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AgustaWestland Products

SERVICE BULLETIN

N° 139-604

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REV. : A - January 31, 2023

TITLE

ATA 66 – INSTALLATION OF KIT MOORING

REVISION LOG

Revision A of this Service Bulletin is issued in order to extend the effectivity also to AW139 helicopters from S/N 31005 to S/N 31157 and from S/N 41001 to S/N 41023.

Revision bars identify changes.

1. PLANNING INFORMATION

A. EFFECTIVITY

AW139 helicopters from S/N 31005 to S/N 31157 (except S/N 31007), from S/N 41001 to S/N 41023, from S/N 31201 to 31398, from S/N 41201 to 41293, from S/N 31400 to 31699, from S/N 41300 to 41499, from S/N 31700 onwards and from S/N 41500 onwards.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instructions on how to perform the installation of the kit mooring P/N 4G6610F00211.

LH issued this SB for the following reason:

Helicopter Reliability/Maintainability	
Product Improvement	
Obsolescence	
Customization	✓
Product/Capability Enhancement	

E. DESCRIPTION

The kit mooring allows the mooring of the helicopter to prevent damage during periods of high winds or turbulent weather. The helicopter should be moored if parked in the open when forecast wind velocity is between 45 knots (52 mph) and 75 knots (86 mph). If parked in the open, the helicopter should be positioned on a paved ramp between suitably spaced tie down rings and should be headed in the direction from which the highest forecast winds are expected.

Fuselage mooring shackles should be secured to ramp tie down points with rope, cable, or manufactured tie down assemblies. If suitably spaced ramp tie downs are not

available, the helicopter should be parked on an unpaved surface and secured to subsurface mooring anchors or "deadman" anchors.

The kit mooring includes eight tie-down shackles, four on each side of the fuselage, installed on dedicated supports.

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.

EASA 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 thirty-two (32) MMH are deemed necessary.

MMH are based on hands-on time and can change with personnel and facilities available.

H. WEIGHT AND BALANCE

- For helicopters that apply the Mooring Kit P/N 4G6610F00211 the following entry in Chart A must be added:

WEIGHT (kg)	12.1	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	5083	61504.3
LATERAL BALANCE	-194	-2347.4

- For helicopters already equipped with kit hoist Goodrich (P/N 4G2591F00211 or P/N 4G2591F00111) that apply the kit Mooring P/N 4G6610F00211, the following entry in Chart A must be added:

WEIGHT (kg)	10.48	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	5243	54951.4
LATERAL BALANCE	-359	-3766.5

- For helicopters already equipped with kit hoist Breeze (P/N 3G2591F00111 or P/N 3G2591F00113) that apply the kit Mooring P/N 4G6610F00211, the following entry in Chart A must be added:

WEIGHT (kg)	12.013	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	5090	61151.5
LATERAL BALANCE	-201	-2419.3

I. REFERENCES

1) PUBLICATIONS

DATA MODULE		DESCRIPTION	PART
DM01	39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	-
DM02	39-A-20-00-00-00A-711A-A	Threaded fasteners - Tighten procedure	-

2) ACRONYMS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
AR	As Required
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LHD	Leonardo Spa Helicopters
MMH	Maintenance-Man-Hours

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1. PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**4G6610F00211**		**KIT MOORING**	**REF**	**.**		**-**
2	**4G1020A00812**		**MOORING INSTALLATION**	**REF**	**..**		**-**
3	109-0882-18-101		Shackle	8	…		139-604L1
4	4G1020A00132		Back support assy LH	1	…		139-604L1
5	4G1020A00232		Back support assy RH	1	…		139-604L1
6	4G1020A00431		Front support assy RH	1	…		139-604L1
7	4G1020A00931		Diagonal support assy LH	1	…		139-604L1
8	4G1020A01031		Diagonal support assy RH	1	…		139-604L1
9	4G1020A01151		Lower diagonal strut	2	…		139-604L1
10	4G1020A01231		Front support assy LH	1	…		139-604L1
11	4G1020A01351		Torsion spring	2	…		139-604L1
12	4G1020A01451		Spacer	2	…		139-604L1
13	A161A0532	AW010TY002FB03B	Countersunk washer	8	…		139-604L1
14	A994A36T016H	AW017TY36T016H	Nonmetallic washer	6	…		139-604L1
15	AN175-22		Bolt	6	…		139-604L1
16	AN175-26		Bolt	2	…		139-604L1
17	MS17825-5		Nut	8	…		139-604L1
18	MS17826-6		Nut	6	…		139-604L1
19	MS20002C6		Washer	14	…		139-604L1
20	MS24665-174		Cotter pin	8	…		139-604L1
21	MS24665-302		Cotter pin	6	…		139-604L1
22	NAS1149C0516R		Washer	18	…		139-604L1
23	NAS1149C0532R		Washer	6	…		139-604L1
24	NAS1149C0563R		Washer	2	…		139-604L1
25	NAS1149C0663R		Washer	12	…		139-604L1
26	NAS626H16	AW012TB26H16	Bolt	12	…	(1)	139-604L1
27	NAS626H18	AW012TB26H18	Bolt	2	…	(2)	139-604L1
28	NAS6706D12		Bolt	6	…		139-604L1
29	NAS75-5-015		Bushing sleeve	2	…		139-604L1
30	**3G5306P42211**		**RETROMOD FOR HOIST GOODRICH**	**REF**	**..**	**(3)**	**-**
31	NAS1149C0516R		Washer	2	…		139-604L1
32	**3G5306P42311**		**RETROMOD FOR HOIST BREEZE**	**REF**	**..**	(4)	-
33	3G1020A00131		Shackle support assy	1	…		139-604L2
34	3G1020A00232		Shackle support assy	1	…		139-604L2
35	3G2591A02751		Washer	3	…		139-604L2
36	NAS1149C0563R		Washer	2	…		139-604L2
37	NAS626H36	AW012TB26H36	Bolt	2	…		139-604L2
38	NAS626H42		Bolt	1	…		139-604L2

Refer also to IPD for the spares materials required to comply with the AMP DMs referenced in the accomplishment instructions.

1) CONSUMABLES

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

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
39	199-05-004 Type II Class B2 SAE AMS-S-8802D	Sealant Proseal 890	AR	(5)	-
40	MS20995C32	Lockwire (C014)	AR	(5)	-
41	MS20995C41	Lockwire (C241)	AR	(5)	-
42	B7444-1-1-10C	Insulating tube	AR	(5)	-

Refer also to AMDI for the consumable materials required to comply with the AMP DM referenced in the accomplishment instructions.

2) 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
139-604L1	1		-
139-604L2	1	(4)	-

NOTE

(1) It is allowed to use bolt P/N NAS626-16 instead of bolt P/N NAS626H16.

(2) It is allowed to use bolt P/N NAS626-18 instead of bolt P/N NAS626H18.

(3) To be applied only if one of the following kits is installed:

- Kit single hoist Goodrich P/N 4G2591F00211
- Kit double hoist Goodrich P/N 4G2591F00111

(4) To be applied only if one of the following kits is installed:

- Kit external hoist Breeze P/N 3G2591F00111
- Kit hoist Breeze extended cable length P/N 3G2591F00113

(5) Item to be procured as local supply.

B. SPECIAL TOOLS

Refer also to ITEP for the special tools required to comply with the AMP DM referenced in the accomplishment instructions.

C. INDUSTRY SUPPORT INFORMATION

Customization.

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) Protect properly all the equipment not removed from area affected by the modification during installation procedure.

c) Carry out duplicate inspections to check correct installation, safety, security, final torque and locking on vital point parts (VP).

1. In accordance with AMP DM 39-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. With reference to figures 1 thru 6, perform the mooring installation P/N 4G1020A00812 as described in the following procedure:
   - 2.1 With reference to Figure 1, gain access to the area affected by the installation on the left side of the fuselage.
   - 2.2 With reference to Figure 2 Detail A, put the front support assy LH P/N 4G1020A01231 in its installation position on the structure.
   - 2.3 With reference to Figure 2 Section B-B, if deemed necessary, perform a cut-out of the upper forward guide assy P/N 3P5330A02731 around the contour of the front support assy LH.
   - 2.4 With reference to Figure 2 View A and Section B-B, install the front support assy LH P/N 4G1020A01231 on the fuselage structure by means of n°4 bolts P/N NAS626H16 and n°4 washers P/N MS20002C6.
   - 2.5 In accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the four bolts P/N NAS626H16 to the standard torque value.

