

[Federal Register: March 4, 2008 (Volume 73, Number 43)]
[Rules and Regulations]
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[DOCID:fr04mr08-12]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-28431; Directorate Identifier 2007-CE-050-AD; Amendment 39-15405; AD 2008-05-11]

RIN 2120-AA64

Airworthiness Directives; Alexandria Aircraft, LLC Models 17-30, 17-31, 17-30A, 17-31A, and 17-31ATC Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) to supersede AD 76-23-03 R1, which applies to certain Alexandria Aircraft, LLC Models 17-30, 17-31, 17-30A, and 17-31A airplanes. AD 76-23-03 R1 currently requires you to inspect the muffler and tailpipe assemblies for cracks and inspect the exhaust assembly for freedom of movement at the ball joints. Since we issued AD 76-23-03-R1, we have received additional reports of in-flight exhaust system failures. Consequently, this AD reduces the exhaust system inspection interval; requires a more detailed inspection of the muffler; and requires replacement, reconditioning, or repair of the exhaust system if cracks or defects are found. This AD also requires P-lead rerouting. We are issuing this AD to detect and correct cracks in the exhaust system, which could result in heat damage to magneto electrical wiring and smoke in the cockpit. This failure could lead to loss of engine power and/or a fire in the engine compartment.

DATES: This AD becomes effective on April 8, 2008.

On April 8, 2008, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

ADDRESSES: For service information identified in this AD, contact Bellanca/ Alexandria Aircraft LLC, 2504 Aga Drive, Alexandria, MN 56308; phone: (320) 763-4088; fax: (320) 763-4095; Internet: <http://www.bellanca-aircraft.com>.

To view the AD docket, go to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or on the Internet at <http://www.regulations.gov>. The docket number is FAA-2007-28431; Directorate Identifier 2007-CE-050-AD.

FOR FURTHER INFORMATION CONTACT: Michael Downs, Aerospace Engineer, FAA, Chicago Aircraft Certification Office, 2300 East Devon Avenue, Room 107, Des Plaines, Illinois 60018; telephone: (847) 294-7870; fax: (847) 294-7834.

SUPPLEMENTARY INFORMATION:

Discussion

On August 24, 2007, 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 Alexandria Aircraft, LLC Models 17-30, 17-31, 17-30A, 17-31A, and 17-31ATC airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on August 31, 2007 (72 FR 50297, August 31, 2007). The NPRM proposed to supersede AD 76-23-03 R1 and would reduce the exhaust system inspection interval; require a more detailed inspection of the muffler; and require replacement, reconditioning, or repair of the exhaust system if cracks or defects are found. The NPRM also proposed to require P-lead rerouting.

The NPRM was a result of additional reports of in-flight exhaust system failures since AD 76-23-03 R1 was issued.

Comments

We provided the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and FAA's response to each comment:

Comment Issue No. 1: Remove the Models 17-31A and 17-31ATC Airplanes From the AD

Dewey D. Elsik and Randall L. Pittman request that the FAA remove the Models 17-31A and 17-31ATC airplanes from the AD and only have it apply to Models 17-30 and 17-30A airplanes. The commenters state that the exhaust system design is different based on turbo-normalization components and the Lycoming engine version. The commenters point out that this is why the accidents only affect the Models 17-30 and 17-30A airplanes.

The FAA acknowledges that there are variations in design. However, the type design data shows that the exhaust systems of the Models 17-31A and 17-30A are essentially identical, except for minor geometry variations to accommodate the different engine geometry. Both exhaust designs were assembled using internal welds where adequate inspection is not possible without disassembly. The Models 17-30, 17-30A, 17-31, and 17-31A should all be subject to the inspection requirements proposed in the NPRM. The Model 17-31TC is not part of the NPRM as written, and the Model 17-31ATC is exempt from the inspections because the exhaust systems of these models are significantly different and are not susceptible to the referenced failures. The Model 17-31ATC is included in the P-Lead rerouting requirement of the NPRM because its P-Lead configuration is essentially identical to that of the Model 17-30A. This requirement is in the NPRM to prevent loss of engine power and/or a fire in the engine compartment because both of its P-Leads are routed together to a common point through the firewall in close proximity to the exhaust system.

