SERVICE BULLETIN REVISION NOTICE

NON-MODIFICATION SERVICE BULLETIN — ENGINE — HIGH PRESSURE (HP) COMPRESSOR, STAGE 3 TO 8 COMPRESSOR DRUM — ULTRASONIC INSPECTION PROCEDURE

Turbojet Engine Service Bulletin No. V2500-ENG-72-0608 Revision No. 4 dated February 13, 2020

Revision History

Original Issue May 5, 2010

Revision 1 dated August 6, 2010

Revision 2 dated January 4, 2011

Revision 3 dated September 27, 2011

Revision 4 dated February 13, 2020

Reason for the Revision

The information contained in this Non-Modification Service Bulletin is replaced by the instructions specified in the latest revision of Reference 1, Non-Modification Service Bulletin No. V2500-ENG-72-A0615. It is not necessary to do this Non-Modification Service Bulletin.

Effect of Revision on Prior Compliance

None

This is a Complete Revision (Not Applicable to the SGML version)

The format of this Service Bulletin has been changed from Revision 3. See Reason for the Revision above.

MODEL APPLICATION

V2525-D5, V2528-D5

BULLETIN ISSUE SEQUENCE

V2500 Series 72-0608

Page	Revision No.	Date
1 thru 9	4	February 13/20

A copy of this Revision Notice and any future revision notices must be filed as a permanent record with your copy of the subject bulletin.

SERVICE BULLETIN

NON-MODIFICATION SERVICE BULLETIN — ENGINE — HIGH PRESSURE (HP) COMPRESSOR, STAGE 3 TO 8 COMPRESSOR DRUM — ULTRASONIC INSPECTION PROCEDURE

MODEL APPLICATION

V2525-D5, V2528-D5

BULLETIN ISSUE SEQUENCE

V2500 Series 72-0608

ATA NUMBER

72-00-00

Compliance Category

3

IAE Distribution Code

V2500

Summary

The information contained in this Non-Modification Service Bulletin is replaced by the instructions specified in the latest revision of Reference 1, Non-Modification Service Bulletin No. V2500-ENG-72-A0615. It is not necessary to do this Non-Modification Service Bulletin.

Planning Information

Effectivity Data

Engine Models Applicable

V2525-D5, V2528-D5
Engine Serial Nos. V20001 thru V20285

NOTE: For an engine not to require an ultrasonic inspection in accordance with this Non-Modification Service Bulletin, the condition that follows must be achieved:

The engine must have a new HP compressor stage 3 – 8 drum of Service Bulletin V2500-ENG-72-0470 or Service Bulletin V2500-ENG-72-0606 and new nuts of Service Bulletin V2500-ENG-72-0596 installed together at the same time.

Concurrent Requirements

There are no concurrent requirements.

Reason

1. Condition: Crack indications have been found on the HP compressor stage 3 – 8 drum assembly during overhaul.
2. Background: Crack indications were highlighted during an Engine Manual (EM) crack inspection of the stage 7 – 8 disc internal cavity.
3. Objective: To do an ultrasonic inspection procedure of the HP compressor stage 8 disc.
4. Substantiation: Crack indications have been found on the HP compressor stage 3 – 8 drum assembly during overhaul. An ultrasonic inspection was developed and has shown the capability of detecting cracks in service.
5. Effects of Bulletin on:

   Removal/Installation: Not Affected.

   Disassembly/Assembly: Not Affected.

   Cleaning: Not Affected.

   Inspection/Check: Not Affected.

   Repair: Not Affected.

   Testing: Not Affected.
6. Supplemental Information

   None.

Description

This Non-Modification Service Bulletin instructs ultrasonic inspection procedures of the HP compressor stage 8 disc that can be carried out "In Service" or "At Overhaul/ Shop Visit".

1. The procedures are to inspect the internal stage 8 disc for cracks, on the outer diameter adjacent to the stage 7 – 8 EB weld land and on the inner diameter at the inner radius position.
2. A shear wave ultrasonic inspection probe is positioned on the ceramic lining of the stage 7 stator, located on the outer diameter of the disc.
3. Engines affected are listed in Effectivity Data.

NOTE: The Accomplishment Instruction of this Non-Modification Service Bulletin is divided into two INSTRUCTIONs as follows:

INSTRUCTION I - Applicable for engines "In Service".

INSTRUCTION II - Applicable for engines "At Overhaul/Shop Visit".

Compliance

Category 3

Compliance times for this Service Bulletin:

Inspection Location	HPC 3 – 8 Drum Cycles Since New	Threshold	From	Regular Repeat Inspection Interval
Outer and Inner Diameters	Refer to the USI Drawdown Plan. See Figure 1.	Refer to the USI Drawdown Plan. See Figure 1.	Date of the Revision 3 of this Service Bulletin	Not more than 750 cycles.

NOTE: An engine which is already inspected remains in a repeat inspection interval of 750 cycles.

NOTE: To comply with the IAE design policy, IAE recommends to install a new HP compressor stage 3 to 8 drum together with partially silver plated nuts of Service Bulletin V2500-ENG-72-0596 standard by the 31st of December 2019.

NOTE: There are two conditions which can affect the inspection start but not the inspection interval, refer to the tables below:

FPI Grace Period

Permitted Grace Period	Required Engine Condition (Shop Visit)
2500 Cycles	Service Bulletin V2500-ENG-72-0596 incorporated. Cleaned in accordance with EM TASK 72-41-11-110-001. Inspected in accordance with EM TASK 72-41-11-200-001.

NOTE: The FPI Grace Period interrupts/delays the ultrasonic inspection by 2500 cycles related to the achieved drum life.

Figure 19 provides a calculation example for the FPI Grace Period.

