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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2010-0691; Directorate Identifier 2010-CE-027-AD; Amendment 39-16459; AD 2010-20-24]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Eclipse Aerospace, Inc. Model EA500 Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires incorporating changes to the electronic flight information system and the airplane flight manuals. This AD was prompted by reports of uncommanded changes to the communications radio frequency, altitude preselect, and/or transponder codes. We are issuing this AD to correct faulty integration of hardware and software, which could result in unannounced, uncommanded changes in communications radio frequency, transponder codes, and altitude preselect settings. These uncommanded changes could result in loss of communication with air traffic control due to improper communications frequency, autopilot level off at the incorrect altitude, or air traffic control loss of proper tracking of the aircraft.

**DATES:** This AD is effective November 9, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of November 9, 2010.

**ADDRESSES:** For service information identified in this AD, contact Eclipse Aerospace Incorporated, 2503 Clark Carr Loop, SE., Albuquerque, New Mexico 87106; telephone: (505) 724-1200; <http://www.eclipseaerospace.net>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and

other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Eric Kinney, Aerospace Engineer, Ft. Worth Aircraft Certification Office, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5459; fax: (817) 222-5960; e-mail: eric.kinney@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to the specified products. That NPRM published in the Federal Register on July 9, 2010 (75 FR 39472). That NPRM proposed to require incorporating changes to the electronic flight information system and the airplane flight manual.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

### **Request To Withdraw the NPRM and Issue a Special Airworthiness Information Bulletin (SAIB)**

Chris Jackman, Eclipse Aerospace Incorporated, proposed the withdrawal of the NPRM and requested the FAA to issue an SAIB instead.

The commenter reasoned that the majority of the affected airplanes have already incorporated the corrective action, and the owners/operators only need to send confirmation of their taking corrective action. The commenter also states that an SAIB would be the most effective means for operators to become aware of the unsafe condition and means to communicate compliance with the service information.

The FAA disagrees with the comment. The Airworthiness Directives Manual, FAA-IR-M-8040.1C, dated May 17, 2010, prohibits the FAA from accepting assurance from a design approval holder that all products are in compliance as a reason not to issue an AD action. Consequently, we are making no change to the final rule AD action.

### **Request To Correct the Applicability Section**

Chris Jackman requested a correction to the Applicability section, paragraph (c)(2) of the proposed AD action. He explained that the applicability in the NPRM is incorrect and should read as follows:

SNs 000039 through 000104, 000113 through 000115, 000120, and 000123 through 000124, that incorporate Avionics Upgrade to AVIO NG Configuration for ETT Configured Aircraft per any revision level of Eclipse SB 500-99-002.

The FAA agrees with the commenter's correction. This error was corrected in the NPRM; correction, published in the Federal Register on August 2, 2010 (75 FR 45075). The final rule AD action incorporates that correction.

## **Request To Add a Reference to Eclipse Aviation Recommended Service Bulletin SB 500-99-005, REV B, dated January 22, 2010**

Chris Jackman commented that Eclipse Aviation Recommended Service Bulletin SB 500-99-005, REV B, dated January 22, 2010, also includes procedures for compliance with this AD and requested adding a reference to that service bulletin in addition to Eclipse Aviation Recommended Service Bulletin SB 500-99-005, REV A, dated February 16, 2009.

The FAA agrees with the commenter. We are adding a reference to Eclipse Aviation Recommended Service Bulletin SB 500-99-005, REV B, dated January 22, 2010, to the final rule AD action.

## **Request To Change the Contact Information for Eclipse Aerospace Incorporated**

Chris Jackman stated the contact for service information has changed. The current name is Eclipse Aerospace Incorporated instead of Eclipse Aviation Corporation.

The FAA agrees with the commenter. We changed the contact information in the final rule AD action.

## **Request To Withdraw the Proposed AD**

Gerard Wasselle stated that he and at least six other owners/pilots who have vast experience in the Eclipse Model EA500 airplane, all agree that the unsafe condition presented in the proposed AD occurs only in the AVIO NG version 1.1. We infer that the commenter would like to have the proposed AD withdrawn.

We disagree with the commenter. The root cause investigation by Eclipse Aerospace Incorporated discovered that this problem can and has occurred in Innovative Solution & Support equipment with software versions 1.0 through 1.2. This AD is not applicable to Avidyne AVIO-equipped Model EA500 airplanes. We are not changing the final rule AD action as a result of this comment.

## **Request To Withdraw the Proposed AD Because of Cost**

Gerard Wasselle stated the corrective action is cost prohibitive for owners of an older version of AVIO to upgrade to AVIO NG since it is more than the value of the airplane. We infer that the commenter would like to see the proposed AD withdrawn.

The FAA disagrees with the commenter. This AD action does not apply to Avidyne AVIO-equipped Model EA500 airplanes. We are not changing the final rule AD action as a result of this comment.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## Costs of Compliance

We estimate that this AD affects 168 airplanes of U.S. registry.

Owners/operators will comply with this AD action by doing either of the following update options. We have no way of knowing the number of airplanes that would receive each of these upgrades.

We estimate the following costs to do the electronic flight instrument system 1.3 software update:

Labor Cost	Parts Cost	Total Cost Per Airplane
2 work-hours X \$85 per hour = \$170	\$600 to \$1,500	\$770 to \$1,670

We estimate the following costs to do the avionics upgrade to AVIO NG + 1.5 configuration:

Labor Cost	Parts Cost	Total Cost Per Airplane
198 work-hours X \$85 per hour = \$16,830	\$233,120	\$249,950

## Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39–AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):



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**2010-20-24 Eclipse Aerospace, Inc.:** Amendment 39-16459; Docket No. FAA-2010-0691;  
Directorate Identifier 2010-CE-027-AD.

