

Alert Service Bulletin

Alert Service Bulletin No. 224

Alternator Spacer P/N 41151 Inspection

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1. Planning Information

A. Effectivity

- (1) Plane Power™ alternator P/Ns ALV-9610, ES-10024, and ES-6024D shipped between 11/07/2023 and 09/18/2024 are affected by this Alert Service Bulletin (ASB).

- (a) Refer to Table-1 for engine/aircraft effectivity.

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

- (2) Serial Number Effectivity

- (a) Serial numbers H-X110017 thru H-Y091617 are affected by this ASB.

WARNING: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS ALERT SERVICE BULLETIN. INFORMATION CONTAINED HEREIN MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THIS ALERT 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 WWW.PLANEPOWER.AERO FOR THE MOST RECENT REVISION LEVEL OF THIS ALERT SERVICE BULLETIN.

B. Concurrent Requirements

- (1) None

C. Reason

- (1) Hartzell Engine Tech has discovered that affected alternators may have been shipped with an incorrect spacer.

- (a) This condition may result in improper drive coupling retention and could result in the loss of alternator function and the introduction of metallic FOD into the engine.

- (2) This ASB is to advise the field of a potential condition and to supply inspection criteria to identify affected alternators.

D. Description

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

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ALTERNATOR P/N (HET)	MAKE / TCH	TCH P/N	ENGINE / AIRCRAFT EFFECTIVITY
ALV-9610	Continental Aerospace Technologies	642056 646842 646491 649304 ALV-9510	IO-520-A, -B, -BA, -BB, -C, -CB, -M, -MB, TSIO-520-B, -BB, -BE, -D, -DB, -E, -EB, -J, -JB, -K, -KB, -L, -LB, -N, -NB, -U, -UB, -VB, -WB GTSIO-520-C, -D, -F, -G, -H, -K, -L, -M, -N, -R IO-550-A, -B, -C, -G, -N, -P, -R TSIO-550-A, -B, -C, -E TSIOL-550-A, -B, -C
	Lycoming Engines	LW-18873	TIGO-541-C1A, -D1A, -D1B, -E1A, -G1AD
	Textron Aviation IncW.	ALV 9510 ALV-9510L ALV-9401 ALV-9401L	E55, E55A, 58, 58A
ES-10024	Continental Aerospace Technologies	656802	IO-550-A, -B, -C, -D, -E, -F, -G, -L, -N, -P, -R, IOF-550-B, -C, -D, -E, -F, -L, -N, -P, -R
ES-6024D	Textron Aviation Inc	642055, 646490, 646843, 646845 with alternator clutch removed	F33A, F33C, S/N's CE0929 & after, CJ0156 36, A36, G36, A36TC, B36TC, S/N's A0159 & after, E1766 thru E3629, E3631 thru E3635, D55, D55A, E55, E55A, With Beech kit 55-3020, E55, E55A, S/N's TE-768-TE-999, 58, 58A, S/N's TH-1 - TH-9999, G58, S/N's TH-2125-TH-9999
	Continental Aerospace Technologies	642055, 646490, 646843, 646845 with alternator clutch removed	IO-520-B, -BA, -BB, -C, -CB, -M, -MB, IO-550-A, -B, -C, -G, -N, -P, -R, TSIO-520-B, -BB, -BE, -D, -DB, -E, -EB, -J, -JB, -K, -KB, -L, -LB, -N, -NB, -U, -UB, -VB, -WB, GTISO-520-C, -D, -H, -K, -L, -M, -N, TSIO-550-A, -B, -C, -E

Table-1 - Engine/Aircraft Effectivity

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E. Compliance

- (1) **IMMEDIATE:** If a loss of alternator output or erratic output indication occurs during flight, land as soon as practicable while closely monitoring engine oil temperature and pressure. Comply with this ASB prior to further flight.
- (2) **Prior to Next Flight:**
 - (a) Perform Section 3, Accomplishment Instructions, of this document.
- (3) For affected alternators in inventory, return within 30 days from the original issue date of this Alert Service Bulletin or prior to installation, whichever occurs first.
- (4) Compliance with Section 3, Accomplishment Instructions, is terminating action for this ASB.

