



400 MAIN STREET, MAIL STOP 121-10
EAST HARTFORD, CT 06108, USA.
TELEPHONE:- 860 565 5515
FAX:- 860 565 0600

DATE: Dec.19/07

P.O. BOX 31, DERBY
TELEGRAMS - 'ROYCAR' DERBY
TELEX - 37645
TELEPHONE:- 44 (0) 1332 242424
FAX:- 44 (0) 1332 249936

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

ALERT

This document transmits Revision 2 to Alert Non-Modification Service Bulletin V2500-ENG-72-A0510

Document History

Service Bulletin Revision Status

Initial Issue	May 9/07
Revision 1	Oct. 8/07

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 and to change the Service Bulletin to an Alert Service Bulletin.

ALERT V2500-ENG-72-A0510

Transmittal - Page 1 of 1

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED

If any have not been received please advise Customer Data Services, Rolls-Royce plc, Derby, England

© Rolls-Royce plc (date as above) Printed in Great Britain

ENGINE – HIGH PRESSURE (HP) COMPRESSOR – VORTEX REDUCER INSPECTION AND OVERHAUL
POLICY – ALERT NON-MODIFICATION SERVICE BULLETIN

1. Planning Information

A. Effectivity

(1) Airbus A319

(a) V2522-A5, V2524-A5, V2527M-A5 Engines

(i) High Pressure (HP) compressor stage 3 to 8 drum, P/N 6A4900, 6A5467, 6A6473, 6A7383, 6A7384, 6A7385 or 6A7401.

(2) Airbus A320

(a) V2500-A1 Engines

(i) HP compressor stage 3 to 8 drum, P/N 6A5467, 6A6473, 6A7384, 6A7385 or 6A7401.

(b) V2524-A5, V2527-A5, V2527E-A5 Engines

(i) HP compressor stage 3 to 8 drum, P/N 6A4900, 6A5467, 6A6473, 6A7383, 6A7384, 6A7385 or 6A7401.

(3) Airbus A321

(a) V2530-A5, V2533-A5 Engines

(i) HP compressor stage 3 to 8 drum, P/N 6A4900, 6A5467, 6A6473, 6A7383, 6A7384, 6A7385 or 6A7401.

(4) Boeing MD-90

(a) V2525-D5, V2528-D5 Engines

(i) HP compressor stage 3 to 8 drum, P/N 6A4900, 6A5467, 6A6473, 6A7383, 6A7384, 6A7385 or 6A7401.

B. Concurrent Requirements

None.

C. Reason

Shop findings of cracked vortex reducer rings have prompted stress analysis and life work on both, the vortex reducer and the HP compressor stage 8 disc. This work showed, that a cracked vortex reducer leads to an increase in stress levels at the bolt holes of the HP compressor stage 8 disc. For HP compressor stage 3 to 8 drums of pre Service Bulletin V2500-ENG-72-0376 standard, the stress increase at the stage 8 bolt holes could lead to a reduction in drum life depending on when the vortex reducer was cracked and the maximum thrust rating of the engine.

D. Description

R The purpose of this Alert Non-Modification Service Bulletin is to mandate an
R additional in-shop crack test inspection of the vortex reducer for the affected
R engines. This Alert Non-Modification Service Bulletin has also been issued to
R mandate that during shop visit a new vortex reducer must be fitted if a
R replacement HP compressor stage 3 to 8 drum of pre Service Bulletin
V2500-ENG-72-0376 standard is to be installed.

The inspection must be carried out within a specified inspection interval defined in step 1.E. Compliance, to meet the requirements of the continued airworthiness regulations.

Engines with a HP compressor stage 3 to 8 drum of pre Service Bulletin V2500-ENG-72-0376 standard, which do not have a planned shop visit within the inspection interval defined in step 1.E. Compliance, are to be scheduled for shop visit within the defined interval. This is to carry out the inspection of the vortex reducer in line with the requirements of this Non-Modification Service Bulletin.

R If the inspection of the vortex reducer is carried out as detailed in step 3. Accomplishment Instructions, within the specified inspection interval, as defined in 1.E. Compliance, no additional inspection of the vortex reducer is required and the engine is compliant with this Alert Non-Modification Service Bulletin.

