



U.S. Department
of Transportation
**Federal Aviation
Administration**

SAFO

Safety Alert for Operators

SAFO 08014
DATE: 6/6/08

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Boeing 777 Extended Operations (ETOPS) Restrictions due to Cargo Fire Suppression System Shortfall

Purpose: To inform operators conducting ETOPS with the Boeing Model 777 series airplane, of a necessity to restrict some aircraft with Walter Kidde filter/regulators installed in the cargo compartment fire suppression system. The affected systems are those with Walter Kidde filter/regulators identified as part numbers 473494-1, -2, or -3, 473995-1, -2, or -3 or 473857-1, -2, or -3.

Background: The Boeing Company has informed the FAA that they 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 shortfall 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 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 of most airplanes with affected filter/regulators is less than that required for the intended maximum ETOPS diversion time under these part 121 operating rules.

There are a total of 694 Boeing 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 table below identifies the affected airplanes and the actual cargo fire suppression capability for each.

The FAA 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. Boeing plans to issue service information for restoring the cargo fire suppression system filter/regulators to the certified time capability.

Recommended Action: Directors of Operations and Directors of Maintenance should determine if their 777 airplanes are equipped with the identified Walter Kidde filter/regulators as part of the airplane’s cargo fire suppression systems. Operators should limit their ETOPS Maximum Diversion Time to the actual capability of their airplanes cargo fire suppression system (minus 15 minutes) or maximum ETOPS authority granted by the FAA, whichever is less. Such a limit may be removed with the incorporation of an FAA approved design change that restores the cargo fire suppression system to the minimum required for the operator’s original approved maximum diversion time.

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

Point of Contact: Any questions regarding this SAFO should be directed to Jim Ryan, Air Carrier Operations Branch, AFS-220, at (202) 267-7493.