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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-CE-35-AD; Amendment 39-12507; AD 2001-23-10]

RIN 2120-AA64

Airworthiness Directives; Raytheon Aircraft Company 33, T-34, 35, 36, 55, 56, 58, and 95 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to certain Raytheon Aircraft Company (Raytheon) 33, T-34, 35, 36, 55, 56, 58, and 95 Series airplanes. This AD requires you to inspect the left-hand and right-hand flap flex shaft assemblies to determine the manufacture date. This AD also requires you to replace any flap flex shaft assemblies manufactured from January 2000 through April 2001. This AD is the result four separate reports of flap drive cable separation. The actions specified by this AD are intended to prevent separation of the flap flex shaft assembly caused by improper heat treatment. Such a condition could lead to an asymmetric flap condition, resulting in uncommanded roll of the airplane.

DATES: This AD becomes effective on December 13, 2001.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation as of December 13, 2001.

The Federal Aviation Administration (FAA) must receive any comments on this rule on or before January 12, 2002.

ADDRESSES: Submit comments to FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2001-CE-35-AD, 901 Locust, Room 506, Kansas City, Missouri 64106.

You may get the service information referenced in this AD from Raytheon Aircraft Company, P.O. Box 85, Wichita, Kansas 67201-0085; telephone: (800) 429-5372 or (316) 676-3140. You may view this information at FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2001-CE-35-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 DeVore, Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 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? Raytheon has notified FAA of four separate incidents of the flap drive cable separating on Models A36, B36TC, and 58 airplanes. Three of the incidents occurred during flight and resulted in asymmetric flap conditions. In all three cases, a safe landing was made. The flap flex shaft failed on one airplane while rigging the flaps on the ground.

Raytheon and FAA investigated the incidents and determined the cause to be a result of a quality control problem. During manufacturing from January 2000 through April 2001, the end of the flap flex shaft assemblies was not being properly heat-treated. Improper heat-treatment allowed the cable end to crack and separate from the flap flex shaft assembly.

Information on the affected parts follows:

--The affected parts are part number 12527Y-63.31 (left-hand) flap flex shaft assemblies, part number 12163Y-63.31 or 12163Y-1 (right-hand) flap flex shaft assemblies, and part number 45-521212 (any dash number) flap actuator assemblies, that were manufactured from January 2000 through April 2001. Raytheon has installed these parts on certain Models A36, B36TC, and 58 airplanes at manufacture; and

--These flap flex shaft assemblies could be installed through spare replacements on any of the following series airplanes: 33, T-34, 35, 36, 55, 56, 58, and 95. Specific models are listed in paragraph (a)(1) and (a)(2) of this AD.

What are the consequences if the condition is not corrected? If this condition is not corrected, separation of the flex flap shaft assembly could result. Such a condition could lead to an asymmetric flap condition, resulting in uncommanded roll of the airplane.

Is there service information that applies to this subject? Raytheon has issued Mandatory Service Bulletin SB 27-3478, September 2001.

What are the provisions of this service information? The service bulletin includes procedures for:

--Inspecting the left-hand flap flex shaft assembly, part number 12527Y-63.31 and the right-hand flap flex shaft assembly, part number 12163Y-63.31 or 12163Y-1, to determine the manufacture date;

--Replacing any flap flex shaft assembly manufactured from January 2000 through April 2001; and

--Inspecting the airplane logbook for airplanes with spare replacement only, to see if any flap flex shaft assemblies or flap actuator assemblies have been replaced since March 1, 2000, to determine if the flap flex shaft assemblies need to be inspected and possibly replaced.

The FAA's Determination and an Explanation of the Provisions of This AD

What has FAA decided? The FAA has reviewed all available information, including the service information referenced above; and determined that:

--The unsafe condition referenced in this document exists or could develop on other Raytheon 33, T-34, 35, 36, 55, 56, 58, and 95 Series airplanes of the same type design;

--The actions specified in the previously-referenced service information (as specified in this AD) should be accomplished on the affected airplanes; and

--AD action should be taken in order to correct this unsafe condition.

What does this AD require? This AD requires you to incorporate the actions in the previously-referenced service bulletin.

In preparation of this rule, we contacted type clubs and aircraft operators to obtain technical information and information on operational and economic impacts. We have included, in the rulemaking docket, a discussion of information that may have influenced this action.

Will I have the opportunity to comment prior to the issuance of the rule? Because the unsafe condition described in this document could result in separation of the flap flex shaft assembly which could lead to an asymmetric flap condition, resulting in uncommanded roll of the airplane, we find that notice and opportunity for public prior comment are impracticable. Therefore, good cause exists for making this amendment effective in less than 30 days.

