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## V2500-A1/A5 NACELLE SERVICE BULLETIN

Printed in Great Britain

This document transmits Revision 4 to Service Bulletin NV2500-71-0285 and Revision 4 to the Supplement

### Document History

#### Service Bulletin Revision Status

Initial Issue	Jan.31/03
Revision 1	Mar.17/03
Revision 2	May 18/04
Revision 3	May 20/04

#### Supplement Revision Status

Initial Issue	Jan.31/03
Revision 1	Mar.17/03
Revision 2	May 18/04
Revision 3	May 20/04

### Bulletin Revision 4

#### Remove

All pages of the  
Service Bulletin

#### Incorporate

Pages 1 to 20 of the  
Service Bulletin

#### Reason for change

To make corrections to  
consumable items

### Supplement Revision 4

#### Remove

All pages

#### Incorporate

Page 1

#### Reason for change

To make corrections to  
consumable items

# V2500-NAC-71-0285

Transmittal - Page 1 of 2

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED

If any have not been received please advise Publication Services, Rolls-Royce plc, Derby, England

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# LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin following incorporation of Revision 4 to the Bulletin and Revision 4 to the Supplement are as follows:

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Supplement		
R 1	4	Dec.6/04

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NACELLE – RIGHT HAND FAN COWL DOOR – HOLD OPEN ROD – RE-ORIENTATION OF THE HOLD OPEN  
ROD AND INSTALLATION OF A NEW ROD STOWAGE BRACKET

1. Planning Information

A. Effectivity

(1) Airbus A319

(a) V2522-A5, V2524-A5, V2527M-A5 Fan Cowl Doors – Serial Numbers prior to 3207001.

(2) Airbus A320

(a) All V2500-A1 Fan Cowl Doors.

(b) V2527-A5, V2527E-A5 Fan Cowl Doors – Serial Numbers prior to 3207001.

(3) Airbus A321

(a) V2530-A5, V2533-A5 Fan Cowl Doors – Serial Numbers prior to 3207001.

B. Concurrent Requirements

Norco Inc. Service Bulletin A361-71-2 should be done prior to or concurrently with this Service Bulletin.

C. Reason

(1) Problem

The proposed new routing of the #4 Compartment Oil Scavenge Pipe will foul on the Hold Open Rod at its current position.

(2) Evidence

The #4 Compartment Oil Scavenge Pipe is to be rerouted. Consequently, it has been found that the proposed new routing will foul with the Hold Open Rod at its current position.

(3) Substantiation

A tolerance stack-up analysis of all the surrounding structure and pipework and a physical mock-up have been carried out and have provided substantiation for the relocation of the Hold Open Rod to the vertical position.



### (4) Objectives

To re-orientate the Hold Open Rod 90 degrees from a horizontal position to a vertical position to remove the potential foul when the #4 Compartment Oil Scavenge Pipe is rerouted. Additionally, to install a new Stowage Bracket on the right hand Fan Cowl Door to engage the Hold Open Rod when the Rod is being stowed in its new position.

### (5) Effect of Bulletin on:

#### (a) Operation

Not affected

#### (b) Maintenance

Affected

#### (c) Overhaul

Affected

#### (d) Repair Scheme

Not affected

#### (e) Interchangeability

Affected

#### (f) Fits and Clearances

Affected

### D. Description

#### (1) The changes introduced by this Service Bulletin are as follows:

(a) The right hand Fan Cowl Door is removed.

(b) The old Stowage Bracket is removed, the redundant holes are filled and surface finish restored.

(c) The Hold Open Rod is removed and modified in accordance with Norco Inc. Vendor Service Bulletin A361-71-2.

(d) The modified Rod is installed to the Door at the new position and at the correct orientation.

(e) The area on the Fan Cowl Door where the new Stowage Bracket is to be installed is potted.

(f) The new Stowage Bracket is installed and the Hold Open Rod is stowed.

(g) The Fan Cowl Door is installed.

#### E. Compliance

##### Category 3

For V2500-A1 Nacelles accomplish at the first visit of a Nacelle to a maintenance base capable of compliance with the accomplishment instructions, regardless of the planned maintenance action, and before the end of August 2006

##### Category 4

For all variants of V2500-A5 Nacelles accomplish at the first visit of a Nacelle to a maintenance base capable of compliance with the accomplishment instructions, regardless of the planned maintenance action for the Nacelle.

#### F. Approval

The technical content of this Service Bulletin has been approved under the authority of the DGAC Design Organisation Approval No. F.J.A.02.

#### G. Manpower

Estimated man-hours to incorporate the intent of this Service Bulletin on each engine:

##### (1) In Service

5.0 M/Hr

##### (2) At overhaul

Not applicable

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

#### H. Material Cost and Availability

NOTE: For spare Strut Assemblies A361-5 not fitted to units listed in Paragraph 1.A. which require modification to A361-9 operators are advised to order kit RW361-5 as instructed in Norco Inc. Service Bulletin A361-71-2.

The parts to accomplish this Service Bulletin are available from IAE as Kit No V2571285-551.

Operators with units listed in Paragraph 1.A. should submit a Charge purchase order for the applicable quantity of kits. The Charge purchase order must specify this Service Bulletin number the parts listed herein.

Direct request to:

IAE Spares Division

400 Main Street

M/S 121-10

East Hartford CT06108

USA

Fax Number 860-565-4121

I. Tooling – Cost and Availability

None.

J. Industry Support Information

Not applicable.

K. Weight and Balance

No effect.

L. Electrical Load Data

Not affected.

M. Software Accomplishment Summary

Not applicable.

N. References

- (1) Standard Practices/Processes Manual (SPP-V2500-1IA) Chapter/Sections 70-09-00, 70-11-26, 70-36-02 and 70-38-07.
- (2) A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual (M-V2500-1IA) Chapter/Sections 70-22-00, 71-13-00 and 71-13-12.
- (3) Overhaul Processes and Consumable Index (IAE PCI-V2500-1IA) Section II.
- (4) IAE engineering change EC 01VN781.
- (5) Norco Inc. Service Bulletin A361-71-2.

- (6) Airbus Modification No. 32942.
- (7) Structural Repair Manual (PSR-V2500-1IA), Chapter 54-01-00.
- (8) ATA Locator - 71-13-12, 71-13-16.

