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V2500-A1/A5 PROPULSION SYSTEMS NON-MODIFICATION SERVICE BULLETIN

This document transmits the Revision 5 of Non-Modification Service Bulletin V2500-ENG-79-0099.

Document History

Non-Modification Service Bulletin Revision Status

Initial Issue.	Nov. 9/10.
Revision 1	Mar. 7/11.
Revision 2	Aug. 4/11.
Revision 3	Mar.19/12.
Revision 4	Aug.13/12.

Non-Modification Service Bulletin Revision 5

Remove	Incorporate	Reason for change
All Pages of the Non-Modification Service Bulletin.	Pages 1 to 12 of the Non-Modification Service Bulletin.	To add Population F.

V2500-ENG-79-0099
 Transmittal - Page 1 of 1

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

NON-MODIFICATION SERVICE BULLETIN – OIL – AIR COOLED OIL COOLER (ACOC) – REPLACEMENT
OF LOCALLY INSUFFICIENT BRAZED UNITS

1. Planning Information

A. Effectivity

(1) Airbus A319

(a) V2522-A5, V2524-A5, V2527M-A5 Engines.

(i) Population A

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4437 to 4541.

(ii) Population B

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4542 to 4577.

(iii) Population C

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 5160 to 5177.

(iv) Population D

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4643 to 4660.

(v) Population E

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4608 to 4613 and 4615 to 4624.

R (vi) Population F

R Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
R from 5280 to 5297.

(2) Airbus A320

(a) V2500-A1 Engines.

(i) Population A

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4437 to 4541.

(ii) Population B

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4542 to 4577.

(iii) Population C

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 5160 to 5177.

(iv) Population D

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4643 to 4660.

(v) Population E

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4608 to 4613 and 4615 to 4624.

(vi) Population F

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 5280 to 5297.

(b) V2527-A5, V2527E-A5 Engines.

(i) Population A

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4437 to 4541.

(ii) Population B

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4542 to 4577.

(iii) Population C

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 5160 to 5177.

(iv) Population D

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4643 to 4660.

(v) Population E

Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers from 4608 to 4613 and 4615 to 4624.

R (vi) Population F
R Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
R from 5280 to 5297.

(3) Airbus A321

(a) V2530-A5, V2533-A5 Engines.

(i) Population A
Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
from 4437 to 4541.

(ii) Population B
Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
from 4542 to 4577.

(iii) Population C
Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
from 5160 to 5177.

(iv) Population D
Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
from 4643 to 4660.

(v) Population E
Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
from 4608 to 4613 and 4615 to 4624.

R (vi) Population F
R Air Cooled Oil Cooler (ACOC) P/N 50026001-1 with Serial Numbers
R from 5280 to 5297.

B. Concurrent Requirements

None.

C. Reason

(1) Condition

R Between December 2008 and December 2012, seven V2500-A5 engines and one
R V2500-A1 engine have experienced a total of eight In-Flight Shutdown
R (IFSD) events, one diversion event due to oil loss on a V2500-A5 engine
R and one finding during maintenance.

R

The cause of the oil loss has been identified as a rupture on the Air Cooled Oil Cooler (ACOC) with P/N 50026001-1 (ACOC Serial Numbers 4445, 4524, 4529, 4533, 4569, 4618, 4652, 5166, 5169 and 5289). The investigation indicated the cause to be a locally insufficient brazed condition.

(2) Background

IFSD and diversion events have been experienced on engines in service.

(3) Objective

Incorporation of this Non-Modification Service Bulletin is designed to mitigate IFSD events and to maintain reliability.

D. Description

- (1) Detailed investigation has shown that there is the potential for an oil leak on the ACOC if the partially insufficient brazing condition is present.

This Non-Modification Service Bulletin exchanges potentially affected ACOCs.

- (2) The commercial conditions for the exchange of the units are detailed in the IAE Program Launch Letter referencing this Non-Modification Service Bulletin.

NOTE: The Accomplishment Instruction of this Service Bulletin is divided into two INSTRUCTIONS as follows:

INSTRUCTION I – Applicable for engines "In Service".

INSTRUCTION II – Applicable for engines "At Overhaul/Shop Visit".

E. Compliance

Category Code 3

Population A

For an Aircraft with ACOC serial numbers listed in 1.A. Effectivity installed on both engines in population A:

Accomplish this Non-Modification Service Bulletin on at least one engine by December 31st 2010.

For all other engines with an ACOC serial number listed in 1.A. Effectivity installed:

Accomplish this Non-Modification Service Bulletin by April 30th 2011.

NOTE: From January 1st 2011 it is only permitted to have only one engine with an ACOC serial number listed in 1.A. Effectivity installed per Aircraft.

Population B

For an Aircraft with ACOC serial numbers listed in 1.A. Effectivity installed on both engines in population B:

Accomplish this Non-Modification Service Bulletin on at least one engine by April 30th 2011.

For all other engines with an ACOC serial number listed in 1.A. Effectivity installed:

Accomplish this Non-Modification Service Bulletin by August 31st 2011.

