

International Aero Engines

V2500 Propulsion System - Nacelle

SERVICE BULLETIN

Date: February 21, 2001

Subject: Transmittal of Revision 1 Service Bulletin Number V2500-NAC-71-02

Service Bulletin History:

<u>Event</u>	<u>Date</u>
Basic Issue	Aug 07/00
Revision 1	Feb 21/01

Reasons for Issuance of Revision:

- (1) To revise the lengths of the rivets required for accomplishment and delete the service bulletin kit.

Effect on Past Compliance:

- (1) None.

List of Effective Pages:

<u>Page No.</u>	<u>Rev No.</u>	<u>Date</u>
Summary	1	Feb 21/01
1 - 3	basic	Aug 07/00
4 - 10	1	Feb 21/01

V2500-NAC-71-02
Transmitt
Page



Number: V2500-NAC-71-0281, Revision No. 1

Summary

Date: February 21, 2001

ATA System: 71-11

SUBJECT: NOSE COWL - REPLACEMENT OF LIPSKIN ATTACH RIVETS

BACKGROUND

GENERAL:

Nose cowls have been found with loose and missing lipskin attach rivets.

This service bulletin provides instructions to remove the existing aluminum rivets and replace them with monel rivets.

ACTION:

Remove 88 existing aluminum rivets and replace with monel rivets.

COMPLIANCE:

Category 5

Accomplish when the nacelle component is disassembled sufficiently to afford access to the affected subassembly and to all affected spare subassemblies.

EFFECTIVITY:

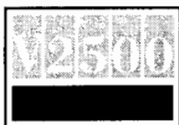
All V2500-D5 nose cowls (in-service and spares).

MANPOWER:

Manpower necessary to incorporate Service Bulletin is 4.0 man-hours for each nose cowl.

MATERIAL INFORMATION:

R There is no kit for this service
R bulletin. The parts to accomplish
R this service bulletin are to be
R purchased individually or procured
R from operator stock.



"MODIFICATION SERVICE BULLETIN" - "NACELLE - EXHAUST - LIPSKIN ATTACH RIVETS,
NOSE COWL - REPLACEMENT OF"

1. PLANNING INFORMATION

A. Effectivity

- (1) Airplane: MD-90
- (2) Nacelle: All V2500-D5 nose cowls (in-service and spares).

B. Concurrent Requirements

None.

C. Reason

(1) Problem

- (a) Nose cowls lipskin attach rivets can become loose in service.

(2) Cause

- (a) The root cause is still under investigation.

(3) Background

- (a) Nose cowls have been found with loose or missing lipskin attach rivets in service.

(4) Objective

- (a) The changes in configuration recommended in this Service Bulletin are intended to maintain reliability of the nose cowl by reducing instances of loose and missing lipskin attach rivets.

(5) Substantiation

- (a) Not applicable.

August 7, 2000

V2500-NAC-71-0281

Page 1



D. Description

This service bulletin provides instructions for removal of 88 existing aluminum lipskin attach rivets and installation of new monel rivets.

E. Compliance

Category 5

Accomplish when the nacelle component is disassembled sufficiently to afford access to the affected subassembly and to all affected spare subassemblies.

F. Approval

Incorporation of this Service Bulletin must be accomplished only in conjunction with Douglas Aircraft Company Service Bulletin MD-90-71-012 which has received exclusive FAA approval for MD-90 Series aircraft.

August 7, 2000

V2500-NAC-71-0281

Page 2



G. Manpower

Estimated man-hours to incorporate the full intent of this Service Bulletin.

VENUE	EST'D MAN HOURS
(1) In Service	
(a) To gain access	0.0 minutes
(b) To modify	4.0 hours
(c) To close up	0.0 minutes
Total	4.0 hours per nose cowl (8.0 hours per aircraft)
(2) In Shop	
(a) To modify	4.0 hours
Total	4.0 hours per nose cowl.

NOTE: Man hour estimate is provided for planning purposes only. No labor reimbursement is provided under the terms of this service bulletin offering.

August 7, 2000

V2500-NAC-71-0281

Page 3



H. Material Cost and Availability

R There is no kit for this service bulletin. The parts to accomplish
R this service bulletin are to be purchased individually or procured
R from operator stock.

I. Tooling

None.

