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SERVICE BULLETIN

N° **189-177**

**EMERGENCY ALERT**

**DATE:** February 22, 2018

**REV. :** A - February 28, 2018

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**TITLE**

**ATA 55 - TAIL PLANE INSTALLATION UPGRADE**

**REVISION LOG**

No further actions are required for Customers already compliant with rev./

Revision A of this SB has been issued to update the effectivity section of Part I, II and III.

The compliance time for all helicopters is intended to be calculated starting from issue date of revision A.

Revision bars in the margins identify changes.

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An appropriate entry should be made in the aircraft log book upon accomplishment.  
If ownership of aircraft has changed, please, forward to new owner.

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# 1. PLANNING INFORMATION

## A. EFFECTIVITY

### Part I:

All AW189 helicopters not already compliant with SB189-130 EXCEPT for the following S/N listed in the table below:

49024	From 89005 included onward	From 92007 included onward
49031		
49032		
49034		
49036		
49040		
49041		
49046		
49047		
From 49050 included onward		

### Part II:

All AW189 helicopters not already compliant with SB189-130 EXCEPT for the following S/N listed in the table below:

49024	From 89005 included onward	From 92007 included onward
49031		
49032		
49034		
49036		
49040		
49041		
49046		
49047		
From 49050 included onward		

### Part III:

AW 189 helicopters already compliant with SB189-130 and the following S/N listed in the table below:

49046	89008	92007
49053	89009	92008

### Part IV:

All AW189 helicopters.

## **B. COMPLIANCE**

### **Part I:**

Before each flight until compliance with Part II of this SB.

### **Part II**

Within 100 flight hours or 1 month whichever occurs first from receipt of this Service Bulletin.

### **Part III**

Within 10 flight hours after the issue of this SB

### **Part IV**

- For helicopters affected by Part II of the present SB:  
After 10 flight hours from compliance with Part II of the present SB; then after 30 flight hours; then every 50 flight hours until 400 flight hours, then every 400 flight hours.
- For helicopters affected by Part III of the present SB:  
After 10 flight hours from compliance with Part III of the present SB; then after 30 flight hours; then every 50 flight hours until 400 flight hours, then every 400 flight hours.
- For all other helicopters:  
After 10 flight hours after the issue of this SB; then after 30 flight hours; then every 50 flight hours until 400 flight hours, then every 400 flight hours.

## **C. CONCURRENT REQUIREMENTS**

The present SB supersedes and replace SB189-130.

## **D. REASON**

This SB has been issued after the report of two in service failures of the FWD LHS tail plane installation bolt. This SB provides all necessary instructions on how to inspect the forward bolt of the tail plane and to perform the tail plane installation retromod P/N 8G5510P00511 which provides the corrective action required to prevent the experienced failures which, if not corrected, could potentially lead to reduced stability in forward flight.

## **E. DESCRIPTION**

Following two cases of failure of the tail plane installation LHS FWD bolt, LHD issued this SB to mandate the upgrade of the installation to the latest available design which provides features designed to prevent further similar occurrences on that bolt.

**Part I** of this SB introduces a precautionary recurrent visual check of the tail plane installation forward bolts required in order to monitor the condition of the bolt until the installation will be upgraded as required by Part II.

**Part II** of this SB provides the necessary instruction on how to perform the tail plane installation retromod P/N 8G5510P00511. The retromod introduces an improved tail plane installation that reduces fretting and wear of the affected bolt.

**Part III** of this SB provides instructions to change the tightening torque interval of the two tail plane installation forward bolts from 5 ÷ 20 Nm to 15 ÷ 20 Nm for helicopters that already install retromod P/N 8G5510P00511. The updated torque range represent the optimum value for tail plane front bolts installation.

**Part IV** of this Service Bulletin introduces a recurrent torque check inspection required in order to monitor the condition of the tail plane installation after compliance with the retromod P/N 8G5510P00511.

## **F. APPROVAL**

The technical content of this Service Bulletin is approved under the authority of DOA nr. EASA.21.J.005. For helicopters registered under other Aviation Authorities, before applying the Service Bulletin, applicable Aviation Authority approval must be checked within Leonardo Helicopters customer portal.

E.A.S.A. states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives.

If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

## **G. MANPOWER**

To comply with this Service Bulletin the following Maintenance-Man-Hours (MMH) are deemed necessary:

Part I: approximately 0.25 MMH.

Part II: approximately twelve (12) MMH.

Part III: approximately one (1) MMH.

Part IV: approximately one (1) MMH

Maintenance-Man-Hours are based on hands-on time and can change with personnel and facilities available.

## H. WEIGHT AND BALANCE

### PART I

N.A.

### PART II

WEIGHT (Kg)	ARM (mm)	MOMENT (Kgmm)
		0.195
LONGITUDINAL BALANCE	12797.4	2495.5
LATERAL BALANCE	-4.3	-0.830

### PART III, PART IV

N.A.

## I. REFERENCES

### 1) PUBLICATIONS

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 89-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	II,III, IV
DM02 89-A-06-41-00-00A-010A-A	Access doors and panels - General data	II,III, IV
DM03 89-A-55-11-01-00A-520A-A	Tail plane - Remove procedure	II
DM04 89-A-55-11-01-00A-720A-A	Tail plane - Install procedure	II, II, IV

### 2) ACRONYMS

AMP	Aircraft Maintenance Publication
FWD	Forward
MMH	Maintenance Man Hour
SB	Service Bulletin

### 3) ANNEX

N.A.

## J. PUBLICATIONS AFFECTED

AW189 Aircraft Maintenance Publication (AMP)

AW189 Illustrated Parts Data Publication (IPD).

## K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

## 2. MATERIAL INFORMATION

### A. REQUIRED MATERIALS

#### 1) PARTS

##### PART I

N.A.

##### PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	8G5510P00511		<b>TAIL PLANE INSTALLATION RETROMOD</b>	REF	.		
2	8G5350A07951	8G5350A07951M01 or equivalent	RH spotface plate	1	..		189-130L1
3	8G5510A06751		Bearing sleeved flanged	1	..		189-130L1
4	8G5510A06351		Bearing sleeved flanged	1	..		189-130L1
5	8G5510A05951		Bolt	2	..		189-130L1
6	8G5510A02651		Bolt	2	..		189-130L1
7	8G5510A02252		Bolt	2	..		189-130L1
8	4F5510A09151		Washer	2	..		189-130L1
9	4F5510A00232		Rod assy	1	..		189-130L1
10	HL82-6AW		Collar	12	..		189-130L1
11	HL75-8AW		Collar	4	..		189-130L1
12	HL10VR6-11		Pin	8	..		189-130L1
13	HL10VR6-13		Pin	2	..		189-130L1
14	HL10VR6-17		Pin	1	..		189-130L1
15	HL10VR6-19		Pin	1	..		189-130L1
16	A864A1151E018R	8G5510A02151	Peel washer	1	..		189-130L1
17	A994A51N035K		Washer	2	..		189-130L1
18	A994A57N030K		Washer	1	..		189-130L1
19	A904A07PV		Washer	2	..		189-130L1
20	A904A07PC		Washer	2	..		189-130L1
21	A864A1151F030H		Washer	2	..		189-130L1
22	MS24665-302		Cotter pin	6	..		189-130L1
23	MS20002C7		Washer	4	..		189-130L1

##### PART III

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
24	MS24665-302		Cotter pin	2	.		/

##### PART IV

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
25	MS24665-302		Cotter pin	2	.		/

## 2) CONSUMABLES

The following consumable materials, or equivalent, are necessary to accomplish this Service Bulletin:

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
26	AWMS05-001 Ty 1 CI B Grade 2 / Code No. 99999999000005965	Sealant MC780 B	AR		II
27	AWMS05-001 Ty 1 CI C Grade 1 / Code No. 99999999000009854	Sealant MC780 C	AR		II
28	Code 9999999900000773	Adhesive EA9395 A/B	AR		II
29	MIL-PRF-16173 Grade 1 CI 1 Code N° 9999999900000191	Corrosion inhibitor	AR		II
30	DTD900/4488A or DTD900/4766 / Code N° 900001846 or 102971ITL	Jointing compound JC5A	AR		II
31	BMS 3-38 Code No. 99999999000017311	Jointing compound Cor-ban 27L	AR	(1)	II
32	MS20995C42	Lock wire	AR		II, III

## 3) LOGISTIC MATRIX

In order to apply this Service Bulletin, the following Logistic P/N can be ordered in accordance with the applicable notes:

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
189-130L1	1	(2)	II

### NOTE

(1) To be used as alternative to jointing compound JC5A.

(2) Applicable to all helicopters affected by this Service Bulletin.

## B. SPECIAL TOOLS

The following special tools, or equivalent, are necessary to accomplish this Service Bulletin:

#	P/N	DESCRIPTION	Q.TY	NOTE	PART
31	8G5350G00731	Bush extractor	1		II

## C. INDUSTRY SUPPORT INFORMATION

**WARRANTY:** Owners/Operators who comply with the instructions of this Service Bulletin no later than the applicable date in the "Compliance" section will be eligible to receive REQUIRED MATERIALS on free of charge basis, except for Consumable Materials and Special Tools.

**NOTE:** Customers who fail to comply with the instructions in this Service Bulletin before the compliance date are not eligible for the aforementioned special policy.

Please Issue relevant MMIR form to your Warranty Administration Dpt.

### **3. ACCOMPLISHMENT INSTRUCTIONS**

#### **GENERAL NOTES**

- a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.
- b) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords.
- c) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.
- d) After drilling, remove all swarf and sharp edges. Apply on bare metal a light film of primer unless the hole is used for ground connection.
- e) Wet assemble all hi-locks fasteners by means of Sealant MC780 C.
- f) Carry out duplicate inspections to check correct installation, safety, security, final torque and locking on vital point parts.
- g) Protect bolts and nuts with corrosion inhibitor MIL-PRF-16173 GRADE 1.
- h) If necessary, removal of Hi-lok fasteners is allowed in order to aid rework.
- i) All lengths are in mm.

