International Aero Engines

SERVICE BULLETIN

AIR - NACELLE - EXHAUST - ACAC EXHAUST DUCT - EXIT AREA INCREASE OF - CATEGORY CODE 4 - MOD.NAC-75-0062

NOTE: This Service Bulletin replaces General Information Bulletin NAC-70-0464 in it's entirety.

1. Planning Information

A. Effectivity

(1) Aircraft: (a) Airbus A320
(b) Airbus A321

(2) Nacelle: (a) V2500-A1 engine buildup units serial numbers prior to 0336001.
(b) V2500-A5 engine buildup units serial numbers prior to 0170001.

B. Concurrency Requirements

(1) It is recommended Service Bulletin V2500-NAC-75-0058 be incorporated concurrently with this Service Bulletin.

(2) This Service Bulletin must be incorporated concurrently with or prior to Service Bulletins V2500-ENG-72-0239 and V2500-ENG-72-0240.

C. Reason

(1) Condition

Some V2500-A1 and -A5 engines have been experiencing black engine oil and filter clogging in service.

For V2500 engines s/n V10198 and up, or on any -A5 engine that has incorporated Service Bulletin V2500-ENG-72-0239; it is necessary to use an ACAC duct with increased exit area to provide adequate cooling to the No. 4 bearing compartment buffer air. The old ACAC duct cannot be used on these engines.

To eliminate the possibility of black oil and to prevent the old standard ACAC duct being inadvertently installed on -A5 engines V10198 and up, or on any -A5 engine that has incorporated Service Bulletin V2500-ENG-72-0239; IAE strongly recommends all old ACAC ducts be replaced or reworked to the new standard.

(2) Background

Investigation of the black oil problem on some V2500-A1 and -A5 engines has shown that the oil contained carbon particles which are generated in the No. 4 bearing compartment. This is caused by low ACAC flow and associated high temperature of compartment buffer air. An increase in ACAC airflow is required to provide adequate cooling for the No. 4 bearing compartment buffer air for all models of V2500 engine including the V2533-A5 (33,000 lb thrust) engines.

(3) Objective

To remove all V2500-A1/-A5 exit ducts part number 740-0361-503 from service and spares inventories by providing the option of fitting a new common ACAC duct with increased exit area or, alternatively, procedures to rework old ducts to the new configuration for all engine models.

This will eliminate black oil observed on some V2500-A1 and A5 engines and also eliminate the possibility of inadvertently using old configuration ducts on -A5 engines V10198 and up, or any -A5 engine that has incorporated Service Bulletin V2500-ENG-72-0239.

(4) Substantiation

Development engine testing of the new ACAC duct has confirmed this provides sufficient cooling for all V2500 engines.

(5) Impact of 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.

D. Description

(1) The change introduced by this Service Bulletin is as follows:

Part 1

Remove the 740-0361-503 ACAC duct and install the 740-0361-507 ACAC duct. return the 740-0361-503 duct to IAE.

Part 2

Remove the ACAC exhaust duct. Cut off the exit end of the duct. Weld a new larger area exit end on the duct. Install the modified ACAC duct.

E. Approval

The technical content of this Service Bulletin is covered by an Airbus Industrie Modification which is under DGAC (Direction Generale de l'Aviation Civile -France) approval.

F. Compliance

Category Code 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.

G. Manpower

Estimated Manhours to incorporate the full intent of this Bulletin on each engine buildup unit:

Venue		Estimated Manhours
Part 1		
(1) In Service		
(a) To remove the ACAC duct		1.00 M/Hrs.
(b) To install the ACAC duct		1.00 M/Hrs.
	Total	2.00 M/Hrs

Venue		Estimated Manhours
Part 2		
(1) In Service		
(a) To remove the ACAC duct		1.00 M/Hrs.
(b) To modify the ACAC duct		2.00 M/Hrs.
(b) To install the ACAC duct		1.00 M/Hrs.
	Total	4.00 M/Hrs

H. Material Cost and Availability

The parts to accomplish Part 1 of this Service Bulletin, replacement of the ACAC duct, are available from IAE as single line items.

The parts to accomplish Part 2 of this Service Bulletin, modification of the ACAC duct, are available from IAE as kit V2575062-551.

