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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-0372; Directorate Identifier 2007-NM-164-AD; Amendment 39-15425; AD 2008-06-13]

RIN 2120-AA64

Airworthiness Directives; Construcciones Aeronauticas, S.A. (CASA), Model C-212 Airplanes

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

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

On 23 November 2006, Emergency Airworthiness Directive (EAD) Nr. (number) 2006-0351-E was published requiring an inspection to be performed on C-212 aeroplanes having been used for Maritime Patrol or other similar low altitude operations, due to the fact that, after initial examination of the evidences of a recent C-212 Maritime Patrol aircraft accident, cracks had been found in the centre wing lower skin at STA Y=1030. At the time of the accident, the aircraft had accumulated 17,000 flight hours and 7,300 flight cycles. The cracks were suspected to be caused by fatigue.

A more detailed examination in the laboratory, led to think that the initiation of the fatigue cracks was produced by fretting, and EAD 2006-0365-E, superseding EAD 2006-0351-E, was published on 4 December 2006 to address the new situation.

Further examination in the laboratory has allowed to establish that crack initiation was due to fatigue and the fretting was posterior.

* * * * *

The above mentioned cracks, if not timely detected, could lead to reduced structural integrity of the aircraft.* * *

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We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective April 17, 2008.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 17, 2008.

The Director of the Federal Register approved the incorporation by reference of EADS-CASA All Operator Letter 212-018, Revision 1, dated December 1, 2006, listed in this AD as of March 14, 2007 (72 FR 8610, February 27, 2007).

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1112; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on January 2, 2008 (73 FR 80), and proposed to supersede AD 2007-05-01, Amendment 39-14962 (72 FR 8610, February 27, 2007). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

On 23 November 2006, Emergency Airworthiness Directive (EAD) Nr. (number) 2006-0351-E was published, requiring an inspection to be performed on C-212 aeroplanes having been used for Maritime Patrol or other similar low altitude operations, due to the fact that, after initial examination of the evidences of a recent C-212 Maritime Patrol aircraft accident, cracks had been found in the centre wing lower skin at STA Y=1030. At the time of the accident, the aircraft had accumulated 17,000 flight hours and 7,300 flight cycles. The cracks were suspected to be caused by fatigue.

A more detailed examination in the laboratory, led to think that the initiation of the fatigue cracks was produced by fretting, and EAD 2006-0365-E, superseding EAD 2006-0351-E, was published on 4 December 2006 to address the new situation.

Further examination in the laboratory has allowed to establish that crack initiation was due to fatigue and the fretting was posterior. Additionally, given that some operators were reporting difficulties in performing the required inspections, a new procedure has been defined using High Frequency Eddy Currents. Finally, an inspection interval has been established to make the required inspections repetitive in the interim until a definitive solution is available.

The subject element is identified in Ref. 1 (CASA C-212 Supplemental Inspection Document (SID) C-212-PV-02-SID) as a Principal Structural Element (PSE) with No. 57.212.06 and requested to be inspected at a threshold of 20,000 landings (subject to some operational constraints defined in Ref. 1) in accordance with the inspection method and sequence described in Ref. 2 (CASA C-212 Supplemental Inspection Procedures (SIP) C-212-PV-02-SIP), Section 57-10-03.

Ref. 1 document was made mandatory by DGAC-Spain Airworthiness directive Nr. 02/88 (current status of that AD is revision 3, dated 4 February 2004).

Inspection threshold as per AD 02/88 Rev. 3 remains valid and relevant inspections have to be performed in addition to the requirements of this Emergency Airworthiness Directive (EAD).

The above mentioned cracks, if not timely detected, could lead to reduced structural integrity of the aircraft. This EAD [which supersedes EASA EAD 2006-0365-E] is intended to ensure that no other C-212 aircraft could be affected by this problem, by mandating a one time inspection of the subject area, and a repetitive inspection thereafter, until the moment a definitive design solution will be available, in accordance with the requirements under the paragraph "Compliance" of this EAD.

An additional inspection procedure, by using High Frequency Eddy Currents, has been introduced, which should be able to detect cracks with higher reliability.

