

**SERVICE BULLETIN**

ENGINE INDICATING - ENGINE - LP TURBINE AND EXHAUST GAS TEMPERATURE (EGT) INDICATING
SYSTEM - REPLACEMENT OF TURBINE EXHAUST CASE AND INSTALLATION OF A REVISED EGT BRACKET
CONFIGURATION - CATEGORY CODE 7 - MOD.ENG-77-0001

1. Planning Information**A. Effectivity**

- (1) Airplane: Airbus A320
- (2) Engine: The V2500-A1 Engines which are candidates for incorporation of this Service Bulletin are:
 - (1) Engines before Serial No. V0084 except V0082
 - (2) Engine Serial Nos. V0118, V0120, V0127 and V0199

B. Reason**(1) Condition**

The EGT Brackets on Flange T of the Turbine Exhaust Case are held on with the Common Nozzle Hardware (Nuts and Bolts). This makes it necessary to disconnect the brackets whenever the Common Nozzle Assembly is removed.

The EGT Brackets are to be attached to the Turbine Exhaust Case but the flange is not thick enough to permit a permanent connection of the EGT Brackets.

(2) Background

It was found during assembly and disassembly that a design where it was not necessary to disconnect the EGT Brackets when the Common Nozzle Assembly was removed would save time.

(3) Objective

To provide an assembly where the EGT Brackets would not have to be disconnected at each removal of the Common Nozzle Assembly.

(4) Substantiation

Not considered necessary.

(5) Effect of Bulletin on the following shop functions:**V2500-ENG-77-0001**



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Removal/Installation	Affected (See Supplemental Information)
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

- (a) The Engine Manual installation procedures under Chapter/Section 72-00-50, Installation-07, will be revised to include instructions for the Post-Service Bulletin parts.

C. Description

- (1) It is not necessary (after this change) to disconnect the EGT Brackets when you remove the Common Nozzle Assembly.

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 7

Accomplish when supply of superseded parts has been depleted.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) At Overhaul	Not applicable

Remarks: No additional time will be required to maintain the new configuration.

G. Material - Price and Availability

- (1) Modification kit not required.
- (2) See "Material Information" section for prices and availability of future spares.

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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
(Power Plant Station (PPS) 100) |

J. Electrical Load Data

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

K. References

- (1) Internal Reference No.

EC88VA027

EC88VA027E

- (2) Other References

IAE V2500 Service Bulletin Numbers

V2500-ENG-77-0002 (Engine - LP Turbine Module and Exhaust Gas Temperature (EGT) Indicating System - Replacement of EGT Loop Clamp Brackets and Attaching Bolts).

V2500-ENG-77-0003 (Engine - Exhaust Gas Temperature (EGT) Indicating System - Replacement of EGT Loop Clamp Brackets).

V2500 Engine Manual.

V2500 Standard Practices Manual.

L. Other Publications Affected

- (1) V2500 Illustrated Parts Catalog, Chapter/Section 72-50-00, Figure 1 and 77-21-43, Figure 1 to add the new parts.
- (2) V2500 Engine Manual, Chapter/Section 72-00-50, Installation-07, to add the assembly procedure for the new parts.
- (3) V2500 Engine Manual, Chapter/Section 72-50-52, Cleaning, to add the new Turbine Exhaust Case.

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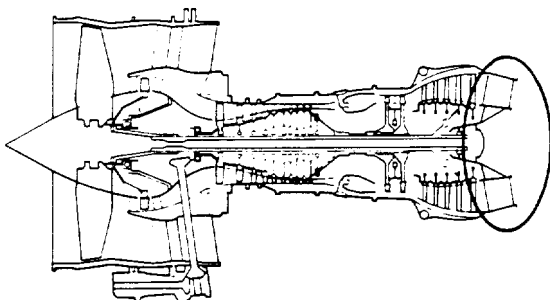
- (4) V2500 Engine Manual, Chapter/Section 72-50-53, Inspection/Check to add the new Turbine Exhaust Case.

