SERVICE BULLETIN REVISION NOTICE

ENGINE — HIGH PRESSURE (HP) COMPRESSOR — STAGE 3 TO 8 COMPRESSOR DRUM — INTRODUCTION OF DAMPER WIRES FOR STAGES 6 TO 8

Turbojet Engine Service Bulletin No. V2500-ENG-72-0642 Revision No. 1 dated May 16, 2017.

Revision History

Original Issue March 21, 2014

Revision 1 dated May 16, 2017

Reason for the Revision

To change Compliance Category change from 6 to 4.

To include Industry Support Program information.

To update the format to reflect current standards.

To add engine flange locations to illustrate major mating engine flanges.

Effect of Revision on Prior Compliance

None.

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

The contents are in accordance with the list of effective pages. All pages have the current revision number. Technical changes are marked with black bars.

MODEL APPLICATION

V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5

BULLETIN ISSUE SEQUENCE

V2500 Series 72-0642

Page	Revision No.	Date
1 thru 14	1	May 16/17

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

ENGINE — HIGH PRESSURE (HP) COMPRESSOR — STAGE 3 TO 8 COMPRESSOR DRUM — INTRODUCTION OF DAMPER WIRES FOR STAGES 6 TO 8

MODEL APPLICATION

V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5

BULLETIN ISSUE SEQUENCE

V2500 Series 72-0642

ATA NUMBER

72-41-11

Compliance Category

4

Summary

This Service Bulletin introduces front and rear seal wires, to be referred to as damper wires, to the High Pressure (HP) compressor stages 6, 7 and 8 rotor discs on the V2500-A5 SelectOne™ engine. The damper wires are installed in six circumferential grooves on the HP compressor stage 3 to 8 drum assembly and are located under the blade platforms. There is one front and one rear damper wire for each affected stage. The damper wires are to be used with the existing blade and rotor drum assemblies. The part numbers of the blades and rotor drum assemblies remain unchanged.

Planning Information

Effectivity Data

Engine Models Applicable

V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 that HAVE Reference 4, Service Bulletin V2500-ENG-72-0565 incorporated but DO NOT HAVE Reference 5, Service Bulletin V2500-ENG-72-0605 incorporated.
Engine Serial Nos. V10001 thru V13190

V2522-A5, V2524-A5, V2527M-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 which DO NOT HAVE Reference 5, Service Bulletin V2500-ENG-72-0605 incorporated.
Engine Serial Nos. V15001 thru V17181

Concurrent Requirements

There are no concurrent requirements.

Reason

V2500-A5 engine service experience indicates that damper wires can reduce the likelihood of accelerated degradation of the Dry Film Lubricant (DFL) coating on the HP compressor stages 6, 7 and 8 blade roots. The combination of deteriorated DFL coating and high contact pressures can lead to galling and fatigue cracks.

Installing damper wires on the V2500-A5 SelectOne™ engine will reduce the risk of under-platform failures caused by fatigue cracks.

Description

This Service Bulletin introduces damper wires to the High Pressure (HP) compressor stages 6, 7 and 8 rotor discs on the V2500-A5 SelectOne™ engine. The damper wires are installed in six circumferential grooves on the HP compressor stage 3 to 8 drum assembly and are located under the blade platforms. There is one front and one rear damper wire for each affected stage.

The damper wires are to be used with the existing blade and rotor drum assemblies. The part numbers of the blades and rotor drum assemblies remain unchanged.

Compliance

Category 4

Accomplish at the first visit of an engine or module to a maintenance base capable of compliance with the accomplishment instructions regardless of the planned maintenance action or the reason for engine removal.

NOTE: “First visit” is classified as the next induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine flanges, except the separation of engine flanges solely for the purposes of transportation without subsequent engine maintenance does not constitute an engine shop

visit. A “major mating engine flange” is considered flanges H through P. For location of engine flanges, refer to Figure 3.

Approval Data

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model(s) given.

Manpower

1. In Service

   ..... Not Applicable.

2. At Overhaul

   ..... Not Applicable.

