[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 30302 6/6/2001]

[Docket No. 2000-CE-27-AD; Amendment 39-12245; AD 2001-11-04]

RIN 2120-AA64

Airworthiness Directives; Raytheon Aircraft Company Models 99, 99A, 99A (FACH), A99, A99A, B99, and C99 Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to certain Raytheon Aircraft Company (Raytheon) Models 99, 99A, 99A (FACH), A99, A99A, B99, and C99 airplanes. This AD requires you to inspect all main landing gear (MLG) hydraulic actuators to determine the end cap part number that is installed, and replace any actuator that has a part number 4A125C32 end cap. This AD is the result of the potential for fatigue cracks to develop on the MLG hydraulic actuator end caps. The actions specified by this AD are intended to eliminate existing and prevent future fatigue cracks in the MLG hydraulic actuator end caps. Such cracks could cause hydraulic fluid to leak and result in collapse of one or more gears with consequent aircraft damage and passenger injury.

DATES: This AD becomes effective on July 23, 2001.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of July 23, 2001.

ADDRESSES: You may get the service information referenced in this AD from the Raytheon Aircraft Company, PO Box 85, Wichita, Kansas 67201-0085; telephone: (800) 625-7043 or (316) 676-4556. You may examine this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-CE-27-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: Paul C. DeVore, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4142; facsimile: (316) 946-4407.

SUPPLEMENTARY INFORMATION:

Discussion

What events have caused this AD? The FAA has received a report of an incident on a Raytheon Model C99 airplane where a cracked main landing gear (MLG) hydraulic actuator end cap resulted in nose landing gear (NLG) collapse during landing. The cracked end cap caused the hydraulic fluid to leak, which then prevented the landing gear from locking down. We have received several other reports of cracks in the MLG hydraulic actuator end caps on certain Raytheon 99 series airplanes of a similar type design.

The suspect MLG hydraulic actuator end caps are part number (P/N) 4A125C32 end caps. These end caps were originally installed on P/N 99-388001 series actuators. We have reports that these parts may also have been installed on the overhauled P/N 99-388008 series, although they are not approved for this configuration.

The P/N 99-388001 and 99-388008 series actuators are installed on Raytheon Models 99, 99A, 99A (FACH), A99, A99A, B99, and C99 airplanes.

What are the consequences if the condition is not corrected? Cracked MLG hydraulic actuator end caps, if not eliminated and prevented from occurring in the future, could cause hydraulic fluid to leak and result in collapse of one or more gears with consequent aircraft damage and passenger injury.

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 Raytheon Models 99, 99A, 99A (FACH), A99A, B99, and C99 airplanes. This proposal was published in the *Federal Register* as a notice of proposed rulemaking (NPRM) on November 2, 2000 (65 FR 65805). The NPRM proposed to require you to inspect all MLG hydraulic actuators to determine the end cap part number that is installed with replacement of any actuator that has a part number 4A125C32 end cap.

Was the public invited to comment? Interested persons were afforded an opportunity to participate in the making of this amendment. No comments were received on the proposed rule or the FAA's determination of the cost to the public.

Is there any new information pertaining to this subject? The FAA's intent is to not affect those airplanes with mechanical landing gear installed either at manufacture or through field approval. The way the NPRM is written would make the AD applicable to all affected airplane models. We are changing the AD to only apply to those airplanes that are equipped with hydraulic landing gear.

We also realized that we inadvertently left off the Raytheon Beech Model A99 airplanes in the Applicability section of the NPRM. These airplanes were originally manufactured with mechanical landing gear, but could have hydraulic landing gear installed. Only 1 of these airplanes is currently on the U.S. Register and FAA has verified that this airplane does not have hydraulic landing gear. Therefore, adding the Beech Model A99 to the AD will not increase the burden upon the public over that already proposed in the NPRM.

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 the changes described above and minor editorial corrections. We determined that these changes and minor corrections:

- will not change the meaning of the AD; and
- will not add any additional burden upon the public than was already proposed.

Cost Impact

How many airplanes does this AD impact? We estimate that this AD could affect 139 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:

Labor Cost	Parts Cost	Total Cost Per Airplane	Total Cost on U.S. Operators
2 workhours X $60 per hour = $120.	No parts necessary to accomplish the inspection.	$120 per airplane	$120 X 139 = $16,680.

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 will need such replacement:

Labor Cost	Parts Cost	Total Cost Per Airplane
4 workhours X $60 per hour = $240.	$1,400 for each actuator; each airplane requires 2 for a total cost of $2,800 per airplane.	$240 + $2,800 = $3,040 per airplane

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 "av-info.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).

