

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2005-20589; Directorate Identifier 2005-CE-12-AD; Amendment 39-14125; AD 2005-12-09]

RIN 2120-AA64

Airworthiness Directives; GROB-WERKE Model G120A Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA adopts a new airworthiness directive (AD) for all GROB-WERKE (GROB) Model G120A airplanes. This AD requires you to repetitively inspect the nose landing gear (NLG) assembly, paying special attention to the NLG swivel tube and the engine truss in the area of the NLG attachment, for cracks and damaged (defective) welding seams. If you find cracks or defects during any inspection, this AD requires you to replace the cracked or defective part. This AD results from mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Germany. We are issuing this AD to detect and correct cracks and defects in the NLG assembly, which could result in failure of the NLG. This failure could lead to a hard landing and/or loss of control of the airplane during landing operations.

DATES: This AD becomes effective on July 28, 2005.

As of July 28, 2005, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation.

ADDRESSES: To get the service information identified in this AD, contact GROB Luft-und Raumfahrt, Lettenbachstrasse 9, D-86874 Tussenhausen-Mattsies, Federal Republic of Germany; telephone: 011 49 8268 998139; facsimile: 011 49 8268 998200.

To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400

Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2005-20589; Directorate Identifier 2005-CE-12-AD.

FOR FURTHER INFORMATION CONTACT: Karl Schletzbaum, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4146; facsimile: (816) 329-4090.

SUPPLEMENTARY INFORMATION:**Discussion**

What events have caused this AD? The Luftfahrt-Bundesamt (LBA), which is the airworthiness authority for Germany, recently notified FAA that an unsafe condition may exist on all GROB Model G120A airplanes. The LBA reports cracks found on the nose landing gear (NLG) swivel tube on one of the affected airplanes during routine maintenance.

What is the potential impact if FAA took no action? If not detected and corrected, cracks and defects in the nose landing gear assembly could cause the nose landing gear to fail. This failure could lead to a hard landing and/or loss of control of the airplane during landing operations.

Has FAA taken any action to this point? We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all GROB Model G120A airplanes. This proposal was published in the **Federal Register** as a notice of proposed rulemaking (NPRM) on April 13, 2005 (70 FR 19340). The NPRM proposed to require you to repetitively inspect the nose landing gear (NLG) assembly, paying special attention to the NLG swivel tube and the engine truss in the area of the NLG attachment, for cracks and damaged (defective) welding seams. The NPRM also proposed to require you to replace any cracked or defective part.

Is there a modification I can incorporate instead of repetitively inspecting the nose landing gear assembly? The FAA has determined that long-term continued operational safety would be better assured by design

changes that remove the source of the problem rather than by repetitive inspections or other special procedures. With this in mind, FAA will continue to work with GROB to collect information and perform fatigue analysis in determining whether a future design change is feasible.

Comments

Was the public invited to comment? We provided the public the opportunity to participate in developing this AD. We received no comments on the proposal or on the determination of the cost to the public.

Conclusion

What is FAA's final determination on this issue? We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial corrections. We have determined that these minor corrections:

- 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.

Changes to 14 CFR Part 39—Effect on the AD

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Costs of Compliance

How many airplanes does this AD impact? We estimate that this AD affects 6 airplanes in the U.S. registry.

What is the cost impact of this AD on owners/operators of the affected airplanes? We estimate the following costs to do the inspections:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
1 work hour × \$65 an hour = \$65	Not applicable	\$65	\$65 × 6 = \$390.

The cost for replacing any cracked or defective part based on the results of the inspections will be covered under warranty by the manufacturer.

Authority for This Rulemaking

What authority does FAA have for issuing this rulemaking action? 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 AD.

Regulatory Findings

Will this AD impact various entities? 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.

Will this AD involve a significant rule or regulatory action? 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 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 summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under **ADDRESSES**. Include "Docket No. FAA-2005-20589; Directorate Identifier 2005-CE-12-AD" in your request.