Weight and Balance

1. Weight Change

   Plus 0.7 lb (0.32 kg).

2. Moment Arm

   17.2 in. (437 mm) rearward of datum.

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

1. ATA Locator — 72-41-11.
2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 72-41-11.
3. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-00-40, 72-00-41, 72-41-00 and 72-41-10.
4. V2500 Service Bulletin V2500-ENG-72-0565 (Engine — Provide The Requirements For Modification To The V2500 SelectOne™ Retrofit Standard).
5. V2500 Service Bulletin V2500-ENG-72-0605 (Engine — High Pressure (HP) Compressor Discs (Stages 3-8) — Re-numbered Front Drums With Increased Repair Limits).

Other Publications Affected

1. V2500 A1/A5 Series Engine Manual, P&W Ref. PN 2A4407, Chapter/Section 72-41-10.
2. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter 72-41-11 will be amended to incorporate the new part numbers (Refer to Material Information).

Interchangeability of Parts

Old and new parts are directly interchangeable.

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

1. There is no kit provided to do this Service Bulletin.
2. Part availability information is provided in material data Instructions — Disposition.

Industry Support Program

For V2500-A5 Engines in the effectivity of this Service Bulletin.

Under this program the operator is offered support in the form of a one-time discount of full catalog list price for the Stage 6 Front Seal Wire, PN 6A1146, Stage 6 Rear Seal Wire, PN 6A1147, Stage 7 Front Seal Wire, PN 6A7386, Stage 7 Rear Seal Wire, PN 6A7387, Stage 8 Front Seal Wire, PN 6A7388 and Stage 8 Rear Seal Wire, PN 6A7389, as a result of the accomplishment of this Service Bulletin.

To be eligible for this discount:

- Stage 6 Front Seal Wire, PN 6A1146, Stage 6 Rear Seal Wire, PN 6A1147, Stage 7 Front Seal Wire, PN 6A7386, Stage 7 Rear Seal Wire, PN 6A7387, Stage 8 Front Seal Wire, PN 6A7388 and Stage 8 Rear Seal Wire, PN 6A7389 must be purchased with proof of incorporation.
- All required documentation must be submitted to IAE within 180 days of the applicable Shop Visit completion date. Requests received after the 180 day period, even if they are prior to the expiration date of this Support Program, will be ineligible for the IAE spare parts discount and disqualified.

No duplicate benefits through FHA, Service Policy or other Support Programs will be approved.

Customers are requested to place a purchase order for the parts through their normal PW/IAE spare parts channel.

Upon approval, IAE Materials Management will issue the applicable IAE spare parts discount to the Customer's account with IAE.

This support program is valid through December 31, 2026.

If you have any questions concerning this offer please contact your IAE Customer Field Representative or Customer Fleet Director.

The material data that follows is for each engine.

For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5 Engines:

New PN	Qty	Estimate of Unit Price ($)	Keyword	Old PN	Instructions — Disposition
6A1146 (72-41-11-01-386)	1	1,461.00	.WIRE, FRONT SEAL, STAGE 6		(S1)
6A1147 (72-41-11-01-388)	1	1,461.00	.WIRE, REAR SEAL STAGE 6		(S1)
6A7386 (72-41-11-01-390)	1	2,330.00	.WIRE, FRONT SEAL, STAGE 7		(S1)

New PN	Qty	Estimate of Unit Price ($)	Keyword	Old PN	Instructions — Disposition
6A7387 (72-41-11-01-392)	1	2,330.00	.WIRE, REAR SEAL, STAGE 7		(S1)
6A7388 (72-41-11-01-394)	1	2,330.00	.WIRE, FRONT SEAL, STAGE 8		(S1)
6A7389 (72-41-11-01-396)	1	2,330.00	.WIRE, REAR SEAL, STAGE 8		(S1)

Instructions/Disposition Code Statements:

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

(S1) This part is part of a modification group. This part must be installed at the same time with the other parts of the modification group.

Vendor Services or Special Components/Materials

Not Applicable.

