

SERVICE BULLETIN**SB16-7**

Compliance Will Enhance Safety

SUBJECT: Hartzell Engine Technologies (HET) Service Bulletin (SB) No. 067

PURPOSE: Requires mandatory replacement of the Poppet Valve in affected Wastegate Poppet Valve assemblies HET P/N 470892-0002, 470892-9002, and CM P/N 635381-2, R-635381-2.

COMPLIANCE: As directed by Hartzell Engine Technologies Service Bulletin (SB) No. 067 or at the next scheduled inspection, whichever occurs first.

MODELS

AFFECTED: New and rebuilt TSIO-520-L, LB, and WB aviation gasoline (AvGas) engines

I. GENERAL INFORMATION

Hartzell Engine Technologies LLC (HET) has issued Service Bulletin (SB) No. 067 requiring mandatory replacement of the Poppet Valve in affected Wastegate Poppet Valve assemblies HET P/N 470892-0002, 470892-9002, and CM P/N 635381-2, R-635381-2. The affected Poppet Valve assembly may exhibit excessive corrosion during normal operation. Corrosion of the Poppet Valve may result in a slow loss of manifold pressure due to leakage past the corroded valve and may require replacement.

Reference the attached HET Service Bulletin (SB) No. 067 to correctly identify the affected Turbocharger, Wastegate Poppet Valve Assembly, Poppet Valve and specific compliance instructions. For your convenience, please use the following cross-reference table to identify affected Continental Motors part numbers:

Description	Part Numbers	
	HET Models	CM Models
Turbocharger	409680-0001, 409680-9001, 409680-0011, 409680-9011	640327-1, 640327-11
Wastegate Poppet Valve Assembly	470892-0002, 470892-9002	635381-2, R-635381-2
Poppet Valve	477285-0002	

Continental Motors (CM) recommends customer compliance, as specified in Hartzell Engine Technologies Service Bulletin No. 067.

II. WARRANTY

Direct all questions regarding the actions required by the attached Service Bulletin to:

Hartzell Engine Technologies LLC
 2900 Selma Highway
 Montgomery, AL 36108
 Phone: +1-334-386-5400 (Option 2)
 FAX: +1-334-386-5450
 E-mail: techsupport@HartzellEngineTech.com

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2900 Selma Highway
 Montgomery, AL 36108 USA
 Tel: 334-386-5400 Fax: 334-386-5450
<http://www.hartzell.aero>

Service Bulletin

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Turbocharger Wastegate Poppet Valve Replacement HET Part Number 477285-0002

1. Planning Information

A. Effectivity

- (1) Hartzell Engine Technologies LLC (HET) Wastegate Poppet Valve assembly P/N 470892-0002 470892-9002 with serial numbers shown in Table 1 or Continental Motors, Inc. (CMI) P/N's 635381-2 or R-635381-2 with serial numbers shown in Table 2 as used on Turbocharger HET P/N's 409680-0001, 409680-9001, 409680-0011, 409680-9011 or CMI P/N's 640327-1 and 640327-11 are affected by this Service Bulletin.
- (2) Hartzell Engine Technologies LLC (HET) Wastegate Poppet Valve P/N 477285-0002 delivered as service parts from November, 2012 through July, 2013 with poppet valves bearing date codes H1112 (week, year format) etched on the poppet valve face are affected by this Service Bulletin.
- (3) The affected turbochargers are used on Continental Motors, Inc. installations (CMI). Refer to Table 3 for reference.

WARNING: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS SERVICE BULLETIN. THE 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.

**Table 1: HET Wastegate Poppet Valve Assembly P/N 470892-0002
 or P/N 470892-9002 Serial Numbers Affected ***

H-PLO00014	H-PLN00015	H-PLN00017	H-QBN00196	H-QCN00001	H-QCO00002
H-QCN00015	H-QCO00160	H-QDO00047	H-QDO00048	- END -	

* The suffix -0002 is New and the serial number contains an "N". The suffix -9002 is a Factory Rebuilt and the serial number contains an "O". The affected serial number Tables include both new and rebuilt units.

**Table 2: CMI Wastegate Poppet Valve Assembly P/N 635381-2 or
 P/N R-635381-2 Serial Numbers Affected (new or rebuilt)**

H-QDN00028	H-QEO00037	H-QEO00038	H-QEO00051	- END -	
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B. Concurrent Requirements

- (1) None

C. Reason

- (1) Affected serial numbers of Wastegate Poppet Valve assembly HET P/N 470892-0002 or P/N 470892-9002 and CMI P/N's 635381-2 or R-635381-2 as installed in Turbochargers listed in 1.A(1) have poppet valve P/N 477285-0002 that may exhibit excessive corrosion during normal operation.

