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V2500-A1/A5 SERIES PROPULSION SYSTEMS SERVICE BULLETIN

This document transmits the Revision 1 of Service Bulletin V2500-ENG-72-0492.

Document History

Service Bulletin Revision Status

Initial Issue. Sep. 7/06.

Service Bulletin Revision 1

Remove	Incorporate	Reason for change
All Pages of the Service Bulletin.	Pages 1 to 28 of the Service Bulletin.	To correct and re-format the Material Information table. Minor editorial changes.
All Pages of the Supplement.	Pages 1 to 2 of the Supplement.	To update the prices.

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CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED
If any have not been received please advise IAE International Aero Engines AG

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ENGINE – MAIN GEARBOX ASSEMBLY – TO ANNOUNCE A NEW GEARBOX WITH HELICAL COILS AND
BOLTS IN PLACE OF STUDS AND LOCKING RINGS

1. Planning Information

A. Effectivity

(1) Airbus A319

R (a) V2522-A5, V2524-A5, V2527M-A5 Engines prior to Serial No.V12382 (A5
R Standard and A5 SelectOne™ Retrofit Standard).

(2) Airbus A320

R (a) ALL V2500-A1 Engines.

R (b) V2527-A5, V2527E-A5 Engines prior to Serial No.V12382 (A5 Standard and
R A5 SelectOne™ Retrofit Standard).

(3) Airbus A321

R (a) V2530-A5, V2533-A5 Engines prior to Serial No.V12382 (A5 Standard and
R A5 SelectOne™ Retrofit Standard).

B. Concurrent Requirements

None.

C. Reason

R (1) Condition

The main casing of the accessory gearbox module and all of its housings, the angle gearbox support and the angle gearbox casing are built with studs and lock-rings in internal and external positions.

R For cost reduction objective studs and lock-rings have been replaced with helical coils and bolts have replaced the nuts that were previously tightened on the studs. The type of the jacking inserts of the above housings has also been changed.

R (2) Background

Studs and lock-rings are more expensive and difficult to install or replace.

(3) Objective

Incorporation of this Service Bulletin is designed to simplify manufacture and overhaul.

(4) Substantiation

The configuration without studs has already been incorporated on V2500-D5 gearboxes with successful evidences from certification testing and field experience.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Affected (Refer to paragraph 1.0. Other Publications Affected).

(d) Repair Schemes

Affected (Refer to paragraph 1.0. Other Publications Affected).

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

(6) Supplement Information

(a) The main casings and housings with the new configuration will replace all of the old standard ones, which will no longer be available.

(b) New and old parts are not directly interchangeable, however each one of the old casings and housings will be replaceable with a set of the new parts.

(c) Partial incorporation of the new main casings and housings on old gearboxes is possible.

(d) The old parts will be supported with studs, lock-rings, nuts and jacking inserts which will be available for sale.

D. Description

(1) This Service Bulletin introduces the following changes:

- (a) Studs and lock-rings of the main casing of the gearbox (72-60-21, 02-050) have been replaced by helical coils. This is applicable for V2500-A5 engine models only.
- (b) Studs and lock-rings of the angle gearbox support (72-60-32, 01-300) and angle gearbox casing (72-60-41, 01-300) have been replaced by helical coils. This is applicable to V2500-A1 and V2500-A5 engine models.
- (c) Nuts to connect the oil tube (79-22-48, 02-110) to the angle gearbox have been replaced by bolts.
- (d) Studs and lock-rings to install the outer ring of the bearing in the starter housing (72-60-22, 01-300) have been replaced by helical coils. This is applicable to V2500-A1 and V2500-A5 engine models.
- (e) Studs and lock-rings to install the outer ring of the bearing in the hydraulic pump (HP) housing (72-60-23, 01-460) have been replaced by helical coils. This is applicable to V2500-A1 and V2500-A5 engine models.
- (f) Studs and lock-rings to install the outer ring of the bearing in the permanent magnet alternator (PMA) drive housing (72-60-24, 01-180) have been replaced by helical coils. This is applicable to V2500-A1 and V2500-A5 engine models.
- (g) Studs and lock-rings to install the outer ring of the bearing in the fuel pump (FP) housing (72-60-25, 01-210) have been replaced by helical coils. This is applicable to V2500-A1 and V2500-A5 engine models.
- (h) Studs and lock-rings to install the outer ring of the bearing in the integrated drive generator (IDG) housing (72-60-28, 01-450) have been replaced by helical coils. This is applicable to V2500-A1 and V2500-A5 engine models.
- (i) Studs and lock-rings to install the outer ring of the bearing in the deoiler housing (72-60-29, 01-390) have been replaced by helical coils. This is applicable to V2500-A1 and V2500-A5 engine models.
- (j) Studs and lock-rings to install the outer rings of the bearings, the RH strainer and the oil pressure distributor on the angle gearbox support (72-60-32, 01-300) have been replaced by helical coils. This modification is applicable to all V2500-A5 and V2500-A1 engine models.
- (k) Bolts replace all of the nuts that were tightened on the studs of the old parts as above. Washers have not been replaced or deleted.