We are making no changes to the final rule AD action based on this comment.

Comment Issue No. 2: Only Apply the AD to Those Airplanes Included in the National Transportation Safety Board's (NTSB) Listing of Accidents

Dewey D. Elsik and Dave Taylor propose that the FAA remove the Models 17-30, 17-31A, and 17-31ATC airplanes from the AD because they cannot find an exhaust system failure for these airplanes included in the NTSB's listing of accidents.

We disagree with the idea of removing these airplanes from the AD because they do not show up in the NTSB's listing of accidents. An AD is issued when "an unsafe condition exists in the product" and "the condition is likely to exist or develop in other products of the same type design." If the type design is the same or similar to another airplane's where there has been an accident, then the AD should also apply to those airplanes with the same or similar type design if the FAA determines there is an unsafe condition. It is not necessary to wait for an accident to issue an AD. The lack of failures on the referenced airplanes could also be attributed to the following:

- The Model 17-31A represents only 13 percent of the airplanes affected in the exhaust inspection requirement of the AD;
- The Model 17-31ATC represents only 14 percent of the airplanes affected by the P-Lead rerouting portion of the AD;
- This sampling is statistically too small to be used as an argument to exclude these models from the AD; and
- Service history shows that the Model 17-31A exhaust system experiences cracks and requires repairs no different than that of the Models 17-30 and 17-30A. We are making no changes to the final rule AD action based on this comment.

Comment Issue No. 3: Only the Exhaust Systems With V-clamps and Internal Welds Should Be Affected by the Increased Inspection Interval of 50 Hours TIS Instead of the 100 Hours TIS as Currently Required by AD 76-23-03 R1

Edward A. Connell requests that the FAA only require airplanes with exhaust systems with V-clamps and internal welds to inspect at intervals of 50 hours instead of the 100-hour intervals of AD 76-23-03 R1. Mr. Connell states that the AD is based on the original design of the exhaust system on the early Model 17-30A airplanes. This design uses a V-clamp to attach the tailpipe to the muffler, which has been the primary location of the reported exhaust system failures. This design also uses internal welds extensively in its construction and is very difficult to inspect. Mr. Connell explains that many Model 17-30A exhaust systems have been either repaired or replaced through FAA-approved repair facilities with a newer design that replaces the V-clamp with a three-bolt clamp arrangement. This newer design also included external welds to replace the internal welds. These externally welded exhaust systems are much easier to inspect and do not require the disassembly specified in the service letter. Mr. Connell proposes that the NPRM be revised so that only the exhaust systems with the V-clamps and the internal welds are subject to the increased 50-hour inspection intervals.

The FAA partially agrees. We are not changing the applicability of the AD because the type design data shows all affected airplanes were manufactured with internal welds that can only be inspected through disassembly. In addition, although difficult to adjust, the V-clamp has not been identified as the root cause of the exhaust system failures. We acknowledge that airplanes with modified exhausts that are similar to the replacement parts configuration as presented in the service letter may provide an acceptable level of safety to exempt them from the increased inspection intervals of 50 hours TIS. Those owners/operators may apply for an alternative method of compliance (AMOC) using the procedures in 14 CFR 39.19 and the AD.

We are making no changes to the final rule AD action based on this comment.