NOTE

It is allowed to add/remove washer P/N NAS1149C0516R (on nut side) to reduce/increase gap between the shackle P/N 109-0882-18-101 and the front support assy LH P/N 4G1020A01231.

2.6 With reference to Figure 2 Section B-B and Detail C, install one of the two shackles P/N 109-0882-18-101 on the front support assy LH P/N 4G1020A01231 by means of n°1 bolt P/N AN175-22, n°1 washer P/N A161A0532, n°2 washers P/N NAS1149C0516R, n°1 washer P/N A994A36T016H, n°1 washer P/N NAS1149C0532R and n°1 nut P/N MS17825-5.

2.7 Tighten the nut P/N MS17825-5 to a torque value of 4.00 thru 4.80 Nm to ensure a friction during the rotation of the shackle.

2.8 With reference to Figure 2 Detail C, safety the nut P/N MS17825-5 with n°1 cotter pin P/N MS24665-174.

2.9 Repeat steps 2.6 thru 2.8 to install the other shackle P/N 109-0882-18-101 on the front support assy LH P/N 4G1020A01231.

2.10 With reference to Figure 3 Detail D, put the back support assy LH P/N 4G1020A00132 in its installation position on the structure.

2.11 With reference to Figure 4 Section K-K, perform a cut-out on the cowling P/N 3P7110A15151 according to the back support assy LH P/N 4G1020A00132.

2.12 With reference to Figure 4 Section H-H, apply the sealant Proseal 890 on the cut-out.

2.13 With reference to Figure 4 Section K-K, install the back support assy LH P/N 4G1020A00132 on the fuselage structure by means of n°2 bolts P/N NAS626H16 and n°2 washers P/N MS20002C6.

2.14 In accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the two bolts P/N NAS626H16 to the standard torque value.

2.15 With reference to Figure 3 Detail D and Section G-G, install the diagonal support assy LH P/N 4G1020A00931 on the structure by means of n°1 bolt P/N NAS626H18, n°1 washer P/N MS20002C6 and n°1 spacer P/N 4G1020A01451.

2.16 With reference to Figure 3 Detail D and Figure 4 Section H-H, install the diagonal support assy LH P/N 4G1020A00931 on the back support assy LH P/N 4G1020A00132 by means of n°1 bolt P/N NAS6706D12, n°2 washers P/N NAS1149C0663R and n°1 nut P/N MS17826-6.

2.17 In accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the bolt P/N NAS626H18 and the nut P/N MS17826-6 to the standard torque value.

2.18 With reference to Figure 4 Section H-H, safety the nut P/N MS17826-6 by means of n°1 cotter pin P/N MS24665-302.

2.19 With reference to Figure 3 Detail D and Figure 4 Section H-H and Section J-J, install the lower diagonal strut P/N 4G1020A01151 on the back support assy LH P/N 4G1020A00132 and on the diagonal support assy LH P/N 4G1020A00931 by means of n°2 bolts P/N NAS6706D12, n°4 washers P/N NAS1149C0663R and n°2 nuts P/N MS17826-6.

2.20 In accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the two nuts P/N MS17826-6 to the standard torque value.

2.21 With reference to Figure 4 Section H-H and Section J-J, safety the two nuts P/N MS17826-6 by means of n°2 cotter pins P/N MS24665-302.

2.22 With reference to Figure 3 Detail D and in accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the four bolts P/N AN3H4A to the standard torque value.

2.23 With reference to Figure 3 Detail D, safety the four bolts P/N AN3H4A in pairs by means of the lockwire P/N MS20995C32.

NOTE

It is allowed to add/remove washer P/N NAS1149C0516R (on nut side) to reduce/increase gap between the shackle P/N 109-0882-18-101 and the back support assy LH P/N 4G1020A00132.

2.24 With reference to Figure 4 Detail D and Figure 2 Detail C, install the upper shackle P/N 109-0882-18-101 on the back support assy LH P/N 4G1020A00132 by means of n°1 bolt P/N AN175-22, n°1 washer P/N A161A0532, n°2 washers P/N NAS1149C0516R, n°1 washer P/N A994A36T016H, n°1 washer P/N NAS1149C0532R and n°1 nut P/N MS17825-5.

2.25 Tighten the nut P/N MS17825-5 to a torque value of 4.00 thru 4.80 Nm to ensure a friction during the rotation of the shackle.

2.26 With reference to Figure 2 Detail C, safety the nut P/N MS17825-5 with n°1 cotter pin P/N MS24665-174.

NOTE

It is allowed to add/remove washer P/N NAS1149C0516R (on nut side) to reduce/increase gap between the shackle P/N 109-0882-18-101 and the back support assy LH P/N 4G1020A00132.

2.27 With reference to Figure 3 Detail D and Detail E, install the lower shackle

P/N 109-0882-18-101 on the back support assy LH 4G1020A00132 by means of n°1 bolt P/N AN175-26, n°1 washer P/N A161A0532, n°1 bushing sleeve P/N NAS75-5-015, n°3 washers P/N NAS1149C0516R, n°1 washer P/N NAS1149C0563R and n°1 nut P/N MS17825-5.

2.28 With reference to Figure 3 Detail E and View F, install the torsion spring P/N 4G1020A01351 on the lower shackle. Make sure to insert the spring arm in the hole on the back support assy LH P/N 4G1020A00132.

2.29 Tighten the nut P/N MS17825-5 to a torque value of 4.00 thru 4.80 Nm to ensure a friction during the rotation of the shackle.

2.30 With reference to Figure 3 Detail E, safety the nut P/N MS17825-5 with n°1 cotter pin P/N MS24665-174.

2.31 With reference to Figure 1, gain access to the area affected by the installation on the right side of the fuselage.

NOTE

Perform step 2.32 only if the following kits are not installed on the helicopter:

- Kit single hoist Goodrich P/N 4G2591F00211
- Kit double hoist Goodrich P/N 4G2591F00111
- Kit external hoist Breeze P/N 3G2591F00111
- Kit hoist Breeze extended cable length P/N 3G2591F00113

2.32 With reference to Figure 2, repeat steps 2.2 thru 2.9 to install the front support assy RH P/N 4G1020A00431 and related shackles P/N 109-0882-18-101.

2.33 With reference to Figure 5 Detail L, put the back support assy RH P/N 4G1020A00232 in its installation position on the structure.

2.34 With reference to Figure 6 Detail R-R, perform a cut-out on the cowling P/N 3P7110A15251 according to the back support assy RH P/N 4G1020A00232.

2.35 With reference to Figure 6 Detail P-P, apply the sealant Proseal 890 on the cut-out.

2.36 With reference to Figure 6 Section R-R, install the back support assy RH P/N 4G1020A00232 on the fuselage structure by means of n°2 bolts P/N NAS626H16 and n°2 washers P/N MS20002C6.

2.37 In accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the two bolts P/N NAS626H16 to the standard torque value.

2.38 With reference to Figure 5 Detail L and Section N-N, install the diagonal support assy RH P/N 4G1020A01031 on the structure by means of n°1 bolt

P/N NAS626H18, n°1 washer P/N MS20002C6 and n°1 spacer P/N 4G1020A01451.

2.39 With reference to Figure 5 Detail L and Figure 6 Section P-P, install the diagonal support assy RH P/N 4G1020A01031 on the back support assy RH P/N 4G1020A00232 by means of n°1 bolt P/N NAS6706D12, n°2 washers P/N NAS1149C0663R and n°1 nut P/N MS17826-6.

2.40 In accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the bolt P/N NAS626H18 and the nut P/N MS17826-6 to the standard torque value.

2.41 With reference to Figure 6 Section P-P, safety the nut P/N MS17826-6 by means of n°1 cotter pin P/N MS24665-302.

2.42 With reference to Figure 5 Detail L and Figure 6 Section P-P and Section Q-Q, install the lower diagonal strut P/N 4G1020A01151 on the back support assy RH P/N 4G1020A00232 and on the diagonal support assy RH P/N 4G1020A01031 by means of n°2 bolts P/N NAS6706D12, n°4 washers P/N NAS1149C0663R and n°2 nuts P/N MS17826-6.

2.43 In accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the two nuts P/N MS17826-6 to the standard torque value.

2.44 With reference to Figure 6 Section P-P and Section Q-Q, safety the two nuts P/N MS17826-6 by means of n°2 cotter pins P/N MS24665-302.

