

[Federal Register: April 14, 2005 (Volume 70, Number 71)]
[Rules and Regulations]
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From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr14ap05-3]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20916; Directorate Identifier 2005-NM-027-AD; Amendment 39-14055; AD 2005-08-03]

RIN 2120-AA64

Airworthiness Directives; Cessna Model 680 Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Cessna Model 680 airplanes. This AD requires revising the airplane flight manual (AFM) to add procedures to facilitate recovery of the cockpit display units in the event that the cockpit display units go blank, and to add flight crew briefings on the use of standby instruments in case the cockpit display units go blank and do not recover. This AD also requires repetitive tests of the avionics standard communication bus (ASCB) for any failures, and corrective action if any failure is found. This AD also requires installing hardware and avionics software upgrades; installing the upgrades will allow removal of AFM revisions and will end the repetitive inspections of the ASCB. This AD is prompted by a report indicating that analysis of the Honeywell Primus Epic systems installed on Cessna Model 680 airplanes revealed that all four of the cockpit display units could go blank simultaneously. We are issuing this AD to prevent a simultaneous loss of data from all four cockpit display units, and loss of primary navigation instruments, autopilot, flight director, master caution/warning lights, aural warnings, global positioning system position information, and air data and altitude information to non-avionics systems. These losses could reduce the flightcrew's situational awareness, increase flightcrew workload, and consequently reduce the ability to maintain safe flight of the airplane.

DATES: Effective April 29, 2005.

The incorporation by reference of certain publications listed in the AD are approved by the Director of the Federal Register as of April 29, 2005.

We must receive comments on this AD by June 13, 2005.

ADDRESSES: Use one of the following addresses to submit comments on this AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, Room PL-401, Washington, DC 20590.
- Fax: (202) 493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. For service information identified in this AD, contact Cessna Aircraft Co., P.O. Box 7706, Wichita, Kansas 67277.

You can examine the contents of this AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, on the plaza level of the Nassif Building, Washington, DC. This docket number is FAA-2005-20916; the directorate identifier for this docket is 2005-NM-027-AD.

Examining the Dockets

You can examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after the DMS receives them.

FOR FURTHER INFORMATION CONTACT: Bryan Easterwood, Aerospace Engineer, Electrical and Avionics Systems, ACE-119W, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4132; fax (316) 946-4107.

SUPPLEMENTARY INFORMATION: We have received reports indicating that, on airplanes equipped with the Honeywell Primus Epic system, all information on all cockpit display units may be lost (blank screens) or may become simultaneously invalid during flight. On Cessna Model 680 airplanes, this condition has been attributed to a failure of the master network interface controller (NIC) in the Honeywell Primus Epic system to synchronize with NICs that control the avionics system communication bus (ASCB). Attempts by all of the NICs to re-synchronize disables all ASCB data. The synchronization process can be delayed or worsened by a failure of any ASCB. This condition, if not corrected, could result in the simultaneous loss of data from all four cockpit display units, and loss of primary navigation instruments, autopilot, flight director, master caution/warning lights, aural warnings, global positioning system position information, and air data and altitude information to non-avionics systems. These losses could reduce the flightcrew's situational awareness, increase flightcrew workload, and consequently reduce the ability to maintain safe flight of the airplane.

Other Relevant Rulemaking

We have determined that, since the Honeywell Primus Epic system is also installed on Dassault Model Falcon 2000EX and 900EX series airplanes, Gulfstream Model GV-SP series airplanes, and Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170 series airplanes, those airplanes are subject to an unsafe condition similar to that addressed in this AD. In light of that determination, we issued the ADs listed in the following table to address the unsafe condition on those airplane models.

RELATED ADS

Airplane	AD citation
Dassault Model Falcon 2000EX and 900EX series airplanes	AD 2005-04-15, amendment 39-13987 (70 FR 9853, March 1, 2005).
Gulfstream Model GV-SP series airplanes	AD 2005-04-06, amendment 39-13978 (70 FR 7847, February 16, 2005).
EMBRAER Model ERJ 170 series airplanes	AD 2004-26-12, amendment 39-13924 (69 FR 78300, December 30, 2004).

Relevant Service Information

We have reviewed Cessna Service Bulletin SB680-34-03, including Attachment, Revision 1, dated March 18, 2005. The service bulletin describes procedures for performing repetitive tests of the avionics standard communication bus (ASCB) for any failures; accomplishing corrective action if any failure is found during the ASCB test; and installing hardware and avionics software upgrades. The corrective action for ASCB test failures includes fixing any wiring problems, replacing parts, and correcting computer configurations. The hardware and avionics software upgrades include:

- Installing a software upgrade of the Honeywell Primus Epic system;
- Replacing the horizontal stabilizer trim actuator with a new, improved actuator;
- Modifying certain wiring associated with the actuator; and
- Replacing two printed circuit boards (PCBs) with new, improved PCBs.

We have also reviewed Cessna Temporary Changes (TC) 68FM TC-R03-01; 68FM TC-R03-02; 68FM TC-R03-03; and 68FM TC-R03-04; all dated March 18, 2005; to the Cessna Model 680 Citation Airplane Flight Manual (AFM). The TCs describe procedures to recover the cockpit display units in the event that all four cockpit display units go blank during flight. Additionally, these TCs advise the flight crew that, during the use of Taxi, Before Takeoff, Approach, and Before Landing checklists, the briefings (takeoff and approach) should include the possibility of the loss of all cockpit display units and the subsequent transition to standby instruments.

