ENGINE - HP TURBINE ROTOR AND STATOR ASSEMBLY - PROVIDE A NEW HPT RETAINING NUT - CATEGORY CODE 8 - MOD.ENG-72-0095

1. Planning Information

A. Effectivity

(1) Aircraft: Airbus A320

(2) Engine: V2500-A1 Engines prior to Serial No. V0169 except Serial No. V0157.

B. Reason

(1) Condition

The Low Pressure Turbine (LPT) cooling airflow provided through the high Pressure Turbine (HPT) Nut is in excess of that which is required.

(2) Background

A Product Improvement Program (PIP) to reduce weight and increase performance is in process. As part of this program, excess cooling airflow to the HPT and LPT will be deleted.

(3) Objective

To provide a High Pressure Turbine Nut with a reduced number of cooling air hole openings to delete excess cooling airflow to the Low Pressure Turbine.

(4) Substantiation

Satisfactory performance and endurance testing.

(5) Effects of Bulletin on Workshop Procedures:

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

(6) Supplemental Information

None

C. Description

(1) A new internally threaded High Pressure Turbine Retaining Nut, which features a reduced number of larger cooling air holes, is provided.

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 8

Accomplish based upon experience with the prior configuration.

F. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
(1) In Service	Not applicable
(2) At Overhaul	Total 1 hour 50 minutes

(Note: The parts affected by this Service Bulletin are accessible at Overhaul).

(a) Machine the cooling air holes of the bearing retaining nut (16 off)	1 hour 44 minutes
(b) Install the metering plug every other hole (8 off)	3 minutes
(c) Mark the new part number to the old part number	3 minutes
Total	1 hour 50 minutes

G. Material - Price and Availability

(1) Modification Kit not Required.

(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 (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.

89VA200

(2) Other References

The V2500 Engine Illustrated Parts Catalog

The V2500 Standard Practices Manual.

The V2500 Engine Manual.

L. Other Publications Affected

(1) The V2500 Engine Illustrated Parts Catalog, Chapter/Section 72-40-00, Figure 4, to add the new parts.

(2) The V2500 Engine Manual, Chapter/Section 72-40-00, Cleaning, to add the new parts.

(3) The V2500 Engine Manual, Chapter/Section 72-40-00, Inspection, to add the new parts.

(4) The V2500 Engine Manual, Chapter/Section 72-40-00, Repair, to add the new part number.

2. Accomplishment Instructions

A. Rework Instructions

(1) Do a modification on the 2A0145 HPT Bearing Retaining Nut (1 off) (See Reference (1), 72-40-00 Fig/Item 04-020) and identify as follows:

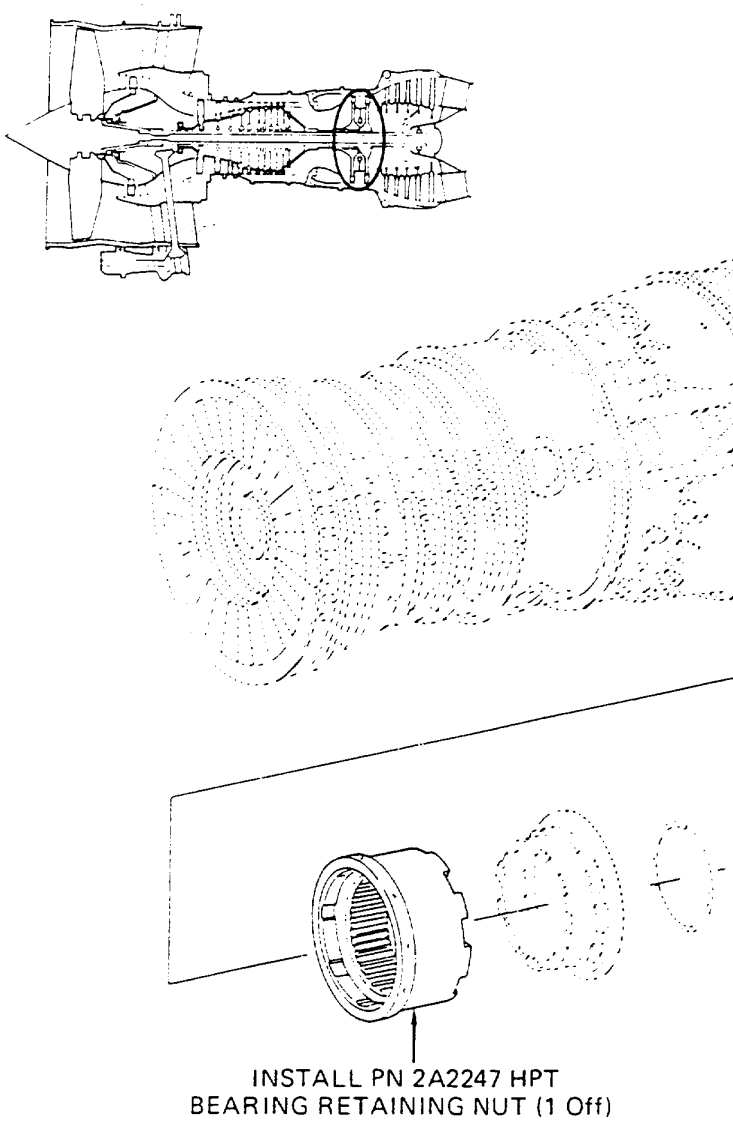
	Procedure	Supplementary Information
(a)	Set-up and machine the cooling air holes to the dimensions specified	Refer to Figures 1 and 2
(b)	Install the Metering Plugs "C" as shown, in every other hole	Refer to Figures 1 and 2
(c)	Mark the new part number adjacent to the old part number. Use the vibration peen method	Old Part Number: 2A0145; New Part Number: 2A2247. Refer to the approved procedure in Reference (2), Chapter/Section 70-09-00 Marking of Parts

