# NACELLE – HYDRAULIC SYSTEM – INTRODUCTION OF AN EXTERNAL DAMPENER FOR EATON ENGINE DRIVEN PUMPS (EDP)

MODEL APPLICATION

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

BULLETIN ISSUE SEQUENCE

V2500 Series 29-0265

ATA NUMBER

29-11-49



Compliance Category

8

Summary

The purpose of this Service Bulletin is to introduce a dampener to the Eaton Engine Driven Pump (EDP) to decrease hydraulic noise.

Planning Information

Effectivity Data

Engine Models Applicable

V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2530-A5, V2533-A5 and V2533-A5 Engine Serial No. V10001 (Propulsion system No. N5001) and subsequent with Eaton EDPs (Part Numbers 623977, 887111, 887673, 3031863-001 and 3031863-002) installed.

Concurrent Requirements

For improved clearances between the dampener and adjacent hardware, it is recommended that Service Bulletin V2500-NAC-29-0266 be done prior to or concurrently with this service bulletin.

Reason

1. Condition: The pressure pulse within the hydraulic system can make an unwanted noise.
2. Background Operators have requested a decrease in the hydraulic noise made during normal operating conditions.
3. Objective: The installation of the dampener to the pressure port outlet of the EDP will decrease the pressure pulse within the hydraulic system and thus decrease the noise.
4. Substantiation: All hardware changes have been substantiated by satisfactory engineering analysis.
5. Effect of Bulletin on:

| | |
|---|---|
| Removal/Installation: | Affected. |
| Disassembly/Assembly: | Affected. |
| Cleaning: | Not affected. |
| Inspection/Check: | Not affected. |
| Repair: | Not affected. |
| Testing: | Not affected. |

6. Supplement Information:

The new configuration was fit checked and flight tested by Airbus.

Description

On each propulsion system, the pressure hose is disconnected. The union and packing are removed from the Eaton EDP and replaced with a new dampener and packing.

Compliance

Category Code 8.

Accomplishment based upon experience with prior configuration.

Approval Data

The technical content under the JAR 25 regulation of this document is approved under the authority of DOA ref. EASA.21J.031.

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.

The compliance statement and the procedures described in this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine model listed.

Manpower

1. In Service

   0.5 M/Hr.

2. At overhaul

   0.5 M/Hr.

Weight and Balance

1. Weight Change

   + 1.2 lb (0,55 Kg).

2. Momemt Arm

   76.4 lb/in (879,9 Kg/mm).

3. Datum

   Engine Front Mount Centreline.
   (Powerplant Station PPS 100.00)

Electrical Load Data

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

Software Accomplishment Summary

Not Applicable

References

1. This Service Bulletin is subject to aircraft modification N° 159213 K30059 and 159698 K30306 (classified minor) and is covered by aircraft Service Bulletin N° A320-29-1170.

   Under no circumstances shall the modified equipment, resulting from the application of this SB, be installed on the aircraft type unless its aircraft SB is approved.

2. ATA Locator 29-11-49.

3. Internal Reference No. EC 16VN302 and 16VN307.

4. V2500 Standard Practices/Processes Manual (SPP-V2500-3IA), Chapter/Section 70-41-01-400-501, 70-41-02-400-501 and 70-64-02-640-501.

5. V2500-A5 Series Illustrated Parts Catalog, P&W Ref. PN 2A4428, Chapter/Section 29-11-49.

6. Bombardier Aerospace Modifications D1346 and D1351.

7. Service Bulletin V2500-NAC-29-0266.

Other Publications Affected

1. V2500 A1/A5 Series Engine Manual, PN 2A4407, Chapter/Section 71-00-02.

2. A318/A319/A320/A321 Aircraft Maintenance Manual. Refer to aircraft Service Bulletin N° A320-29-1170.

3. V2500 A1/A5 Component Maintenance Manual, Chapter/Section 29-11-49.

Interchangeability of Parts

Refer to aircraft Service Bulletin N° A320-29-1170.

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.

The material data that follows is for each engine.

