

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-CE-10-AD; Amendment 39-12764; AD 2002-11-03]

RIN 2120-AA64

Airworthiness Directives; Air Tractor, Inc. Models AT-502, AT-502A, AT-502B, and AT-503A 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 Air Tractor, Inc. (Air Tractor) Models AT-502, AT-502A, AT-502B, and AT-503A airplanes. This AD lowers the safe life for the wing lower spar cap established in AD 2001-10-04 R1 and further reduces the safe life for airplanes that incorporate or have incorporated Marburger Enterprises, Inc. winglets. This AD also requires you to eddy-current inspect the wing lower spar cap immediately prior to the replacement/modification to detect and correct any crack in a bolthole before it extends to the modified center section of the wing and report the results of this inspection to the Federal Aviation Administration (FAA). This AD is the result of reports of several cracks originating in the outboard 3/8-inch hole of the main spar lower cap on Air Tractor Models AT-502, AT-502A, AT-502B, and AT-503A airplanes at times lower than the established safe life. The actions specified by this AD are intended to prevent fatigue cracks from occurring in the wing lower spar cap before the established safe life is reached. Fatigue cracks in the wing lower spar cap, if not detected and corrected, could result in the wing separating from the airplane during flight.

DATES: This AD becomes effective on June 14, 2002.

The Director of the Federal Register previously approved the incorporation by reference of certain publications listed in the regulation as of June 8, 2001 (66 FR 27014, May 16, 2001).

The FAA must receive any comments on this rule on or before July 5, 2002.

ADDRESSES: Submit comments to FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-10-AD, 901 Locust, Room 506, Kansas City, Missouri 64106. You may view any comments at this location between 8 a.m. and 4 p.m., Monday through Friday, except Federal holidays. You may also send comments electronically to the following address: 9-ACE-7-Docket@faa.gov. Comments sent electronically must contain "Docket No. 2002-CE-10-AD" in the subject line. If you send comments electronically as attached electronic files, the files must be formatted in Microsoft Word 97 for Windows or ASCII text.

You may get the service information referenced in this AD from Air Tractor, Incorporated, P.O. Box 485, Olney, Texas 76374; or Marburger Enterprises, Inc., 1227 Hillcourt, Williston, North Dakota 58801; telephone: (800) 893-1420 or (701) 774-0230; facsimile: (701) 572-2602. You may view this information at FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-10-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: Direct all questions to:

For the airplanes that do not incorporate and never have incorporated Marburger Enterprises, Inc. winglets: Rob Romero, Aerospace Engineer, FAA, Fort Worth Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone: (817) 222-5102; facsimile: (817) 222-5960; and

For airplanes that incorporate or have incorporated Marburger Enterprises, Inc. winglets: John Cecil, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, 3960 Paramount Boulevard, Lakewood, California 90712; telephone: (562) 627-5228; facsimile: (562) 627-5210.

SUPPLEMENTARY INFORMATION:

Discussion

What Events Have Caused This AD?

On December 17, 2001, FAA 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 Air Tractor, Inc. (Air Tractor) AT-400, AT-500, and AT-800 series airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on December 27, 2001 (66 FR 66823). The NPRM proposed to supersede AD 2001-10-04 R1 with a new AD that would retain the safe life for the wing lower spar cap and require you to eddy-current inspect the wing lower spar cap immediately prior to the replacement/modification to detect and correct any crack in a bolthole before it extends to the modified center section of the wing. The NPRM also proposed to further reduce the safe life for those AT-400 and AT-500 series airplanes that incorporate or have incorporated Marburger Enterprises, Inc. winglets.

Since issuance of that NPRM, we received reports of several cracks originating in the outboard 3/8-inch hole of the main spar lower cap on Air Tractor Models AT-502, AT-502A, AT-502B, and AT-503A airplanes at hours time-in-service (TIS) lower than the established safe life.

What Are the Consequences if the Condition Is Not Corrected?

This condition could result in fatigue cracks in the wing lower spar cap before the established safe life is reached. Fatigue cracks in the wing lower spar cap, if not detected and corrected, could result in the wing separating from the airplane during flight.

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

What Has FAA Decided?

The FAA has reviewed all available information and determined that:

- The unsafe condition referenced in this document exists or could develop on other Air Tractor Models AT-502, AT-502A, AT-502B, and AT-503A airplanes of the same type design;
- The safe life on these airplanes should be further reduced;
- These airplanes should be removed from the previous NPRM; and
- Final rule; request for comments (immediately adopted rule) AD action should be taken to address this condition.

What Does This AD Require?

