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DATE: Apr.12/10

## V2500-A1/A5/D5 SERIES PROPULSION SYSTEM NON-MODIFICATION SERVICE BULLETIN

This document transmits the Revision 2 of Non-Modification Service Bulletin V2500-ENG-72-0601.

### Document History

#### Service Bulletin Revision Status

Initial Issue. Oct.27/09

Revision 1. Dec.18/09

#### Service Bulletin Revision 2

Remove	Incorporate	Reason for change
All pages of the Service Bulletin.	Pages 1 to 9 of the Service Bulletin.	To revise the effectivity. To add capable maintenance facilities.

# V2500-ENG-72-0601

Transmittal - Page 1 of 1

**CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED**  
If any have not been received please advise IAE International Aero Engines AG

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NON-MODIFICATION SERVICE BULLETIN – ENGINE – HIGH PRESSURE (HP) COMPRESSOR – STAGE 3  
TO 8 COMPRESSOR DRUM – OVERHAUL SHOP SPECIAL CLEANING PROCEDURE

1. Planning Information

A. Effectivity Data

(1) Airbus A320

R All V2500-A1 Engines.

(2) Airbus A319, A320 and A321

R All V2500-A5 Engines.

R (3) Boeing MD-90

R All V2500-D5 Engines.

(4) This NMSB does not apply to engines previously incorporating NMSB V2500-ENG-72-0601 (Engine Manual (EM) TASK 72-41-11-110-001) cleaning process and Service Bulletin (SB) V2500-ENG-72-0596 reduced silver plated nuts or installing new 3-8 drums and re-assembled incorporating SB V2500-ENG-72-0596 reduced silver plated nuts.

NOTE: 1. It is anticipated that the FAA will issue an AD, which as one of the final closing actions, will require that new or newly cleaned drums will be installed in all A1, A5 and D5 engines as of some future date. This will be a 'one time' requirement to be satisfied concurrent with incorporation of SB V2500-ENG-72-0596 (nut replacement).

2. This NMSB V2500-ENG-72-0601 supersedes the current EM cleaning TASK 72-41-11-100-001, for a one time operation.

B. Concurrent Requirements

(1) For future shop visits. The requirement for accomplishment of this NMSB no longer applies to engines that have previously incorporated SB V2500-ENG-72-0596 reduced silver plated nuts together with either; NMSB V2500-ENG-72-0601 cleaning process incorporated; or a new 3-8 drum installed.

**C. Reason****(1) Condition:**

Surface contamination of the High Pressure (HP) compressor 3-8 drum stage 8 inner cavity has been detected at shop level inspections and identified as silver chloride, which can contribute to stress corrosion in titanium at high temperatures.

**(2) Background:**

The source of the silver component of the silver chloride referenced in the paragraph 1.C.(1) is the silver plated nuts, used in the bolted joint between the 3-8 and 9-12 drum assemblies.

SB V2500-ENG-72-0596 requires replacement of the externally silver plated nut, with an equivalent standard of nut without external silver plating.

**(3) Objective:**

To remove silver residue from the HP compressor 3-8 drum by implementing EM special cleaning procedure 01: TASK 72-41-11-110-001.

**(4) Substantiation:**

The HP compressor drum cleaning procedure instructed by this SB has been assessed by engineering specialists and is deemed appropriate to maintain component service reliability in accordance with engine certification standards.

**(5) Effects of bulletin on:****(a) Operation**

Not affected.

**(b) Maintenance**

Not affected.

**(c) Overhaul**

Accomplishment of this NMSB.

**D. Description**

- (1) This NMSB introduces a procedure to accomplish and record a one time EM special cleaning task to remove silver residue from V2500 A1, A5 and D5 HP compressor 3-8 drum assemblies. Refer to previous paragraph A. for engines requiring this NMSBs special cleaning procedure. Accomplishment is required at the drum's next level 3 shop visit, or when the drum is at piece part level. Refer to Figure 1 for the NMSB accomplishment flow chart.
- (2) SB 72-0596 reduced silver plated nuts must be installed concurrently with this NMSB. SB 72-0596 and NMSB 72-0601 must be done at the same time otherwise the HP compressor 3-8 drum special cleaning procedure will need to be accomplished a second time.

**E. Compliance**

For engines requiring cleaning listed in paragraph A. without previously accomplished EM special cleaning procedure 01: TASK 72-41-11-110-001 instructed by this NMSB.

Category code 6

Accomplish when the sub-assembly is disassembled sufficiently to afford access to the affected parts.

