

[Federal Register Volume 77, Number 27 (Thursday, February 9, 2012)]  
[Rules and Regulations]  
[Pages 6663-6666]  
From the Federal Register Online via the Government Printing Office [www.gpo.gov]  
[FR Doc No: 2012-1998]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2011-1128; Directorate Identifier 2011-CE-031-AD; Amendment 39-16933; AD 2012-02-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; CPAC, Inc. Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are superseding an existing airworthiness directive (AD) for all CPAC, Inc. (type certificate formerly held by Commander Aircraft Corporation, Gulfstream Aerospace Corporation, and Rockwell International) Models 112, 112B, 112TC, 112TCA, 114, 114A, 114B, and 114TC airplanes. That AD currently requires a one-time inspection of the elevator spar for cracks and, if any crack is found, either replace with a serviceable elevator spar that is found free of cracks or repair/modify the elevator spar with an FAA-approved method. That AD also requires reporting to the FAA the results of the inspection. Since we issued that AD, using the data collected through the reporting requirement, we have determined there is a need for continued inspections. This new AD requires repetitive inspections of the elevator spar for cracks and, if any crack is found, either replacing with a serviceable elevator spar that is free of any cracks and/or corrosion or repairing/modifying the elevator spar with an FAA-approved procedure. We are issuing this AD to correct the unsafe condition on these products.

**DATES:** This AD is effective March 15, 2012.

#### **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:** T.N. Baktha, Senior Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4155; fax: (316) 946-4107; email: t.n.baktha@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011). That AD applies to the specified products. The NPRM published in the Federal Register on October 17, 2011 (76 FR 64038). That NPRM proposed to retain all of the requirements of AD 2011-07-13 and make the previous one-time inspection repetitive.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (76 FR 64038, October 17, 2011) and the FAA's response to each comment.

### **Request for Clarification**

James D. Richards of Aerodyme Corporation requested additional information be added to the final rule AD action to clarify whether or not the inspection intervals and procedures in this AD take precedence over those specified in the FAA-approved Parts Manufacturer Approval (PMA) Elevator Spars 44211-RE9 and 44211-RE10, Instructions for Continued Airworthiness, original issue date May 5, 2011.

James D. Richards obtained a PMA for CPAC, Inc. Models 112, 112B, 112TC, 112TCA, 114, 114A, 114B, and 114TC airplanes elevator spars. The PMA Instructions for Continued Airworthiness have inspection intervals and procedures that are different from the intervals and procedures specified in the proposed AD (76 FR 64038, October 17, 2011).

We agree with the commenter. We do not want to have two different inspection intervals and procedures for the same elevator spars. We revised this AD as requested and added information into paragraph (f) to clarify that the actions required in this AD take precedence over those contained in PMA Elevator Spars 44211-RE9 and 44211-RE10, Instructions for Continued Airworthiness, original issue date May 5, 2011.

### **Request for Additional Information**

Fredrick E. Maupertuis requested that specific information be added to paragraph (l) Special Flight Permit of the final rule AD action about allowable crack criteria. Fredrick E. Maupertuis questioned whether the number of cracks, the length of the cracks, and/or the orientation of cracks found during an inspection will be a determining factor in obtaining a special flight permit.

We agree with the commenter because the requested information was not included in the proposed AD (76 FR 64038, October 17, 2011). We revised this AD as requested by adding crack criteria and allowances into paragraph (l).

### **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 (76 FR 64038, October 17, 2011) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (76 FR 64038, October 17, 2011).

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

### Interim Action

We consider this AD interim action. We continue to evaluate the reported data and repair procedures to determine a possible terminating action. Based on this determination, we may initiate further rulemaking action if needed to address the unsafe condition identified in this AD.

