

**RAM AIRCRAFT, L.P.  
SERVICE BULLETIN**

**SB2017-02**

**SUBJECT:** Exhaust Coupling, V-Band (p/n 2177-300) – Possible Improper Spot Weld

**PURPOSE:** Recall Non-Conforming Parts

**COMPLIANCE:** Inspect within next 10 hours and Replace non-conforming parts at next Annual or 100-hour inspection, whichever occurs first.

**MODELS POTENTIALLY AFFECTED:**

Textron (Cessna) T182 s/n 18267716 & on; TR182 s/n R18200581 & on; T337 s/n 33701816 & on  
Continental Motors Inc. TSIO-360-E, -EB, -F, -FB, -KB, -LB; LTSIO-360-E, -EB, -KB; TSIO-520-T

**DOCUMENTS SUPERSEDED:** None


**PARTS SUPERSEDED:** 2177-300 with date code “06-15”

A. INTRODUCTION

RAM Aircraft, LP (RAM) p/n 2177-300 v-band coupling is FAA-PMA approved to replace Cessna p/n 24540-300 or Continental Motors Inc. p/n 653332 couplings in the exhaust system on airplane and engine models listed above. This service bulletin is being issued to notify operators about a specific lot of these multi-segment v-band couplings that may have been improperly spot-welded during manufacturing. The issue has been traced to a single manufacturing lot, of which 36 parts were sold by RAM between August 17, 2015 and September 06, 2017.

One of the subject multi-segment v-band couplings was returned to RAM after an unknown time (reportedly less than 100-hours) in service. The mechanic reported that one of three v-segments detached from the coupling assembly during removal of the exhaust system for routine maintenance. Inspection at RAM revealed that three welds attaching the segment to the assembly had broken causing one of the three v-retainers to become detached from the coupling’s outer band.

In collaboration with our supplier, we determined that the root cause was that the resistance (spot) welder tip contacted the retainer on the radius instead of making full contact in the middle (of the v-retainer). This non-conforming condition was found to be random among the 64 couplings we removed from RAM’s stock.

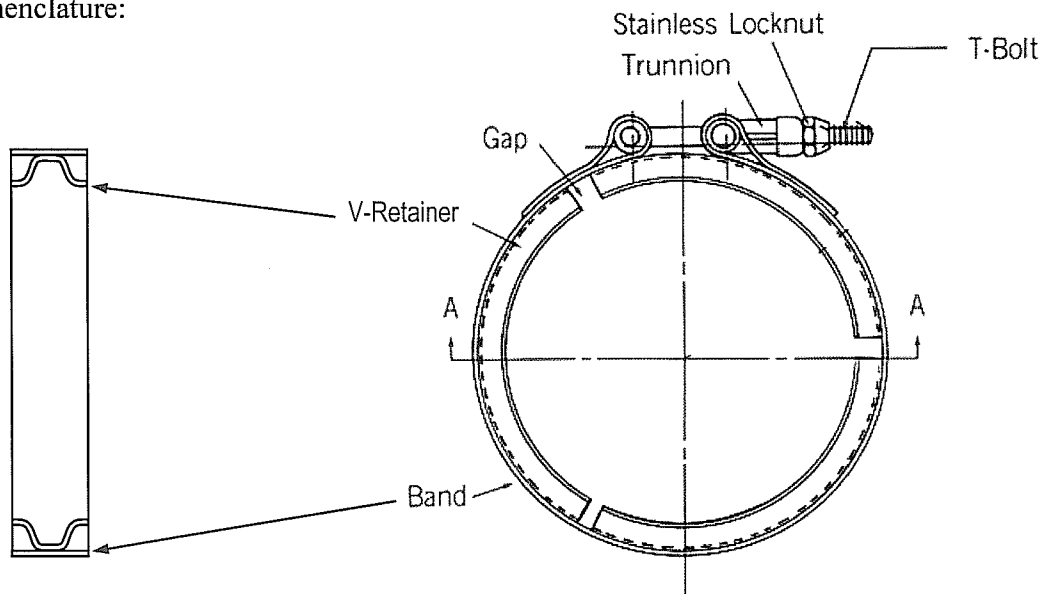
ISSUED			REVISED			 <b>RAM Aircraft, L.P.</b> Waco Regional Airport 7505 Karl May Dr. Waco, Texas 76708 Phone: (254) 752-8381 Fax: (254) 752-3307 Website: <a href="http://www.ramaircraft.com">http://www.ramaircraft.com</a>	PAGE	REVISION
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Based on our design review and safety assessment, we do not consider the issue to present any imminent safety threat. Nevertheless, RAM recommends replacement of non-conforming parts at the first reasonable opportunity as noted in section D.

**B. INSPECTION INSTRUCTIONS:**

Refer to Figure 1, Figure 2, Figure 3, and attached Quality Alert, published by Voss Aerospace.


