



# MOONEY INTERNATIONAL CORPORATION SPECIAL LETTER

SPECIAL LETTER 18-20

Date: 12-19-2018

- SUBJECT:** To ADVISE MOONEY OWNERS/OPERATORS of the **Continental Motors Aircraft Engine SERVICE BULLETIN SB18-04A, Revised Date: 12/18/2018 - Subject: Replacement of Flanged Nut (P/N 652541) Identified with Manufacturer's Stamp "ZB"**.
- MODELS/  
S/N AFFECTED:** All Continental Motors, Inc. (CMI), O- 470, IO- 470, IO- 520, GIO- 550, GTSIO- 520, IO- 550, IOF- 550, L/TSIO- 520, TSIO- 550, TSIOF- 550 and TSIOL- 550 aviation gasoline (AvGas) engines using flanged nut (P/N 652541) (see attached document for more information).
- TIME OF  
COMPLIANCE:** At the next 100- Hour/Annual Inspection or next maintenance event.
- INTRODUCTION:** Continental Motors, Inc. (CMI) has seen evidence of dimensional non- conforming conditions for a limited production of flanged nuts (P/N 652541).  
The manufacturer's stamp is used to identify those flanged nuts which require replacement (maker's mark, "ZB" on the outer- edge of the nut head, see Figure 1 on attached document).
- INSTRUCTIONS:** Refer to - **Continental Motors Aircraft Engine SERVICE BULLETIN SB18-04A, Revised Date: 12/18/2018 - Subject: Replacement of Flanged Nut (P/N 652541) Identified with Manufacturer's Stamp "ZB"**. (see attached document for more information)
- WARRANTY:** Refer to - **Continental Motors Aircraft Engine SERVICE BULLETIN SB18-04A, Revised Date: 12/18/2018 - Subject: Replacement of Flanged Nut (P/N 652541) Identified with Manufacturer's Stamp "ZB"**. (see attached document for more information)
- REFERENCE  
DATA:** Refer to - **Continental Motors Aircraft Engine SERVICE BULLETIN SB18-04A, Revised Date: 12/18/2018 - Subject: Replacement of Flanged Nut (P/N 652541) Identified with Manufacturer's Stamp "ZB"**. (see attached document for more information)
- PARTS LIST:** Refer to - **Continental Motors Aircraft Engine SERVICE BULLETIN SB18-04A, Revised Date: 12/18/2018 - Subject: Replacement of Flanged Nut (P/N 652541) Identified with Manufacturer's Stamp "ZB"**. (see attached document for more information)

**SERVICE BULLETIN**

Contains Useful Information Pertaining To Your Aircraft Engine

Supersedes SB18-04  
 TECHNICAL PORTIONS  
**FAA APPROVED**

**SUBJECT:** Replacement of Flanged Nut (P/N 652541)  
 Identified with Manufacturer’s Stamp “ZB”

**PURPOSE:** To provide required service replacement for through-bolt, flanged nuts (P/N 652541).

**COMPLIANCE:** At the next 100-Hour/Annual Inspection or next maintenance event.

**MODELS**

**AFFECTED:** All Continental Motors, Inc. (CMI), O-470, IO-470, IO-520, GIO-550, GTSIO-520, IO-550, IOF-550, L/TSIO-520, TSIO-550, TSIOF-550 and TSIOL-550 aviation gasoline (AvGas) engines using flanged nut (P/N 652541).

**I. GENERAL INFORMATION**

Continental Motors, Inc. (CMI) has seen evidence of dimensional non-conforming conditions for a limited production of flanged nuts (P/N 652541).

The manufacturer’s stamp is used to identify those flanged nuts which require replacement (maker’s mark, “ZB” on the outer-edge of the nut head, see Figure 1).

**UPDATE: Flange nuts purchased prior to 1 OCT 2017 are not affected by this Service Document (SB18-04A).**

**II. SCOPE**

Action required to comply with this Service Document:

1. This Service Document creates a required replacement procedure for the through-bolt, flanged nut (P/N 652541) identified with manufacturer’s stamp “ZB” at the next 100-hour “Engine Inspection” (see Section COMPLIANCE, above).
2. Replace all flanged nuts (P/N 652541, as shown in Figure 1) in accordance with the procedures in Section III, “ACTION REQUIRED”.



Figure 1. Flanged Nut, Manufacturer’s Stamp, (maker’s mark, affected)

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### III. ACTION REQUIRED

Perform “100-hour Engine Inspection” according to your engine’s Maintenance and Overhaul Manual. Perform the following steps:

1. Identify the affected flanged nut by the manufacturer’s stamp (maker’s mark) as “ZB” on the outer-head edge (see Figure 1).