2.45 With reference to Figure 5 Detail L and in accordance with AMP DM 39-A-20-00-00-00A-711A-A, tighten the four bolts P/N AN3H4A to the standard torque value.

2.46 With reference to Figure 5 Detail L, safety the four bolts P/N AN3H4A in pairs by means of the lockwire P/N MS20995C32.

NOTE

It is allowed to add/remove washer P/N NAS1149C0516R (on nut side) to reduce/increase gap between the shackle P/N 109-0882-18-101 and the back support assy RH P/N 4G1020A00232.

2.47 With reference to Figure 5 Detail L and Figure 2 Detail C, install the upper shackle P/N 109-0882-18-101 on the back support assy RH P/N 4G1020A00232 by means of n°1 bolt P/N AN175-22, n°1 washer P/N A161A0532, n°2 washers P/N NAS1149C0516R, n°1 washer P/N A994A36T016H, n°1 washer P/N NAS1149C0532R and n°1 nut P/N MS17825-5.

2.48 Tighten the nut P/N MS17825-5 to a torque value of 4.00 thru 4.80 Nm to ensure a friction during the rotation of the shackle.

2.49 With reference to Figure 2 Detail C, safety the nut P/N MS17825-5 with n°1 cotter pin P/N MS24665-174.

NOTE

It is allowed to add/remove washer P/N NAS1149C0516R (on nut side) to reduce/increase gap between the shackle P/N 109-0882-18-101 and the back support assy RH P/N 4G1020A00232.

2.50 With reference to Figure 5 Detail L and Detail M, install the lower shackle P/N 109-0882-18-101 on the back support assy RH P/N 4G1020A00232 by means of n°1 bolt P/N AN175-26, n°1 washer P/N A161A0532, n°1 bushing sleeve P/N NAS75-5-015, n°3 washers P/N NAS1149C0516R, n°1 washer P/N NAS1149C0563R and n°1 nut P/N MS17825-5.

2.51 With reference to Figure 5 Detail M and Figure 3 View F, install the torsion spring P/N 4G1020A01351 on the lower shackle. Make sure to insert the spring arm in the hole on the back support assy RH P/N 4G1020A00232.

2.52 Tighten the nut P/N MS17825-5 to a torque value of 4.00 thru 4.80 Nm to ensure a friction during the rotation of the shackle.

2.53 With reference to figure 5 Detail M, safety the nut P/N MS17825-5 with n°1 cotter pin P/N MS24665-174.

NOTE

Perform step 3 and related substeps only if one of the following kits is installed:

- Kit single hoist Goodrich P/N 4G2591F00211
- Kit double hoist Goodrich P/N 4G2591F00111

3. With reference to Figure 7, perform the retromod for hoist Goodrich P/N 3G5306P42211 as described in the following procedure:

3.1 With reference to Figure 7 Detail A and Detail B, remove the existing shackles and related fixing hardware from the hoist support P/N 3G2591A05351.

NOTE

It is allowed to add/remove washer P/N NAS1149C0516R (on nut side) to reduce/increase gap between the shackle P/N 109-0882-18-101 and the hoist support P/N 3G2591A05351.

3.2 With reference to Figure 7 Detail B, install one of the two shackles P/N 109-0882-18-101 on the hoist support P/N 3G2591A05351 by means of n°1 bolt P/N AN175-22, n°1 washer P/N A161A0532, n°3 washers

P/N NAS1149C0516R and n°1 nut P/N MS17825-5.

3.3 Tighten the nut P/N MS17825-5 until a friction during the rotation of the shackle is present.

3.4 With reference to Figure 7 Detail B, safety the nut P/N MS17825-5 by means of a cotter pin P/N MS24665-174.

3.5 Repeat steps 3.2 thru 3.4 to install the other shackle P/N 109-0882-18-101 on the hoist support P/N 3G2591A05351.

NOTE

Perform step 4 and related substeps only if one of the following kits is installed:

- Kit external hoist Breeze P/N 3G2591F00111
- Kit hoist Breeze extended cable length P/N 3G2591F00113

4. With reference to Figure 8, perform the retromod for hoist Breeze P/N 3G5306P42311 as described in the following procedure:

4.1 With reference to Figure 8 Detail A, remove n°3 bolts P/N NAS626H24 and n°3 washers P/N 3G2591A02751 from the hoist mount assy P/N 3G2591A00634.

NOTE

To obtain the correct grip length it is allowed to install an additional washer under the bolt head.

4.2 With reference to Figure 8 Detail A and Section C-C, install the shackle support assy P/N 3G1020A00232 and the shackle support assy P/N 3G1000A00131 on the hoist mount assy P/N 3G2591A00634 by means of n°2 bolts P/N NAS626H36, n°1 bolt P/N NAS626H42 and n°3 washers P/N 3G2591A02751.

4.3 Tighten the two bolts P/N NAS626H36 and the bolt P/N NAS626H42 to a torque value of 37.98 thru 43.40 Nm.

4.4 With reference to Figure 8 Section C-C, safety the bolts P/N NAS626H36 and the bolt P/N NAS626H42 by means of the lockwire P/N MS20995C41 and the insulating tube P/N B7444-1-1-10C.

NOTE

It is allowed to add/remove washer P/N NAS1149C0516R (on nut side) to reduce/increase gap between the shackle P/N 109-0882-18-101 and the shackle support assy P/N 3G1020A00232.

4.5 With reference to Figure 8 Detail B, install the shackle P/N 109-0882-18-101 on the shackle support assy P/N 3G1020A00232 by means of n°1 bolt

P/N AN175-22, n°1 washer P/N A161A0532, n°1 washer P/N NAS1149C0563R, n°2 washers P/N NAS1149C0516R and n°1 nut P/N MS17825-5.

4.6 Tighten the nut P/N MS17825-5 to 6.80 thru 8.00 Nm to ensure a friction during the rotation of the shackle.

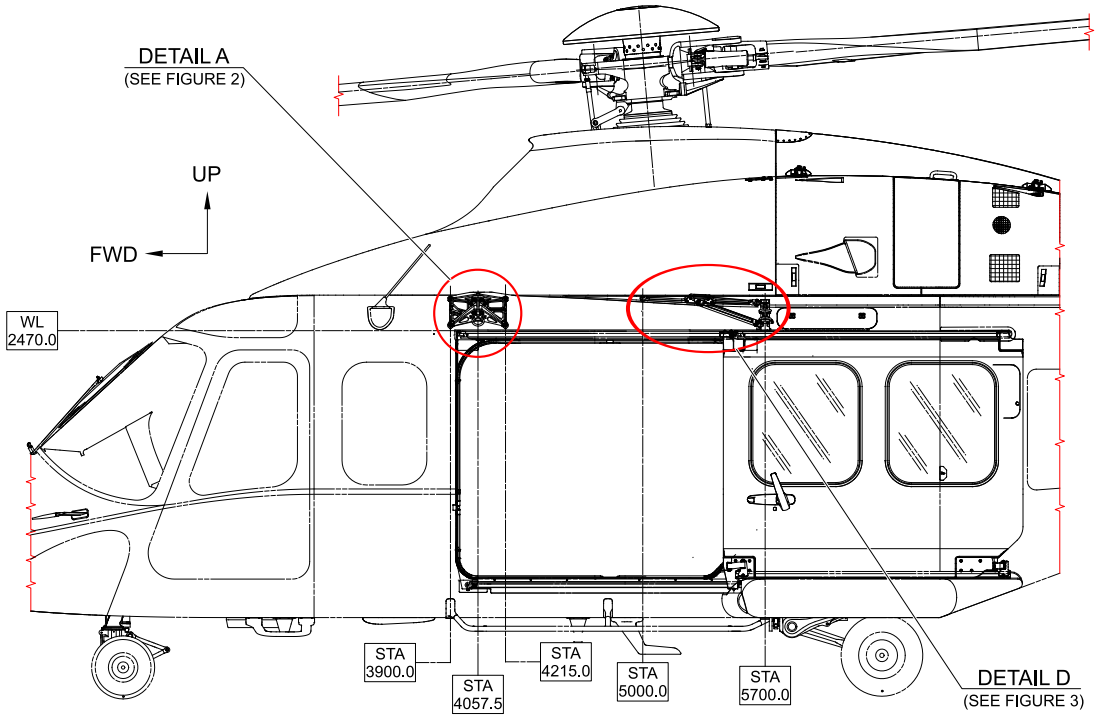
4.7 With reference to Figure 8 Detail B, safety the nut P/N MS17825-5 with n°1 cotter pin P/N MS24665-174.