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 Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. FAA amends § 39.13 by adding a new AD to read as follows:

2005-12-09 Grob-Werke: Amendment 39-14125; Docket No. FAA-2005-20589; Directorate Identifier 2005-CE-12-AD.

When Does This AD Become Effective?

(a) This AD becomes effective on July 28, 2005.

What Other ADs Are Affected by This Action?

(b) None.

What Airplanes Are Affected by This AD?

(c) This AD affects Model G120A airplanes, all serial numbers, that are certificated in any category.

What Is the Unsafe Condition Presented in This AD?

(d) This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Germany. We are issuing this AD to detect and correct cracks and damage in the nose landing gear (NLG) assembly, which could result in failure of the NLG. This failure could lead to a hard landing and/or loss of control of the airplane during landing operations.

What Must I Do To Address This Problem?

(e) To address this problem, you must do the following:

Actions	Compliance	Procedures
(1) Inspect the nose landing gear (NLG) assembly for cracks or damages (defective) welding seams. Pay special attention to the NLG swivel tube and the engine truss in the area of the NLG attachment.	Initially inspect within the next 50 hours time-in-service (TIS) after July 28, 2005 (the effective date of this AD), unless already done. Repetitively inspect thereafter at intervals not to exceed 50 hours TIS.	Follow GRDB Service Bulletin No. MSB1121-055 dated November 26, 2004.
(2) If you find cracks or defects during any inspection required in paragraph (e)(1) of this AD, replace the cracked or defective part.	Replace before further flight after the inspection in which cracks and/or defects are found. After you replace the cracked or defective part, continue with the repetitive inspections required in paragraph (e)(1) of this AD at the 50 hours TIS intervals.	Follow GROB Service Bulletin No. MSB1121-055 dated November 26, 2004.

Note: The compliance time in this AD is different than the compliance time in GROB Service Bulletin No. MSB1121-055 dated November 26, 2004. The compliance time in this AD takes precedence over the compliance time in the service information.

May I Request an Alternative Method of Compliance?

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Standards Office, Small Airplane Directorate, FAA. For information on any already approved alternative methods of compliance, contact Karl Schletzbaum,

Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4146; facsimile: (816) 329-4090.

Is There Other Information That Relates to This Subject?

(g) German AD Number D-2004-514, effective date: December 9, 2004, also addresses the subject of this AD.

Does This AD Incorporate Any Material by Reference?

(h) You must do the actions required by this AD following the instructions in GROB Service Bulletin No. MSB1121-055 dated November 26, 2004. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To get a copy of this service

information, contact GROB Luft-und Raumfahrt, Lettenbachstrasse 9, D-86874 Tussenhausen-Mattsies, Federal Republic of Germany; telephone: 011 49 8268 998139; facsimile: 011 49 8268 998200. To review copies of this service information, go to the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html or call (202) 741-6030. To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2005-20589; Directorate Identifier 2005-CE-12-AD.

Issued in Kansas City, Missouri, on June 6, 2005.

Kim Smith,

*Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.*

[FR Doc. 05-11614 Filed 6-13-05; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-05-21177; Directorate Identifier 2005-CE-26-AD; Amendment 39-14129; AD 2005-12-13]

RIN 2120-AA64

Airworthiness Directives; Cessna Aircraft Company Models 402C and 414A Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments

SUMMARY: The FAA is adopting a new airworthiness directive (AD) to supersede AD 2005-05-52 (70 FR 13362, March 21, 2005), which applies to all Cessna Aircraft Company (Cessna) Models 402C and 414A airplanes. AD 2005-05-52 currently requires you to eddy current inspect the forward wing spars and visually inspect the aft and auxiliary spars. This AD is the result of fatigue and crack growth analyses of the wings of these airplanes, recent cracks found on Model 402C airplanes, and the FAA's determination that repetitive inspections and a wing spar modification are necessary to address the unsafe condition. Consequently, this AD would require repetitive eddy current inspections, visual inspections, and a spar strap modification on each wing. You must retain the actions of AD 2005-05-52 until you do the modifications of this AD. The actions specified by this AD are intended to prevent wing spar cap failure caused by undetected fatigue cracks. Such failure could result in loss of a wing with consequent loss of airplane control. FAA is also issuing AD 2005-12-12 to require the spar strap modification and long-term inspections on Models 401, 401A, 402, 402A, 402B, 411, and 411A airplanes.