0. Other Publications Affected

- (1) A320/V2500-A1/A5 Engine Illustrated Parts Catalog, Chapter/Section 71-13-12 will be revised.
- (2) Component Maintenance Manual (CMM-FC-V2500-1IA), Chapter/Section 71-13-00 will be revised.
- (3) V2500 Structural Repair Manual, Chapter/Section 54-20-00.
- (4) A320/V2500-A1 A319/A320/A321/V2500-A5 Engine Manual (E-V2500-1IA) Chapter/Section 71-13-16 will be revised.

P. Interchangeability of Parts

- (1) The parts introduced by this Service Bulletin must be fitted as a set.

## 2. Material Information

### A. Kits associated with this Bulletin:

Applicability: For each V2500-A1 or A5 Nacelle to incorporate this Bulletin

NEW PART NO.	QTY	PART TITLE	OLD PART NO.	INSTR DISP
--------------------	-----	------------	--------------------	---------------

V2571285-551	1	Kit, Re-orientation of Hold Open Rod		(A)
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Consisting of:

NAS1193K5CP	1	Tab Washer		
108C0312-01	1	Retaining Device		
AN316-5	1	Jam Nut (Alt p/n AN316C5R)		
R1361-4B	1	Stowage Bracket		
MS20500-1032	3	Nut (Alt p/n H19475-3)		
NAS8703U17	3	Bolt		

### B. Parts affected by this Bulletin - V2500 A1

NEW PART NO.	QTY	PART TITLE	OLD PART NO.	INSTR DISP
740-4002-601 (71-13-16)	1	Fan Cowl Door - right hand	740-4002-597 (01-010)	(B)(C)(1D)
A361-9 (71-13-12)	1	.Hold Open Rod	A361-5 (02-010B)	(B)(C)(1D)

### C. Parts affected by this Bulletin - V2500 A5

NEW PART NO.	QTY	PART TITLE	OLD PART NO.	INSTR DISP
745-4002-511 (71-13-16)	1	Fan Cowl Door - right hand	745-4002-507 (01-010)	(B)(C)(1D)
A361-9 (71-13-12)	1	.Hold Open Rod	A361-5 (02-010B)	(B)(C)(1D)

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**D. Instructions/Dispositions Code Statements:**

- (A) Kit is currently available.
- (B) Parts are currently available.
- (C) Old and new parts are not interchangeable physically or functionally.
- (1D) Old part number may be reworked and reidentified to new part number.

**E. Materials Required to Incorporate this Service Bulletin:**

CoMat 01-076 - Methyl ethyl ketone (MEK)

CoMat 01-124 - Isopropyl Alcohol

CoMat 02-099 - Lint free cloth

CoMat 02-178 - Masking tape

CoMat 02-007 - Teflon tape

CoMat 02-162 - Syringe

CoMat 05-075 - 800 grit silicon carbide abrasive paper

CoMat 08-021 - EA934NA Resin, Parts A and B

R CoMat 08-104 - EA9394 Resin, (2 Part)

CoMat 04-005 - PL32M Jointing compound Vendor Code K6835

CoMat 07-166 - Clear Varnish (there are four acceptable alternatives listed below):

R Obtain (1) 9110C8000/2000-2-0538 Varnish from: International Paints, Aviation Division, Ladyswood Works, Ratton Park Street, Birmingham B16 0AD, England.

Obtain (2) EC75/C9071 Varnish from: Lise Cunningham, PPG Aerospace Tel: ++44 1388 770242 Fax: ++44 1388 776870 Email: Cunningham@PPG.com

Obtain (3) IP9064 Clear Varnish or (4) IP2 Clear Varnish from: Indestructible Paint Ltd. Tel: ++44 121 702 2485 Fax: ++44 121 778 4338  
[www.indestructible.co.uk](http://www.indestructible.co.uk)

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

### 3. Accomplishment Instructions

#### A. Pre-requisite Instructions

**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.

- (1) Remove the right hand Fan Cowl Door as instructed in the A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual, Task 71-13-16-000-010.
- (2) Remove the Hold Open Rod as instructed in the A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual, Task 71-13-12-000-010.

**CAUTION:**

WHEN YOU MODIFY THE HOLD OPEN ROD MAKE SURE THAT THE RE-ASSEMBLED ROD WHEN FULLY RETRACTED AND LOCKED IS TO THE DIMENSION SHOWN IN FIGURE 2. IF YOU DO NOT OBEY THIS INSTRUCTION INCORRECT INSTALLATION OF THE STOWAGE BRACKET CAN OCCUR.

- (3) Do Norco Inc. service Bulletin A361-71-2 'Conversion procedure to convert Norco Inc. Strut Assembly A361-5 to A361-9'.

#### B. Rework Instructions

- (1) Remove the three MS20500-1032 Nuts, the three AN960C10L Washers and the three NAS8703U17 Bolts to release the RI361-4A Stowage Bracket from the Fan Cowl Door. Remove the Bracket. Refer to Figure 1.

**WARNING:**

EA934NA RESIN (COMAT 08-021) OR EA9394 RESIN (COMAT 08-104) IS CLASSIFIED AS A HAZARDOUS MATERIAL WHICH MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURERS 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.

**WARNING:**

YOU MUST USE PROTECTIVE CLOTHING, GLOVES, DUST MASK AND SAFETY GOGGLES TO PROTECT YOU AGAINST DUST AND LOOSE PARTICLES WHICH CAN BE DANGEROUS TO YOUR HEALTH.

**WARNING:**

SOLVENT (COMAT 01-076) OR SOLVENT (COMAT 01-124) IS FLAMMABLE AND THE VAPOUR IS HARMFUL. USE IN A WELL-VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPOURS OR PROLONGED OR REPEATED CONTACT WITH SKIN. HIGH CONCENTRATIONS MAY CAUSE IMPAIRED JUDGEMENT. PROTECTIVE GLOVES SHOULD BE WORN DURING USE. MAY CAUSE DERMATITIS BY REMOVING SKIN OILS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE 'MATERIAL SAFETY DATA SHEET' AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

**CAUTION:**

DO NOT CAUSE DAMAGE TO THE OUTER SURFACE OF THE FAN COWL DOOR. BE CAREFUL AND ONLY REMOVE SEALANT FROM THE REWORK AREA. DO NOT USE A LIQUID WITH THE ABRASIVE PAPER.