4.8 Repeat step 4.5 thru 4.7 to install the shackle P/N 109-0882-18-101 on the shackle support assy P/N 3G1000A00131.

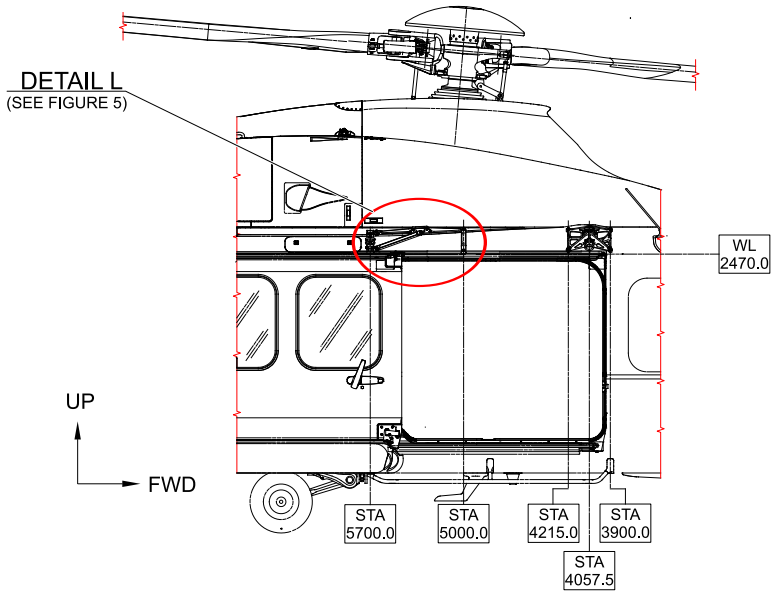
5. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
6. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
7. Send the attached compliance form to the following mail box:

   cse.aw139.aw@leonardocompany.com

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



VIEW LOOKING INBOARD LEFT SIDE



VIEW LOOKING INBOARD RIGHT SIDE

Figure 1

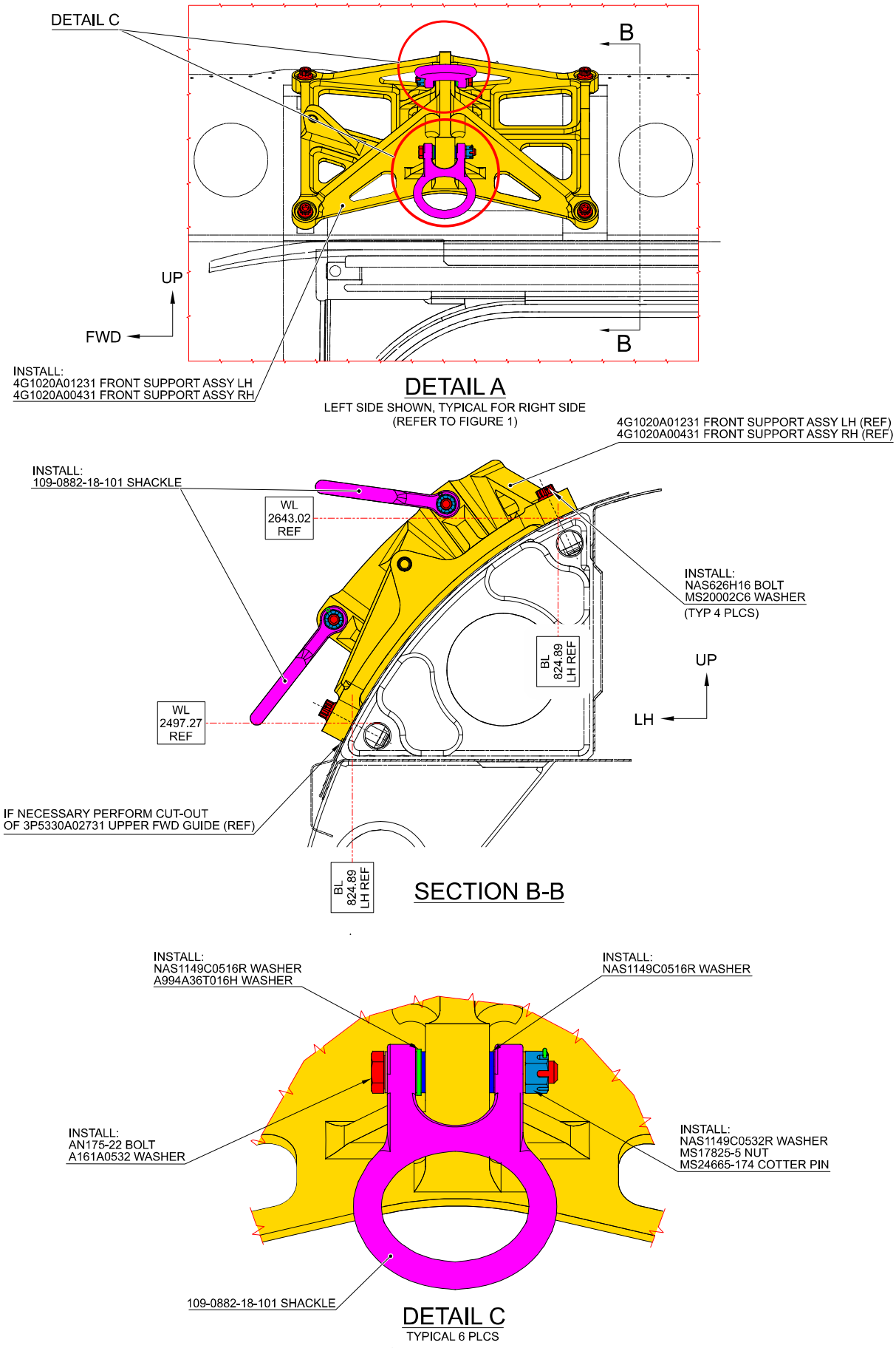

DETAIL C
B
UP
FWD
B
INSTALL:
4G1020A01231 FRONT SUPPORT ASSY LH
4G1020A00431 FRONT SUPPORT ASSY RH
DETAIL A
LEFT SIDE SHOWN, TYPICAL FOR RIGHT SIDE
(REFER TO FIGURE 1)
4G1020A01231 FRONT SUPPORT ASSY LH (REF)
4G1020A00431 FRONT SUPPORT ASSY RH (REF)
INSTALL:
109-0882-18-101 SHACKLE
WL
2643.02
REF
INSTALL:
NAS626H16 BOLT
MS20002C6 WASHER
(TYP 4 PLCS)
BL
824.89
LH REF
UP
LH
WL
2497.27
REF
IF NECESSARY PERFORM CUT-OUT
OF 3P5330A02731 UPPER FWD GUIDE (REF)
BL
824.89
LH REF
SECTION B-B
INSTALL:
NAS1149C0516R WASHER
A994A36T016H WASHER
INSTALL:
NAS1149C0516R WASHER
INSTALL:
AN175-22 BOLT
A161A0532 WASHER
INSTALL:
NAS1149C0532R WASHER
MS17825-5 NUT
MS24665-174 COTTER PIN
109-0882-18-101 SHACKLE
DETAIL C
TYPICAL 6 PLCS