DATES: This AD becomes effective on June 22, 2005.

As of June 22, 2005, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation.

We must receive any comments on this AD by August 3, 2005.

ADDRESSES: Use one of the following 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 20590-001.

- *Fax:* 1-202-493-2251.

- *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.

To get the service information identified in this AD, contact Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277; telephone: (316) 517-5800; facsimile: (316) 942-9006.

To view the comments to this AD, go to <http://dms.dot.gov>. The docket number is FAA-05-21177; Directorate Identifier 2005-CE-26-AD.

FOR FURTHER INFORMATION CONTACT: Paul Nguyen, Aerospace Engineer, FAA, ACE-118W, Wichita Aircraft Certification Office, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4125; facsimile: (316) 946-4107.

SUPPLEMENTARY INFORMATION:

What Events Have Caused This AD?

Initial AD Action

FAA issued AD 99-11-13 (64 FR 29781, June 3, 1999), requiring inspections of the forward, aft, and auxiliary wing spars for cracks on Cessna Models 402C airplanes with repair or replacement as necessary. AD 99-11-13 also required the operator to report the results of the inspections to FAA. AD 99-11-13 resulted from an accident where the right wing of a Cessna 402C failed just inboard of the nacelle at Wing Station (WS) 87. Investigation revealed fatigue cracking of the forward main spar that initiated at the edge of the front spar forward lower spar cap. FAA determined the spar cap cracking could continue to develop over the life of the affected airplanes and issued AD 2000-23-01, Amendment 39-11971 (65 FR 70645, November 27, 2000), to require repetitive inspections of the forward, aft, and auxiliary wing spars for cracks on Cessna Models 402C airplanes with repair or replacement as necessary.

Accomplishment of the actions mandated by AD 2000-23-01 required following Cessna Service Bulletin MEB99-3, dated May 6, 1999.

Wing Analysis

Cessna analyzed the wing, including fatigue and crack growth analyses, on the affected airplanes. Analysis included:

- A determination of the probable location and modes of damage based on analytical results, available test data, and service information;
- Classical fatigue analyses;
- Crack growth and residual strength analyses including use of linear elastic fracture mechanics methods;
- Full-scale ground testing to validate analytical models; and
- A flight strain survey to develop stress spectra used in the analyses.

Based on the analysis, Cessna found that the eddy current method will not find the crack until it is .03 inch longer than the critical crack length. When the crack reaches the critical length, it is not reliably detectable because it is under the head of the fastener. Once the main spar cap is severed, the remaining structure will no longer meet the residual strength requirements. Wing separation could then occur under loading conditions less than those established for the design limit load.

Cessna reported only one instance where use of the NDI eddy current procedure detected cracks. There are other reported instances where cracks were detected visually on the aft flange in the wheel well area. The access doubler flanges cover a large percentage of the forward spar flange, hampering the effectiveness of visual inspections.

To meet industry NDI standards, cracks need to be found on Cessna Models 402C and 414A airplanes through NDI inspection methods with a 90-percent probability of detection at a 95-percent confidence level.

Cessna's analysis indicates the probability and confidence levels are not being met. The FAA concurs.

Action Based on Cessna's Analysis

We issued proposals to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include two ADs that would apply to Cessna Models 401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, and 414A airplanes. These proposals (Docket Nos. 2002-CE-05-AD and 2002-CE-57-AD) published in the **Federal Register** as notices of proposed rulemaking (NPRMs) on May 15, 2003 (68 FR 26239 and 68 FR 26244). The NPRMs proposed the following:

- Docket No. 2002-CE-05-AD: applied to Cessna Models 401, 401A,