- (2) Fill the three redundant holes in the Fan Cowl Door.

**PROCEDURE**

**RELATED DATA**

- |   |   |
|---|---|
| <p>(a) Use a clean, lint free cloth dampened with CoMat 01-076 or CoMat 01-124 Solvent to remove all oil, grease, dirt or other contaminants from the countersunk edges of the vacant holes. Wipe the area dry with a clean, lint free cloth before the solvent evaporates.</p> | <p>Refer to Figure 1.<br/>Make sure that no excess solvent leaks into the vacant holes.</p> |
| <p>(b) Install Masking Tape (CoMat 02-178) over the three redundant holes on the outside of the Fan Cowl Door</p>   |   |
| <p>(c) Mix a quantity of EA934NA Resin (CoMat 08-021) or EA9394 Resin (CoMat 08-104) in accordance with the manufacturers instructions.</p>   | <p>Obey the above warning.</p>  |
| <p>(d) Fill a Syringe (CoMat 02-162) with the mixed EA934NA Resin (CoMat 08-021) or EA9394 Resin (CoMat 08-104).</p>  |   |



- (e) Fill the redundant holes in the Fan Cowl Door with the Resin until the Resin overflows on the inner surface of the Fan Cowl Door
  - (f) Scrape the overflow Resin level with the inner surface of the Door Use a plastic Spatula.
  - (g) Cure the Resin in accordance with the manufacturers instructions
  - (h) Remove the Masking Tape from the outside surface of the Fan Cowl Door
  - (i) Make the rework area on the outside surface of the Fan Cowl Door smooth Obey the above warning and caution.  
Use 800 grit silicon carbide abrasive paper (CoMat 05-075)
  - (j) Use a clean lint free cloth (CoMat 02-099) made moist with solvent (CoMat 01-076) or solvent (CoMat 01-124) and remove dirt and grease from the inside surface of the Fan Cowl Door. Wipe the area dry before the solvent becomes dry. Obey the above warning.  
Refer to the IAE/V2500 Standard Practices/Processes Manual, Task 70-11-26-300-503.
  - (k) Restore the paint finish Refer to the Standard Practices/Processes Manual (SPP-V2500-1IA) Chapter 70-38-07.
- (3) Install the A361-9 Hold Open Rod to the Fan Cowl Door

### CAUTION:

CONFIRM THAT THE HOLD OPEN ROD IS CORRECTLY ORIENTATED AS SHOWN IN FIGURE 3 SHEET 3. IF YOU DO NOT OBEY THIS INSTRUCTION DAMAGE TO THE ROD OR ADJACENT HARDWARE CAN OCCUR DURING THE FAN COWL DOOR CLOSING PROCEDURE.

### PROCEDURE

### RELATED DATA

- (a) Do a dimension check on the A361-9 Hold Open Rod when fully retracted and locked and confirm correct orientation Refer to Figure 2.



- |  |  |
|--|--|
| (b) Install the A361-9 Hold Open Rod to the Fan Cowl Door  | Refer to the A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual, Task 71-13-12-400-010. |
| (c) Locate the R1361-4B Stowage Bracket on the A361-9 Hold Open Rod                                    | Obey the above caution. Refer to Figure 3 sheet 1. Confirm correct engagement with the Hold Open Rod.  |
| (d) Mark an arc on the Fan Cowl Door from the centre of the R1361-4B Stowage Bracket                   | Use chalk, or suitable alternative, to make the mark.  |
| (e) Mark a parallel line from the edge of the Fan Cowl Door  | Use chalk, or suitable alternative, to make the mark.  |
| (f) Where the arc and the parallel line intersect, locate the centre of the R1361-4B Stowage Bracket   | Confirm correct engagement with the A361-9 Hold Open Rod.  |
| (g) Make a mark of the three fastener holes from the Stowage Bracket onto the Door. Remove the Bracket |  |
- (4) Make a potted area on the Fan Cowl Door

**WARNING:**

YOU MUST USE PROTECTIVE CLOTHING, GLOVES, DUST MASK AND SAFETY GOGGLES TO PROTECT YOU AGAINST DUST AND LOOSE PARTICLES WHICH CAN BE DANGEROUS TO YOUR HEALTH.

**WARNING:**

EA934NA RESIN (COMAT 08-021) OR EA9394 RESIN (COMAT 08-104) IS CLASSIFIED AS A HAZARDOUS MATERIAL WHICH MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURERS 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.



### CAUTION:

MAKE SURE THAT YOU DO NOT DRILL THE HOLES MORE THAN 0.5 IN. (12,5 MM.) INTO THE FAN COWL DOOR. IF YOU DRILL THE HOLES MORE THAN 0.5 IN. (12,5 MM.) YOU MAY DAMAGE THE SEPTUM LAYER. USE A DRILL STOP IF AVAILABLE.

### PROCEDURE

### RELATED DATA

- |  |                                     |
|--|-------------------------------------|
| (a) Make a cutting tool  | Refer to Figure 3 sheet 2.          |
| (b) Mask off the area for resin injection with teflon tape (CoMat 02-007)  |                                     |
| (c) Drill 0.125 in. (3,175 mm.) dia. tooling holes, where required, on the inner surface of the Fan Cowl Door at the masked off area to allow for the removal of the Honeycomb. Approximately 1.00 in. (25 mm.) pitch between each tooling hole will be sufficient | Obey the above warning and caution. |
| (d) Insert the tool into the tooling hole and rotate to remove the honeycomb cell. Repeat for all the tooling holes  |                                     |
| (e) Mix a quantity of EA934NA Resin (CoMat 08-021) or EA9394 Resin (CoMat 08-104) in accordance with the manufacturers instructions  | Obey the above warning.             |
| (f) Fill a Syringe (CoMat 02-162) with the mixed EA934NA Resin (CoMat 08-021) or EA9394 Resin (CoMat 08-104)   |                                     |
| (g) Fill the cells beneath the carbon fibre layer with EA934NA Resin (CoMat 08-021) or EA9394 Resin (CoMat 08-104) to overflow   |                                     |
| (h) Scrape the overflow Resin level with the inner surface of the Door   | Use a plastic spatula.              |

R

R

(i) Cure the rework area in accordance with the manufacturers instructions for the Resin

Typically an elevated cure can be achieved at 93°C for one hour using a suitable heat source (heat lamps or blankets).