Correcting model/serial number sequence.

2001-11-04 RAYTHEON AIRCRAFT COMPANY: Amendment 39-12245; Docket No. 2000-CE-27-AD.

(a) What airplanes are affected by this AD? This AD affects the following airplane models and serial numbers that are certificated in any category and are equipped with hydraulic landing gear:

Model	Serial Numbers
99, 99A, 99A (FACH), A99, A99A, and B99	U-1 through U-49 and U51 through U-164.
C99	U-50 and U-165 through U-239.

(b) Who must comply with this AD? Anyone who wishes to operate any of the above airplanes must comply with this AD.

(c) What problem does this AD address? The actions specified by this AD are intended to eliminate existing and prevent future fatigue cracks in the main landing gear (MLG) hydraulic actuator end caps. Such cracks could cause hydraulic fluid to leak and result in collapse of one or more gears with consequent aircraft damage and passenger injury.

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

Actions	Compliance	Procedures
(1) Inspect all MLG hydraulic actuators to determine what part number (P/N) end caps are installed.	Within the next 200 hours time-in-service (TIS) after July 23, 2001 (the effective date of this AD), unless already accomplished.	In accordance with the Accomplishment Instructions section of Raytheon Mandatory Service Bulletin SB 2290, Rev. 1, Revised: August, 1999.
(2) If a P/N 4A211S1 (or FAA-approved equivalent part number) end cap is installed on both actuators, then no additional action is required by this AD.	AD is complied with.	AD is complied with.

Actions	Compliance	Procedures
(3) If a P/N 4A125C32 (or FAA-approved equivalent part number) end cap is installed on a P/N 99-388001 series actuator, accomplish the following: (i) Inspect, using fluorescent penetrant methods, each end cap for evidence of cracking; (ii) Replace each actuator with an actuator that has a P/N 4A211S1 (or FAA-approved equivalent part number) end cap; and (iii) This replacement may be accomplished prior to 600 hours TIS, but must be replaced if evidence of cracking is found.	Accomplish the inspection prior to further flight after the inspection required by paragraph (d)(1) of this AD and thereafter at intervals not to exceed 200 hours TIS until the end caps are replaced. Accomplish the replacement prior to further flight after the inspection where any evidence of cracking is found or within 600 hours TIS after July 23, 2001 (the effective date of this AD), if no evidence of cracking is found.	In accordance with Part I, steps (2) through (10) and Part II, of the Accomplishment Instructions section of Raytheon Mandatory Service Bulletin SB 2290, Rev. 1, Revised: August, 1999.
(4) If a P/N 4A125C32 (or FAA-approved equivalent part number) end cap is installed on a P/N 99-388008 series actuator, replace the actuator with an actuator that has a P/N 4A211S1 (or FAA-approved equivalent part number) end cap.	Prior to further flight after the inspection required by this AD.	In accordance with Part I, steps (2) through (10) and Part II, of the Accomplishment Instructions section of Raytheon Mandatory Service Bulletin SB 2290, Rev. 1, Revised: August, 1999.
(5) Do not install, on any affected airplane, a P/N 99-388008 series actuator that incorporates an end cap that is not P/N 4A211S1 (or FAA-approved equivalent part number).	As of July 23, 2001 (the effective date of this AD).	Not Applicable.
(6) Do not install, on any affected airplane, a P/N 99-388001 series actuator that incorporates an end cap that is not P/N 4A211S1 (or FAA-approved equivalent part number).	As of 600 hours TIS after July 23, 2001 (the effective date of this AD) provided the 200-hour repetitive inspections required by this AD are accomplished and no evidence of cracking is found. If evidence of cracking is found, the actuator must be immediately replaced with one that incorporates P/N 4A211S1 (or FAA-approved equivalent part number).	Not Applicable.

(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, Wichita 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, Wichita 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 Paul C. DeVore, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4142; facsimile: (316) 946-4407.

(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 Raytheon Mandatory Service Bulletin SB 2290, Rev. 1, Revised: August, 1999. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You can get copies from the Raytheon Aircraft Company, PO Box 85, Wichita, Kansas 67201-0085. You can look at 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 July 23, 2001.

FOR FURTHER INFORMATION CONTACT: Paul C. DeVore, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4142; facsimile: (316) 946-4407.

Issued in Kansas City, Missouri, on May 22, 2001.
Michael Gallagher, Manager, Small Airplane Directorate, Aircraft Certification Service.