E. Compliance

Category Code 3

R Accomplish this Alert Non-Modification Service Bulletin,

if the used vortex reducer has previously been installed to a replacement HP compressor stage 3 to 8 drum of pre Service Bulletin V2500-ENG-72-0376 standard,

and

R if this replacement HP compressor stage 3 to 8 drum of pre Service Bulletin
R V2500-ENG-72-0376 standard has been operated or is operating at thrust ratings
of V2527M-A5, V2527E-A5, V2528-D5, V2530-A5 or V2533-A5 for one or more cycles,

and

if the accumulated life of the replacement HP compressor stage 3 to 8 drum of
pre Service Bulletin V2500-ENG-72-0376 standard was less than 3000 cycles when
the used vortex reducer was fitted,

then

the vortex reducer must be inspected between 3000 and 13500 accumulated cycles
of the replacement HP compressor stage 3 to 8 drum of pre Service Bulletin
V2500-ENG-72-0376 standard. (Refer to Figure 1 and 2)

NOTE: An engine that had a replacement HP compressor stage 3 to 8 drum of pre
Service Bulletin V2500-ENG-72-0376 standard installed with a used vortex
reducer at the previous shop visit, but is currently not operating at
R one of the affected ratings, must not be changed to one of the affected
ratings until this Alert Non-Modification Service Bulletin has been
accomplished.

NOTE: If the affected HP compressor stage 3 to 8 drum has already accumulated
R more than 13500 cycles since new and the inspection, in accordance with
this Alert Non-Modification Service Bulletin, has not not been carried
out, then the engine is to be scheduled for immediate vortex reducer
inspection.

NOTE: The vortex reducer inspection must be repeated between 3000 and 13500
accumulated cycles of the HP compressor stage 3 to 8 drum, if the vortex
reducer was inspected and re-assembled before the replacement HP
compressor stage 3 to 8 drum of pre Service Bulletin V2500-ENG-72-0376
standard had accumulated a drum life above 3000 cycles.

NOTE: When a replacement HP compressor stage 3 to 8 drum of pre Service
Bulletin V2500-ENG-72-0376 standard is to be installed in an affected
engine in the shop, then a new vortex reducer must be fitted.

R NOTE: No inspection is required at this shop visit if the used vortex reducer
has not been installed to a replacement HP compressor stage 3 to 8 drum
R of pre Service Bulletin V2500-ENG-72-0376 standard at a previous shop
visit.

R NOTE: The Engine Manual piece part inspection of the vortex reducer as per
Chapter 72-41-12 is equivalent to the inspection required by this Alert
Non-Modification Service Bulletin.

F. Approval

- R The technical content of this Alert Non-Modification Service Bulletin comply with the Federal Aviation Regulations and is FAA-approved for the engine models listed.

G. Manpower**(1) In Service**

Not applicable.

(2) At Overhaul

Applicable (Hours not affected).

H. Material Price and Availability

Not applicable.

I. Tooling Price and Availability

Not applicable.

J. References**(1) V2500 A5/D5 Engine Manual, Chapters 72-41-00 and 72-41-12.****(2) V2500 Service Bulletin:**

V2500-ENG-72-0178 – ENGINE – HP COMPRESSOR DISCS – STAGE 3 TO 8 ROTOR DRUM WITH THICKER STAGE 6 DISC HUB AND DAMPING WIRE LOCATION LIPS

(3) V2500 Service Bulletin:

V2500-ENG-72-0254 – ENGINE – HP COMPRESSOR DISCS (STAGES 3 TO 8) – INTRODUCTION OF HP COMPRESSOR DRUM WITH REVISED DISC PROFILES

(4) V2500 Service Bulletin:

V2500-ENG-72-0300 – ENGINE – STAGE 3 TO 8 HP COMPRESSOR DISCS – INTRODUCTION OF REVISED STAGE 3 TO 8 DISC ASSEMBLY AND REVISED STAGE 7 AND 8 SEALING WIRES

(5) V2500 Service Bulletin:

V2500-ENG-72-0304 – ENGINE – HP COMPRESSOR DISCS – INTRODUCTION OF A REWORKED STAGE 3 TO 8 DISC ASSEMBLY WITH REVISED L SHAPED SEALING WIRES – CATEGORY 6 – MOD.ENG-72-0304

(6) V2500 Service Bulletin:

V2500-ENG-72-0376 - ENGINE - HP COMPRESSOR DISCS (STAGES 3 - 8) -
INTRODUCTION OF A REVISED STAGE 3 - 8 DISC ASSEMBLY WITH INCREASED LIFE

(7) Internal Reference No.

Engineering Change No. 06VR1001B.

(8) ATA Chapter - 72-41-12.

2. Material Information

None.

