



ENGINE INDICATING - REPLACEMENT OF EGT LOOP CLAMP BRACKETS AND ATTACHING BOLTS -
CATEGORY CODE 3 - MOD.ENG-77-0002

1. Planning Information

A. Effectivity

- (1) Aircraft: Airbus A320
- (2) Engine: V2500-A1 Engines serial No.s V0003 through V0086 except Engine Serial No.V0007.

B. Reason

(1) Condition

The present configuration EGT Brackets on flange P at hole location 52, 53, 62 and 63 can physically interfere with the Hold Open Rod Brackets for the C-Ducts.

It can be difficult to close the C-Duct. This could cause damage to the EGT Brackets, Hole Open Rod Brackets, and C-Duct.

(2) Background

The conditions described were found during the flight test portion of the Compliance Engine Program.

(3) Objective

To provide a new design for the bracket arrangement on the EGT Harness at hole locations 52, 53, 62 and 63, to prevent in service difficulty with the EGT Brackets and C-Duct Hold Open Rods.

(4) Substantiation

Not necessary.

(5) Effect of Bulletin on:

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

(6) Supplemental Information

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None.

C. Description

(1) Interference between the EGT Brackets (at P Flange hole locations 52, 53, 62 and 63) and Hold Open Rod Brackets for the C-Ducts is removed as follows:

(a) Two new brackets are provided to attach the Harness at the locations specified.

(b) New bolts are provided to attach the Loop Clamps to the Loop Clamp Brackets.

D. 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 Model listed.

E. Compliance

Category Code 3.

Accomplish prior to revenue service.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	
(a) To gain access	hours, minutes
(b) To embody	hours, minutes
(c) To return engine to flyable status	hours minutes
TOTAL 26 1/2 minutes	

(2) At Overhaul

Not applicable.

G. Material – Price and Availability

(1) Modification kit not required

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

H. Tooling - Price and Availability

Special tools are not required.

I. Weight and Balance

- | | | | | | |
|-----|---------------|----|----|----|---|
| (1) | Weight change | .. | .. | .. | None |
| (2) | Moment arm | .. | .. | .. | No effect |
| (3) | Datum | .. | .. | .. | Engine front mount centreline
(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.

EC89VA021

EC89VA021A

- (2) Other References

A320 Aircraft Maintenance Manual

V2500 Standard Practices manual

L. Other Publications Affected

- (1) V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-50-00, Figure 01 and Chapter/Section 77-21-43, Figure 01 to add the new parts.
- (2) V2500 Engine Manual Chapter/Section 72-50-00, Cleaning, to add the new parts.
- (3) V2500 Engine Manual Chapter/Section 72-50-00, Inspection/Check, to add the new parts.

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2. Accomplishment Instructions

A. Rework Instructions

- (1) There are no rework instructions necessary for this Service Bulletin.

B. Prerequisite Instructions

- (1) If applicable, open the Thrust Reverser Halves by the approved procedures in Reference (1) Chapter/Section 78-32-00 Maintenance Practices.

C. Fitment Instructions

- (1) Remove the Nuts and Bolts which hold the two 2A1804 loop clamp brackets to the Loop Clamps. Refer to Figure 1.

NOTE: The nuts removed will be kept and installed with the new bolts.

- (2) Remove the Nuts and Bolts which hold the 2A1804 Loop Clamp Brackets to the Turbine Exhaust Case Flange. (Hole Locations 52, 53, 62 and 63).

- (3) Remove the loop clamp brackets.

- (4) Lubricate the threads of the 662138 nuts (4 off) and the bolts (which will hold the Brackets to the flange) with CoMat 10-039 Engine Oil.

NOTE: 662138 Nuts replace 4W0002 nuts at the flange bolt hole locations specified.

- (5) Put the 2A2004 Loop Clamp Bracket (1 off) at the location of holes 62 and 63. Refer to Figure 1.

- (6) Install the Nuts and Bolts and tighten them with your hand.

- (7) Put the 2A2005 Loop clamp Bracket (1 off) at the location of holes 52 and 53. Refer to Figure 1.

- (8) Install the Nuts and Bolts and tighten them with your hand.