This AD:

- Lowers the safe life for the wing lower spar cap established in AD 2001-10-04 R1;
- Further reduces the safe life for the Models AT-502, AT-502A, AT-502B, and AT-503A airplanes that incorporate or have incorporated Marburger Enterprises, Inc. winglets;
- Requires you to eddy-current inspect the wing lower spar cap immediately prior to the replacement/modification to detect and correct any crack in a bolthole before it extends to the modified center section of the wing; and
- Requires you to report the results of this inspection to the FAA.

You must accomplish these actions in accordance with Snow Engineering Service Letter #197 or #205, both Revised March 26, 2001, as applicable.

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 the wing separating from the airplane during flight, 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. 2002–CE–10–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.

§ 39.13 [Amended]

2. FAA amends § 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 "www.airweb.faa.gov/rgl"

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).

CORRECTION: *Minor typographical errors exist in the Federal Register printing of this document and on the Government Printing Office (GPO) website. The FAA has requested a correction be made to both the Federal Register and GPO website. This copy reflects the corrections.*

2002-11-03 Air Tractor, Inc.: Amendment 39-12764; Docket No. 2002-CE-10-AD.

(a) *What airplanes are affected by this AD?* This AD applies to certain Models AT-502, AT-502A, AT-502B, and AT-503A airplanes. Use paragraph (a)(1) of this AD for airplanes that do not incorporate and never have incorporated winglets. Use paragraph (a)(3) of this AD for certain AT-500 series airplanes that incorporate or have incorporated Marburger Enterprises, Inc. winglets.

(1) The following presents airplanes (certificated in any category) that are affected by this AD, along with the new safe life (presented in hours time-in-service (TIS)) of the wing lower spar cap for all affected airplane models and serial numbers:

Model	Serial Nos.	Safe life
AT-502	0003 through 0236	2,050 hours TIS.
AT-502A	0158 through 0618	1,650 hours TIS.
AT-502B	0187 through 0618	2,050 hours TIS.
AT-503A	All serial numbers beginning with 0067	2,050 hours TIS

(2) If piston powered aircraft have been converted to turbine power, you must use the limits for the corresponding serial number turbine-powered aircraft.

(3) The following presents airplanes (certificated in any category) that could incorporate or could have incorporated Marburger Enterprises, Inc. winglets. These winglets are installed in accordance with Supplemental Type Certificate (STC) SA00490LA. Use the winglet usage factor in the table below, the safe life specified in paragraph (a)(1) of this AD, and the instructions included in the Appendix to this AD to determine the new safe life of these airplanes:

Model	Serial Nos.	Winglet usage Factor
AT-502	0003 through 0236	1.6
AT-502A	0158 through 0238	1.6
AT-502A	0239 through 0618	1.2
AT-502B	0187 through 0618	1.2

(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 fatigue cracks from occurring in the wing lower spar cap before the established safe life is reached. Fatigue cracks in the wing lower spar cap, if not detected and corrected, could result in the wing separating from the airplane during flight.

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

Actions	Compliance	Procedures
<p>(1) Modify the applicable aircraft records (logbook) as follows to show the reduced safe life for the wing lower spar cap (use the information from the table in paragraph (a)(1) of this AD and utilize the information in paragraph (a)(3) of this AD and the Appendix to this AD, as applicable):</p> <hr/> <p>(i) Incorporate the following into the Aircraft Logbook “In accordance with AD 2002–11–03, the wing lower spar cap is life limited to ____.” Insert the applicable safe life number from the applicable tables in paragraphs (a)(1) and (a)(3) of this AD and the Appendix to this AD)</p> <hr/> <p>(ii) If, as of the time of the logbook entry requirement of paragraph (d)(1)(i) of this AD, your airplane is over or within 50 hours of the safe life, an additional 50 hours TIS is allowed to accomplish the replacement/ modification.</p>	<p>Accomplish the logbook entry within the next 10 hours TIS after June 14, 2002 (the effective date of this AD).</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 modify the aircraft records as specified in paragraphs (d)(1)(i) and (d)(1)(ii) of this AD. Make an entry into the aircraft records showing compliance with this portion of AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9). Accomplish the actual replacement/modification in accordance with Snow Engineering Service Letter #197 or #205, both Revised March 26, 2001, as applicable. The owner/operator may not accomplish the replacement/modification, unless he/she holds the proper mechanic authorization.</p>
<p>(2) If you have ordered parts from the factory when it is time to replace the wing lower spar cap (as required when you reach the established safe life), but the parts are not available, you may eddy-current inspect the wing lower spar cap. These inspections are allowed until one of the following occurs, at which time the replacement/modification must be accomplished:</p> <hr/> <p>(i) Crack(s) is/are found;</p>	<p>Inspect prior to further flight after ordering the parts and thereafter at intervals not to exceed 400 hours TIS until one of the criteria in paragraphs (d)(2)(i), (d)(2)(ii), and (d)(2)(iii) of this AD is met.</p>	<p>In accordance with the procedures in Snow Engineering Service Letter #197 or #205, both Revised March 26, 2001, as applicable.</p>

