
SERVICE BULLETIN

N° 139-723

DATE: October 17, 2022

REV. : /

TITLE

ATA 53 - CABIN PROVISION MODIFICATION

REVISION LOG

First Issue

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

1. PLANNING INFORMATION

A. EFFECTIVITY

AW139 helicopters from S/N 41801 to SN 41806.

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 4th seat rail structural provision P/N 3G5311A64811 Rev. B, IPSL structural provision P/N 3G5311A64911 Rev. B and fire extinguisher structural provision P/N 3G2620A06511 Rev. A, in order to permit a different seats configuration and to install the fire extinguisher.

E. DESCRIPTION

This Service Bulletin is divided in two parts:

- Part I give information on how to perform 4th seat rail structural provision P/N 3G5311A64811 Rev. B and IPSL structural provision P/N 3G5311A64911 Rev. B, which rework the floor and roof panels and install inserts and nut plates, in order to permit a different seats configuration.
- Part II provide the instructions on how to install the fire extinguisher structural provision P/N 3G2620A06511 Rev. A, which reworks the roof panel in order to allow the fire extinguisher installation.

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, the following MMH are deemed necessary:

Part I: approximately seventy (70) MMH;

Part II: approximately ten (10) MMH;

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

H. WEIGHT AND BALANCE

PART I

WEIGHT (kg)	ARM (mm)	MOMENT (kgmm)
		2.17
LONGITUDINAL BALANCE	4711.3	10.223.56
LATERAL BALANCE	-724.95	-1573.13

PART II

N.A.

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	I, II
DM02 39-A-06-41-00-00A-010A-A	Access door panel remove procedure.	I, II

2) ACRONYMS & ABBREVIATIONS

AMD I	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
DM	Data Module
DOA	Design Organization Approval

EASA European Aviation Safety Agency
LH Leonardo Helicopters
MMH Maintenance Man Hours
P/N Part Number
S/N Serial Number

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	3G5311A64811		4TH SEAT RAIL STRUCTURAL PROVISION	REF	.		-
2	3G5318A60751		Shim	1	..		139-723L1
3	3G5318A60752		Shim	1	..		139-723L1
4	3G5318A60753		Shim	1	..		139-723L1
5	3G5318A60851		Lower angle	1	..		139-723L1
6	AW007TE-30-109		Insert	1	..		139-723L1
7	AW007TE-40-108	999-5000-40-108	Insert	3	..		139-723L1
8	AW007TE-40-125		Insert	4	..		139-723L1
9	MS20426AD3-4-5		Rivet	6	..		139-723L1
10	MS20426AD3-6		Rivet	0.1 kg	..		139-723L1
11	MS20426AD3-6-5		Rivet	0.1 kg	..		139-723L1
12	MS20426AD4-7		Rivet	0.1 kg	..		139-723L1
13	MS21069L4		Nut plate	4	..		139-723L1
14	MS21073L3		Nut plate	1	..		139-723L1
15	NAS1097AD6-5		Rivet	0.1 kg	..		139-723L1
16	NAS1399C3-3		Rivet	2			139-723L1
17	NAS1399C3-5		Rivet	2			139-723L1
18	NAS9301B-4-06		Rivet	3			139-723L1
19	3G5311A64911		IPSL STRUCTURAL PROVISION	REF	.		-
20	AW007TE-40-108	999-5000-40-108	Insert	12	..		139-723L1
21	AW007TE-40-125		Insert	28	..		139-723L1
22	MS20426AD3-4-5		Rivet	8	..		139-723L1
23	MS21069L3		Nut plate	2	..		139-723L1
24	MS21071L4		Nut plate	2	..		139-723L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
25	3G2620A06511		FIRE EXTINGUISHER STRUCTURAL PROVISION	REF	.		-
26	MS20426AD3-5		Rivet	0.1 kg	..		139-723L2
27	MS21069L3		Nut plate	1	..		139-723L2
28	NAS1836-3-13		Insert	2	..		139-723L2

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

2) CONSUMABLES

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

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
29	199-05-002 Type I, Class II	ADHESIVE EA 9309.3NA AERO (C021)	AR	(1)	I
30	199-05-002 Type II, Class 2	ADHESIVE EA 934NA AERO (C397)	AR	(1)	I, II
31	AWTR033	HEXFORCE 20823 1200 (C557)	AR	(1)	I
32	199-50-002 Type I	RESIN ARALDIT LY5138-2	AR	(1)	I
33	199-50-002 Type I	HARDENER HY5173	AR	(1) (2)	I

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

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
139-723L1	1		Part I
139-723L2	1		Part II

NOTES

- (1) Item to be procured as local supply.
- (2) As an alternative, it is possible to use adhesive EA9309.3NA.

