



## SERVICE BULLETIN

ENGINE - MAIN GEARBOX ASSEMBLY - PROVIDE A MODIFIED VSCF SHAFT PLUG ASSEMBLY -  
CATEGORY CODE 8 - MOD.ENG-72-0232

See Vendor Bulletin N

1. Planning Information

A. Effectvitivity

- (1) Aircraft: McDonnell Douglas MD-90
- (2) Engine: V2525-D5 engines
- (3) Engine: V2528-D5 engines

B. Reason

(1) Condition

For the management of VSCF problems in service, it is desirable to perform return flights to main maintenance stations with inoperative failed VSCF's. This condition can be achieved by removal of the VSCF input shaft, but requires installation of a plug assembly into the VSCF drive gear to prevent oil leakage from the gearbox. The existing plug assembly can not be used because of an interference condition with the VSCF

(2) Background

There have been many VSCF failures since Entry Into Service of D5 Engines. Current MEL allows Aircraft dispatch with one VSCF inoperative.

Existing plug assembly is not designed for installation together with the VSCF, and trial checks have identified an interference condition.

(3) Objective

To introduce a revised plug assembly which eliminates the interference condition.

(4) Substantiation

The modified plug has been released using the experience of similar plugs installed on other engine models

(5) Effects of Bulletin on Workshop Procedures

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Removal/Installation	Not affected
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

**C. Description**

The change introduced by this Service Bulletin is as follows:

- Introduce a revised plug assembly for installation in the VSCF drive gear on the gearbox
- Allows installation of the plug assembly for up to four consecutive revenue flights back to a main maintenance station, if there is a requirement to make a failed VSCF inoperative

**D. Approval**

The part number changes and part modifications described in Section 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulation and are FAA-APPROVED for the Engine Model listed.

**E. Compliance**

Category Code 8

Accomplish based upon experience with the prior configuration

**F. Manpower**

Estimated man-hours to incorporate the full intent of this Bulletin:

Venue	Estimated Man-hours
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(1) In service:.....	Not applicable
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(2) At overhaul:.....	Not applicable
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**G. Material – Price and Availability**

(1) Modification Kit is not provided

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- (2) See "Material information" section for prices and availability of future spares.

## H. Tooling - Price and Availability

None

## I. Weight and Balance

- |                   |   |
|-------------------|---|
| (1) Weight change | No effect   |
| (2) Moment arm    | No effect   |
| (3) Datum         | Engine front mount centerline<br>(Powerplant Station (P.P.S) 100) |

## J. Electrical Load Data

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

## K. References

- (1) Internal reference No.

EC95VF017

## L. Other Publications Affected

- (1) The V2500-D5 Engine Illustrated Parts Catalog, Chapter/Section 72-60-03, to add the new part numbers