The parts to accomplish this service bulletin are available from the following IAE stores and will be issued on receipt of a free of charge purchase order. The allocation will be one (1) V25750062-551 kit per customer V2500 engine.

Direct Purchase Order to:

IAE Spares Department
Corporate Centre 2
628 Hebron Avenue
Glastonbury, CT 06033-2595
USA

I. Tooling -Cost and Availability

None Required.

J. Weight and Balance

(1) Weight change .....Negligible

(2) Moment arm.....No effect

(3) Datum.....Engine Front Mount Centerline

.....(Power Plant Station (PPS) 188.05)

K. Electrical Load Data

Not affected.

L. References

(1) Internal Reference No.

94VN035/95VN106

(2) Other References

IAE V2500 Standard Practices/Processes Manual 70-09-00
70-23-00
70-31-13

Overhaul Processes and Consumable Index
(PCI-V2500-1IA)

M. Other Publications Affected

A320/V2500-A1 Engine Illustrated Parts Catalog 75-22-48
(S-V2500-1IA)

A320/V2500-A5 Engine Illustrated Parts Catalog 75-22-48
(S-V2500-2IA)

A320/V2500A1 Power Plant Illustrated Parts 75-22-48
Catalog (PIP-V2500-1IA)

A320/A321/V2500A5 Power Plant Illustrated Parts 75-22-48
Catalog (PIP-V2500-2IA)

A320/V2500A1 Power Plant Build-Up Manual 71-00-02
(PPB-V2500-1IA)

A320/A321/V2500A5 Power Plant Build-Up Manual 71-00-02
(PPB-V2500-2IA)

2. Accomplishment Instructions

A. Pre-requisite Instructions

None.

B. Rework and Modification Instructions - Part 1

(1) Remove the 740-0361-503 ACAC duct as instructed in the A320/A321 Aircraft Maintenance Manual, TASK 78-11-11-000-010.

(2) Install the 740-0361-507 ACAC duct as instructed in the A320/A321 Aircraft Maintenance Manual, TASK 78-11-11-400-010.

C. Rework and Modification Instructions - Part 2

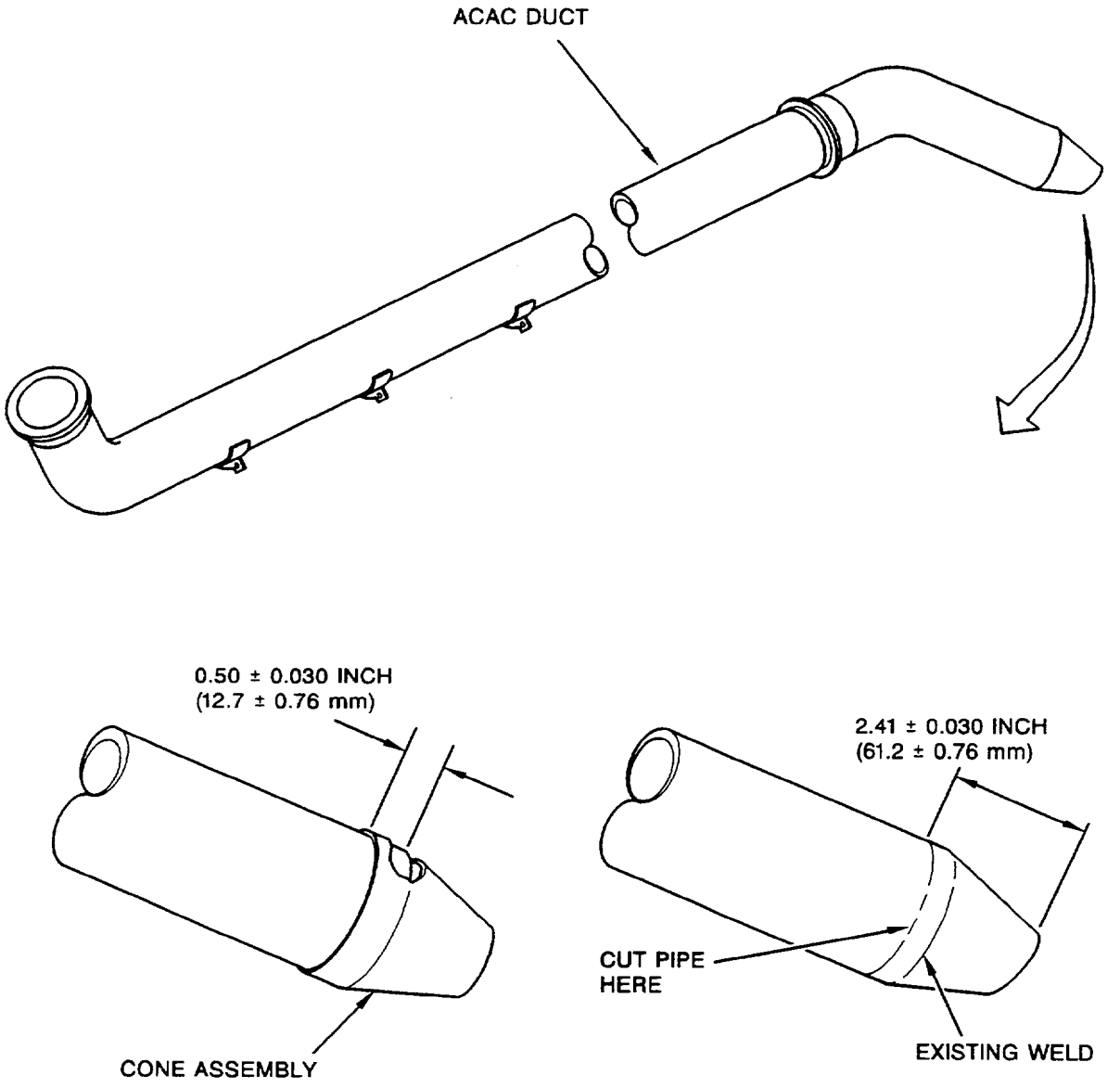
(1) Remove the ACAC duct as instructed in the A320/A321 Aircraft Maintenance Manual, TASK 78-11-11-000-010.