Tooling — Price and Availability

Special tools are not required to accomplish this Service Bulletin.

Reidentified Parts

Not Applicable.

Other Material Information Data

Not Applicable.

Accomplishment Instructions

1. Rework Instructions

   A. None.

2. Assembly Instructions

   A. Remove the High Pressure (HP) compressor assembly from the engine (Refer to the Reference 3, Engine Manual, Chapter/Section 72-00-41).

   B. Disassemble the HP compressor assembly (Refer to the Reference 3, Engine Manual, Chapter/Section 72-41-00).

   C. Disassemble the HP compressor rotor assembly (Refer to the Reference 3, Engine Manual, Chapter/Section 72-41-10 and to Figure 1 of this Service Bulletin).

      (1) Remove the HP compressor stages 6, 7 and 8 blades from the HP compressor stages 3 to 8 rotor disc assembly.

   D. Assemble the HP compressor rotor assembly (Refer to the Reference 3, Engine Manual, Chapter/Section 72-41-10 and to Figure 2 of this Service Bulletin).

      (1) Install the six HP compressor stages 6 to 8 damper wires (72-41-11, 01-386 to 72-41-11, 01-396).

      (a) Install the new HP compressor Stage 6 Front Seal Wire, PN 6A1146 (72-41-11, 01-386), in the HP compressor stage 6 front damper wire groove of the HP compressor stages 3 to 8 rotor disc assembly.

         1 Make sure that the HP compressor Stage 6 Front Seal Wire, PN 6A1146 (72-41-11, 01-386) is installed in the correct damper wire groove of the HP compressor stages 3 to 8 disc assembly. Refer to Figure 2, Sheet 1.

         2 Make sure that the ends of the HP compressor Stage 6 Front Seal Wire, PN 6A1146 (72-41-11, 01-386) overlap by at least 0.236 in. (6.00 mm). Refer to Figure 2, Sheet 2.

      (b) Install the new HP compressor Stage 6 Rear Seal Wire, PN 6A1147 (72-41-11, 01-388), in the HP compressor stage 6 rear damper wire groove of the HP compressor stages 3 to 8 disc assembly.

         1 Make sure that the HP compressor Stage 6 Rear Seal Wire, PN 6A1147 (72-41-11, 01-388) is installed in the correct damper wire groove of the HP compressor stages 3 to 8 disc assembly. Refer to Figure 2, Sheet 1.

         2 Make sure that the ends of the HP compressor Stage 6 Rear Seal Wire, PN 6A1147 (72-41-11, 01-388) overlap by at least 0.236 in. (6.00 mm). Refer to Figure 2, Sheet 2.

         3 Make sure that the overlap of the HP compressor Stage 6 Rear Seal Wire, PN 6A1147 (72-41-11, 01-388) is positioned 180 degrees from the overlap of the HP compressor Stage 6 Front Seal Wire, PN 6A1146 (72-41-11, 01-386).

      (c) Install the HP compressor stage 6 blades in the HP compressor stages 3 to 8 rotor disc assembly.

(d) Install the new HP compressor Stage 8 Front Seal Wire, PN 6A7388 (72-41-11, 01-394), in the HP compressor stage 8 front damper wire groove of the HP compressor stages 3 to 8 disc assembly.

1 Make sure that the HP compressor Stage 8 Front Seal Wire, PN 6A7388 (72-41-11, 01-394) is installed in the correct damper wire groove of the HP compressor stages 3 to 8 disc assembly. Refer to Figure 2, Sheet 1.

2 Make sure that the ends of the HP compressor Stage 8 Front Seal Wire, PN 6A7388 (72-41-11, 01-394) overlap by at least 0.236 in. (6.00 mm). Refer to Figure 2, Sheet 2.

(e) Install the new HP compressor Stage 8 Rear Seal Wire, PN 6A7389 (72-41-11, 01-396), in the HP compressor stage 8 rear damper wire groove of the HP compressor stages 3 to 8 disc assembly.

