

MANDATORY

MEL-79-01

TITLE

OIL - TRANSMITTAL OF CONTINENTAL AEROSPACE TECHNOLOGIES CSB07-1A CONNECTING ROD PISTON PIN BUSHING INSPECTION

EFFECTIVITY

All airplane serial numbers for the following Cessna and Beechcraft models that have a Continental IO-360, TSIO-360, O-470, IO-470, IO-520, GTSIO-520, IO-550, LTSIO-520 aviation gasoline (AvGas) engine installed.

CESSNA MODELS

| MODEL | SERIAL NUMBERS |
|-------------------|------------------------------------|
| T303 | 695, T30300001 thru T30300315 |
| 310 | 35000 thru 35546 |
| 310A | 38000 thru 38161 |
| 310B | 35547 thru 35771 |
| 310C | 35772 thru 35999, 39001 thru 39031 |
| 310D | 39032 thru 39309 |
| 310E | 310M0001 thru 310M0036 |
| 310F | 310-0001 thru 310-0156 |
| 310G | 310G0001 thru 310G0156 |
| 310H/E310H | 310H0001 thru 310H0148 |
| 310I | 310I0001 thru 310I0200 |
| 310J/310J-1/E310J | 310J0001 thru 310J0200 |
| 310K | 310K0001 thru 310K0245 |
| 310L | 310L0001 thru 310L0207 |
| 310N | 310N0001 thru 310N0198 |
| 310P/T310P | 310P0001 thru 310P0240 |
| 310Q/T310Q | 310Q0001 thru 310Q1160 |
| 310R/T310R | 310R0001 thru 310R2140 |
| 320/320-1 | 320-0001 thru 320-0110 |
| 320A | 320A0001 thru 320A0047 |
| 320B | 320B0001 thru 320B0062 |
| 320C | 320C0001 thru 320C0073 |
| 320D | 320D0001 thru 320D0130 |
| 320E | 320E0001 thru 320E0110 |
| 320F | 320F0001 thru 320F0045 |

April 22, 2021

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|------------------|--|
| 335 | 335-0001 thru 335-0065 |
| 336 | 336-0001 thru 336-0195 |
| 337 | 337-0001 thru 337-0239 |
| 337A | 337-0240 thru 337-0525 |
| 337B/T337B | 337-0526 thru 337-0755 |
| M337B | 337-M0001 thru 337-M0476 |
| 337C/T337C | 337-0756 thru 337-0978 |
| 337D/T337D | 337-0979 thru 337-1193 |
| 337E/T337E | 33701194 thru 33701316 |
| F337E/FT337E | F33700001 thru F33700024 |
| 337F/T337F | 33701317 thru 33701462 |
| F337F/FT337F | F33700025 thru F33700055 |
| 337G | 33701449, 33701463 thru 33701815 |
| F337G | F33700056 thru F33700084 |
| T337G | P3370001 thru P3370292 |
| 337H/T337H | 33701816 thru 33701950 |
| T337H-SP | 33701920, 33701922 thru 33701927, 33701951 thru 33701955 |
| F337H | F33700085 thru F33700086 |
| FTB337/FTB337G/H | FP3370001 thru FP3370023 |
| P337H | P3370196, P3370293 thru P3370356 |
| 340 | 340-0001 thru 340-0115, 340-0151 thru 340-0260, 340-0301 thru 340-0370, 340-0501 thru 340-0555 |
| 340A | 340A0001 thru 340A0125, 340A0201 thru 340A0375, 340A0401 thru 340A0562, 340A0601 thru 340A0801, 340A0901 thru 340A1045, 340A1201 thru 340A1280, 340A1501 thru 340A1543, 340A1801 thru 340A1817 |
| 401/402 | 401-0001 thru 401-0322, 402-0001 thru 402-0322 |
| 401A | 401A0001 thru 401A0132 |
| 401B | 401B0001 thru 401B0221 |
| 402A | 402A0001 thru 402A0129 |
| 402B | 402B0001 thru 402B0122, 402B0201 thru 402B0249, 402B0301 thru 402B0455, 402B0501 thru 402B0640, 402B0801 thru 402B0935, 402B1001 thru 402B1100, 402B1201 thru 402B1250, 402B1301 thru 402B1384 |
| 402C | 402C0001 thru 402C0125, 402C0201 thru 402C0355, 402C0401 thru 402C0528, 402C0601 thru 402C0653, 402C0801 thru 402C1020 |

