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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-0286; Directorate Identifier 2007-CE-086-AD; Amendment 39-15381; AD 2008-04-09]

RIN 2120-AA64

Airworthiness Directives; Taylorcraft A, B, and F Series Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) to supersede AD 2007-16-14, which applies to all Taylorcraft (Taylorcraft) A, B, and F series airplanes. AD 2007-16-14 currently requires you to do an initial visual inspection of the left and right wing front and aft lift struts for cracks and corrosion and replace any cracked strut or strut with corrosion that exceeds certain limits. If the strut is replaced with an original design vented strut, AD 2007-16-14 requires you to repetitively inspect those struts thereafter. Since we issued AD 2007-16-14, we determined that the eddy current inspection method does not address the unsafe condition for the long term. We also determined that Models FA-III and TG-6 airplanes are not equipped with the affected struts. Consequently, this AD retains the actions required in AD 2007-16-14, except it removes the eddy current inspection method (provides 24-month credit if already done using this method), adds the radiograph method as an inspection method, changes the Applicability section, and changes the compliance time between the repetitive inspections. We are issuing this AD to detect and correct cracks and corrosion in the left and right wing front and aft lift struts. This condition, if not corrected, could result in failure of the lift strut and lead to in-flight separation of the wing.

DATES: This AD becomes effective on March 28, 2008.

On March 28, 2008, the Director of the Federal Register approved the incorporation by reference of Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, listed in this AD.

As of August 20, 2007 (72 FR 45153, August 13, 2007), the Director of the Federal Register approved the incorporation by reference of Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision A, dated August 1, 2007, listed in this AD.

ADDRESSES: For service information identified in this AD, contact Taylorcraft Aviation, LLC, 2124 North Central Avenue, Brownsville, Texas 78521; telephone: 956-986-0700.

To view the AD docket, go to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or on the Internet at <http://www.regulations.gov>. The docket number is FAA-2007-0286; Directorate Identifier 2007-CE-086-AD.

FOR FURTHER INFORMATION CONTACT: Andrew McAnaul, Aerospace Engineer, ASW-150 (c/o MIDO-43), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; telephone: (210) 308-3365; fax: (210) 308-3370.

SUPPLEMENTARY INFORMATION:

Discussion

On December 3, 2007, 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 Taylorcraft (Taylorcraft) A, B, and F series airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on December 10, 2007 (72 FR 69630). The NPRM proposed to supersede AD 2007-16-14 with a new AD that would:

- Retain the actions required in AD 2007-16-14, except it removes the eddy current inspection method (provides 24-month credit if already done using this method);
- Adds the radiograph method as an inspection method;
- Changes the Applicability section to remove Models FA-III and TG-6 airplanes; and
- Changes the compliance time between the repetitive inspections.

Comments

We provided the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and FAA's response to each comment:

Comment Issue No. 1: Approve Installing Univair Part Numbers (P/N) UA-A815 and UA-854 as a Terminating Action for the Repetitive Inspection Requirement for All Affected Taylorcraft Airplanes

Univair Aircraft Corporation (Univair) requests that we expand the airplane model applicability for installation of P/Ns UA-A815 and UA-854 as a terminating action for the repetitive inspection requirement from Taylorcraft Models BC12-D/D1 and BCS12-D/D1 airplanes (as currently approved in an alternative method of compliance (AMOC) to AD 2007-16-14) to include all affected Taylorcraft airplanes.

On January 2, 2008, Univair received parts manufacturer approval (PMA) under PMA Supplement Numbers 198 and 199 expanding the eligibility to install P/Ns UA-A815 and UA-854 on all Taylorcraft airplane models affected by the proposed AD. Installation of these sealed struts provides an acceptable level of safety for terminating action to the AD for all affected Taylorcraft airplane models.

We agree with the commenter. We will change the final rule AD action to incorporate this change.

Comment Issue No. 2: Extend or Eliminate Repetitive Inspection Intervals

Richard W. Gross and seven other commenters request that the repetitive inspection interval be either extended from 4 years to 10 years or terminated altogether if no corrosion is found during the initial inspection.

Some of the commenters base their request on service history of some struts having been in service for 60 years without any signs of corrosion.

We do not agree with the commenters. We have not received any data to support extending the repetitive inspection interval. We have received reports of several corroded vented wing lift struts from different Taylorcraft series airplanes. Repetitive inspections are necessary to detect and correct corrosion that can develop after the initial inspection. Based on the inspection methods used and the application of corrosion inhibitor at each inspection, 48 months is the appropriate repetitive inspection interval.

We are not changing the final rule AD action based on these comments.

Comment Issue No. 3: Remove F-Model Airplanes From the Applicability Section

Shawn Coleman and three other commenters request that the newer F-Model Taylorcraft airplanes be removed from the Applicability section. This request is based on these models being the most recent airplanes produced and the expectation that they should not have a corrosion problem.

We do not agree with the commenters. We do not have any data to support excluding these airplane models from the AD. These models use the same strut design and material as the earlier produced Taylorcraft model airplanes. We have received reports of one Model F-21 airplane and three Model F-22 airplanes having one or more struts that failed inspection due to corrosion.

