

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.

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- 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 cowl. (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 cowl. (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.

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CONTINENTAL AEROSPACE TECHNOLOGIES™
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.

ISSUED
2007/03/19

REVISED
2020/09/02



DOC NO
CSB07-01

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.

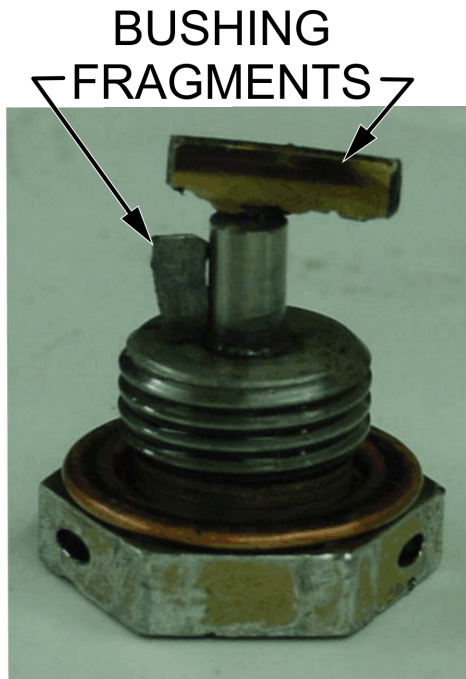


Figure 2. 1000 Micron Stainless Steel Oil Strainer

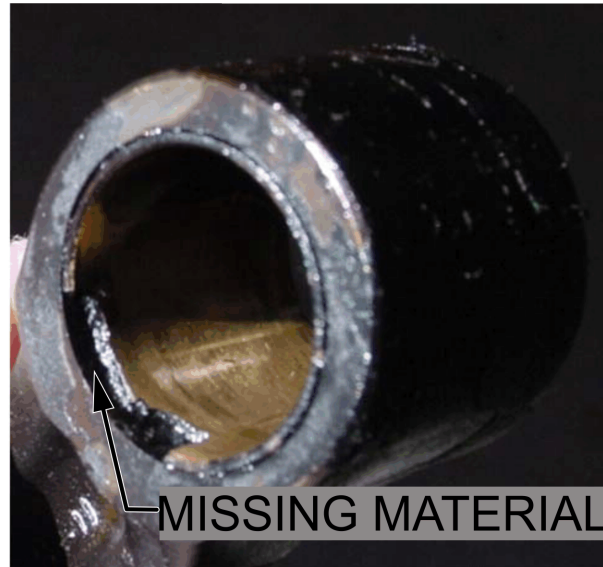
NOTE: The quick drain coupling orifice may trap debris and sediment material. To prevent entrapped material and allow collection of ferrous particles, Continental strongly recommends removing the non-magnetic oil plug (Part No. 532432) or quick drain coupling (Part Nos. 656122, 656995, or 658764) and 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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