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|------|--|
| 404 | 404-0001 thru 404-0136, 404-0201 thru 404-0246, 404-0401 thru 404-0460, 404-0601 thru 404-0695, 404-0801 thru 404-0859 |
| 411 | 611, 411-0001 thru 411-0250 |
| 411A | 411-0251 thru 411-0300 |
| 414 | 414-0001 thru 414-0099, 414-0151 thru 414-0175, 414-0251 thru 414-0280, 414-0351 thru 414-0437, 414-0451 thru 414-0550, 414-0601 thru 414-0655, 414-0801 thru 414-0855, 414-0901 thru 414-0965 |
| 414A | 414A0001 thru 414A0121, 414A0201 thru 414A0340, 414A0401 thru 414A0535, 414A0601 thru 414A0680, 414A0801 thru 414A0858, 414A1001 thru 414A1212 |
| 421 | 421-0001 thru 421-0200 |
| 421A | 421A0001 thru 421A0158 |
| 421B | 421B0001 thru 421B0056, 421B0101 thru 421B0147, 421B0201 thru 421B0275, 421B0301 thru 421B0486, 421B0501 thru 421B0665, 421B0801 thru 421B0970 |
| 421C | 421C0001 thru 421C0171, 421C0201 thru 421C0350, 421C0401 thru 421C0525, 421C0601 thru 421C0715, 421C0801 thru 421C0910, 421C1001 thru 421C1115, 421C1201 thru 421C1257, 421C1401 thru 421C1413, 421C1801 thru 421C1807 |

BEECHCRAFT MODEL

| MODEL | SERIAL NUMBERS |
|--------|---|
| 95-55 | TC-1 thru TC-190 |
| 95-A55 | TC-191 thru TC-349, TC-351 thru TC-370, TC-372 thru TC-501 |
| 95-B55 | TC-371, TC-502 thru TC-1392, TC-1397 thru TC-1401, TC-1403 thru TC-2456 |
| 95-C55 | TC-350, TE-1 thru TE-49, TE-51 thru TE-451 |
| D55 | TE-452 thru TE-767 |
| E55 | TE-768 thru TE-1201 |
| 58 | TH-1 thru TH-2124 |
| 58P | TJ-1 thru TJ-497 |
| 58TC | TK-1 thru TK-151 |
| G58 | TH-2125 thru TH-2537 |

REASON

There have been reports from the field of piston pin bushing material being found in the oil sump and/or the oil filter. Continental Aerospace Technologies has released Revision A to Critical Service Bulletin CSB07-01 which has been extensively revised and provides inspection instructions for the connecting rod piston pin bushing and also includes additional instructions to strain the oil and inspect the oil filter

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media during routine oil changes. In addition to the expanded inspection, Revision A of CSB07-01 has Instructions for Continued Airworthiness (ICA) that must be placed into specified manuals as listed in Revision A of CSB07-01.

DESCRIPTION

This service document transmits Continental Aerospace Technologies CSB07-01 Revision A, Inspection of the connecting rod pin piston bushing.

COMPLIANCE

MANDATORY. Refer to the Continental Aerospace Technologies Critical Service Bulletin CSB07-01 Revision A for compliance information.

A service document published by Textron Aviation may be recorded as *completed* in an aircraft log only when the following requirements are satisfied:

- 1) The mechanic must complete all of the instructions in the service document, including the intent therein.
- 2) The mechanic must correctly use and install all applicable parts supplied with the service document kit. Only with written authorization from Textron Aviation can substitute parts or rebuilt parts be used to replace new parts.
- 3) The mechanic or airplane owner must use the technical data in the service document only as approved and published.
- 4) The mechanic or airplane owner must apply the information in the service document only to aircraft serial numbers identified in the *Effectivity* section of the document.
- 5) The mechanic or airplane owner must use maintenance practices that are identified as acceptable standard practices in the aviation industry and governmental regulations.

