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

Office of the Chief Counsel
800 Independence Ave., SW.
Washington, DC 20591

MAR 22 2012

Ms. Vanessa Meskimen
3804 Red Top Lane
Helena, Montana 59602

Re: Request for Legal Interpretation of 14 C.F.R. § 91.411(b)(2) Concerning Which Ratings a Certificated Repair Station Must Hold to Perform the Inspections Required by § 91.411(a)

Dear Ms. Meskimen:

This is in response to your request for a legal interpretation on which ratings an FAA-certificated repair station must hold in order to perform the altimeter-related tests and inspections required by § 91.411(a). Because your question involves practical considerations of how the FAA rates and regulates repair stations, we obtained advice from the Avionics Branch in the Aircraft Maintenance Division of the FAA's Office of Flight Standards. We apologize for the delay in responding to your inquiry.

In order to respond meaningfully to your question, we believe it useful to include the text of the regulation at issue. Section 91.411(b) states, in pertinent part:

> (b) The tests required by paragraph (a) of this section must be conducted by—
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> * * * * *
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> (2) A certificated repair station properly equipped to perform those functions and holding—
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> (i) An instrument rating, Class 1;
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> (ii) A limited instrument rating appropriate to the make and model of appliance to be tested;
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> (iii) A limited rating appropriate to the test to be performed;
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> (iv) An airframe rating appropriate to the airplane, or helicopter, to be tested; or
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> * * * * *

You stated you have heard different opinions from FAA inspectors as to which ratings are required under § 91.411(b) for the referenced tests. Specifically, you said that some inspectors say that a repair station must hold either a Class 1, or the appropriate Limited Instrument rating, **and** a Class or a Limited Airframe rating (appropriate to the airplane or helicopter to be tested). Others, you said, maintain that only a Class 1, or the appropriate Limited Instrument rating, is required, and that **no** associated Airframe (class or limited) rating is required. You stated that the purpose of your inquiry is to find out "where is the dividing line . . . between the instrument rating and the Airframe rating." You elaborated that your understanding was that "an instrument rating was required for repairing an instrument," and that, "[f]or the installation, inspecting, and testing the instrument in an aircraft, an Airframe rating was required . . . ."

Under the current regulations, a repair station with an appropriate Instrument rating does not need an associated Airframe rating to install, inspect, or test the instrument worked on when it is installed in an aircraft. While those privileges are not clearly set forth in current 14 C.F.R. § 145.59(e) describing the instrument ratings for FAA-certificated repair stations, they were privileges associated with those same ratings via appendix A before the repair station rules (14 C.F.R. part 145) were amended in 2001. For example, among the job functions authorized by that appendix for a Class 1 instrument–rated repair station were:

> (ii) Maintain and alter instruments, including installation and replacement of parts;
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> * * * * *
>
> The function of installation includes fabrication of instrument panels and other installation structural components.
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> * * * * *
>
> (iii) Inspect, test and calibrate instruments: Perform these functions on instruments listed under paragraph (e)(1)(i) of this appendix, on and off the aircraft, when appropriate.

When the FAA amended part 145 in 2001 (66 FR 41088, August 6, 2001), appendix A was withdrawn because of comments pointing out the difficulty of keeping current an appendix that lists job functions and associated equipment requirements. The 2001 rule also retained the previous rating system with no changes. (*See* 66 FR 41088, 41097, August 6, 2001.) Accordingly, the FAA did not intend to, nor did, make any substantive changes to the job functions/privileges afforded repair stations by the previous appendix A. Indeed, the job functions set forth in appendix A had been in place since at least 1962, with only two amendments to the appendix over the years, the last one occurring in 1982, nearly 30 years ago. While the issues you raise may not be definitively clear from reading the current ratings regulations in isolation, the agency cannot unilaterally, by guidance or otherwise, make substantive changes to repair station job functions/privileges that have been long-standing without notice and comment rulemaking.

