

**International
Aero Engines**

V2500 Propulsion System — Nacelle

SERVICE BULLETIN

**NACELLE — EXHAUST — MANUAL DRIVE, THRUST REVERSER
— REPLACEMENT OF**

MODEL APPLICATION

V2500-D5

BULLETIN INDEX LOCATOR

78-00-00

Compliance Category Code

4

Internal Reference No.

JG 97VN812

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1. Planning Information

A. Effectivity

- (1) Airplane: MD90
- (2) Nacelle: V2500-D5
 - (a) V2500-D5 thrust reverser serial numbers prior to 0705001.

B. Reason

(1) Condition

- (a) The wind shaft of the thrust reverser manual drive failed to pass a 2000 cycle test at 800 cycles.
- (b) The manual drive housing end cap can slowly loosen and begin to leak at approximately 13,000 flight cycles.

(2) Background

- (a) The diameter of the manual drive wind shaft is too small.
- (b) The design of the housing end cap allows the end cap to become loose.

(3) Objective

To provide a new manual drive with a larger wind shaft diameter to prevent failure and an improved end cap design to prevent inadvertant loosening.

(4) Substantiation

Endurance test of the new manual drive has proven successful.

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(5) Impact of the Bulletin on Workshop Procedures:

Removal/Installation	Not Affected
Disassembly/Assembly	Not Affected
Cleaning	Not Affected
Inspection/Repair	Not Affected
Repair	Not Affected
Testing	Not Affected

(6) Supplemental Information

None.

C. Description

The change introduced by this Bulletin is as follows:

Replaces the manual drive with an improved manual drive.

D. Approval

Incorporation of this Service Bulletin must be accomplished only in conjunction with Douglas Aircraft Company Service Bulletin MD90-78-033 which has received exclusive FAA approval for MD-90 Series aircraft.

E. Compliance

Category 4

Accomplish at the first visit of the nacelle or nacelle component to a maintenance base capable of compliance with the accomplishment instructions regardless of the planned maintenance action for the nacelle or nacelle component.

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F. Manpower

Estimated manhours to incorporate the full intent of this Bulletin for each nacelle:

<u>VENUE</u>	<u>ESTIMATED MANHOURS</u>
(1) In Service	
(a) To gain access	0.50 M/hour
(b) To modify	1.00 M/hour
(c) To return to service	<u>0.50 M/hour</u>
Total	2.00 M/hour

NOTE: Manhours estimate provided for planning information only.

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G. Material Cost and Availability

The parts to accomplish this Service Bulletin are available from the supplier as kit V2578161-551 at no cost to the operator.

Operators with units listed in Paragraph 1.A should submit a no-charge purchase order for the applicable quantity of kits. The purchase order must specify this service bulletin number and only the parts listed herein. Operators will have one year from the issue date of the Service Bulletin to place an order. After one year, kits will no longer be available and Operators will have to order parts individually at catalog prices, if they desire to incorporate the change.

Direct Purchase order to:
Rohr, Inc.
850 Lagoon Drive
Chula Vista, CA 91910-2098
U.S.A.

Attn: Airline Support Manager - MZ 107A
(Ref. Service Bulletin No. V2500-NAC-78-0161)

NOTE: Please do not send purchase orders for kits via Spec 2000 ordering system.

H. Tooling Cost and Availability

None required.

I. Weight and Balance

- (1) Weight change +0.5 lb per nacelle
- (2) Moment arm No effect
- (3) Datum..... Engine Front Mount Centerline
..... (Powerplant Station PPS 100.00)

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J. Electrical Load Data

Not affected.

K. References

Chapter/Section

MD90 Aircraft Maintenance Manual

71-13-00

78-31-18

IAE V2500 Standard Practices/Processes
Manual

70-09-00

L. Other Publications Affected

MD90/V2500D5 Thrust Reverser Component
Maintenance Manual (CMM-TR-V2500-3IA)

78-31-18

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2. Accomplishment Instructions

A. Pre-requisite Instructions

- (1) Open the upper and lower fan cowl doors. Refer to the MD90 Aircraft Maintenance Manual, Chapter 71-13-00, Page Block 201.

B. Rework or Modification Instructions

- (1) Remove the TY1914-02 (290D8009-25) manual drive. Refer to the MD90 Aircraft Maintenance Manual, Chapter 78-31-18, Page Block 401.
- (2) Install the TY2135-01 (290D8009-47) manual drive. Refer to the MD90 Aircraft Maintenance Manual, Chapter 78-31-18, Page Block 401.

C. Post-requisite Instructions

- (1) Close the fan cowl doors. Refer to the MD90 Aircraft Maintenance Manual, Chapter 71-13-00, Page Block 201.

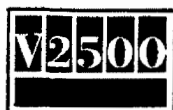
D. Recording Instructions

- (1) A record of accomplishment is necessary. Write in the applicable records and metal stamp, vibroetch, or electroetch on the thrust reverser data plate that Service Bulletin V2500-NAC-78-0161 has been done. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

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3. Material Information

Applicability: For each V2500-D5 thrust reverser to incorporate this Bulletin.

A. Kits associated with this Bulletin:

<u>NEW PART NO</u> <u>(ATA NO)</u>	<u>QTY</u>	<u>EST'D</u> <u>UNIT</u> <u>PRICE</u>	<u>KEYWORD</u>	<u>OLD PART NO</u> <u>(IPC NO)</u>	<u>INSTR/</u> <u>DISPOS</u>
V2578161-551			Kit		(A)
Consisting of:					
TY2135-01	2		Manual Drive		
(290D8009-47)					

B. Parts affected by this Bulletin:

<u>NEW PART NO</u> <u>(ATA NO)</u>	<u>QTY</u>	<u>EST'D</u> <u>UNIT</u> <u>PRICE</u>	<u>KEYWORD</u>	<u>OLD PART NO</u> <u>(IPC NO)</u>	<u>INSTR/</u> <u>DISPOS</u>
TY2135-01	1		Manual	TY1914-02	(B)(C)
(290D8009-47)			Drive	(290D8009-25)	(1D)(S1)
(78-31-18)				(01-010)	
				(02-010)	

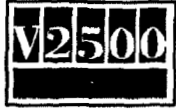
C. Instruction/Disposition Code Statements

- (A) Kit available December 1998.
- (B) New part available December 1998.
- (C) Old part will no longer be available.
- (1D) Discard old part.
- (S1) Old and new parts are freely and fully interchangeable.

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D. Materials Required to Incorporate this Service Bulletin:

None.

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