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# Service Bulletin

## Service Bulletin No. 205

### Turbocharger V-Band Torque Verification

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#### 1. Planning Information

##### A. Effectivity

- (1) Overhauled or repaired Aeroforce turbocharger models TE06, TH08, TH08A, TA8102, T18A, and TA61 manufactured by Hartzell Engine Tech are affected by this Service Bulletin (SB).
  - (a) Table 1 contains turbocharger assembly Model, turbocharger P/N, and associated aircraft/engines affected by this SB.
  - (b) All serial numbers of overhauled or repaired turbocharger assemblies are affected.

**NOTE:** Aircraft and engine models found in Table 1 are for reference only. Table 1 is not an all-inclusive list of aircraft and engines affected by this SB. It is the responsibility of the owner/operator to verify whether an affected turbocharger 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**WARNING:** DO NOT USE OBSOLETE OR OUTDATED INFORMATION.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 [WWW.AEROFORCE.AERO](http://WWW.AEROFORCE.AERO) FOR THE MOST RECENT REVISION LEVEL OF THIS SERVICE BULLETIN.

##### B. Concurrent Requirements

- (1) None

##### C. Reason

- (1) Hartzell Engine Tech has discovered that affected turbocharger v-band lock-nut (1) torque specifications referenced in 400600-0000 Rev. New thru Rev. D are incorrect.
  - (a) This condition could compromise the integrity of the v-band retention system.

##### D. Description

- (1) This SB provides Instructions for Continued Airworthiness (ICA).
- (2) This SB is to advise the field of a known condition, supply inspection criteria to identify affected turbocharger assemblies, and provide corrective actions for affected turbochargers.
- (3) Torque specifications found in Table 2 of this document supersede those referenced in HET Manual P/N 400600-0000 Rev. New thru Rev. D for affected turbocharger assemblies.
  - (a) Table 2 data is scheduled to be incorporated in the release of HET Manual P/N 400600-000 Rev. E.

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#### E. Compliance

- (1) Compliance with section 3.A of this SB is required at the next scheduled aircraft annual inspection, not to exceed 12 calendar months from issuance date of this SB, whichever occurs first.

#### 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 or by aircraft documentation review.
- (2) Up to one-half (.5) hour to perform a one-time inspection of the affected turbochargers.

#### H. References

- (1) Applicable aircraft POH or AFM.
- (2) Aircraft maintenance manual (as applicable).
- (3) Engine Service Instructions or maintenance manual (as applicable).
- (4) Aircraft Turbocharger Maintenance and Overhaul Manual, HET P/N 400600-0000 Rev. New thru Rev. D.

#### I. Other Publications Affected

- (1) None

#### J. Weight and Balance

- (1) No Change

## 2. Material Required

#### A. None

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#### 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 TURBOCHARGER 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 AND THE APPLICABLE AIRCRAFT, ENGINE AND/OR THE HET P/N 400600-0000 MAINTENANCE MANUAL. INFORMATION CONTAINED IN THESE MANUALS OR THIS SERVICE BULLETIN MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THE 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 AEROFORCE WEBSITE ([WWW.AEROFORCE.AERO](http://WWW.AEROFORCE.AERO)) FOR THE MOST RECENT REVISION OF THE 400600-0000 MANUAL.

**CAUTION 2:** DO NOT DEPEND ON THIS SERVICE BULLETIN FOR GAINING ACCESS TO THE ENGINE OR TURBOCHARGER. 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. Turbocharger Identification

