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

Office of the Chief Counsel

800 Independence Ave., S.W.
Washington, D.C. 20591

JUL 15 2011

Mr. Paul Hurlbert
[redacted]

Dear Mr. Hurlbert:

This letter is in response to your March 8, 2011 request for legal interpretation of the requirements for transponder installation and use in aircraft in part 135 operations as required by 14 C.F.R. § 135.143.

In your letter you ask if the FAA's regulations require that all aircraft need be equipped with an operational transponder to be operated under part 135. As explained below, the answer to your question is no, the transponder requirements of § 135.143 are triggered by the airspace in which the aircraft is operated. The airspace in which transponders are required is described in § 91.215. Provided that the aircraft is not operated within the airspace described in § 91.215, it would not need to be equipped with a transponder to operate under part 135.

Section 135.143 General requirements, provides as follows:

> (a) No person may operate an aircraft under this part unless that aircraft and its equipment meet the applicable regulations of this chapter.
> (b) Except as provided in § 135.179, no person may operate an aircraft under this part unless the required instruments and equipment in it have been approved and are in operable condition.
> (c) ATC transponder equipment installed within the time periods indicated below must meet the performance and environmental requirements of the following TSO's:
> (1) *Through January 1, 1992*: (i) Any class of TSO-C74b or any class of TSO-C74c as appropriate, provided that the equipment was manufactured before January 1, 1990; or
> (ii) The appropriate class of TSO-C112 (Mode S).
> (2) *After January 1 1992*: The appropriate class of TSO-C112 (Mode S). For purposes of paragraph (c)(2) of this section, "installation" does not include—
> (i) Temporary installation of TSO-C74b or TSO-C74c substitute equipment, as appropriate, during maintenance of the permanent equipment;
> (ii) Reinstallation of equipment after temporary removal for maintenance; or
> (iii) For fleet operations, installation of equipment in a fleet aircraft after removal of the equipment for maintenance from another aircraft in the same operator's fleet.

Prior to 1972, aircraft transponder requirements were codified in § 91.99, Jet Advisory Areas. Under that section and in pertinent part, no person was permitted to operate an aircraft within a radar jet advisory area designated in Part 75 unless: "(1) That aircraft is operated under IFR at a specific altitude assigned by ATC." If the aircraft was not being operated in this manner the aircraft was required to be "equipped with a functioning coded radar beacon transponder having a Mode A (military Mode 3) 64 code capability, [and which was] operated to reply to Mode 3/A interrogation with the code specified by ATC." If the aircraft was not so equipped, then specific authorization was required to be obtained from ATC to operate in the designated area." See 28 FR 6702, 6711 (June 29, 1963).

By Notice No. 69-9[1], the FAA proposed new § 91.96, Areas requiring airborne beacon transponders, which proposed to require aircraft to carry an improved radar beacon transponder for operations in controlled airspace at and above 10,000 feet MSL, in positive controlled airspace, or in terminal airspace within which transponders are required.

Subsequently, the FAA issued a supplemental notice to 69-9 on March 30, 1971, proposing new standards in Parts 37, 91, 121, 127, and 135 for airborne ATC transponder equipment and to require that transponders in aircraft meet TSO standards.[2] In this notice, the FAA stated that "For the foregoing reasons, it is proposed to amend Parts 91, 121, 127, and 135 to require that ATC transponder equipment installed after January 1, 1972, in any aircraft not previously equipped with an ATC transponder must meet the requirements of TSO-C74b or the appropriate requirements of the TSO proposed herein . . . . This will insure that all transponder equipment being used in any operation, regardless of when that equipment was installed, eventually meets the necessary performance standards."

This notice specifically proposed new § 91.24 and § 135.143 as follows:

> § 91.24(a) ATC transponder equipment installed after January 1, 1972, in U.S. registered civil aircraft not previously equipped with an ATC transponder and all ATC transponder equipment used in U.S. registered civil aircraft after January 1, 1975, must meet the requirements of any Class of TSO-C74b of any Class of TSO-C74c, as appropriate.
> (b) This section does not apply to operations conducted under Part 121, 123, 127, or 135 of this chapter.
>
> § 135.143(c) ATC transponder equipment installed after January 1, 1972, in aircraft not previously equipped with an ATC transponder and all ATC transponder equipment used after January 1, 1975, must meet the requirements of any Class of TSO-C74b, or Class 1A or Class 1B of TSO-C74c, as appropriate.

The FAA issued a final rule that merged proposed §§ 91.96 and 91.24 into new § 91.21.[3] Paragraph (a) of § 91.21 incorporated the schedule for transponder installation for part 91

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[1] 34 FR 5259 (Mar. 14, 1969).
[2] 36 FR 5853 (Mar. 30, 1971).
[3] 38 FR 14672 (June 4, 1973).

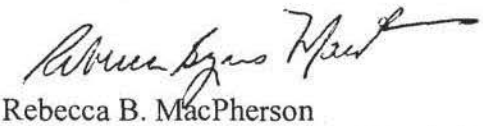
operations. Paragraph (b) and (c) of § 91.21 specify the airspace for which all aircraft are required to operate with a transponder. Section 135.143 paragraph (c) imposed the schedule for equipping aircraft operated under part 135 with transponders. Thus, part 91 retains the requirement for all operators to have a transponder when operating in designated airspace.

The FAA amended the above regulations several times, which has resulted in the present language of §§ 91.215 and 135.143(c). However, these regulations have retained the same structure identified in the 1972 amendment, provided above, with respect to the operations requirement contained in part 91 and the specific equipment requirement in the part applicable for the type of operation. Paragraph (a) of § 91.215 sets forth the transponder requirements for operations not conducted under part 121 or 135. Paragraph (b) of § 91.215 sets forth the airspace for which all aircraft must be equipped with a transponder in order to operate in the airspace. Paragraph (b) applies to any person, which includes operators under part 121 and 135, in addition to operations conducted under part 91. Section 135.143(c) provides the specific equipment that must be installed on an aircraft conducting part 135 operations.

Accordingly, if the aircraft is operated under part 135 and will not be operating in the airspace articulated in § 91.215, then that aircraft does not need to be equipped with a transponder. To operate in the airspace specified in § 91.215, an operator conducting operations under part 135 must equip the aircraft with the appropriate transponder in accordance with the time schedule set forth in § 135.143(c).

This response was prepared by Dean E. Griffith, Attorney in the Regulations Division of the Office of the Chief Counsel and coordinated with the Air Transportation and Air Maintenance Divisions of Flight Standards Service. Please contact us at (202) 267-3073 if we can be of additional assistance.

Sincerely,



Rebecca B. MacPherson
Assistant Chief Counsel for Regulations, AGC-200