Figure 2

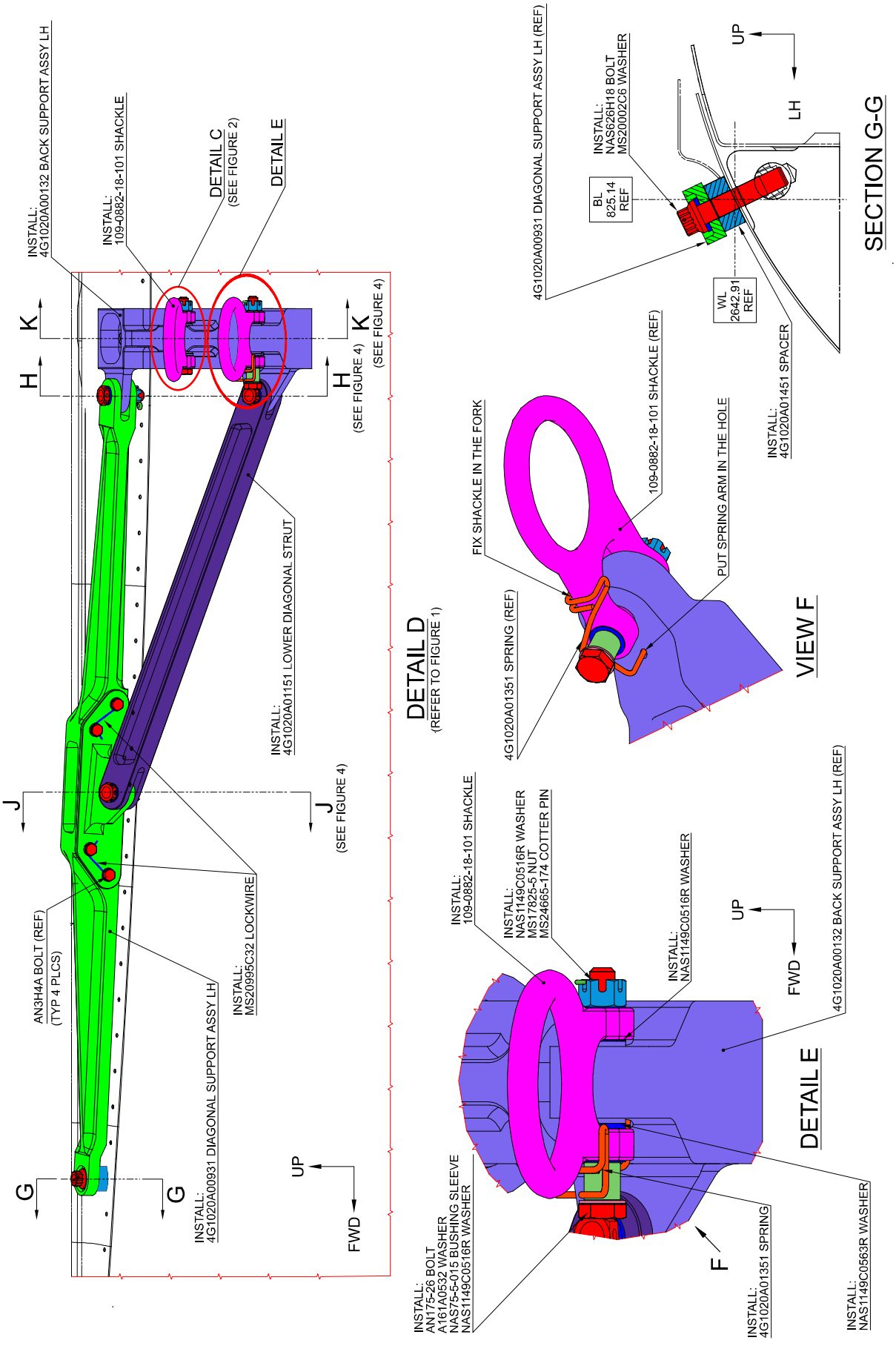

INSTALL:
4G1020A00132 BACK SUPPORT ASSY LH
INSTALL:
109-0882-18-101 SHACKLE
DETAIL C
(SEE FIGURE 2)
DETAIL E
K
H
(SEE FIGURE 4)
INSTALL:
4G1020A01151 LOWER DIAGONAL STRUT
J
(SEE FIGURE 4)
AN3H4A BOLT (REF)
(TYP 4 PLCS)
INSTALL:
MS20995C32 LOCKWIRE
INSTALL:
4G1020A00931 DIAGONAL SUPPORT ASSY LH
G
UP
FWD
DETAIL D
(REFER TO FIGURE 1)
FIX SHACKLE IN THE FORK
4G1020A01351 SPRING (REF)
109-0882-18-101 SHACKLE (REF)
PUT SPRING ARM IN THE HOLE
VIEW F
4G1020A00931 DIAGONAL SUPPORT ASSY LH (REF)
INSTALL:
NAS626H18 BOLT
MS20002C6 WASHER
BL
825.14
REF
WL
2642.91
REF
INSTALL:
4G1020A01451 SPACER
UP
LH
SECTION G-G
INSTALL:
109-0882-18-101 SHACKLE
INSTALL:
NAS1149C0516R WASHER
MS17825-5 NUT
MS24665-174 COTTER PIN
INSTALL:
NAS1149C0516R WASHER
UP
FWD
4G1020A00132 BACK SUPPORT ASSY LH (REF)
DETAIL E
INSTALL:
AN175-26 BOLT
A161A0532 WASHER
NAS75-5-015 BUSHING SLEEVE
NAS1149C0516R WASHER
F
INSTALL:
4G1020A01351 SPRING
INSTALL:
NAS1149C0563R WASHER