(ii) Parts become available from the manufacturer; or

(iii) Not more than three inspections or 1,200 hours TIS go by: the first inspection would have to be accomplished upon accumulating the safe life; the second inspection would have to be accomplished within 400 hours TIS after accumulating the safe life; the third inspection would have to be accomplished 400 hours TIS after the second inspection; and the replacement/modification would have to be accomplished within 400 hours TIS after the third inspection (maximum elapsed time would be 1,200 hours TIS).

(3) Eddy-current inspect the wing lower spar cap in order to detect any crack before it extends to the modified center section of the wing and repair that crack or replace the wing section. The inspection must be accomplished by one of the following:

(i) a Level 2 or Level 3 inspector that is certified for eddy-current inspection using the guidelines established by the American Society for Nondestructive Testing or MIL-STD-410; or

(ii) A person authorized to perform AD work who has completed and passed the Air Tractor, Inc. training course on Eddy Current Inspection on wing lower spar caps.

Immediately prior to the replacement/modification required when you reach the new safe life. For airplanes that had this replacement/modification accomplished in accordance with either AD 2001-10-04 or AD 2001-10-04 R1, accomplish this inspection and any necessary corrective action within the next 400 hours TIS after June 14, 2002 (the effective date of this AD), unless already accomplished (have the mechanic who accomplished the work mark the logbooks accordingly).

In accordance with the procedures in Snow Engineering Service Letter #197 or #205, both Revised March 26, 2001, as applicable.

(4) Report to FAA the results of each inspection required by paragraph (d)(3) of this AD. The Office of Management and Budget (OMB) approved the information collection requirements contained in this regulation under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*) and assigned OMB Control Number 2120-0056.

Within 10 days after the inspection required in paragraph (d)(3) of this AD or within 10 days after June 14, 2002 (the effective date of this AD, whichever occurs later.

Submit the form (Figure 1 of this AD) to FAA, Fort Worth Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone: (817) 222-5102; facsimile: (817) 222-5960.

BILLING CODE 4910-13-P

AD 2002-11-03 INSPECTION REPORT	
1. Inspection Performed By:	2. Phone:
3. Aircraft Model:	4. Aircraft Serial Number:
5. Engine Model Number:	6. Aircraft Total TIS:
7. Wing Total TIS:	8. Lower Spar Cap TIS:
9. Has the lower spar cap been inspected before? (Eddy-current, Dye penetrant, magnetic particle, ultrasound) <input type="checkbox"/> Yes <input type="checkbox"/> No	9a. If yes, Date: _____ Inspection Method: _____ Lower Spar Cap TIS: _____ Cracks found? <input type="checkbox"/> Yes <input type="checkbox"/> No
10. Has there been any major repair or alteration performed to the spar cap? <input type="checkbox"/> Yes <input type="checkbox"/> No	10a. If yes, specify (Description and TIS)
11. Date of AD inspection: _____	
12. Inspection Results: NOTE: Indicate even if no cracks are found	12a. <input type="checkbox"/> Left Hand <input type="checkbox"/> Right Hand
12b. Crack Length: _____	12c. Does drilling hole to next larger size remove all traces of the crack(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No
12d. Corrective Action Taken:	

Figure 1 of paragraph (d)(4) of this AD

BILLING CODE 4910-13-C

(e) *Can I comply with this AD in any other way?*

(1) You may use an alternative method of compliance or adjust the compliance time if:

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

(ii) The Manager, Fort Worth or Los Angeles Airplane Certification Office (ACO), as applicable, approves your alternative. Submit your request through an FAA Principal Maintenance Inspector. The inspector may add comments before sending it to the Manager, Fort Worth or Los Angeles ACO.

(2) Alternative methods of compliance approved for AD 2001-10-04 and/or AD 2000-14-51 are not considered approved for this AD.

(3) Alternative methods of compliance approved for AD 2001–10–04 R1 are considered approved for this AD.