3. Accomplishment Instructions

A. Inspection instructions

(1) General

(a) Obey all the WARNINGS and CAUTIONS in the procedures that are referred to.

(b) Consumable Materials

(i) Refer to the related Manual tasks given in this instruction.

(c) Tools and Equipment

(i) Refer to the related Manual tasks given in this instruction.

(2) Get access to the vortex reducer

(a) Disassemble the HP compressor module (Refer to the Engine Manual, Chapter 72-41-00).

(3) Inspect the vortex reducer (Refer to the Engine Manual, Chapter 72-41-12, TASK 72-41-12-200-001)

(a) If the vortex reducer (72-41-12, 01-575) has no cracks, it is acceptable for re-assembly.

NOTE: Engines defined within paragraph 1.A. Effectivity, must have a new vortex reducer fitted, if a replacement HP compressor stage 3 to 8 drum of pre Service Bulletin V2500-ENG-72-0376 standard is to be installed.

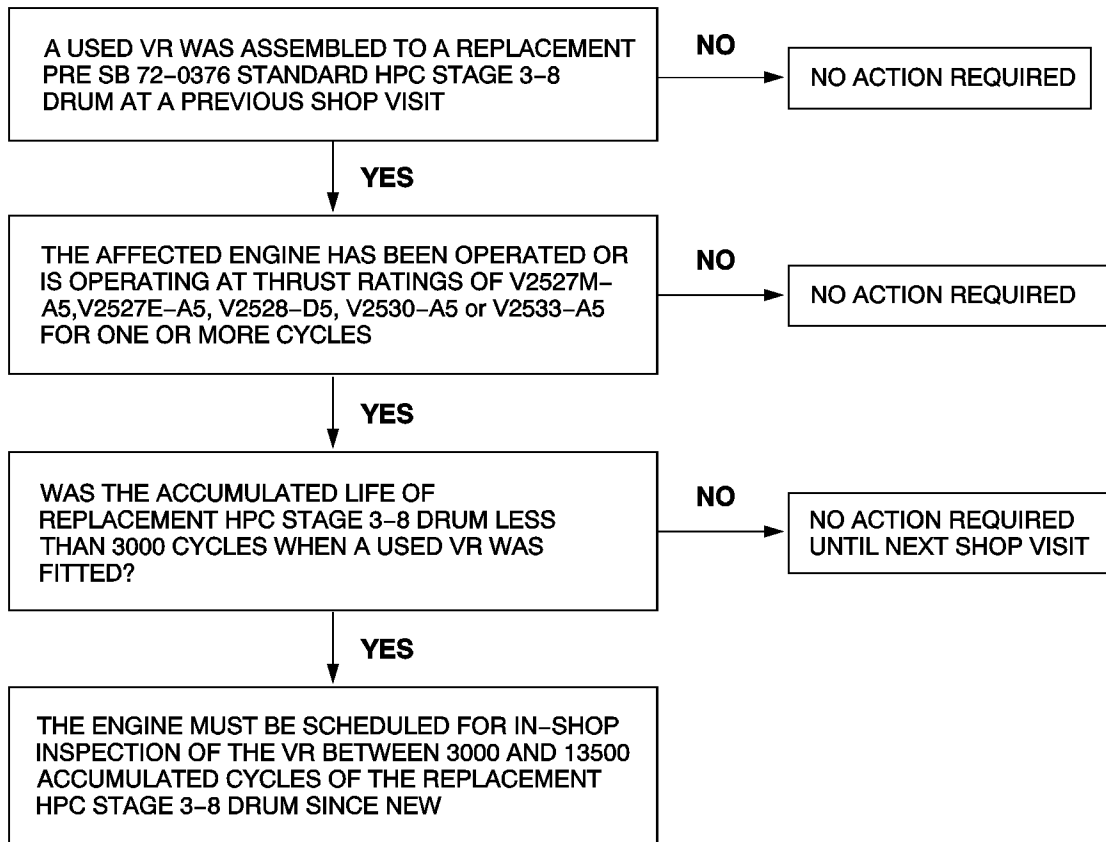
(b) If the vortex reducer (72-41-12, 01-575) is found cracked, the vortex reducer and the HP compressor stage 3 to 8 drum are to be rejected.

B. Recording instructions

(1) A record of accomplishment is required.