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

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Turbocharger Model	Turbocharger P/N	Aircraft/Engine Make	Aircraft/Engine Model
T18A	407800-3	Lycoming Engines	TIGO-541-D1A, -E1A
	408590-12	Continental Aerospace Technologies	GTSIO-520-F; GTSIO-520-K
TA61	466881-1	Lycoming Engines	TIO-540-AJ1A
TA8102	466412-3	Continental Aerospace Technologies	TSIOL-550-A, -C
TE06	406970-1	Cessna Aircraft	TSIO-360-D/ F,R: RT-337RG, TSIO-360-A&B: T-337B, TSIO-360-A: T-337C-F
	406610-4	Continental Aerospace Technologies	TSIO-520-D
	406610-5	Cessna Aircraft	TSIO-520-C: T(P,U)-206A-F, TSIO-520-M: TU-206G, TSIO-520-G: T-207, TSIO-520-M: T-207A, TSIO-520-C: T-210F-H, TSIO-520-H: T-210J-L, TSIO-520-R: T-210M-N
	406610-15	Lycoming Engines	TVO-435-D1A, D1B, E1A, G1A, F1A
	406610-18	Cessna Aircraft	T337G
	406610-19	Continental Aerospace Technologies	TSIO-520-B, E
	406610-20	Lycoming Engines	TIO-540-A1A, A1B, A2A, A2B, A2C, F2BD
	406610-21	Lycoming Engines	TIO-540-C1A, E1A, G1A, H1A
	406610-22	Cessna Aircraft	T337G
	406610-25	Continental Aerospace Technologies	TSIO-520-B, -BB, E, -EB
	406610-26	Lycoming Engines	TIO-540-S1AD
	406610-28	Continental Aerospace Technologies	TSIO-520-VB
	406610-29	Continental Aerospace Technologies	TSIO-520-UB
	406610-30	Cessna Aircraft	TSIO-520-AE: T-303
	406610-31	Lycoming Engines	TIO-540-AB1AD, AB1BD
406610-32	Lycoming Engines	TIO-540-AA1AD	
TH08	406990-4	Continental Aerospace Technologies	GTSIO-520-D
	408610-1	Continental Aerospace Technologies	GTSIO-520-H
TH08A	409170-1	Lycoming Engines	TIO-540-J2B; TIO-540-J2BD; TIO-540-N2BD
	407810-1	Continental Aerospace Technologies	TSIO-520-J, -K, -N/NB
	409680-11	Continental Aerospace Technologies	TSIO-520-L; TSIO-520-WB
The aircraft and engine models found in Table 1 are provided for reference only. The applicable aircraft/engine manufacturer's Type Certification information should be consulted as the official source.			

**Table 1 - Turbocharger Model, P/N, and Aircraft/Engine Effectivity**

400600-0000 Rev. D pg. 5-70-01, Table 5-1

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#### B. Corrective Action

- (1) V-band torque check
  - (a) Gain access to the turbocharger in accordance with applicable aircraft/engine maintenance manual and service instructions.
    - 1) Inspect the v-band coupling for looseness.
      - a) If the v-band coupling is found loose on the housing:
        - 1: Contact HET customer support prior to taking action.
      - b) If the v-band coupling is not found loose on the housing:
        - 1: Using a calibrated in-lb torque wrench, inspect the v-band coupling lock-nut (1) torque against the turbocharger models referenced in Table 2, this document.
        - 2: If the locknut (1) torque is not within specification, adjust torque in accordance with Table 2.
        - 3: If the locknut (1) torque is within limits, continue to 3.C, Return to service.

#### C. Return to Service

- (1) Close all doors and covers used to gain access to the turbocharger.
- (2) Perform the recommended turbocharger 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 Service Bulletin.

#### 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](mailto:techsupport@Hartzell.aero)
- (4) Address

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

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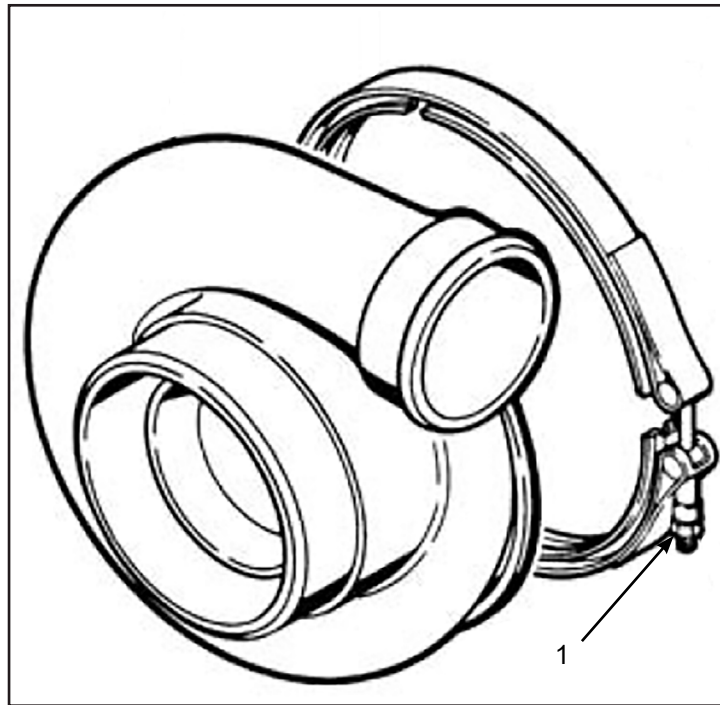


Figure 1 - Turbocharger V-Band Coupling, Typical

Turbocharger Model	V-Band Locknut Torque Value
T18A	110-130 in-lbs (12.43-14.69 Nm)
TA61	110-130 in-lbs (12.43-14.69 Nm)
TA8102	130-150 in-lbs (14.69-16.95 Nm)
TE06	40-60 in-lbs (4.52-6.78 Nm)
TH08	40-60 in-lbs (4.52-6.78 Nm)
TH08A	40-60 in-lbs (4.52-6.78 Nm)

Table 2 - V-Band Torque Values