Comment Issue No. 4: Apply the AD Only to the Model 17-30A

Ronald Quillen states that the unsafe condition is shown to exist or develop only on the Model 17-30A airplanes. The commenter bases this on the following observations:

- There have only been a total of eight NTSB-reported accidents relating to exhaust system and/or P-Lead failures, which represents less than 1 percent of the total airplanes produced and all failures occurred on Model 17-30A airplanes;

- Of these eight failures, only three occurred after the issuance of AD 76-23-03 R1 (effective November 7, 1986). Three additional accidents occurred in 1985, just prior to the effective date of AD 76-23-03 R1. There was one other accident in 1977 and the first was in October 1976, which prompted the original AD 76-23-03.
- The eight NTSB reports all apply to the early production years (prior to 1978-1979) of the Model 17-30A airplanes before the exhaust system was redesigned.
- There are no NTSB-reported failures for Model 17-30A airplanes manufactured after 1978-1979 or for any other affected airplane model.
- Failure of early year exhaust systems would direct gasses directly toward an electrical harness, which would exit a cannon connector parallel to the firewall and then be oriented inboard and downward.
- The later production year exhaust systems do not direct gasses directly toward the electrical harness as it exits the cannon connector perpendicular to the firewall and above the point of failure, thus the reason for no failures reported on these later production exhaust systems.
- Both the Lycoming-powered Model 17-31TC airplane (not included in the AD) and the Model 17-31ATC (not included in AD 76-23-03 R1, but included in the NPRM), have entirely different exhaust systems and do not have any ball joints shown to be prone to failure. Both models do not seem to have the unsafe condition, and it does not seem likely that the condition will exist or develop in the future.

The FAA partially agrees. We agree that design changes to exhaust systems have been many over the years. However, all designs have included internal welds where inspection is not possible without disassembly. Also there has not been an exhaust system design change to address the issues of the AD until the exhaust system design defined in the replacement parts of Bellanca/AALC Service Letter B-110. Previous service letters, AD 76-23-03 R1, and the NPRM all address one failure mode of the hanger/mount/support/muffler/tailpipe/ball joint/welds of all airplane models, except for the Models 17-31TC and 17-31ATC airplanes. As specified earlier, these latter models have internal welds, the Model 17-31TC is not part of the AD, and the Model 17-ATC is not affected by the inspection requirement in the AD. The type design of the P-Lead configuration of the 17-31ATC is the same as that of the accident airplanes, which is why this airplane model is included in the AD, but only in the P-Lead rerouting requirement. This design must be modified to separate leads where they penetrate the firewall so one heat source (whether from directed exhaust gasses or other source) does not melt the insulation on both leads and short them to ground, which could cause loss of engine power and/or a fire in the engine compartment. If owners/operators of Model 17-31ATC already have a separated P-Lead configuration and believe the AD should not apply to them, then they may apply for an AMOC following the procedures in 14 CFR 39.19 and this AD.

We are making no changes to the final rule AD action based on this comment.

Comment Issue No. 5: Exclude the Model 17-31ATC From the AD

Randall L. Pittman, Ronald J. Quillen, and Edwin A. Stephan request that the FAA exclude the Model 17-31ATC from the AD based on:

1. Exhaust design or maintenance deficiencies related to P-Lead failures in Models 17-31ATC or 17-31TC are non-existent and not likely to develop. Since the Model 17-31TC is not included in the NPRM and both models share the same exhaust system, this justifies removing the Model 17-31ATC from the AD.

2. There has not been a single NTSB accident report for an exhaust or P-Lead failure on these airplanes.

3. The exhaust system design of the Model 17-31ATC is different than that of the Model 17-30 airplanes. It does not share the same geometry or construction details, which could lead to P-Lead failure as in the Model 17-30 airplanes.

4. There is no design basis of commonality to require the AD to affect the Model 17-31ATC airplanes. The P-Lead modification instructions specified in the NPRM do not apply to the Model 17-31ATC airplanes; the instructions are unique and specific for the Models 17-30 and 17-30A airplanes. Thus, an adequate comment period has not been provided for the Model 17-31ATC airplanes because no appropriate reference material and instructions have been provided in the NPRM.