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- (2) Corrosion of the Wastegate Poppet Valve may result in a slow loss of manifold pressure due to leakage past the corroded valve and may require replacement of the Poppet Valve.
- (3) Affected Poppet Valves P/N 477285-0002 must be replaced with a Poppet Valve that is not affected by this Service Bulletin.
- (4) Regulatory action is unknown.

D. Description

- (1) This Service Bulletin provides Instructions for Continued Airworthiness (ICA).
- (2) This Service Bulletin requires replacement of the Poppet Valve in affected Wastegate Poppet Valve assemblies HET P/N 470892-0002, 470892-9002, and CMI P/N 635381-2, R-635381-2.

E. Compliance

- (1) For affected Poppet Valves with less than one hundred (100) hours time in service (TIS), at the next scheduled inspection event or one (1) year after the effective date of this Service Bulletin, whichever occurs first, inspect the affected Wastegate Poppet Valve assembly in accordance with the Accomplishment Instructions of this Service Bulletin.
- (2) For affected Poppet Valves with one hundred (100) hours time in service (TIS) and above, within the next twenty-five (25) hours TIS, at the next scheduled inspection event, or one (1) year after the effective date of this Service Bulletin, whichever occurs first, inspect the affected Wastegate Poppet Valve assembly in accordance with the Accomplishment Instructions of this Service Bulletin.
- (3) Compliance with the Accomplishment Instructions in this Service Bulletin is the terminating action for this Service Bulletin.

F. Approval

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

G. Manpower

- (1) Up to two (2.0) man hours of labor are needed for removal, inspection and replacement of an affected Wastegate Poppet Valve assembly from the turbocharger when performed in conjunction with regularly scheduled maintenance inspection.
- (2) If an affected Wastegate Poppet Valve assembly is field repaired, approximately one (1) man hour is required in addition to the time specified in section 1.G.(1).

H. Weight and Balance

- (1) No change.

I. References

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

- (1) Applicable aircraft and engine maintenance manuals of the latest revision.
- (2) HET 400600-0000 Rev. B or latest Turbocharger Overhaul & Maintenance manual.
- (3) HET 400999-0000 Rev. C or latest Turbocharger Valves & Controller Overhaul & Maintenance manual if field repair is to be performed.

J. Other Publications Affected

- (1) None.

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2. Material Information

- A. One (1) each, Poppet Valve, HET P/N 477285-0002 for the affected Wastegate Poppet Valve assembly HET P/N's 470892-0002, 470892-9002 or CMI P/N's 635381-2, R-635381-2 if poppet valve replacement is performed.
- B. Two (2) each, Lock Plates, HET P/N 477291 to secure the Wastegate Poppet Valve assembly after inspection and repair.

3. Accomplishment Instructions

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

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 (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 ENGINE MANUFACTURER'S PUBLICATIONS AND/OR AIRCRAFT MAINTENANCE MANUAL INDEX FOR THE MOST RECENT REVISION LEVELS.

CAUTION: DO NOT DEPEND ON THIS SERVICE BULLETIN FOR GAINING ACCESS TO THE AIRCRAFT AND ENGINE. ACCESS REQUIRES 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) Determine the Turbocharger part number through documentation or by visual inspection of the Turbocharger data tag. The Turbocharger containing the affected Wastegate Poppet Valve assembly is HET P/N 409680-0001, 409680-9001, 409680-0011, 409680-9011, or CMI P/N's 640327-1 and 640327-11.
- (2) Determine the Wastegate Poppet Valve assembly serial number through documentation or by visual inspection of the Wastegate Poppet Valve assembly data tag.
 - (a) The Wastegate Poppet Valve assembly is affected if listed in Table 1 or Table 2. Refer to Fig. 1.
- (3) If the Wastegate Poppet Valve assembly is not listed in either Table, but the documentation indicates a poppet valve HET P/N 477285-0002 has been replaced after November, 2012, continue to 3.B.