**Effective Date**

- (a) This AD is effective November 9, 2010.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Model EA500 airplanes with the following serial numbers (SNs) that are certificated in any category:

(1) SNs 000105 through 000112, 000116 through 000119, 000121 through 000122, and 000125 through 000260;

(2) SNs 000039 through 000104, 000113 through 000115, 000120, and 000123 through 000124, that incorporate Avionics Upgrade to AVIO NG Configuration for ETT Configured Aircraft per any revision level of Eclipse SB 500-99-002; and

(3) SNs 000001 through 000038, that incorporate Performance Enhancement & Drag Reduction Modification per any revision level of Eclipse SB 500-99-001 and Avionics Upgrade to AVIO NG Configuration for ETT Configured Aircraft per any revision level of Eclipse SB 500-99-002.

**Subject**

- (d) Air Transport Association of America (ATA) Code 23: Communications.

**Unsafe Condition**

(e) This AD results from reports of uncommanded changes to the communications radio frequency, altitude preselect, and/or transponder codes. We are issuing this AD to correct faulty integration of hardware and software, which could result in unannounced, uncommanded changes in communications radio frequency, transponder codes, and altitude preselect settings. These uncommanded changes could result in loss of communication with air traffic control due to improper communications frequency, autopilot level off at the incorrect altitude, or air traffic control loss of proper tracking of the aircraft.

**Compliance**

- (f) To address this problem, you must do the following, unless already done:

**Table 1–Actions, Compliance, and Procedures**

<b>Actions (software updates and AFM revisions)</b>	<b>Compliance</b>	<b>Procedures</b>
<p>(1) Incorporate one of the following set of software upgrades and AFM revisions:</p> <p>(i) Electronic flight instrument system (EFIS) 1.3 software update and one of the following airplane flight manual revisions:</p> <p>(A) Temporary Revision (TR) 010, Airplane Flight Manual part number (P/N) 06–122204 Before 3–45, Revision 01 and TR 009, Quick Reference Handbook P/N 06–122205, Revision 01; or</p> <p>(B) TR 010A, Airplane Flight Manual P/N 06–122204 Before 3–51, Revision 02 and TR 009A, Quick Reference Handbook P/N 06–122205, Revision 02; or</p> <p>(C) Airplane Flight Manual P/N 06–122204 Revision 3, dated February 3, 2010, and Quick Reference Handbook P/N 06–122205, Revision 03.</p> <p>(ii) Avionics upgrade to AVIO NG + 1.5 Configuration and one of the following airplane flight manual revisions:</p> <p>(A) Aircraft Flight Manual, P/N 06–122204, Revision 2, dated November 7, 2008, or</p> <p>(B) AVIO NG + 1.5 configuration and Aircraft Flight Manual, P/N 06–122204, Revision 3, dated February 10, 2010.</p>	<p>Incorporate within the next 6 months after November 9, 2010 (the effective date of this AD).</p>	<p>Follow, as appropriate, Eclipse Aviation Required Service Bulletin SB 500-31-015, REV D, dated January 14, 2009; or Eclipse Aviation Recommended Service Bulletin SB 500-99-005, REV A, dated February 16, 2009; or Eclipse Aviation Recommended Service Bulletin SB 500-99-005, REV B, dated January 22, 2010.</p>
<p>(2) Send the completed service bulletin compliance record required by paragraph (f)(1)(i) of this AD or paragraph (f)(1)(ii) of this AD to the address identified in paragraph (g) of this AD. The Office of Management and Budget (OMB) approved the information collection requirements contained in this regulation under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and assigned OMB Control Number 2120–0056.</p>	<p>Within 30 days after you incorporate the revisions required by paragraph (f)(1)(i) of this AD or paragraph (f)(1)(ii) of this AD or within 30 days after November 9, 2010 (the effective date of this AD), whichever occurs later.</p>	<p>Not Applicable.</p>

**Alternative Methods of Compliance (AMOCs)**

(g) The Manager, Fort Worth Airplane Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Eric Kinney, Fort Worth ACO, Aerospace Engineer, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5459; fax: (817) 222-5960. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

## Related Information

(h) For more information about this AD, contact Eric Kinney, Aerospace Engineer, Fort Worth ACO, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; phone: (817) 222-5459; fax: (817) 222-5960; e-mail: eric.kinney@faa.gov.

## Material Incorporated by Reference

(i) You must use the service information contained in Table 2 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of the service information contained in Table 2 of this AD under 5 U.S.C. 552(a) and 1 CFR part 51.

**Table 2—New Material Incorporated By Reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
(i) Eclipse Aviation Required Service Bulletin SB 500-31-015	REV D	January 14, 2009
(ii) Eclipse Aviation Recommended Service Bulletin SB 500-99-005	REV B	January 22, 2010
(iii) Eclipse Aviation Recommended Service Bulletin SB 500-99-005	REV A	February 16, 2009

(2) For service information identified in this AD, contact Eclipse Aerospace Incorporated, 2503 Clark Carr Loop, SE., Albuquerque, New Mexico 87106; telephone: (505) 724-1200; <http://www.eclipseaerospace.net>.

(3) You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Kansas City, Missouri, on September 24, 2010.

Patrick R. Mullen,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.