

[Federal Register Volume 76, Number 34 (Friday, February 18, 2011)]
[Rules and Regulations]
[Pages 9495-9498]
From the Federal Register Online via the Government Printing Office [www.gpo.gov]
[FR Doc No: 2011-3653]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0827; Directorate Identifier 2010-CE-029-AD; Amendment 39-16552; AD 2010-17-18 R1]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final regulatory flexibility analysis (FRFA).

SUMMARY: This document incorporates the FRFA for Airworthiness Directive (AD) 2010-17-18, which applied to these products: Air Tractor, Inc. (AirTractor) Models AT-802 and AT-802A airplanes. We have since revised AD 2010-17-18, which requires you to repetitively inspect (using the eddy current method) the two outboard fastener holes in both of the wing main spar lower caps at the center splice joint for cracks and repair or replace any cracked spar, and changes the safe life for certain serial number (SN) ranges. Our initial analysis indicated that a FRFA was necessary for AD 2010-17-18. We issued AD 2010-17-18 without the FRFA to immediately address the unsafe condition. This action presents the FRFA for AD 2010-17-18, which is required to be published in the Federal Register.

DATES: This FRFA is effective February 18, 2011.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

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SUPPLEMENTARY INFORMATION:

Discussion

On August 11, 2010, we issued AD 2010-17-18, amendment 39-16412 (75 FR 52255, August 25, 2010), for all Air Tractor Models AT-802 and AT-802A airplanes. That AD required you to repetitively inspect (using the eddy current method) the two outboard fastener holes in both of the wing main spar lower caps at the center splice joint for cracks and repair or replace any cracked spar, and changes the safe life for certain SN ranges. That AD resulted from the FAA's evaluation of service information issued by Air Tractor and our determination that we needed to add inspections, add modifications, and change the safe life for certain SN ranges. We issued that AD to detect and correct cracks in the wing main spar lower cap at the center splice joint, which could result in failure of the spar cap and lead to wing separation and loss of control of the airplane.

Reason for This Action

The Regulatory Flexibility Act of 1980 (Pub. L. 96-354) (RFA) establishes as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation.

To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The RFA covers a wide range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. In accordance with Section 608 of the Regulatory Flexibility Act, an agency head may waive or delay completion of some or all of the requirements of Section 603 by providing a written finding that this final rule is being promulgated in response to an emergency that makes compliance or timely compliance with the provisions of Section 603 impracticable.

Our initial analysis indicated that a FRFA was necessary for this action. We issued AD 2010-17-18 without the FRFA to immediately address the unsafe condition.

On December 16, 2010, we issued AD 2010-17-18 R1, amendment 39-16552 (75 FR 82219, December 30, 2010), for certain Air Tractor Models AT-802 and AT-802A airplanes. This AD retains the actions of AD 2010-17-18 and reduces the applicability from all SN beginning with SN-0001 as required by the previous AD to SN-0001 through SN-0269. This AD was prompted by our evaluation of a comment from David Ligon, Air Tractor, and our determination that we should reduce the applicability from that already required by the previous AD.

This action presents the FRFA, which is required to be published in the Federal Register.

Final Regulatory Flexibility Analysis

On August 25, 2010, the Federal Aviation Administration (FAA) issued Airworthiness Directive (AD 2010-17-18) for Air Tractor Models AT-802 and AT-802A airplanes. The FAA determined that the final rule was being issued in response to an emergency and that timely compliance with the Regulatory Flexibility Act of 1980 (Pub. L. 96-354) (RFA) was impracticable. This analysis fulfills the RFA requirements.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

This final rule will have a significant impact on a substantial number of small entities. In accordance with the requirements in the RFA, we have performed this FRFA and address the following requirements:

- (1) A succinct statement of the need for, and objectives of, the rule.
- (2) A summary of the significant issues raised by the public comments.
- (3) A description and an estimate of the number of small entities.
- (4) A description of the projected reporting, recordkeeping, and other compliance requirements.
- (5) A description of the steps the agency has taken to minimize the significant adverse economic impact on small entities.
- (6) An identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap, or conflict with the final rule.

Next, we address each of those individual requirements.

- (1) A succinct statement of the need for, and objectives of, the rule.

This AD will improve the ability of operators flying Models Air Tractor 802 and 802A airplanes to discover and to correct cracks in the wing main spar lower cap at the center splice joint, which could result in the failure of the spar cap and lead to the wing separating from the airplane body.

The FAA is responsible for the safety of flight in the United States and for the safety of U.S.-registered aircraft and U.S. operations. The FAA is also responsible for issuing rules affecting the safety of air commerce and national security. The FAA's authority to issue the rules on aviation safety is found in Title 49 of the United States Code. Subtitle I, section 106(g) describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. Section 40101(d)(1) provides that the Administrator shall consider in the public interest, among other matters, assigning, maintaining, and enhancing safety and security as the highest priorities in air commerce. Further, the FAA has broad authority under section 44701(a)(5) to prescribe regulations governing the practices, methods, and procedures the Administrator finds necessary for safety in air commerce and national security. The FAA finds this action necessary to prevent a potential hazard to Air Tractor Models AT-802 and AT-802A airplanes engaged primarily in agricultural and firefighting operations.