We are not changing the final rule AD action based on these comments.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for the changes previously discussed and 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.

Costs of Compliance

We estimate that this AD will affect 3,119 airplanes in the U.S. registry.

We estimate the following costs to do the visual inspection:

Labor Cost	Parts Cost	Total Cost Per Airplane	Total Cost on U.S. Operators
1 work-hour X \$80 per hour = \$80	Not applicable.	\$80	\$249,520

We estimate the following costs to do the repetitive ultrasound or radiograph inspection:

Labor Cost	Parts Cost	Total Cost Per Airplane
4 work-hours X \$80 per hour = \$320	Not applicable	\$320

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

Labor Cost	Parts Cost	Total Cost Per Airplane to Replace all 4 Wing Lift Struts
4 work-hours to replace all 4 struts X \$80 per hour = \$320	sealed front lift strut: \$835 per strut. Two per airplane = \$1,670 sealed aft lift strut: \$638 per strut. Two per airplane = \$1,276	\$1,670 + \$1,276 + \$320 = \$3,266

Original design vented lift struts are no longer manufactured. We have no way of determining the cost associated with obtaining a useable vented strut.

The estimated total cost on U.S. operators includes the cumulative costs associated with AD 2007-16-14 and any actions being added in this AD.

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 AD.

Regulatory Findings

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.

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-2007-0286; Directorate Identifier 2007-CE-086-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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2007-16-14, Amendment 39-15153 (72 FR 45153, August 13, 2007), and adding the following new AD:



2008-04-09 Taylorcraft: Amendment 39-15381; Docket No. FAA-2007-0286; Directorate Identifier 2007-CE-086-AD.

Effective Date

(a) This AD becomes effective on March 28, 2008.

Affected ADs

(b) This AD supersedes AD 2007-16-14, Amendment 39-15153.

Applicability

(c) This AD applies to all serial numbers of Taylorcraft Models A, BC, BCS, BC-65, BCS-65, BC12-65 (Army L-2H), BCS12-65, BC12-D, BCS12-D, BC12-D1, BCS12-D1, BC12D-85, BCS12D-85, BC12D-4-85, BCS12D-4-85, (Army L-2G) BF, BFS, BF-60, BFS-60, BF-65, (Army L-2K) BF 12-65, BFS-65, BL, BLS, (Army L-2F) BL-65, BLS-65, (Army L-2J) BL12-65, BLS12-65, 19, F19, F21, F21A, F21B, F22, F22A, F22B, and F22C airplanes that:

(1) Are certificated in any category; and

(2) Do not incorporate sealed wing front lift struts, part number (P/N) MA-A815, Univair P/N UA-A815, or FAA-approved equivalent P/N, and sealed aft lift struts, P/N MA-A854, Univair P/N UA-854, or FAA-approved equivalent P/N, for all struts.

Note 1: This AD applies to all Taylorcraft models listed above, including those models not listed in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007. If there are any other differences between this AD and the above service bulletin, this AD takes precedence.

Note 2: For the purposes of this AD, a used strut that has been inspected using the ultrasound or radiograph inspection method, meets the Acceptance/Rejection Criteria specified in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, and is treated with internal corrosion protection, is considered a new strut.

Unsafe Condition

(d) This AD results from our determination that the radiograph inspection method should be used in place of the eddy current inspection method currently required in AD 2007-16-14. We are issuing this AD to detect and correct corrosion or cracks in the left and right wing front and aft lift struts, which could result in failure of the lift strut and lead to in-flight separation of the wing with consequent loss of control.

Compliance

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

Actions	Compliance	Procedures
<p>(1) Visually inspect the left and right wing front and aft lift struts, (P/N A-A815 and P/N A-A854, or FAA-approved equivalent P/Ns), along the entire bottom 12 inches of each strut for cracks and corrosion.</p>	<p>Within the next 5 hours TIS after August 20, 2007 (the effective date of AD 2007-16-14), unless one of the following conditions is met:</p> <p>(i) The struts have been replaced with parts specified in paragraph (e)(2)(i) of this AD. No further action is required on those struts.</p> <p>(ii) The struts have been replaced with parts specified in paragraph (e)(2)(ii) of this AD and have been installed for less than 48 months. No visual inspection is required. These parts are now subject to the repetitive inspection requirement specified in paragraph (e)(4) of this AD.</p>	<p>Follow Part 1 of the Instructions in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision A, dated August 1, 2007; or Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007.</p>
<p>(2) If any cracks are found during the visual inspection required in paragraph (e)(1) of this AD, replace the cracked strut with the following applicable strut:</p> <p>(i) A sealed front lift strut, P/N MA-A815, Univair P/N UA-A815, or FAA-approved equivalent P/N, a sealed aft lift strut, P/N MA-A854, Univair P/N UA-854, or FAA-approved equivalent P/N. Installing these lift struts terminates the repetitive inspections required by this AD for that strut and no further action is required.</p> <p>(ii) A new vented front lift strut, P/N A-A815, a new vented aft lift strut, P/N A-A854, or FAA-approved equivalent P/Ns, that is treated with internal corrosion protection specified in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007. Installing one of these lift struts is subject to the repetitive inspections required in paragraph (e)(4) of this AD.</p>	<p>Before further flight after the visual inspection required in paragraph (e)(1) of this AD.</p>	<p>Following the Instructions in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007.</p>

(3) If corrosion is found during the inspection required in paragraph (e)(1) of this AD, do an ultrasound or radiograph inspection to determine if the corrosion exceeds the Acceptance/Rejection Criteria specified in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007.