FOR V2500-A5/D5 ENGINES IN SERVICE

'ON WING'



NOTE: REFER TO STEPS A. EFFECTIVITY AND E. COMPLIANCE FOR ADDITIONAL INFORMATION AND FURTHER DETAILS

Flow Chart for engines - In Service
Figure 1

V2500-ENG-72-A0510

Page 8

May. 9/07
Dec.19/07 Revision 2

© Rolls-Royce plc

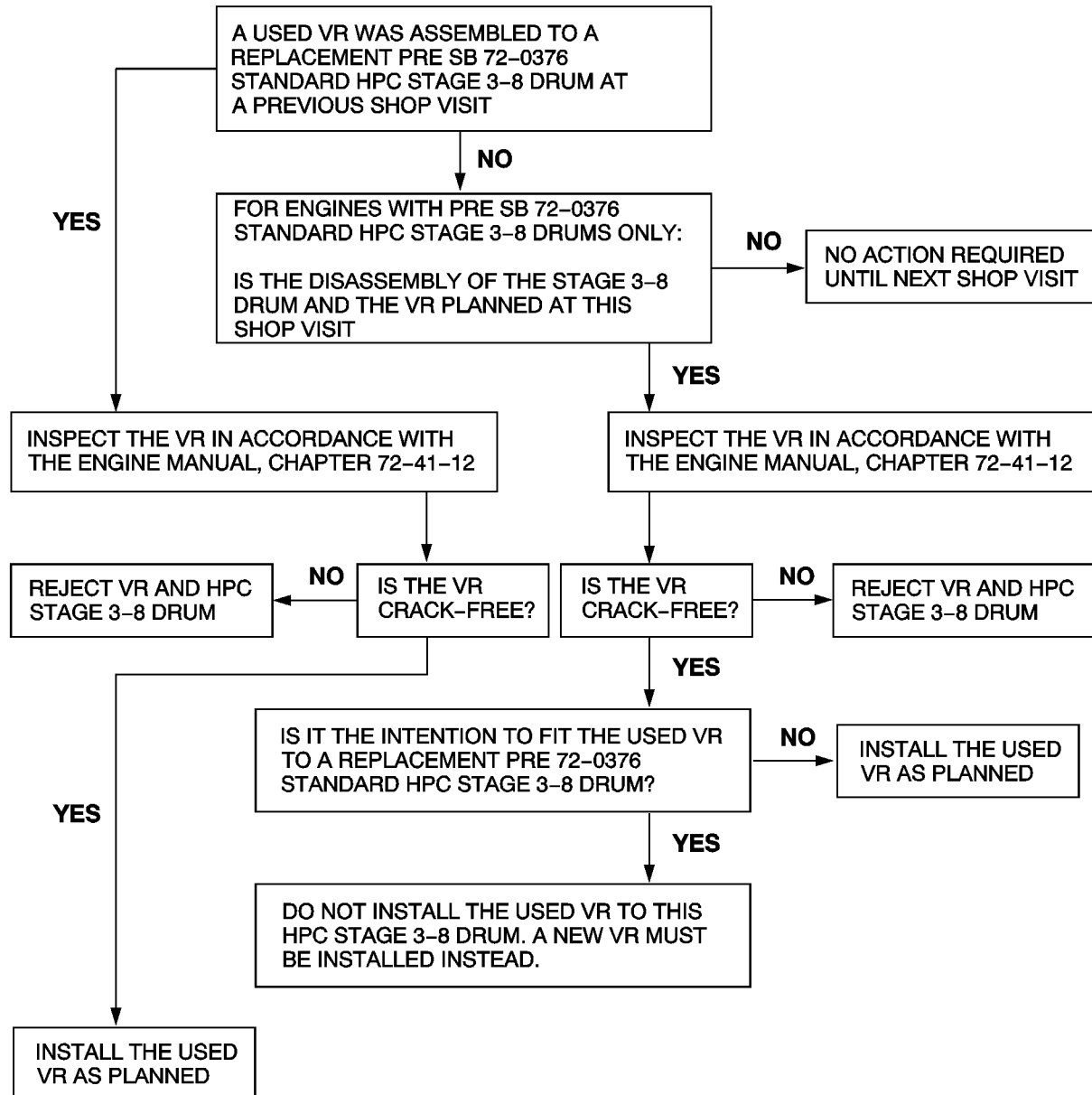
Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

bmi0000213

R
R

FOR V2500-A5/D5 ENGINES AT OVERHAUL

'OFF WING'



NOTE: REFER TO STEPS A. EFFECTIVITY AND E. COMPLIANCE FOR ADDITIONAL INFORMATION AND FURTHER DETAILS

Flow Chart for engines - At Overhaul
Figure 2