1 Make sure that the HP compressor Stage 8 Rear Seal Wire, PN 6A7389 (72-41-11, 01-396) is installed in the correct damper wire groove of the HP compressor stages 3 to 8 disc assembly. Refer to Figure 2, Sheet 1.

2 Make sure that the ends of the HP compressor Stage 8 Rear Seal Wire, PN 6A7389 (72-41-11, 01-396) overlap by at least 0.236 in. (6.00 mm). Refer to Figure 2, Sheet 2.

3 Make sure that the overlap of the HP compressor Stage 8 Rear Seal Wire, PN 6A7389 (72-41-11, 01-396) is positioned 180 degrees from the overlap of the HP compressor Stage 8 Front Seal Wire, PN 6A7388 (72-41-11, 01-394).

(f) Install the HP compressor stage 8 blades in the HP compressor stages 3 to 8 rotor disc assembly.

(g) Install the new HP compressor Stage 7 Front Seal Wire, PN 6A7386 (72-41-11, 01-390), in the HP compressor stage 7 front damper wire groove of the HP compressor stages 3 to 8 disc assembly.

1 Make sure that the HP compressor Stage 7 Front Seal Wire, PN 6A7386 (72-41-11, 01-390) is installed in the correct damper wire groove of the HP compressor stages 3 to 8 disc assembly. Refer to Figure 2, Sheet 1.

2 Make sure that the ends of the HP compressor Stage 7 Front Seal Wire, PN 6A7386 (72-41-11, 01-390) overlap by at least 0.236 in. (6.00 mm). Refer to Figure 2, Sheet 2.

(h) Install the new HP compressor Stage 7 Rear Seal Wire, PN 6A7387 (72-41-11, 01-392), in the HP compressor stage 7 rear damper wire groove of the HP compressor stages 3 to 8 disc assembly.

1 Make sure that the HP compressor Stage 7 Rear Seal Wire, PN 6A7387 (72-41-11, 01-392) is installed in the correct damper wire groove of the HP compressor stages 3 to 8 disc assembly. Refer to Figure 2, Sheet 1.

2 Make sure that the ends of the HP compressor Stage 7 Rear Seal Wire, PN 6A7387 (72-41-11, 01-392) overlap by at least 0.236 in. (6.00 mm). Refer to Figure 2, Sheet 2.

3 Make sure that the overlap of the HP compressor Stage 7 Rear Seal Wire, PN 6A7387 (72-41-11, 01-392) is positioned 180 degrees from the overlap of the HP compressor Stage 7 Front Seal Wire, PN 6A7386 (72-41-11, 01-390).

(i) Install the HP compressor stage 7 blades in the HP compressor stages 3 to 8 rotor disc assembly.

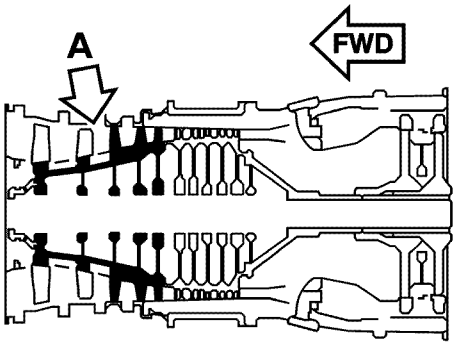
E. Assemble the HP compressor assembly (Refer to the Reference 3, Engine Manual, Chapter/Section 72-41-00).

F. Install the High Pressure (HP) compressor assembly on the engine (Refer to the Reference 3, Engine Manual, Chapter/Section 72-00-41).