B. Assembly Instructions

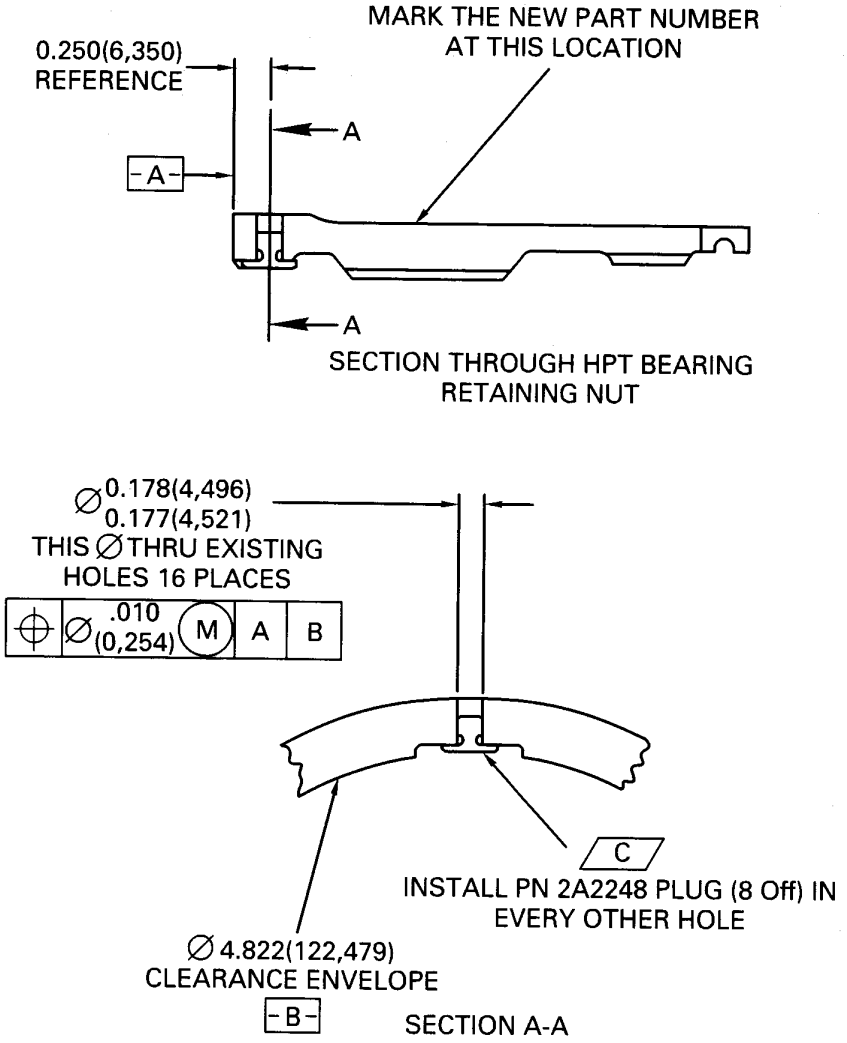
(1) Install the 2A2247 High Pressure Turbine Bearing Retaining Nut (1 off) by the approved procedure in Reference (3), Chapter/Section 72-40-00, Installation-01.

C. Recording Instructions

(1) A record of accomplishment is necessary.



Location of HPT Bearing Retaining Nut
Fig.1



NOTE: BREAK ALL SHARP EDGES 0.003-0.015
(0,08-0,038)
UNLESS DIFFERENTLY SPECIFIED
FINISH ON ALL SURFACES IS
63 MICROINCHES (1,6 Micrometers)

19906

Modification of the HPT Bearing Retaining Nut
Fig.2

3. Material Information

Applicability: For each V2500 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
2A2247 (72-40-00)	1	6865.00	Nut - Bearing Retaining	2A0145 (04-020)	(1D)(A)(B)
2A2248 (72-40-00)	8	21.90	Plug - Plain	- (04-025)	(A)

C. Instruction/Disposition Code Statements:

(1D) A modification can be done to the old part and it can be identified as the new part number.
(A) New Part is currently available.
(B) Old Part is no longer available.

NOTE: The estimated 1991 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.