#### **PART I**

1. With reference to Figure 12, perform a visual inspection of the tail plane installation. Make sure that the forward attachment bolts P/N 8G5510A06251 and P/N 8G5510A05951 are correctly installed and not broken.
2. If a bolt is found damaged, apply tail plane installation retromodification P/N 8G5510P00511 in accordance with Part II of this SB and advise Leonardo Product Support Engineering at the following address:  
[pse\\_aw189.mbx@leonardocompany.com](mailto:pse_aw189.mbx@leonardocompany.com).
3. Record for compliance with Part I of this Service Bulletin.



## **PART II**

1. In accordance with AMP DM 89-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, remove the access panels 321A and 322A.
3. Perform the tail plane installation retromod P/N 8G5510P00511 as described in the following procedure:
  - 3.1 With reference to Figure 2 Details A, B, Step 1.1 and Step 1.2, remove the indicated hardware from LH rod assy P/N 8G5510A06032.
  - 3.2 With reference to Figure 2 Detail B Step 1.2, remove and discard the LH rod assy P/N 8G5510A06032 from the helicopter.
  - 3.3 With reference to Figure 2 Detail C Step 1.3, remove the indicated hardware from RH rod assy P/N 8G5510A06032.
  - 3.4 With reference to Figure 3 Details D, E, F, Step 2 and in accordance with AMP DM 89-A-55-11-01-00A-520A-A, remove the indicated hardware and the tail plane from the helicopter. Discard the hardware.
  - 3.5 With reference to Figure 4 Detail G Step 3.1, remove the indicated Hi-Lok from the RH spotface plate P/N 4F5350A09951.
  - 3.6 With reference to Figure 4 Detail G Step 3.2, remove and discard the installed RH spotface plate P/N 4F5350A09951 from helicopter.

### **CAUTION**

Take care not to damage the internal bore of the fitting.

- 3.7 With reference to Figure 5 Detail H Step 4.1 and Figure 11, carefully remove and discard the indicated bush from the lower fitting assy P/N 8G5350A06732 by means of bush extractor tool P/N 8G5350G00731.

### **NOTE**

If necessary 0.5mm liquid shim is allowed. Use adhesive EA9395.

- 3.8 With reference to Figure 5 Detail J Steps 4.2 and 4.3, install the new RH spotface plate P/N 8G5350A07951 on the helicopter by means of n°4 pins P/N HL10VR6-11, a pin P/N HL10VR6-17, a pin P/N HL10VR6-19 and n°6 collars P/N HL82-6AW.
- 3.9 With reference to Figure 6 Detail L Step 5.1, adjust the length of the rod assy P/N 4F5510A00232 to 186.5mm.

**CAUTION**

Apply Titanite JC5A lubricant to the shank of the bolt.

Make sure to not apply the lubricant to threaded part.

- 3.10 With reference to Figure 6 Detail M Step 5.2, install the rod assy P/N 4F5510A00232 to the LH tailplane upper fitting by means of a bolt P/N 8G5510A02651, a washer P/N MS20002C7, a washer P/N NAS1149C0732R and a nut P/N MS17825-7.
- 3.11 With reference to Figure 6 Detail M Step 5.3, torque the bolt to 5.0÷20.0 Nm and lock the nut by means of cotter pin P/N MS24665-302.
- 3.12 With reference to Figure 7 Detail N Step 6.1, install a Teflon washer P/N A994A57N030K in the indicated position.
- 3.13 With reference to Figure 7, temporarily position the tailplane assy in its installation position.

**CAUTION**

Apply Titanite JC5A lubricant to the shank of the bolt.

Make sure to not apply the lubricant to threaded part.

- 3.14 With reference to Figure 7 Detail N Step 6.2, install a bolt P/N 8G5510A05951, a convex washer P/N A904A07PV and a concave washer P/N A904A07PC.
- 3.15 With reference to Figure 7 Detail N Steps 6.3 and 6.4, install the bearing sleeved flange P/N 8G5510A06751 and then a washer P/N NAS1149C0763R and a nut P/N MS17825-7; lightly tighten the nut.
- 3.16 With reference to Figure 7 Detail N Step 6.5, torque the nut to 20.0 Nm.
- 3.17 With reference to Figure 7 Detail N Step 6.5, undo nut and bolt to release the run down torque.
- 3.18 With reference to Figure 7 Detail N Step 6.5, torque the nut to 15.0÷20.0 Nm.

**CAUTION**

Apply Titanite JC5A lubricant to the shank of the bolt.

Make sure to not apply the lubricant to threaded part.

- 3.19 With reference to Figure 8 Detail P Step 7.1, install a bolt P/N 8G5510A05951, a convex washer P/N A904A07PV and a concave washer P/N A904A07PC.

### NOTE

Make sure that it is possible to install the bearing sleeved flange P/N 8G5510A06351 by hands without forcing it in its seat.

**CAUTION** If there is interference between the sleeve and tail plane lower fitting, do not proceed with the installation and contact Leonardo PSE at the following address for further instructions:

[pse\\_aw189.mbx@leonardocompany.com](mailto:pse_aw189.mbx@leonardocompany.com)

- 3.20 With reference to Figure 8 Detail P Steps 7.2, 7.3 and 7.4, install the bearing sleeved flange P/N 8G5510A06351 and then a washer P/N NAS1149C0763R and a nut P/N MS17825-7; lightly tighten the nut.
- 3.21 With reference to Figure 9 Detail P Step 7.5, measure the gap between the tailplane lower fitting bush and the tailplane elastomeric bushing.
- 3.22 With reference to Figure 9 Detail A Step 7.6, adjust the thickness of the peel washer P/N A864A1151E018R or P/N 8G5510A02151 to match the gap measured at previous step.
- 3.23 If the peel washer supplied is P/N 8G5510A02151, with reference to Figure 9 Detail A Step 7.7, trim the peel washer to obtain a circular shape with external radius of 10.0. After cutting, remove any sharp edges.
- 3.24 With reference to Figure 9 Detail P Step 7.8, remove the hardware installed at steps 3.19 and 3.20 and install the peel washer P/N 8G5510A02151 or P/N A864A1151E018R.
- 3.25 Perform the steps 3.19 and 3.20 again.

### NOTE

If required to ensure correct alignment of the pin hole in bolt P/N 8G5510A05951 and castellations of nut P/N MS17825-7, it is acceptable to replace washer P/N NAS1149C0763R with washer P/N NAS1149C0732R.

- 3.26 With reference to Figure 9 Detail P Step 7.9, torque the nut to 15.0±20.0 Nm; lock the nut by means of cotter pin P/N MS24665-302.
- 3.27 With reference to Figure 10 Detail Q Step 8.1, install a washer P/N A994A51N035K, a washer P/N 4F5510A09151 and a washer P/N A864A1151F030H in the indicated position of the tailplane LH fitting.

**CAUTION**

Apply Titanite JC5A lubricant to the shank of the bolt.

Make sure to not apply the lubricant to threaded part.

- 3.28 With reference to Figure 10 Detail Q Step 8.1, secure the rod assy P/N 4F5510A00232 to the tailplane LH fitting by means of bolt P/N 8G5510A02252, a washer P/N MS20002C7, a washer P/N NAS1149C0732R and a nut P/N MS17825-7.
- 3.29 With reference to Figure 10 Detail Q Step 8.2, torque the nut to 5.0±20.0 Nm; lock the nut by means of cotter pin P/N MS24665-302.
- 3.30 With reference to Figure 10 Detail R Step 8.3, install a washer P/N A994A51N035K, a washer P/N 4F5510A09151 and a washer P/N A864A1151F030H in the indicated position of the tailplane RH fitting.

**CAUTION**

Apply Titanite JC5A lubricant to the shank of the bolt.

Make sure to not apply the lubricant to threaded part.

- 3.31 With reference to Figure 10 Detail R Step 8.3, secure the RH rod assy to the tailplane RH fitting by means of bolt P/N 8G5510A02252, a washer P/N MS20002C7, a washer P/N NAS1149C0732R and a nut P/N MS17825-7.
- 3.32 With reference to Figure 10 Detail R Step 8.4, torque the nut to 5.0±20.0 Nm; lock the nut by means of cotter pin P/N MS24665-302.
- 3.33 Check the tailplane installation: If excessive movement of the tailplane assy is experienced, it is allowed to adjust the LH rod assy P/N 4F5510A00232 by unlocking the pitch link sleeve and rotating it to increase the overall length of the rod. Lock the pitch link sleeve rotation by means of installed nuts and lock washers. Safety the nuts on the rod by means of lock wire P/N MS20995C42.
- 3.34 In accordance with AMP DM 89-A-06-41-00-00A-010A-A, install the access panels 321A and 322A.
4. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
5. Send the attached compliance form to the following mail box:

[pse\\_aw189.mbx.aw@leonardocompany.com](mailto:pse_aw189.mbx.aw@leonardocompany.com)

As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".

### **PART III**

1. In accordance with AMP DM 89-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, remove the access panels 321A and 322A.
3. With reference to Figure 7 Detail N Step 6.5 and Figure 9 Detail P Step 7.9, remove and discard n°2 cotter pins P/N MS24665-302.
4. With reference to Figure 7 Detail N Step 6.5 and Figure 9 Detail P Step 7.9, loose the two nuts P/N MS17825-7.
5. With reference to Figure 7 Detail N Step 6.5 and Figure 9 Detail P Step 7.9 and in accordance with applicable step of AMP DM 89-A-55-11-01-00A-720A-A, tighten the nuts to a torque of 15.0÷20.0 Nm.
6. With reference to Figure 7 Detail N Step 6.5 and Figure 9 Detail P Step 7.9, install n°2 cotter pins P/N MS24665-302.
7. With reference to Figure 6, safety the nuts on the adjustable rod assy P/N 4F5510A00232 by means of lock wire P/N MS20995C42.
8. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, install the access panels 321A and 322A.
9. Return the helicopter to flight configuration and record for compliance with Part III of this Service Bulletin on the helicopter logbook.
10. Send the attached compliance form to the following mail box:

[pse\\_aw189.mbx.aw@leonardocompany.com](mailto:pse_aw189.mbx.aw@leonardocompany.com)

As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the “Service Bulletin Application Communication”.