(j) Do a Composite Structure Tap Test or other appropriate NDT inspection of the repair area.

Refer to the Structural Repair Manual, Chapter 54-01-00.

(5) Install the new RI361-4B Stowage Bracket to the Fan Cowl Door

**WARNING:**

WEAR PROTECTIVE CLOTHING, GLOVES, DUST MASK AND SAFETY GOGGLES. WHEN COMPOSITE MATERIALS ARE CUT OR SANDED, DUST AND LOOSE PARTICLES ARE PRODUCED WHICH ARE POTENTIAL HEALTH HAZARDS. DO NOT BREATHE THE DUST.

**WARNING:**

VARNISH (COMAT 07-166) IS CLASSIFIED AS A HAZARDOUS MATERIAL WHICH MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURERS 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.

**WARNING:**

SOLVENT (COMAT 01-076) OR SOLVENT (COMAT 01-124) IS FLAMMABLE AND THE VAPOUR IS HARMFUL. USE IN A WELL-VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPOURS OR PROLONGED OR REPEATED CONTACT WITH SKIN. HIGH CONCENTRATIONS MAY CAUSE IMPAIRED JUDGEMENT. PROTECTIVE GLOVES SHOULD BE WORN DURING USE. MAY CAUSE DERMATITIS BY REMOVING SKIN OILS. PRIOR TO USE OF THIS PRODUCT, CAREFULLY READ THE APPLICABLE 'MATERIAL SAFETY DATA SHEET' AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

**WARNING:**

JOINTING COMPOUND (COMAT 04-005) IS CLASSIFIED AS A HAZARDOUS MATERIAL WHICH MAY CAUSE INJURY OR ILLNESS IF NOT PROPERLY USED. THIS PRODUCT SHOULD BE USED ONLY IN ACCORDANCE WITH THE MANUFACTURERS 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.

**PROCEDURE**

**RELATED DATA**

(a) Locate the RI361-4B Stowage Bracket to the Fan Cowl Door

Refer to Figure 3 sheet 3.



- |  |  |
|--|--|
| (b) Drill three 0.125 in. (3,175 mm.) pilot sized holes through the Fan Cowl Door from the Stowage Bracket at the marked locations   | Obey the above warning. Make sure that the pilot holes are drilled at 90 degrees to the Door surface.      |
| (c) Increase the size of the three holes to 0.190 - 0.193 in. (4,83 - 4,90 mm.) in the Fan Cowl Door   |  |
| (d) Remove the Stowage Bracket and deburr all the holes  |  |
| (e) Countersink the three holes in the outer skin of the Fan Cowl Door to suit a NAS8703U17 CSK Bolt   | Countersink to 100° by 0.049 in. (1,20 mm.) deep.  |
| (f) Treat the cut edges on the Fan Cowl Door with Varnish (CoMat 07-166)   | Obey the above warning.  |
| (g) Use a clean, lint free cloth (CoMat 02-099) made moist with solvent (CoMat 01-076) or solvent (CoMat 01-124) and remove oil, dirt, grease and other contaminants from the mating surface of the Fan Cowl Door and the Stowage Bracket. Wipe the area dry with a clean, lint free cloth (CoMat 02-099) before the solvent evaporates. | Obey the above warning. Refer to the IAE/V2500 Standard Practices/Processes Manual, Task 70-11-26-300-503. |
| (h) Apply Jointing Compound (CoMat 04-005) to the mating surface of the RI361-4B Stowage Bracket as an interfay and locate in the correct position on the Cowl Door  | Obey the above warning. Refer to the IAE/V2500 Standard Practices/Processes Manual, Chapter 70-36-02.      |
| (i) Install the RI361-4B Stowage Bracket to the Fan Cowl Door with the three NAS8703U17 Bolts, the three AN960C10L Washers and the three MS20500-1032 Nuts.  | Wet install the Bolts with Jointing Compound (CoMat 04-005).   |



- (j) Torque the three MS20500-1032 Nuts to 25 lbf.inches (2,82 Nm.). Remove any excess sealant

Refer to the SPP-V2500-1IA Standard Practices/Processes Manual, Chapter 70-41-00.

(6) Engrave the Fan Cowl Doors

PROCEDURE

RELATED DATA

- (a) Engrave this Service Bulletin number onto the Mod Plates with a metal stamp or vibro-etch engraver and identify the modified Fan Cowl Doors as shown in the table below