(1) The bolts introduced by this Service Bulletin must be tightened to the same torque of the nuts of the old configuration.

R (2) This Service Bulletin cannot be introduced by rework on old parts.

R (3) New parts can replace old parts in sets for the above sections, 1.(a) to
R 1.(k). In order to do partial introduction of this Service Bulletin you
must comply with the following requirements and the specified instruction
disposition codes:

(a) New parts (72-60-00, 01-200 and 72-60-40, 01-001) coded (S7) replace as a set the old part (72-60-40, 01-001) coded (S7). This is applicable to all V2500-A1 and V2500-A5 engine models.

(b) New parts (72-60-22, 01-240 and 72-60-22, 01-300) coded (S4) replace as a set the old part (72-60-22, 01-240) coded (S4). This is applicable to all V2500-A1 and V2500-A5 engine models.

(c) New parts (72-60-23, 01-420 and 72-60-23, 01-460) coded (S4) replace as a set the old part (72-60-23, 01-460) coded (S4). This is applicable to all V2500-A1 and V2500-A5 engine models.

(d) New parts (72-60-24, 01-120 and 72-60-24, 01-180) coded (S4) replace as a set the old part (72-60-24, 01-180) coded (S4). This is applicable to all V2500-A1 and V2500-A5 engine models.

(e) New parts (72-60-25, 01-190 and 72-60-25, 01-210) coded (S4) replace as a set the old part (72-60-25, 01-210) coded (S4). This is applicable to all V2500-A1 and V2500-A5 engine models.

(f) New parts (72-60-28, 01-390 and 72-60-28, 01-450) coded (S4) replace as a set the old part (72-60-28, 01-450) coded (S4). This is applicable to all V2500-A1 and V2500-A5 engine models.

(g) New parts (72-60-29, 01-270 and 72-60-29, 01-390) coded (S4) replace as a set the old part (72-60-29, 01-390) coded (S4). This is applicable to all V2500-A1 and V2500-A5 engine models.

R (h) New parts (72-60-32, 01-165, 72-60-32, 01-300, 72-60-26, 01-120, 72-60-27, 01-120 and 79-21-48, 01-720) coded (S6) replace as a set the old part (72-60-32, 01-300) coded (S6). This is applicable to all V2500-A1 and V2500-A5 engine models.

R (i) New parts (72-60-40, 01-055, 72-60-40, 01-165, 72-60-40, 01-245, 72-60-40, 01-405, 72-60-41, 01-144, 72-60-41- 01-210, 72-60-41, 01-300 and 79-22-48, 02-200) coded (S8) replace as a set the old part
R (72-60-41, 01-300) coded (S8). This is applicable to all V2500-A1 and
V2500-A5 engine models.

(j) New parts (72-60-42, 01-070, 72-60-42, 01-230 and 72-60-42, 01-232) coded (S4) replace as a set the old part (72-60-42, 01-232) coded (S4). This is applicable to all V2500-A1 and V2500-A5 engine models.

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(k) New parts (72-60-10, 01-115, 72-60-10, 01-165, 72-60-10, 01-205, 72-60-10, 01-245, 72-60-10, 01-285, 72-60-10, 01-315, 72-60-10, 01-355, 72-60-10, 01-395, 72-60-10, 01-455, 72-60-10, 01-575, 72-60-10, 01-675, 72-60-10, 01-825, 72-60-10, 01-835, 72-60-21, 01-180, 72-60-21, 01-680, 72-60-21, 01-740, 72-60-21, 02-050, 72-60-22, 01-520, 72-60-23, 01-660, 72-60-25, 01-300, 72-60-26, 01-200, 72-60-27, 01-240, 72-60-28, 01-610 and 72-60-29, 01-510) coded (S9) replace as a set the old part (72-60-21, 02-050) coded (S9). This is applicable to all V2500-A5 engine models.

E. Compliance

Category Code 7

Accomplish when the supply of superseded parts have been depleted.

F. Approval

The part number changes and/or part modifications described in sections 2 and 3 of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.

G. Manpower

In Service

Not applicable.

At Overhaul

Applicable (Hours not affected).

NOTE: The parts affected by this Service Bulletin are accessible at overhaul.

H. Material Price and Availability

Modification kit is not required; parts supplied as single line items.

For prices and availability of spares, refer to Supplement to this Service Bulletin.

I. Tooling Price and Availability

Special tools are not required.

J. Industry Support Information

Not applicable.

K. Weight and Balance**(1) Weight Change**

None.

(2) Moment Arm

No effect.

(3) Datum

R Engine Front Mount Centerline (Power Plant Station (PPS) 100).