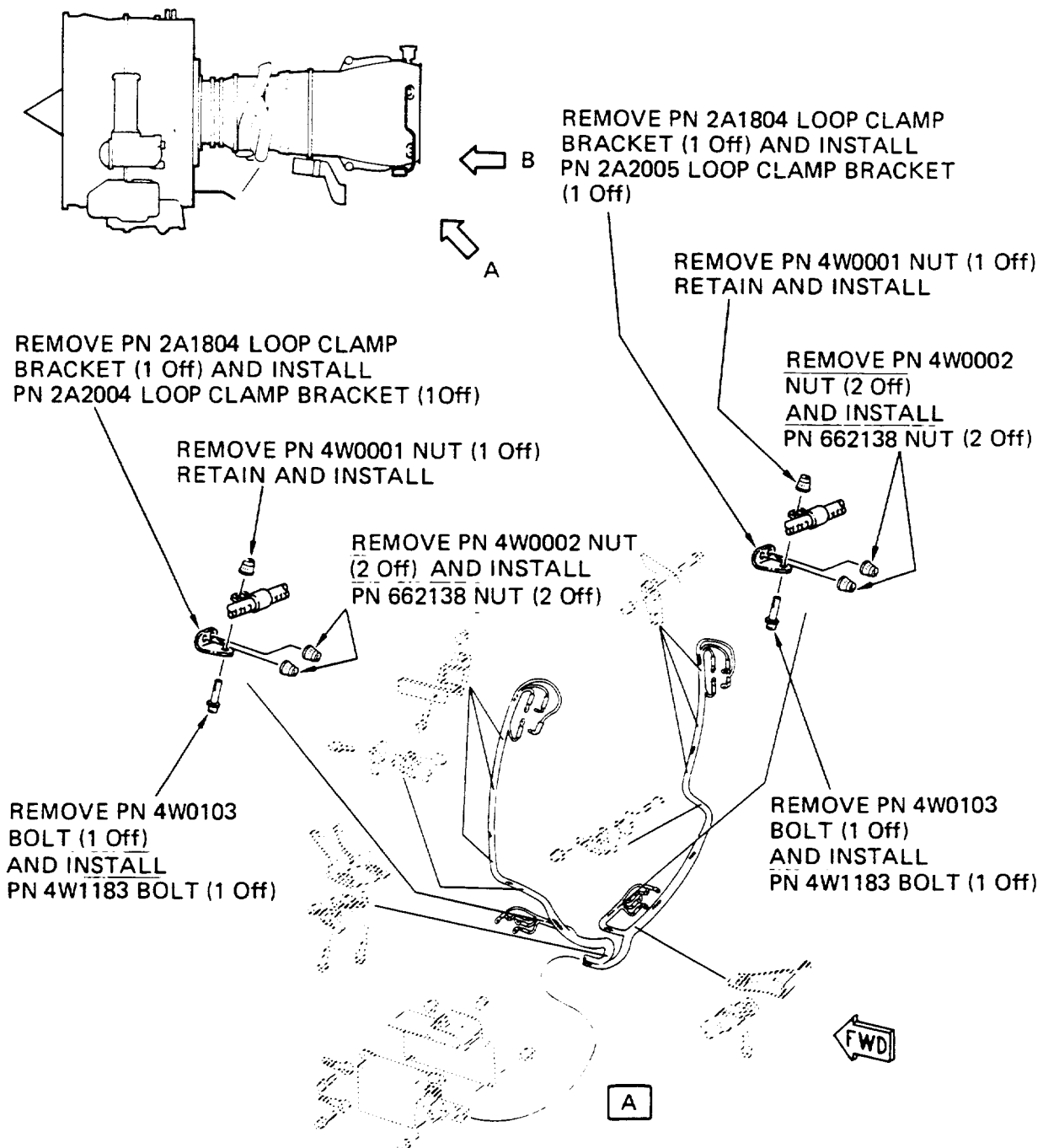
- (9) Torque the Bolts to between 85 to 105 lbfin (9,60 to 11,86 Nm). See Reference (2) Chapter/Section 70-41-00, Torque Tightening Technique.

- (10) Move the Loop Clamps so bolt holes align with the bolt holes in the Loop Clamp brackets (at both new bracket locations).

- (11) Lubricate the threads of the two 4W1183 Bolts (2 off), and the two Nuts removed in step (1), with CoMat 10-039 Engine Oil.

- (12) Install the Bolts and the Nuts and tighten them with your hand.