1. Nomenclature:

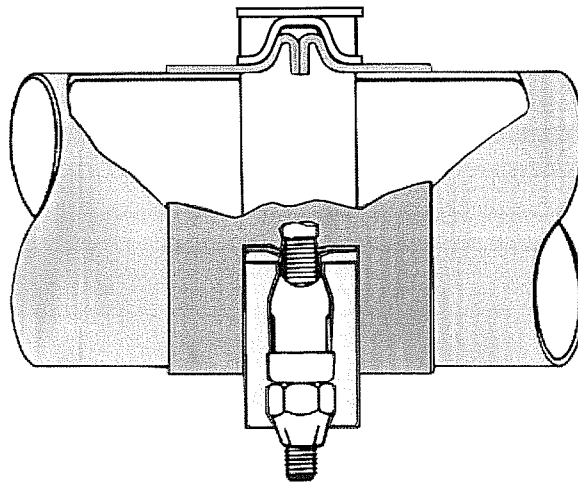


**Section A-A**

**FIGURE 1: 2177-300 V-BAND COUPLING**

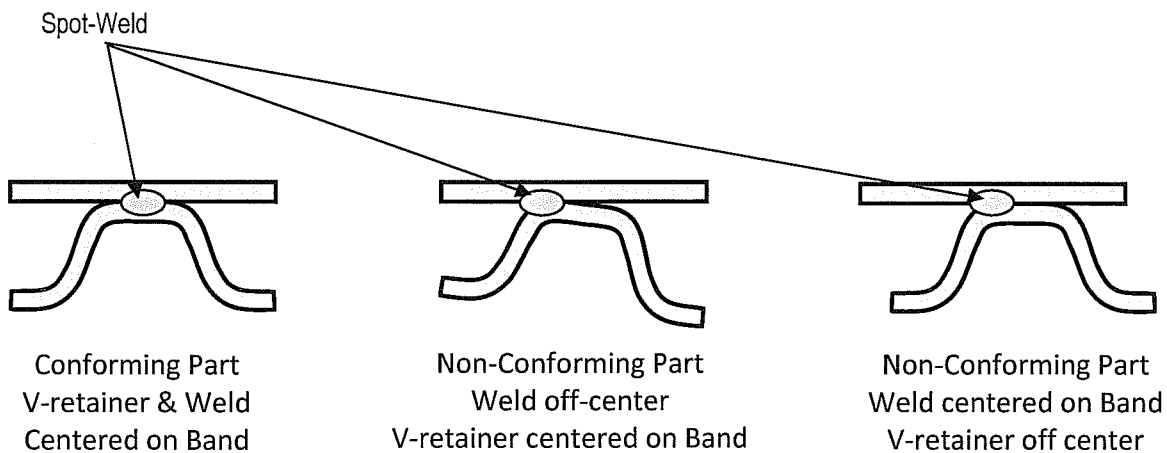
2. Within the next 10 hours time in service, inspect engine exhaust system to determine if non-conforming v-band coupling p/n 2177-300 is installed.
3. To determine if non-conforming parts are installed on your aircraft:
  - a. Check purchase date records: Couplings (p/n 2177-300) purchased from RAM between August 17, 2015 and September 6, 2017 are non-conforming.
  - b. Check packaging: Packaging with p/n “2177-300” and reference to Purchase Order (PO) # “P100954” contain non-conforming couplings.
  - c. Check markings on the outer perimeter of band by visual inspection: Couplings with p/n “2177-300” and date code “06-15” are non-conforming
  - d. Check physical condition of part by visual inspection:
    1. Couplings not in the proper location as shown in Figures 2 & 3 are non-conforming.
    2. V-retainers not centered in band as shown in Figure 3 are non-conforming.
    3. Spot-welds not centered on v-retainer and band as shown in Figure 3 are non-conforming.
    4. Gaps not evenly spaced within circumference are non-conforming. See Figure 1.
    5. Loose v-retainers are non-conforming.

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**FIGURE 2**  
**Exhaust Joint Assembly (Coupling Properly Installed)**

Cut-Away View  
 V-Band Coupling Assembly.



**FIGURE 3**  
**Cross-Section of V-retainer/Band (Welded Joint)**

Possible Scenarios

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C. ACCEPTANCE CRITERIA:


1. Unless determined to be non-conforming, accept properly installed p/n 2177-300 v-band couplings with date codes other than "06-15".
2. Maintain conforming v-band couplings in accordance with RAM document no. 2166, available online at [www.ramaircraft.com](http://www.ramaircraft.com).

D. CORRECTIVE ACTION:

1. Replace non-conforming v-band coupling p/n 2177-300 at next scheduled annual or 100-hour inspection (whichever occurs first).
  - a. For questions, replacement parts, and warranty considerations, contact RAM Aircraft LP (See Section E) for instructions.
2. Install replacement v-band couplings in accordance with RAM document # 2166, available online at [www.ramaircraft.com](http://www.ramaircraft.com).

E. CONTACT INFORMATION:

RAM Aircraft, L.P. Customer Service Dept. at (254) 752-8381 between 8 AM and 5 PM C.S.T. Monday through Friday.

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