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Service Bulletin

No. 043

X-Drive Starter Fit

1. Planning Information

A. Effectivity

- (1) Hartzell Engine Technologies LLC (HET), formerly Kelly Aerospace Energy Systems, LLC (KAES), X-Drive starter, model no. SRB-9021, of any serial number, when used in the following aircraft installations:
 - (a) IO-360-A1B6 Lycoming engine used in Partenavia P68 Observer, P68 Observer II, or any other P68 series aircraft.
 - (b) IO-360-A1B6 Lycoming engine used in Vulcanair series aircraft.

CAUTION: DO NOT USE OBSOLETE OR OUTDATED INFORMATION.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 IN THIS SERVICE BULLETIN 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 HET WEBSITE FOR THE MOST RECENT REVISION LEVEL OF THE SERVICE BULLETIN.

B. Concurrent Requirements

- (1) None

C. Reason

- (1) It has come to the attention of HET that the Partenavia and the Vulcanair applications using the SRB-9021 X-Drive starter may experience airframe interference including contact with the engine oil cooler not evident at initial starter installation but occurring after start or upon application of engine torque.
- (2) HET FAA PMA Supplement and the current engine starter application guide allow use of the SRB-9021 X-Drive starter on IO-360-A1B6 Lycoming engine applications.
- (3) To issue an advisory not to use the SRB-9021 X-Drive starter on specific airframe applications as listed in the Effectivity.
- (4) Regulatory action is not expected.

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D. Description

(1) This Service Bulletin is being issued to advise that the SRB-9021 X-Drive starter does not qualify as eligible for installation in Partenavia or Vulcanair aircraft.

E. Compliance

(1) **Prior to next flight**, if a new or rebuilt HET SRB-9021 starter has been installed per the Effectivity 1.A.(1), proceed to Accomplishment Instructions 3.A.(2).

(2) **Prior to next flight**, if it is unknown whether an HET SRB-9021 starter has been installed, proceed to Accomplishment Instructions 3.A.(1).

(3) Prior to installation of a new or rebuilt HET SRB-9021 starter per the Effectivity 1.A.(1):

(a) Do not install a the SRB-9021 X-Drive starter.

(b) Install an approved starter. Hartzell Engine Technologies recommends using an HET MHB-4016 or MHB-6016 (FAA PMA approved) starter.

(4) Compliance with this Service Bulletin is mandatory.

F. Approval

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

G. Manpower

(1) Up to three (3) man hours for gaining access, inspection, and Return to Service. (per engine)
(Refer to Appendix 1.)

H. Weight and Balance

(1) No change.

I. Electrical Load Data

(1) No change.

CAUTION: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF A DOCUMENT.

J. References

(1) Partenavia Aircraft Service or Maintenance Manual.

(2) Vulcanair Aircraft Service or Maintenance Manual.

(3) Lycoming IO-360-A1B6 Service Instructions or Maintenance Manual.

(4) HET Starter Application Guide.

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K. Other Publications Affected

- (1) None.

2. Material Information

- A. As required, one (1) aircraft starter per engine, HET P/N MHB-4016 or MHB-6016. (Refer to Appendix 1.)

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 ENGINE STARTER 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 SERVICE BULLETIN (SB) AND THE APPLICABLE AIRCRAFT MAINTENANCE MANUAL AND/OR ENGINE SERVICE INSTRUCTIONS. INFORMATION CONTAINED IN THESE MANUALS OR THIS SB MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THE SB 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 APPLICABLE AIRCRAFT MAINTENANCE MANUAL AND/OR LYCOMING PUBLICATIONS INDEX FOR THE MOST RECENT REVISION LEVELS.

CAUTION 2: DO NOT DEPEND ON THIS SERVICE BULLETIN FOR GAINING ACCESS TO THE AIRCRAFT OR ENGINE. 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.

A. Identification

- (1) If positive identification of a starter installation other than an SRB-9021 can be made through the aircraft paperwork, continue with 3.D Return to Service. If a positive identification cannot be made, continue with this instruction.
- (2) Access the aircraft engine in accordance with the instructions contained in the applicable aircraft service or maintenance manual.
- (3) Remove the cowling from the engine and locate the starter on the Lycoming IO-360-A1B6 engine.
- (4) Locate the data tag on the starter and determine if the unit is an SRB-9021 starter.
 - (a) If the unit is NOT an SRB-9021 starter, proceed to section 3.D for Return to Service.
 - (b) If the unit IS an SRB-9021 starter, proceed with Accomplishment Instructions 3.B.

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B. Inspection

CAUTION: POTENTIAL DAMAGE FROM INSTALLATION OF THE X-DRIVE SRB-9021 STARTER PER THE EFFECTIVITY SECTION IS LIMITED TO INTERFERENCE BETWEEN THE SOLENOID ON THE X-DRIVE STARTER AND THE ENGINE OIL COOLER. DAMAGE MAY RANGE FROM CHAFE MARKS TO RUPTURE OF THE OIL COOLER. OIL COOLER RUPTURE WILL CAUSE ENGINE OIL LEAKAGE AND POSSIBLE ENGINE OIL STARVATION.

- (1) Using a light source and mirror, inspect the starter installation looking at the oil cooler just next to the starter solenoid. Look for evidence of impact damage or oil leakage.
 - (a) If oil cooler IS damaged or leaking oil, replace or repair prior to further flight and proceed to Corrective Action.
 - (b) If oil cooler IS NOT damaged or leaking oil, proceed to Corrective Action.