NOTE: From May 1st 2011 it is only permitted to have only one engine with an ACOC serial number listed in 1.A. Effectivity installed per Aircraft.

Population C

For an Aircraft with ACOC serial numbers listed in 1.A. Effectivity installed on both engines in population C:

Accomplish this Non-Modification Service Bulletin on at least one engine by August 31st 2011.

For all other engines with an ACOC serial number listed in 1.A. Effectivity installed:

Accomplish this Non-Modification Service Bulletin by October 31st 2011.

NOTE: From September 1st 2011 it is only permitted to have only one engine with an ACOC serial number listed in 1.A. Effectivity installed per Aircraft.

Population D

For an Aircraft with ACOC serial numbers listed in 1.A. Effectivity installed on both engines in population D:

Accomplish this Non-Modification Service Bulletin on at least one engine by March 31st 2012.

For all other engines with an ACOC serial number listed in 1.A. Effectivity installed:

Accomplish this Non-Modification Service Bulletin by May 31st 2012.

NOTE: From April 1st 2012 it is only permitted to have only one engine with an ACOC serial number listed in 1.A. Effectivity installed per Aircraft.

Population E

For an Aircraft with ACOC serial numbers listed in 1.A. Effectivity installed on both engines in population E:

Accomplish this Non-Modification Service Bulletin on at least one engine by August 31st 2012.

For all other engines with an ACOC serial number listed in 1.A. Effectivity installed:

Accomplish this Non-Modification Service Bulletin by October 31st 2012.

NOTE: From September 1st 2012 it is only permitted to have one engine with an ACOC serial number listed in 1.A. Effectivity installed per Aircraft.

R Population F

R For an Aircraft with ACOC serial numbers listed in 1.A. Effectivity installed
R on both engines in population F:

R Accomplish this Non-Modification Service Bulletin on at least one engine by
R February 28th 2013.

R For all other engines with an ACOC serial number listed in 1.A. Effectivity
R installed:

R Accomplish this Non-Modification Service Bulletin by April 30th 2013.

R **NOTE:** From March 1st 2013 it is only permitted to have one engine with an ACOC
R serial number listed in 1.A. Effectivity installed per Aircraft.

F. Approval

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

G. Manpower

(1) In Service

2 hours.

(2) At Overhaul/Shop Visit

Applicable (Hours not affected).

H. Material Price and Availability

Return the replaced ACOC to Sumitomo Precision Products Co., Ltd. (SPP) for investigation.

Sumitomo Precision Products Co., Ltd.

1-10, Fuso-cho, Amagasaki, Hyogo, 660-0891 Japan

Attention: Manager, Product Support Section, International Business Department.

Phone: +81-6-6489-5884

Fax: +81-6-6489-5889

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

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

L. Electrical Load Data

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

M. Software Accomplishment Summary

Not applicable.

N. References

- (1) A319/A320/A321 Aircraft Maintenance Manual, Chapter 71-13-00 Opening/Closing and 79-21-42, Removal/Installation.
- (2) IAE V2500 A1/A5 Engine Manual (E-V2500-1IA), 72-00-32, Removal/Installation.
- (3) Service Bulletin V2500-ENG-79-0094 - ENGINE - OIL - INTRODUCTION OF A REDESIGNED DOUBLE HEADER AIR COOLED OIL COOLER
- (4) Internal Reference No.

R
R

Engineering Change No. 10VR879, 10VR879A, 10VR879B, 10VR879C, 10VR879D and 10VR879E.

- (5) ATA Locator - 79-21-42.

O. Interchangeability of Parts

Not affected.

2. Material Information**A. The kit required consists of the following parts:**

None.

3. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly Instructions

INSTRUCTION I – Applicable for engines "In Service".

(1) General

CAUTION: IN ORDER TO REDUCE THE POTENTIAL FOR MULTIPLE ENGINE IN-FLIGHT SHUT DOWN, POWER LOSS, OR OTHER ANOMALIES DUE TO MAINTENANCE ERROR, IAE RECOMMENDS THAT OPERATORS AVOID PERFORMING MAINTENANCE ON MULTIPLE ENGINES INSTALLED ON THE SAME AIRCRAFT AT THE SAME TIME. IF IT IS NOT POSSIBLE TO AVOID MAINTENANCE ON MORE THAN ONE ENGINE AT THE SAME TIME, IAE RECOMMENDS THAT ADDITIONAL CONTROLS BE APPLIED IN ORDER TO ENSURE THAT MAINTENANCE TASKS HAVE BEEN COMPLETED AS DEFINED. MAINTENANCE GUIDELINES SHOULD BE REVISED WHERE POSSIBLE, TO PROMOTE THIS RECOMMENDATION.

WARNING: DO NOT TOUCH THE ENGINE COMPONENTS FOR A SHORT TIME AFTER THE ENGINE IS SHUT DOWN. THE COMPONENTS STAY HOT AND CAN CAUSE INJURY.

(a) Obey all WARNINGS and CAUTIONS in the procedures that are referred to.