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B. Inspection for Field Repair Poppet Valve:

- (1) Remove the affected Wastegate Poppet Valve assembly from the Turbocharger in accordance with the aircraft/engine and the HET 400600-0000 Rev B or latest maintenance manuals.
- (2) Inspect the face of the Poppet Valve for the affected date code (H1112) shown in Fig. 2:
 - (a) If the date code is H1112, continue to 3.C(1) or 3.C(4).
 - (b) If the date code is not H1112, continue to 3.D.
- (3) If the date code can not be determined, place a magnet on the valve face similar to that shown in Fig. 4.
 - (a) If the magnet sticks to the Poppet Valve, it is an affected Poppet Valve. Continue to 3.C(1) or 3.C(4).
 - (b) If the magnet does not stick to the Poppet Valve, it is not an affected. Continue to 3.D.

C. Corrective Action:

- (1) Remove the affected Wastegate Poppet Valve assembly from the Turbocharger in accordance with the applicable aircraft/engine and HET maintenance manuals.
- (2) Repair or replace the affected Wastegate Poppet Valve assembly in accordance with the following instructions:
 - (a) Wastegate Poppet Valve Repair – replace the affected Poppet Valve using the applicable sections of the HET 400999-0000 Rev. C or later Turbocharger Valves & Controller Overhaul & Maintenance manual to disassemble, repair, reassemble, and test the Wastegate Poppet Valve assembly or;
 - (b) Return the affected Wastegate Poppet Valve assembly properly packaged to HET for repair/replacement following the instructions contained in the Service Bulletin Appendix.
- (3) Prior to installation of the repaired or replaced Wastegate Poppet Valve assembly inspect the hold down clamp for cracks or elongated holes and inspect the bolts for thread damage. Replace if required.
- (4) Install an unaffected Wastegate Poppet Valve assembly on the Turbocharger using two (2) new HET P/N 477291 lockplates in accordance with the instructions in the HET 400600-0000 Rev. B or later Turbocharger Overhaul & Maintenance manual and the applicable aircraft/engine maintenance manuals.

D. Return to Service

- (1) Inspect the Turbocharger system installation on the aircraft or engine as instructed in the latest revision of the applicable aircraft/engine maintenance manual.
- (2) Perform the recommended functional tests in accordance with the appropriate aircraft/engine maintenance manuals and POH or AFM.
- (3) Using the the latest revision of the applicable aircraft maintenance manual, install any portion of the aircraft that was removed to gain access.

E. Maintenance Record

- (1) Make an aircraft logbook entry to indicate the completion of this Service Bulletin as applicable, noting compliance with this Service Bulletin as terminating action.

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4. Contact Information

A. Contact **HET Product Support** for all communications regarding the technical content of this Service Bulletin and to obtain **RMA** return information.

- (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 Technologies LLC
2900 Selma Highway,
Montgomery, AL 36108
USA

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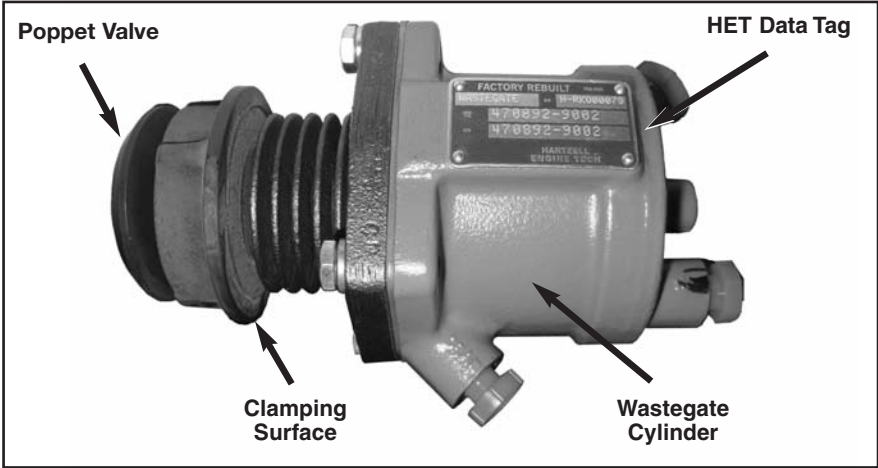


Figure 1 - Wastegate Poppet Valve Assembly
(HET P/N 470892-9002 Factory Rebuilt) above
(CMI P/N 635381-2 Factory New) below



