Federal Aviation Administration

Memorandum

Date: May 22, 2009

To: Wayne P. Fry, Manager Southwest Region Technical Support Branch, ASW-230

From: Rebecca B. MacPherson, Assistant Chief Counsel for Regulations, Office of the Chief Counsel, AGC-200

Subject: Passenger Oxygen Requirements

This memorandum responds to your November 17, 2008 request to the 135 Air Carrier Operations Branch (AFS-250) requesting clarification of the intent of § 135.157(b) of Title 14, Code of Federal Regulations (14 CFR) with regard to the use of an air carrier Minimum Equipment List (MEL). Specifically, you request clarification regarding the altitude limitations applicable to two aircraft, a Lear 31A and a King Air 200 operated by Basin Aviation under the provisions of 14 CFR part 135 when the passenger oxygen system for each aircraft is inoperative. AFS-250 has requested that this office respond to your request.

Section 135.179 sets forth the regulatory requirements under which a person may take off an aircraft with inoperable instruments or equipment installed. Paragraph (a) of that section states that no person may take off an aircraft with inoperable instruments or equipment installed unless certain conditions are met. One of those conditions is that the certificate-holding district office has issued the certificate holder operations specifications authorizing operations in accordance with an approved Minimum Equipment List. A Minimum Equipment List specifies those items which may be inoperative on the aircraft. Paragraph (a)(3)(i) of § 135.179 states that the approved Minimum Equipment List must be prepared in accordance with the limitations specified in paragraph (b) of that section. Paragraph (b) specifies those instruments and equipment that may not be included in the MEL. Paragraph (b)(3) specifically states that "instruments and equipment required for specific operations by this part" may not be included in the MEL. Accordingly, an MEL may not permit operation of an aircraft without any instrument or equipment specifically mandated by regulation for the operation being conducted.

Section 135.157(b) sets forth the oxygen equipment requirements for pressurized aircraft conducting operations at various altitudes under part 135. Paragraph (b)(2) sets forth those oxygen equipment requirements that apply when the cabin pressure altitude of the aircraft exceeds 10,000 feet MSL. Paragraph (b)(2)(i) specifies that if the cabin pressurization fails when flying "at altitudes above 10,000 feet through 15,000 feet MSL" the aircraft must be

equipped with enough oxygen dispensers and oxygen to supply at least 10 percent of the occupants of the aircraft, other than the pilots, for that part of the flight at those altitudes that is more than 30 minutes duration. Accordingly, if the passenger oxygen system of a pressurized aircraft is inoperable, that aircraft may not be used to carry passengers for more than 30 minutes at altitudes above 10,000 feet MSL through 15,000 feet MSL with an inoperative cabin pressurization system.

For any flight above 15,000 feet MSL through 25,000 feet MSL in a pressurized aircraft, the aircraft must be equipped to supply oxygen to each passenger in the event of a cabin pressurization failure. However the amount of the required oxygen supply is dependent upon the time in which the aircraft can safely descend to 15,000 feet MSL, as set forth in § 135.157 (b)(2)(ii). If the aircraft cannot descend to 15,000 feet MSL within four minutes each passenger must be provided with oxygen for one hour; if the aircraft can descend to 15,000 feet MSL within four minutes at all times during flight at those altitudes, only a 30 minute supply of oxygen is required to be provided to each passenger. Passenger–carrying operations of any duration above 15,000 feet MSL are therefore prohibited in an aircraft with an inoperative passenger oxygen system as the passengers can not be provided with the required supply of oxygen in the event of a cabin pressurization failure.

Additionally, if the aircraft's cabin pressurization system is inoperative the oxygen equipment requirements applicable to unpressurized aircraft set forth in § 135.157(a) would apply. The provisions of an MEL can not supersede these, or any other requirements set forth in § 135.157.

This response was prepared by Paul Greer, an attorney in the Regulations Division of the Office of the Chief Counsel, and was coordinated with the Air Transportation Division (AFS-200) of the Flight Standards Service. Please contact us at (202) 267-3073 if we can be of further assistance.