Figure 3

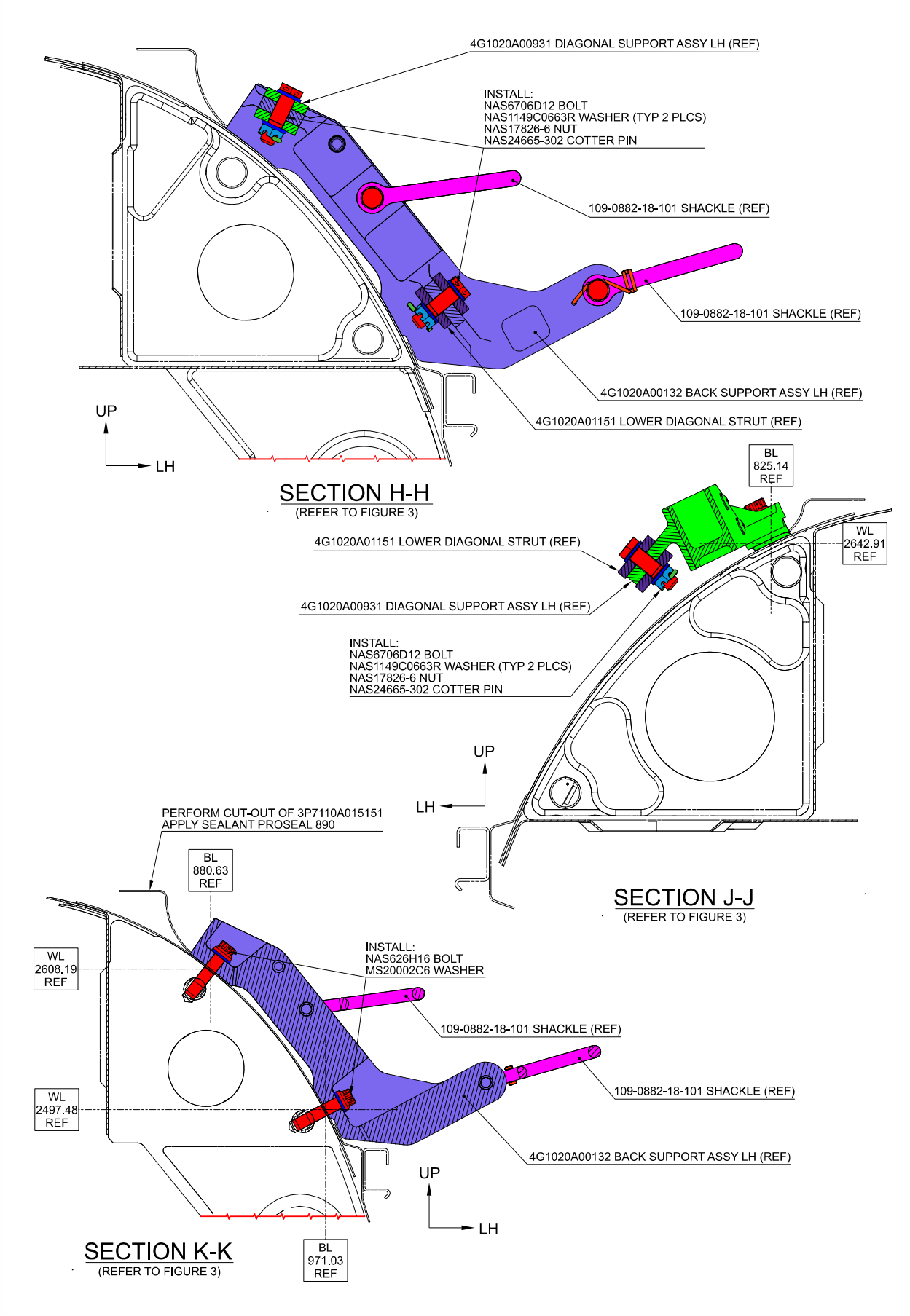

4G1020A00931 DIAGONAL SUPPORT ASSY LH (REF)
INSTALL:
NAS6706D12 BOLT
NAS1149C0663R WASHER (TYP 2 PLCS)
NAS17826-6 NUT
NAS24665-302 COTTER PIN
109-0882-18-101 SHACKLE (REF)
109-0882-18-101 SHACKLE (REF)
4G1020A00132 BACK SUPPORT ASSY LH (REF)
4G1020A01151 LOWER DIAGONAL STRUT (REF)
UP
LH
SECTION H-H
(REFER TO FIGURE 3)
BL 825.14 REF
WL 2642.91 REF
4G1020A01151 LOWER DIAGONAL STRUT (REF)
4G1020A00931 DIAGONAL SUPPORT ASSY LH (REF)
INSTALL:
NAS6706D12 BOLT
NAS1149C0663R WASHER (TYP 2 PLCS)
NAS17826-6 NUT
NAS24665-302 COTTER PIN
UP
LH
SECTION J-J
(REFER TO FIGURE 3)
PERFORM CUT-OUT OF 3P7110A015151
APPLY SEALANT PROSEAL 890
BL 880.63 REF
WL 2608.19 REF
INSTALL:
NAS626H16 BOLT
MS20002C6 WASHER
109-0882-18-101 SHACKLE (REF)
WL 2497.48 REF
109-0882-18-101 SHACKLE (REF)
4G1020A00132 BACK SUPPORT ASSY LH (REF)
UP
LH
SECTION K-K
(REFER TO FIGURE 3)
BL 971.03 REF

Figure 4

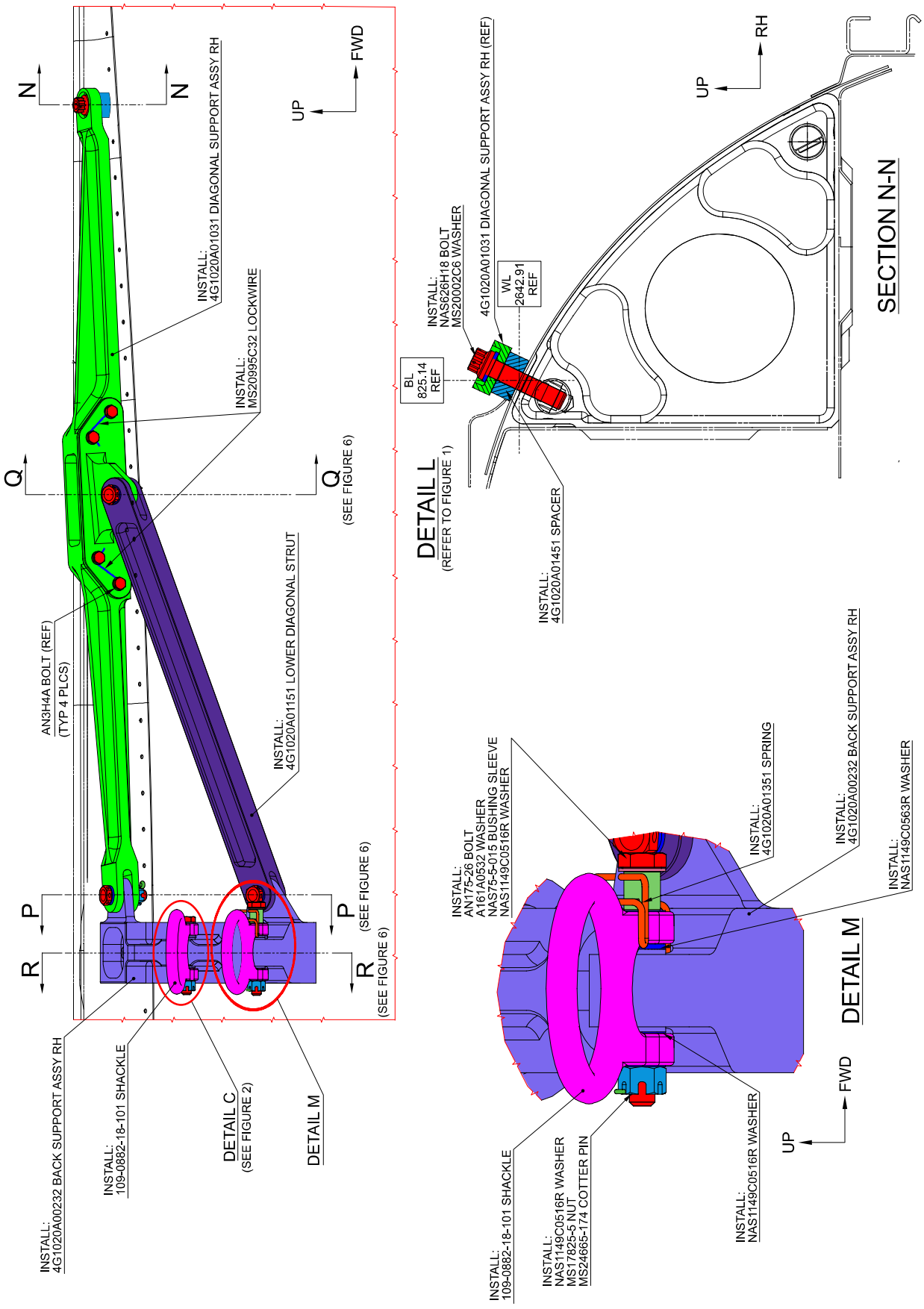

N
N
UP
FWD
INSTALL:
4G1020A01031 DIAGONAL SUPPORT ASSY RH
INSTALL:
MS20995C32 LOCKWIRE
Q
Q
(SEE FIGURE 6)
AN3H4A BOLT (REF)
(TYP 4 PLCS)
INSTALL:
4G1020A01151 LOWER DIAGONAL STRUT
P
P
(SEE FIGURE 6)
R
R
(SEE FIGURE 6)
INSTALL:
4G1020A00232 BACK SUPPORT ASSY RH
INSTALL:
109-0882-18-101 SHACKLE
DETAIL C
(SEE FIGURE 2)
DETAIL M
DETAIL L
(REFER TO FIGURE 1)
BL
825.14
REF
INSTALL:
NAS626H18 BOLT
MS20002C6 WASHER
4G1020A01031 DIAGONAL SUPPORT ASSY RH (REF)
WL
2642.91
REF
INSTALL:
4G1020A01451 SPACER
UP
RH
SECTION N-N
INSTALL:
AN175-26 BOLT
A1617A0532 WASHER
NAS75-5-015 BUSHING SLEEVE
NAS1149C0516R WASHER
INSTALL:
4G1020A01351 SPRING
INSTALL:
4G1020A00232 BACK SUPPORT ASSY RH
INSTALL:
NAS1149C0563R WASHER
DETAIL M
INSTALL:
109-0882-18-101 SHACKLE
INSTALL:
NAS1149C0516R WASHER
MS17825-5 NUT
MS24665-174 COTTER PIN
INSTALL:
NAS1149C0516R WASHER
UP
FWD