F. Approval

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

G. Manpower

- (1) Labor is negligible for identification and inspection when performed in conjunction with regularly scheduled maintenance required by the engine/aircraft manufacturer.
- (2) Up to one and a half (1.5) hours labor required for removal, inspection, and installation of the alternator.
- (3) Up to two (2) hours to remove and replace affected spacer, drive-coupling inspection, and engine oil change.

H. References

- (1) Continental Aerospace Technologies' M-0 manual, *Standard Practice Maintenance Manual for Spark Ignited Engines*.
- (2) Applicable aircraft POH or AFM.
- (3) Aircraft maintenance manual (as applicable).
- (4) Engine Service Instructions or maintenance manual (as applicable).

I. Other Publications Affected

- (1) None

J. Weight and Balance

- (1) No Change

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2. Material Required

A. HET:

- (1) One new alternator spacer P/N 41151.
- (2) One new O-Ring P/N 32B70247A01.
- (3) Silicone Lubricant - Dow Corning® Molykote 111 Compound
- (4) Woodruff Key #5 P/N X-0260 - If required

B. Continental Aerospace Technologies (See Manual #M-0):

- (1) Cotter Pin
- (2) Thrust Washer
- (3) Alternator Gasket

3. Accomplishment Instructions

WARNING:

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

CAUTION 1:

DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS ALERT SERVICE BULLETIN AND THE APPLICABLE AIRCRAFT ENGINE MAINTENANCE MANUAL. INFORMATION CONTAINED IN THESE MANUALS OR THIS ALERT SERVICE BULLETIN MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THE ALERT 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 ALERT SERVICE BULLETIN.

CAUTION 2:

DO NOT DEPEND ON THIS ALERT SERVICE BULLETIN FOR GAINING ACCESS TO THE ENGINE OR ALTERNATOR. ACCESS REQUIRES THE USE OF THE APPLICABLE MANUFACTURER'S MAINTENANCE MANUALS OR SERVICE INSTRUCTIONS. IN ADDITION, ANY PREFLIGHT OR IN FLIGHT OPERATIONAL CHECKS REQUIRE USE OF THE APPROPRIATE AFM OR POH.

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A. Alternator Identification

- (1) If positive identification of the alternator model and serial number can be made through the engine or aircraft documentation, and the alternator **is** affected per 1.A., continue to 3.B., Corrective Action. If the alternator is **not** affected, continue to 3.D.(1), Maintenance Record.
- (2) If positive identification cannot be made through engine or aircraft documentation, gain access and locate the data tag on the alternator to verify the alternator effectivity.
 - (a) If the unit **is** affected, continue to section 3.B., Corrective Action.
 - (b) If the unit is **not** affected, install any components that were removed to gain access in accordance with the latest engine/airframe service instructions or maintenance manual. Continue to 3.D.(1), Maintenance Record.

B. Corrective Action

(1) Alternator Spacer Inspection

- (a) Remove the affected alternator in accordance with applicable aircraft engine and airframe service instructions or maintenance manual.
- (b) Using a flashlight, visually inspect the spacer between the alternator and alternator drive coupling. Refer to Fig. 1 thru Fig. 1b
 - 1) If the spacer **does** have a visible groove in the OD as shown in Fig. 1, no further maintenance is required.
 - a) Install the alternator in accordance with applicable aircraft engine and airframe service instructions or maintenance manual. Continue to 3C. Return to Service.
 - 2) If the spacer **does not** have a visible groove in the OD as shown in Fig. 1, replace the spacer in accordance with below instructions, 3 B. (2).