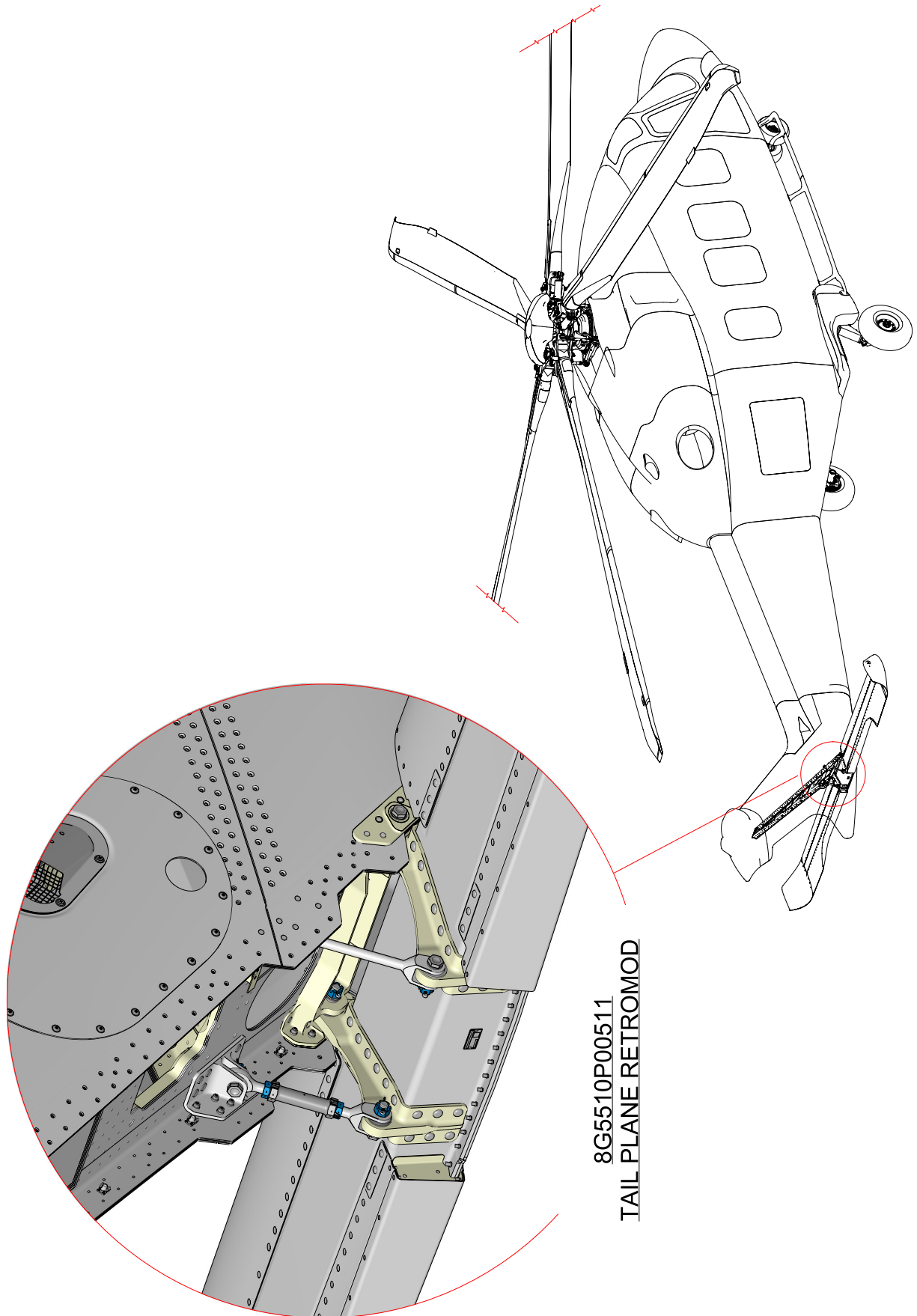
## **PART IV**

1. In accordance with AMP DM 89-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, remove the access panels 321A and 322A.
3. With reference to Figure 7 Detail N Step 6.5 and Figure 9 Detail P Step 7.9, remove and discard n°2 cotter pins P/N MS24665-302.
4. With reference to Figure 7 Detail N Step 6.5 and Figure 9 Detail P Step 7.9, perform a torque check of the n°2 nuts P/N MS17825-7. Make sure that the torque is 15.0÷20.0 Nm.
5. If the measured torque is out of the correct value, perform the following procedure:
  - 5.1 With reference to Figure 7 Detail N and Figure 9 Detail P and in accordance with applicable step of AMP DM 89-A-55-11-01-00A-520A-A, remove bolt or bolts P/N 8G5510A05951 found out of torque.
  - 5.2 Perform a visual check for condition of the removed bolt P/N 8G5510A05951. If the bolt has signs of wear, replace it with a new one with same P/N.
  - 5.3 Please provide photographic evidence of each bolt P/N 8G5510A05951 found damaged and send it to Leonardo Helicopter division PSE at the following address:  
  

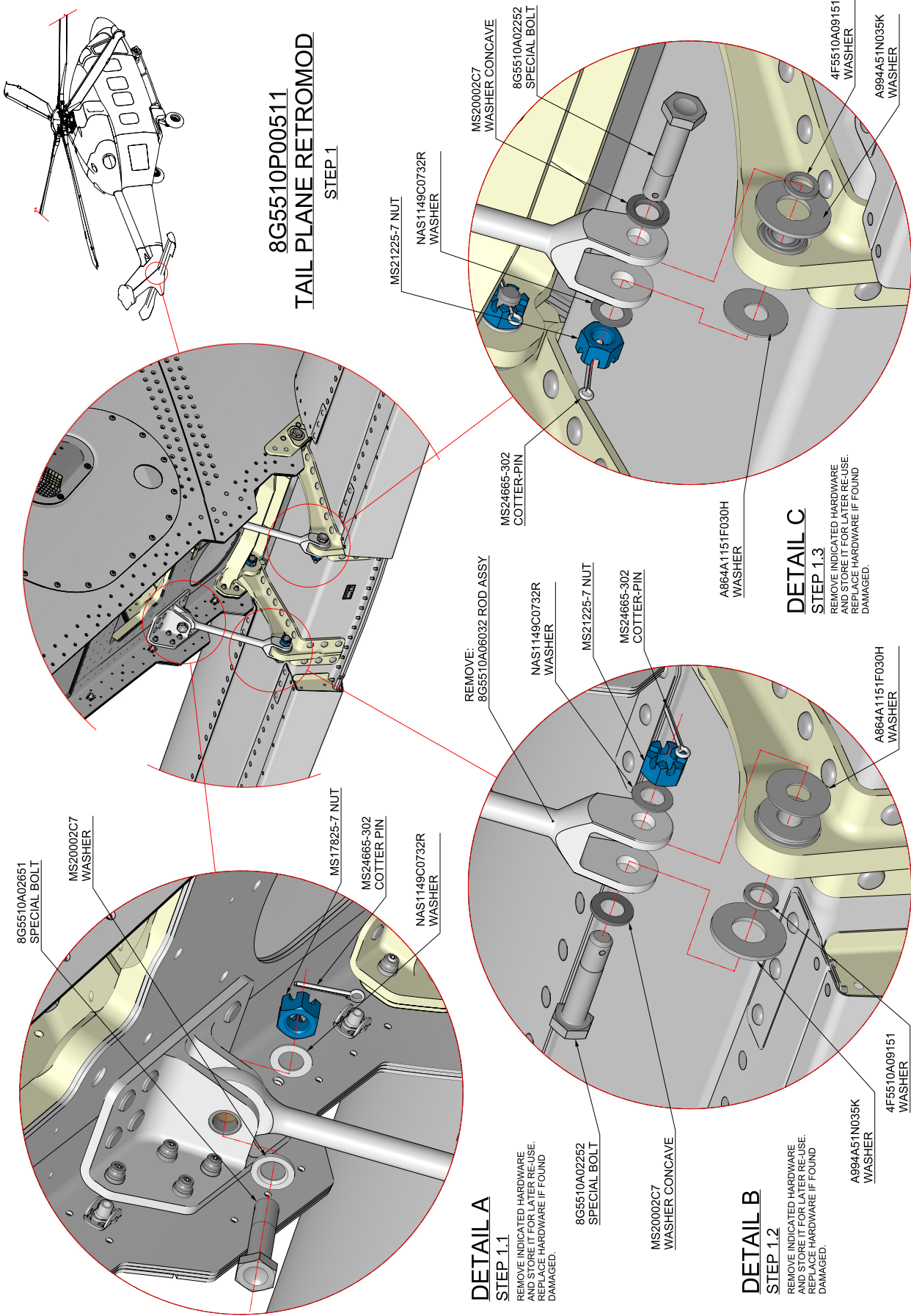
[pse\\_aw189.mbx.aw@leonardocompany.com](mailto:pse_aw189.mbx.aw@leonardocompany.com)
  - 5.4 With reference to Figure 7 Detail N and Figure 9 Detail P and in accordance with applicable step of AMP DM 89-A-55-11-01-00A-720A-A, re-install the bolt. Tighten the bolt to a torque of 15.0÷20.0 Nm.
6. With reference to Figure 7 Detail N Step 6.5 and Figure 9 Detail P Step 7.9, install n°2 cotter pins P/N MS24665-302.
7. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, install the access panels 321A and 322A.
8. Return the helicopter to flight configuration and record for compliance with Part IV of this Service Bulletin on the helicopter logbook.
9. Send the attached compliance form to the following mail box:

[pse\\_aw189.mbx.aw@leonardocompany.com](mailto:pse_aw189.mbx.aw@leonardocompany.com)