Accomplishing the actions specified in the service information is intended to adequately address the unsafe condition.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other airplanes of the same type design. Therefore, we are issuing this AD to prevent the simultaneous loss of data from all four cockpit display units, and loss of primary navigation instruments, autopilot, flight director, master caution/warning lights, aural warnings, global positioning system position information, and air data and altitude information to non-avionics systems. These losses could reduce the flightcrew's situational awareness, increase flightcrew workload, and consequently reduce the ability to maintain safe flight of the airplane. This AD requires accomplishing the actions specified in the service bulletin described previously, except as discussed under "Difference Between the AD and the Service Bulletin." This AD also requires revising the AFM to include the information in the TCs described previously.

Difference Between the AD and the Service Bulletin

Operators should note that, although the Accomplishment Instructions of the referenced service bulletin describe procedures for submitting a maintenance transaction report recording compliance with the service bulletin, this AD does not require that action. The FAA does not need this information from operators.

Clarification of Actions Beyond What Is Necessary To Prevent the Unsafe Condition

The Cessna service bulletin was being developed for Honeywell Epic Phase 2 certification before the unsafe condition was reported to the FAA. The software upgrade that is necessary for preventing the unsafe condition is included with software upgrades that were developed for the Phase 2 certification. Hardware upgrades that were also developed for the Phase 2 certification are included in the service bulletin. While it is theoretically possible to separate the upgrades and then issue a service bulletin that specifies only the software upgrades necessary to prevent the unsafe conditions, it is impractical to do the service bulletin revision before the effective date of this AD. Therefore, we find it necessary to require accomplishment of all the software upgrades and hardware upgrades specified in the service bulletin.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD; therefore, providing notice and opportunity for public comment before the AD is issued is impracticable, and good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2005-20916; Directorate Identifier 2005-NM-027-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of our docket Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You can review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you can visit <http://dms.dot.gov>.

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

We have determined that 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 the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD. See the ADDRESSES section for a location to examine the regulatory evaluation.

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):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

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

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-08-03 Cessna Aircraft Company: Amendment 39-14055. Docket No. FAA-2005-20916; Directorate Identifier 2005-NM-027-AD.

Effective Date

- (a) This AD becomes effective April 29, 2005.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Cessna Model 680 airplanes, certificated in any category; with serial numbers -0001 through -0021 inclusive.

Unsafe Condition

- (d) This AD was prompted by a report indicating that analysis of the Honeywell Primus Epic systems installed on Cessna Model 680 airplanes revealed that all four of the cockpit display units could go blank simultaneously. The FAA is issuing this AD to prevent a simultaneous loss of data from all four cockpit display units, and loss of primary navigation instruments, autopilot, flight director, master caution/warning lights, aural warnings, global positioning system (GPS) position information, and air data and altitude information to non-avionics systems. These losses could reduce the flightcrew's situational awareness, increase flightcrew workload, and consequently reduce the ability to maintain safe flight of the airplane.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Airplane Flight Manual (AFM) Revisions

- (f) Within 72 hours after the effective date of this AD, revise the applicable sections of the Cessna Model 680 Citation Airplane Flight Manual 68FM by inserting a copy of the procedures contained in the temporary changes listed in Table 1 of this AD.

TABLE 1.—CESSNA TEMPORARY CHANGES

Cessna temporary changes	Date
68FM TC-R03-01	March 18, 2005.
68FM TC-R03-02	March 18, 2005.
68FM TC-R03-03	March 18, 2005.
68FM TC-R03-04	March 18, 2005.

Initial and Repetitive Tests

(g) Within 30 days after the effective date of this AD, do a test of the avionics system communication bus for any failure indication in accordance with the Attachment of Cessna Service Bulletin SB680-34-03, Revision 1, dated March 18, 2005. If any failure indications are found during the test, do applicable corrective actions before further flight in accordance with the service bulletin. Repeat the test thereafter at intervals not to exceed 30 days until the actions required by paragraph (h) of this AD are done.

Terminating Actions

(h) Within 90 days after the effective date of this AD, do hardware and avionics software upgrades in accordance with the Accomplishment Instructions of Cessna Service Bulletin SB680-34-03, including Attachment, Revision 1, dated March 18, 2005. Doing the requirements of this paragraph ends the requirements of paragraph (g) of this AD, and the AFM revisions required by paragraph (f) of this AD may be removed from the AFM.

No Reporting Required

(i) Although the service bulletin referenced in this AD specifies to submit certain information to the manufacturer, this AD does not include that requirement.

Previous Actions

(j) Hardware and avionics software upgrades done before the effective date of this AD in accordance with the Accomplishment Instructions of Cessna Service Bulletin SB680-34-03, dated February 2, 2005, is acceptable for compliance with the requirements of paragraph (h) of this AD.

Alternative Methods of Compliance (AMOCs)

(k) The Manager, Wichita Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(l) You must use the service information that is specified in Table 2 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approves the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. For copies of the service information, contact Cessna Aircraft Co., P.O. Box 7706, Wichita, Kansas 67277. To view the AD docket, go to the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC. To review copies of the service information, go to the National Archives and

Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

TABLE 2.—MATERIAL INCORPORATED BY REFERENCE

Cessna service information	Revision level	Date
Cessna Service Bulletin SB680–34–03, including Attachment	1	March 18, 2005
Cessna Temporary Change 68FM TC–R03–01	Original	March 18, 2005
Cessna Temporary Change 68FM TC–R03–02	Original	March 18, 2005
Cessna Temporary Change 68FM TC–R03–03	Original	March 18, 2005
Cessna Temporary Change 68FM TC–R03–04	Original	March 18, 2005

Issued in Renton, Washington, on April 5, 2005.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-7379 Filed 4-13-05; 8:45 am]

BILLING CODE 4910-13-P