Before further flight after the visual inspection required in paragraph (e)(1) of this AD.

Follow Part 2 of the Instructions in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007. All ultrasound or radiograph inspections required by this AD must be done by one of the following:

(i) A Level II or III inspector certified in the applicable ultrasound or radiograph inspection method using the guidelines established by the American Society of Nondestructive Testing or NAS 410 (formerly MIL-STD-410);

(ii) An inspector certified to specific FAA or other acceptable government or industry standards, such as Air Transport Association (ATA) Specifications 105-Guidelines for Training and Qualifying Personnel in Nondestructive Testing Methods; or

(iii) An FAA Repair Station or a Testing/ Inspection Laboratory qualified to do ultrasound or radiograph inspections.

(4) If no corrosion or cracks are found during the visual inspection required in paragraph (e)(1) of this AD, or if the inspection required in paragraph (e)(3) reveals that the corrosion does not exceed the Acceptance/Rejection Criteria specified in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, repetitively inspect thereafter using the ultrasound or radiograph inspection method and treat with internal corrosion protection until all struts are replaced with the sealed struts specified in paragraph (e)(2)(i) of this AD. If any cracks are found or corrosion is found that exceeds the Acceptance/Rejection Criteria specified in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, during any of the repetitive inspections required by this AD, take the necessary corrective actions as applicable in paragraph (e)(5) of this AD.

(i) Initially inspect within the next 3 months after August 20, 2007 (the effective date of AD 2007-16-14) or within 48 months after installing a lift strut specified in paragraph (e)(2)(ii) of this AD, whichever occurs later.

(ii) Repetitively inspect thereafter at intervals not to exceed 48 months, except as required by paragraph (e)(4)(iii) of this AD.

(iii) If the initial inspection was done using the eddy current method as specified in AD 2007-16-14, the first ultrasound or radiograph repetitive inspection must be done within the next 24 months after doing the eddy current inspection. Repetitively inspect thereafter at intervals not to exceed 48 months using the ultrasound or radiograph inspection method.

Follow Part 2 of the Instructions in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, using the ultrasound or radiograph inspection method.

(5) If, during any inspection required in paragraphs (e)(3) or (e)(4) of this AD, any cracks are found or it is determined that the corrosion exceeds the Acceptance/Rejection Criteria specified in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, replace the lift strut with the applicable lift strut specified in paragraph (e)(2)(i) or (e)(2)(ii) of this AD.

Before further flight after the inspection required in paragraph (e)(3) or (e)(4) of this AD.

Following the Instructions in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007.

<p>(6) Do not install P/N A-A815, P/N A-A854, or FAA-approved equivalent P/N, unless:</p> <p>(i) within the last 48 months it has been inspected using the ultrasound or radiograph method;</p> <p>(ii) it meets the Acceptance/Rejection Criteria; and</p> <p>(iii) it is treated with internal corrosion protection as specified in Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007.</p>	<p>As of 5 hours TIS after March 28, 2008 the effective date of this AD.</p>	<p>Not applicable.</p>
<p>(7) As a terminating action for the repetitive inspections required by this AD, all vented lift struts (P/Ns A-A815, A-A854, and FAA-approved equivalent P/Ns) may be replaced with sealed lift struts (P/Ns MA-A815, UA-A815, MA-A854, UA-854, or FAA-approved equivalent P/Ns).</p>	<p>At any time after March 28, 2008 the effective date of this AD.</p>	<p>Not applicable.</p>

Alternative Methods of Compliance (AMOCs)

(f) The Manager, Fort Worth Airplane Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Andrew McAnaul, Aerospace Engineer, ASW-150 (c/o MIDO-43), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; telephone: (210) 308-3365; fax: (210) 308-3370. 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.

(g) AMOCs approved for AD 2007-16-14 are approved for this AD.

Material Incorporated by Reference

(h) You must use Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision A, dated August 1, 2007; and Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, 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 Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision B, dated October 15, 2007, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) On August 20, 2007 (72 FR 45153, August 13, 2007), the Director of the Federal Register approved the incorporation by reference of Taylorcraft Aviation, LLC Service Bulletin No. 2007-001, Revision A, dated August 1, 2007.

(3) For service information identified in this AD, contact Taylorcraft Aviation, LLC, 2124 North Central Avenue, Brownsville, Texas 78521; telephone: 956-986-0700.

(4) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106; 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/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on February 13, 2008.

David R. Showers,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. E8-3074 Filed 2-21-08; 8:45 am]