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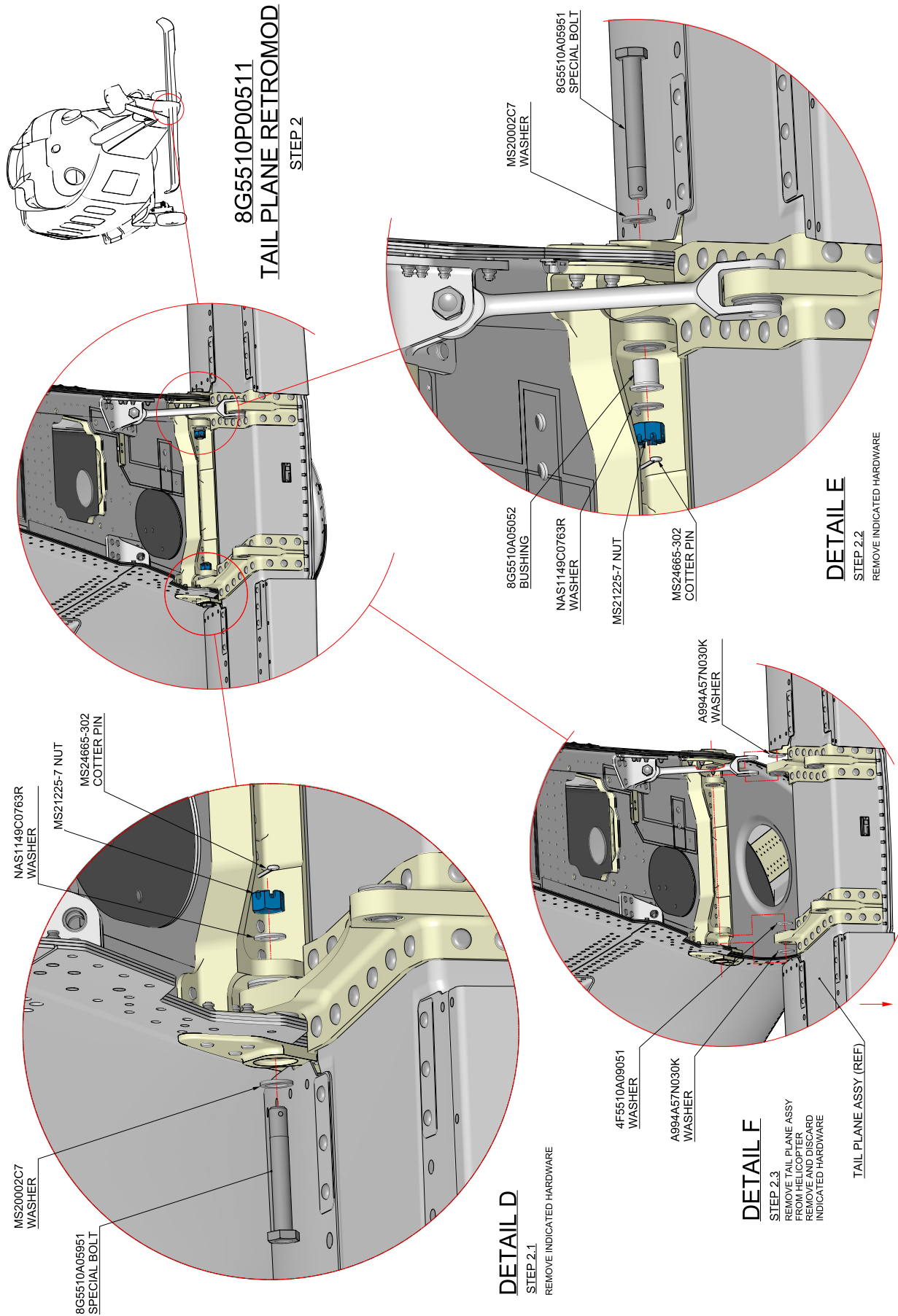
**Figure 1**



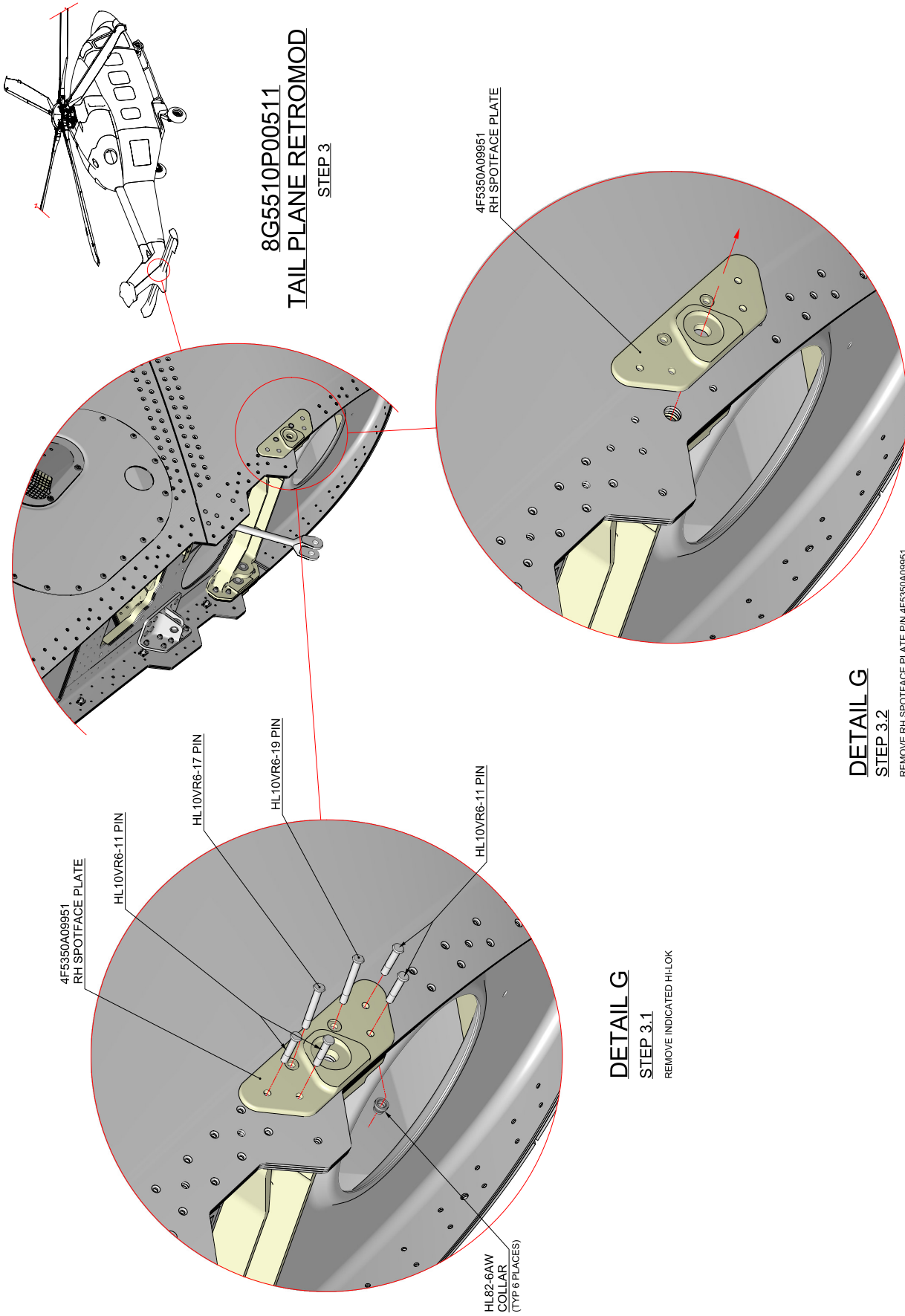
**Figure 2**

S.B. N°189-177 EMERGENCY ALERT  
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REVISION: A - February 28, 2018