The corrective action includes repetitive inspections for cracks, and repair if necessary. You may obtain further information by examining the MCAI in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

We estimate that this AD will affect about 33 products of U.S. registry. We also estimate that it will take about 8 work-hours per product to comply with the basic requirements of this AD. The

average labor rate is \$80 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$21,120, or \$640 per product.

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 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 this AD:

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 and placed it in the AD docket.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 Amendment 39-14962 (72 FR 8610, February 27, 2007) and adding the following new AD:



2008-06-13 Construcciones Aeronauticas, S.A. (CASA): Amendment 39-15425. Docket No. FAA-2007-0372; Directorate Identifier 2007-NM-164-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective April 17, 2008.

Affected ADs

- (b) This AD supersedes AD 2007-05-01, Amendment 39-14962.

Applicability

- (c) This AD applies to CASA Model C-212 airplanes; all series, all serial numbers; certificated in any category.

Subject

- (d) Air Transport Association (ATA) of America Code 57: Wings.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

On 23 November 2006, Emergency Airworthiness Directive (EAD) Nr. (number) 2006-0351-E was published, requiring an inspection to be performed on C-212 aeroplanes having been used for Maritime Patrol or other similar low altitude operations, due to the fact that, after initial examination of the evidences of a recent C-212 Maritime Patrol aircraft accident, cracks had been found in the centre wing lower skin at STA Y=1030. At the time of the accident, the aircraft had accumulated 17,000 flight hours and 7,300 flight cycles. The cracks were suspected to be caused by fatigue.

A more detailed examination in the laboratory, led to think that the initiation of the fatigue cracks was produced by fretting, and EAD 2006-0365-E, superseding EAD 2006-0351-E, was published on 4 December 2006 to address the new situation.

Further examination in the laboratory has allowed to establish that crack initiation was due to fatigue and the fretting was posterior. Additionally, given that some operators were reporting difficulties in performing the required inspections, a new procedure has been defined using High Frequency Eddy Currents. Finally, an inspection interval has been established to make the required inspections repetitive in the interim until a definitive solution is available.

The subject element is identified in Ref. 1 (CASA C-212 Supplemental Inspection Document (SID) C-212-PV-02-SID) as a Principal Structural Element (PSE) with No. 57.212.06 and requested to be inspected at a threshold of 20,000 landings (subject to

some operational constraints defined in Ref. 1) in accordance with the inspection method and sequence described in Ref. 2 (CASA C-212 Supplemental Inspection Procedures (SIP) C-212-PV-02-SIP), Section 57-10-03.

Ref. 1 document was made mandatory by DGAC-Spain Airworthiness directive Nr. 02/88 (current status of that AD is revision 3, dated 4 February 2004).

Inspection threshold as per AD 02/88 Rev. 3 remains valid and relevant inspections have to be performed in addition to the requirements of this Emergency Airworthiness Directive (EAD).

The above mentioned cracks, if not timely detected, could lead to reduced structural integrity of the aircraft. This EAD [which supersedes EASA EAD 2006-0365-E] is intended to ensure that no other C-212 aircraft could be affected by this problem, by mandating a one time inspection of the subject area, and a repetitive inspection thereafter, until the moment a definitive design solution will be available, in accordance with the requirements under the paragraph "Compliance" of this EAD.

An additional inspection procedure, by using High Frequency Eddy Currents, has been introduced, which should be able to detect cracks with higher reliability.

The corrective action includes repetitive inspections for cracks, and repair if necessary.

Restatement of Requirements of AD 2007-05-01

(f) Unless already done, do the following actions.

(1) For airplanes used for maritime operations and all other airplanes on which the operator cannot positively determine that the airplanes have not been flown more than ten percent of flights at altitudes below 3,000 feet as of March 14, 2007 (the effective date of AD 2007-05-01): Perform a Non-Destructive Inspection (NDI) and a complementary NDI for cracks at the applicable time specified in paragraph (f)(1)(i), (f)(1)(ii), or (f)(1)(iii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 1, dated December 1, 2006; or Revision 2, dated March 20, 2007. As of the effective date of this AD, only Revision 2 may be used.

Note 1: For the purposes of this AD, the term "maritime operations" is defined as airplanes which are used for monitoring certain areas of water.