- (2) A summary of the significant issues raised by the public comments.

The FAA received one comment on this final rule. Air Tractor commented that there should be no additional inspections required for their AT-802 and AT-802A airplanes with serial numbers greater than 0269. We concurred and on December 30, 2010, issued AD 2010-17-18 R1 to reduce the applicability of AD 2010-17-18 only to Models AT-802 and AT-802A serial numbers 0001 through 0269.

- (3) A description and an estimate of the number of small entities.

There are 52 of these affected Air Tractor airplanes operating in the United States. Of these 52 airplanes, 46 are operated by the private sector and 6 are operated by the United States State Department. Of the 46 operated by the 34 entities in the private sector, 25 operate only 1 airplane, 1 operates 2 airplanes, 5 operate 3 airplanes, and 1 operates 4 airplanes. The Small Business Administration classifies operators with less than 1,500 employees as small businesses. All of the private entities are small entities with fewer than 1,500 employees.

- (4) A description of the projected reporting, recordkeeping, and other compliance requirements.

This final rule changes the existing requirement that any inspection finding a crack must be reported to the FAA by requiring the operator to use a specific one-page reporting form that has been approved by the Office of Management and Budget for that report.

The final rule requires operators of Air Tractor serial numbers AT-802-0092 through 0101 and AT-802A-0092 through 0101:

- To perform, using the eddy current method, two inspections at 1,700 time-in-service (TIS) hours, at 2,500 TIS hours, and at 3,300 TIS hours (at a cost of \$650 an inspection) of the two outboard fastener holes in both of the wing main spar lower caps at the center splice joint for cracks and to repair or replace any cracked spar.
- To install at 4,100 TIS hours a center web plate and splice blocks (at a cost of \$25,500).

Operators of Air Tractor serial numbers AT-802-0102 through 0178 and AT-802A-0102 through 0178 to perform using the eddy current method, two inspections at 5,500 TIS hours and at 6,600 TIS hours (at a cost of \$650 an inspection) of the two outboard fastener holes in both of the wing main spar lower caps at the center splice joint for cracks and to repair or replace any cracked spar.

We determined that an average AT-802 or AT-802A lasts 40 years before it leaves service in the United States. We also determined that it flies an average of 450 hours a year. Thus, an AT-802 or AT-802A accumulates an average of 18,000 TIS hours before it leaves service in the United States. All of the affected airplanes (AT-802 0092-0178 and AT-802A 0092-0178) were built between 2000 and 2004.

The baseline from which the FAA calculated the incremental costs to comply with Air Tractor AD 2010-17-18 is compliance with the previous Air Tractor AD (AD 2010-13-08) published in the Federal Register on June 23, 2010. This earlier AD addressed Air Tractor Airplane Model AT-802 serial numbers 0001 through 0091 and Model AT-802A serial numbers 0001 through 0091.

This AD imposed no new requirements beyond those in AD 2010-13-08 on Air Tractor Models AT-802 serial numbers 0001 through 0091 and Model AT-802A serial numbers 0001 through 0091.

As previously noted, this AD also addressed Air Tractor Model AT-802 serial numbers 0179 forward and Model AT-802A serial numbers 0179 forward. However, the December 30, 2010, AD removed these airplanes from compliance with this AD.

Thus, in comparison with AD 2010-13-08, this AD affects Model AT-802 serial numbers 0092 through 0178 and Model AT-802A serial numbers 0092 through 0178 in service in the United States.

For the purposes of this analysis, there are two different categories within each of these two models. Category 1 consists of Model AT-802 serial numbers 0092 through 0101 and Model AT-802A serial numbers 0092 through 0101, which were manufactured in 2000. Category 2 consists of Model AT-802 serial numbers 0102 through 0178 and Model AT-802A serial numbers 0102 through 0178 manufactured between 2000 through 2004. As seen in Table 1, there are only 6 category 1 airplanes and 40 category 2 airplanes.

Table 1—Numbers of Affected AT-802 and AT-802A Airplanes in Private Operations by Category and by Year of Manufacture

Manufacture year	Category		Total
	1	2	
2000	6	4	10
2001		10	10
2002		6	6
2003		13	13
2004		7	7
Total	6	40	46

For category 1 airplanes, this AD requires that the operator must perform three eddy current inspections (at 1,700 TIS hours, at 2,500 TIS hours, and at 3,300 TIS hours), each inspection costing \$650. However, as all of these airplanes were manufactured in 2000 and, given an average of 450 annual TIS hours, they are already, on average, at 4,050 TIS hours. Nevertheless, the FAA assumes that these six airplanes will need one inspection, which will be taken in 2011.