L. Electrical Load Data

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

M. Software Accomplishment Summary

Not applicable.

N. References**(1) Internal Reference No.**

R Engineering Change No. 04VF005, 04VF005-01, 04VF005A and 04VF005C.

(2) Engine Manual, 72-60-00, 72-60-10, 72-60-22, 72-60-23, 72-60-24, 72-60-25, 72-60-28, 72-60-29, 72-60-32, 72-60-40 and 72-60-42, Disassembly/Assembly.**(3) ATA Locators - 72-60-00, 72-60-10, 72-60-21, 72-60-22, 72-60-23, 72-60-24, 72-60-25, 72-60-26, 72-60-27, 72-60-28, 72-60-29, 72-60-32, 72-60-40, 72-60-41, 72-60-42, 79-21-48 and 79-22-48.**

R

O. Other Publications Affected**(1) For effect on Illustrated Parts Catalogue (IPC), refer to 2. Material Information.****(2) IAE V2500 Engine Manual (E-V25001IA), Chapters 72-60-00, 72-60-10, 72-60-22, 72-60-23, 72-60-24, 72-60-25, 72-60-28, 72-60-29, 72-60-32, 72-60-41 and 72-60-42, Disassembly/Assembly.****(3) IAE V2500 Engine Manual (E-V25003IA), Chapters 72-60-00, 72-60-10, 72-60-21, 72-60-22, 72-60-23, 72-60-24, 72-60-25, 72-60-28, 72-60-29, 72-60-32, 72-60-41 and 72-60-42, Disassembly/Assembly.**

- (4) The following Repair Schemes will be revised to include the new parts introduced by this Service Bulletin:

VRS5020, VRS5021, VRS5023, VRS5026, VRS5027, VRS5028, VRS5029, VRS5030,
VRS5031, VRS5032, VRS5033, VRS5034, VRS5037, VRS5038, VRS5039, VRS5040,
VRS5041, VRS5042, VRS5043, VRS5044, VRS5046, VRS5049, VRS5052, VRS5053,
VRS5054, VRS5055, VRS5056, VRS5057, VRS5058, VRS5061, VRS5062, VRS5063,
VRS5064, VRS5065, VRS5066, VRS5067, VRS5068, VRS5069, VRS5070, VRS5072,
VRS5073, VRS5074, VRS5075, VRS5076, VRS5077, VRS5078, VRS5081, VRS5082,
VRS5083, VRS5084, VRS5085, VRS5086, VRS5087, VRS5088, VRS5091, VRS5092,
VRS5093, VRS5094, VRS5095, VRS5096, VRS5097, VRS5098, VRS5102, VRS5103,
VRS5104, VRS5105, VRS5107, VRS5108, VRS5109, VRS5110, VRS5111, VRS5114,
VRS5115, VRS5117, VRS5118, VRS5119, VRS5120, VRS5122, VRS5123, VRS5125,
VRS5126, VRS5127, VRS5193, VRS5239, VRS5417 and VRS5430.

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- (5) For V2500-A5 engines only:

The following Repair Schemes will be revised to include the new parts introduced by this Service Bulletin:

VRS5016, VRS5253, VRS5254, VRS5257, VRS5258, VRS5259, VRS5260, VRS5261,
VRS5262, VRS5263, VRS5264, VRS5265, VRS5266, VRS5267, VRS5268, VRS5269,
VRS5270, VRS5271, VRS5272, VRS5273, VRS5274, VRS5275, VRS5276, VRS5277,
VRS5278, VRS5279, VRS5280, VRS5281, VRS5282, VRS5283, VRS5284, VRS5285,
VRS5286, VRS5287, VRS5288, VRS5289, VRS5290, VRS5291, VRS5292, VRS5293,
VRS5294, VRS5296, VRS5345, VRS5420, VRS5421, VRS5422, VRS5423 and VRS5424.

- (6) The following Repair Schemes are not applicable when this Service Bulletin is incorporated:

VRS5024, VRS5025, VRS5035, VRS5036, VRS5045, VRS5047, VRS5048, VRS5059,
VRS5060, VRS5071, VRS5079, VRS5080, VRS5089, VRS5090, VRS5099, VRS5100,
VRS5112, VRS5113, VRS5328 and VRS5416.

- (7) For V2500-A5 engines only:

The following Repair Schemes are not applicable when this Service Bulletin is incorporated:

VRS5255 and VRS5256.

P. Interchangeability of Parts

- R Affected (Refer to paragraph 2.E. Instruction disposition codes).

2. Material Information

A. The kit required consists of the following parts:

None.

B. Parts to be reworked:

None.

