

SERVICE BULLETIN

SERVICE BULLETIN No. 209

Alternator Mounting Bracket Inspection

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1. Planning Information

A. Effectivity

- (1) Plane Power alternator P/Ns 10-1050 or AL12-50C, 10-1050C or SAL12-70C, and 10-5050C or TAL24-70C are affected by this Service Bulletin (SB).
 - (a) Alternator P/Ns 10-1050 or AL12-50C installed with mounting kit P/N 10-9099 are affected by this SB.
 - (b) Alternator P/Ns 10-1050C or SAL12-70C installed with mounting kit P/N 10-9099 are affected by this SB.
 - (c) Alternator P/Ns 10-5050C or TAL24-70C installed with mounting kit P/N 10-9099A are affected by this SB.
- (2) Alternators, mounting kits, and aircraft model/series affected by this SB are shown in Table 1.

NOTE: Table 1 is for reference only and is not an all-inclusive list of aircraft affected by this SB. It is the responsibility of the owner/operator to verify whether an affected alternator and mounting kit may be installed.

WARNING: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS SERVICE BULLETIN. INFORMATION CONTAINED HEREIN MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THIS SERVICE BULLETIN OR THE USE OF OBSOLETE INFORMATION MAY CREATE AN UNSAFE CONDITION THAT MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE PLANE-POWER WEBSITE, WWW.PLANEPOWER.AERO, FOR THE MOST RECENT REVISION LEVEL OF THIS SERVICE BULLETIN.

B. Concurrent Requirements

- (1) None

C. Reason

- (1) Installed alternators mounting kits listed in section 1.A could contain a cracked alternator mounting bracket P/N 10-9003 due to non-shimmed gaps between the alternator and alternator mounting bracket ears.
- (2) This SB is to advise the field of a potential condition and to supply inspection criteria to identify affected alternators using alternator mounting bracket P/N 10-9003.

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Alternator P/N *	Mounting Kit P/N**	Aircraft Make	Aircraft Model/Series
10-1050 - OR - AL12-50C	10-9099 Kit with Bracket P/N 10-9003	Cessna Aircraft Corporation	182, A, B, C, D, E, F, G, 210, A, B, 210-5 (205), 185, A) (185B, C, 180, A, B, C, D, E, F, G, 206, P206)
		Lockheed Martin Aeronautics Company	402-2
		Sierra Hotel Aero Inc.	Navion D, E, F, G
		Interceptor Aircraft Corporation	200, A, B, C, D
		Textron Aviation Inc.	H35, J35, K35, M35, N35, P35, 35-33, 35-A33, 35-B33, 35-C33, 35, A35, B35, C35, D35, E35, F35, G35, 35R
10-1050C - OR - SAL12-70C	10-9099 Kit with Bracket P/N 10-9003	Bellanca Aircraft, Inc.	14-19-2, 14-19-3, 14-19-3A with STC SA10682SC installed)
		Textron Aviation Inc.	35, A35, B35, C35, D35, E35, F35, G35, 35R, with STC SA10682SC installed, and modified by STC conversion to O-470 or IO-470, H35, J35, K35, M35, N35, P35, 35-33, -A33, -B33, -C33 with STC SA10682SC installed, 180, A, B, C, D, E, F, G, 182, A, B, C, D, E, F, G, H, 185, A, B, C, D, 210, A, 210-5 (205), -5A (205A), 206, P206 with STC SA10682SC installed
		Interceptor Aircraft Inc.	200, A, B, C, D with STC SA10682SC installed
		Sierra Hotel Aero Inc.	Navion A, B, D, E, F, G, H, (L-17A & L-17B), with STC SA10682SC installed, and modified by STC conversion to O-470 or IO-470
		Lockheed Martin Aeronautics Company	402-2 with STC SA10682SC installed
10-5050C - OR - TAL24-70C	10-9099A Kit with Bracket P/N 10-9003	Textron Aviation Inc.	95-55, -A55, -B55, -B55A with STC SA10682SC installed, 310, A (USAF U-3A), B, C, D, E (USAF U-3B), F, G, H, I, J, K with STC SA10682SC installed
		Fred Garcia	480 with STC SA10682SC installed
		Twin Commander Aircraft LLC	500A with STC SA10682SC installed

Table 1 - Aircraft Effectivity

* Either of the two P/Ns listed may be found on the alternator datatag

** See Fig. 1 for bracket P/N 10-9003 location

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D. Description

- (1) This Service Bulletin provides Instructions for Continued Airworthiness (ICA).