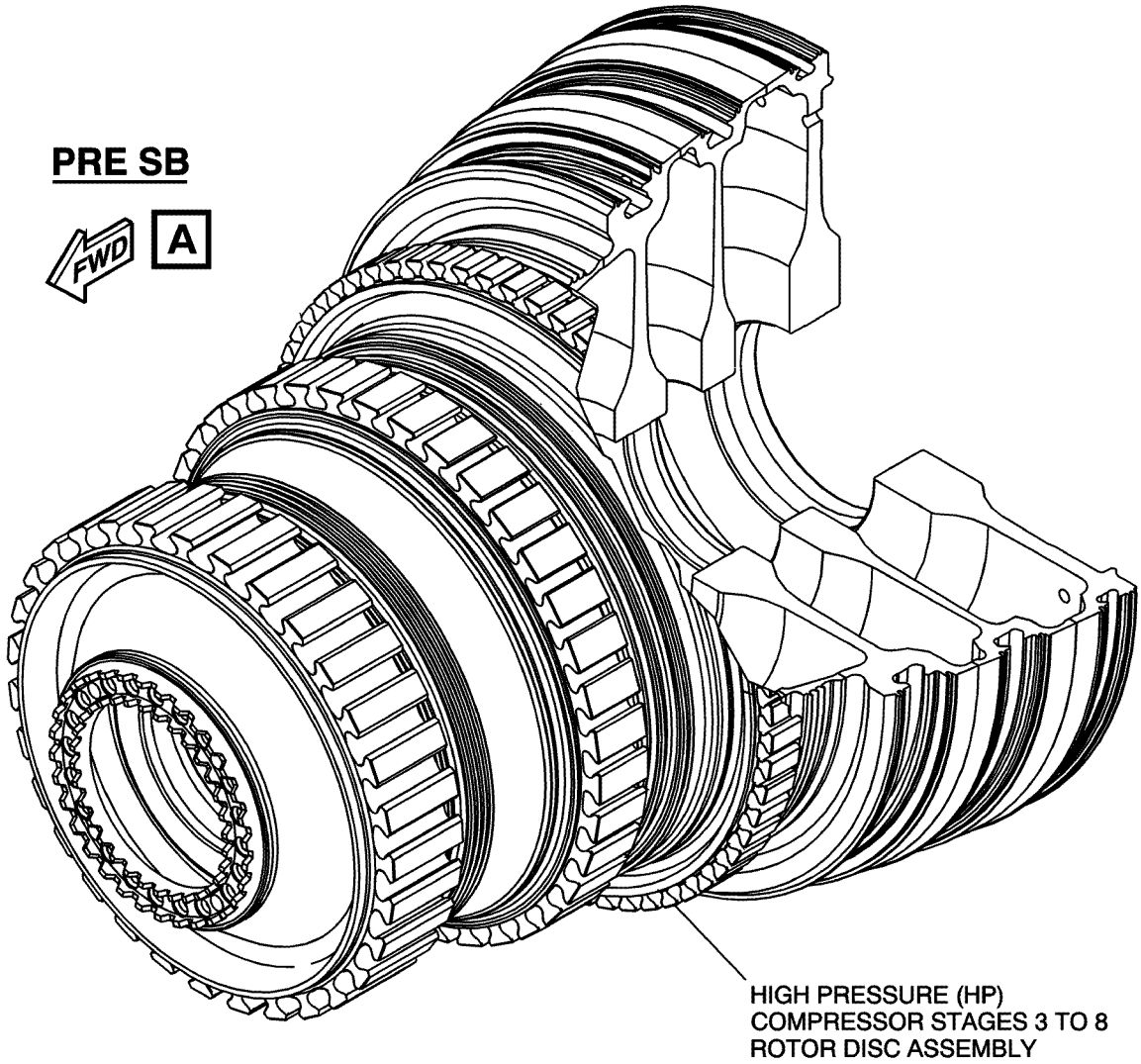
G. Make sure that the work area is clean and clear of tools, equipment and other unwanted materials.

3. Recording Instructions

A. A record of accomplishment is required.



NOTE: HIGH PRESSURE (HP) COMPRESSOR BLADES NOT SHOWN FOR CLARITY.