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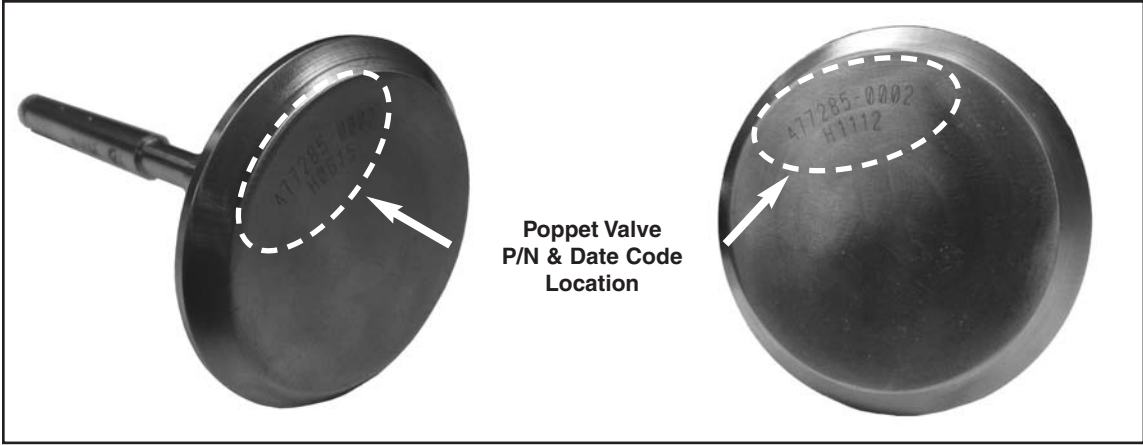


Figure 2 - New Poppet Valve (HET P/N 477285-0002) with H1112 Date Code

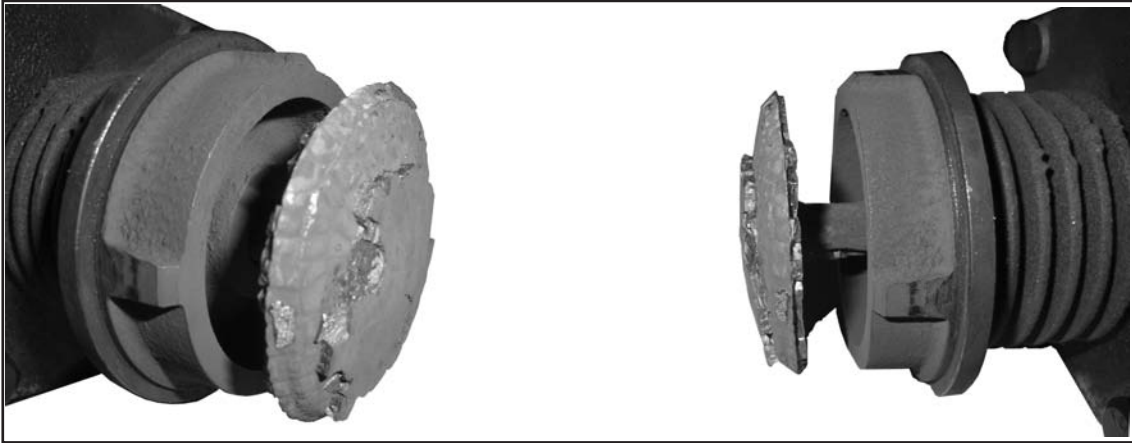


Figure 3 - Corroded Poppet Valve Examples



Figure 4 - Poppet Valve Magnet Check

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Table 3 - Reference Guide*

Turbocharger Part Number	Wastgate Part Number	Engine Model	Aircraft Model
409680-0001 409680-9001 (CMI 640327-1)	470892-0002 470892-9002 (CMI 635281-2)	TSIO-520-L TSIO-520-WB	Beech Baron 58P, 58TC Beech Baron 58P, 58TC
409680-0011 409680-9011 (CMI 640327-11)	(CMI R-635281-2)		

* Use for reference purposes only. Aircraft/engines listed are inclusive of but not limited to these models. Applicable engine and aircraft manufacturer's Type Certification information should be consulted as the official source.

Service Bulletin Appendix

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Turbocharger Wastegate Poppet Valve Replacement HET P/N 477285-0002

1. ELIGIBILITY:

- A. HET P/N 470892-0002 or 470892-9002 Wastegate Poppet Valve assembly with serial numbers listed in Table 1.
- B. CMI P/N 635381-2 or R-635381-2 Wastegate Poppet Valve assembly with serial numbers listed in Table 2.
- C. HET P/N 477285-0002 Poppet Valve with date code stamp H1112 or that were delivered between November, 2012 through July, 2013.
 - (1) Includes Wastegate Poppet Valve assembly documented to contain affected Poppet Valve through field overhaul or repair.