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

| New PN | Qty | Estimate of Unit Price ($) | Keyword | Old PN | Instructions — Disposition |
|---|---|---|---|---|---|
| - | 1 | * | Union | 740-5233-501 (29-11-49-05-413) | (C)(S1) |
| - | 1 | * | Packing, O-Ring | 100-916-2397 (29-11-49-05-415) | (C)(D)(S1) |
| - | 1 | * | Packing, Retainer | TF450-212A (29-11-49-05-417) | (C)(D)(S1) |
| - | 1 | * | Packing, O-Ring | 100-212-2397 (29-11-49-05-420) | (C)(D)(S1) |
| 485000-14 | 1 | * | Dampener | - (29-11-49-05-425) | (A)(B)(S1) |
| NAS1611-212A | 1 | * | Packing, O-Ring | - (29-11-49-05-430) | (A)(B)(E)(S1) |
| M8791/1-212 | 2 | * | Packing, Retainer | - (29-11-49-05-435) | (A)(B)(S1) |
| NAS1612-16A | 1 | * | Packing, O-Ring | - (29-11-49-05-440) | (A)(B)(F)(S1) |

Instructions/Disposition Code Statements:

Parts Modification Conditions

Not applicable

Spare Parts Availability

(A) The new part is available.
(B) Refer to aircraft Service Bulletin A320-29-1170 for procurement.
(C) The old part will continue to be supplied.
(D) Refer to the IPC for alternatives.
(E) Packing EN6075-212 is an acceptable alternative for Packing NAS1611-212A.
(F) Packing EN6076-16 is an acceptable alternative for Packing NAS1612-16A.
(S1) New parts coded (S1) must replace old parts coded (S1) as a COMPLETE SET per Propulsion systems (or Nacelle).

Vendor Services or Special Components/Materials

Not Applicable.

Tooling - Price and Availability

Special tools are not required to accomplish this Service Bulletin.

Re-identified Parts

Not Applicable.

Other Material Information Data

Not Applicable.

Accomplishment Instructions.

WARNING: MAKE SURE THAT THE ENGINE IS SAFE FOR MAINTENANCE. THIS WILL PREVENT INJURIES TO PERSONNEL AND/OR DAMAGE TO THE EQUIPMENT.

WARNING: OBEY THE HYDRAULIC SAFETY PROCEDURES.

WARNING: DO NOT GET HYDRAULIC FLUID ON YOUR SKIN, IN YOUR EYES OR IN YOUR MOUTH. HYDRAULIC FLUID IS POISONOUS AND CAN GO THROUGH YOUR SKIN AND INTO YOUR BODY. FLUSH HYDRAULIC FLUID FROM YOUR EYES, MOUTH OR SKIN WITH WATER. GET MEDICAL AID IF YOU GET HYDRAULIC FLUID IN YOUR EYES OR MOUTH.

CAUTION: DO NOT LET HYDRAULIC FLUID FALL ON THE ENGINE. UNWANTED HYDRAULIC FLUID MUST BE REMOVED IMMEDIATELY WITH A CLEAN LINT FREE CLOTH. THE FLUID CAN CAUSE DAMAGE TO THE SURFACE PROTECTION AND TO SOME PARTS.

1. Removal of the union (2) from the Eaton EDP (ref). Refer to Figure 1.

   A. Put a suitable container below the pressure hose (1) / union (2) connection to the Eaton EDP.

   B. Hold the union (2) with an applicable wrench and disconnect the pressure hose (1) from the union.

   C. Let the hydraulic fluid flow into the container.

   D. With an applicable wrench, remove the union (2) and packing (3), (4) and (5) from the EDP (ref).

   E. Discard the packing (3), (4) and (5).

   F. Put a suitable protective cover on the end of the pressure hose (1) and the EDP (ref).

2. Installation of the new dampener (2) on the Eaton EDP (ref). Refer to Figure 2.

   A. Remove the covers from the dampener (2), the pressure hose (1) and the EDP (ref).

   B. Lightly lubricate the threads and abutment faces of the dampener (2) and pressure hose (1) with the hydraulic fluid used in the aircraft hydraulic system.

   C. Lubricate the packing (3), (4) (2-off) and (5) (ref SPM Task 70-44-01-400-501) and install the new dampener (2) and packings (3), (4) (2-off) and (5) to the Eaton EDP.