The FAA does not concur with exempting the Model 17-31 ATC airplanes from the AD, as follows:

1. The type design for the Model 17-31ATC airplanes does not have the same P-Lead configuration as the Model 17-31TC airplanes. The P-Lead configuration of the Model 17-31ATC is basically the same as the accident airplanes. The NTSB reports show that the loss of engine power and/or a fire in the engine compartment occurred when the exhaust system failed and allowed hot exhaust gas to melt the insulation on the P-Lead wires, which caused them to short in close proximity to the exhaust system. The P-Lead rerouting portion of the AD would correct this problem by separating the P-Leads and relocating them away from the exhaust system. Therefore, the Model 17-31ATC will remain as part of the Applicability of the AD.

2. The Model 17-31ATC airplanes have not been reported with a failure similar to the accident airplanes. This is most likely due to the small population that the Model 17-31ATC airplanes represent. The Models 17-31 and 17-31A airplanes also represent a small fleet size. The fleet size for the Models 17-31, 17-31A, and 17-31ATC airplanes are 1 percent, 12 percent, and 11 percent, respectively. The sampling is statistically not large enough to be used as criteria to exclude these airplanes from the AD. The similar P-Lead configuration design of the Model 17-30A that was involved in the NTSB-documented accidents justifies including all of these airplanes in the AD.

3. We agree that the exhaust system design of the Model 17-31ATC is different than the Model 17-30 airplanes. This is the reason why the Model 17-31ATC airplanes are not subject to the exhaust system inspections proposed in the NPRM. However, the type design for the P-Lead configuration for the Model 17-31ATC airplanes is basically the same as that of the accident airplanes, thus making the Model 17-31ATC airplanes subject to the proposed P-Lead rerouting requirement in the NPRM.

4. The Bellanca/AALC Service Kit SK1072 is intended to be used for all the airplanes specified in the NPRM, including the Model 17-31ATC airplanes. The procedures in the service information address the Teledyne-powered airplanes to illustrate details because they are most representative of the fleet. The service information includes notes in the instructions that extend to the other affected airplane models. As previously discussed, the Model 17-31TC is not part of the NPRM. Because the service information does apply to the Model 17-31ATC airplanes, there was adequate reference material available for comment.

We are making no changes to the final rule AD action based on this comment.

Comment Issue No. 6: Withdraw the NPRM

Ronald J. Quillen requests that the FAA withdraw the NPRM because the existing ADs are sufficient, and the accident data supports this. The commenter states that the type design for the Models 17-30, 17-31, 17-30A, and 17-31A airplane exhaust systems are identical (they were built at the factory during the same production time frame) except for minor differences due to geometry variations. All were manufactured with internal welds. This includes all assembled using internal welds. The commenter sets up time frames with the accidents to show that the current ADs are working, and the events do not justify the AD.

The commenter also believes the FAA should withdraw the NPRM because of inaccurate statements made in both the NRPM and Airworthiness Concern Sheet (ACS) as part of the Small Airplane Directorate's Airworthiness Concern Process. These are as follows:

- In the NPRM: It states that AD 76-23-03 R1 "applies to certain Alexandria Aircraft, LLC (Bellanca) Models 17-30, 17-31, 17-31A, and 17-31ATC airplanes." The commenter states that AD 76-23-03 R1 did not apply to Model 17-31ATC airplanes.

- In the ACS: It states "Seven other similar accidents occurred since 1986 when AD 76-23-03 was amended to solve this problem." The commenter states that actually five accidents occurred prior to this AD, three in 1985 and two prior to that date with only three accidents following the issuance of the AD. Of the three that followed the AD, they were separated by 8 and 11 years respectively, which is clearly a dramatic reduction in the reported accident rate and frequency and likely directly attributable to the fact that the current AD is working. Of these accident airplanes, all were pre-1985 production Model 17-30A airplanes and shared the weld defect design of the exhaust systems and P-Lead failure likely due to routing directly aft of the exhaust system failure point.