C. New production parts:

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R	For V2500-A1 Engines:					
R	72-60-00					
R	01-200	4W1250	8	.Bolt	-	4W0002 (A)(B)(S2) (S7)
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:					
R	72-60-00					
	01-001	4A1077	1	Gearbox, Accessory, Module	-	4A1076 (A)(C)(S1)
R	01-200	4W1250	8	.Bolt	-	4W0002 (A)(B)(S2) (S7)
R	For V2500-A1 Engines:					
	72-60-10					
R	01-001	4A1104	1	Gearbox, Assy main	-	4A1103 (A)(C)(S1) (1D)
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:					
R	72-60-10					
R	01-001	4A1127	1	Gearbox, Assy main	-	4A1126 (A)(C)(S1)
R	01-115	4W1246	1	.Bolt	-	4W0002 (A)(B)(S2) (S9)



	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	01-165	4W1246	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-205	4W1246	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-245	4W1246	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-285	4W1246	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-315	4W1246	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-355	4W1246	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-395	4W1246	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-455	4W1250	7	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-575	4W1250	8	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-675	4W1250	2	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-825	4W1250	16	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-835	4W1250	1	.Bolt	—	4W1249	(A)(B)(S2) (S9)
R	72-60-21						
R R	01-180	4W1246	2	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-680	4W1246	2	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R R	01-740	4W1246	2	.Bolt	—	4W0002	(A)(B)(S2) (S9)



	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	02-050	4B0423	1	.Casing, A/O Gearbox	-	4B0402	(A)(C)(S2) (S9)
R R	02-090	MS21209 F4-20L	1	..Insert	-	MS51991 E206L	(A)(B)(S2)
R R	02-230	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-250	MS21209 F4-20L	2	..Insert	-	MS51991 E206L	(A)(B)(S2)
R R	02-300	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-350	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-390	MS21209 F4-20L	16	..Insert	-	MS51551 C205-12	(A)(B)(S2)
R R	02-410	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	02-430	MS21209 F4-20L	2	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-450	MS21209 F4-20L	2	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-470	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-490	MS21209 F4-20L	2	..Insert	-	MS51990 E206L	(A)(B)(S2)
R R	02-540	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-570	MS21209 F4-20L	2	..Insert	-	MS51990 E206L	(A)(B)(S2)
R R	02-590	MS21209 F4-20L	7	..Insert	-	MS51551 C205-14	(A)(B)(S2)



	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	02-610	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	02-630	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	02-670	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-700	MS21209 F4-20L	8	..Insert	-	MS51551 C205-13	(A)(B)(S2)
R R	02-740	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	02-760	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	02-780	MS21209 F4-20L	2	..Insert	-	MS51551 C205-12	(A)(B)(S2)
R R	02-800	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	02-820	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-840	MS21209 F4-20L	2	..Insert	-	MS51990 E206L	(A)(B)(S2)
R R	02-890	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	02-910	MS21209 F4-20L	2	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	02-930	MS21209 F4-20L	1	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R	For V2500-A1 Engines:						
R	72-60-22						
R R	01-240	4W0165	3	.Bolt	-	4W0002	(A)(B)(S2) (S4)

	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	01-300	4B0349	1	Housing, A/O Starter	—	4B0248	(A)(C)(S2) (S4)
R	01-360	1518M33P01	3	Insert, Screw Head	—	4P0040	(A)(B)(S2)
R R	01-400	MS21209 F4-20L	3	..Insert	—	MS51551 C205-9	(A)(B)(S2)
R R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:						
R	72-60-22						
R R	01-240	4W0165	3	.Bolt	—	4W0002	(A)(B)(S2) (S4)
R R	01-300	4B0349	1	Housing, A/O Starter	—	4B0248	(A)(C)(S2) (S4)
R	01-360	1518M33P01	3	Insert, Screw Head	—	4P0040	(A)(B)(S2)
R R	01-400	MS21209 F4-20L	3	..Insert	—	MS51551 C205-9	(A)(B)(S2)
R R	01-520	4W0165	1	.Bolt	—	4W0002	(A)(B)(S2) (S9)
R	For V2500-A1 Engines:						
R	72-60-23						
R R	01-420	4W0165	3	.Bolt	—	4W0002	(A)(B)(S2) (S4)
R R	01-460	4B0350	1	Housing, A/O HP	—	4B0313	(A)(C)(S2) (S4)
R	01-500	1518M33P01	3	Insert, Screw Head	—	4P0040	(A)(B)(S2)
R R	01-580	MS21209 F4-20L	3	..Insert	—	MS51551 C205-9	(A)(B)(S2)