E. Compliance

- (1) Compliance with section 3.A of this SB is required at the next scheduled aircraft inspection from the release date of this SB or at the next annual aircraft inspection, whichever occurs first.
- (2) Compliance with the Accomplishment Instructions is the terminating action for this SB.

F. Approval

- (1) FAA acceptance has been obtained on the technical data in this publication that affects type design.

G. Manpower

- (1) Up to one (1.0) hours labor for alternator mounting bracket removal and installation, includes installation of shim.

H. References

- (1) Applicable Aircraft Service Instructions or Maintenance Manual
- (2) Applicable Aircraft AFM or POH
- (3) HET 14-2001 - *TAL24-70C Installation Instructions*
- (4) HET 10-9001 - *AL12-50C Installation Instructions*
- (5) HET 14-6001 - *SAL12-70C Installation Instructions*

I. Weight and Balance

- (1) No Change

2. Materials Required

A. If required in accordance with Section 2.A. Inspection, or Section 3.B. Corrective Action

- (1) Lock-Nut
- (2) .032" safety wire

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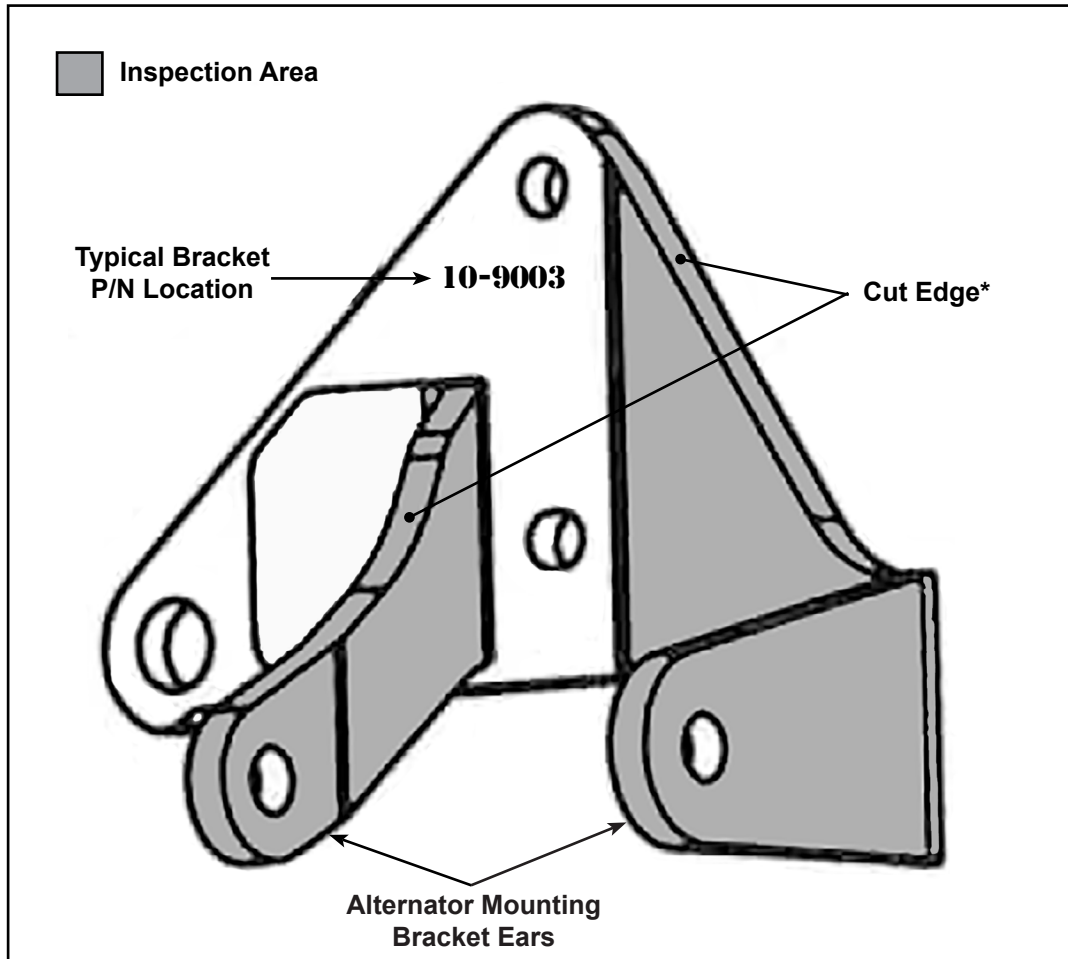


Figure 1 - Alternator Mounting Bracket Inspection Area

* Linear machining marks may be visible on the cut edge of the alternator mounting bracket/ears. They do not represent cracks.