Edwin A. Stephan requests the FAA withdraw the NPRM because the instructions for commenting on the AD were confusing. The NPRM directed the commenters to the Docket Management System (DMS) at <http://dms.dot.gov>, and the DMS directed the commenters to the Federal Document Management System (FDMS) at <http://regulations.gov>. The commenter believes this discouraged comments on the NPRM and may have reduced or prevented comments.

We disagree with withdrawing the NPRM. The common design of all of these airplanes that justifies the need for further AD action is the internal welds, which require exhaust system disassembly to adequately inspect. Service data also shows that the exhaust system should be inspected at 50-hour TIS intervals or 12-month intervals, whichever occurs first. This is based on failures occurring between 50 hours TIS and the current 100-hour TIS interval required by AD 76-23-03 R1. Because all but 38 airplanes were built before 1985, the potential for more exhaust system failures exists if further AD action is not taken because the airplanes will be approaching 40 years of service with many having the original factory-installed exhaust system. Repair or replacement of the exhaust system would only be required by the AD if cracks or leaks were found.

The FAA agrees that the Model 17-31ATC was not part of AD 76-23-03 R1. However, it does have the same P-Lead configuration and should be included in the AD. Inadvertently referencing this model in AD 76-23-03 R1 does not mean there is no unsafe condition and thus does not justify withdrawing the NPRM.

As far as the data in the ACS, the data, no matter how it is analyzed, will show that the airplanes affected by the exhaust system inspection all have internal welds and, as discussed previously, the service data also shows that the exhaust system should be inspected at 50-hour TIS intervals or 12-month intervals, whichever occurs first. This is based on failures occurring between 50 hours TIS and the current 100-hour TIS interval required by AD 76-23-03 R1. And as discussed above, a large majority of the airplanes will be approaching 40 years of service with many having the original factory-installed exhaust system.

The FAA agrees that there were issues with the DMS and FDMS. The NPRM was issued when the electronic docket was DMS, but during the comment period the FAA transitioned to the FDMS as mandated by Congress that all federal agencies begin using the FDMS. However, posting of comments was on DMS for part of the comment period and on FDMS for the other. All DMS comments could be reviewed on both the DMS and FDMS. All comments are currently housed in FDMS, and they are extensive. We evaluated all comments. Because there were comments posted in both DMS and FDMS, we believe that the public had adequate time and methods to comment on the NPRM.

We are making no changes to the final rule AD action based on these comments.

Comment Issue No. 7: Exclude From the Inspection Portion of the AD Those Airplanes With Exhaust Systems Modified With Parts Equivalent to Those in Bellanca Service Letter B-110

Dave Taylor states that those airplanes that incorporate exhaust systems modified with replacement parts that are equivalent to those in Bellanca/AALC Service Letter B-110 should not be affected by the exhaust system inspection portion of the AD. The commenter goes on to state that the AD is too burdensome for owners and micromanages the risk that should be placed on airplane

owners since the exhaust systems are already inspected on an annual basis through normal maintenance practices.

We agree that those airplanes that incorporate exhaust systems modified with replacement parts that are equivalent to those in Bellanca/AALC Service Letter B-110 should be exempt from the exhaust system inspection portion of the AD. Any owner/operator who believes he/she has such parts can apply to the FAA for an AMOC following the procedures in 14 CFR 39.19 and the AD.

As far as the AD being too burdensome on airplane owners when the exhaust system is inspected annually, we disagree because the service history shows that the current maintenance procedures and AD 76-23-03 R1 are not fully detecting the cracks and leaks before failure. Service difficulty information, factory Service Alerts, or other recommendations are vehicles to communicate information, but they are not required by law. An AD is a method the FAA has to require actions on all airplanes to address a known unsafe condition.

We are making no changes to the final rule AD action based on this comment.

Comment Issue No. 8: Revise the AD Instead of Supersede the AD

Ronald J. Quillin proposes that the FAA revise the existing AD 76-23-03 R1 to the R2 level rather than supersede it and give it an entirely new AD number. The commenter states that this would be less confusing since AD 76-23-03 R1 already requires inspection techniques for the detection and correction of cracks in the exhaust system of affected models.

