

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-CE-03-AD; Amendment 39-12890; AD 2002-19-10]

RIN 2120-AA64

Airworthiness Directives; Air Tractor, Inc. Models AT-402, AT-402A, AT-402B, AT-602, AT-802, and AT-802A Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to certain Air Tractor, Inc. (Air Tractor) Models AT-402, AT-402A, AT-402B, AT-602, AT-802, and AT-802A airplanes. This AD requires you to repetitively inspect the upper longeron and upper diagonal tube on the left hand side of the aft fuselage structure for cracks and contact the manufacturer for a repair scheme if cracks are found. This AD is the result of reports of excessive movement in the empennage due to the loss of fuselage torsional rigidity. The actions specified by this proposed AD are intended to prevent failure of the fuselage caused by cracks. Such failure could result in loss of control of the airplane.

DATES: This AD becomes effective on November 15, 2002.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of November 15, 2002.

ADDRESSES: You may get the service information referenced in this AD from Air Tractor, Incorporated, P.O. Box 485, Olney, Texas 76374. You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-03-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: Andrew D. McAnaul, Aerospace Engineer, FAA, Fort Worth Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone: (817) 222-5156; facsimile: (817) 222-5960.

SUPPLEMENTARY INFORMATION:

Discussion

What Events Have Caused This AD?

The FAA received reports of three occurrences of cracks found on the left hand upper longeron and upper diagonal support tubes where they intersect on the left hand side of the fuselage frame just forward of the vertical fin front spar attachment point on Air Tractor Model AT-602 airplanes. The crack starts at the forward edge of the weld where the tubes come together. We initially determined that the cracks resulted from high vertical tail loads during repeated hard turns. The cracks were found by the pilot and/or ground crew when they noticed excessive movement in the empennage due to the loss of torsional rigidity.

Air Tractor started installing extended reinforcement gussets on AT-402 and AT-802 series airplanes at the factory to alleviate the crack condition from occurring. The extended reinforcement gussets were intended to transfer the loads away from the joint. However, further cracking has been reported on 3 more AT-602 airplanes, as well as 1 AT-402 series, and 3 AT-802 series airplanes. One of the AT-802 airplanes had the extended reinforcement gusset installed during factory production. Air Tractor discovered that the factory installed extended reinforcement gusset, which runs further forward than the original gusset, is also cracking at the forward end of the extended gusset.

What Is the Potential Impact if FAA Took No Action?

This condition, if not corrected, could cause the fuselage to fail. Such failure could result in loss of control of the airplane.

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 Air Tractor Model AT-402, AT-402A, AT-402B, AT-602, AT-802, and AT-802A airplanes. This proposal was published in the Federal Register as a supplemental notice of proposed rulemaking (NPRM) on June 28, 2002 (67 FR 43568). The supplemental NPRM proposed to require you to repetitively inspect the upper longeron and upper diagonal tube on the left hand side of the aft fuselage structure for cracks and contact the manufacturer for a repair scheme if cracks are found.

Was the Public Invited to Comment?

The FAA encouraged interested persons to participate in the making of this amendment. We did not receive any comments on the proposed rule or on our determination of the cost to the public.

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 minor editorial corrections. We have determined that these minor corrections:

- provide 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.

Is There a Modification I Can Incorporate Instead of Repetitively Inspecting the Left Hand Upper Longeron and Upper Diagonal Tube of the Fuselage Frame for Cracks?

The FAA has determined that long-term continued operational safety would be better assured by design changes that remove the source of the problem rather than by repetitive inspections or other special procedures. With this in mind, FAA will continue to work with Air Tractor in performing further tests to determine the cause of the cracking and to provide a corrective action, terminating the need for repetitive inspections.

Why Are Air Tractor AT-500 Series Airplanes Not Included in This AD?

The Air Tractor AT-500 series airplanes have a similar design in the upper longeron in the aft fuselage structure. However, we have not received any reports of damage in this area on those airplanes. The only reports of damage are those previously referenced on the AT-402 series airplanes, Model AT-602 airplanes, and AT-802 series airplanes.

Air Tractor is currently researching this subject on the AT-500 series airplanes. Based on this research and if justified, we may propose additional rulemaking on this subject for these other airplanes.

Cost Impact

How Many Airplanes Does This AD Impact?

We estimate that this AD affects 248 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(s):

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
1 workhour x \$60 = \$60	No parts required	\$60	60 X 248 = \$14,880.

We have no method of determining the number of repairs or replacements each owner/operator would incur over the life of each of the affected airplanes based on the results of the proposed inspections. We have no way of determining the number of airplanes that may need such repair. The extent of damage may vary on each 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 "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).

2002-19-10 Air Tractor, Inc.: Amendment 39-12890; Docket No. 2002-CE-03-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.

Model	Serial No.
AT-402	All serial numbers beginning with 402-0694.
AT-402A	All serial numbers beginning with 402A-0738.
AT-402B	All serial numbers beginning with 402B-0966.
AT-602	All serial numbers.
AT-802	All serial numbers.
AT-802A	All serial numbers.

(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 failure of the empennage caused by cracks. Such failure could result in loss of control of the airplane.

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

Actions	Compliance	Procedures
(1) Inspect the upper longeron and upper diagonal tube on the left hand side of the fuselage frame, just forward of the vertical fin front spar attachment, for cracks.	Initially inspect within the next 100 hours time-in-service (TIS) after November 15, 2002 (the effective date of this AD) and thereafter at intervals not to exceed 100 hours TIS.	In accordance with Snow Engineering Co. Service Letter #195, dated February 4, 2000, and the applicable maintenance manual.

(2) If cracks are found during any inspection required in paragraph (d)(1) of this AD, accomplish the following:	Obtain and incorporate the repair scheme prior to further flight after inspection in which the cracks are found.	In accordance the with the repair scheme obtained from Air Tractor, Incorporated, P.O. Box 485, Olney, Texas 76374.
(i) Obtain a repair scheme from the manufacturer through the FAA at the address specified in paragraph (f) of this AD; and	Continue to inspect as specified in paragraph (d)(1) of this AD.	Obtain this repair scheme through the FAA at the address specified in paragraph (f) of this AD.
(ii) Incorporate this repair scheme.		

(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, Fort Worth 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, Fort Worth 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 Andrew D. McAnaul, Aerospace Engineer, FAA, Fort Worth Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone: (817) 222-5156; facsimile: (817) 222-5960.

(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 Snow Engineering Co. Service Letter #195, dated February 4, 2000. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may get copies from Air Tractor, Incorporated, P.O. Box 485, Olney, Texas 76374. You may view 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 November 15, 2002.

Issued in Kansas City, Missouri, on September 18, 2002.
Michael Gallagher,
Manager, Small Airplane Directorate, Aircraft Certification Service.
[FR Doc. 02-24404 Filed 9-30-02; 8:45 am]
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