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3. Accomplishment Instructions

WARNING 1: THIS PROCEDURE MUST BE PERFORMED BY COMPETENT AND QUALIFIED PERSONNEL WHO ARE FAMILIAR WITH THE AIRFRAME AND ENGINE SYSTEM MAINTENANCE. FAILURE TO DO SO MAY RESULT IN PHYSICAL INJURY, EQUIPMENT DAMAGE AND/OR ECONOMIC LOSS.

WARNING 2: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS SERVICE BULLETIN. INFORMATION CONTAINED HEREIN MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THIS SERVICE BULLETIN OR THE USE OF OBSOLETE INFORMATION MAY CREATE AN UNSAFE CONDITION THAT MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE PLANE-POWER WEBSITE FOR THE MOST RECENT REVISION LEVEL OF THIS SERVICE BULLETIN, WWW.PLANEPOWER.AERO.

CAUTION: REFER TO THE APPLICABLE MANUFACTURER'S MAINTENANCE MANUALS OR SERVICE INSTRUCTIONS TO GAIN ACCESS TO THE AIRFRAME OR ALTERNATOR. IN ADDITION, ANY PREFLIGHT OR IN-FLIGHT OPERATIONAL CHECKS REQUIRE USE OF THE APPROPRIATE AFM OR POH.

A. Inspection

- (1) If previous compliance cannot be verified through aircraft or engine maintenance records, use the same references to determine if an affected alternator has been installed. Refer to section 1.A, Effectivity.
- (2) If effectivity of the alternator cannot be established using aircraft or engine maintenance records, utilize the applicable aircraft engine maintenance manual to gain access to the alternator and inspect the alternator and alternator mounting bracket against criteria found in section 1.A of this SB.
 - (a) If the alternator **is** affected per section 1.A and alternator mounting bracket P/N 10-9003 is installed (Fig. 1), inspect the alternator mounting bracket ears for stress cracks. See Fig. 1, Inspection Area.

NOTE: Linear machining marks may be visible on the cut edge of the alternator mounting bracket/ears. They do not represent cracks.

- 1) If the alternator mounting bracket **is** cracked, contact HET Product Support for assistance in obtaining a new alternator mounting bracket and shims and continue to 3.B, corrective action.

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2) If the alternator mounting bracket is **not** cracked, see Fig. 2 for the following:

- a) Loosen the tension-arm bolt (5) holding belt tension.
- b) Loosen the bracket-ear/arm bolt (3).

NOTE: The Alternator, tension arm, and bracket arm should be in a free state.

- c) Align the alternator and spacers (1) & (2) to one side of the alternator mounting bracket.
- d) Use a feeler gauge and inspect the gap between the alternator mounting bracket ear and spacer.
- e) Record gap measurement.

1: The measured gap should be ≤ 0.007 .

2: If the measured gap is **not** ≤ 0.007 , continue to 3.B, Corrective Action.

3: If the measured gap **is** ≤ 0.007 , perform the following:

- a: Tension drive alternator drive belt in accordance with aircraft/engine maintenance manual and service instructions. Torque the bolt (5) to 140 in/lbs and install .032" safety wire.

NOTE: The aircraft/engine manufacturer's torque value, if supplied, supersedes the above recommended torque.

- b: Install a new lock-nut and torque the bolt (3) and lock-nut (4) to 160-190 in/lbs.

- (b) If the alternator and alternator mounting bracket part numbers are **not** affected per section 1.A, continue to 3.C. Return to Service.