C. Corrective Action:

- (1) Remove the X-Drive starter, SRB-9021 from the engine.
- (2) Install an approved starter. HET recommends using the HET MHB-4016 or MHB-6016 (FAA PMA approved) starter.

D. Return to Service

- (1) Inspect the airframe and oil cooler as prescribed in the latest revision of the aircraft or engine maintenance manual or service instructions.
- (2) Perform the recommended functional tests in accordance with the appropriate aircraft maintenance manual and engine service instructions.
- (3) Using the applicable aircraft and engine manufacturer's maintenance manuals of the latest revision, install any portion of the aircraft that was removed to gain access.
- (4) The aircraft may be returned to service after making a logbook entry to indicate completion of this Service Bulletin as applicable.

4. Contact Information

- A. All communications regarding this Service Bulletin, must be placed either through Hartzell Engine Technologies Technical Support at (888) 461-6077 or via Fax (334) 386-5450. For the Warranty department, (334) 386-5441.
- B. Written communications must be placed through Hartzell Engine Technologies Technical Support, 2900 Selma Highway, Montgomery, AL 36108, USA.
- C. If E-mail communication is desired, go to our website: <http://www.hartzellenginetech.com> and select "contact" and follow the instructions.

APPENDIX I

(SB 043)

COMMERCIAL ASSISTANCE:

In addition to warranty coverage provided by the HET (formerly KAES) Limited Warranty, HET will provide additional commercial assistance to comply with SB043 under the terms outlined in this Appendix. A. The offer for commercial assistance shall expire one hundred twenty (120) days from the date of publication of the original release of Service Bulletin SB 043.

Commercial Assistance: To qualify for HET commercial assistance, a PPCR (Attachment A, with all Sections fully completed) along with copies of invoices showing breakdown of labor charges and log book entries must be submitted. This will serve as a claim form when received by HET warranty department.

Removal and Installation (includes gaining access): Up to two (2) hours labor (up to \$150 maximum) per engine. This assistance applies only if an SRB-9021 (X-Drive) starter has been installed, no assistance will be allowed for identification or inspection of unaffected starters.

Identification: Labor is negligible once access is gained.

Inspection & Corrective Action: Up to one (1) hour labor (up to \$75 maximum) per engine once access is gained to inspect, remove and replace affected starter (Corrective Action). This assistance applies only if an SRB-9021 (X-Drive) starter has been installed.

Prorata: If an SRB-9021 X-Drive starter is removed from service after being installed on Partenavia P68 or Vulcanair series aircraft, a prorata will be offered when installing a factory new or rebuilt MHB-4016 as follows: New is direct exchange with shipping one way upon receipt of affected SRB-9021 starter. Up to 200 hours TIS 80%, 201 hours TIS to 500 hours TIS 50%, 501 hours TIS and up, 25%. SRB-9021 X-Drive starter must be returned for exchange credit. MHB-4016 must be ordered through normal HET distribution. Appropriate credit will be applied directly from HET upon submission of proof of purchase and/or associated aircraft paperwork and claim as indicated above.

Damage: All claims for airframe/engine damage resulting from installation of an SRB-9021 X-Drive starter on Partenavia P68 or Vulcanair series aircraft shall be handled through the warranty department on a case by case basis via telephone (334) 386-5441 or by e-mail at, warranty@hartzellenginetech.com. Any offer of assistance shall expire one hundred twenty (120) days from the date of publication of the original release of Service Bulletin SB 043.

WARRANTY STATEMENT:

- A. The sole warranty for the actions within this Service Bulletin are contained in the HET Limited Warranty Policy issued with the purchase of each new or rebuilt SRB-9021 X-Drive starter (see terms and conditions therein).
- B. Commercial assistance may apply as stated in this Appendix. Attachment A of this Service Bulletin, fully completed, is required.
- C. Issuance of this Service Bulletin 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 or starting system.

CONTACT INFORMATION:

All communications regarding this service bulletin, must be placed either through Hartzell Engine Technologies Technical Support at telephone (888) 461-6077 or via Fax (334) 386-5450. For the Warranty department, telephone (334) 386-5441. Written communications must be placed through Hartzell Engine Technologies Technical Support, 2900 Selma Highway, Montgomery, AL 36108, USA.

If e-mail communication is desired, go to our website: <http://www.hartzellenginetech.com> and select "contact" and follow the instructions.

ATTACHMENT A - SB 043



PPCR

Publication Product Condition Report

(To validate warranty or commercial assistance, all information MUST be filled out.)

SECTION I: Customer information (Completed by End User)

Name: _____ Date of Report: _____ Tel: _____

Company Name: _____ E-mail: _____

Address: _____

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

Engine _____

(as may be applicable)

SECTION II: Product or Component Information (Completed by End User)

Nomenclature: X-Drive Starter Part Number: SRB-9021

Serial Number: _____ Batch/Date Code: _____

Part Time in Service: _____

SECTION III: Compliance Information: (Completed by Repair Facility)

- Compliance with SB-043: YES
- X-Drive (SRB-9021) installed: YES NO
- Oil Cooler Damaged: YES NO

Please describe condition of starter installation damage if applicable:

Eligibility:

To be eligible for any commercial assistance, this form must be completed as instructed above and will serve as a claim form. NO reimbursement will be made without completing this form. The offer for commercial assistance shall expire one hundred twenty (120) days from the date of publication of the original release of Service Bulletin SB 043.

For further information contact Hartzell Engine Technologies LLC at: 2900 Selma Highway, Montgomery, AL, USA or FAX to HET Customer Service, 334-386-5450. The complete service bulletin is available to you online via