The AD also reduced their spar cap maximum safe life from 8,163 TIS hours to 4,100 TIS hours. However, the operator can extend the spar cap maximum safe life from 4,100 hours to 8,000 hours by spending \$25,500 to install a center web plate and splice blocks. The FAA assumes that all of these installations will occur in 2012. Finally, although the spar cap has to be replaced (at a cost of \$81,175) by 8,000 TIS hours, this is required under AD 2010-13-08.

For category 2 airplanes, this AD reduced their spar cap maximum safe life from 8,163 TIS hours to 5,500 TIS hours. However, if the operator performs two eddy current inspections (at 5,500

TIS hours and at 6,600 TIS hours), each inspection costing \$650, the spar cap maximum safe life can be extended to 8,000 TIS hours. Given an average of 450 annual TIS hours, these airplanes will have their first inspection (at 5,500 TIS hours) 12 years after they were manufactured and will have their second inspection 3 years later (after having an average of 1,350 TIS hours during those 3 years). As these airplanes were manufactured between late 2000 and 2004, the FAA assumes that the 2000 airplanes will have their first inspection in 2012 and the second inspection in 2015; the 2001 airplanes will have their first inspection in 2013 and the second inspection in 2016, etc.

The FAA uses a 10-year period of analysis (2011-2020) because that is when nearly all of the compliance expenditures will be made. The FAA also uses a 7 percent discount rate to calculate the present values of the costs.

The AD does not require any additional inspections after the replacement spar has been installed because the replacement spars are higher quality than the original equipment.

Thus, the AD will impose two types of compliance costs. The first are the costs from the inspections. The second are the costs to the category 1 Air Tractor operators that will need to install a center web plate and splice blocks at 4,100 TIS hours.

As seen in Table 2, the cost to comply with the AD requirements for inspections during the ten-year period would be \$55,900, which, using a 7 percent discount rate, has a present value of \$39,260.

Table 2—Total and Present Value Compliance Costs To Comply With the Inspections Required by the AD [2011-2020]

Manufacture year	Number of inspections by year										Total
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
2000 (Cat 1)	6	0	0	0	0	0	0	0	0	0	6
2000 (Cat 2)	0	4	0	0	4	0	0	0	0	0	8
2001	0	0	10	0	0	10	0	0	0	0	20
2002	0	0	0	6	0	0	6	0	0	0	12
2003	0	0	0	0	13	0	0	13	0	0	26
2004	0	0	0	0	0	7	0	0	7	0	14
Total	6	4	10	6	17	17	6	13	7	0	86
Total Cost	\$3,900	\$2,600	\$6,500	\$3,900	\$11,050	\$11,050	\$3,900	\$8,450	\$4,550	\$0	\$55,900
Present Value	\$3,645	\$2,271	\$5,306	\$2,975	\$7,878	\$7,363	\$2,429	\$4,918	\$2,475	\$0	\$39,260

Each of the 6 category 1 Air Tractor airplane operators will need to spend \$25,500 to install the center web plate and splice blocks in 2012, which has a present value of \$22,273 using a 7 percent discount rate. The total cost to install this equipment on these 6 airplanes is \$153,000, which has a present value of \$133,638 using a 7 percent discount rate.

Thus, the total cost would be \$208,900, which has a present value of \$172,898 using a 7 percent discount rate.

However, these costs are unequally distributed across the 34 operators. The six category 1 Air Tractor airplane operators will need to spend \$26,150 an airplane while the category 2 Air Tractor airplane operators will need to spend between \$650 and \$1,300 an airplane.

(5) A description of the steps the agency has taken to minimize the significant economic impact of the final rule on small entities.

The FAA is responsible for the safety of U.S.-registered aircraft and U.S. operators. The FAA has not identified any significant alternatives to this final rule that accomplish the stated objectives of applicable statutes, and which minimize any significant economic impact of the final rule SFAR on small entities.

(6) An identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap, or conflict with the final rule.

The FAA knows of no other Federal rules which duplicate, overlap, or conflict with the final rule.

Determination of Significant Impact

As discussed in the compliance cost section, all of these operators are small businesses. Further, nearly all of them are privately held businesses that do not file reports that the FAA can access to determine annual revenues. However, the FAA can determine that the average value of an Air Tractor Model AT-800A serial number 0091-0101 is about \$650,000. This rule requires the 6 operators of these airplanes to spend about 4 percent (\$25,500) of the value of the airplane on a repair. The FAA believes that this magnitude of an expenditure could place these six operators in some financial difficulty.

Therefore, this final rule will have a significant economic impact on a substantial number of small entities.

Issued in Kansas City, Missouri, on February 11, 2011.

John R. Colomy,
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Aircraft Certification Service.
[FR Doc. 2011-3653 Filed 2-17-11; 8:45 am]
BILLING CODE 4910-13-P