

maintenance manual references, and other pertinent documents which define the alterations, maintenance or operational requirements and limitations that the FAA requires to make an airplane type design suitable for ETOPS. The CMP is an amendment to the airplane type design defined in 14 CFR 21.31. The initial CMP approval, as a change to the type design, is analogous to other type design approvals for specific operations such as Category III autoland approval for autopilot systems that could involve design changes to a previously certified system.

After ETOPS approval, the CMP may be modified by any airworthiness directives (ADs) issued in accordance with part 39 that supersede existing CMP requirements. CMP document requirements will not increase except by AD.

Misconceptions about the criteria for revising CMP documents generated some of the biggest discussions in the ARAC ETOPS Working Group meetings. The FAA approved airplanes for ETOPS under the original AC 120-42 between 1985 and 1989 without a defined propulsion system reliability standard. The approach used in AC 120-42 to assess the suitability of an airplane-engine combination for ETOPS was to use a "fix all problems" approach. This process involved identifying the causes of propulsion system problems in service on the candidate airplane and including identified corrective actions into an approved CMP document as a condition for ETOPS approval. This was an ongoing process and the FAA conducted regular reviews to determine additional corrective actions as new problems occurred in service. As a result, the FAA routinely required the airplane manufacturer to revise the CMP documents during this period.

The "fix all problems" approach to airplane propulsion system assessment

was carried over into the revised AC 120-42A at the end of 1988, and continues on in this notice in proposed part 25 Appendix L paragraph II(a)(ii). However, revision A of the AC added a propulsion system reliability standard as a provision for ETOPS type design approval that did not exist in the original AC. With an established propulsion system reliability standard, the FAA now had a gauge to monitor the safety of the approved ETOPS fleet without a need to continually update the CMP as new problems occurred. Also, several ETOPS operators began objecting to the FAA requiring them to continually upgrade existing ETOPS approved airplanes without any input to the changes being required.

The FAA recognized that our previous practice of requiring upgrades to already approved airplanes without prior public review created an undue burden on operators. As a result, the FAA changed its approval process for revisions to CMP documents. The FAA documented this change in an internal memorandum signed by the managers of the Transport Airplane Directorate, and the Engine and Propeller Directorate on April 3, 1990. In that memo, the directorate managers noted that the AC gave them the responsibility for the continuing airworthiness of the type design CMP standard and that the CMP should not be changed unless the reliability of the airplane-engine combination is not achieving or maintaining the reliability objective, or some other unsafe condition arises. As with any type design, the FAA permits manufacturers and operators to incorporate minor changes and routine enhancements by service bulletins or production design changes. However, the FAA will not mandate such enhancements in a revision to the CMP standard. The memo concludes by stating that the Transport Airplane and the Engine and

Propeller Directorates plan to use the AD process to control the continuing airworthiness type design requirements of the ETOPS CMP standard.

As a result of the joint memo, the FAA established strict guidelines for CMP revisions to ensure that the requirements of the basic CMP standard originally approved for an airplane-engine combination are not increased without going through the AD process.

The FAA approves revisions to an airplane's CMP document for the following reasons:

1. When incorporating the CMP standard for a newly approved airplane-engine combination into an existing CMP document.
2. When correcting errors in previous revisions.
3. When ADs are issued that supersede existing CMP requirements.
4. When approving optional alternatives to existing requirements.
5. When mandating changes to the CMP by an AD.

The FAA aircraft certification offices have used these guidelines since issuance of the joint memo to approve CMP revisions. Because operators had already complied with several revisions to previously approved CMP documents in force at the time the FAA issued the new CMP guidelines, the FAA worked with the airlines and the manufacturers to establish "baseline" CMP requirements for each ETOPS approved airplane-engine combination. The affected operators agreed to ensure that all of the requirements of these baseline CMPs are incorporated into their ETOPS fleets. Thereafter, the new CMP revision guidelines would be the standard way of making subsequent revisions.

Summary of the Proposed Changes

The following chart summarizes which operations would be affected by the proposed rule changes:

	Current requirements		Proposed rule		
	Up to 60 minutes	Beyond 60 minutes	Up to 60 minutes	Beyond 60 min up to 180 minutes	Beyond 180 minutes
Part 121 two engine	Section 121.161 applies.	Advisory material and policy letters.	No change	Would apply (Would codify previous practice).	Would apply.
Part 121 more than two engine.	No current regulation ...	No current regulation ...	No change	No change	Would apply.
Part 135	No current regulation ...	No current regulation ...	No change	No change	Would apply.