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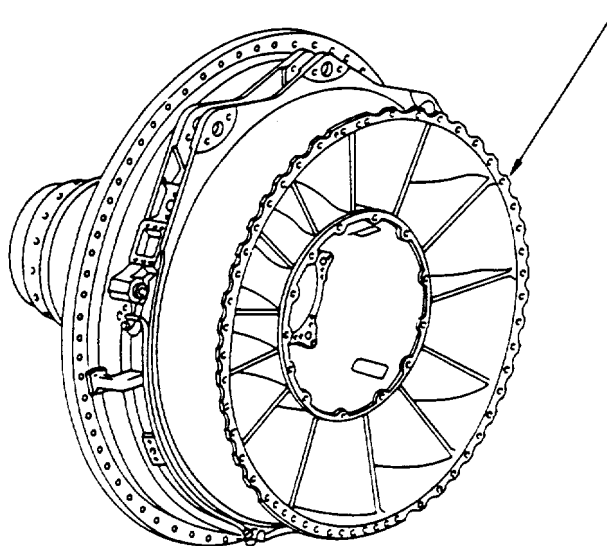
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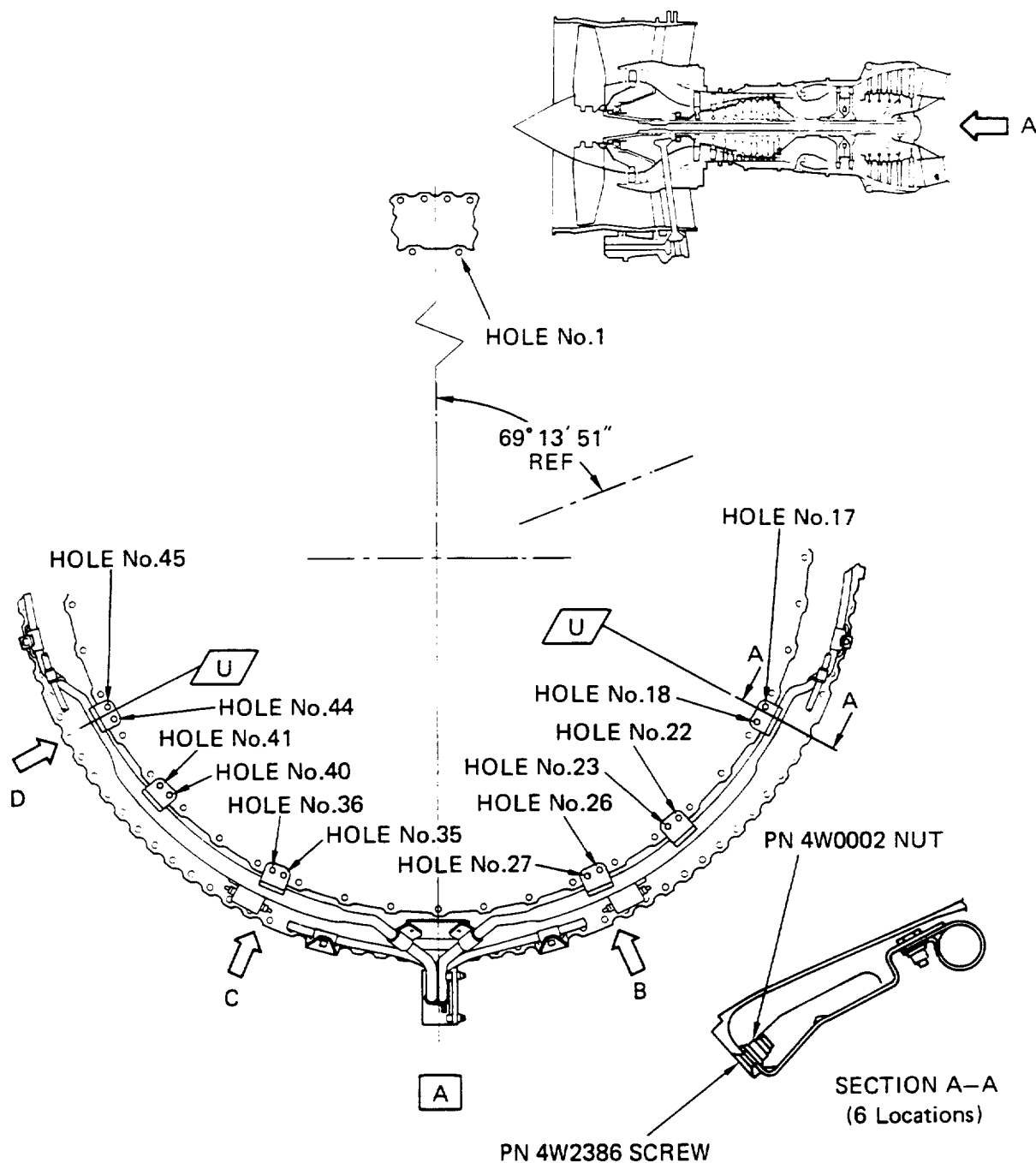
REMOVE PN 4A8015 TURBINE
EXHAUST CASE MINI MODULE
(1 Off) AND INSTALL PN 4A8026
TURBINE EXHAUST CASE
MINI MODULE (1 Off)