(i) For airplanes having accumulated 5,600 flight hours or less, and 2,400 landings or less as of March 14, 2007: Perform the inspections before the accumulation of 5,600 total flight hours, or before the accumulation of 2,400 total landings, or within 6 months after March 14, 2007, whichever occurs latest.

(ii) For airplanes having accumulated more than 5,600 flight hours but less than or equal to 8,000 flight hours, or more than 2,400 landings but less than or equal to 3,600 landings, as of March 14, 2007: Perform the inspections before the accumulation of 200 flight hours or 100 landings after March 14, 2007, whichever occurs first.

(iii) For airplanes having accumulated more than 8,000 flight hours or more than 3,600 landings as of March 14, 2007: Perform the inspections within 14 days after March 14, 2007.

(2) For airplanes other than those identified in paragraph (f)(1) of this AD: Perform the NDIs at the applicable time specified in paragraph (f)(2)(i), (f)(2)(ii), or (f)(2)(iii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 1, dated December 1, 2006; or Revision 2, dated March 20, 2007. As of the effective date of this AD, only Revision 2 may be used.

(i) For airplanes having accumulated 10,000 total flight hours or less, and 10,000 total landings or less as of March 14, 2007: Perform the inspections before the accumulation of 10,000 total flight hours, or before the accumulation of 10,000 total landings, or within 6 months after March 14, 2007, whichever occurs latest.

(ii) For airplanes having accumulated more than 10,000 flight hours but less than or equal to 15,000 flight hours, or more than 10,000 landings but less than or equal to 15,000 landings, as of March 14, 2007: Perform the inspections before the accumulation of 200 flight hours or 100 landings after March 14, 2007, whichever occurs first.

(iii) For airplanes having accumulated more than 15,000 flight hours or more than 15,000 landings as of March 14, 2007: Perform the inspections within 14 days after March 14, 2007.

New Requirements of This AD: Actions and Compliance

(g) Unless already done, do the following actions.

(1) For airplanes identified in paragraph (f)(1) of this AD that have accumulated 5,600 flight hours or less, and 2,400 landings or less as of the effective date of this AD: Perform the inspections at the times specified in paragraphs (g)(1)(i) and (g)(1)(ii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007.

(i) At the later of the times specified in paragraphs (g)(1)(i)(A) and (g)(1)(i)(B) of this AD: Perform a high frequency eddy current (HFEC) NDI for cracks.

(A) Within 200 flight hours or 100 landings after the effective date of this AD, whichever occurs first.

(B) Before the accumulation of 5,600 total flight hours or 2,400 total landings, whichever occurs first.

(ii) Repeat the inspections required by paragraphs (f)(1) and (g)(1)(i) of this AD before the accumulation of 8,000 total flight hours or 3,600 total landings, whichever occurs first, and thereafter at intervals not to exceed 600 flight hours or 250 landings, whichever occurs first.

(2) For airplanes identified in paragraph (f)(1) of this AD that have accumulated more than 5,600 flight hours but less than or equal to 8,000 flight hours, or more than 2,400 landings but less than or equal to 3,600 landings, as of the effective date of this AD: Perform the inspections at the times specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007.

(i) Within 200 flight hours or 100 landings after the effective date of this AD, whichever occurs first: Perform a HFEC NDI for cracks.

(ii) Within 600 flight hours or 250 landings, whichever occurs first, after doing the inspection required by paragraph (g)(2)(i) of this AD: Perform the inspections required by paragraphs (f)(1) and (g)(2)(i) of this AD and repeat the inspections thereafter at intervals not to exceed 600 flight hours or 250 landings, whichever occurs first.

(3) For airplanes identified in paragraph (f)(1) of this AD that are not subject to paragraph (g)(1) or (g)(2) of this AD: Perform the inspections at the times specified in paragraphs (g)(3)(i) and (g)(3)(ii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007.

(i) Within 14 days after the effective date of this AD: Perform a HFEC NDI for cracks.

(ii) Within 600 flight hours or 250 landings, whichever occurs first, after doing the inspection required by paragraph (g)(3)(i) of this AD: Perform the inspections required by paragraphs (f)(1) and (g)(3)(i) of this AD and repeat the inspections thereafter at intervals not to exceed 600 flight hours or 250 landings, whichever occurs first.