**F. Approval**

The compliance statement at paragraph E. (Compliance) and the procedures in Section 3. (Accomplishment Instruction) of this NMSB comply with the Federal Aviation Authority (FAA) Regulations and are FFA-approved for the engine models listed.

**G. Manpower**

Estimated man-hours to carry out this NMSB in full:

- (1) In Service  
Not applicable.
- (2) At Overhaul  
Hours not affected.

**H. Tooling price and availability**

- (1) Equipment required to accomplish special cleaning procedure - 01, as per reference I.(2) below

Stainless steel tanks or suitable non-metallic tanks of:

Conditioner CoMat 01-042 solution and  
Nitric acid CoMat 01-025 solution.  
With all associated safety equipment.

(2) Resources capable of accomplishment of this NMSB:

(a) Rolls-Royce Gas Turbine Services

Address -

IAE Services AG

C/O Rolls-Royce Aero Engines Services

East Kilbride

Glasgow, G74 4PY

United Kingdom

Contact - Carol Rackstraw

Tel: +44 1355 277357

Fax: +44 1355 277608

E-mail: carol.rackstraw@rolls-royce.com

R (b) Christchurch Engine Centre

R 634 Memorial Avenue

R Christchurch International Airport

R Harewood

R Christchurch 8053

R New Zealand

R Maintenance Centre Key Contact:

R Mike (Brent) Turton

R Work Phone: +64 3 374 7598

R E-mail: brent.turton@pw.utc.com

R E-fax: +1 860 755 3606

R (c) MTU Maintenance Zuhai Co.Ltd.

R Tel: +86 (0) 756 8687806 – 732  
R Mobile: +86 139 269 34 732  
R Fax: +86 (0) 756 8687920  
R E-mail: daian.xue@mtuzhuhai.com  
R Contact MTU-Z to confirm shipping details.

### I. References

#### (1) Service Bulletin:

SB 72-0596 – ENGINE – HIGH PRESSURE (HP) COMPRESSOR DISC –  
INTRODUCTION OF NUTS WITH SILVER PLATING ON THREAD ONLY –  
Issue date Jun.22/09

#### (2) Engine Manual:

TASK STANDARD CLEANING PROCEDURE – CLEAN THE HP COMPRESSOR  
72-41-11-100-001- STAGE 3-8 DISCS – Issue date Jul. 1/04

TASK SPECIAL CLEANING PROCEDURE 01 – REMOVE THE SILVER RESIDUE  
72-41-11-110-001- FROM THE TITANIUM SURFACE OF THE HP COMPRESSOR STAGE 3-8  
DISCS – Issue date Aug. 1/09 (Jul.13/09 on the 180 day  
portal) EC09VR896A

TASK INSPECTION TASK – EXAMINE THE STAGES 3 TO 8 HP COMPRESSOR  
72-41-11-200-001- DISCS – Issue date Jul.11/09 (on the 180 day portal)  
EC09VR857

#### (3) Internal Reference No.:

Engineering Change No. 09VR930B.

**2. Material Information**

None.