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Location of turbine exhaust case
Fig.1

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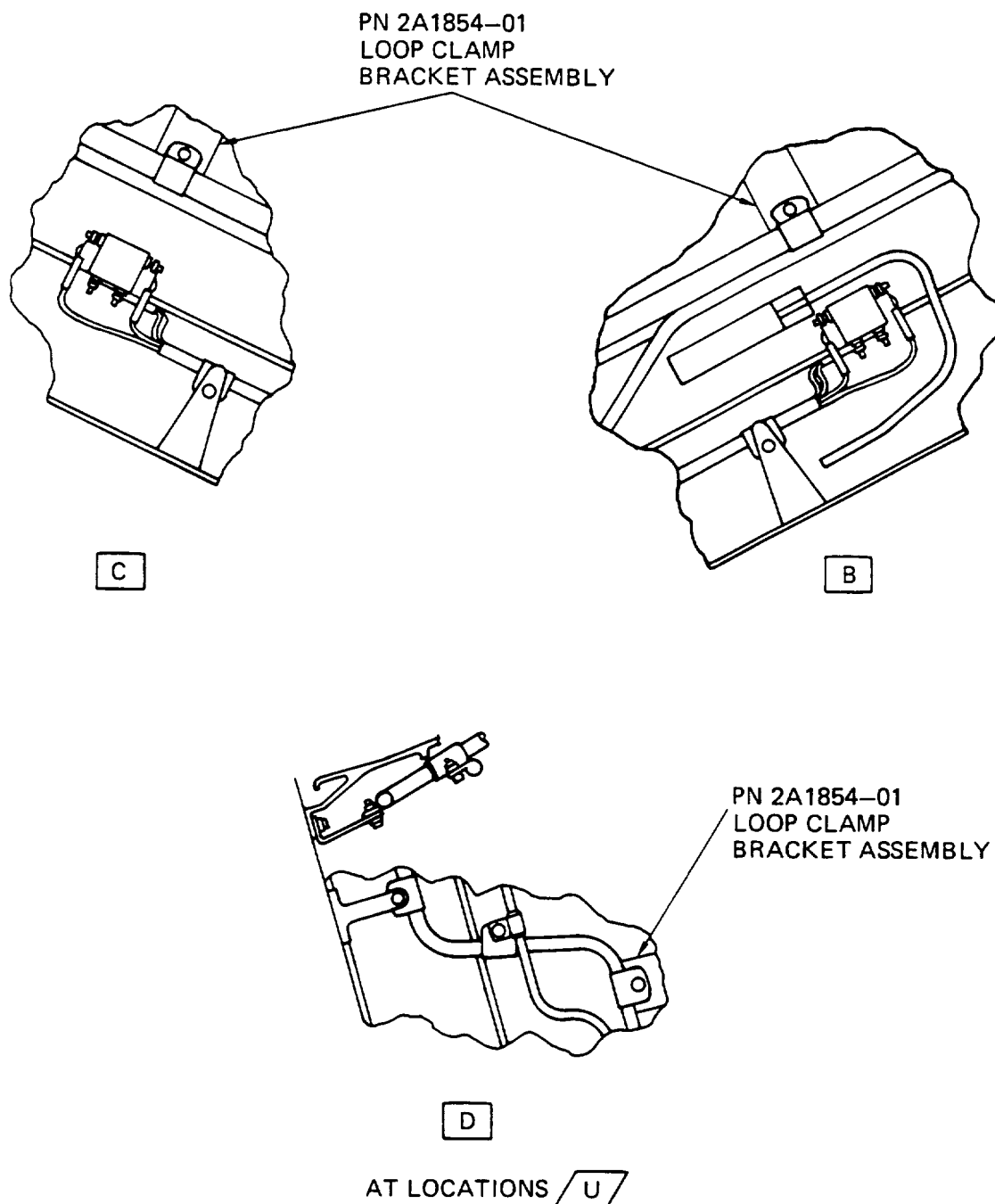


