

SUBJECT: Required Testing of Transponder Pressure Altitude Reporting Equipment
Aircraft Type: Eclipse 500 and Eclipse 550®
Effectivity: All Aircraft
Applicability: All Aircraft

1. SUMMARY

Eclipse Aerospace, Inc. (EAI) has recently seen several instances of A + P Mechanics signing for 91.411 and 91.413 checks in aircraft log book entires. We have also received inquiries from operators and maintenance providers as to which components are affected by the 14 CFR Part 91 testing requirements for automatic pressure altitude reporting systems of ATC transponders

2. BACKGROUND

For the purposes of this discussion the integrated system refers to the components that transmit and / or receive altitude data electronically. Static pressure system components such as static ports, plumbing, and valves, are controlled by the requirements of 14 CFR 91.411(a)(2) and 14 CFR 43 appendix E, paragraph (a).

14 CFR 91.411(a)(3) states⁽¹⁾:

Following installation or maintenance on the automatic pressure altitude reporting system of the ATC transponder where data correspondence error could be introduced, the integrated system has been tested, inspected, and found to comply with paragraph (c), appendix E, of part 43 of this chapter.

14 CFR 91.411(b) states⁽¹⁾:

The tests required by paragraph (a) of this section must be conducted by—

(1) The manufacturer of the airplane, or helicopter, on which the tests and inspections are to be performed;

(2) A certificated repair station properly equipped to perform those functions and holding—

(i) An instrument rating, Class I;

(ii) A limited instrument rating appropriate to the make and model of appliance to be tested;

(iii) A limited rating appropriate to the test to be performed;

(iv) An airframe rating appropriate to the airplane, or helicopter, to be tested; or

(3) A certificated mechanic with an airframe rating (static pressure system tests and inspections only).

14 CFR 91.413(b) states⁽²⁾:

Following any installation or maintenance on an ATC transponder where data correspondence error could be introduced, the integrated system has been tested, inspected, and found to comply with paragraph (c), appendix E, of part 43 of this chapter.

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14 CFR 91.413(c) states⁽²⁾:

The tests and inspections specified in this section must be conducted by—

(1) A certificated repair station properly equipped to perform those functions and holding—

(i) A radio rating, Class III;

(ii) A limited radio rating appropriate to the make and model transponder to be tested;

(iii) A limited rating appropriate to the test to be performed;

3. ECLIPSE ACTION

EAI's interpretation of these regulations is that any installation or maintenance to the Air Data Computer (ADC), Attitude Heading Reference System (AHRS), Primary Flight Display (PFD), or Transponder requires an Automatic Pressure Altitude Reporting Equipment and ATC Transponder System Integration Test per 14 CFR Part 43 Appendix E Paragraph (c).

4. SUGGESTED OPERATOR ACTION

Owners, operators, and maintainers should review the applicable sections of 14 CFR part 43 and 91 to ensure they are in compliance with the regulations.

AMM Task 34-50-20-071-801 (effectivity A, B or C as applicable) fulfills the 14 CFR Part 43 Appendix E Paragraph (c) requirements.

In addition to the FAR test requirements detailed above, additional tests may be required by an RVSM maintenance program. A review of the aircraft's RVSM manual is recommended to determine what tests are required.

5. EXPORT CONTROL

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(1) [Doc. No. 18334, 54 FR 34308, Aug. 18, 1989, as amended by Amdt. 91-269, 66 FR 41116, Aug. 6, 2001; 72 FR 7739, Feb. 20, 2007]

(2) [Doc. No. 18334, 54 FR 34311, Aug. 18, 1989, as amended by Amdt. 91-267, 66 FR 21066, Apr. 27, 2001; Amdt. 91-269, 66 FR 41116, Aug. 6, 2001]

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