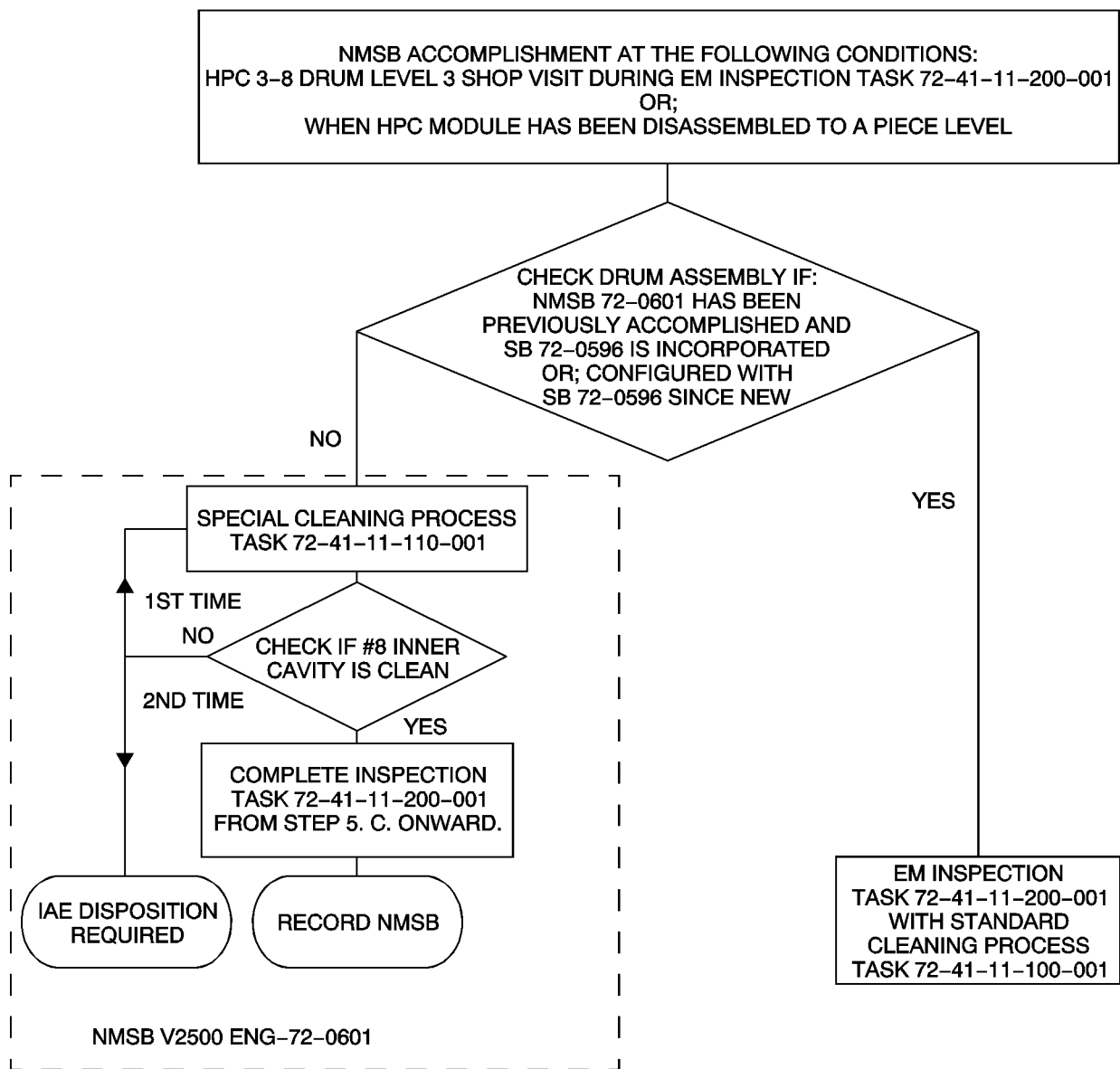


### 3. Accomplishment Instruction

- A. At the next level 3 shop visit of the HP compressor stage 3-8 drum, check engine records if this NMSB V2500-ENG-72-0601 has been previously accomplished, see Figure 1 NMSB accomplishment flow chart.
- B. If NMSB V2500-ENG-72-0601 has been previously accomplished and SB 72-0596 was incorporated, or a new stage 3-8 drum was installed and SB 72-0596 was incorporated:
- (1) Proceed with examination of the HP compressor stage 3-8 drum as per EM inspection TASK 72-41-11-200-001.
- C. If the conditions of paragraph 3.B. are not met:
- (1) Replace cleaning task in EM inspection TASK 72-41-11-200-001, paragraph 5.A.:
- Instruction to be replaced - Clean part. Refer to TASK 72-41-11-100-001.
- Replace with new instruction - Clean part. TASK 72-41-11-110-001.
- (2) Visually inspect stage 8 HP compressor disc inner cavity at inspection location 10 refer to EM inspection TASK 72-41-11-200-001.
- (a) Perform visual check by illuminating the cavity with a white light source and examine with mirror or borescope.
- (b) Examine cavity surface cleanliness:
- (i) If surface condition is not sufficiently clean to perform the following FPI, repeat cleaning operation one time.
- Do (steps 3.C.(1) above) and re-examine (steps 3.C.(2) above).
- (ii) After repeat cleaning operation and re-examination, if surface cleanliness is not to the required standard, report surface condition to IAE for disposition, through the local IAE representative.
- (iii) If surface condition is of a sufficiently clean standard, proceed with the accomplishment of this NMSB.
- (3) Accomplish all remaining steps of EM inspection TASK 72-41-11-200-001, from step 5.C. onwards.
- (4) Record accomplishment of this NMSB.
- (a) Record NMSB V2500-ENG-72-0601 in the applicable engine log book.



- (b) Inform the local IAE office that NMSB-ENG-72-0601 has been accomplished, quoting affected engine serial number and drum serial number.



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NMSB V2500-ENG-72-0601 Accomplishment Flow Chart  
Figure 1