Since the NPRM provides additional inspection techniques and introduces the P-Lead rerouting, we must supersede the AD because it requires additional actions on the public. Paragraph 33, page 27, of the Airworthiness Directives Manual, FAA-IR-M-8040.1A (FAA-AIR-M-8040.1), dated January 23, 2007, includes the following: "if the new AD imposes new requirements, it must be issued as a supersedure."

We are making no changes to the final rule AD action based on this comment.

Comment Issue No. 9: Revise the Cost of Compliance To Adequately Show the Number of Airplanes on the U.S. Registry

Ronald J. Quillin states that the number of airplanes affected by both the inspection and P-Lead rerouting requirements are incorrect. The commenter states that, according to his research, there are 1,041 airplanes on the U.S. registry that would be affected by the AD; and that 921 airplanes on the U.S. registry would be affected by the exhaust system inspections and 854 airplanes in the U.S. registry would be affected by the P-Lead rerouting. The commenter states that this would downwardly affect the total cost on the fleet.

We agree. We based our numbers on production airplanes. We will revise the Costs of Compliance section to reflect the numbers provided in the comment.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for the change in the Costs of Compliance section and minor editorial corrections. We have determined that these minor corrections:

- Are consistent with 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.

Costs of Compliance

We estimate that this AD affects 1,041 airplanes in the U.S. registry.

We estimate the inspection of the exhaust system affects 921 airplanes with the following costs:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
4 work-hours × \$80 per hour = \$320	N/A	\$320	\$294,720

We estimate the P-Lead rerouting affects 854 airplanes with the following costs:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
4 work-hours × \$80 per hour = \$320	\$500	\$820	\$700,280

We estimate the following costs to replace the exhaust system based on the results of the inspection. The estimate is based on updating the entire exhaust system to the current production exhaust system. This AD allows other means to do the required repairs/replacement, which could cost less. We have no way of determining the number of airplanes that may need this repair/replacement:

Labor cost	Parts cost	Total cost per airplane
8 work-hours × \$80 per hour = \$640	\$4,000	\$4,640

The estimated costs represented in the above actions include the costs associated with AD 76-23-03 R1 and the costs of this AD. The added cost impact this AD imposes upon an owner/operator over that already required by AD 76-23-03 R1 is a more detailed inspection (which requires more work-hours to do) and the P-Lead rerouting on certain models.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this AD.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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.

We prepared a summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "Docket No. FAA-2007-28431; Directorate Identifier 2007-CE-050-AD" in your request.

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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 76-23-03 R1, Amendment 39-5454, and adding the following new AD:



2008-05-11 Alexandria Aircraft, LLC: Amendment 39-15405; Docket No. FAA-2007-28431;
Directorate Identifier 2007-CE-050-AD.

Effective Date

(a) This AD becomes effective on April 8, 2008.

Affected ADs

(b) This AD supersedes AD 76-23-03 R1, Amendment 39-5454.

Applicability

(c) This AD applies to the following airplane models and serial numbers that are certificated in any category:

Model	Serial Nos.
17-30	All serial numbers.
17-30A	30263 through 301030.
17-31	All serial numbers.
17-31A	All serial numbers.
17-31ATC	All serial numbers.

Unsafe Condition

(d) This AD results from several accidents caused by exhaust system failures. We are issuing this AD to detect and correct cracks in the exhaust system, which could result in heat damage to magneto electrical wiring and smoke in the cockpit. This failure could lead to loss of engine power and/or a fire in the engine compartment.

