



# Federal Aviation Administration

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## Memorandum

Date: NOV 21 2007

To: Manager, Small Airplane Directorate, ACE-100

From: Manager, Wichita Aircraft Certification Office, ACE-115W

Prepared by: Anthony Flores, ASE (Mechanical Systems), ACE-116W

Subject: Extension of Equivalent Level of Safety for Passenger Oxygen Dispensing Units of Cessna Model 525C, ACE-04-06A

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This memorandum requests your office to review and provide concurrence with the proposed extension of the equivalent level of safety for passenger oxygen dispensing units to the oxygen system requirements of § 23.1447(e) of 14 CFR Part 23.

### **BACKGROUND:**

Cessna letter L390-07-2496, dated August 9, 2006, requested on behalf of the Cessna Model 525C a finding of extension of the ACE-04-06 Equivalent Level of Safety (ELOS) for the Cessna Model 525B Passenger Oxygen Dispensing Units to the Model 525C, reference FAA project AT4632WI-A. The equivalent level of safety is being requested because at cold cabin temperatures the passenger oxygen masks become stiff and will not unfold and fall from the dispensing unit stowage box for presentation to the passengers. Cessna is proposing a streamer be attached to the oxygen mask. The streamer would fall and be presented to the passengers, who would then be able to pull the lodged oxygen mask from the dispensing unit box using the streamer and don the mask. Cessna Model 525C aircraft are expected to operate from climates where winter temperatures are often very cold.

### **APPLICABLE REGULATIONS:**

The Cessna Model 525C will be certified in the Commuter Category to the certification basis of 14 CFR Part 23 as amended through Amendment 55.

**REGULATION REQUIRING AN ELOS:**

14 CFR § 23.1447(e) requires that; "If certification for operation above 30,000 feet is requested, the dispensing units for passengers must be automatically presented to each occupant before the cabin altitude exceeds 15,000 feet."

**DESCRIPTION OF COMPENSATING FEATURES:**

See the attached copy of the ELOS memo dated July 21, 2004, which granted ELOS ACE-04-06 for the Model 525B.

**EXPLANATION OF COMPENSATING FEATURES:**

See the attached copy of the ELOS memo dated July 21, 2004, which granted ELOS ACE-04-06 for the Model 525B.

**ACO RECOMMENDATION:**

The Wichita ACO has reviewed the information presented in Cessna's letter and the information in the ELOS memo dated July 21, 2004, and concurs that it is appropriate to extend ELOS ACE-04-06 to the Model 525C.

Concurrence:

*Margaret Kline*

*October 23, 2007*

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 Manager, Wichita Aircraft Certification Office, ACE-115W      Date

*W. J. [Signature]*  
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 Manager, Standards Office, ACE-110

*11/16/07*  
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 Date

*Karin [Signature]*  
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 Manager, Small Airplane Directorate,  
 Aircraft Certification Service, ACE-100

*11/21/07*  
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 Date