Comments Invited

How do I comment on this AD? Although this action is in the form of a final rule and was not preceded by notice and opportunity for public comment, FAA invites your comments on the rule. You may submit whatever written data, views, or arguments you choose. You need to include the rule's docket number and submit your comments to the address specified under the caption ADDRESSES. We will consider all comments received on or before the closing date specified above. We may amend this rule in light of comments received. Factual information that supports your ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether we need to take additional rulemaking action.

Are there any specific portions of the AD I should pay attention to? We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. You may view all comments we receive before and after the closing date of the rule in the Rules Docket. We will file a report in the Rules Docket that summarizes each FAA contact with the public that concerns the substantive parts of this AD.

How can I be sure FAA receives my comment? If you want us to acknowledge the receipt of your comments, you must include a self-addressed, stamped postcard. On the postcard, write "Comments to Docket No. 2001-CE-35-AD." We will date stamp and mail the postcard back to you.

Regulatory Impact

Does this AD impact various entities? These regulations 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, FAA has determined that this final rule does not have federalism implications under Executive Order 13132.

Does this AD involve a significant rule or regulatory action? We have determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a significant regulatory action under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket (otherwise, an evaluation is not required). A copy of it, if filed, may be obtained from the Rules Docket.

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.

Sec. 39.13 [Amended]

2. FAA amends Sec. 39.13 by adding a new airworthiness directive (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).

2001-23-10 Raytheon Aircraft Company: Amendment 39-12507; Docket No. 2001-CE-35-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:

(1) Group 1: Raytheon may have installed the affected flap flex shaft assemblies on the following airplanes at manufacture:

Models	Serial Nos.
(i) A36.....	E-3302 through E-3398
(ii) B36TC.....	EA-652 through EA-677
(iii) 58.....	TH-1936 through TH-1988 and TH-1990 through TH-1996.

(2) Group 2: The affected flap flex shaft assemblies and flap actuator assembly could be installed through spare replacement on any of the following model airplanes:

Models	Serial Nos.
(i) 35-33, 35-A33, 35-B33, 35-C33, 35-C33A, E33, E33A, E33C, F33, F33A, F33C, and G33.	All serial numbers
(ii) T-34C, T-34C (T-34C-1), T-34C(34C), A45 (T-34A, B-45), D45 (T-34B), and 45 (YT-34).	All serial numbers.
(iii) 35, 35R, A35, B35, C35, D35, E35, F35, G35, H35, J35, K35, M35, N35, P35, S35, V35, V35A, and V35B.	All serial numbers except D-1 through D-837.
(iv) 36, A36, A36TC, and B36TC.....	All serial numbers except E-3302 through E-3398 and EA-652 through EA-677 (those serial numbers are included in Group 1).
(v) 95-55, 95-A55, 95-B5 5, 95-B55A, 95-B55B (T-42A), 95-C55, 95-C55A D55, D55A, E55, and E55A.	All serial numbers.
(vi) 56TC and A56TC.....	All serial numbers.
(vii) 58, 58A, 58P, 58PA, 58TC, and 58TCA.	All serial numbers except TH-1936 through TH-1988 and TH-1900 through TH-1996 (those serial numbers are included in Group 1)
(viii) 95, B95, B95A, D95A, and E95....	All serial numbers.

(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 prevent separation of the flap flex shaft assembly caused by improper heat treatment. Such a condition could lead to an asymmetric flap condition, which could result in uncommanded roll of the airplane.

(d) *What actions must I accomplish to address this problem for Group 1 airplanes?* To address this problem for Group 1 airplanes, you must accomplish the following:

Actions	Compliance	Procedures
(1) Inspect the identification label on the left-hand (LH) flap flex shaft assembly, part (P/N) 12527Y-63.31, and the number right-hand (RH) flap flex shaft assembly, P/N 12163Y-63.31 or 12163Y-1, to determine the manufacture date. If the manufacture date on the identification label on any of the flex flap shaft assemblies is before January 2000 and after April 2001, the flap flex assemblies are not affected and do not need to be replaced.	Within the next 25 hours time-in- service (TIS) after December 13, 2001, the effective date of this AD.	In accordance with Raytheon Mandatory Service Bulletin SB27-3478, Issued: September 2001, and the applicable maintenance manual.
(2) If the manufacture date on the identification label on any of the flex flap shaft assemblies is from January 2000 through April 2001, replace with parts that were manufactured before January 2000 and after April 2001.	Prior to further flight after the inspection required in paragraph (d)(1) of this AD.	In accordance with Raytheon Mandatory Service Bulletin SB27-3478, Issued: September 2001, and the applicable maintenance manual.
(3) Do not install on any airplane, a LH flap flex shaft assembly, P/N 12527Y-63.31, a RH flap flex shaft assembly, P/N 12163Y-63.31 or 12163Y-1, or a flap actuator assembly, P/N 45-521212 (any dash number containing a flap flexible shaft assembly), that has a manufacture date from January 2000 through April 2001.	As of December 13, 2001, the effective date of this AD.	In accordance with Raytheon Mandatory Service Bulletin SB27-3478, Issued: September 2001.