   D. Torque the dampener (2) to 975 – 1060 lbf in. (110,2 – 119,8 Nm).

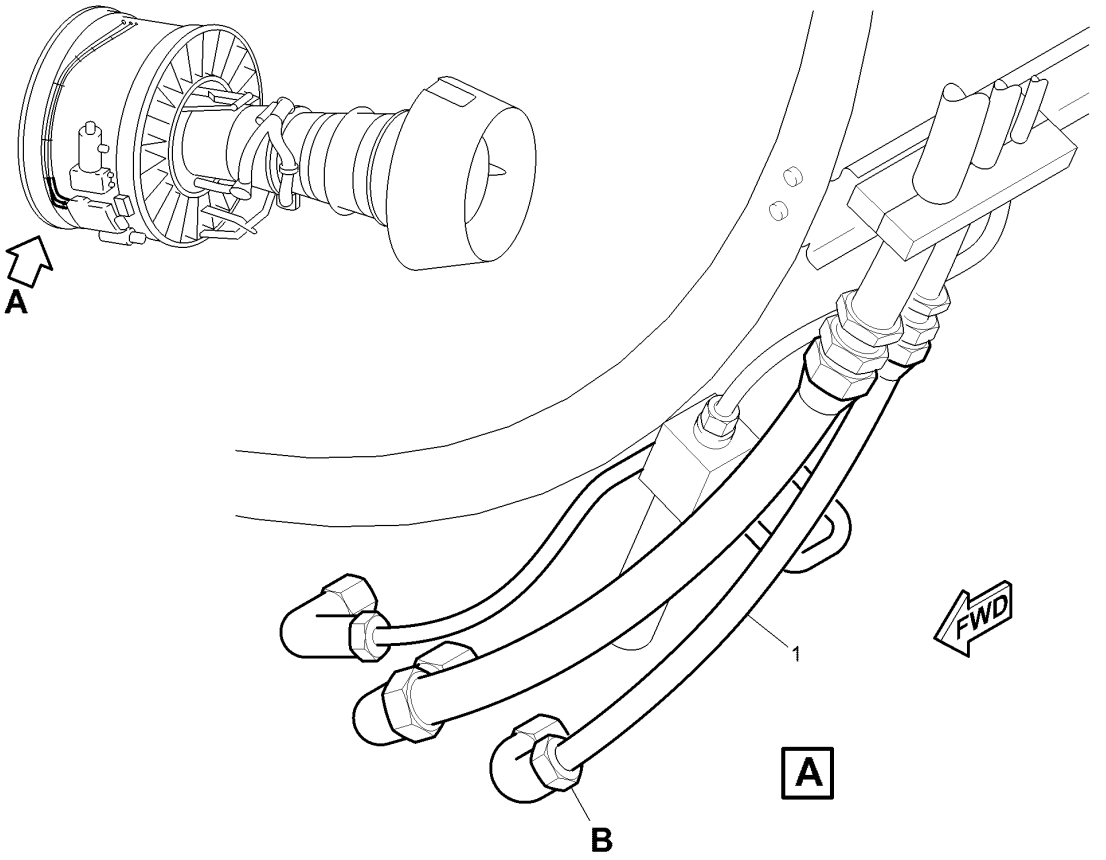
E. Connect the pressure hose (1) to the dampener (2).

NOTE: The hose installation may be eased by loosening the hose upstream then re-torqueing. For the Aircraft Maintenance Manual task, refer to aircraft Service Bulletin N° A320-29-1170.

F. Hold the dampener (2) with an applicable wrench and with a second wrench, torque the connector nut of the pressure hose (1) to 752 – 840 lbf in. (85,0 – 95,0 Nm).

3. Recording Instructions

A. A record of accomplishment is necessary. Write in the Engine Log Book that Service Bulletin V2500-NAC-29-0265 has been done.




**LEGEND**

1. Pressure hose AE707875-1.
2. Union 740-5233-501.
3. Packing 100-916-2397.
4. Packing TF450-212A.
5. Packing 100-212-2397.