(2) Remove the exit end from the duct as shown in Figure 1. Remove all burrs and sharp edges.

(3) Size the end of the tube.

(4) Weld the 740-0364-2D cone assembly on the duct as shown in Figure 1. Refer to the IAE V2500 Standard Practices/Processes Manual, TASK 70-31-13-310-501. (MIL-STD-2219 is an acceptable substitute for TASK 70-31-13-310-501.) Use welding filler wire (CoMat 03-287).

(5) Penetrant inspect the weld. Refer to the IAE V2500 Standard Practices/Processes Manual, TASK 70-23-00-230-501. (MIL- STD-6866 is an acceptable substitute for TASK 70-23-00-230-501.)



ACAC Duct Exit Area Modification
Figure 1

ACAC Duct Exit Area Modification
Fig.1

(6) Identify the modified 740-0361-503 duct as the 740-0361-507 duct with electroetch or vibroetch method. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

(7) Install the 740-0361-507 ACAC duct as instructed in the A320/A321 Aircraft Maintenance Manual, TASK 78-11-11-400-010.

D. Post-requisite Instructions

None.

E. Recording Instructions

A record of accomplishment is necessary. Write in the engine log that Service Bulletin V2500-NAC-75-0062 has been done.

3. Material Information

Applicability: For each V2500-A1/A5 engine build-up unit to incorporate this Bulletin.

A. Kits associated with this Bulletin:

NEW PART NO (ATA NO)	QTY	EST'D UNIT PRICE ($)	KEYWORD	OLD PART NO (IPC NO)	INSTR/ DISPOS
V2575062-551 Consisting of:	1		Kit		(A)
740-0364-2D			Cone Assembly		

B. Parts affected by this Bulletin:

740-0361-507 (75-22-48)	1		Duct	740-0361-503 (01-010)	(B)(C) (1D)(S1)

C. Instruction/Disposition code statements:

(A) Kit will be available October 1996.

(B) New part is available.

(C) Old part will no longer be available.

(1D) Old part may be reworked to new configuration or returned to IAE for replacement. Contact the IAE Warranty department for the return address.

(S1) Because of potential for damage if old part is used on an increased thrust engine, it is recommended all old parts be removed from service and stock as soon as possible. Old and new parts are not interchangeable.

D. Materials required to incorporate this Service Bulletin:

CoMat 03-287 Welding Filler Wire

NOTE: To identify the consumable materials, refer to the Overhaul Processes and Consumable Index PCI-V2500-1IA.