

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.42

National Policy

Effective Date:
6/5/08

Cancellation Date
6/5/09

SUBJ: Boeing Model 777 Airplane ETOPS Authority Restriction

1. Purpose of This Notice. This notice informs aviation safety inspectors (ASI) with oversight responsibilities of certificate holders conducting Extended Operations (ETOPS) with Boeing Model 777 airplanes, of a necessity to restrict some aircraft with Walter Kidde filter/regulators installed in the cargo compartment fire suppression system, in accordance with a proposed Federal Aviation Administration (FAA) Immediate Adopted Rule (IAR) Airworthiness Directive. The affected systems are those with Walter Kidde filter/regulators identified as part number 473494-1,-2,or-3, 473995-1,-2,or-3 and 473857-1,-2,or-3.

2. Audience. The primary audience for this notice is Flight Standards District Office (FSDO) ASI. The secondary audience includes Flight Standards branches and divisions in the regions and in headquarters.

3. Where You Can Find This Notice. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Operators may find this information on the Federal Aviation Administration's (FAA) Web site at: <http://fsims.faa.gov/>.

4. Background. The Boeing Company has informed the Seattle Aircraft Certification Office (ACO) that they have discovered an error in the capability of certain cargo compartment fire suppression systems certified on Model 777 airplanes. The affected fire suppression systems as delivered by Boeing are now known to have filter/regulators that do not conform to the approved type design, which results in a metered flow rate higher than the certified level. This results in a system time capability less than that identified in the Model 777 ETOPS Configuration, Maintenance, and Procedures (CMP) Document Number D044W054. This CMP document approves the Model 777 for (ETOPS) under Title 14 of the Code of Federal Regulations (14 CFR) part 121, § 121.162(a) for ETOPS up to and including 180 minutes, and identifies cargo fire suppression system configurations intended to comply with the time-limited system requirements of § 121.633(a) and appendix P, section I, paragraph (h)(4) for 207-minute ETOPS. Boeing has determined that the correct cargo fire suppression capability for most airplanes with affected filter/regulators is less than that required for the intended maximum ETOPS diversion time under these part 121 operating rules.

a. There are a total of 694 Model 777 airplanes in the world fleet affected by this problem. Of those, there are 137 airplanes registered in the United States and 128 operated by U.S. carriers. The attachment identifies the affected airplanes and the actual cargo fire suppression capability for each.

b. The Boeing Company plans to issue service information for restoring the cargo fire suppression system filter/regulators to the certified time capability. Restored filter/regulators will be assigned new part numbers in order to avoid confusion with filter/regulators that have not yet been complied with the service information.

c. The FAA Seattle Aircraft Certification Office (ACO) has reviewed this problem and plans to issue an Immediate Adopted Rule (IAR) airworthiness directive to require operators to comply with a new revision to the Model 777 CMP that will identify the actual cargo fire suppression capability.

d. The FAA does not recommend immediately suspending any ETOPS operation of the affected Boeing 777 airplanes for those air carriers operating these airplanes. The operational requirements of part 121, § 121.162(a) and § 121.633(a) as well as Appendix P, section I, paragraph (h)(4) state the time needed to fly to an alternate airport must not exceed the airplane's most limiting cargo fire suppression system time, minus 15 minutes.

5. Action. It is the position of the Flight Standards Service (AFS) that the U.S. air carriers operating the affected B-777 approved ETOPS Operation are limited to routings where; at no point along the route, is the time needed to fly to an ETOPS Alternate Airport (at the approved one-engine inoperative cruise speed under standard conditions in still air) more than the "Maximum Diversion Times" stated in any revised Demonstrated Capability Statement in Boeing document D044W054, Model 777ETOPS Configuration, Maintenance and Procedures (CMP) document, minus 15 minutes.

a. For Example: A Boeing model 777-200ER may have FAA ETOPS Authority for 207 minutes in the North Pacific Area of Operations. This Authority was based on the original CMP approved cargo fire suppression capability of 222 minutes. If the airplane is equipped with Filter Regulator Part Number 473995-1,-2,or-3, it's actual capability is 213 minutes, and should be restricted to ETOPS operations of 198 minutes (213 minus 15) or less from an ETOPS Alternate Airport in accordance with the new revision to the CMP.

b. Principal inspectors responsible for those air carriers that have B-777 ETOPS authority must do the following no later than 14 days from the date of this notice:

(1) Determine if any of the air carrier's airplanes are equipped with Walter Kidde filter/regulators identified as part number 473494-1,-2,or-3, 473995-1,-2,or-3, or 473857-1,-2,or-3 installed in their cargo fire suppression systems.

(2) If it is determined that the air carrier's airplanes are equipped with the identified part numbers, assist the air carrier to immediately amend operations specifications (OpSpec) D086 to limit or restrict the operation of the air carrier's affected B-777 airplanes to routings where no point along the route is more than the actual capability of the airplanes cargo fire suppression

system (minus 15 minutes) or the current maximum ETOPS authority granted by the FAA in OpSpec B042 for specific areas, whichever is less. For example:

Table 1. OpSpec D086

Registration No.	Airplane M/M/S	Maximum Diversion Time In Minutes
N543XX	B-777-200	198 minutes in the North Atlantic Area of Operations (See AD ###)

(3) If the Air Carrier declines to voluntarily amend OpSpec D086 to reflect the adjusted Maximum Diversion Time, immediately notify AFS-200 in writing.

(4) The following table lists the affected Boeing 777 models:

Aircraft Model	Filter Regulator Part Installed	Original Certification	Actual Capability
777-200 & 777-200 Increased Gross Weight (777-200ER)	473494-1,-2,or- 3	Certified Capability 195 Minutes	174 Minutes
777-200 Increased Gross Weight (777-200ER)	473995-1,-2,or- 3	Certified Capability 222 Minutes	213 Minutes
777-200LR Gas Ox System	473995-1,-2,or- 3	Certified Capability 222 Minutes	203 Minutes
777-200LR Low Flow System	473995-1,-2,or -3	Certified Capability 271 Minutes	213 Minutes
777-300	473857-1,-2,or- 3	Certified Capability 195 Minutes	185 Minutes
777-300ER Standard 3-Bottle System	473857-1,-2,or- 3	Certified Capability 195 Minutes	185 Minutes
777-300ER Optional 4-Bottle System	473857-1,-2,or- 3	Certified Capability 267 Minutes	239 Minutes

6. Distribution. This notice is distributed to the division level in the Flight Standards Service in Washington headquarters; to the branch level in the regional flight Standards division; to the Flight Standards district Offices (FSDO); and to the Regulatory Standards Division at the Mike Monroney Aeronautical Center. This notice is also distributed electronically to the division level in the Flight Standards Service in Washington headquarters and to all regional Flight Standards division and district offices.

7. Disposition. This notice is intended to cover the time required to complete the corrective action and will not be incorporated into 8900.1. Questions regarding the capability of the cargo fire suppression system or the safety analysis, please contact Bob Hettman at telephone (425) 917-6457. If you have questions regarding application of ETOPS requirements, please contact Jim Ryan at telephone (202) 267-7493.

ORIGINAL /S/

by

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