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Installation of EGT brackets
Fig.2 (Sheet 1 of 2)

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Installation of EGT brackets
Fig.2 (Sheet 2 of 2)

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2. Accomplishment Instructions

A. Rework Instructions

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

B. Assembly Instructions

- (1) Install the 4A8026 Mini-Module (1 off) by the approved procedure in Reference (2), Chapter/Section 72-00-50, Installation-04. Refer to Figure 1.
- (2) Identify 4W6013 LP Turbine Module as 4W5192.
- (3) Install the LP Turbine Module Components, External Harnesses and Tubes by the approved procedure in Reference (2), Chapter/Section 72-00-50, Installation-07 (except as specified in step (4)).
- (4) Install the 2A1854-01 Loop Clamp Bracket Assemblies (6 off) and connect the EGT Harness by Figure 2 and as follows:
 - (a) Lubricate the threads of the 4W2386 Screws (12 off) and 4W0002 Nuts (12 off) with CoMat 10-039 Engine Oil.
 - (b) Put one of the Loop Clamp Bracket Assemblies at the No.17 and 18 hole locations on Flange T. Refer to Figure 2.
 - (c) Install two of the 4W2386 screws and the 4W0002 Nuts and tighten them with your hand.
 - (d) Do steps (b) and (c) again until all of the Loop Clamp Bracket Assemblies are installed at the remaining hole locations (holes 22 and 23, 26 and 27, 35 and 36, 40 and 41 and 44 and 45).
 - (e) Torque the nuts to 85-105 lbfin (9,60 - 11,86 Nm) by the approved procedure in reference (3), Chapter/Section 70-41-00, Torque Tightening Technique.
 - (f) Lubricate the threads of the 4W0001 Nuts (6 off).
 - (g) Connect one Loop Clamp to the Loop Clamp Bracket Assembly at hole No.17 and 18.
 - (h) Install one of the 4W0001 Nuts and tighten it with your hand.
 - (i) Do steps (g) and (h) again until all Loop Clamps are connected.
 - (j) Torque the Nuts to 36-45 lbfin (4,00 - 5,00 Nm).

C. Recording Instructions

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- (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:

2A1854-01 (77-21-43)	6	85.10	Bracket - Loop Clamp, Assembly	2A1992-01 (01-360)	(S1)(A)(B)
4W2386 (77-21-43)	12	4.95	Screw Option Consisting of:	- (01-385)	(S1)(A)(C)
NAS1102E4R10			Screw		
AS51010			Screw		
AS51011			Screw		
4W0002 (77-21-43)	12	6.11	Nut Option Consisting of:	- (01-390)	(S1)(A)(C)
AS20625			Nut		
AS3066-10			Nut		
AS3067-10			Nut		
AS3068-10			Nut		
AS3069-10			Nut		
AS3070-10			Nut		
4A8026 (72-50-50)	1	-	Turbine Exhaust Case - Mini-Module	4A8015 (01-001)	(S1)(A)(E)
4A8025 (72-50-53)	1	-	Turbine Exhaust Case - Assembly	4A8014 (01-001)	(S1)(A)(D)
4B8068 (72-50-53)	1	-	Turbine Exhaust Case - Assembly	4B8060 (02-300)	(S1)(A)(D)

C. Instruction/Disposition Code Statements:

- (S1) New parts coded (S1) must replace old parts coded (S1) as a COMPLETE SET per Engine.
- (A) The New Part is currently available.
- (B) The Old Part will be retained as interchangeability is affected.
- (C) Parts will be supplied in increased units.
- (D) Old part will no longer be available.
- (E) Old part will continue to be available.

NOTE: The new Turbine Exhaust Case can be used with the old or the New EGT Brackets.

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The New EGT Brackets can only be used with the New Turbine Exhaust Case.

NOTE: The estimated 1990 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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