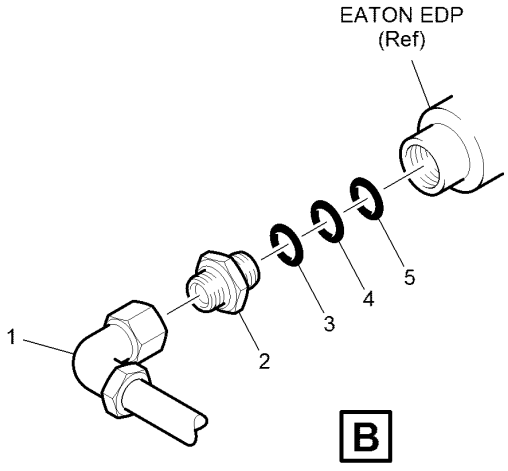



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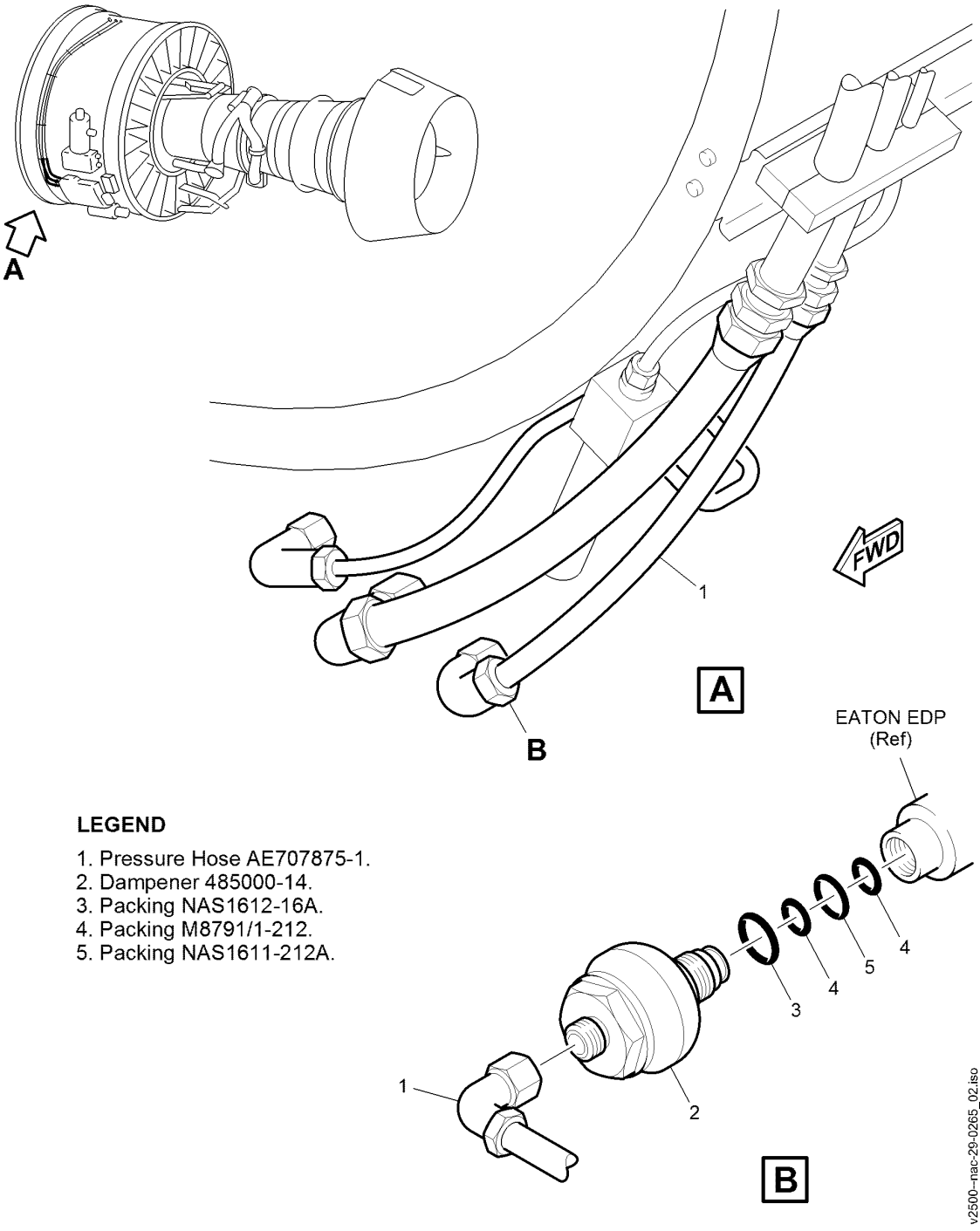
Figure 1
Removal of EDP Union.




**LEGEND**

1. Pressure Hose AE707875-1.
2. Dampener 485000-14.
3. Packing NAS1612-16A.
4. Packing M8791/1-212.
5. Packing NAS1611-212A.

Figure 2
Installation of EDP Dampener.

Appendix

Added Data

Internal Reference Information

| Revision No. | Reference Document | Origination |
|---|---|---|
| Original | EC 16VN302 and 16VN307 | MM |

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