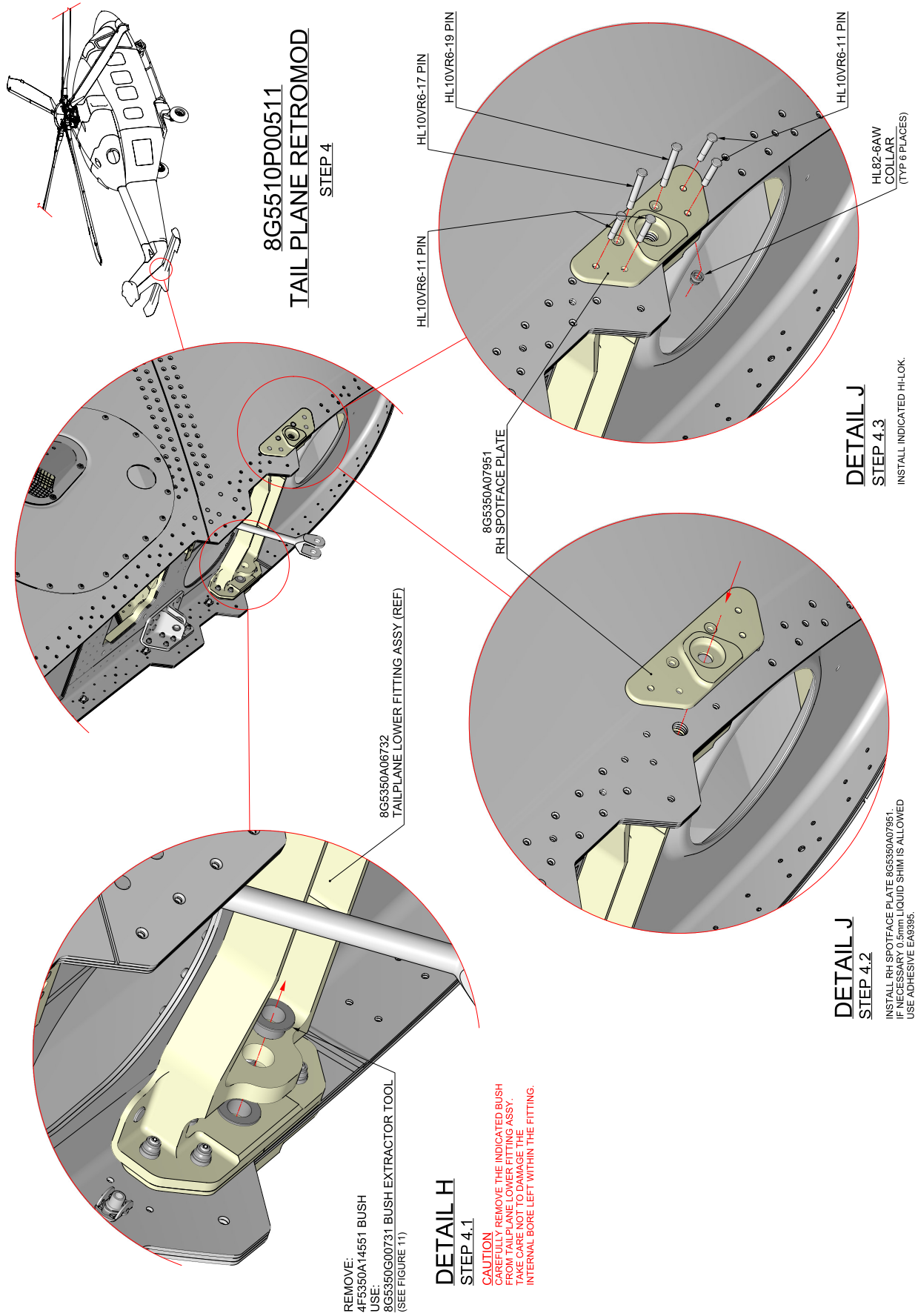


**Figure 3**

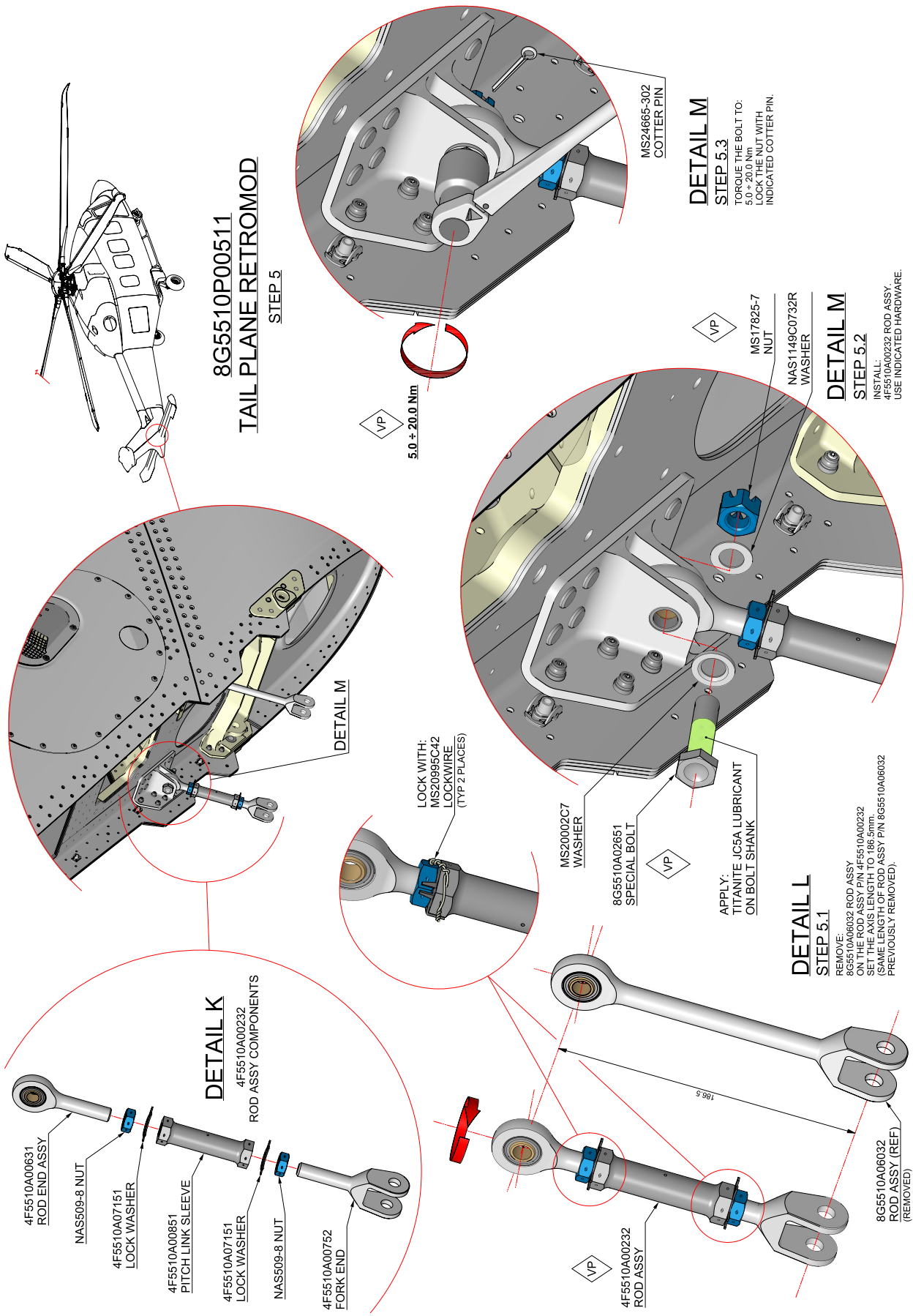


**Figure 4**

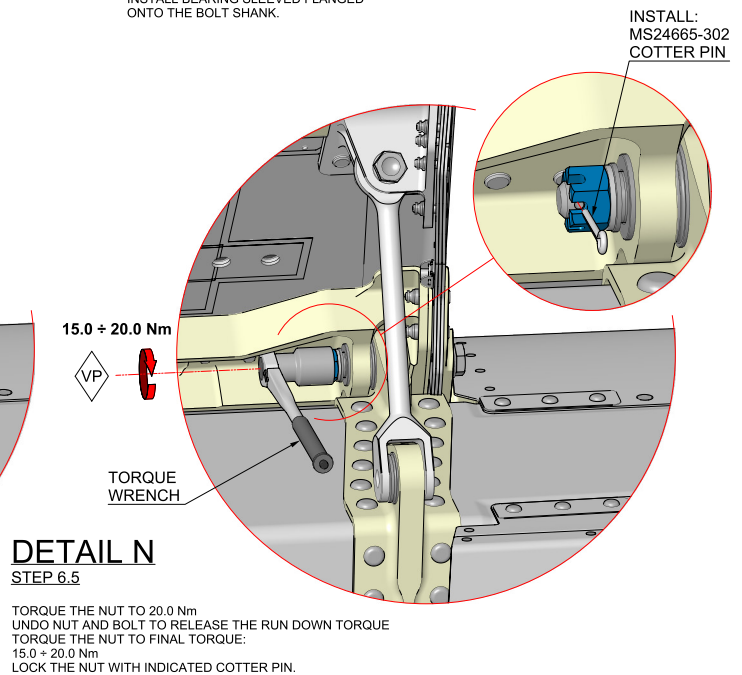
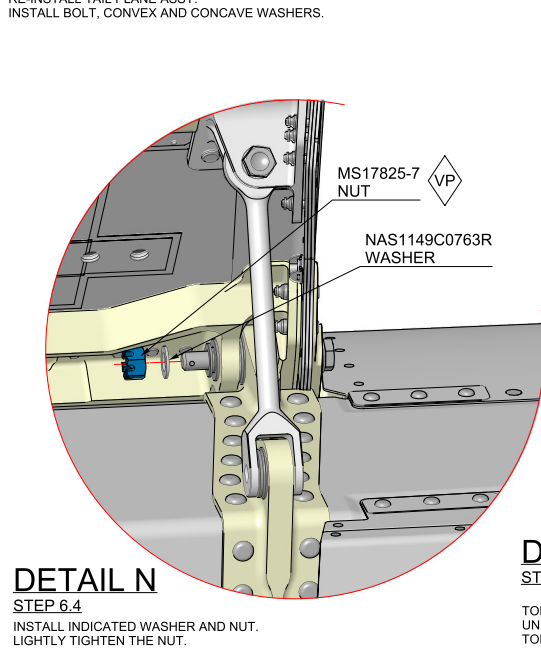
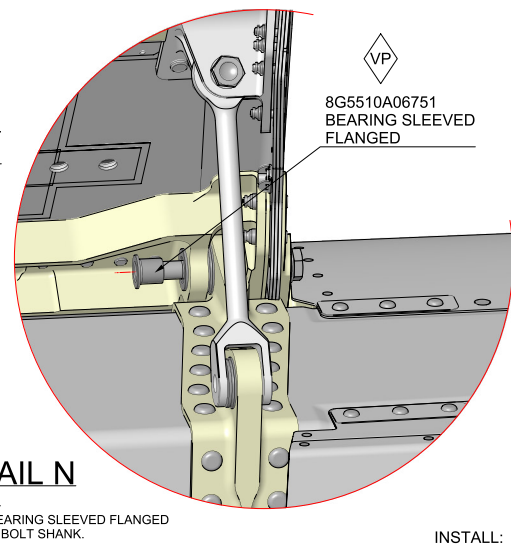
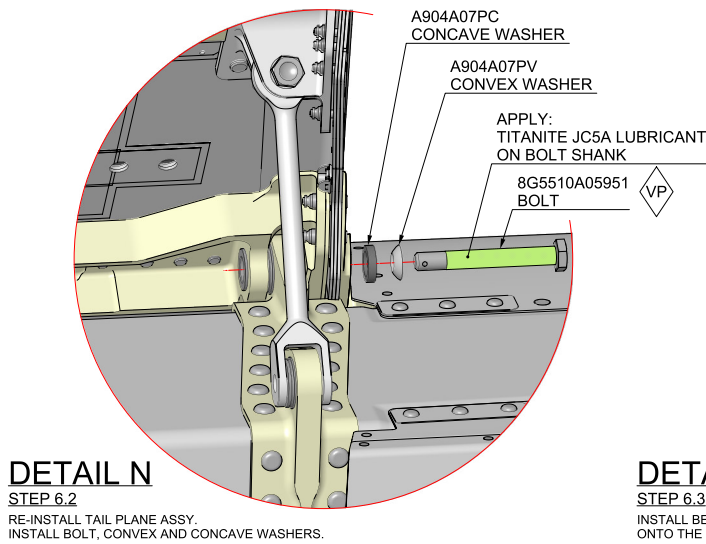
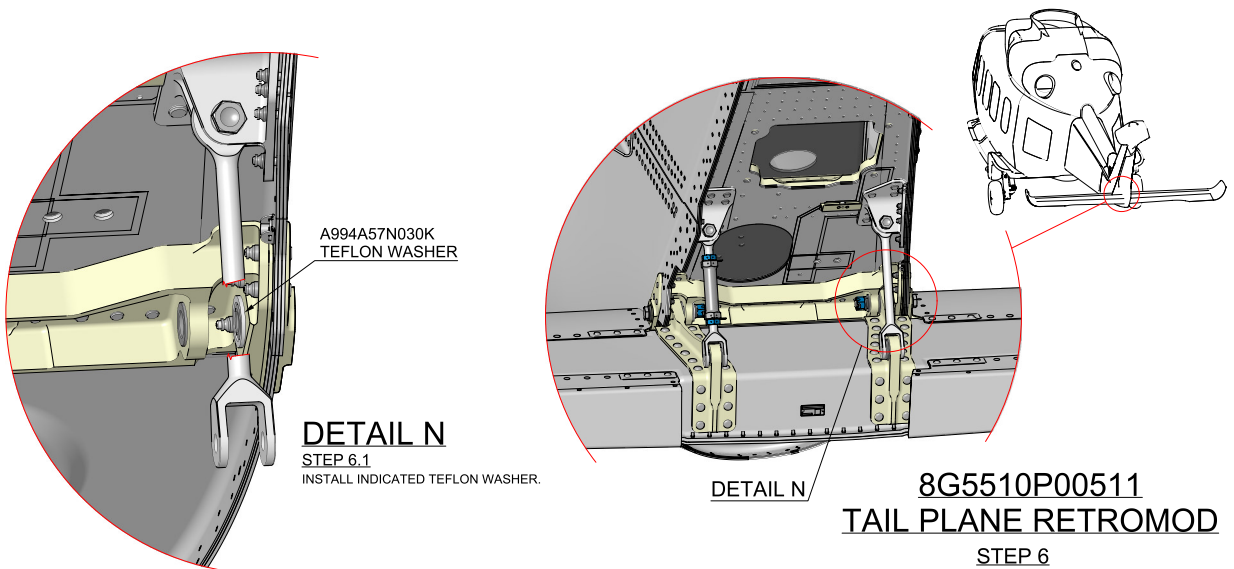
S.B. N°189-177 EMERGENCY ALERT  
DATE: February 22, 2018  
REVISION: A - February 28, 2018