J. Weight and Balance

- | | | |
|----|---------------|--|
| 1) | Weight change | None |
| 2) | Moment Arm | No effect |
| 3) | Datum | Engine front mount centreline
(Powerplant Station PS 100) |

K. References

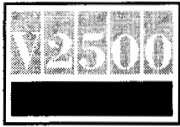
Publication	Chapter/Section
IAE Standard Practices/Processes Manual (SPP-V2500-1IA)	70-09-00 70-23-05 70-38-03

L. Other Publications Affected

Publication	Chapter/Section
Nose Cowl Assembly Component Maintenance Manual (CMM-NC-V2500-3IA)	71-11-11

August 7, 2000
Revision 1 - February 21, 2001

V2500-NAC-71-0281
Page 4



SERVICE BULLETIN

2. Material Information

A. Material Requirements

(1) The following is applicable to a nose cowl.

B. Parts necessary for this Service Bulletin:

	NEW PNUMBER (ATA NUMBER)	QTY	ESTD UNIT PRICE	KEYWORD	OLD PNNUMBER (IPC NUMBER)	INSTR/ DISPOS
R	CR3522P5-04	80		Rivet		
R	CR3552P5-04	24		Rivet (over-		
R				size alter-		
R				nate for		
R				CR3522P5-04)		
R	CR3522P5-05	20		Rivet		
R	CR3552P5-05	6		Rivet (over-		
R				size alter-		
R				nate for		
R				CR3522P5-05)		

C. Parts affected by this Service Bulletin:

None.

August 7, 2000
Revision 1 - February 21, 2001

V2500-NAC-71-0281
Page 5



D. Instructions/Disposition Codes:

(A) Kit is available.

E. Tooling - Price and Availability:

None.

F. Materials Required to do this Service Bulletin:

CoMat 01-438	Solvent
CoMat 02-099	Lint Free Cloth
CoMat 07-106	Chromate Conversion Coating for Aluminum
CoMat 07-139	Catalyst
CoMat 07-140	Epoxy Primer
CoMat 08-144	Thinner

August 7, 2000
Revision 1 - February 21, 2001

V2500-NAC-71-0281
Page 6



3. Accomplishment Instructions

A. Pre-requisite Instructions

None.

B. Replace the nose cowl lipskin attach rivets. Refer to Figure 1.

- (1) Remove the 88 existing lip skin attach rivets between the edge of the T.A.I inlet access panel and the first hoist point. Do not remove all of the rivets at the same time. Refer to Figure 1. Do not damage the rivet holes.
- (2) Examine the rivet holes. Make any damaged holes larger. Refer to Figure 2 for oversize limits. Countersink the holes that you make larger 100 degrees.
- (3) Remove the rivet and drilling pieces from the nose cowl. Remove and install access panels as necessary.

WARNING: SOLVENT (COMAT 01-438) IS CLASSIFIED AS A HAZARDOUS MATERIAL AND MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

- (4) Clean the nose cowl with solvent (CoMat 01-438) and a clean lint free cloth (CoMat 02-099). Wipe the nose cowl dry before the solvent becomes dry.

WARNING: CONVERSION COATING (COMAT 07-106) IS CLASSIFIED AS A HAZARDOUS MATERIAL AND MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

- (5) Apply conversion coating (CoMat 07-106) to the bare metal in the area of the nose cowl from which you have removed the rivets.

August 7, 2000
Revision 1 - February 21, 2001

V2500-NAC-71-0281
Page 7



Refer to the manufacturer's instructions.

WARNING: CATALYST (COMAT 07-139), PRIMER (07-140), AND THINNER (COMAT 07-144) ARE CLASSIFIED AS HAZARDOUS MATERIALS AND MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THESE PRODUCTS SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC SAFETY AND HEALTH RECOMMENDATIONS. PRIOR TO USE OF THESE PRODUCTS, CAREFULLY READ THE APPLICABLE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

(6) Mix the catalyst (CoMat 07-139), the primer (CoMat 07-140), and the thinner (CoMat 07-144). Refer to the manufacturer's instructions.