No individual or corporate organization other than Textron Aviation is authorized to make or apply any changes to a Textron Aviation-issued service document or flight manual supplement without prior written consent from Textron Aviation.

Textron Aviation is not responsible for the quality of maintenance performed to comply with this document, unless the maintenance is accomplished at a Textron Aviation-owned Service Center.

CONSUMABLE MATERIAL

No specialized consumable materials are required to complete this service document.

TOOLING

No specialized tooling is required to complete this service document.

REFERENCES

Applicable Model Maintenance/Service Manual

Continental Aerospace Technologies Critical Service Bulletin CSB07-01 Revision A dated September 02, 2020.

PUBLICATIONS AFFECTED

None

ACCOMPLISHMENT INSTRUCTIONS

1. Prepare the airplane for maintenance.
 - A. Make sure that the airplane is electrically grounded.
 - B. Make sure that all switches are in the OFF/NORM position.

- C. Disconnect electrical power from the airplane.
 - (1) Disconnect the airplane battery.
 - (2) Disconnect external electrical power.
 - D. Attach maintenance warning tags to the battery and external power receptacle that have **"DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS"** written on them.
2. Remove the engine cowling. (Refer to the Appropriate Model Maintenance or Service Manual.)
 3. Complete the Continental Aerospace Technologies Critical Service Bulletin CSB07-01 Revision A.
 4. Install the engine cowling. (Refer to the Appropriate Model Maintenance or Service Manual.)
 5. Remove the maintenance warning tags and connect the airplane battery.
 6. Make an entry in the airplane logbook that states compliance and method of compliance with this service document.

TITLE

OIL - TRANSMITTAL OF CONTINENTAL AEROSPACE TECHNOLOGIES CSB07-1A CONNECTING ROD PISTON PIN BUSHING INSPECTION

TO:

Aircraft Owner of the Cessna and Beechcraft Models as follows:

CESSNA MODELS

T303, 310, 310A, 310B, 310C, 310D, 310E, 310F, 310G, 310H, E310H, 310I, 310J, 310J-1, E310J, 310K, 310L, 310N, 310P, T310P, 310Q, T310Q, 310R, T310R, 320, 320-1, 320A, 320B, 320C, 320D, 320E, 320F, 335, 336, 337, 337A, 337B, T337B, M337B, 337C, T337C, 337D, T337D, 337E, T337E, F337E, FT337E, 337F, T337F, F337F, FT337F, 337G, F337G, T337G, 337H, T337H, T337H-SP, F337H, FTB337, FTB337G, FTB337H, P337H, 340, 340A, 401, 402, 401A, 401B, 402A, 402B, 402C, 404, 411, 411A, 414, 414A, 421, 421A, 421B, 421C

BEECHCRAFT MODELS

95-55, 95-A55, 95-B55, 95-C55, D55, E55, 58, 58P, 58TC, G58

REASON

There have been reports from the field of piston pin bushing material being found in the oil sump and/or the oil filter. Continental Aerospace Technologies has released Revision A to Critical Service Bulletin CSB07-01 which has been extensively revised and provides inspection instructions for the connecting rod piston pin bushing and also includes additional instructions to strain the oil and inspect the oil filter media during routine oil changes. In addition to the expanded inspection, Revision A of CSB07-01 has Instructions for Continued Airworthiness (ICA) that must be placed into specified manuals as listed in Revision A of CSB07-01.

COMPLIANCE

MANDATORY. Refer to the Continental Aerospace Technologies Critical Service Bulletin CSB07-01 Revision A for compliance information.

LABOR HOURS**WORK PHASE**

Inspection

LABOR-HOURS

As Necessary

MATERIAL AVAILABILITY

No part are required to complete this service document.

WARRANTY

None

NOTE: As a convenience, service documents are now available online to all our customers through a simple, free-of-charge registration process. If you would like to sign up, please visit the Customer Access link at www.txtavsupport.com to register.