**Figure 5**



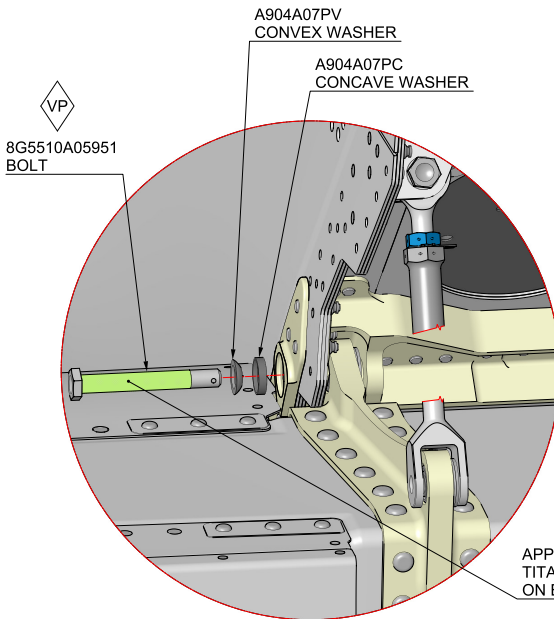
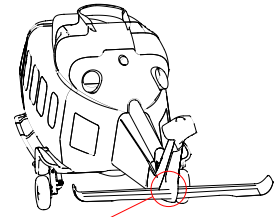
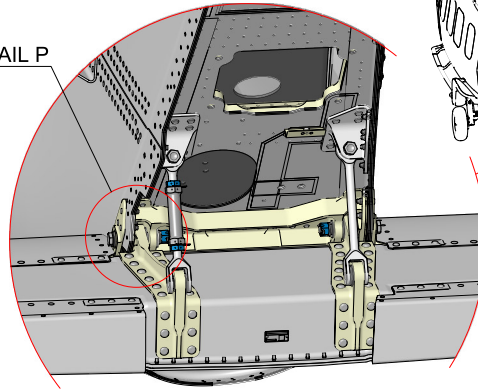
**Figure 6**



**Figure 7**

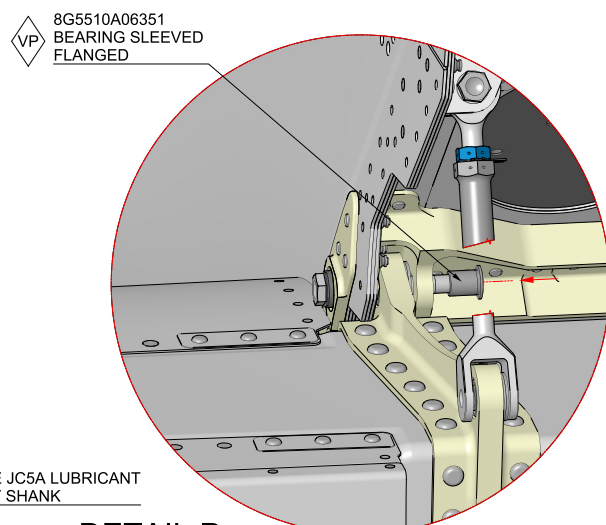
**8G5510P00511**  
**TAIL PLANE RETROMOD**  
**STEP 7**