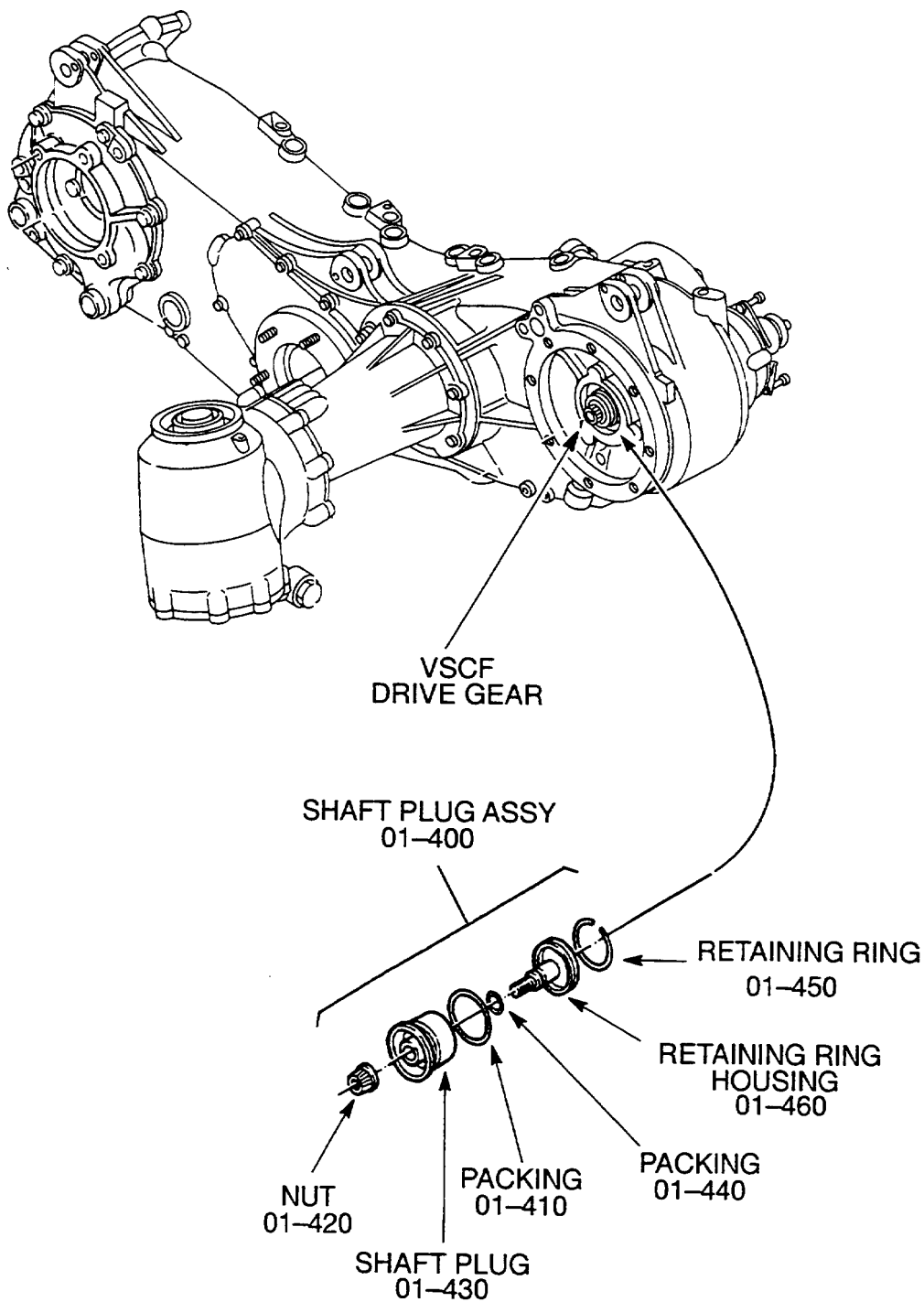
## 2. Accomplishment Instructions

### A. Installation instructions

- (1) Make sure that proper o-ring seals are installed on the retaining ring housing and on the shaft plug. See Figure 1
- (2) Tighten the nut until the mating faces of the nut, shaft plug, retaining ring and retaining ring housing touch. Make sure that the retaining rings is evenly seated between the retaining ring housing and the shaft plug.
- (3) Install the preassembled shaft plug assembly into the VSCF drive gear.
- (4) Push the shaft plug assembly into the gear until it touches the ID spline in the gear.
- (5) Hold the retaining ring housing and torque the nut to 290 to 370 lbfin.
- (6) Make sure that the plug assembly is tight in the VSCF drive gear.
- (7) Put a notice in the Aircraft Log that the plug assembly is installed.



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installation of VSCF shaft plug assy  
Fig.1

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3. Material Information

Applicability: For each V2525-D5 or V2528-D5 Engine to incorporate this Bulletin

A. Kits associated with this Bulletin

None

B. Parts affected by this Bulletin

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
4A0411 (72-60-03)	1	635.00	.Plug, Assy Shaft	4A0138 (01-400)	(A)(B)(S1)
4P0413 (72-60-03)	1	4.34	..Nut, Self Lock- ing Dbl. Hex.	4W0004 (01-420)	(A)(B)(S2)
4P0412 (72-60-03)	1	294.00	..Plug, Shaft	4P0135 (01-430)	(A)(B)(S2)

C. Instruction/Disposition Code Statements:

(A) New part is currently available for sale.

(B) Old part will continue to be available for other applications.

(S1) Old and new parts are fully interchangeable, except only new part can be used when installed with an inoperative VSCF.

(S2) Old and new parts are interchangeable in complete sets with old and new parts coded (S1). Remaining existing details of old part coded (S1) are used in new part coded (S1).

NOTE: The estimated 1996 Unit Prices shown are provided for planning purposes only and do not constitute a firm quotation. Consult the IAE Price Catalog or contact IAE's Spare Parts Sales Department for information concerning firm prices.

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