NOTE: Flanged nuts **purchased prior to 1 OCT 2017** or identified with the “OPTIONAL” profile (relief cut, as shown in Figure 2) **do not** require replacement.

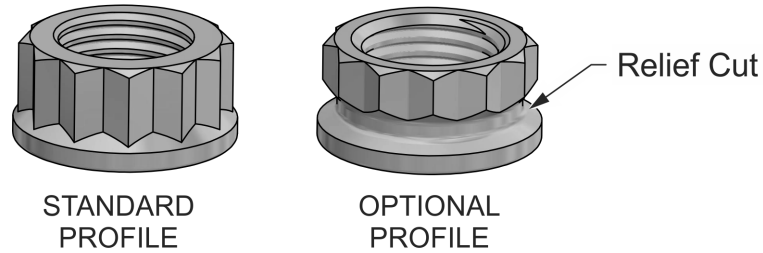


Figure 2. Flanged Nut, Profiles

#### WARNING

**Do not loosen or tighten torque on more than one through-bolt at a time. Failure to loosen or torque through-bolt nuts on both sides of the engine may result in engine failure.**

2. All identified flanged nuts installed must be removed and replaced according to the applicable Maintenance and Overhaul Manual crankcase hardware instructions (one through-bolt at a time).
3. All identified flange nuts (removed or spares) must be returned to Continental Motors according to the instructions in Section IV on page 3.
4. As each nut is removed, visually inspect the through-bolt and crankcase hardware for thread damage:
  - a. If the crankcase hardware is not damaged (through-bolt threads, etc.), continue to Step 5.

*CAUTION: Lubricate fasteners and apply torque to the crankcase hardware according to the applicable Maintenance and Overhaul Manual crankcase torque instructions for your engine. Failure to do so may result in crankcase damage or engine failure.*

- b. If the crankcase through-bolt exhibits thread damage, replace the damaged unit (one through-bolt at a time) according to the Maintenance and Overhaul Manual crankcase hardware installation instructions. After replacing all damaged crankcase hardware, pre-torque and final torque all through-bolts according to the crankcase torque instructions, in M-0, “Standard Practice Maintenance Manual, Chapter 10.”
- c. If a flanged nut is missing or crankcase hardware indicates a fracture or crack, remove engine from service and perform an inspection for possible bearing shift according to the Maintenance and Overhaul Manual.

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5. Thoroughly clean removed crankcase hardware with mineral spirits and apply corrosion protection after completing the installation (Step 1. through Step 4. above) for all affected parts, according to M-0, “Standard Practice Maintenance Manual, Chapter 6.”
6. Create a log book entry of compliance with this Service Bulletin, SB18-04A.

#### IV. WARRANTY

Standard warranty practices apply. Visit the Continental Motors web site at [www.continentalmotors.aero](http://www.continentalmotors.aero) to obtain copies of Continental Motors Warranty Policies.

Complete and eMail the linked Compliance Form (<http://continentalmotors.aero/uploadedFiles/Content/Services/Warranty%20Claim.pdf>), along with a copy of the work invoice and a copy of the repair agency’s W-9, immediately upon completion for reimbursement. Continental Motors reserves the right to request copies of invoices and maintenance records to verify warranty applicability.

##### A. Allowances/Reimbursements

Eligible Allowance / Reimbursement Type	4 Cylinder	
	Labor Hours <sup>1</sup>	Parts
Inspection for Flanged Nut (P/N 652541) Identified with Manufacturer’s Stamp “ZB”	1	inc.
Replacement of all Flanged Nuts (P/N 652541) <sup>2</sup>	4	inc. <sup>3</sup>
Replacement of affected crankcase hardware (as required according to the Maintenance and Overhaul Manual crankcase hardware installation instructions) <sup>2</sup>	X	inc. <sup>3</sup>

1. at published shop rate
2. including reasonable freight costs
3. as required by the applicable engine ICA

##### B. Parts Return Instructions

Replacement parts required to comply with this bulletin are published in the Illustrated Parts Catalog (IPC) on the Continental Motors web site and may be ordered through any authorized Continental Motors distributor.

Return all identified parts to the following address:

Continental Motors  
 C/O **SB18-04A**  
 2039 S. Broad Street  
 Mobile, Alabama 36615

- or eMail: [cmtechnical@cmg.aero](mailto:cmtechnical@cmg.aero)
- or Fax: 1 (251) 436-8270

Contact Continental Motors Technical Services at one of the numbers listed below if you have any questions concerning the technical content of this Service Document.

1.888.826.5465 Toll Free in the United States  
 +1.251.436.8299 International Callers  
 +1.305.964.0872 En Español

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