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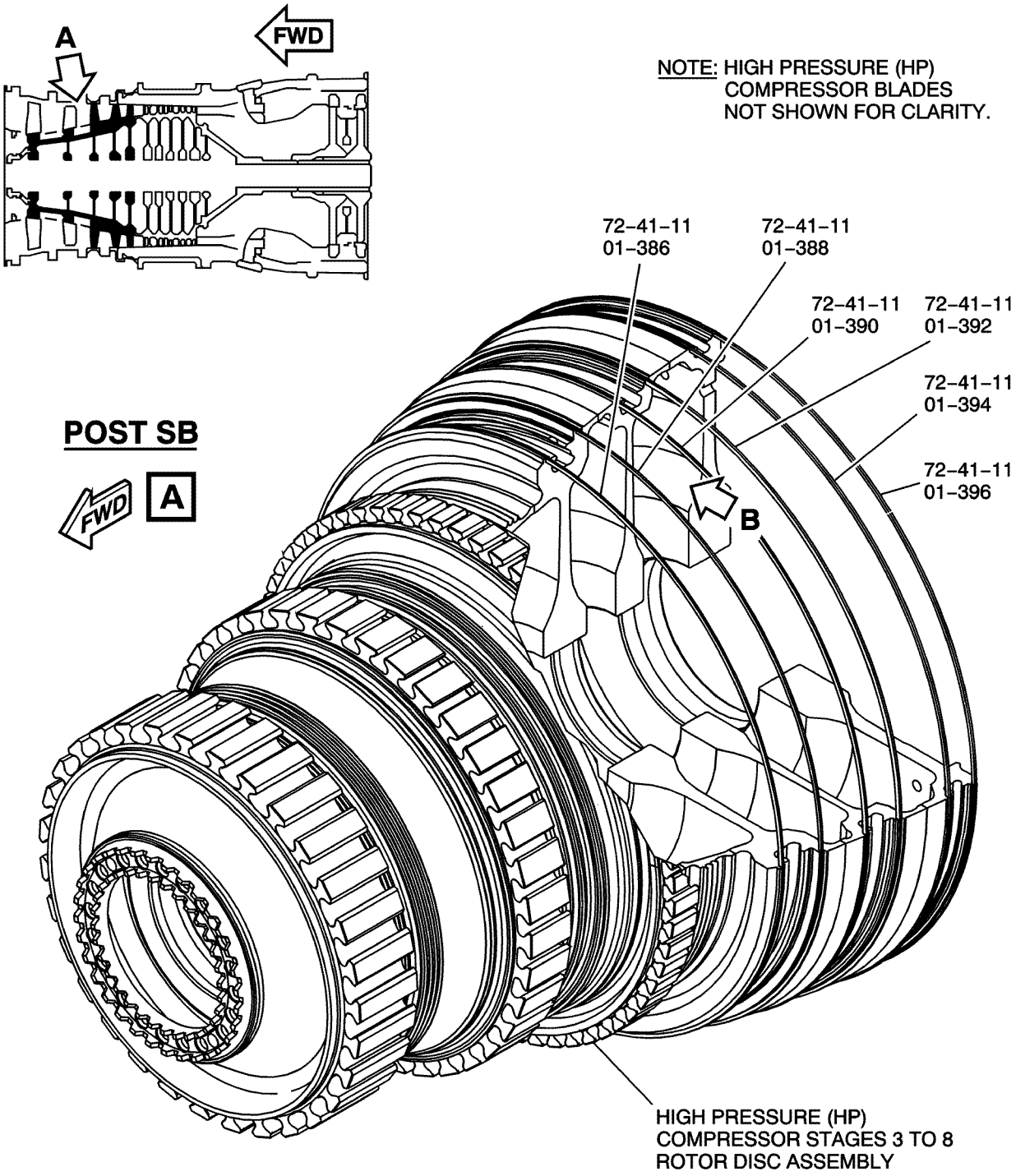
HIGH PRESSURE (HP) COMPRESSOR STAGES 3 TO 8 ROTOR DISC ASSEMBLY WITHOUT HP COMPRESSOR STAGES 6 TO 8 DAMPER WIRES INSTALLED
FIGURE 1