The FAA's Aircraft Maintenance Division (AFS-300) in the Office of Flight Standards advises us that some of the agency's current guidance on these matters needs clarification. For example, Paragraph 2-1182 in FAA Order No. 8900.1 states that maintenance on wiring harnesses requires an appropriate Airframe rating. This is correct only to the extent that an appropriate Airframe rating qualifies for that maintenance; however, as noted above, it is not the only rating that does. Flight Standards indicates that this will be clarified in a future revision to the Order. Another

paragraph in Order No. 8900.1 is clearly **not** correct. A note in Paragraph 2-1192 states that a Radio-rated repair station is required to hold an Airframe rating to remove and install radios. According to Flight Standards, that note will be corrected in a future revision to the Order.

You raised a question pertaining to one of the tests in appendix E of part 43, the instrument-testing appendix specified in § 91.411(a), as referenced in § 91.411(b), above. Specifically, you referred to paragraph (c) of appendix E, which is for an "Automatic Pressure Altitude Reporting Equipment and ATC Transponder System Integration Test."[1] You asked: "If a Certificated Repair Station was performing only the Altimeter system and altitude reporting equipment test and inspection required by 91.411 is the Repair Station also required to hold a Radio Rating?" The answer is **no**. This is made clear by paragraph (a)(3) of § 91.411, which specifically mandates the test, and by paragraph (b)(2), quoted above, which provides that if a repair station conducts the test, the repair station must hold an instrument rating (Class I [sic] or limited), or other "limited rating appropriate to the test to be performed." The regulation does not require a Radio rating.[2]

You prefaced your next question by quoting the 14 C.F.R. § 1.1 definition of maintenance, which provides: "*Maintenance* means inspection, overhaul, repair, preservation, and the replacement of parts, but excludes preventive maintenance." You asked: "Is the Altimeter system and altitude reporting equipment test and inspection required by 91.411 a repair?" The answer is **no**. As you can see from the maintenance definition, *repair* is but a subset of maintenance, as is *inspection*, and they are different activities. Because the FAA's regulations no longer define repair, we refer to the dictionary for a common meaning. For example: *repair*: "**1**. To restore to sound condition after damage or injury: FIX. . . . **3**. To renew or refresh." (*Webster's II New Riverside University Dictionary*, The Riverside Publishing Company, 1984.) A correction or fix to a defective instrument would be a repair—a test or inspection would not be.

Finally, you asked whether a certificated repair station with a Radio rating issued under § 145.59(d) is "authorized to approve an aircraft for return to service after the repair station completed either a major or minor alteration to the airframe by removing and/or installing any of the radio equipment listed under 145.59(d) and without holding an Airframe rating applicable to the aircraft for which maintenance is being performed." The answer is **yes**, for the reasons explained above, where we concluded that an instrument-rated repair station does not need an Airframe rating to install, inspect, and test an instrument on the aircraft. Former appendix A, in paragraph (d)(4) listed several job functions/privileges for "all classes of radio ratings"—these included: "Install and repair aircraft antennas. . . . Install complete radio systems in aircraft . . . . (That phase of radio installation requiring alterations to the aircraft structure must be performed, supervised, and inspected by qualified personnel)." As noted above, these job functions/ privileges remain in effect until the agency changes them by notice and comment rulemaking.

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[1] Note that appendix E to part 43 is for "Altimeter System Test and Inspection," and appendix F to part 43 is for "ATC Transponder Tests and Inspections." As your question implies, a transponder is considered a radio transmitting and receiving device.

[2] If, however, the integration test of paragraph (c) of appendix E was done by a repair station following any installation or maintenance on an ATC transponder where data correspondence error could be introduced, as required by § 91.413(b), a repair station would have to hold a radio rating (Class III [sic] or limited), or other "limited rating appropriate to the test to be performed."

This response was prepared by Edmund Averman, an Attorney in the Regulations Division in the Office of the Chief Counsel, and coordinated with the Aircraft Maintenance Division (AFS-300) in the Office of Flight Standards. If you have additional questions regarding this matter, please contact us at your convenience at (202) 267-3073.

Sincerely,

Rebecca MacPherson
Assistant Chief Counsel for Regulations
Office of the Chief Counsel