

BILLING CODE 4910-13-P