2. COMMERCIAL ASSISTANCE PROGRAM:

- A. Hartzell Engine Technologies LLC (HET) will provide the following with the submission of a completed SB 067 Claim Form, copies of invoices showing breakdown of labor charges, material and log book entries and Poppet Valve assembly documentation as applicable. **Any commercial assistance or other consideration shall expire twelve (12) calendar months from the original published date of SB 067.**
 - (1) For field replacement of the Poppet Valve in an eligible Wastegate Poppet Valve assembly, HET will provide a replacement Poppet Valve and two (2) Lockplates, plus up to 3 hours labor at a shop rate not to exceed \$75 per hour.
 - (2) For return of an eligible Wastegate Poppet Valve assembly, HET will repair or provide an exchange unit at HET's option and two (2) Lockplates, plus up to 2 hours labor at a shop rate not to exceed \$75 per hour.
 - (a) If an exchange unit is desired in advance, a core charge of \$1,300 must be paid in advance. This core charge will be refunded upon the receipt of an eligible Wastegate Poppet Valve assembly within 90 days of shipment of the exchange Wastegate Poppet Valve assembly.
- B. Eligible Poppet Valves in inventory may be returned for replacement.
- C. HET has Recommended Service Facilities (RSF) that are approved to perform warranty service on HET Turbocharger system products. Field repair of the poppet valve per SB 067 may be performed by an RSF.
 - (a) RSF service facilities must meet appropriate FAA requirements and additional HET requirements before being recommended by HET.
 - (b) Each RSF is audited by HET to verify the continuation of these standards.
 - (c) Hartzell Engine Technologies recommends that you use an RSF for repair or overhaul of HET Turbocharger system products.
 - (d) For a current list of HET Recommended Service Facilities, contact Hartzell Product Support or refer to the Hartzell Engine Technologies website at <http://www.hartzell.aero/service-centers/>.

3. COMMERCIAL ASSISTANCE ADMINISTRATION:

- A. Complete the Service Bulletin SB 067 Claim Form attached to this appendix.
 - (1) Mail, e-mail, or fax the SB 067 Claim Form to the attention of Product Support as indicated on the Service Bulletin Claim Form.
- B. Upon receipt of the Service Bulletin Claim Form and affected Wastegate Poppet Valve assembly, Hartzell Engine Technologies LLC will repair and return the Wastegate Poppet Valve assembly to the service provider indicated.

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C. For labor and material charges:

- (1) For reimbursement, aircraft/engine service facility must submit an invoice up to the amount specified in section 2, copies of logbook entries, and a completed SB 067 Claim Form .

4. WARRANTY STATEMENT:

- A. The sole warranty for the actions of SB 067 is contained in the HET Limited Warranty Policy issued with the purchase of each new or factory overhauled Wastegate Poppet Valve assembly.
- B. Commercial assistance may apply as stated in this Appendix.
- C. Issuance of SB 067 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 turbocharging 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 +1.334.386.5450.
- (3) E-mail at techsupport@HartzellEngineTech.com.
- (4) Address

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

6. SHIPPING INFORMATION:

- A. Wastegate Poppet Valve assembly or Poppet Valve being returned for repair/replacement must be securely packaged so no damage will occur in shipment.
- B. A copy of the properly completed SB 067 Claim Form for each affected Wastegate Poppet Valve assembly or Poppet Valve must be placed inside the shipping container.
- C. Wastegate Poppet Valve assemblies must be received undamaged and assembled.

Address package to:

Hartzell Engine Technologies LLC
Product Support Department
2900 Selma Highway,
Montgomery, AL 36108
USA

Also indicate clearly on the outside of the shipping container:

PRODUCT SUPPORT DEPT / SB 067

- D. When using an HET RSF, steps A, B, and C apply except:
Follow the shipping instructions required by the RSF.

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SB 067 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: _____ Part Number: _____

Serial Number: _____ Date Removed: _____

Part Time in Service: _____ Original Date Installed: _____

For RMA Number

Send this SB 067 Claim Form to:

Hartzell Engine Technologies Product Support

Fax: +1.334.386.5450

E-mail: techsupport@hartzellenginetech.com

RMA Number:

(write in HET assigned RMA number)

Hartzell Use Only - do not write below this line.

Warranty No: _____ Authorized by: _____