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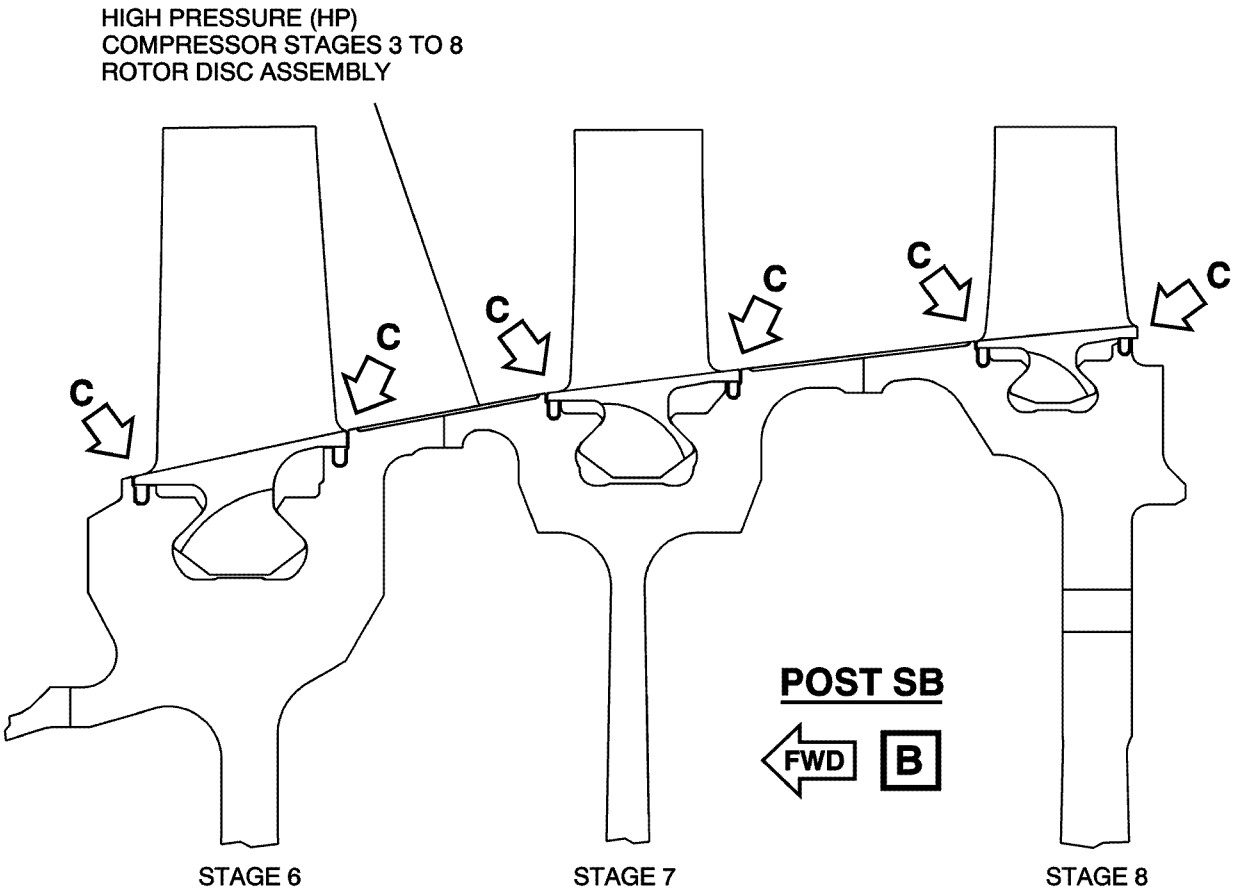
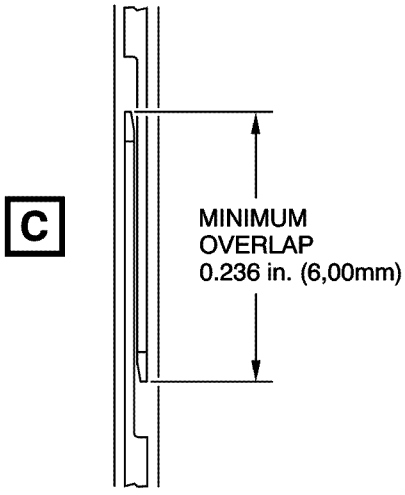
HIGH PRESSURE (HP) COMPRESSOR STAGES 3 TO 8 ROTOR DISC ASSEMBLY WITH HP COMPRESSOR STAGES 6 TO 8 DAMPER WIRES INSTALLED
FIGURE 2, SHEET 1





NOTE: THE OVERLAP ON THE FRONT DAMPER WIRE TO BE POSITIONED 180° FROM THE OVERLAP ON THE REAR DAMPER WIRE.