Note: This AD applies to each airplane identified in paragraphs (a)(1) and (a)(3) 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) *Are there any alternative methods of compliance already approved or being considered for this AD?* The FAA may approve, as an alternative method of compliance, inspection of the wing lower spar cap. You must submit the request in accordance with the procedures in paragraph (e) of this AD and adhere to the following:

(1) If you are over or within 50 hours TIS of the safe life for the wing lower spar cap and you have ordered parts and scheduled a date for the replacement/modification, but having the replacement/modification done on this date grounds the airplane, accomplish the following:

(i) inspect the wing lower spar cap within 50 hours TIS after approval of the alternative method of compliance;

(ii) reinspect thereafter at intervals not to exceed 400 hours TIS until either cracks are found, the date of the scheduled replacement/modification occurs, or 1,200 hours TIS after the initial inspection are accumulated, whichever occurs first; and

(iii) accomplish the inspections in accordance with the procedures in Snow Engineering Service Letter ö197 or ö205, both Revised March 26, 2001, as applicable.

(2) Submit the following to the Fort Worth or Los Angeles ACO, as applicable, using the procedures described in paragraph (e) of this AD:

(i) the airplane model serial number designation, and airplane registration number (N-number);

(ii) the number of hours TIS on the airplane;

(iii) the scheduled date for the replacement/modification; and

(iv) the name and location of the authorized repair shop.

(3) For more information about this issue, contact:

(i) For the airplanes that do not incorporate and never have incorporated Marburger Enterprises, Inc. winglets: Rob Romero, Aerospace Engineer, FAA, Fort Worth Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193–0150; telephone: (817) 222–5102; facsimile: (817) 222–5960; and

(ii) For the airplanes that incorporate or have incorporated winglets: John Cecil, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, 3960 Paramount Boulevard, Lakewood, California 90712; telephone: (562) 627-5228; facsimile: (562) 627–5210.

(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 provided that the following is adhered to:

(1) Only operate in day visual flight rules (VFR) only.

(2) Ensure that the hopper is empty.

(3) Limit airspeed to 135 miles per hour (mph) indicated airspeed (IAS).

(4) Avoid any unnecessary g-forces.

(5) Avoid areas of turbulence.

(6) Plan the flight to follow the most direct route.

(h) *Are any service bulletins incorporated into this AD by reference?* Replacement and inspection actions required by this AD must be done in accordance with Snow Engineering Service Letter #197 or #205, both Revised March 26, 2001, as applicable. The Director of the Federal Register previously approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51, as of June 8, 2001 (66 FR 27014, May 16, 2001). You can get copies from Air Tractor, Incorporated, P.O. Box 485, Olney, Texas 76374; or Marburger Enterprises, Inc., 1227 Hillcourt, Williston, North Dakota 58801. You may view copies 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.

(i) *When does this amendment become effective?* This amendment becomes effective on June 14, 2002.

APPENDIX TO AD 2002-11-03

The following provides procedures for determining the safe life for Models AT-502, AT-502A, and AT-502B airplanes that incorporate or have incorporated Marburger Enterprises, Inc. winglets. These winglets are installed in accordance with Supplemental Type Certificate (STC) SA00490LA.

What If I Removed the Marburger Winglets Prior to Further Flight After the Effective Date of This AD or Prior to the Effective Date of This AD?

1. Review your airplane's logbook to determine your airplane's time-in-service (TIS) with winglets installed per Marburger Enterprises STC SA00490LA. This includes all time spent with the winglets currently installed and any previous installations where the winglet was installed and later removed.

Example: A review of your airplane's logbook shows that you have accumulated 350 hours TIS since incorporating the Marburger STC. Further review of the airplane's logbook shows that a previous owner had installed the STC and later removed the winglets after accumulating 150 hours TIS. Therefore, your airplane's TIS with the winglets installed is 500 hours.

If you determine that the winglet STC has never been incorporated on your airplane, then your safe life is presented in paragraph (a)(1) of this AD. Any future winglet installation will be subject to a reduced safe life per these instructions.

2. Determine your airplane's unmodified safe life from paragraph (a)(1) of this AD.

Example: Your airplane is a Model AT-502B, serial number 0292. From paragraph (a)(1) of this AD, the safe life of your airplane is 2,050 hours TIS.

All examples from hereon will be based on the Model AT-502B, serial number 0292 airplane.

3. Determine the winglet usage factor from paragraph (a)(3) of this AD.

Example: Again, your airplane is a Model AT-502B, serial number 0292. From paragraph (a)(3) of this AD, your winglet usage factor is 1.2.

4. Adjust the winglet TIS to account for the winglet usage factor. Multiply the winglet TIS (result of Step 1 above) by the winglet usage factor (result of Step 3 above).

Example: Winglet TIS is 500 hours X a winglet usage factor of 1.2. The adjusted winglet TIS is 600 hours.