DETAIL P



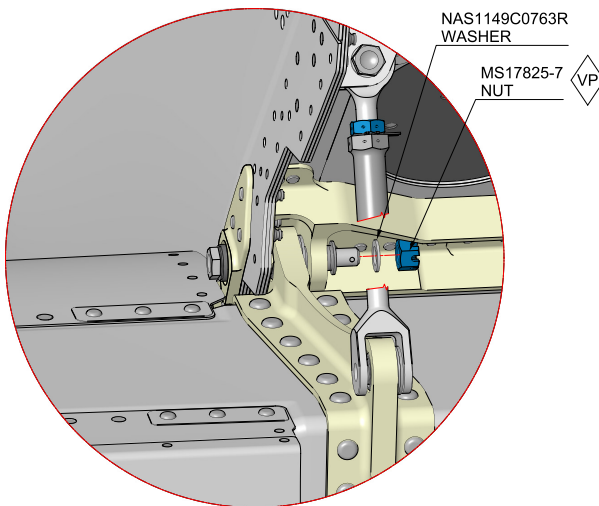
**DETAIL P**

**STEP 7.1**  
INSTALL BOLT, CONVEX AND CONCAVE WASHERS.



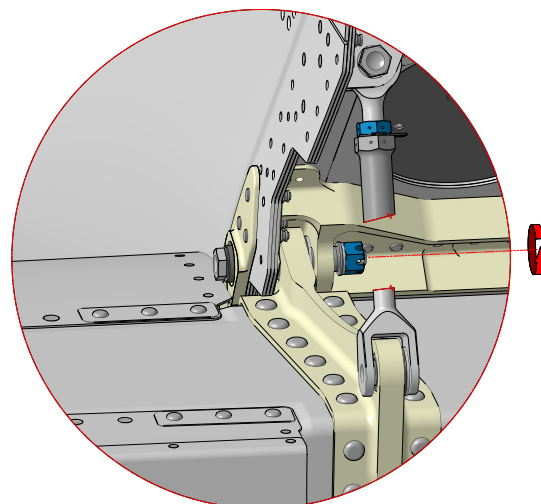
**DETAIL P**

**STEP 7.2**  
INSTALL BEARING SLEEVED FLANGED ONTO THE BOLT SHANK.



**DETAIL P**

**STEP 7.3**  
INSTALL INDICATED WASHER AND NUT.



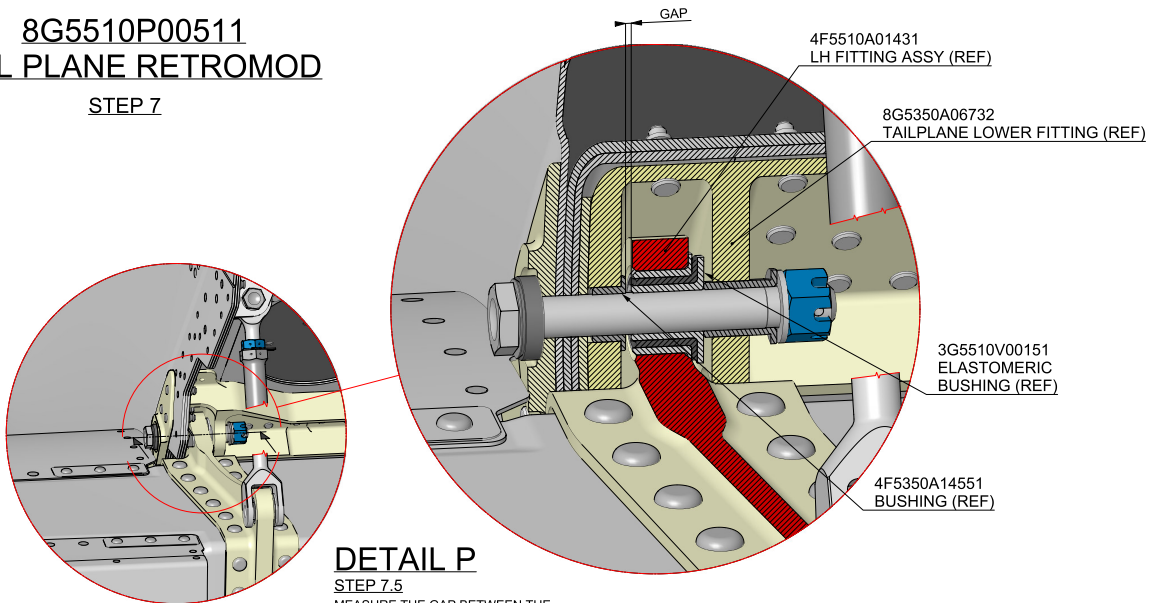
**DETAIL P**

**STEP 7.4**  
LIGHTLY TIGHTEN THE NUT.

**Figure 8**

**8G5510P00511**  
**TAIL PLANE RETROMOD**

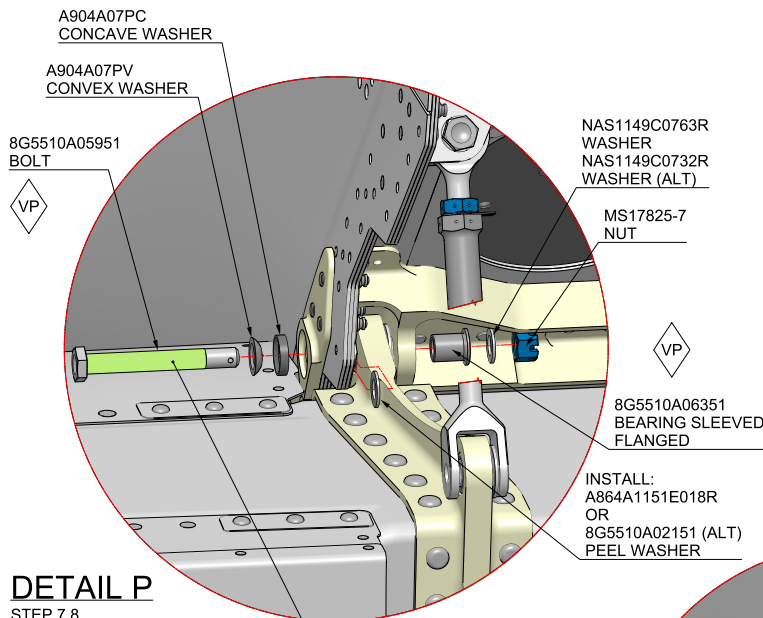
**STEP 7**



**DETAIL P**

**STEP 7.5**

MEASURE THE GAP BETWEEN THE LOWER FITTING BUSHING P/N 4F5350A14551 AND THE ELASTOMERIC BUSHING P/N 3G5510V00151.

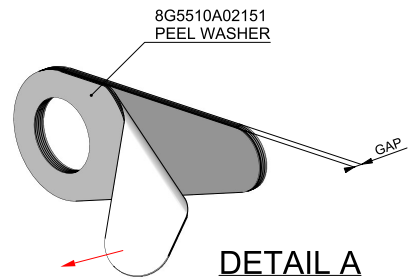


**DETAIL P**

**STEP 7.8**

REMOVE:  
8G5510A05951 BOLT  
A904A07PV CONVEX WASHER  
A904A07PC CONCAVE WASHER  
8G5510A06351 BEARING SLEEVED FLANGED  
NAS1149C0763R WASHER  
MS21225-7 NUT  
PREVIOUSLY INSTALLED.  
INSTALL:  
8G5510A02151 PEEL WASHER.  
RE-INSTALL THE REMOVED HARDWARE.

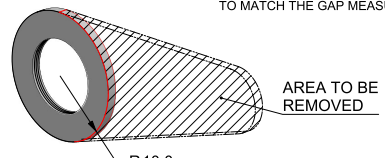
APPLY:  
TITANITE JC5A LUBRICANT  
ON BOLT SHANK



**DETAIL A**

**STEP 7.6**

ADJUST THE THICKNESS OF THE PEEL WASHER 8G5510A02151 TO MATCH THE GAP MEASURED.



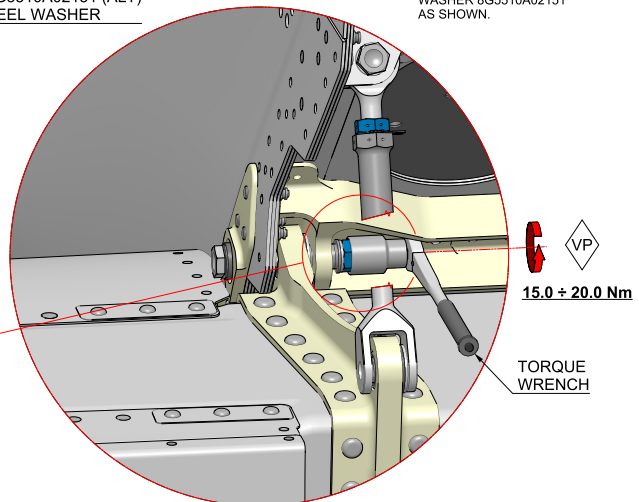
**DETAIL A**

**STEP 7.7**

TRIM THE PEEL WASHER 8G5510A02151 AS SHOWN.

NAS1149C0763R WASHER  
NAS1149C0732R WASHER (ALT)

INSTALL:  
MS24665-302  
COTTER PIN

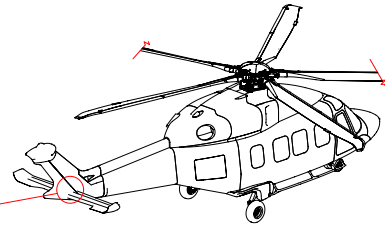


**DETAIL P**

**STEP 7.9**

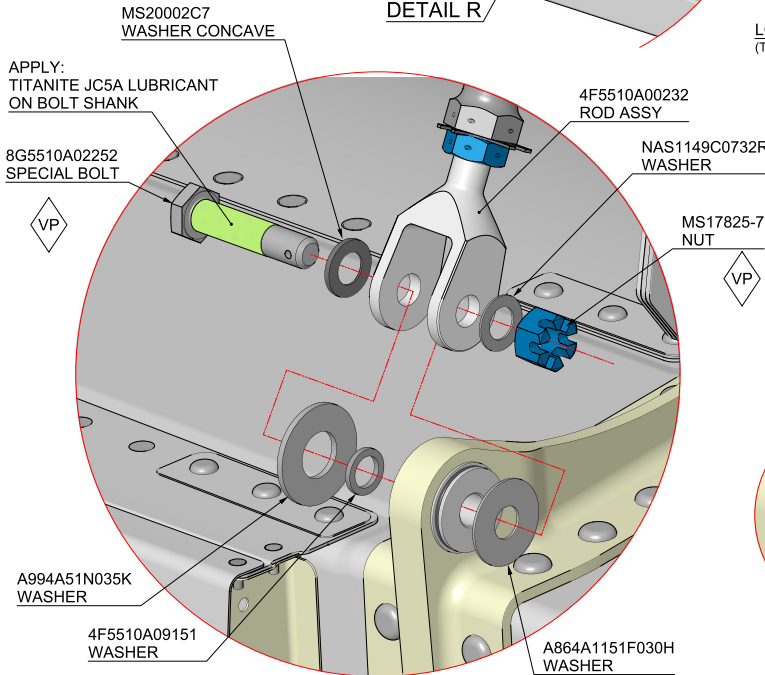
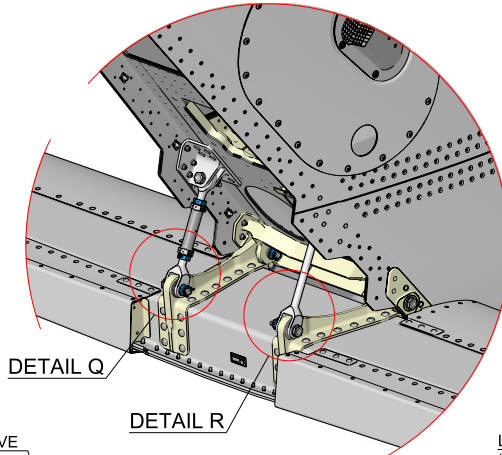
TORQUE THE NUT TO 20.0 Nm  
UNDO NUT AND BOLT TO RELEASE THE RUN DOWN TORQUE  
TORQUE THE NUT TO FINAL TORQUE:  
15.0 + 20.0 Nm  
LOCK THE NUT WITH INDICATED COTTER PIN.

**Figure 9**



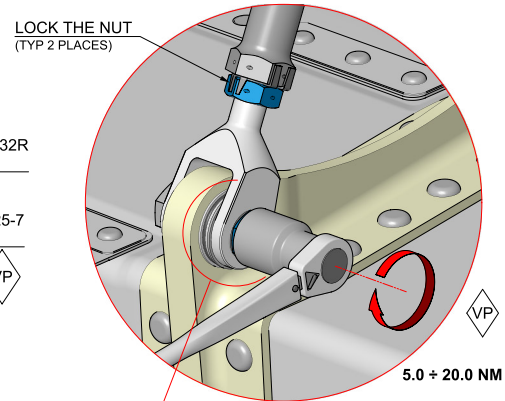
**8G5510P00511  
TAIL PLANE RETROMOD**

STEP 8



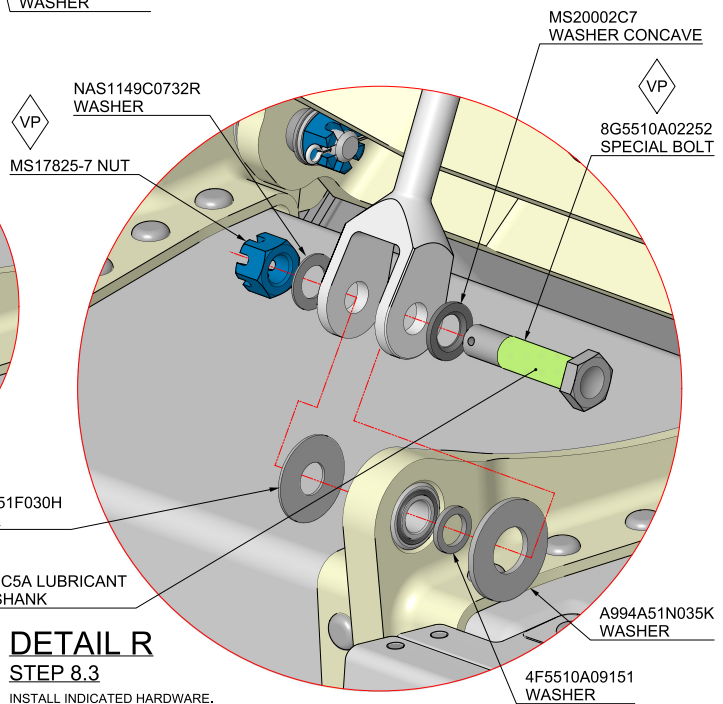
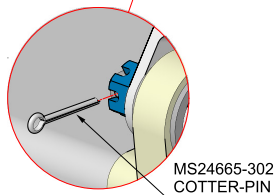
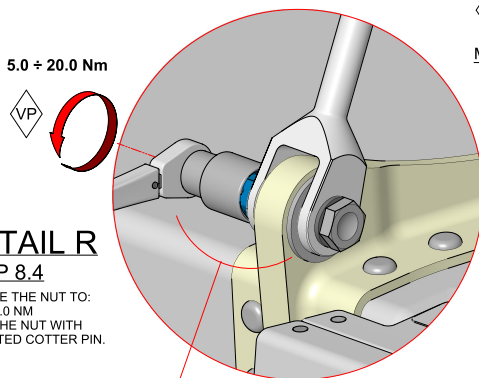
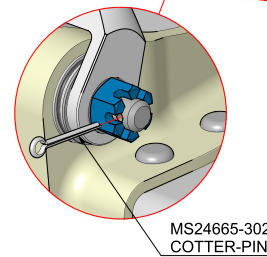
**DETAIL Q  
STEP 8.1**

INSTALL INDICATED HARDWARE.