(2) Spacer Replacement

See Fig. 2 for indexed parts

(a) Removal

- 1) Inspect engine ring gear for any indications of wear or damage in accordance with Continental Aerospace Technologies' M-0 Manual, § 6-4.22.1.
- 2) Inspect alternator drive coupling teeth, rubber damper, body OD, and thrust washer face for any indications of abnormal wear or contact with the engine ring gear.
 - a) If any abnormal wear or contact is noted, perform a FOD contamination inspection in accordance with Continental Aerospace Technologies' M-0 Manual, § 6-5.7.
- 3) Remove the alternator drive coupling in accordance with Continental Aerospace Technologies' M-0 Manual § 10-4.1.2. Discard the thrust washer.
- 4) Remove the woodruff key (1) from the alternator rotor assembly drive shaft. Set aside for installation, inspect and replace if required.
- 5) Remove and discard O-Ring (2) from rotor assembly drive shaft.
- 6) Remove and discard spacer (3) from the alternator drive-end housing and rotor assembly drive shaft.

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(b) Installation

- 1) Insert a new spacer (3) P/N 41151 onto the rotor assembly drive shaft and into the drive-end housing.
- 2) Lubricate a new O-Ring (2) with Dow Corning® Molykote 111 Compound and install the O-Ring onto the rotor assembly drive shaft and against the spacer (3).
- 3) Install the woodruff key (1) into the rotor assembly drive shaft.
- 4) Install the alternator drive coupling and new thrust washer in accordance with Continental Aerospace Technologies' M-0 Manual, § 10-4.1.3.
- 5) Install the alternator onto the engine in accordance with applicable aircraft engine and airframe service instructions or maintenance manual.
- 6) Perform an engine oil change in accordance with applicable aircraft engine and airframe service instructions or maintenance manual. Continue to 3. C., Return to Service.

C. Return to Service

- (1) Perform the recommended alternator system set up and functional tests in accordance with the appropriate aircraft maintenance manual, engine service instructions, and operational tests in the AFM or POH.

D. Maintenance Record

- (1) For terminating action, make an engine logbook entry to indicate compliance with this Alert Service Bulletin.

4. Contact Information

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

- (1) Phone +1.334.386.5400 (Option 2)
- (2) Fax +1.334.386.5450.
- (3) E-mail at techsupport@HartzellEngineTech.com.
- (4) Address

