



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0288; Directorate Identifier 2017-CE-007-AD]

RIN 2120-AA64

Airworthiness Directives; Textron Aviation Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Textron Aviation Inc. Models A36TC and B36TC airplanes. This proposed AD was prompted by a fatal accident where the exhaust tailpipe fell off during takeoff. This proposed AD would add a life limit to the exhaust tailpipe v-band coupling (clamp) that attaches the exhaust tailpipe to the turbocharger and, if the coupling is removed for any reason before the life limit is reached, this proposed AD would require an inspection of the coupling before reinstalling. We are proposing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0288; 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 proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Thomas Teplik, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4196; fax: (316) 946-4107; email: thomas.teplik@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-0288; Directorate Identifier 2017-CE-007-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We were notified of a fatal accident involving a Textron Aviation Inc. (Beech Bonanza) Model A36TC airplane. The National Transportation Safety Board preliminary report stated that shortly after takeoff the pilot advised the control tower that there was smoke in the cockpit and they needed to return to the airport. Witnesses reported seeing smoke and flames coming from the airplane before it impacted terrain. The exhaust tailpipe, a fractured v-band coupling (clamp) that attached the exhaust tailpipe to the turbocharger, and small fragments of fabric insulation were recovered from the runway. Failure of the exhaust tailpipe v-band coupling may lead to detachment of the exhaust tailpipe from the turbocharger and allow high-temperature exhaust gases to enter the engine compartment, which could result in an inflight fire.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would add a life limit to the exhaust tailpipe v-band coupling and, if the coupling is removed for any reason before the life limit is reached, this AD would require an inspection of the v-band coupling before reinstalling.

Costs of Compliance

We estimate that this proposed AD affects 499 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement of the exhaust tailpipe v-band coupling (clamp)	2 work-hours X \$85 per hour = \$170	\$300	\$470	\$234,530

We estimate the following costs to do any necessary inspection that would be required based on removal and reinstallation of the exhaust tailpipe v-band coupling. We have no way of determining the number of airplanes that might need this inspection:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Inspection of the exhaust tailpipe v-band coupling (clamp)	1 work-hour X \$85 per hour = \$85	Not applicable	\$85

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 rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (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),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 adding the following new airworthiness directive (AD):

Textron Aviation Inc.: Docket No. FAA-2017-0288; Directorate Identifier 2017-CE-007-AD

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Textron Aviation Inc. Models A36TC and B36TC airplanes; all serial numbers, that are certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 81, Turbocharging.

(e) Unsafe Condition

This AD was prompted by a fatal accident where the exhaust tailpipe fell off during takeoff. We are issuing this AD to prevent failure of the exhaust tailpipe v-band coupling that may lead to detachment of the exhaust tailpipe from the turbocharger and allow high-temperature exhaust gases to enter the engine compartment, which could result in an inflight fire.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Replacement of the V-Band Coupling (Clamp)

Replace the exhaust tailpipe v-band coupling part number (P/N) N4211-375-M or P/N 5322C-375-Z (P/Ns are also known as P/N N4211-375M and P/N 5322C3752) with a new exhaust tailpipe v-band coupling. When installing the new part, tighten the v-band coupling to 40 in-lbs., tap the periphery of the band to distribute tension, and torque again to 40 in-lbs. Do the replacement at the compliance times in paragraphs (g)(1) and (2) of this AD. For the purposes of this AD, the exhaust tailpipe v-band coupling may also be referred to as the exhaust tailpipe v-band clamp.

Note 1 to paragraph (g) of this AD: The engineering drawing lists the applicable part number v-band couplings as P/N N4211-375-M and P/N 5322C-375-Z; however, the parts catalog lists the applicable v-band couplings as P/N N4211-375M and P/N 5322C3752.

Note 2 to paragraphs (g) and (h)(2) of this AD: We recommend after installation of the exhaust tailpipe v-band coupling, you do an engine run and recheck the torque of the v-band coupling.

(1) If from a review of the maintenance records you can positively identify that the hours time-in-service (TIS) for the exhaust tailpipe v-band coupling is less than 500 hours TIS: Do the initial replacement within 500 hours TIS for the exhaust tailpipe v-band coupling or within the next 50 hours TIS after the effective date of this AD, whichever occurs later, and replace repetitively thereafter at intervals not to exceed 500 hours TIS on the exhaust tailpipe v-band coupling.

(2) If from a review of the maintenance records you can positively identify that the hours TIS for the exhaust tailpipe v-band coupling is 500 hours TIS or more or you cannot positively identify the hours TIS for the exhaust tailpipe v-band coupling: Do the initial replacement within 50 hours TIS after the effective date of this AD and replace repetitively thereafter at intervals not to exceed 500 hours TIS on the exhaust tailpipe v-band coupling.

(h) Removal of the Exhaust Tailpipe V-Band Coupling Before Reaching the 500-Hour Life Limit

(1) If the exhaust tailpipe v-band coupling is removed for any reason before any replacement required by this AD, before re-installing the same (existing) v-band coupling, you must do the inspection steps listed in paragraphs (h)(1)(i) through (vi) of this AD. During the removal, inspection, and reinstallation do not open the coupling more than necessary because excessive flexing of the coupling can lead to damage.