**DETAIL Q  
STEP 8.2**

TORQUE THE NUT TO:  
5.0 ± 20.0 NM  
LOCK THE NUT WITH  
INDICATED COTTER-PIN.

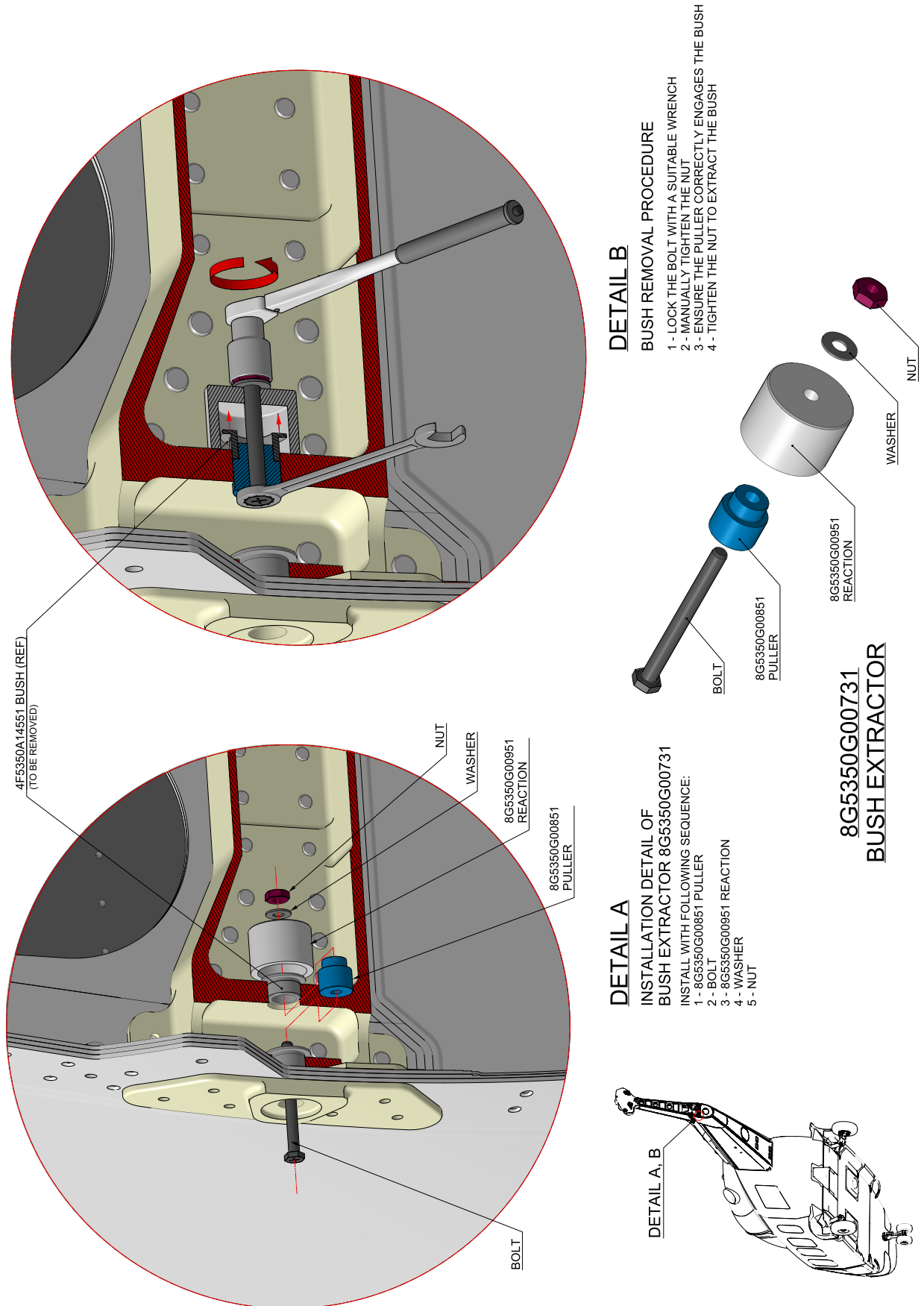


**DETAIL R  
STEP 8.3**

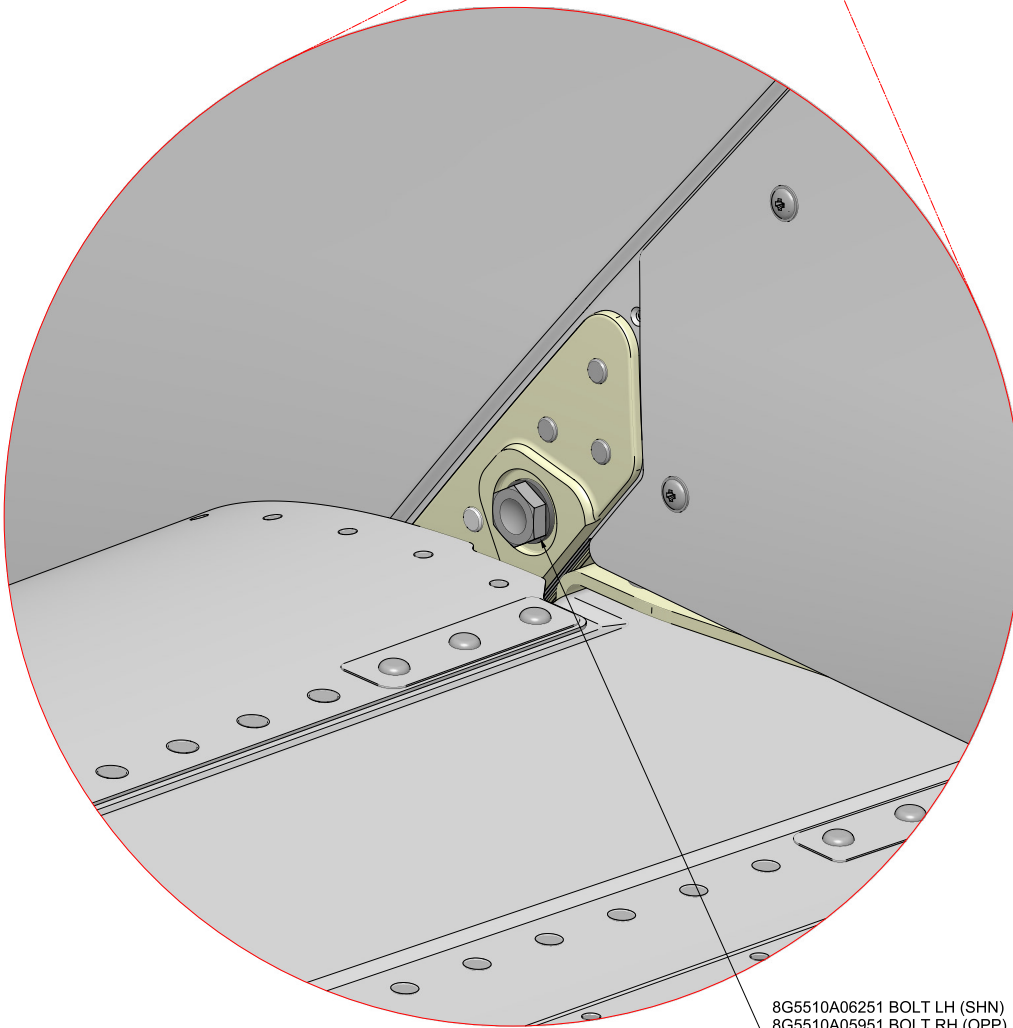
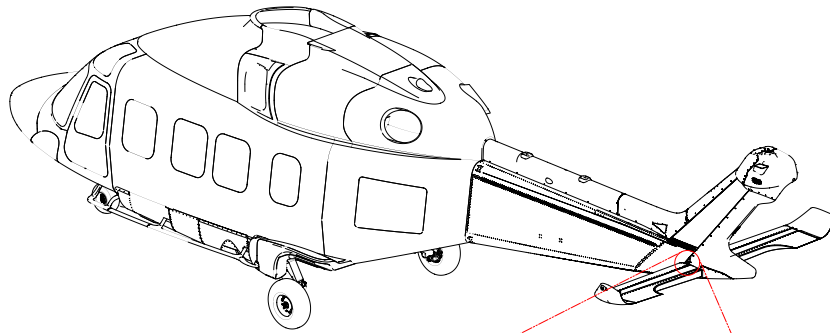
INSTALL INDICATED HARDWARE.

**Figure 10**





**Figure 11**



**DETAIL A**  
PERFORM VISUAL INSPECTION OF BOLT  
LH SIDE SHOWN  
RH SIDE OPPOSITE

**Figure 12**

S.B. N°189-177 EMERGENCY ALERT  
DATE: February 22, 2018  
REVISION: A - February 28, 2018