Figure 5

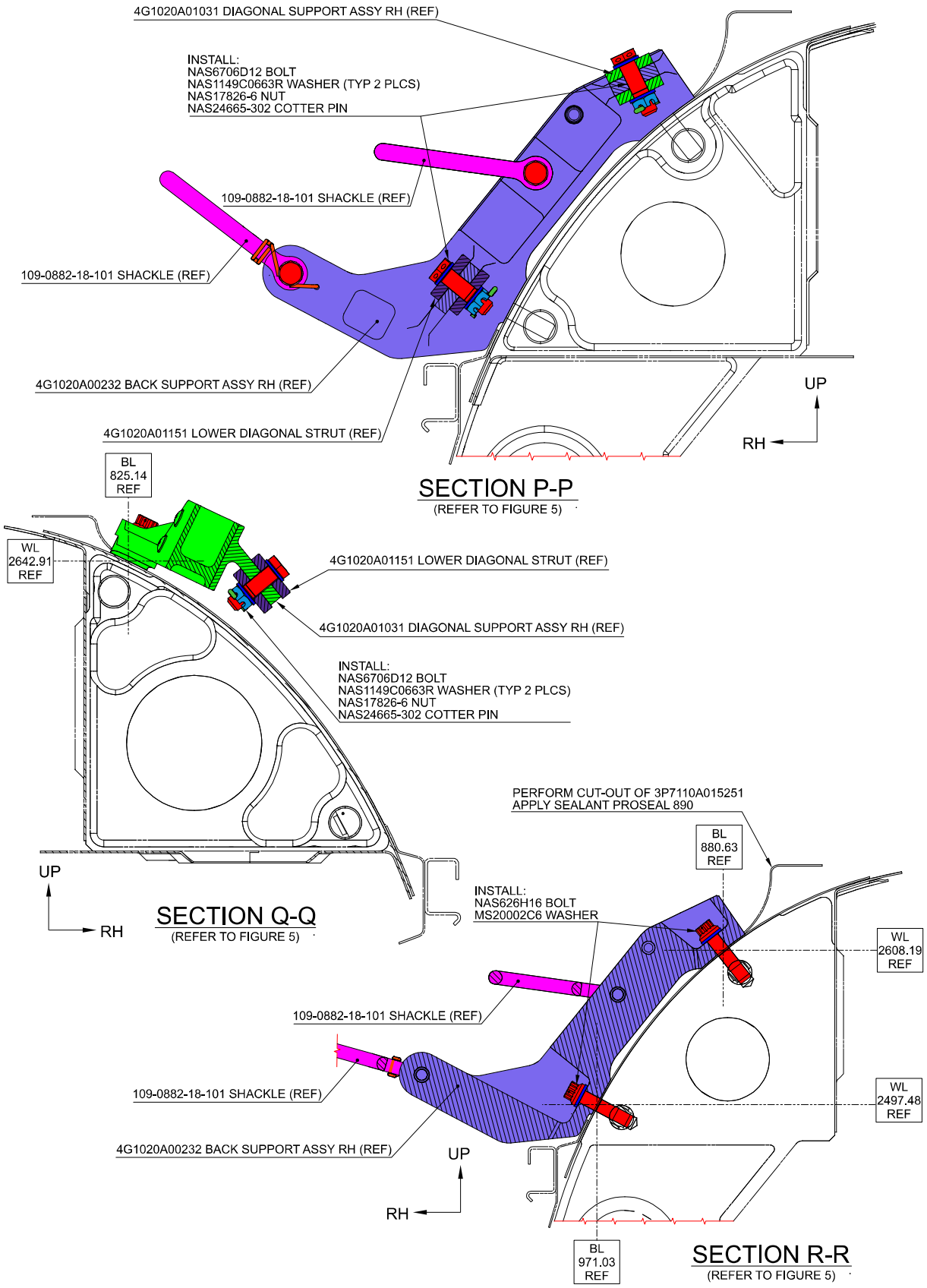
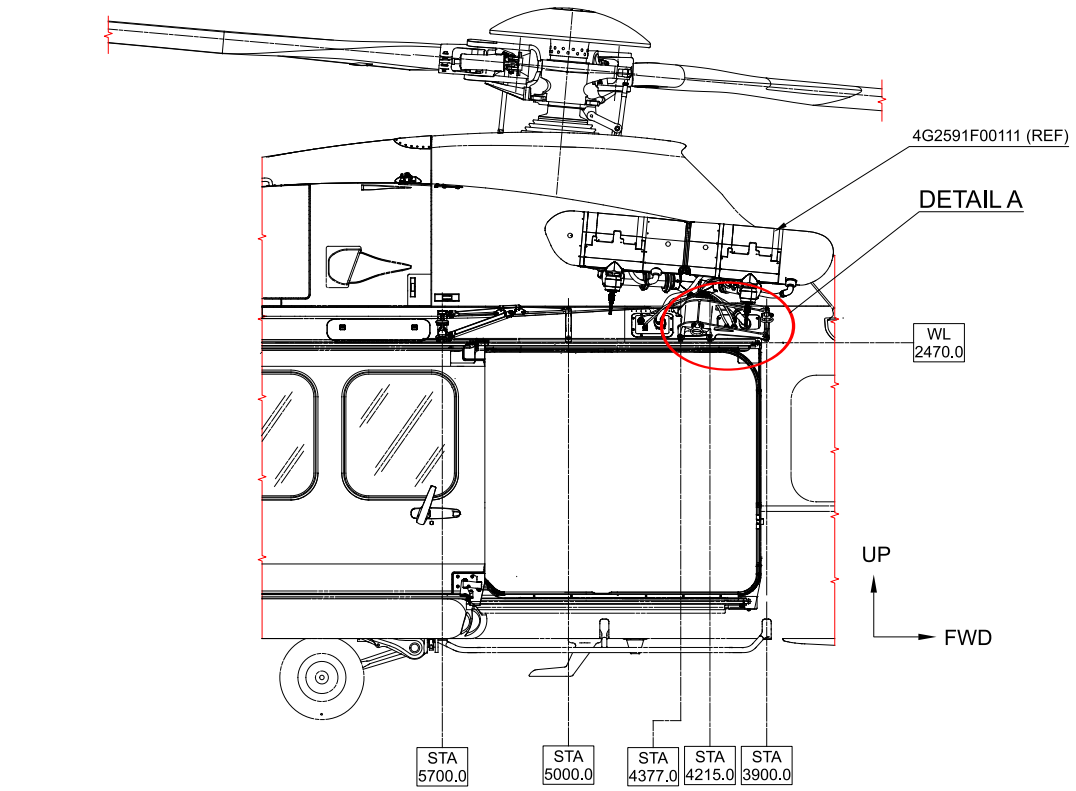
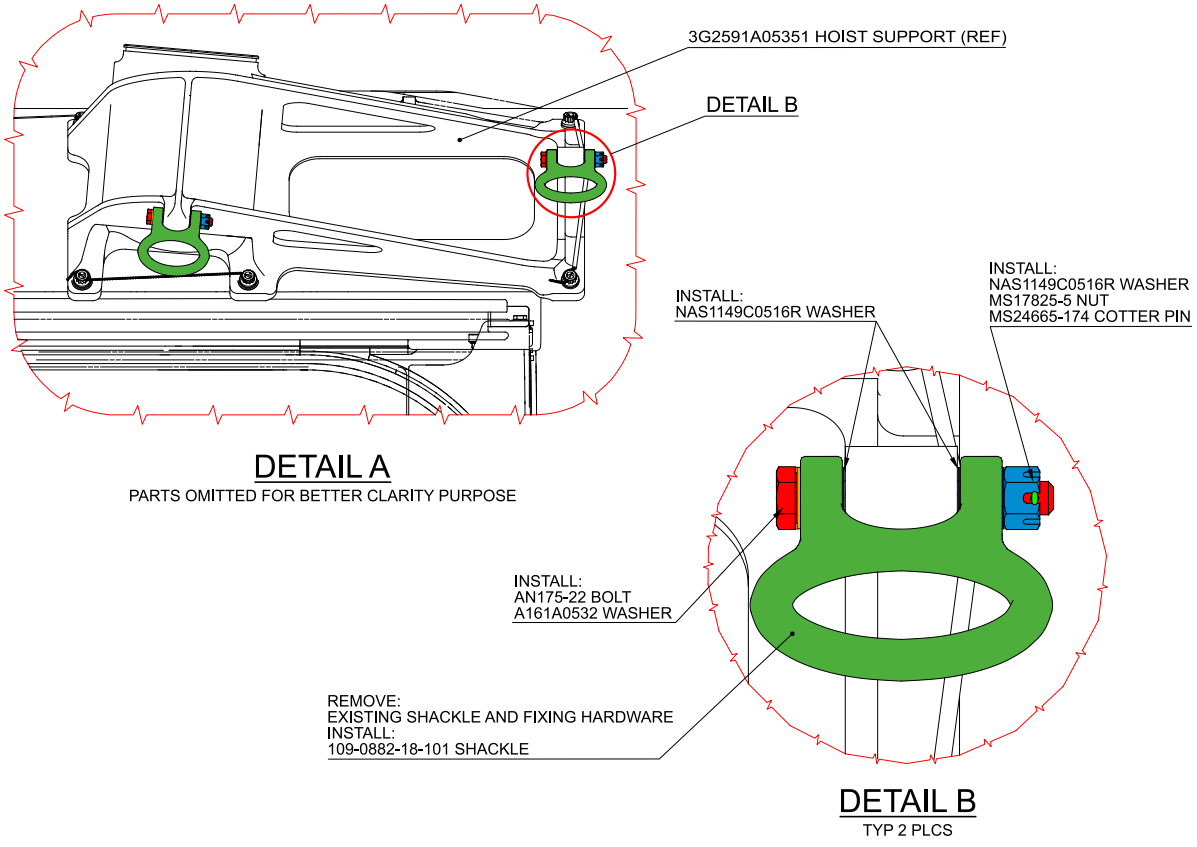