Refer to the IAE/V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

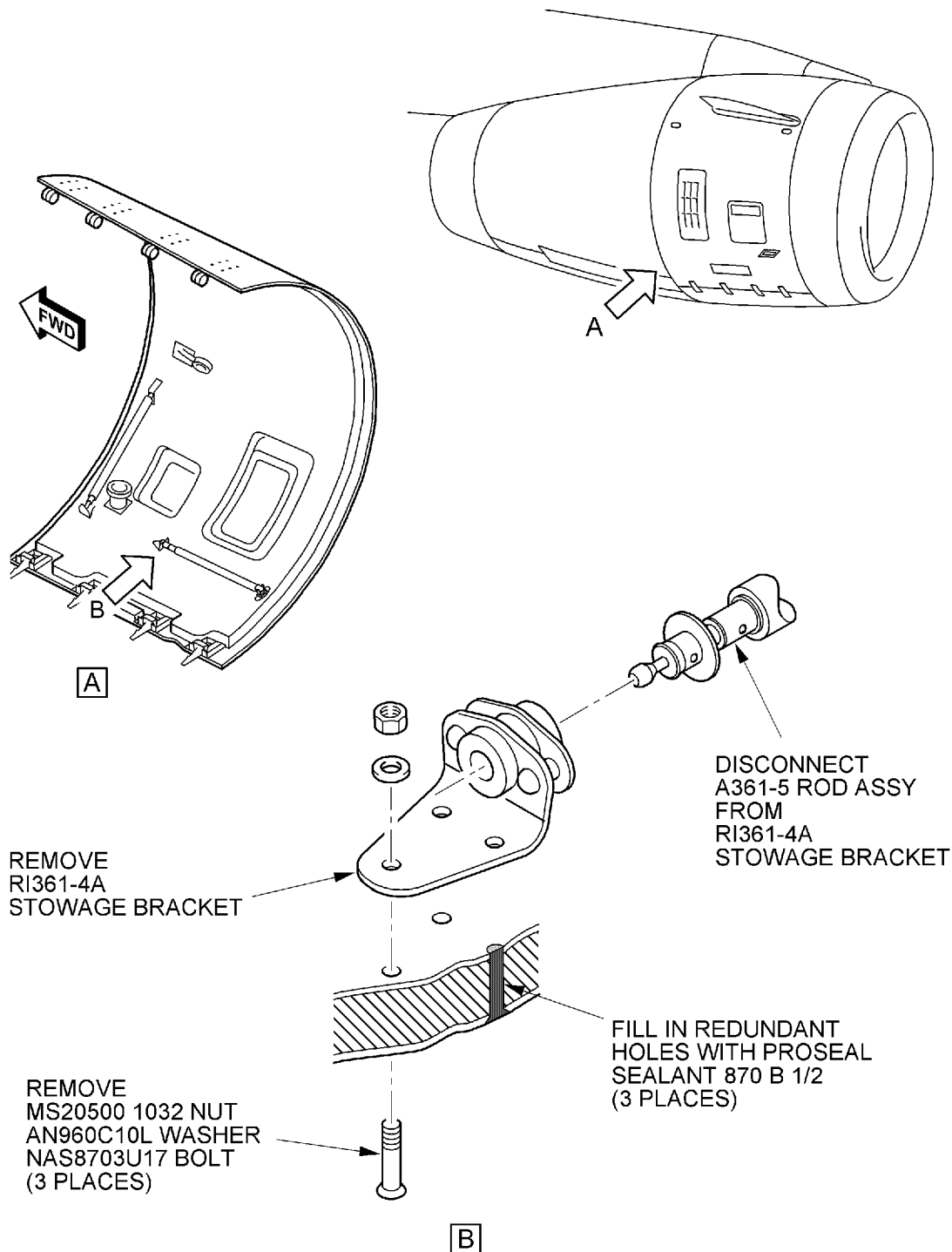
New Part No	Old Part No
740-4000-506	740-4000-502
740-4000-508	740-4000-504
745-4000-508	745-4000-502
745-4000-510	745-4000-504
745-4000-512	745-4000-506

C. Post-requisite instructions

- (1) Install the right hand Fan Cowl Door as instructed in the A320/V2500-A1 A319/A320/A321/V2500-A5 Aircraft Maintenance Manual, Task 71-13-16-400-010.

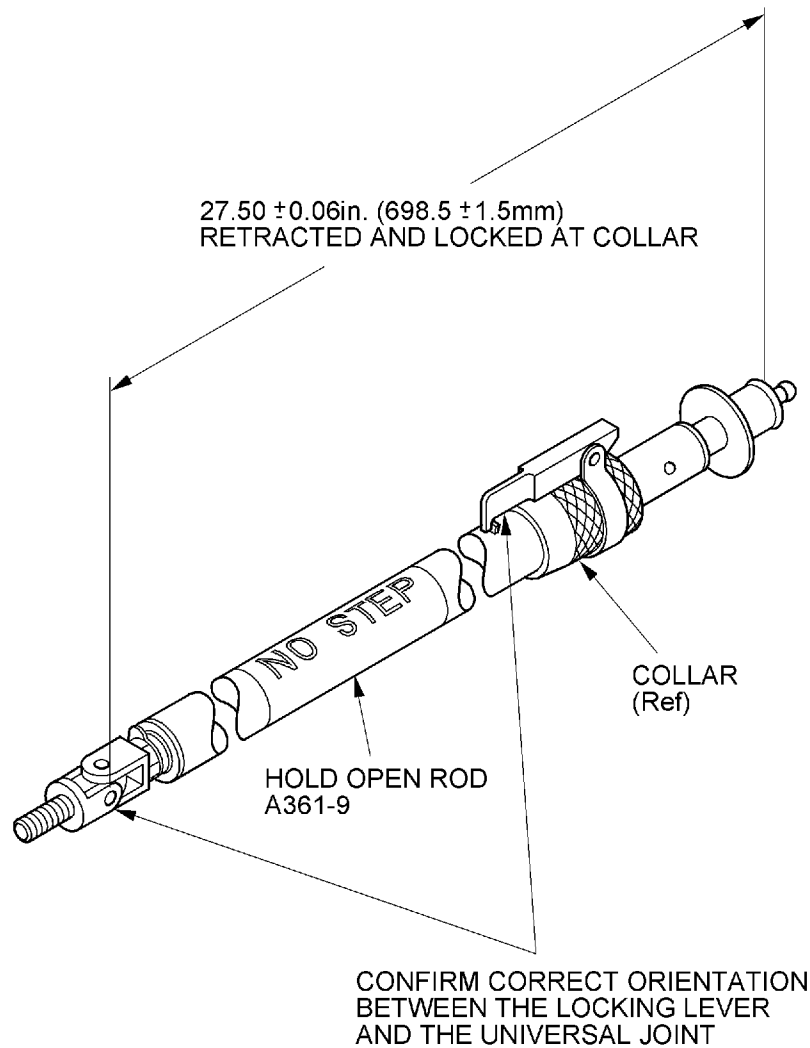
D. Recording Instructions

- (1) A record of accomplishment is necessary. Write in the Aircraft Log Book that service Bulletin V2500-NAC-71-0285 has been done.