B. Corrective Action

See Fig. 2 for the following:

- (1) With the alternator, tension arm, and bracket arm in a free state, align alternator pulley and engine drive pulley.
- (2) Press spacers (1) & (2) against the alternator.
- (3) Install shims between the spacer (1) and/or (2) and the alternator mounting bracket until a combined gap between the alternator spacers (1 & 2) and alternator bracket of ≤ 0.007 is achieved.

NOTE: Shims may be split between forward and rear gaps to align the alternator pulley to the engine drive pulley.

- (4) Install a new lock-nut (4) onto bolt (3). Do not torque the lock-nut (4) at this time.

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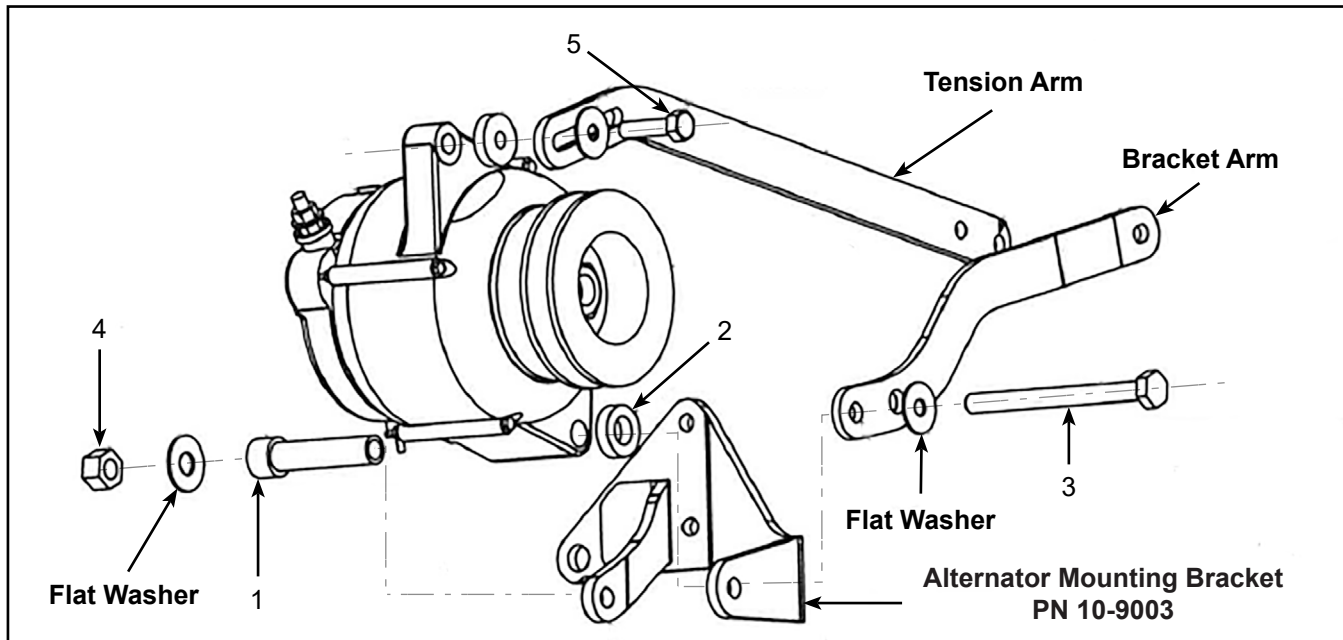


Figure 2 - Alternator and Alternator Mounting Bracket Assembly

- (5) Using a feeler gage, verify total thickness of gaps is ≤ 0.007 .
- (6) Tension alternator drive belt in accordance with aircraft/engine maintenance manual and service instructions. Torque the bolt (5) to 140 in/lbs and install .032" safety wire.

NOTE: The aircraft/engine manufacturer's torque value, if supplied, supersedes the above recommended torque.

- (7) Torque the bolt (3) and lock-nut (4) to 160-190 in/lbs.

C. Return to Service

- (1) Close all access doors and covers opened to gain access to the alternator in accordance with applicable airframe and/or engine maintenance manual.

D. Maintenance Record

- (1) Make an appropriate logbook entry noting compliance with this Service Bulletin.

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4. Contact Information

A. Contact HET Product Support for all communications regarding the technical content of this Service Bulletin.

(1) Phone +1.334.386.5400 (Option 2)

(2) Fax +1.334.386.5450

(3) E-mail at techsupport@hartzell.aero

(4) Address

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