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and					
R	V2533-A5 Engines:					
R	72-60-23					
R	01-420	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S4)
R	01-460	4B0350	1	Housing, A/O HP	-	4B0313 (A)(C)(S2) (S4)
R	01-500	1518M33P01	3	Insert, Screw Head	-	4P0040 (A)(B)(S2)
R	01-580	MS21209	3	..Insert	-	MS51551 (A)(B)(S2) C205-9
R	01-660	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S9)
R	For V2500-A1 Engines:					
R	72-60-24					
R	01-120	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S4)
R	01-180	4B0352	1	Housing, A/O PMA Drive	-	4B0292 (A)(C)(S2) (S4)
R	01-200	MS51990	1	..Ring, Lock	-	MS51990 (S5) E105P
R	01-240	MS21209	3	..Insert	-	MS51551 (A)(B)(S2) C205-9
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and					
R	V2533-A5 Engines:					
R	72-60-24					
R	01-120	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S4)
R	01-180	4B0352	1	Housing, A/O PMA Drive	-	4B0292 (A)(C)(S2) (S4)

	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	01-200	MS51990 E105P	1	..Ring, Lock	-	MS51990 E105P	(S5)
R R	01-240	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R	For V2500-A1 Engines:						
R	72-60-25						
R R	01-190	4W0165	3	.Bolt	-	4W0002	(A)(B)(S2) (S4)
R R	01-210	4B0351	1	Housing, A/O FP Drive	-	4B0087	(A)(C)(S2) (S4)
R	01-230	1518M33P01	3	Insert, Screw Head	-	4P0040	(A)(B)(S2)
R R	01-270	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and						
R	V2533-A5 Engines:						
R	72-60-25						
R R	01-190	4W0165	3	.Bolt	-	4W0002	(A)(B)(S2) (S4)
R R	01-210	4B0351	1	Housing, A/O FP Drive	-	4B0087	(A)(C)(S2) (S4)
R	01-230	1518M33P01	3	Insert, Screw Head	-	4P0040	(A)(B)(S2)
R R	01-270	MS21209 F4-20L	3	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	01-300	4W0165	3	.Bolt	-	4W0002	(A)(B)(S2) (S9)
R	For V2500-A1 Engines:						
R	72-60-26						
R R	01-120	4W0165	3	.Bolt	-	4W0002	(A)(B)(S2) (S6)

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and					
R	V2533-A5 Engines:					
R	72-60-26					
R	01-120	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S6)
R	01-200	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S9)
R	For V2500-A1 Engines:					
R	72-60-27					
R	01-120	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S6)
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and					
R	V2533-A5 Engines:					
R	72-60-27					
R	01-120	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S6)
R	01-240	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S9)
R	For V2500-A1 Engines:					
R	72-60-28					
R	01-390	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2) (S4)
R	01-450	4B0348	1	Housing, A/O IDG	-	4B0312 (A)(C)(S2) (S4)
R	01-490	MS21209 F4-20L	3	..Insert	-	MS51551 (A)(B)(S2) C205-9
R	01-550	1518M33P01	3	Insert, Screw Head	-	4P0040 (A)(B)(S2)

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and					
R	V2533-A5 Engines:					
R	72-60-28					
R	01-390	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2)
R						(S4)
R	01-450	4B0348	1	Housing, A/O IDG	-	4B0312 (A)(C)(S2)
R						(S4)
R	01-490	MS21209	3	..Insert	-	MS51551 (A)(B)(S2)
R		F4-20L				C205-9
R	01-550	1518M33P01	3	Insert, Screw Head	-	4P0040 (A)(B)(S2)
R	01-610	4W0165	3	.Bolt	-	4W0002 (A)(B)(S2)
R						(S9)
R	For V2500-A1 Engines:					
R	72-60-29					
R	01-270	4W0165	6	.Bolt	-	4W0002 (A)(B)(S2)
R						(S4)
R	01-390	4B0347	1	Housing, A/O Deoiler	-	4B0315 (A)(C)(S2)
R						(S4)
R	01-430	MS21209	6	..Insert	-	MS51551 (A)(B)(S2)
R		F4-20L				C205-9
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and					
R	V2533-A5 Engines:					
R	72-60-29					
R	01-270	4W0165	6	.Bolt	-	4W0002 (A)(B)(S2)
R						(S4)
R	01-390	4B0347	1	Housing, A/O Deoiler	-	4B0315 (A)(C)(S2)
R						(S4)
R	01-430	MS21209	6	..Insert	-	MS51551 (A)(B)(S2)
R		F4-20L				C205-9



	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	01-510	4W0165	3	.Bolt	-	4W0002	(A)(B)(S2) (S9)
R	For all V2500-A1 and V2500-A5 Engines:						
R	72-60-32						
R R	01-165	4W1246	1	.Bolt	-	4W0002	(A)(B)(S2) (S6)
R R	01-300	4B0353	1	.Support, A/O Angle Gearbox-	-	4B0062	(A)(C)(S2) (S6)
R	01-320	1518M33P01	3	Insert, Screw Head	-	4P0040	(A)(B)(S2)
R R	01-360	MS21209 F4-20L	6	..Insert	-	MS51551 C205-9	(B)
R R	01-400	MS21209 F4-20L	1	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R	01-500	1518M33P01	2	Insert, Screw Head	-	4P0040	(A)(B)(S2)
R R	01-620	MS21209 F4-20L	1	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R	For all V2500-A1 and V2500-A5 Engines:						
R	72-60-40						
R R	01-001	4A0075	1	.Gearbox, Assy Angle	-	4A0074	(A)(C)(S2) (S7)
R R	01-055	4W0170	6	.Bolt	-	4W0002	(A)(B)(S2) (S8)
R R	01-165	4W0170	4	.Bolt	-	4W0002	(A)(B)(S2) (S8)
R R	01-245	4W1246	1	.Bolt	-	4W0002	(A)(B)(S2) (S8)
R R	01-405	4W1246	1	.Bolt	-	4W0002	(A)(B)(S2) (S8)

