
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/AT/21 Amdt 2 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Airtractor AT-300, 400 and 500 Series Aeroplanes

**AD/AT/21
Amdt 3**

Wing Lower Spar Cap Safe Life - 2

2/2007

Applicability: Models AT-501, AT-502, AT-502A, AT-502B, and AT-503A aircraft.

Requirement: 1. The following table specifies the safe life of the wing lower spar cap for affected aircraft that do not incorporate and never have incorporated Marburger Enterprises Inc. winglets. Retire at or before reaching the safe lives listed.

Model	Serial Numbers	Safe Life
AT-501	0002 through 0061	4,531 hours TIS
AT-501	0062 and subsequent	7,693 hours TIS
AT-502	0003 and subsequent	1,650 hours TIS
AT-502A	0158 and subsequent	1,650 hours TIS
AT-502B	0187 through 0654, except 0643	1,650 hours TIS
AT-502B	6243, and 0655 through 0692	9,000 hours TIS
AT-502B	0693 through 0701	9,500 hours TIS
AT-502B	0702 and subsequent	9,800 hours TIS
AT-503A	0067 and subsequent	1,650 hours TIS

2. If piston powered aircraft have been converted to turbine power, use the limits for the corresponding serial number turbine powered aircraft.
3. Aircraft that have been modified to install lower spar caps, part numbers 21058-1 and 21058-2, should have a safe life of 9,800 hours TIS.
4. Some aircraft at some stage could have been fitted with Marburger Enterprises Inc. winglets. These winglets are installed in accordance with Supplemental Type Certificate (STC) SA00490LA. Use the winglet usage factor indicated in the table below, the wing lower spar cap safe life specified above, and the instructions included in FAA AD 2006-24-10 Appendix 1, to determine the new safe life for aircraft that incorporate or have incorporated Marburger winglets.

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Model	Serial Numbers	Winglet Usage Factor
AT-501	0002 through 0061	1.6
AT-501	0062 and subsequent	1.6
AT-502	0003 through 0236	1.6
AT-502A	0158 through 0238	1.6
AT-502A	0239 and subsequent	1.2
AT-502B	0187 and subsequent	1.2

Note 1: FAA AD 2006-24-10 Appendix 1 and Appendix 2 may be obtained from the FAA Internet web site www.airweb.faa.gov/rgl or by request to the Authority Internet address airworthiness.directives@casa.gov.au

5. Model AT-502B aircraft, serial number 0643, serial number 0655 and subsequent, and all other aircraft that have been modified with replacement spar caps, part number part numbers 21058-1 and 21058-2, are not eligible to have STC SA00490LA installed without additional fatigue data being provided to the FAA.
6. Modify the applicable aircraft records as follows to show the reduced safe life for the wing lower spar cap by using the information contained in Requirement 1 and Requirement 4 of this Directive, and FAA AD 2006-24-10 Appendix 1, as applicable:

Incorporate the following into the Aircraft Logbook, "In accordance with AD/AT/21 Amdt 3, (AD/AT/21 Amdt 2 or AD/AT/20 Amdt 4) the wing lower spar cap is life limited to ___".
7. Accomplish the actual replacement /modification in accordance with Snow Engineering Drawing No. 21050, Snow Engineering Service Letter No. 197 or No. 205, both revised 26 March 2001, as applicable.
8. To extend the safe life of the wing lower spar cap for certain aircraft, accomplish an eddy current inspection and modify the wing lower spar cap in accordance with the procedures included as part of the Alternative Method Of Compliance (AMOC) in Appendix 2 to FAA AD 2006-24-10.
9. For Model AT-502B aircraft, serial numbers 502B-0643 and 502B-0655 through 502B-0692: Cold work the left hand and right hand two outboard wing centre splice block bolt holes (four total) in the lower spar cap, in accordance with Snow Engineering Service Letter No. 244, dated 25 April 2005.

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For all affected aircraft: Aircraft that have the two-part modification accomplished in accordance with the applicable Snow Engineering Service Letters, but have oversized outboard bolt holes at the splice block, must obtain an AMOC from the FAA to determine applicable inspection intervals.

AMOCs approved for FAA AD 2001-10-04 and/or AD 2000-14-51 are not considered approved for AD 2006-24-10 (this Directive).

AMOCs approved for AD 2001-10-04 R1, AD 2002-11-03, AD 2002-11-05, AD 2002-11-05 R1, or AD 2002-26-05 are considered approved for AD 2006-24-10 (this Directive).

Note 2: FAA AD 2006-24-10 Amdt 39-14839 refers.

Compliance: Requirements 1, 2, 3 & 4: As specified in Requirements 1, 2, 3 & 4.

Requirement 5: As specified in Requirement 5.

Requirement 6: For aircraft previously affected by FAA AD 2002-26-05, within 10 hours time in service after 20 March 2003.

For aircraft not previously affected by FAA AD 2002-26-05, within 10 hours time in service after 15 February 2007, unless already accomplished.

Requirement 7: Upon reaching the safe life specified in Requirement 1 or as recalculated in Requirement 4, as applicable. If, as of the time of logbook entry as required by Requirement 6, the aircraft wing lower spar cap(s) is/are over or within 50 hours of the safe life, an additional 50 hours time in service is allowed to accomplish the replacement /modification.

Requirement 8: As specified in the inspection schedule included as part of the AMOC in Appendix 2.

Requirement 9: Before the accumulation of 2,000 hours time in service or within 100 hours time in service after 15 February 2007, whichever occurs later.

The initial compliance time for Requirement 6 remains unchanged by this issue of the Directive.

This Amendment becomes effective on 15 February 2007.

Airtractor AT-300, 400 and 500 Series Aeroplanes

AD/AT/21 Amdt 3 (continued)

Background: This Directive lowered the safe life for the wing lower spar cap for affected aircraft that was established in AD/AT/20, and further reduced the safe life for aircraft that incorporate or have incorporated Marburger Enterprises Inc. winglets. This Directive also requires an eddy current inspection immediately prior to the replacement/modification to detect and correct any crack in a bolt hole before it extends to the modified centre section of the wing. This Directive is the result of reports the FAA received of cracks originating in the outboard 3/8-inch hole of the main spar lower cap on affected aircraft at times lower than the established safe life.

Amendment 1 further reduced the safe life of the Models AT-502, AT-502B, and AT-503A aircraft, and added aircraft recently manufactured to the applicability of this Directive.

Amendment 2 allowed the use of an AMOC which involves the use of inspections and modifications and a new extended retirement life (8,000 Hours TTIS), in lieu of the safe lives specified in this AD.

Amendment 3 is issued in response to a new FAA AD. Since the issue of FAA AD 2002-26-05 (AD/AT/21) and 2002-11-05 R1 (AD/AT/20), apart from retaining the actions of these Directives, the FAA determined that additional aircraft should be added to the applicability section and also determined the safe life for new production aircraft and replacement spar caps should be extended. The FAA also developed an AMOC to the requirements of 2006-24-10 (this Directive). This Directive incorporates the requirements of AD/AT/20 Amdt 4.

The original issue of this Airworthiness Directive became effective on 10 July 2002.



David Villiers
Delegate of the Civil Aviation Safety Authority

4 January 2007