### Costs of Compliance

We estimate that this AD affects 773 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

#### Estimated costs

| Action                          | Labor cost                           | Parts cost | Cost per product | Cost on U.S. operators |
|---------------------------------|--------------------------------------|------------|------------------|------------------------|
| Inspection of the elevator spar | 8 work-hours X \$85 per hour = \$680 | N/A        | \$680            | \$525,640              |

We estimate the following costs to do any replacement that will be required based on the results of the inspection. We have no way of determining the number of aircraft that might need this replacement:

#### On-Condition Costs

| Action   | Labor cost per elevator spar                  | Parts cost per elevator spar    | Cost per product per elevator spar |
|--|---|---------------------------------|------------------------------------|
| Replace cracked elevator spar with a serviceable elevator spar | Up to 16 work-hours X \$85 per hour = \$1,360 | May range from \$100 to \$1,000 | May range from \$1,460 to \$2,360  |
| Replace cracked elevator spar with a new elevator spar         | Up to 16 work-hours X \$85 per hour = \$1,360 | \$1,250                         | \$2,610                            |

We estimate the following costs to do any repair/modification that will be required based on the results of the inspection. We have no way of determining the number of aircraft that might need this repair/modification:

### On-Condition Costs

| Action                              | Labor cost                                    | Parts cost | Cost per airplane |
|-------------------------------------|---|------------|-------------------|
| Repair/modify cracked elevator spar | Up to 26 work-hours X \$85 per hour = \$2,210 | *\$1,690   | \$3,900           |

\* An STC is available to repair the elevator spars and the STC holder sells the repair kit in pairs only. Kits to repair only one side of the elevator are not available for sale. The parts cost in the table above is for a pair of repair kits. The STC holder currently charges \$2,250 to install both repair kits.

### 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 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 removing airworthiness directive (AD) 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011), and adding the following new AD:



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**2012-02-10 CPAC, Inc. (Type Certificate Formerly Held by Commander Aircraft Corporation, Gulfstream Aerospace Corporation, and Rockwell International):** Amendment 39-16933; Docket No. FAA-2011-1128; Directorate Identifier 2011-CE-031-AD.

**(a) Effective Date**

This airworthiness directive (AD) is effective March 15, 2012.

**(b) Affected ADs**

This AD supersedes AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011).

**(c) Applicability**

This AD applies to CPAC, Inc. (type certificate formerly held by Commander Aircraft Corporation, Gulfstream Aerospace Corporation, and Rockwell International) Models 112, 112B, 112TC, 112TCA, 114, 114A, 114B, and 114TC airplanes, all serial numbers, certificated in any category. Type Certificate No. A12SO does not include Models 112A and 115. The Model 112A is a Rockwell "marketing name" for the Model 112. The Model 115 is a Rockwell "marketing name" for the Model 114. Since they are type-certificated as Model 112 and Model 114, this AD is applicable to the Models 112A and 115.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 55, Stabilizers.

**(e) Unsafe Condition**

This AD was prompted by reports of a total of nine elevator spar cracks across seven of the affected airplanes, including a crack of 2.35 inches just below the outboard hinge of the right-hand elevator. We are issuing this AD to prevent structural failure of the elevator spar due to such cracking, which could result in separation of the elevator from the airplane with consequent loss of control.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done. The inspection intervals and procedures in this AD take precedence over those contained in Parts Manufacturer Approval (PMA) Elevator Spars 44211-RE9 and 44211-RE10, Instructions for Continued Airworthiness, original issue date May 5, 2011.

**(g) Inspection Requirement Retained From AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011)**

Within the next 5 hours time-in-service (TIS) after April 4, 2011 (the effective date retained from AD 2011-07-13 (76 FR 18376, April 4, 2011)), visually inspect the left-hand (LH) and right-hand (RH) elevator spar behind and around the outboard hinge bracket on the elevator spar for cracks. Do the inspection following the procedures specified in paragraph (j) of this AD. If cracks are found during this inspection, take the necessary corrective actions specified in paragraph (k) of this AD.

**(h) Reporting Requirement Retained From AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011)**

Within 30 days after the inspection required in paragraph (g) of this AD, report the results of the inspection to the FAA, Wichita Aircraft Certification Office (ACO), Attn: T.N. Baktha, Senior Aerospace Engineer, 1801 Airport Road, Room 100; Wichita, Kansas 67209; phone: (316) 946-4155; fax: (316) 946-4107; email: t.n.baktha@faa.gov. Include the following information:

- (1) Airplane model and serial number.
- (2) Hours TIS at time of inspection.
- (3) Annotate any cracking found, including the exact location and length of any cracks.
- (4) Any installations, repairs, modifications, etc. that have been done on your airplane in the elevator spar area or that could have affected the elevator spar.
- (5) Type of operation primarily flown.