	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R	72-60-41						
R R	01-144	4W1246	1	.Bolt	-	4W0002	(A)(B)(S2) (S8)
R R	01-210	4W1246	2	.Bolt	-	4W0002	(A)(B)(S2) (S8)
R R	01-300	4B0354	1	.Casing, A/O Angle Gearbox	-	4B0256	(A)(C)(S2) (S8)
R R	01-370	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	01-390	MS21209 F4-20L	1	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	01-410	MS21209 F4-20L	6	..Insert	-	MS51551 C205-13	(A)(B)(S2)
R R	01-430	MS21209 F4-20L	1	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	01-450	MS21209 F4-20L	4	..Insert	-	MS51551 C205-14	(A)(B)(S2)
R R	01-470	MS21209 F4-20L	2	..Insert	-	MS51551 C205-9	(A)(B)(S2)
R R	01-510	MS21209 F4-20L	2	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R R	01-530	MS21209 F4-20L	8	..Insert	-	MS51551 C205-13	(A)(B)(S2)
R R	01-550	MS21209 F4-20L	4	..Insert	-	MS51991 E206L	(A)(B)(S2)

	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R	72-60-42						
R R	01-070	4W1246	3	.Bolt	-	4W0002	(A)(B)(S2) (S4)
R R	01-230	4B0355	1	.Support, A/O Rad. Gear	-	4B0272	(A)(C)(S2) (S4)
R R	01-232	4W0170	4	.Bolt	-	4W0002	(A)(B)(S2) (S4)
R	01-240	1518M33P01	3	Insert, Screw Head	-	4P0040	(A)(B)(S2)
R R	01-260	MS21209 F4-20L	4	..Insert	-	MS51551 C205-12	(A)(B)(S2)
R R	01-280	MS21209 F4-20L	3	..Insert	-	MS51551 C205-10	(A)(B)(S2)
R	79-21-48						
R R	01-720	4W1246	1	.Bolt	-	4W0002	(A)(B)(S2) (S6)
R	79-22-48						
R R	02-220	4W1246	2	.Bolt	-	4W0002	(A)(B)(S2) (S8)

D. Redundant Parts

	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:						
	72-60-21						
	02-080		1	..Ring, Lock	-	MS51990 E106P	(B)

	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	02-220		3	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-240		2	..Ring, Lock	—	MS51990 E106P	(B)
R R	02-290		3	..Ring, Lock	—	MS51990 E106P	(B)
R R	02-340		3	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-380		16	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-400		1	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-420		2	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-440		2	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-460		3	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-480		2	..Ring, Lock	—	MS51990 E106P	(B)
R R	02-530		3	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-560		2	..Ring, Lock	—	MS51990 E106P	(B)
R R	02-580		7	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-600		1	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-620		1	..Ring, Lock	—	MS51990 E105P	(B)



	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	02-660		3	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-690		8	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-710		2	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-730		1	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-750		1	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-790		1	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-810		3	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-830		2	..Ring, Lock	—	MS51990 E106P	(B)
R R	02-850		1	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-900		2	..Ring, Lock	—	MS51990 E105P	(B)
R R	02-920		1	..Ring, Lock	—	MS51990 E105P	(B)
R	For V2500-A1 Engines:						
R	72-60-22						
R R	01-380		3	..Ring, Lock	—	MS51990 E105P	(B)
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and						
R	V2533-A5 Engines:						
R	72-60-22						

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	01-380	3	..Ring, Lock	-	MS51990 E105P	(B)
R	For V2500-A1 Engines:					
R	72-60-23					
R R	01-560	3	..Ring, Lock	-	MS51990 E105P	(B)
R R R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:					
R	72-60-23					
R R	01-560	3	..Ring, Lock	-	MS51990 E105P	(B)
R	For V2500-A1 Engines:					
R	72-60-25					
R R	01-260	3	..Ring, Lock	-	MS51990 E105P	(B)
R R R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:					
R	72-60-25					
R R	01-260	3	..Ring, Lock	-	MS51990 E105P	(B)
R	For V2500-A1 Engines:					
R	72-60-28					
R R	01-470	3	..Ring, Lock	-	MS51990 E105P	(B)
R R R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:					
R	72-60-28					
R R	01-470	3	..Ring, Lock	-	MS51990 E105P	(B)

FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R	For V2500-A1 Engines:					
R	72-60-29					
R	01-410	6	..Ring, Lock	-	MS51990 E105P	(B)
R	For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5 and V2533-A5 Engines:					
R	72-60-29					
R	01-410	6	..Ring, Lock	-	MS51990 E105P	(B)
R	For all V2500-A1 and V2500-A5 Engines:					
R	72-60-32					
R	01-340	6	..Ring, Lock	-	MS51990 E105P	(B)
R	01-380	1	..Ring, Lock	-	MS51990 E105P	(B)
R	01-600	1	..Ring, Lock	-	MS51990 E105P	(B)
R	For all V2500-A1 and V2500-A5 Engines:					
R	72-60-41					
R	01-360	1	..Ring, Lock	-	MS51990 E105P	(B)
R	01-380	1	..Ring, Lock	-	MS51990 E105P	(B)
R	01-400	6	..Ring, Lock	-	MS51990 E105P	(B)
R	01-420	1	..Ring, Lock	-	MS51990 E105P	(B)
R	01-440	4	..Ring, Lock	-	MS51990 E105P	(B)

	FIG ITEM NO.	NEW PART NO.	QTY	PART TITLE	MAT	OLD PART NO.	INSTR DISP
R R	01-460		2	..Ring, Lock	—	MS51990 E105P	(B)
R R	01-500		2	..Ring, Lock	—	MS51990 E105P	(B)
R R	01-520		8	..Ring, Lock	—	MS51990 E105P	(B)
R R	01-540		4	..Ring, Lock	—	MS51990 E106P	(B)
R	72-60-42						
R R	01-250		4	..Ring, Lock	—	MS51990 E105P	(B)
R R	01-270		3	..Ring, Lock	—	MS51990 E105P	(B)

E. Instruction disposition codes:

- (A) The new part is currently available.
- (B) The old part will continue to be available.
- (C) The old part will be discontinued.
- (S1) Old and new parts are interchangeable.
- (S2) Old and new parts are not interchangeable.
- (S3) The quantity of the new part is 2.
- (S4) New parts coded (S4) replace parts coded (S4) as a set.
- (S5) The quantity of the new part is 1.
- (S6) New parts coded (S6) replace parts coded (S6) as a set.
- (S7) New parts coded (S7) replace parts coded (S7) as a set.
- (S8) New parts coded (S8) replace parts coded (S8) as a set.
- (S9) New parts coded (S9) replace parts coded (S9) as a set.

(1D) The new part can be obtained by installing P/N 4B0353, (72-60-32, 01-300) Angle Gearbox Support Assembly.

3. Accomplishment Instructions

A. Rework Instructions

- (1) None.

B. Assembly Instructions

- (1) The bolts introduced by this Service Bulletin must be tightened with the same torque of the nuts of the old configuration. Refer to the Engine Manual assembly instructions relevant to the affected sections.
- (2) The new External Gearbox Module part number 4A1052 coded (S1), 72-60-00, 01-001 is interchangeable with the old part number 4A1051. This instruction is applicable to the V2500-A1 engine model.
- (3) The new External Gearbox Module part number 4A1077 coded (S1), 72-60-00, 01-001 is interchangeable with the old part number 4A1076. This instruction is applicable to all V2500-A5 engine models.
- (4) The new Main Gearbox Assembly part number 4A1104 coded (S1), 72-60-10, 01-001 is interchangeable with the old part number 4A1103. This instruction is applicable to the V2500-A1 engine model.
- (5) The new Main Gearbox Assembly part number 4A1127 coded (S1), 72-60-10, 01-001 is interchangeable with the old part number 4A1126. This instruction is applicable to all V2500-A5 engine models.
- (6) In order to install the new Angle Gearbox Assembly part number 4A0075 coded (S7), 72-60-40, 01-001 the new parts coded (S7), 72-60-00, 01-200 must be fitted. Install parts following Engine Manual Subtask 72-60-00-430-051 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- R (7) The new parts of the Starter Drive Gear Assembly coded (S4), 72-60-22, 01-240 and 72-60-22, 01-300 replace as a set the old part coded (S4), 72-60-22, 01-240. Assemble parts following Engine Manual Task 72-60-22-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- (8) The new parts of the Hydraulic Pump Drive Gearshaft coded (S4), 72-60-23, 01-420 and 72-60-23, 01-460 replace as a set the old part coded (S4), 72-60-23, 01-460. Assemble parts following Engine Manual Task 72-60-23-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- (9) The new parts of the Extension Layshaft Gear coded (S4), 72-60-24, 01-120 and 72-60-24, 01-180 replace as a set old part coded (S4), 72-60-24, 01-180. Assemble parts following Engine Manual Task 72-60-24-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.