(i) Use crocus cloth and mineral spirits/Stoddard solvent, to clean the outer band of the v-band coupling. Pay particular attention to the spot weld areas on the coupling.

(ii) Use a 10X magnifier to visually inspect the outer band for cracks, paying particular attention to the spot weld areas. If cracks are found during this inspection, do not re-install the v-band coupling. Before further flight, you must install a new v-band coupling and restart the hours TIS for the repetitive replacement of the v-band coupling.

(iii) Visually inspect the flatness of the outer band using a straight edge. Lay the straight edge across the width of the outer band. The gap must be less than 0.062 inches. See figure 1 to paragraphs (h)(1)(iii) and (v) of this AD. If the gap exceeds 0.062 inches between the outer band and the straight edge, do not re-install the v-band coupling. Before further flight, you must install a new v-band coupling and restart the hours TIS for the repetitive replacement of the v-band coupling.

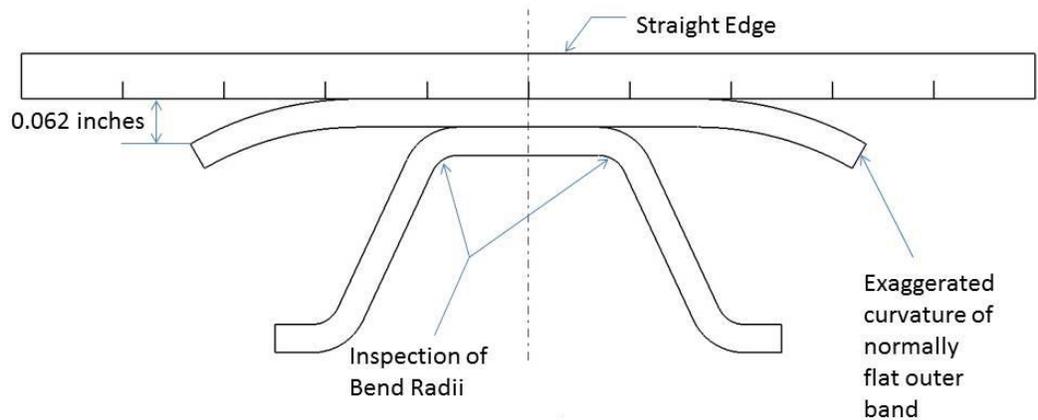


Figure 1 to paragraphs (h)(1)(iii) and (v) of this AD: Cross section of v-band coupling

(iv) With the t-bolt in the 12 o'clock position, visually inspect the coupling for the attachment of the outer band to the v-retainer coupling segments by inspecting for gaps between the outer band and the v-retainer coupling segments between approximately the 1 o'clock through 11 o'clock position. It is recommended to use backlighting to see gaps. If gaps between the outer band and the v-retainer coupling segments are found, do not re-install the v-band coupling. Before further flight, you must install a new v-band coupling and restart the hours TIS for the repetitive replacement of the v-band coupling.

(v) Visually inspect the bend radii of the coupling v-retainer coupling segments for cracks. Inspect the radii throughout the length of the segment. See figure 1 to paragraphs (h)(1)(iii) and (v) of this AD. If any cracks are found, do not re-install the v-band coupling. Before further flight, you must install a new v-band coupling and restart the hours TIS for the repetitive replacement of the v-band coupling.

(vi) Visually inspect the outer band opposite the t-bolt for damage (distortion, creases, bulging, or cracks), which may be caused from excessive spreading of the coupling during installation and/or removal. If any damage is found, do not re-install the v-band coupling. Before further flight, you must install a new v-band coupling and restart the hours TIS for the repetitive replacement of the v-band coupling.

(2) If the removed exhaust tailpipe v-band coupling passes all of the inspection steps listed in paragraphs (h)(1)(i) through (vi) of this AD, you may re-install the same v-band coupling. After the coupling is re-installed and torqued as specified in paragraph (g) of this AD, verify there is space between each v-retainer coupling segment below the t-bolt. If there is no space between each v-retainer coupling segment below the t-bolt, before further flight, you must install a new v-band coupling and restart the hours TIS for the repetitive replacement of the v-band coupling.

(3) The inspections required in paragraphs (h)(1) and (2) of this AD only apply to re-installing the same exhaust tailpipe v-band coupling that was removed for any reason as specified in paragraph (h)(1) of this AD. It does not apply to installation of a new v-band coupling. These inspections do not terminate the 500-hour TIS repetitive replacement of the v-band coupling and do not restart the hours TIS for the repetitive replacement of the v-band coupling.

(4) After the effective date of this AD, do not install a used exhaust tailpipe v-band coupling on the airplane except for the reinstallation of the inspected exhaust tailpipe v-band coupling that was removed for any reason as specified in paragraph (h)(1) of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Wichita Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (j) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

For more information about this AD, contact Thomas Teplik, Aerospace Engineer, Wichita ACO, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4196; fax: (316) 946-4107; email: thomas.teplik@faa.gov.

Issued in Kansas City, Missouri, on April 3, 2017.

Pat Mullen,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

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