(e) *What actions must I accomplish to address this problem for Group 2 airplanes?* To address this problem for Group 2 airplanes, you must accomplish the following:

Actions	Compliance	Procedures
(1) Check the airplane logbook to determine whether the LH flap flex shaft assembly, P/N 12527Y-63.31, the RH flap flex shaft assembly, P/N 12163Y-63.31 or 12163Y-1, or the flap actuator assembly, P/N 45-521212 (any dash number), has been replaced since March 1, 2000. (i) 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. (ii) If, by checking the airplane logbook, the pilot can positively show that the LH or the RH flap flex shaft assembly or the flap actuator assembly has never been replaced since March 1, 2000, no further action is required..	Within the next 25 hours time-in-service (TIS) after December 13, 2001, the effective date of this AD.	In accordance with Raytheon Mandatory Service Bulletin SB27-3478, Issued: September 2001.
(2) If the check of the airplane logbook shows that the LH or the RH flap flex shaft assembly or the flap actuator assembly has been replaced since March 1, 2000, or if complete records of the LH and RH flap flex assembly or the flap actuator assembly do not exist, inspect the identification labels on the flap flex shaft assemblies to determine the manufacture date. (i) If the manufacture date on the identification label on any of the flex flap shaft assemblies is from January 2000 through April 2001, replace with parts that were manufactured before January 2000 and after April 2001. (ii) If the manufacture date on any identification label is before January 2000 and after April 2001, the flap flex assemblies are not affected and do not need to be replaced.	Within the next 25 hours time-in-service (TIS) after December 13, 2001, the effective date of this AD. Accomplish replacements prior to further flight.	In accordance with Raytheon Mandatory Service Bulletin SB27-3478, Issued: September 2001, and the applicable maintenance manual

(3) Do not install on any airplane, a LH flap flex shaft assembly, P/N 12527Y- 63.31, a RH flap flex shaft assembly, P/N 12163Y-63.31 or 12163Y-1, or a flap actuator assembly, P/N 45-531212 (any dash number containing a flap flexible shaft assembly), that has a manufacture date from January 2000 through April 2001.	As of December 13, 2001, the effective date of this AD.	In accordance with Raytheon Mandatory Service Bulletin SB27-3478, Issued: September 2001.
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(f) *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 (f) 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.

(g) *Where can I get information about any already-approved alternative methods of compliance?* Contact Paul DeVore, Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4142; facsimile: (316) 946-4407.

(h) *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. You must adhere to the limitations presented in the appendix to this AD.

(i) *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 27-3478, Issued: September 2001. 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 Raytheon Aircraft Company, P.O. Box 85, Wichita, Kansas 67201-0085; telephone: (800) 429-5372 or (316) 676-3140. You may view this information at 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.

(j) *When does this amendment become effective?* This amendment becomes effective on December 13, 2001.

Appendix to Docket No. 2001-CE-35-AD

The following must be adhered to in order to obtain a special flight permit as specified in paragraph (h).

Limitations--Flaps must be retracted for all takeoffs.

Emergency Procedures

Asymmetrical Flaps

Attempt to retract the flaps. If flaps will not retract, the airplane will have a tendency to roll in the direction of the retracted flap. This roll tendency will increase with increasing speed. Use aileron trim and reduce speed as required to reduce roll forces.

Flaps-Up or Asymmetrical-Flap Landing

Follow all published Before Landing Procedures except for airspeed. Maintain the published Flaps-Up Approach Speed. If this speed is not published, use one of the following:

- (a) Multiply the highest indicated flaps-up stall speed, found in the Performance Section, by 1.3.
or
- (b) For Bonanza Series, T-34A, T-34B, and 45, add 10 knots to the published Flaps-Down Landing Approach Speed.
- (c) For Baron Series, add 15 knots to the published Flaps-Down Landing Approach speed.
Plan on longer landing distance.

Issued in Kansas City, Missouri, on November 13, 2001.

James E. Jackson,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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