April 22, 2021

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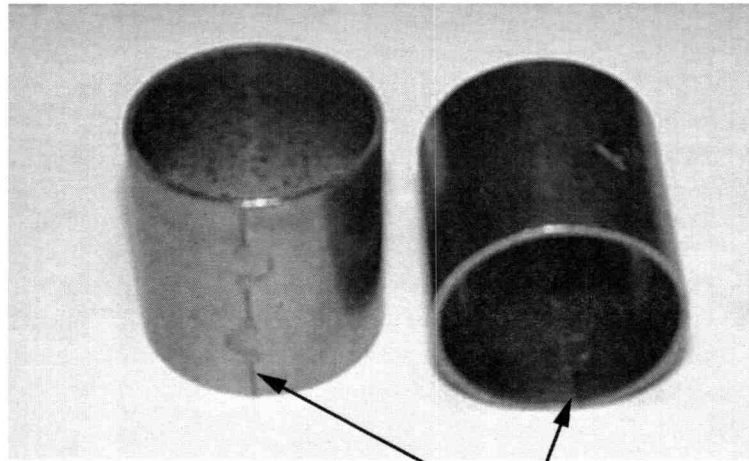
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CRITICAL SERVICE BULLETIN

COMPLIANCE NECESSARY TO MAINTAIN SAFETY

CATEGORY 2
CSB07-01A**Supersedes SB07-1**
TECHNICAL PORTIONS
FAA APPROVED**SUBJECT:** Connecting Rod Piston Pin Bushing Inspection**PURPOSE:** Provide inspection instructions for the connecting rod piston pin bushing**COMPLIANCE:** At each cylinder removal or anytime piston pin bushing material is identified during routine maintenance**MODELS****AFFECTED:** Continental Aerospace Technologies new and rebuilt A Series, C Series, E Series, O-200, IO-240, IOF-240, GO-300, O-300, IO-346, IO-360, LTSIO-360, TSIO-360, GIO-470, O-470, IO-470, TSIO-470, IO-520, GTSIO-520, LTSIO-520, TSIO-520, IO-550, IOF-550, TIARA, TSIO-550, TSIOF-550, and TSIOL-550 engine models.**I. GENERAL INFORMATION**

Continental Aerospace Technologies, Inc. (Continental™) has received reports from the field of piston pin bushing material being found in the oil sump or the oil filter. Piston pin bushings are manufactured from steel-backed bronze and are curved on a radius of approximately 0.62" (see Figure 1).

**BUSHING SPLIT LINE****Figure 1. Typical New Piston Pin Bushings****II. OIL CHANGE**

Straining engine oil and during the oil change and inspecting the oil filter media is the least invasive method to determine if connecting rod piston pin bushing material has separated from the connecting rods.

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2007/03/19**REVISED**
2020/09/02

CONTINENTAL
AEROSPACE TECHNOLOGIES
P.O. Box 90 Mobile, AL 251.436.8299

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REVISION A
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1. Perform the oil change at the next scheduled interval according to the instructions in M-0, Section 6-4.8.
 - a. Rather than drain the oil into catch basin and try to strain the spent oil through a paper filter, Continental recommends the following enhanced instructions:
 - 1) Place a pre-cleaned catch basin beneath the oil sump drain.
 - 2) Position a 1000 micron or less (approximately 0.040” or less) mesh screen in the catch basin to strain the oil sump contents. The 1000 micron stainless steel oil strainer (part number 2000) shown in Figure 2 is designed to fit the opening of a standard 5 gallon bucket. It is available for purchased from Arborfab.com. Arbor Fabricating, 14030 Tuttle Hill, Milan, MI 48160. (734) 626-5864.
 - b. Rinse the excess oil residue from the screen, retaining any fragments, particles, or sediment in the screen for analysis.

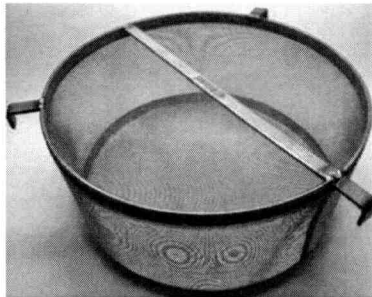
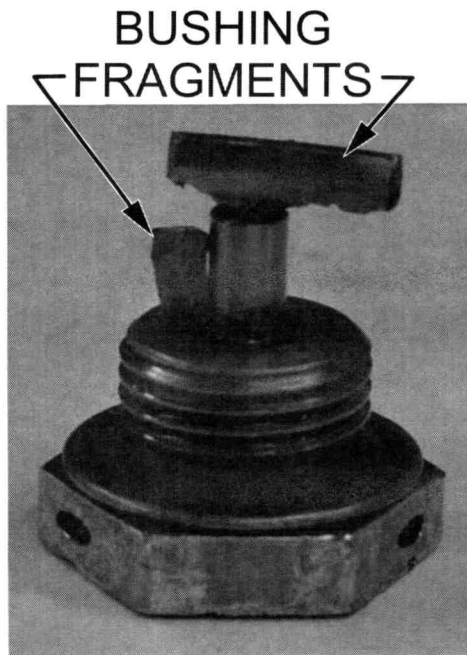