(4) For airplanes identified in paragraph (f)(2) of this AD that have accumulated 10,000 flight hours or less, and 10,000 landings or less, as of the effective date of this AD: Perform the inspections at the times specified in paragraphs (g)(4)(i) and (g)(4)(ii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007.

(i) Within 200 flight hours or 100 landings after the effective date of this AD, whichever occurs first: Perform a HFEC NDI for cracks.

(ii) Repeat the inspections required by paragraphs (f)(2) and (g)(4)(i) of this AD before the accumulation of 15,000 total flight hours or 15,000 total landings, whichever occurs first, and thereafter at intervals not to exceed 4,500 flight hours or 4,500 landings, whichever occurs first.

(5) For airplanes identified in paragraph (f)(2) of this AD that have accumulated more than 10,000 flight hours but less than or equal to 15,000 flight hours, or more than 10,000 landings but less than or equal to 15,000 landings, as of the effective date of this AD: Perform the inspections at the time specified in paragraphs

(g)(5)(i) and (g)(5)(ii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007.

(i) Within 200 flight hours or 100 landings after the effective date of this AD, whichever occurs first: Perform a HFEC NDI for cracks.

(ii) Within 4,500 flight hours or 4,500 landings, whichever occurs first, after doing the inspection required by paragraph (g)(5)(i) of this AD: Perform the inspections required by paragraphs (f)(2) and (g)(5)(i) of this AD. Repeat the inspections thereafter at intervals not to exceed 4,500 flight hours or 4,500 landings, whichever occurs first.

(6) For airplanes identified in paragraph (f)(2) of this AD that are not subject to paragraph (g)(4) or (g)(5) of this AD: Perform the inspections at the time specified in paragraphs (g)(6)(i) and (g)(6)(ii) of this AD. Do the inspections as defined in EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007.

(i) Within 14 days after the effective date of this AD: Perform a HFEC NDI for cracks.

(ii) Within 4,500 flight hours or 4,500 landings, whichever occurs first, after doing the inspection required by paragraph (g)(6)(i) of this AD: Perform the inspections required by paragraphs (f)(2) and (g)(6)(i) of this AD, and repeat the inspection thereafter at intervals not to exceed 4,500 flight hours or 4,500 landings, whichever occurs first.

(7) If any crack or loose rivet is detected during any inspection required by this AD, before further flight, repair using a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) (or its delegated agent). Within 30 days after cracks are detected, or within 30 days after the effective date of this AD, whichever occurs later, send a detailed report of the first inspection findings (both positive and negative) of the inspections required by paragraph (f) of this AD to EADS-CASA for evaluation at the following address: EADS-CASA, Military Transport Aircraft Division, Integrated Customer Services, Technical Services, Avenida de Aragon 404, 28022-Madrid, Spain; telephone 34-91-624-6306; fax 34-91-585-5505; E-mail: MTA.TechnicalService@casa.eads.net. In any case, a confirmation of the accomplishment of this inspection is required to be sent to EADS-CASA.

FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows:

(1) Compliance Time: For certain airplanes, the compliance time required by the MCAI or service information for performing the HFEC inspections is before further flight; however, to avoid inadvertently grounding airplanes, this AD requires performing those inspections within 14 days after the effective date of this AD.

(2) Repair: Although the MCAI or service information does not include a repair procedure for cracking, this AD requires the repair of any cracking per the FAA or EASA (or its delegated agent).

Other FAA AD Provisions

(h) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1112; fax (425) 227-1149. 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.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(i) Refer to MCAI EASA Emergency Airworthiness Directive 2007-0108-E, dated April 18, 2007, and EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007, for related information.

Material Incorporated by Reference

(j) You must use EADS-CASA All Operator Letter 212-018, Revision 1, dated December 1, 2006; and EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007; as applicable; 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 EADS-CASA All Operator Letter 212-018, Revision 2, dated March 20, 2007, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The Director of the Federal Register previously approved the incorporation by reference of EADS-CASA All Operator Letter 212-018, Revision 1, dated December 1, 2006, on March 14, 2007 (72 FR 8610, February 27, 2007).

(3) For service information identified in this AD, contact Construcciones Aeronauticas, S.A., Getafe, Madrid, Spain.

(4) You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on March 4, 2008.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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