Hartzell Engine Tech LLC
2900 Selma Highway,
Montgomery, AL 36108
USA

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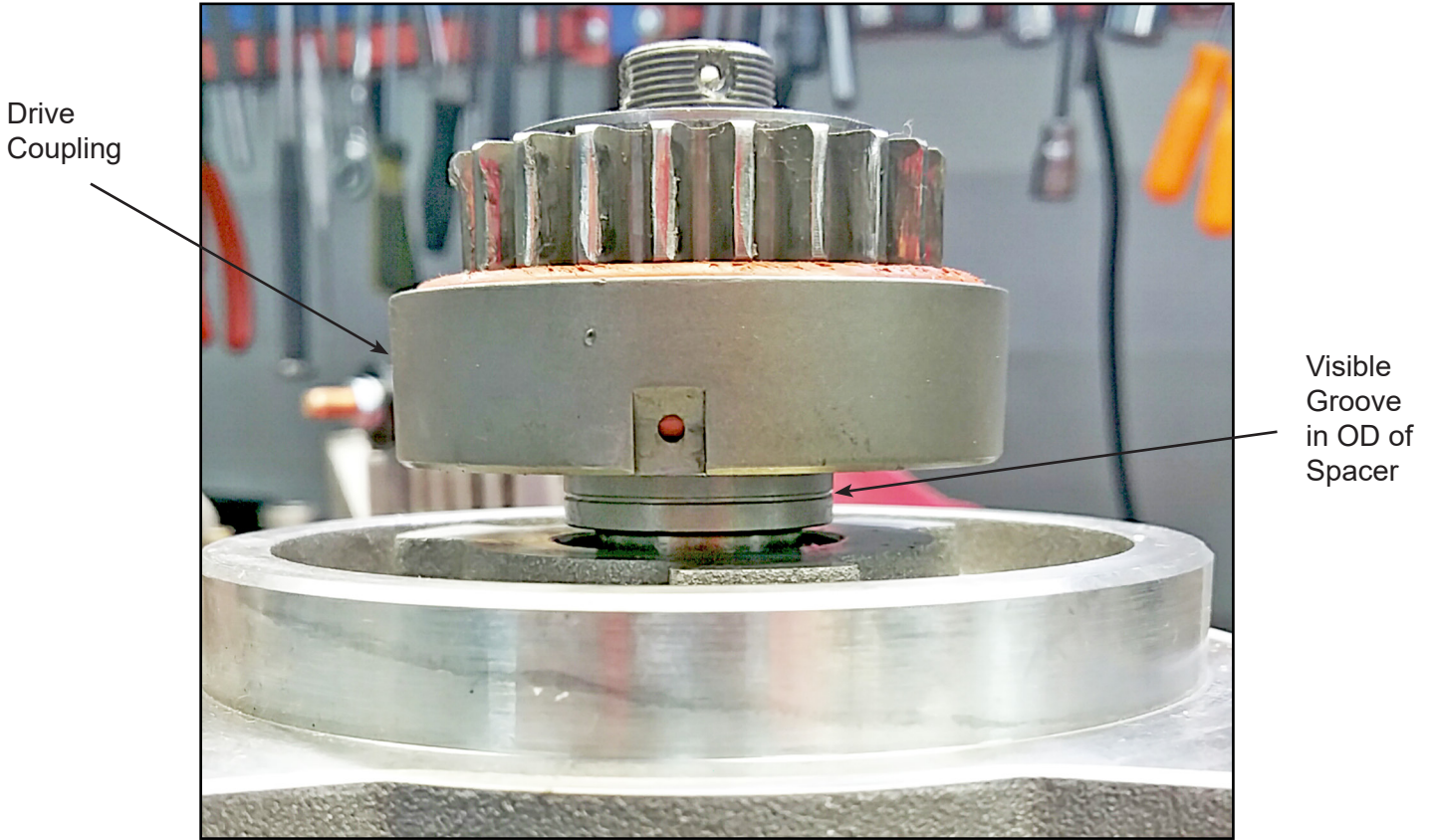