Figure 2. 1000 Micron Stainless Steel Oil Strainer

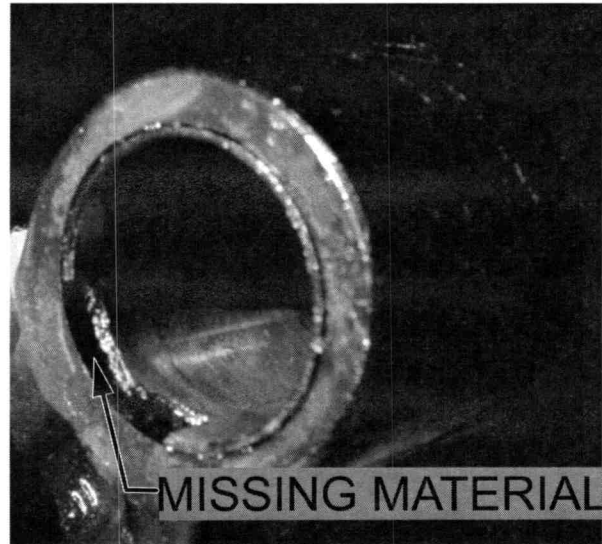
NOTE: The quick drain coupling orifice may trap debris and sediment material. To prevent entrapped material and allow collection of ferrous particles, Continental strongly recommends removing the non-magnetic oil plug (Part No. 532432) or quick drain coupling (Part Nos. 656122, 656995, or 658764) and installing a magnetic drain plug (Part No. 636376 or 656169) in the oil sump to attract and collect ferrous (iron) wear particulate and larger particles that could contaminate the lubrication system. The presence and collection of material on the magnetic drain plug can: 1) indicate an issue with certain engine components; 2) prevent damage to the oil pump and; 3) capture particles that could become lodged in the oil pressure relief-valve and result in a low oil pressure event. Not all engines are equipped with quick drain couplings or magnetic drain plugs - check engine illustrated parts catalog for applicability.

- c. Examine the strainer, drain plug and/or quick drain coupling for abnormal/excessive wear material, metal fragments, and debris to assess the engine condition. Metal fragments on the magnetic drain plug may indicate excessive wear or part damage.

If piston pin bushing material (see Figure 3) is recovered from an engine, remove the cylinders, pistons, and piston pins (no more than two cylinders at a time) to inspect the connecting rod piston pin bushings. In addition, the piston pin bushing must be inspected for condition each time a cylinder is removed for any reason.



**MAGNETIC OIL
DRAIN PLUG**



**CONNECTING ROD
AND BUSHING**

Figure 3. Typical Indications of Bushing Fragments

III. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA)

This bulletin contains updates to the Instructions for Continued Airworthiness required under Title 14 CFR § 43.13(a). A copy of this bulletin must be inserted into the manuals listed in Table 1 of this bulletin until the data is incorporated into the manual by revision or the bulletin is superseded or canceled.

WARNING

Instructions for Continued Airworthiness in Section 10-9.4 of M-0, Standard Practice Maintenance Manual contain the instructions for the remaining Maintenance and Overhaul Manuals listed below. When performing Connecting Rod Inspection or Maintenance, use the instructions in M-0, Section 10-9.4.