Removal of the old Stowage Bracket  
Figure 1

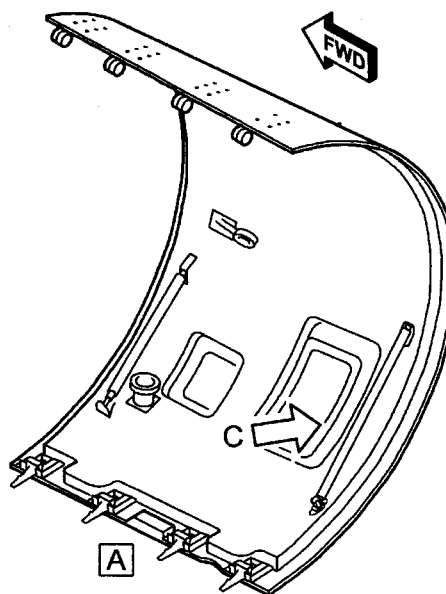
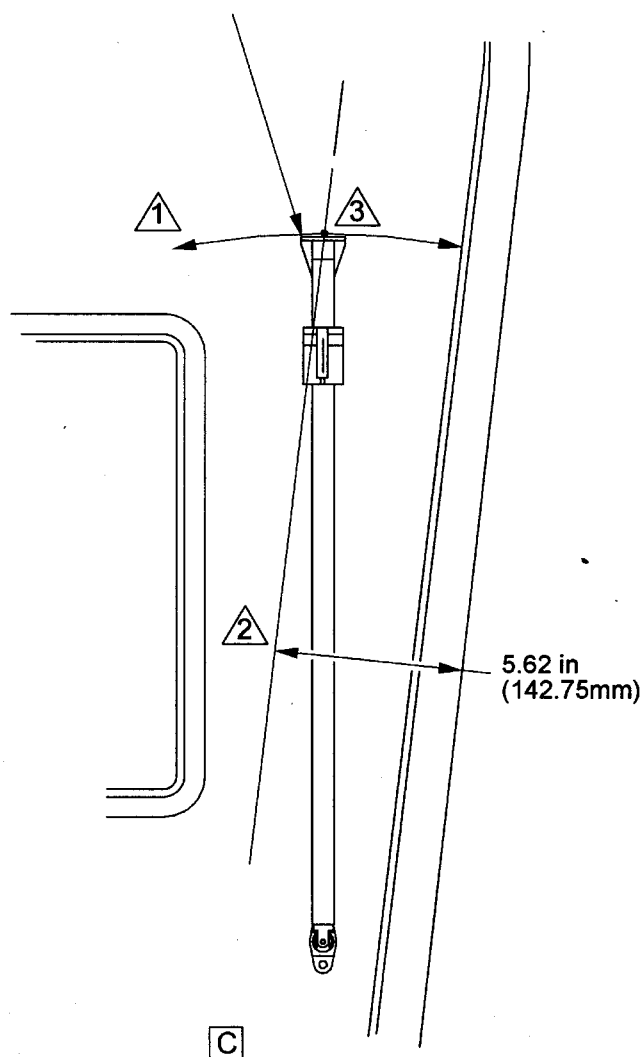
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Dimension check of the Hold Open Rod  
Figure 2

LOCATE THE R1361-4B STOWAGE BRACKET AS SHOWN AND CONFIRM STOWING OF HOLD OPEN ROD



**NOTE**

All linear dimensions have a tolerance of  $\pm 0.03$  in. (0.76 mm)



Mark an arc from the centre of stowage bracket



Mark a parallel line from the edge of the door



Locate the centre of the bracket where the arc and parallel line intersect

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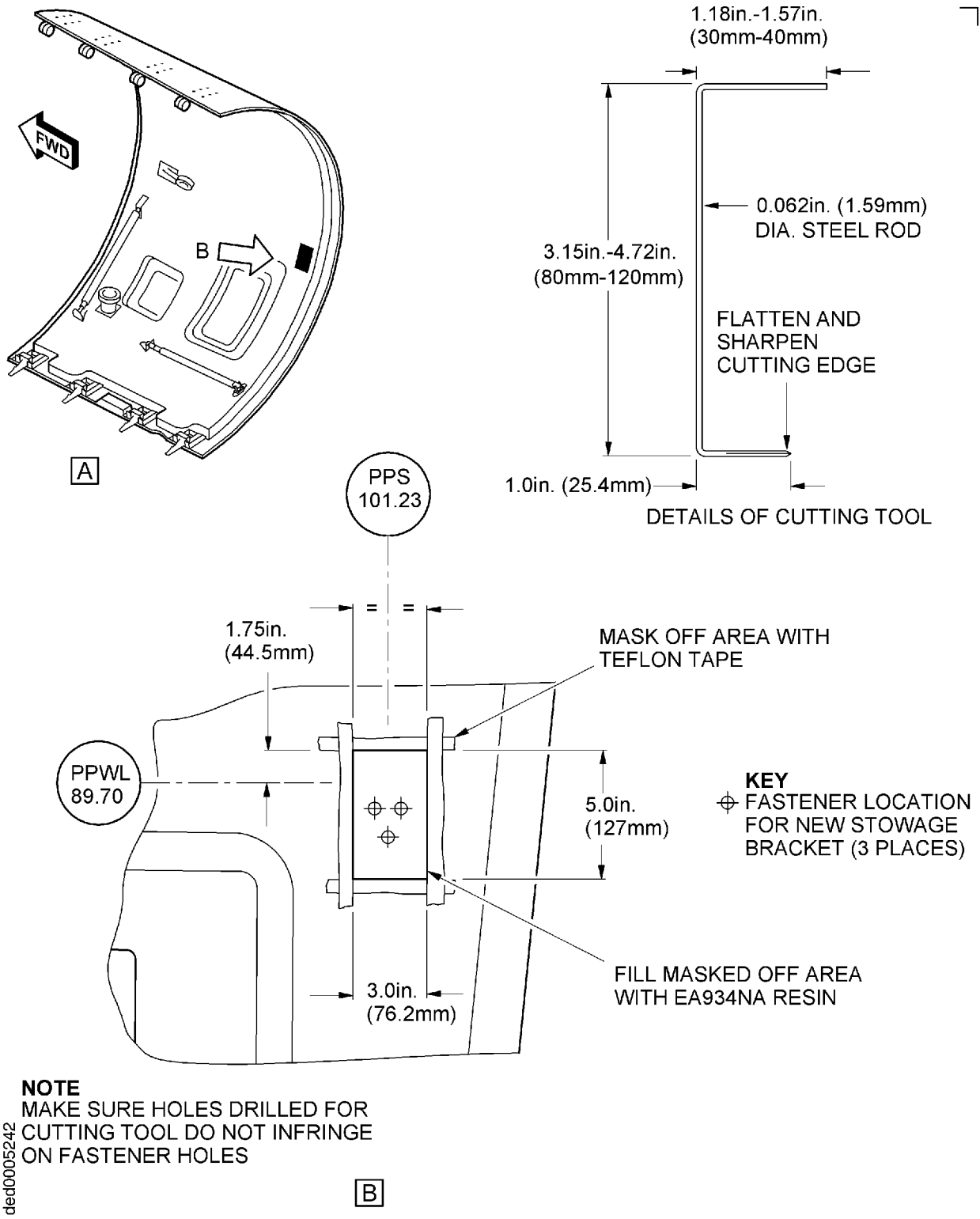
Re-location of the Hold Open Rod and installation of the new Stowage Bracket