**(i) Repetitive Inspection Requirement**

As a result of the inspection required in paragraph (g) of this AD, if the elevator spar was:

(1) Replaced with a new elevator spar, within the next 300 hours TIS after the replacement, visually inspect the elevator spar behind the outboard hinge bracket and surrounding area for cracks. Repetitively inspect thereafter at intervals not to exceed 12 months or 150 hours TIS, whichever occurs first. Do the inspection following the procedures specified in paragraph (j) of this AD.

(2) Replaced with a serviceable elevator spar (one that was in service before and had no cracks and/or corrosion), within the next 150 hours TIS after the replacement, visually inspect the elevator spar behind the outboard hinge bracket and surrounding area for cracks. Repetitively inspect thereafter at intervals not to exceed 12 months or 150 hours TIS, whichever occurs first. Do the inspection following the procedures specified in paragraph (j) of this AD.

(3) Found free of cracks, within the next 150 hours TIS after the inspection, visually inspect the elevator spar behind the outboard hinge bracket and surrounding area for cracks. Repetitively inspect thereafter at intervals not to exceed 12 months or 150 hours TIS, whichever occurs first. Do the inspection following the procedures specified in paragraph (j) of this AD.

**(j) Inspection Procedures**

- (1) Disconnect the elevator trim pushrod at the trim tab.
- (2) Remove the hinge bolts at the horizontal stabilizer points.
- (3) Remove six screws and two bolts at the inboard end of the elevator and remove the elevator.
- (4) Remove all fasteners common to the elevator outboard aft end rib, part number (P/N) 44330, and elevator skin, P/N 44323.
- (5) Remove the remaining two fasteners common to the elevator outboard aft end rib (P/N 44330) and the elevator spar, P/N 44211.
- (6) Remove the elevator aft end rib, P/N 44330, to gain access to the aft side of the elevator spar.
- (7) Remove the four bolts, washers, and nuts that secure the outboard elevator hinge bracket, P/N 44285.

(8) Remove elevator hinge bracket, P/N 44285, from the elevator spar.

(9) Clean in and around the location of the elevator outboard hinge bracket, outboard elevator hinge, and the outboard elevator hinge bracket (as applicable) on the elevator spar and visually inspect for cracks. Use a 10x magnifier to facilitate the detection of any crack.

#### **(k) Corrective Actions**

(1) If cracks are found during any inspection required in paragraphs (g), (i)(1), (i)(2), or (i)(3) of this AD, before further flight, either replace the elevator spar with a new spar or a serviceable spar that is found free of cracks and/or corrosion or repair/modify the elevator spar following a procedure approved for this AD by the FAA, Wichita ACO;

(2) After doing the actions required in paragraph (k)(1) of this AD, before further flight, reassemble the elevator assembly, rebalance the elevator, and reinstall on the airplane following standard repair practices. Ensure elevator rigging is within tolerance, and that the system operates with ease, smoothness, and positiveness appropriate to its function; and

(3) After taking corrective action, continue with the repetitive inspections required in paragraphs (i)(1), (i)(2), and (i)(3) of this AD.

#### **(l) Special Flight Permit**

(1) Special flight permits are permitted for daytime visual flight rules (VFR) only, restricted to crew, calm weather, reduced speed not to exceed 111 knots calibrated air speed (KCAS), and not to exceed 5 flight hours when cracks are found in the elevator spar if:

(i) The cracks are at or near the outboard hinge bracket;

(ii) The cracks are 1.25 inches long or less; and

(iii) There is no more than one crack on the top and one at the bottom of the hinge bracket.

(2) Special flight permits are not allowed if:

(i) The crack length is greater than 1.25 inches; or

(ii) The number of cracks is more than two.

#### **(m) Paperwork Reduction Act Burden Statement**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

#### **(n) AMOCs**

(1) The Manager, Wichita ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.



(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) AMOCs approved for AD 2011-07-13, Amendment 39-16650 (76 FR 18376, April 4, 2011), are approved for this AD.

**(o) Related Information**

For more information about this AD, contact T.N. Baktha, Senior Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4155; fax: (316) 946-4107; email: t.n.baktha@faa.gov.

Issued in Kansas City, Missouri, on January 25, 2012.

John Colomy,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.