

## DEPARTMENT OF TRANSPORTATION

## Federal Aviation Administration

## 14 CFR Part 39

[Docket No. 2000-CE-59-AD; Amendment 39-13100; AD 2003-07-04]

RIN 2120-AA64

**Airworthiness Directives; Air Tractor, Inc. Models AT-300, AT-400, AT-400A, AT-401, AT-401B, AT-402, AT-402A, AT-402B, AT-501, AT-502, and AT-502B 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-300, AT-400, AT-400A, AT-401, AT-401B, AT-402, AT-402A, AT-402B, AT-501, AT-502, and AT-502B airplanes. This AD requires you to repetitively inspect the vertical fin front spar fitting for cracks and replace any cracked fitting found. This AD also requires you to install a steel doubler as a terminating action for the repetitive inspections. This AD is the result of a report of failure of a 1/4-inch thick vertical fin front spar fitting. The actions specified by this AD are intended to prevent failure of the vertical fin front spar fitting, which could result in failure of the rear spar fitting. Such failures could lead to loss of directional control of the airplane.

**DATES:** This AD becomes effective on May 22, 2003.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of May 22, 2003.

**ADDRESSES:** You may get the service information referenced in this AD from Air Tractor, Inc., PO 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. 2000-CE-59-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:**

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**SUPPLEMENTARY INFORMATION:**

## Discussion

*What Events have Caused This AD?*

The FAA received reports of two incidents, one in 1994 and one in 1995, in which the vertical fin front spar fitting and rear spar fitting failed, while in flight, on an Air Tractor Model AT-402 and a Model AT-502 airplane. Failure of the vertical fin front spar fitting causes the rear spar fitting to fail. These failures result in the vertical tail lying over against the elevator creating difficulty in controlling the airplane.

These vertical fin front spar fittings were made of 3/16-inch thick aluminum. Investigation revealed that Air Tractor models with the 3/16-inch front spar attach plates installed were subject to fatigue failure.

This unsafe condition was addressed in AD 95-20-06, Amendment 39-9384. AD 95-20-06 applied to airplanes with 3/16-inch thick and 1/4-inch thick aluminum fin front spar fittings installed.

In 1997, we issued AD 97-14-05, Amendment 39-10063, that supersedes AD 95-20-06. Further investigation revealed that only Air Tractor models with a 3/16-inch thick fin front spar fitting installed were developing cracks. Therefore, we issued AD 97-14-05 to remove Air Tractor models with a 1/4-inch thick fin front spar fitting installed from the applicability.

Recently, a Model AT-502 airplane was found with a cracked 1/4-inch thick fin front spar fitting. The crack was found during a routine inspection. The rear spar had not yet failed. This recent finding demonstrates that Air Tractor models with a 1/4-inch thick fin front spar fitting are subject to fatigue failure.

*What Is the Potential Impact if FAA Took No Action?*

This condition, if not detected and corrected, could result in structural failure of the vertical fin front spar fitting and eventually the rear spar fitting. Such failure could result in loss of directional 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 Models AT-300, AT-400, AT-400A, AT-401, AT-401B, AT-402, AT-402A, AT-402B, AT-501, AT-502, and AT-502B airplanes. This proposal was published in the **Federal Register** as a notice of proposed rulemaking (NPRM) on December 27, 2002 (67 FR 79008). The NPRM proposed to require you to repetitively inspect the vertical fin front

spar fitting for cracks and replace any cracked fitting found. The NPRM also proposed to require you to install a steel doubler as a terminating action for the repetitive inspections.

*Was the Public Invited To Comment?*

The FAA encouraged interested persons to participate in the making of this amendment. The following presents the comment received on the proposal and FAA's response:

**Comment Issue: Change the Serial Number Applicability for Certain Affected Airplane Models**

*What Is the Commenter's Concern?*

The commenter states that the serial number affectivity for Air Tractor Models AT-401 and AT-401B should include the notation that specifically designates serial numbers that have been converted to turbine powerplants as specified in Snow Engineering Co. Service Letter #155, Revised November 27, 2002.

*What Is FAA's Response to the Concern?*

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

**FAA's Determination**

*What Is FAA's Final Determination on This Issue?*

We carefully reviewed all available information related to the subject presented above and determined that air safety and the public interest require the adoption of the rule as proposed except for the changes discussed above and minor editorial corrections. We have determined that these changes and 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.

*How Does the Revision to 14 CFR Part 39 Affect This AD?*

On July 10, 2002, FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs FAA's AD system. This regulation now includes material that relates to special flight permits, alternative methods of compliance, and altered products. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.