Figure 3. sheet 1

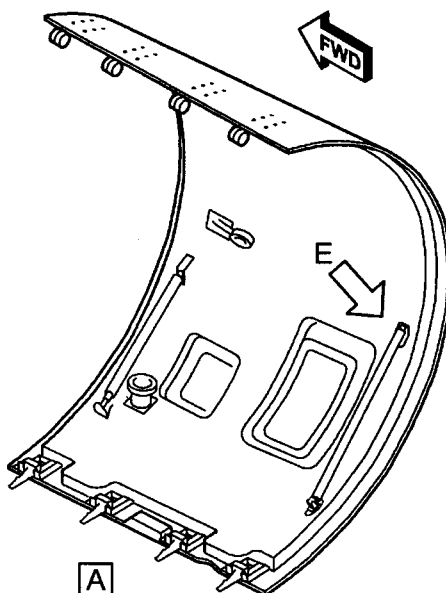
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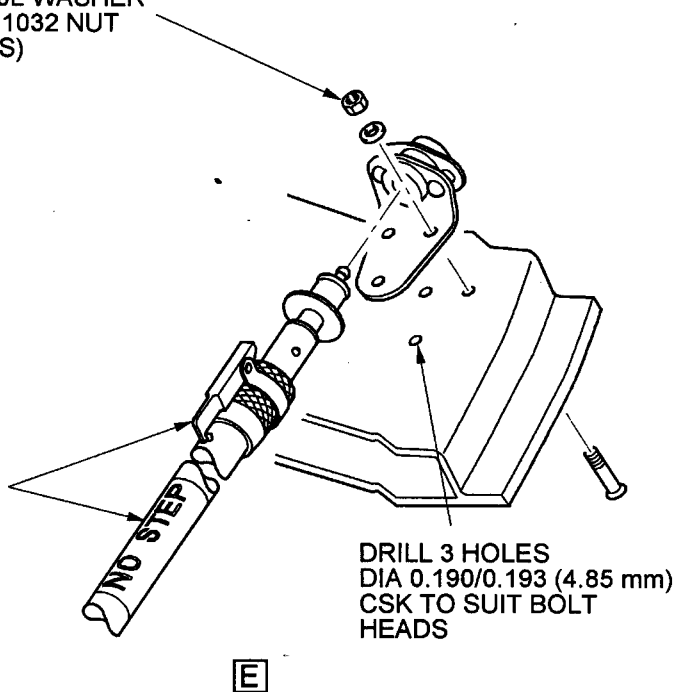


Re-location of the Hold Open Rod and Installation of the new Stowage Bracket  
Figure 3 Sheet 2



INSTALL  
NAS8703U17 BOLT  
R1261-4B STOWAGE BRACKET  
AN960C10L WASHER  
MS20500 1032 NUT  
(3 PLACES)

CONFIRM  
RELEASE LEVER AND  
DECAL ARE ORIENTATED  
AS SHOWN



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Re-location of the Hold Open Rod and Installation of the new Stowage Bracket  
Figure 3 Sheet 3

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Not subject to the EAR per 15 C.F.R. Chapter 1, Part 734.3(b)(3).

NACELLE – RIGHT HAND FAN COWL DOOR – HOLD OPEN ROD – RE-ORIENTATION OF THE HOLD OPEN  
ROD AND INSTALLATION OF A NEW ROD STOWAGE BRACKET

SUPPLEMENT – PRICES AND AVAILABILITY

The prices if shown are for estimating purposes only and as such are given in good faith, without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current price catalogue for current prices.

1. Modification Kits:

Part No.	Desc.	Unit Price US Dollars
V2571285-551	Kit, Re-orientation of Hold Open Rod	Price supplied on request



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# SERVICE BULLETIN

## NO. A361-71-2

Conversion Procedure To Convert Norco Inc. Strut Assembly A361-5 To A361-9

### 1. PLANNING INFORMATION

#### A. Effectivity

##### (1) Component Affected

This Service Bulletin affects the following hold open rods that are in service.

<u>Norco P/N</u>	<u>Serial Numbers</u>
A361-5	All

##### (2) Spares Affected

This Service Bulletin affects those units listed above that are in airline Spares stores, if applicable.

#### B. Reason

The incorporation of this Service Bulletin will provide a procedure to convert an A361-5 strut assembly into an A361-9 strut assembly.

#### C. Description

This Service Bulletin is to inform all users of the procedures and detailed instructions required for reworking Norco part number A361-5. The reworking requires reorientation of the universal assembly on the A361-5 to the orientation required on A361-9.

#### D. Approval

The repair and modifications herein comply with the applicable Federal Aviation Regulations (FARs) and are approved by Short Bros.

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### E. Manpower

Remove Rod Assembly from Aircraft .2 Hrs.

Reorient universal .3 Hrs.

Replace Rod Assembly in Aircraft .2 Hrs.

TOTAL .7 Hrs.

### F. Material Cost and Availability

The parts identified in Section 3A may be obtained from Norco, Inc. as follows:

<u>Part No.</u>	<u>Description</u>	<u>Availability</u>	<u>Price</u>
RW361-5	Rework kit	10 Days /Stock	\$100.00

DIRECT PURCHASE ORDER TO: NORCO, INC.  
P.O. BOX 405  
GEORGETOWN, CT 06829  
203-544-8301  
203-544-7121 FAX

### G. Tooling - Cost and Availability

Not applicable.

### H. Weight and Balance

The incorporation of this Service Bulletin will have no affect on weight and balance.

### I. Other Publications Affected

None.

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### 2. ACCCOMPLISHMENT INSTRUCTIONS

#### A. Disassembly (See Figure 1)

- (1) Cut safety wire MS20995C32 and discard.
- (2) Using a .500 open-end wrench, loosen jam nut AN316-5 approximately 4 turns by rotating counterclockwise.
- (3) Slide retaining device 108C0312-01 back with jam nut AN316-5.
- (4) Slide washer rod end 120C0000-5 back out of slot in strut end fitting.
- (5) Remove universal from strut assembly by rotating counterclockwise.
- (6) Discard washer rod end 120C0000-5 and retaining device 108C0312-01.

