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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-CE-63-AD; Amendment 39-13081; AD 2003-05-05]

RIN 2120-AA64

Airworthiness Directives; Robert E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to certain Robert E. Rust (R.E. Rust) Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes. This AD requires you to inspect the fuselage to determine if a steel fuselage center-section tie bar fitted with bushings in the end lug bolt holes is installed. If this bushed steel fuselage center-section tie bar is installed, this AD decreases the safe life limit. This AD is the result of reports that certain replacement steel fuselage center-section tie bars installed on the affected airplanes could fail before the originally published safe life limit. The actions specified by this AD are intended to prevent early failure of these bushed steel fuselage center-section tie bars, which could result in reduced structural integrity of the wings. Such a condition could lead to loss of control of the airplane.

DATES: This AD becomes effective on April 25, 2003.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of April 25, 2003.

ADDRESSES: You may get the service information referenced in this AD from DeHavilland Support Limited, Duxford Airfield, Bldg. 213, Cambridgeshire, CB2 4QR, United Kingdom, telephone: +44 1223 830090, facsimile: +44 1223 830085, e-mail: info@dhsupport.com. You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-CE-63-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Cindy Lorenzen, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia; telephone: (770) 703-6078; facsimile: (770) 703-6097.

SUPPLEMENTARY INFORMATION:

Discussion

What Events Have Caused This AD?

The FAA has received reports that an unsafe condition may exist on certain R.E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes. After a review of several of these airplanes, we have determined that steel fuselage center-section tie bars, part number RD.C1.FS.107, are being installed as replacement parts. Some of these part numbers have been fitted with bushings in the end lugs to cover scored or oversized holes.

The use of bushings in the end of the lugs on these parts severely reduces the safe life limit. The original safe life limit established for the steel fuselage center-section tie bar was 30,000 fatigue hours. Fatigue hours are hours time-in-service multiplied by the role factor (operational use).

What Is the Potential Impact if FAA Took No Action?

This condition, if not corrected, could result in failure of the steel fuselage center-section tie bar. Such failure could lead to loss of control of the airplane.

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 certain R.E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on November 15, 2002 (67 FR 69149). The NPRM proposed to require you to check the airplane logbook to determine if a steel fuselage center-section tie bar, part number RD.C1.FS.107, is installed on the airplane. If this part number is installed, the NPRM proposed to require you to inspect the end lugs to determine if bushings are installed in the bolt holes. If bushings are present, the NPRM also proposed to reduce the safe life of that part from 30,000 fatigue hours to 16,000 fatigue hours.

Was the Public Invited To Comment?

The FAA encouraged interested persons to participate in the making of this amendment. We did not receive any comments on the proposed rule or on our determination of the cost to the public.

FAA's Determination

What Is FAA's Final Determination on This Issue?

After careful review of all available information related to the subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. We have determined that these minor corrections:

- Provide 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.

Cost Impact

How Many Airplanes Does This AD Impact?

We estimate that this AD affects 54 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 accomplish the inspection:

Parts cost	Labor cost	Total cost per airplane	Total cost on U.S. operators
12 workhours x \$60 per hour = \$720	No parts required	\$720	\$720 x 54 = \$38,880.

We estimate the following costs to accomplish any necessary replacements that will be required based on the results of the inspection. We have no way of determining the number of airplanes that may need such replacement:

Labor cost	Parts cost	Total cost per airplane
80 workhours x \$60 per hour = \$4,800.	\$2,250	\$4,800 + \$2,250 = \$7,050.

Regulatory Impact

Does This AD Impact Various Entities?

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

Does This AD Involve a Significant Rule or Regulatory Action?

For the reasons discussed above, I certify that this action (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); 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. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

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:

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).

2003-05-05 Robert E. Rust: Amendment 39-13081; Docket No. 2000-CE-63-AD.

(a) *What airplanes are affected by this AD?* This AD affects R.E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes, serial numbers C1-001 through C1-1014, that are type certificated in any category.

Note 1: We recommend all owners/operators of DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes, serial numbers C1-001 through C1-1014, with experimental airworthiness certificates comply with the actions required in this AD.