(b) Consumable Materials

(i) Refer to the related Manual tasks given in this instruction.

(c) Tools and Equipment

(i) Refer to the related Manual tasks given in this instruction.

(2) Get access to the Air Cooled Oil Cooler (ACOC) that is installed in the Lower left side area of the fan case

(a) Open the applicable fan cowl doors (Refer to the Aircraft Maintenance Manual, Chapter 71-13-00 Opening/Closing).

(3) Make a check of the serial number of the ACOC

(a) If the serial number listed on the data plate of the ACOC is between 4437 and 4541 or between 4542 and 4577 or between 5160 and 5177 or between 4643 and 4660 or between 4608 to 4613 and 4615 to 4624 or between 5280 to 5297 inclusive, replace the ACOC (Refer to the Aircraft Maintenance Manual, Chapter 79-21-42 Removal/Installation)

(i) Return the removed ACOC to Sumitomo Precision Products Co., Ltd. (SPP) for investigation.

Sumitomo Precision Products Co., Ltd.

1-10, Fuso-cho, Amagasaki, Hyogo, 660-0891 Japan.

Attention: Manager, Product Support Section, International Business Department.

Phone: +81-6-6489-5884.

Fax: +81-6-6489-5889.

(b) Close the access to the ACOC

(i) Close the applicable fan cowl doors (Refer to the Aircraft Maintenance Manual, Chapter 71-13-00 Opening/Closing).

INSTRUCTION II – Applicable for engines "At Overhaul/Shop Visit"

(1) General

(a) Obey all the WARNINGS and CAUTIONS in the procedures that are referred to.

(b) Consumable Materials

(i) Refer to the related Manual tasks given in this instruction.

(c) Tools and Equipment

(i) Refer to the related Manual tasks given in this instruction.

(2) Make a check of the serial number of the ACOC

(a) If the serial number listed on the data plate of the ACOC is between 4437 and 4541 or between 4542 and 4577 or between 5160 and 5177 or between 4643 and 4660 or between 4608 to 4613 and 4615 to 4624 or between 5280 to 5297 inclusive, replace the ACOC (Refer to the Engine Manual, Chapter 72-00-32 Removal/Installation)

(i) Return the removed ACOC to Sumitomo Precision Products Co., Ltd. (SPP) for investigation.

Sumitomo Precision Products Co., Ltd.

1-10, Fuso-cho, Amagasaki, Hyogo, 660-0891 Japan.

Attention: Manager, Product Support Section, International Business Department.

Phone: +81-6-6489-5884.

Fax: +81-6-6489-5889.

C. Recording Instructions

(1) If the ACOC is replaced, contact your local IAE office and provide the serial number of the ACOC that has been removed with reference to Non-Modification Service Bulletin V2500-ENG-79-0099.

(2) Record the incorporation of Non-Modification Service Bulletin V2500-ENG-79-0099 in the applicable engine record.



International Aero Engines™

Please use this form to give feedback on the quality of this Service Bulletin. The input you provide will be used to analyse areas of improvement and to take action to further improve on the quality of our Service Bulletins.

We thank you for the time you spent in completing this form.

Please rate on a scale of 1 to 5, with 5 being the highest score:

- General quality rating of this Service Bulletin	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
- Quality rating of the Accomplishment Instructions	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
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- Is this Service Bulletin easy to understand ?	<input type="checkbox"/> Yes	<input type="checkbox"/> No			

If you have had difficulties to perform this Service Bulletin please quote below the area(s) and give a short description of the issue:

Planning Information Section:		Material Information Section:	Accomplishment Instruction Section:
<input type="checkbox"/> 1.A.	<input type="checkbox"/> 1.I.	<input type="checkbox"/> 2.A.	<input type="checkbox"/> General
<input type="checkbox"/> 1.B.	<input type="checkbox"/> 1.J.	<input type="checkbox"/> 2.B.	<input type="checkbox"/> Get Access
<input type="checkbox"/> 1.C.	<input type="checkbox"/> 1.K.	<input type="checkbox"/> 2.C.	<input type="checkbox"/> Removal/Installation
<input type="checkbox"/> 1.D.	<input type="checkbox"/> 1.L.	<input type="checkbox"/> 2.D.	<input type="checkbox"/> Inspection
<input type="checkbox"/> 1.E.	<input type="checkbox"/> 1.M.	<input type="checkbox"/> 2.E.	<input type="checkbox"/> Test
<input type="checkbox"/> 1.F.	<input type="checkbox"/> 1.N.	<input type="checkbox"/> 2.F.	<input type="checkbox"/> Close the Access
<input type="checkbox"/> 1.G.	<input type="checkbox"/> 1.O.		<input type="checkbox"/> Log Book Entry
<input type="checkbox"/> 1.H.	<input type="checkbox"/> 1.P.		

Explanatory notes:

Operator:	Overhaul Site:
Name/Title:	Date:

**Please send the completed Service Bulletin Feedback Form to IAE, Customer Support.
Email: GP1AECUSTCOM@IAEV2500.COM**