- (10) The new parts of the Fuel Pump Drive Gear Assembly coded (S4), 72-60-25, 01-190 and 72-60-25, 01-210 replace as a set old part coded (S4), 72-60-25, 01-210. Assemble parts following Engine Manual Task 72-60-25-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- (11) The new parts of the IDG Gear Drive coded (S4), 72-60-28, 01-390 and 72-60-28, 01-450 replace as a set old part coded (S4), 72-60-28, 01-450. Assemble parts following Engine Manual Task 72-60-28-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- (12) The new parts of the Deoiler Gear and Impeller coded (S4), 72-60-29, 01-270 and 72-60-29, 01-390 replace as a set old part coded (S4), 72-60-29, 01-390. Assemble parts following Engine Manual Task 72-60-29-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- R
R (13) The old Angle Gearbox Support part number 4B0062 coded (S6), 72-60-32, 01-300 is replaced by the new part number 4B0353 as a set with the new parts coded (S6), 72-60-26, 01-120, 72-60-27, 01-120 and 79-21-48, 01-720. Assemble parts following Engine Manual Tasks 72-60-32-440-001, 72-00-60-420-002-A00/B00 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- R
R (14) The old part Angle Gearbox Assembly coded (S8), 72-60-41, 01-300 is replaced as a set by the new parts coded (S8), 72-60-41, 01-300, 72-60-40, 01-055, 72-60-40, 01-165, 72-60-40, 01-245, 72-60-40, 01-405, 72-60-41, 01-144, 72-60-41, 01-210 and 79-22-48, 02-200. Assemble parts following Engine Manual Tasks 72-60-40-440-001, 72-00-60-450-007 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- (15) The new parts of the Angle Gearbox Driving Bevel Gear Assembly coded (S4), 72-60-42, 01-070, 72-60-42, 01-230 and 72-60-42, 01-232 replace as a set old part coded (S4), 72-60-42, 01-232. Assemble parts following Engine Manual Task 72-60-42-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.
- (16) The old part of the Main Gearbox Assembly coded (S9), 72-60-21, 02-050 is replaced as a set by the new parts coded (S9), 72-60-21, 02-050, 72-60-10, 01-115, 72-60-10, 01-165, 72-60-10, 01-205, 72-60-10, 01-245, 72-60-10, 01-285, 72-60-10, 01-315, 72-60-10, 01-355, 72-60-10, 01-395, 72-60-10, 01-455, 72-60-10, 01-575, 72-60-21, 01-180, 72-60-21, 01-240, 72-60-21, 01-680, 72-60-21, 01-740, 72-60-22, 01-520, 72-60-23, 01-660, 72-60-25, 01-300, 72-60-26, 01-200, 72-60-27, 01-240, 72-60-28, 01-610 and 72-60-29, 01-510. Assemble parts following Engine Manual Task 72-60-10-440-001 and tighten new bolts with the same torque of old nuts. This instruction is applicable to all V2500-A1 and V2500-A5 engine models.

C. Recording Instructions

- (1) A record of accomplishment is necessary.

ENGINE – MAIN GEARBOX ASSEMBLY – TO ANNOUNCE A NEW GEARBOX WITH HELICAL COILS AND BOLTS IN PLACE OF STUDS AND LOCKING RINGS

SUPPLEMENT – PRICES AND AVAILABILITY

The prices (if shown) are for estimating purposes only and as such are given in good faith, without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current price catalogue for current prices.

1. Modification Kit:

Not applicable.

2. New Production Parts:

	Part No.	Description	Unit Price US Dollars
R	4A0075	Gearbox, Assy Angle	P.O.A.
R	4A1052	Gearbox, Accessory,	P.O.A.
R		Module	
R	4A1077	Gearbox, Accessory,	P.O.A.
		Module	
R	4A1104	Gearbox, Assembly,	298,790.00
		Main	
R	4A1127	Gearbox, Assembly,	346,600.00
		Main	
R	4B0423	Casing, Assembly of,	181,850.00
		Gearbox	
R	4B0349	Housing, Assembly	6,033.00
		of, Starter	
R	4B0313	Housing, Assembly	5,198.00
		of, HP	
R	4B0352	Housing, Assembly	3,358.00
		of, PMA Drive	
R	4B0351	Housing, Assembly	4,042.00
		of, FP Drive	
R	4B0348	Housing, Assembly	5,670.00
		of, IDG	
R	4B0347	Housing, Assembly	5,130.00
		of, Deoiler	
R	4B0353	Support, Assembly	39,530.00
		of, Angle Gearbox	
R	4B0354	Casing, Assembly of,	23,780.00
		Angle Gearbox	
R	1518M33P01	Insert, Screw Head	114.00
R	P.O.A. – Price On Application		
R	Parts are currently available.		

3. Tools

None.