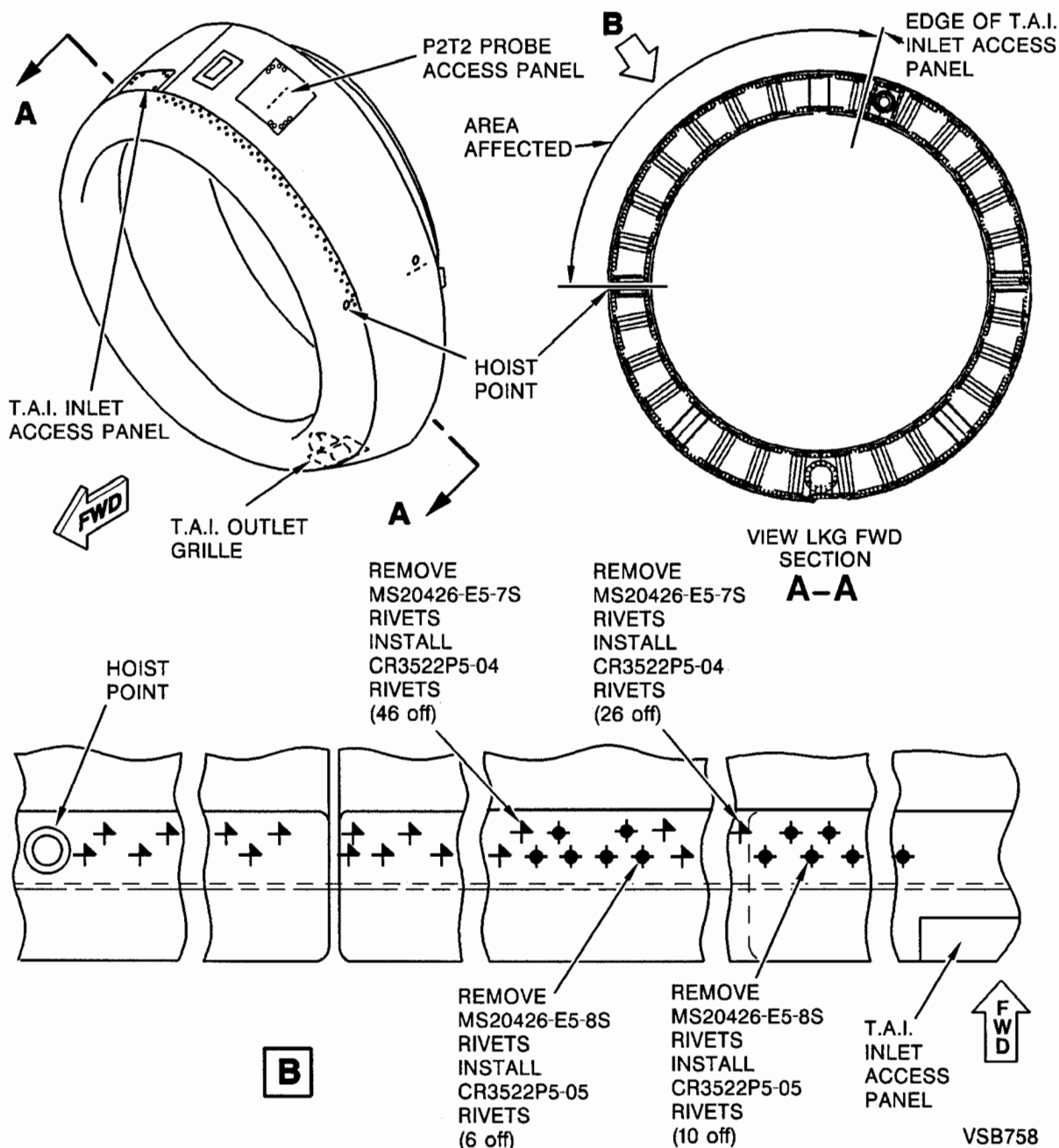
(7) Wet install the rivets with primer mix. Refer to Figure 1.

C. Recording Instructions

(1) A record of accomplishment is required. Write in the applicable records and metal stamp, electroetch, or vibroetch on the thrust reverser data plate that Service Bulletin V2500-NAC-71-0281 has been done. Refer to the Standard Practices/Processes Manual (SPP-V2500-1IA), Chapter 70-09-00.

August 7, 2000
Revision 1 - February 21, 2001

V2500-NAC-71-0281
Page 8



Nose Cowl Rivet Replacement
Figure 1

August 7, 2000
Revision 1 - February 21, 2001

V2500-NAC-71-0281
Page 9



FASTENER PART NUMBER	DRILL SIZE	HOLE SIZE	
		MIN.	MAX.
CR3522P5-()	#20	0.160 in.	0.164 in.
CR3552P5-()	#16	0.176 in.	0.180 in.

RIVET HOLE SIZE
TABLE 1

ORIGINAL FASTENER	REPLACEMENT FASTENERS	
MS20426-E5-7S	CR3522P5-(),	CR3552P5-()
MS20426-E5-8S	CR3522P5-(),	CR3552P5-()

REPLACEMENT RIVETS
TABLE 2

VSB761

Nose Cowl Rivet Replacement
Figure 2

August 7, 2000
Revision 1 - February 21, 2001

V2500-NAC-71-0281
Page 10