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the airplanes identified in paragraph (a) of this AD must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to prevent failure of the steel fuselage center-section tie bar prior to the originally published safe life, which could result in reduced structural integrity of the wings. Such a condition could lead to loss of control of the airplane. Steel fuselage center-section tie bars fitted with bushings in the end lug bolt holes have a reduced safe life of 16,000 fatigue hours.

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
(1) Check the airplane logbook to determine if a steel fuselage center-section tie bar, part number (P/N) RD.C1.FS.107, is installed. Initial steel tie bar fitments were done under cover of Repair Drawings R.C1.FS.191 and RD.C1.FS.106. Later these drawings were included in Modification H.288 so fitment may be logged under either.	Upon accumulating 16,000 fatigue hours or within the next 100 hours time-in-service (TIS) after April 25, 2003 (the effective date of this AD), whichever occurs later.	The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may check the airplane logbook. Calculate fatigue hours by multiplying the TIS by the role factor in accordance with British Aerospace Mandatory Technical News Sheet Series: Chipmunk (C1), No. 138, Issue: 5, dated August 1, 1985.

<p>(2) If, by checking the airplane logbook, you can positively determine that a steel fuselage center-section tie bar, P/N RD.C1.FS.107, is not installed.</p> <p>(i) you must make an entry into the aircraft records that shows compliance with paragraphs (d)(1) and (d)(2) of this AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9); and</p> <p>(ii) continue to comply with the published life limits of the installed tie bar.</p>	<p>Not applicable</p>	<p>The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may check the airplane logbook.</p>
<p>(3) If, by checking the airplane logbook, you determine that a steel fuselage center-section tie bar, P/N RD.C1.FS.107, is installed, or cannot positively show that one is not installed.</p> <p>(i) inspect the lug bolt holes to determine if bushings have been installed.</p> <p>(ii) if bushings have been installed, the safe life limit for that part is now 16,000 fatigue hours;.</p> <p>(iii) if bushing have not been installed, the safe life limit for that part remains at 30,000 fatigue hours; and.</p> <p>(iv) make an entry into the aircraft records that shows compliance with this portion of the AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).</p>	<p>Prior to further flight after the logbook check required in paragraph (d)(1) of this AD.</p>	<p>In accordance with British Aerospace Mandatory Technical News Sheet Series: Chipmunk (C1), No. 175, Issue 1, dated August 1, 1985.</p>
<p>(4) The following are the safe life limit for steel fuselage center-section tie bars, P/N RD.C1.FS.107.</p> <p>(i) If fitted with bushings in the end lug bolt holes: 16,000 fatigue hours; and.</p> <p>(ii) If not fitted with bushings in the end lug bolt holes: 30,000 fatigue hours.</p>	<p>As of April 25, 2003 (the effective date of this AD).</p>	<p>Not applicable.</p>

(e) *Can I comply with this AD in any other way?* You may use an alternative method of compliance or adjust the compliance time if:

(1) Your alternative method of compliance provides an equivalent level of safety; and

(2) The Manager, Atlanta Aircraft Certification Office (ACO), approves your alternative. Submit your request through an FAA Principal Maintenance

Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

Note: This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an

assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(f) *Where can I get information about any already-approved alternative methods of compliance?* Contact Cindy Lorenzen, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia; telephone: (770) 703-6078; facsimile: (770) 703-6097.

(g) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(h) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with British Aerospace Mandatory Technical News Sheet Series: Chipmunk (C1), No. 138, Issue: 5, dated August 1, 1985, and British Aerospace Mandatory Technical News Sheet Series: Chipmunk (C1), No. 175, Issue 1, dated August 1, 1985. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may get copies from DeHavilland Support Limited, Duxford Airfield, Bldg. 213, Cambridgeshire, CB2 4QR, United Kingdom, telephone: +44 1223 830090, facsimile: +44 1223 830085, e-mail: info@dhsupport.com. You may view copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

(i) *When does this amendment become effective?* This amendment becomes effective on April 25, 2003.

Issued in Kansas City, Missouri, on March 4, 2003.

Dorenda D. Baker,
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.
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