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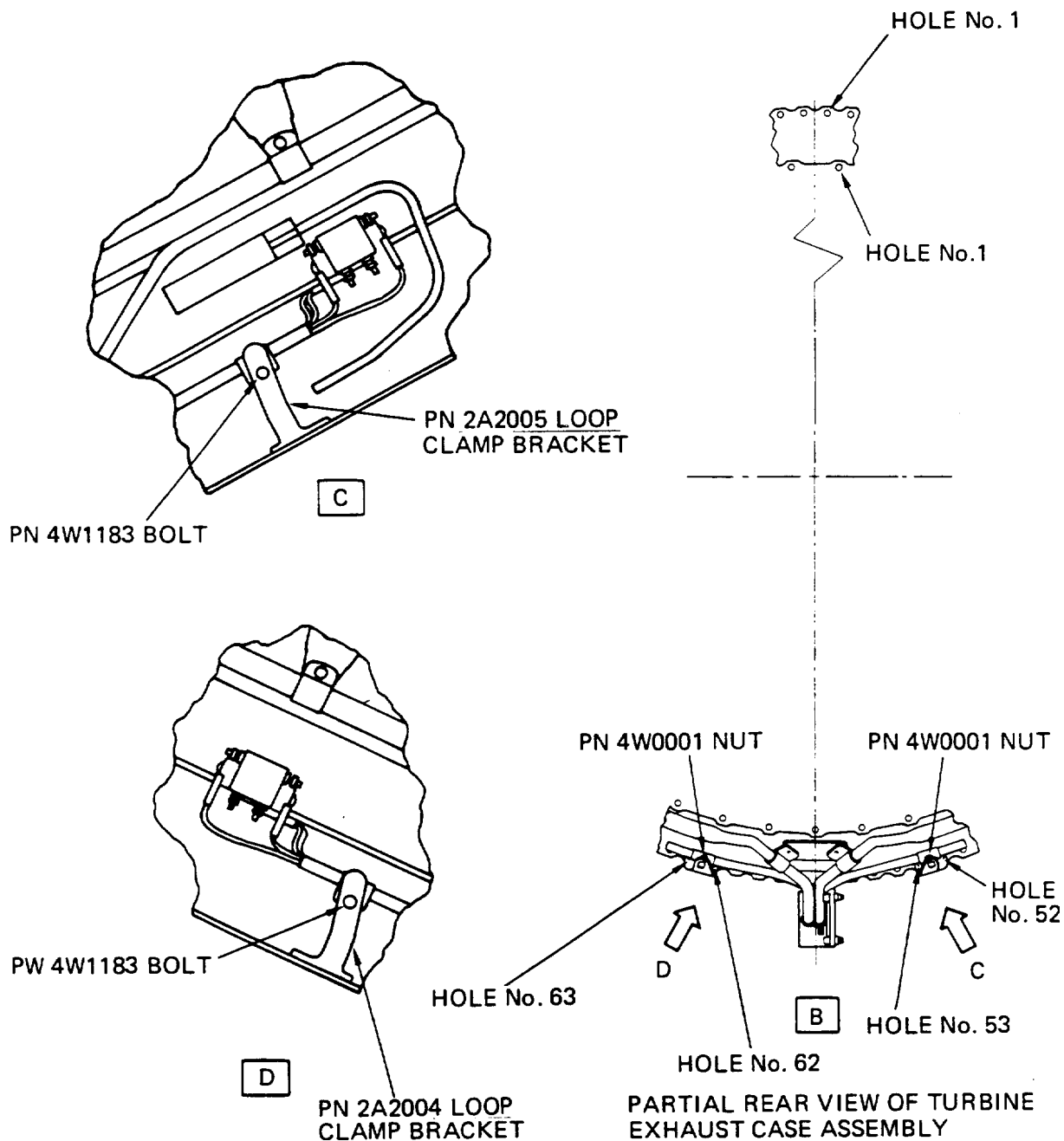
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Replacement of EGT loop clamp brackets and attaching bolts
Fig.1 Sheet 1 of 2

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Replacement of EGT loop clamp brackets and attaching bolts
Fig.1 Sheet 2 of 2

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- (13) Torque the Bolts to between 36 to 45 lbfin (4,07 to 5,08 Nm). See Reference (2) Chapter/Section 70-41-00, Torque Tightening Technique.

D. Postrequisite Instructions

- (1) If applicable, close the Thrust Reverser Halves per the approved procedures in Reference (1) Chapter/Section 78-32-00 Maintenance Practices.

E. Recording Instructions

- (1) A record of accomplishment is necessary.



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3. Material Information

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
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Applicability: For each V2500 Engine to incorporate this Bulletin.

A. Kits associated with this Bulletin:

None

B. Parts affected by this Bulletin:

- (72-50-00)	2	-	Bracket-loop clamp	2A1804 (01-400)	(S1) (A)
2A2004 (72-50-00)	1	18.00	Bracket-loop clamp	- (01-410)	(S1) (B) (C)
2A2005 (72-50-00)	1	18.00	Bracket-loop clamp	- (01-400)	(S1) (B) (C)
4W1183 (77-21-43)	2	1.37	Bolt-hex head	4W0103 (01-290) (01-170)	(S1) (B) (D)
662138 (72-50-00) 662139 662140 662141 662142	4	6.41	Nut option consisting of: Nut Nut Nut Nut	- (01-055)	(S1) (B)
- (72-50-00)	4		Nut option consisting of: Nut Nut Nut Nut Nut Nut Nut	4W0002 (01-050) AS20625 AS3066-10 AS3067-10 AS3068-10 AS3069-10 AS3070-10	(S1) (C) (D)

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C. Instruction/Disposition Code Statements:

- (S1) New Parts Coded (S1) must replace Old Parts Coded (S1) as a COMPLETE SET per Engine.
- (A) Old part will no longer be available.
- (B) New part is currently available.
- (C) Do not purchase or install these parts if you do V2500-ENG-72-0050 when you do this Service Bulletin.
- (D) Old part will continue to be supplied for lesser units, for use at other locations.

NOTE: The estimated 1989 unit prices shown are provided for planning purposes only and do not constitute a firm quotation. Contact IAE's Spare Parts Sales Department for information concerning firm prices.