4G1020A01031 DIAGONAL SUPPORT ASSY RH (REF)
INSTALL:
NAS6706D12 BOLT
NAS1149C0663R WASHER (TYP 2 PLCS)
NAS17826-6 NUT
NAS24665-302 COTTER PIN
109-0882-18-101 SHACKLE (REF)
109-0882-18-101 SHACKLE (REF)
4G1020A00232 BACK SUPPORT ASSY RH (REF)
4G1020A01151 LOWER DIAGONAL STRUT (REF)
UP
RH
SECTION P-P
(REFER TO FIGURE 5)
BL
825.14
REF
WL
2642.91
REF
4G1020A01151 LOWER DIAGONAL STRUT (REF)
4G1020A01031 DIAGONAL SUPPORT ASSY RH (REF)
INSTALL:
NAS6706D12 BOLT
NAS1149C0663R WASHER (TYP 2 PLCS)
NAS17826-6 NUT
NAS24665-302 COTTER PIN
UP
RH
SECTION Q-Q
(REFER TO FIGURE 5)
PERFORM CUT-OUT OF 3P7110A015251
APPLY SEALANT PROSEAL 890
BL
880.63
REF
INSTALL:
NAS626H16 BOLT
MS20002C6 WASHER
WL
2608.19
REF
109-0882-18-101 SHACKLE (REF)
109-0882-18-101 SHACKLE (REF)
WL
2497.48
REF
4G1020A00232 BACK SUPPORT ASSY RH (REF)
UP
RH
BL
971.03
REF
SECTION R-R
(REFER TO FIGURE 5)

Figure 6



VIEW LOOKING INBOARD RIGHT SIDE



DETAIL A
PARTS OMITTED FOR BETTER CLARITY PURPOSE

DETAIL B
TYP 2 PLCS

Figure 7

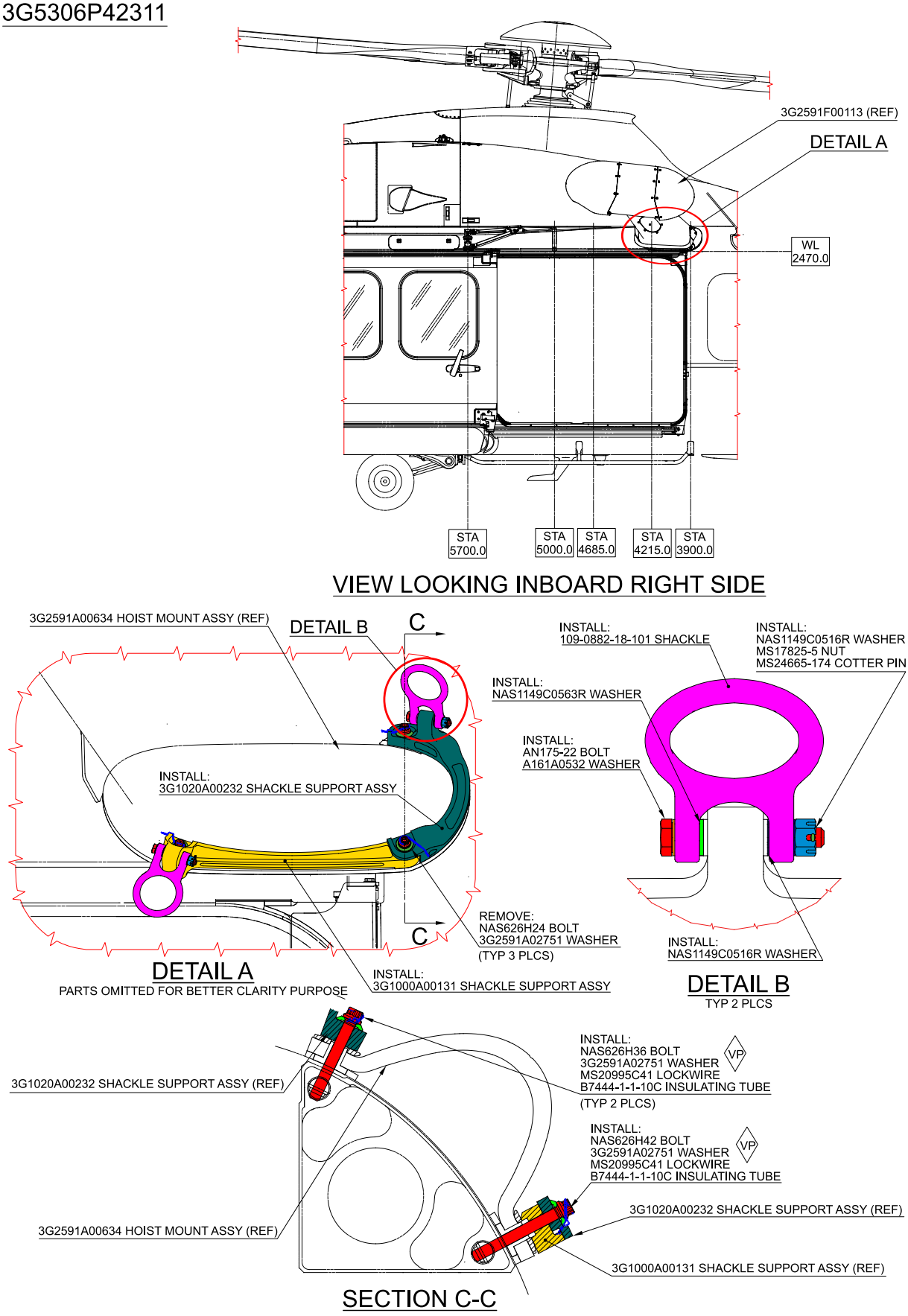

3G2591F00113 (REF)
DETAIL A
WL 2470.0
STA 5700.0
STA 5000.0
STA 4685.0
STA 4215.0
STA 3900.0
VIEW LOOKING INBOARD RIGHT SIDE
3G2591A00634 HOIST MOUNT ASSY (REF)
DETAIL B
C
INSTALL: 3G1020A00232 SHACKLE SUPPORT ASSY
REMOVE: NAS626H24 BOLT 3G2591A02751 WASHER (TYP 3 PLCS)
INSTALL: 3G1000A00131 SHACKLE SUPPORT ASSY
DETAIL A
PARTS OMITTED FOR BETTER CLARITY PURPOSE
INSTALL: 109-0882-18-101 SHACKLE
INSTALL: NAS1149C0516R WASHER MS17825-5 NUT MS24665-174 COTTER PIN
INSTALL: NAS1149C0563R WASHER
INSTALL: AN175-22 BOLT A161A0532 WASHER
INSTALL: NAS1149C0516R WASHER
DETAIL B
TYP 2 PLCS
3G1020A00232 SHACKLE SUPPORT ASSY (REF)
INSTALL: NAS626H36 BOLT 3G2591A02751 WASHER MS20995C41 LOCKWIRE B7444-1-1-10C INSULATING TUBE (TYP 2 PLCS)
VP
INSTALL: NAS626H42 BOLT 3G2591A02751 WASHER MS20995C41 LOCKWIRE B7444-1-1-10C INSULATING TUBE
VP
3G1020A00232 SHACKLE SUPPORT ASSY (REF)
3G2591A00634 HOIST MOUNT ASSY (REF)
3G1000A00131 SHACKLE SUPPORT ASSY (REF)
SECTION C-C

Figure 8

LEONARDO
HELICOPTERS

AgustaWestland Products

Please send to the following address: **LEONARDO S.p.A.** **CUSTOMER SUPPORT & SERVICES - ITALY** **PRODUCT SUPPORT ENGINEERING & LICENSES DEPT.** Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) - ITALY Tel.: +39 0331 225036 Fax: +39 0331 225988	**SERVICE BULLETIN COMPLIANCE FORM**	Date:
	Number:	
	Revision:	

Customer Name and Address:	Telephone:
	Fax:
	B.T. Compliance Date:

Helicopter Model	S/N	Total Number	Total Hours	T.S.O.

Remarks:

Information:

We request your cooperation in filling this form, in order to keep out statistical data relevant to aircraft configuration up-to-date. The form should be filled in all its parts and sent to the above address or you can communicate the application also via Technical Bulletin Application Communication Section placed in Leonardo AW Customer Portal - MyCommunications Area. We thank you beforehand for the information given.