#### B. Assembly (See Figure 1)

To reorient universal from A361-5 configuration to A361-9 configuration follow the following steps:

- (1) Washer rod end 120C0000-5 is to be replaced with NAS1193K5CP locking device.
- (2) Replace jam nut AN316-5 and new retaining device 108C0312-01 on threaded shaft of universal.
- (3) Install bottom part of NAS1193K5CP so that internal key engages key slot in universal shaft with the serrations facing the end of the threaded shaft.
- (4) Position top part of NAS1193K5CP so that serrations are engaged with serrations on bottom part.
- (5) Engage threaded shaft of universal in threaded bore of strut end fitting.

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- (6) Thread universal into strut end fitting by rotating clockwise.
- (7) Continue rotating until extended and locked length of  $43.00 \pm .06$  is obtained.
- (8) Adjust position of universal joint as shown on figure 1.
- (9) Engage key on top part of NAS1193K5CP with slot in strut end fitting
- (10) Engage serrations of bottom part with top part.
- (11) Rotate jam nut AN316-5 and retaining device 108C0312-01 together clockwise until contact with NAS1193K5CP is made.
- (12) Torque jam nut AN316C5 to 30/50 lb.-in.
- (13) Install new safety wire MS20995C32 in accordance with MS33540.

### C. Re-identification

After converting A361-5 to A316-9, part number on identification label shall be changed.

- (1) Using a black indelible marker, blank out the existing -5 identification number.
- (2) Using a black indelible marker, add the new -9 identification number.

### D. Warranty

A trained airline mechanic performing the required rework in accordance with paragraphs A through C accomplishment instructions will not affect Norco Inc. warranty.

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### 3. MATERIAL INFORMATION

#### A. Parts Required Per Hold Open Rod

A rework kit is available, part number RW361-5, which contains the following parts to rework hold open rod A361-5.

P/N Provided	Quantity	Keyword
NAS1193K5CP	1	Locking Device
MS20995C32	6"	Safety wire
108C0312-01	1	Retaining Device

#### B. Parts Required to Modify Spares

(If Applicable) Same parts as items 3A. Above.

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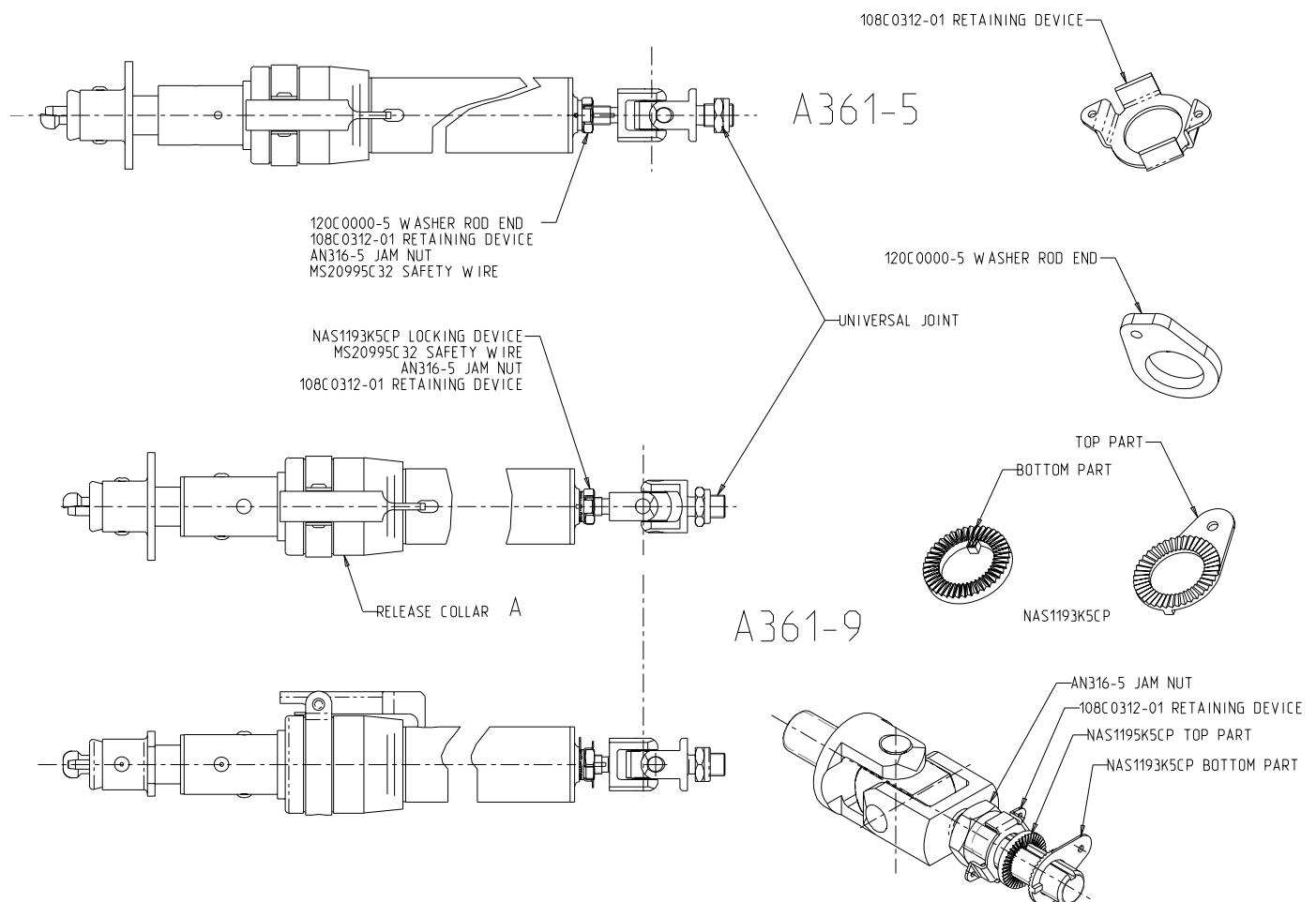


FIGURE 1

## A361-71-2

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