Compliance

(e) To address this problem, you must do the following, unless already done:

Actions	Compliance	Procedures
<p>(1) For aircraft models and serial numbers listed below, inspect the exhaust system for cracks or other defects such as excessive wear:</p> <p>(i) Model 17–30, all serial numbers;</p> <p>(ii) Model 17–30A, serial numbers 30263 through 301030;</p> <p>(iii) Model 17–31, all serial numbers; and</p> <p>(iv) Model 17–31A, all serial numbers.</p>	<p>Initially within the next 12 months after April 8, 2008 (the effective date of this AD) or within 25 hours time-in-service (TIS) after April 8, 2008 (the effective date of this AD), whichever occurs first. Then repetitively thereafter at intervals not to exceed 12 months or 50 hours TIS, whichever occurs first. Accomplishment of the actions in paragraph (e)(2)(i) or (e)(2)(ii) of this AD terminates the recurring inspections required in this paragraph for the replaced/reconditioned ex-</p>	<p>Follow Bellanca/Alexandria Aircraft, LLC Service Letter B–110, dated May 8, 2007.</p>
<p>(2) Repair or replace the exhaust system using any of the options listed below:</p> <p>(i) Option #1—replace the entire defective left and/or right muffler and tailpipe assembly(ies) with new parts as specified in Bellanca/Alexandria Aircraft, LLC Service Letter B–110, dated May 8, 2007;</p> <p>(ii) Option #2—replace the entire defective left and/or right muffler and tailpipe assembly(ies) with parts reconditioned to the new parts as specified in Bellanca/Alexandria Aircraft, LLC Service Letter B–110, dated May 8, 2007; or</p> <p>(iii) Option #3—recondition or repair the defective left and/or right muffler and tailpipe assembly(ies) to their original configuration using FAA-approved methods and materials.</p>	<p>Before further flight after any inspection required in paragraph (e)(1) of this AD where a crack or other defect is found. The actions in paragraph (e)(2)(i) or (e)(2)(ii) of this AD terminate the recurring inspections required in paragraph (e)(1) of this AD for the replaced/reconditioned exhaust system (left and/or right side).</p>	<p>Follow Bellanca/Alexandria Aircraft, LLC Service Letter B–110, dated May 8, 2007.</p>

(3) For aircraft models and serial numbers listed below that do not have Bellanca/Alexandria Aircraft, LLC Service Kit 1067: Rerouting Right Magneto "P" Lead installed, reroute the magneto "P" leads:	Within the next 12 months after April 8, 2008 (the effective date of this AD) or within 100 hours TIS after April 8, 2008 (the effective date of this AD), whichever occurs first.	Follow Bellanca/Alexandria Aircraft, LLC Service Kit 1072 instructions located on drawing SK 1072, dated April 2, 2007, as referenced in Bellanca/Alexandria Aircraft, LLC Service Letter B-110, dated May 8, 2007.
(i) Model 17-30A, serial numbers 30263 through 30998;		
(ii) Model 17-31A, all serial numbers; and		
(iii) Model 17-31ATC, all serial numbers.		

Alternative Methods of Compliance (AMOCs)

(f) The Manager, Chicago Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Michael Downs, Aerospace Engineer, ACE-118C, Chicago Aircraft Certification Office, 2300 East Devon Avenue, Room 107, Des Plaines, Illinois 60018; phone: (847) 294-7870; fax: (847) 294-7834. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

Material Incorporated by Reference

(g) You must use Bellanca/Alexandria Aircraft, LLC Service Letter B-110, dated May 8, 2007; and Alexandria Aircraft, LLC Service Kit 1072 instructions located on drawing SK 1072, dated April 2, 2007, as referenced in Bellanca/Alexandria Aircraft, LLC Service Letter B-110, dated May 8, 2007, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Bellanca/Alexandria Aircraft, LLC, 2504 Aga Drive, Alexandria, MN 56308; phone: (320) 763-4088; fax: (320) 763-4095; Internet: <http://www.bellanca-aircraft.com>.

(3) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on February 25, 2008.

James E. Jackson,
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.
[FR Doc. E8-3899 Filed 3-3-08; 8:45 am]