Figure-1 - Spacer Inspection

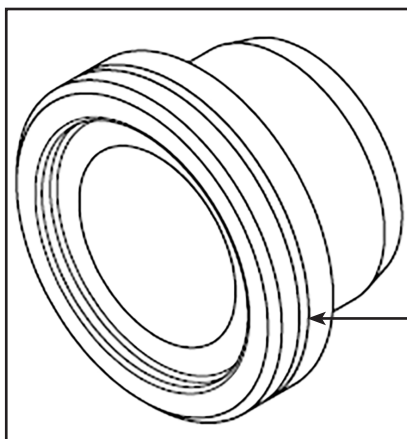


Figure-1a - Correct Spacer
P/N 41151

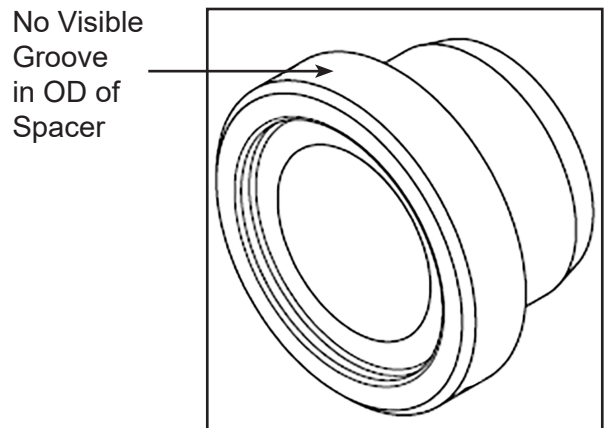


Figure-1b - Incorrect Spacer

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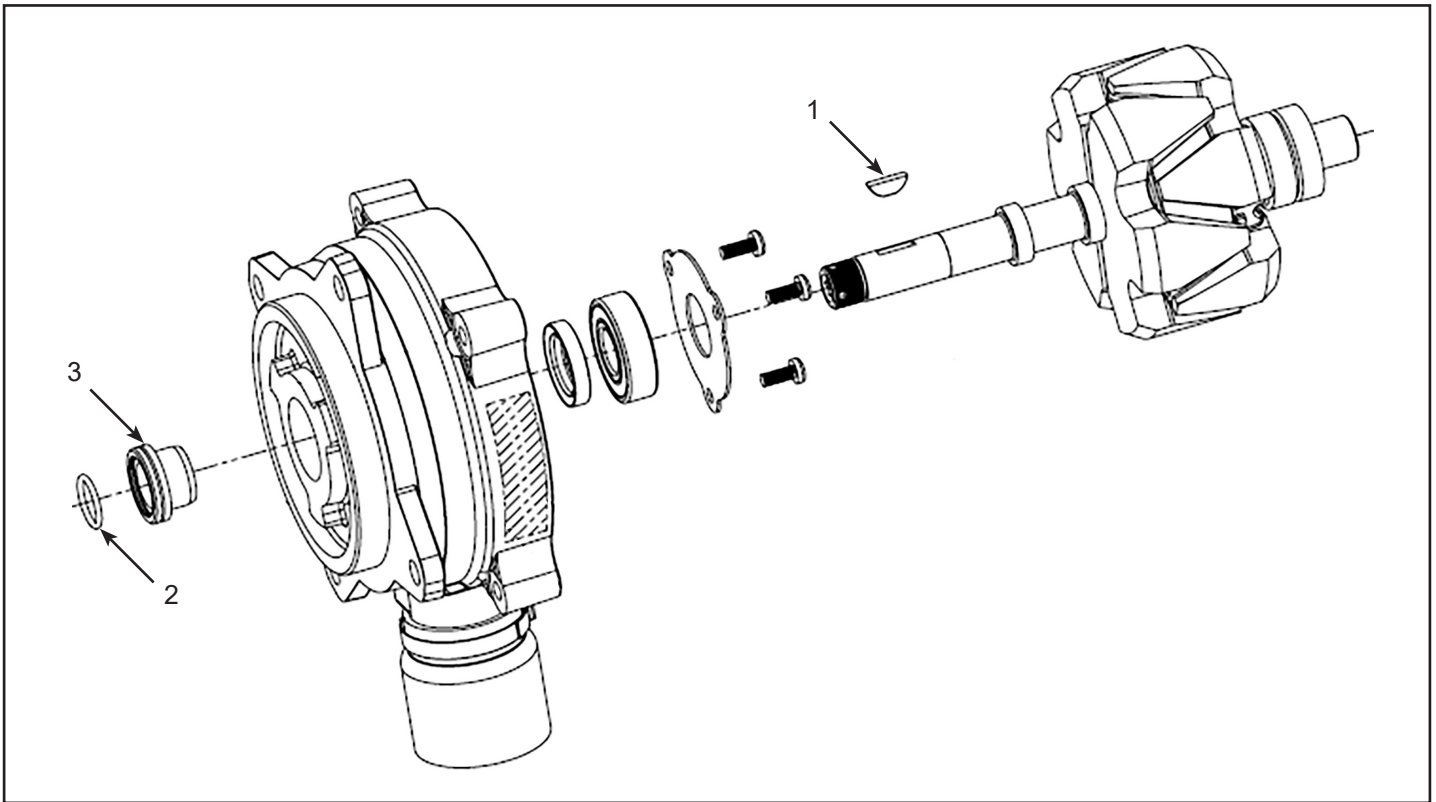


Figure-2 - Spacer Replacement

NOTE: Fig. 2 is a reference to indexed parts only. It is not necessary to disassemble the alternator further than what is required by accomplishment instructions found herein.