5. Calculate the winglet usage penalty. Subtract the winglet TIS (result of Step 1 above) from the adjusted winglet TIS (result of Step 4 above).

Example:

$$\begin{aligned} \text{Adjusted winglet TIS} - \text{the winglet TIS} &= \text{winglet usage penalty.} \\ (600 \text{ hours}) - (500 \text{ hours TIS}) &= (100 \text{ hours TIS}). \end{aligned}$$

6. Adjust the safe life of your airplane to account for winglet usage. Subtract the winglet usage penalty (result of Step 5 above) result from the unmodified safe life from paragraph (a)(1) of this AD (result of Step 2 above).

Example:

$$\begin{aligned} \text{Unmodified safe life} - \text{winglet usage penalty} &= \text{adjusted safe life.} \\ (2,050 \text{ hours TIS}) - (100 \text{ hours TIS}) &= (1,950 \text{ hours TIS}). \end{aligned}$$

7. If you remove the winglets from your airplane prior to further flight or no longer have the winglets installed on your airplane, the safe life of your airplane is the adjusted safe life (result of Step 6 above). Enter this number in paragraph (d)(1)(i) of this AD and the airplane logbook.

What If I Have the Marburger Winglet Installed as of the Effective Date of This AD and Plan to Operate My Airplane Without Removing the Winglet?

1. Review your airplane's logbook to determine your airplane's TIS without the winglets installed.

Example: A review of your airplane's logbook shows that you have accumulated 1,500 hours TIS, including 500 hours with the Marburger winglets installed. Therefore, your airplane's TIS without the winglets installed is 1,000 hours.

2. Determine your airplane's unmodified safe life from paragraph (a)(1) of this AD.

Example: Your airplane is a Model AT-502B, serial number 0292. From paragraph (a)(1) of this AD, the safe life of your airplane is 2,050 hours TIS.

All examples from hereon will be based on the Model AT-502B, serial number 0292 airplane.

3. Determine the winglet usage factor from paragraph (a)(3) of this AD.

Example: Again, your airplane is a Model AT-502B, serial number 0292. From paragraph (a)(3) of this AD, your winglet usage factor is 1.2.

4. Determine the potential winglet TIS. Subtract the TIS without the winglets installed (result of Step 1 above) from the unmodified safe life (result of Step 2 above).

Example:

$$\begin{aligned} \text{Unmodified safe life} - \text{TIS without winglets} &= \text{Potential winglet TIS.} \\ (2,050 \text{ hours TIS}) - (1,000 \text{ hours TIS}) &= (1,050 \text{ hours TIS}). \end{aligned}$$

5. Adjust the potential winglet TIS to account for the winglet usage factor. Divide the potential winglet TIS (result of Step 4 above) by the winglet usage factor (result of Step 3 above).

Example:

$$\begin{aligned} \text{Potential winglet TIS} \div \text{Winglet usage factor} &= \text{Adjusted potential winglet TIS.} \\ (1,050 \text{ hours TIS}) \div (1.2) &= (875 \text{ hours TIS}). \end{aligned}$$

6. Calculate the winglet usage penalty. Subtract the adjusted potential winglet TIS (result of Step 5 above) from the potential winglet TIS (result of Step 4 above).

Example:

$$\begin{aligned} \text{Potential winglet TIS} - \text{Adjusted potential winglet TIS} &= \text{Winglet usage penalty.} \\ (1,050 \text{ hours TIS}) - (875 \text{ hours TIS}) &= (175 \text{ hours TIS}). \end{aligned}$$

7. Adjust the safe life of your airplane to account for the winglet installation. Subtract the winglet usage penalty (result of Step 6 above) from the unmodified safe life from paragraph (a)(1) of this AD (result of Step 2 above).

Example:

$$\begin{aligned} \text{Unmodified safe life} - \text{Winglet usage penalty} &= \text{Adjusted safe life.} \\ (2,050 \text{ hours TIS}) - (175 \text{ hours TIS}) &= (1,875 \text{ hours TIS}). \end{aligned}$$

8. Enter the adjusted safe life (result of Step 7 above) in paragraph (d)(1)(i) of this AD and the airplane logbook.

What If I Install or Remove the Marburger Winglet From My Airplane in the Future?

If, at anytime in the future, you install or remove the Marburger winglet STC from your airplane, you must repeat the procedures in this Appendix to determine the airplane's safe life.

Issued in Kansas City, Missouri, on May 22, 2002.

Michael Gallagher,

Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 02-13423 Filed 6-3-02; 8:45 am]

BILLING CODE 4910-13-P