Table 1. Applicable Engine ICAs

| Document Number | Applicable Engine Model(s) | Section/ Subsection |
|------------------------|---|----------------------------|
| M-0 | Continental Spark-Ignited AvGas Engines | 10-9.4 |
| M-2 | O200D | M-0, § 10-9.4 |
| M-6 ¹ | IO240A, B | 15-7.9 |
| M-7 | IO360A, AB, AF, C, CB, D, DB, ES, G, GB, H, HB, J, JB, K & KB | M-0, § 10-9.4 |

Table 1. Applicable Engine ICAs

| Document Number | Applicable Engine Model(s) | Section/ Subsection |
|------------------------|--|----------------------------|
| M-8 | LTSIO360E, EB, KB, & RB; TSI0360A, AB, B, BB, C, CB, D, DB, E, EB, F, FB, G, GB, H, HB, JB, KB, LB, MB, RB, SB | M-0, § 10-9.4 |
| M-11 ¹ | IO520B, BA, BB, C, CB, M & MB | 19 |
| M-16 ¹ | IO550A, B, C, G, N, P & R | 15-7.2.1 |
| M-18 | TSIO550A, B, C, E, G, J, K & N | M-0, § 10-9.4 |
| M-22 ¹ | IOF240B | 15-6.2.1 |
| OH-15 ¹ | TSIOL550C | 16 & 18 |
| OMI-15 ¹ | TSIOL550C | 16 |
| OH-24 ¹ | IOF550B, C, N, P & R | 9-7.2.3 |
| M-26 ¹ | TSIOF550D, J, K & P | 15-7.2.1 |
| X30008 ¹ | A-65 | 9 |
| X30010 ¹ | C-75, C85, C90 & O200A, B | XIII |
| X30013 ¹ | C-125, C-145 & O300 | 10 |
| X30016 ¹ | E-165, E-185, E-225 | IX |
| X30019 ¹ | GO300A, C, D & E | 9 |
| X30027 ¹ | IO346 | IX |
| X30144 ¹ | TIARA | 7 |
| X30033 ¹ | TSIO470 | X |
| X30039 ¹ | IO520A, B, BA, BB, C, CB, D, E, F, J, K, L, M & MB | 6 |
| X30045 ¹ | GTSIO520C, D, F, H, K, L, M & N | IX |
| X30574 ¹ | TSIO520B, BB, BE, D, DB, E, EB, J, JB, K, KB, L, LB, N, NB, UB, VB, & WB | 72-20-20 |
| X30575 ¹ | TSIO520AE, AF, C, CE, G, H, M, P, R & T | 72-20-20 |
| X30586 ¹ | O470A, B, E, G, J, K, L, M, P, R, S & U | 72-20 |
| X30588 ¹ | IO470-C, D, E, F, G, H, J, K, L, M, N, P, R, S, U, V & VO | 72-40 |
| X30600 ¹ | TSIOL550A | 72-40 |
| X30607 ¹ | IO550D, E, F, L | 72-40 |

1. The contents of these documents will be modified to reference M-0, Section 10-9.4.

IV. INSPECTION

CAUTION: Connecting rod piston pin bushing replacement requires specialized tools and procedures and must be accomplished by a shop properly rated to perform the repair.

NOTE: Complete Connecting Rod Piston Pin Inspection Criteria may be found in **Section 10-9.4** of **M-0**, Standard Practice Maintenance Manual.

If piston pin bushing issues are suspected:

1. Remove the cylinders and pistons from the engine using the instructions contained in the appropriate maintenance or overhaul manual to gain access to the piston pin bushings.
2. Inspect the connecting rods according to the instructions in **M-0**, Section 10-9.4.
3. Visually inspect the piston pin bushing for any signs of cracks emanating from the piston pin bushing split line, missing bushing material, or signs of bushing movement.
4. Inspect the piston pin bushing for wear according to the instructions in **M-0**, Standard Practice Maintenance Manual, **Section 10-9.4**.
 - a. Replace any piston pin bushing that does not meet the installation criteria in **M-0**, Section 10-9.4 or is found cracked per during the inspection in step 3.
 - b. Replace any piston pin bushing that does not meet the inspection criteria in **M-0**, Standard Practice Maintenance Manual, **Section 10-9.4**.

V. WARRANTY

For engines currently within the warranty period, Continental will reimburse the customer for the parts and labor required to complete the inspection and repairs.

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2007/03/19

REVISED
2020/09/02



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REVISION
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