ECI Grace Period

Permitted Grace Period	Required Engine Condition (Shop Visit)
13000 Cycles	Service Bulletin V2500-ENG-72-0596 incorporated. Inspected in accordance with Service Bulletin V2500-ENG-72-0625.

NOTE: The ECI Grace Period interrupts/delays the ultrasonic inspection by 13000 cycles related to the achieved drum life.

On completion of a successful ECI inspection and the 13000 cycles Grace Period, the engine will return to the 750 cycles repeat inspection interval.

Approval Data

The information contained in this Non-Modification Service Bulletin is replaced by the instructions specified in the latest revision of Reference 1, Non-Modification Service Bulletin No. V2500-ENG-72-A0615. It is not necessary to do this Non-Modification Service Bulletin.

Manpower

1. In Service

   Engines without heat shield retainers installed .....3 Hours.

   Engines with heat shield retainers installed .....7 Hours.

2. At Overhaul

   Engines without heat shield retainers installed .....3 Hours.

   Engines with heat shield retainers installed .....6 Hours.

NOTE: The ultrasonic inspection defined in this Non-Modification Service Bulletin must only be performed by personnel qualified to ultrasonic inspection level 2 or higher in accordance with EN4179 and/or NAS410 or alternative standards/guidelines accepted by the applicable National Aviation Authority.

Weight and Balance

1. Weight Change

   None.

2. Moment Arm

   No Effect.

3. Datum

   Engine Front Mount Centerline (Power Plant Station (PPS) 100).

Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

Software Accomplishment Summary

Not Applicable.

References

NOTE: In 2014 IAE converted the V2500 Technical Publications to a new system. As a result of the conversion, some manuals were consolidated. All manuals received new P&W part numbers. To facilitate the use of this Service Bulletin, a Technical Publications conversion table is provided in the Appendix.

1. IAE Non-Modification Service Bulletin V2500-ENG-72-A0615 — Engine — High Pressure (HP) Stage 3 To 8 Compressor Drum — Ultrasonic Inspection Procedure And Stage 3 To 8 Compressor Drum Replacement. Issue Sequence 72-A0615, V2500 Series.
2. Engineering Change No. 10VR659C.

Other Publications Affected

None.

Interchangeability of Parts

Not applicable.

Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (No)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

Material Information

Material — Price and Availability

The information contained in this Non-Modification Service Bulletin is replaced by the instructions specified in the latest revision of Reference 1, Non-Modification Service Bulletin No. V2500-ENG-72-A0615. It is not necessary to do this Non-Modification Service Bulletin.

Industry Support Program

Not Applicable.

The material data that follows is for each engine.

This Non-Modification Service Bulletin is for inspection only.

Instructions/Disposition Code Statements:

Parts Modification Conditions

Not applicable.

Spare Parts Availability

Not applicable.

Vendor Services or Special Components/Materials

Not Applicable.

Tooling — Price and Availability

The tooling to comply with the inspections will be provided to operators on free of charge (FOC) loan basis. To receive the FOC tooling, please follow the ordering procedure outlined below:

1. Submit a zero charge PO to IAE Spares (GPIAESPRTLG@IAEV2500.com) with kit tool number and, if applicable, drilling guide tool number to address requested.
2. Shipping and customs costs are the responsibility of the operator

Return of kits after use must use the following procedure:

1. Submit an e-mail request to GPIAESPRTLG@IAEV2500.com. Return details will be provided by e-mail.
2. Upon issuance of a MRA all return details of the kit will be provided.

NOTE: Contact your CFD with any questions.

Reidentified Parts

Not Applicable.

Other Material Information Data

Not Applicable.

Modification and Spares Information

Parts Modification Conditions

Estimated part prices are provided when they are available at time of publication. The Estimate of Unit Price is only for planning purposes and does not constitute a firm quotation. An asterisk (*) is shown where part pricing information was unavailable. In either case, contact IAE Spares for firm quotations.

Spare Parts Availability

Not Applicable.

Vendor Services or Special Components/Materials

Not Applicable.

Accomplishment Instructions

1. The information contained in this Non-Modification Service Bulletin is replaced by the instructions specified in the latest revision of Reference 1, Non-Modification Service Bulletin No. V2500-ENG-72-A0615. It is not necessary to do this Non-Modification Service Bulletin.

Appendix

Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC10VR659C	RR
1	EC10VR659C	RR
2	EC10VR659C	RR
3	EC10VR659C	RR
4	EA19VG375	JM/RCM

Number values shown in parentheses adjacent to U.S. values are International System of units (SI) equivalents.

To calculate part life, include the hours and/or cycles since the part was made. Use the total hours or cycles to calculate life limits that are the result of part modification, a part used in an engine with different thrust, or for some other reason.

NOTE: In 2014 IAE converted the V2500 Technical Publications to a new system. As a result of the conversion, some manuals were consolidated. All manuals received new P&W part numbers. To facilitate the use of this Service Bulletin, the following Technical Publications cross reference table is provided.

Technical Publications Cross Reference Table

Publication	Engine Model(s)	IAE IETM Pub Ref	P&W Part Number
ENGINE MANUAL — D5	All	E-V2500-3IA	2A4416
CMM-EHC — D5	All	EHC-V2500-31A	2A4418
CMM-FN — D5	All	FN-V2500-3IA	2A4419
CMM-MMC — D5	All	MECH-V2500-3IA	2A4420
CMM-THD — D5	All	THD-V2500-3IA	2A4423
TLM — D5	All	T-V2500-3IA	2A4417
EIPC — D5	V2525/V2528-AQ02	S-V2500-3IA	2A4426
	V2525/V2528-AQ03	S-V2500-3IB	
	V2525/V2528-AQ04	S-V2500-3IC	