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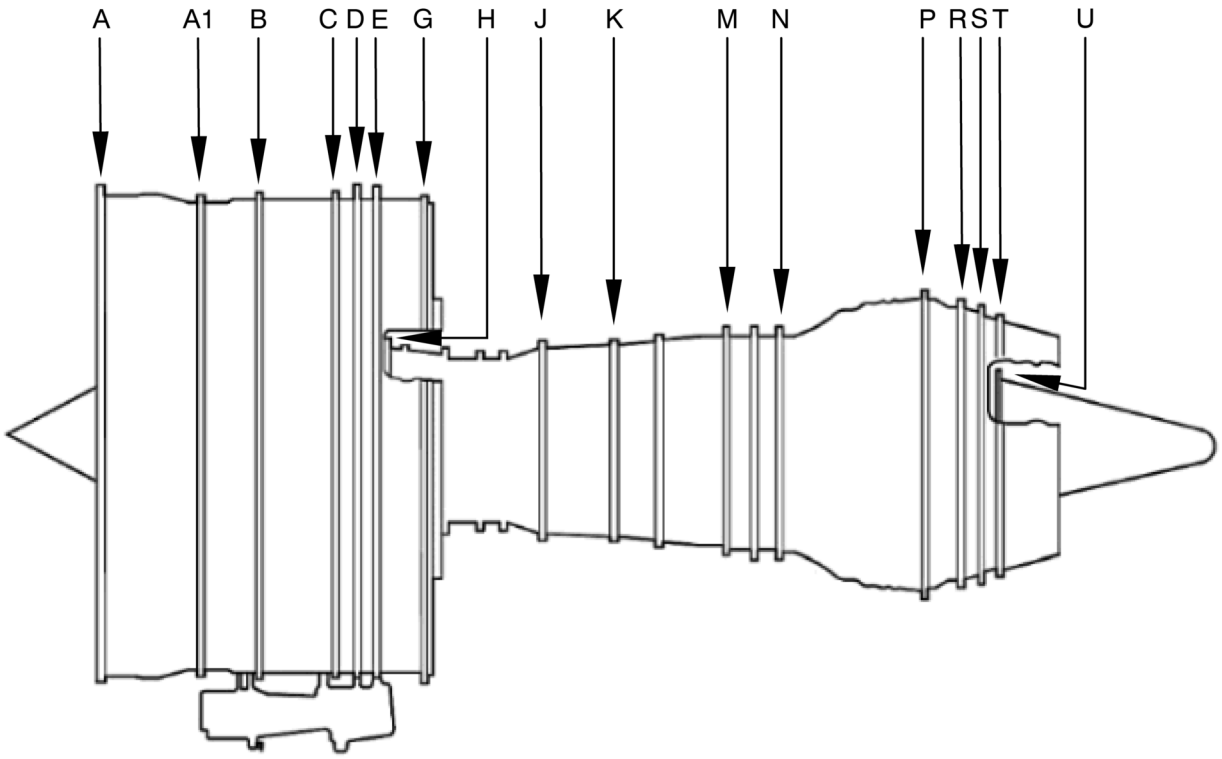
INSTALLATION OF THE HIGH PRESSURE (HP) COMPRESSOR STAGES 6 TO 8 DAMPER WIRES
FIGURE 2, SHEET 2



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ENGINE MAJOR FLANGES
FIGURE 3

Appendix

Added Data

Internal Reference Information

Revision No.	Reference Document	Origination
Original	EC13VR006	RR/IEL
1	EC13VR006–01	MJM/JAC

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