ALERT SERVICE BULLETIN APPENDIX

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1. Eligibility:

- A. Plane Power™ alternator P/Ns ALV-9610, ES-10024, and ES-6024D shipped between 11/07/2023 and 09/18/2024 are affected by Alert Service Bulletin (ASB) #224
 - (1) Refer to Table-1 of ASB #224 for engine/aircraft effectivity.

2. Commercial Assistance Program:

The following will be provided with the submission of a completed ASB #224 Claim Form, copies of invoices showing breakdown of material and labor charges, and log book entries. **Any commercial assistance or other consideration shall expire twelve (12) calendar months from the original published date of ASB No. 224.**

- A. Required material listed in Section 2.A. of ASB #224.
- B. Labor for inspection, removal, & installation of an affected aircraft alternator will be paid at a shop rate of \$85 per hour, not to exceed US \$297.50 per affected alternator.
 - (1) Up to one and a half (1.5) hours labor required for removal, inspection, and installation of the alternator.
 - (2) Up to two (2) hours to remove and replace affected spacer, drive-coupling inspection, and engine oil change.

3. Commercial Assistance ADMINISTRATION:

- A. Complete the ASB #224 Claim Form attached to this appendix.
 - (1) Mail, e-mail, or fax the ASB #224 Claim Form to the attention of Product Support as indicated on the ASB Claim Form.
- B. Upon receipt of the ASB Claim Form, Hartzell Engine Tech LLC will:
 - (1) Ship the required material in accordance with Section 2.A. of ASB #224 to the service provider indicated.
 - (2) The service provider must return proof of service within thirty (30) days or the service provider shall be invoiced for the HET supplied materials.
- C. For labor and parts listed in section 2:
 - (1) Aircraft/engine service facility or owner must submit an invoice up to the amount specified in Section 2, copies of logbook entries, and a completed ASB #224 Claim Form for reimbursement (*May be a copy of the original form provided*).

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4. WARRANTY STATEMENT:

- A. The sole warranty for the actions of ASB #224 are contained in the HET Limited Warranty Policy issued with the purchase of each new/overhauled alternator (see terms and conditions therein).
- B. Commercial assistance may apply as stated in this Appendix.
- C. Issuance of ASB #224 in no way constitutes an implied or expressed warranty of any kind.
- D. This publication does not imply or state any responsibility for the workmanship of any person or entity performing work or maintenance on the engine or aircraft electrical system.

5. 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 +1.334.386.5410
 - (3) E-mail at techsupport@Hartzell.aero
 - (4) Address
 - Hartzell Engine Tech LLC
 - 2900 Selma Highway,
 - Montgomery, AL 36108
 - USA

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SB 224 CLAIM FORM

Owner information

Name: _____ Date: _____ Tel: _____ Fax: _____

Company Name: _____ E-mail: _____

Address: _____

City: _____ State: _____ Postal Code: _____

Country: _____

Aircraft/Engine Service Facility information

Name: _____ Date: _____ Tel: _____ Fax: _____

Company Name: _____ E-mail: _____

Address: _____

City: _____ State: _____ Postal Code: _____

Country: _____

Aircraft Mfg: _____ Model: _____ Time in Service: _____ S/N: _____

Engine: _____ Model: _____ Time in Service: _____ S/N: _____

Component Information

Nomenclature: Alternator Assembly _____ Part Number: _____

Serial Number: _____ (Alternator) Date Removed: _____

Part Time in Service: _____ (Alternator) Original Date Installed: _____

For RMA Number

Send this ASB #224 Claim Form to:

Hartzell Engine Tech Product Support

Fax: +1.334.386.5410

E-mail: techsupport@hartzell.aero

RMA Number:

(write in HET assigned RMA number)

Hartzell Use Only - do not write below this line.

Warranty No: _____ Authorized by: _____