B. SPECIAL TOOLS

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

#	P/N	DESCRIPTION	Q.TY	NOTE	PART
34	3G5311A64811A004A	Drilling template tool	1		I
35	4G2520F27911A004A	Drilling template tool	1		I
36	3G2620A06511A003A	Drilling template tool	1		II

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

SPECIAL TOOLS NOTE

N.A.

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) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.
- c) 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.
- d) Let adhesive cure at room temperature for at least 24 hours unless otherwise specified.
- e) All lengths are in mm.

PART I

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. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 1 thru 3, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the 4TH seat rail struct provision P/N 3G5311A64811 as described in the following procedure:
 - 2.1 With reference to Figure 1 View A-A, Section C-C and Section D-D, temporarily locate the drilling template tool P/N 3G5311A64811A004A-2-1 on the panel and pilot the n° 7 holes with a #30 drill through the panel.
 - 2.2 Drill n° 4 holes $\varnothing 6.45 \div 6.75$ and n°3 holes $\varnothing 6.50 \div 6.65$ thru the panel.
 - 2.3 With reference to Figure 1 Section C-C, counterbore the n°4 holes to $\varnothing 9.50 \div 9.60$.

NOTE

It is allowed to shim the insert under the head by means of a washer type NAS1149 (finish code J) to prevent gap between the panel's thickness and insert's length.

- 2.4 With reference to Figure 1 Section C-C, install n°4 inserts P/N AW007TE-40-125

- on the panel by means of adhesive EA 934NA Aero (C397).
- 2.5 With reference to Figure 1 Section D-D install n°3 nut plates P/N MS21069L4 on the panel by means of n°6 rivets P/N MS20426AD3-4-5.
 - 2.6 With reference to Figure 2 View J and View K1, remove the nut plate P/N MS21069L3 and the existing rivets from the LH angle lower.
 - 2.7 With reference to Figure 2 Section L-L, countersink the hole and install the rivet P/N NAS1097AD6-5 on the LH angle lower.

NOTE

As alternative it is allowed to use adhesive EA 9309.3NA Aero (C021) to restore the surface.

- 2.8 With reference to Figure 2 Section N-N, restore the surface by means of 1 ply of fiberglass HexForce 20823 1200 (C557), resin ARALDIT LY5138-2 and hardener Hy5173. Fill the hole by means of adhesive EA 9309.3NA Aero (C021).
- 2.9 With reference to Figure 2 View E-E, Detail F and Section G-G and Figure 3 Detail H and Section T-T, temporarily locate the drilling template tool P/N 3G5311A64811A004A-1-1 and pilot the n°8 holes through the panel.
- 2.10 With reference to Figure 2 View E-E, Detail F and Section G-G and Figure 3 Detail H and Section T-T drill n°3 holes $\varnothing 6.45 \div 6.75$ and n°1 hole $\varnothing 4.90 \div 5.10$ thru the panel.
- 2.11 With reference to Figure 2 Section G-G, counterbore the n°3 holes to $\varnothing 9.50 \div 9.60$.
- 2.12 With reference to Figure 2 Section G-G, install n°3 inserts P/N AW007TE-40-108 on the panel by means of adhesive EA 934NA Aero (C397).
- 2.13 With reference to Figure 3 Section T-T, counterbore the hole to $\varnothing 9.50 \div 9.60$.
- 2.14 With reference to Figure 3 Detail H, install the shim P/N 3G5318A60753 on the panel by means of adhesive EA 9309.3NA Aero (C021).
- 2.15 With reference to Figure 3 Section T-T, install the insert P/N AW007TE-30-109 on the shim P/N 3G5318A60753 and on the panel by means of adhesive EA 934NA Aero (C397).
- 2.16 With reference to Figure 2 View K2, drill n°1 hole $\varnothing 4.90 \div 5.05$ thru the LH lower angle according with dimensions shown.
- 2.17 With reference to Figure 2 View K2, install the shim P/N 3G5318A60751 on the LH lower angle by means of n°2 rivets P/N MS20426AD4-7, n°1 rivet P/N MS20426AD3-6 and adhesive EA 9309.3NA Aero (C021).
- 2.18 With reference to Figure 2 View K2, install the nut plate P/N MS21073L3 on the shim P/N 3G5318A60751 by means of n°2 rivets P/N MS20426AD3-6-5.

- 2.19 With reference to Figure 3 View P and View R, install the lower angle P/N 3G5318A60851 on the longeron by means of n°3 rivets P/N NAS9301B-4 and n°2 rivets P/N NAS1399C3.
 - 2.20 With reference to Figure 3 Section S-S, install the shim P/N 3G5318A60752 on the longeron by means of adhesive EA 9309.3NA Aero (C021).
 - 2.21 With reference to Figure 3 View R and Section S-S, drill n°1 hole $\varnothing 6.70 \div 6.85$ thru the lower angle P/N 3G5318A60851, the longeron and the shim P/N 3G5318A60752 according with dimensions shown.
 - 2.22 With reference to Figure 3 Section S-S, install the nut plate P/N MS21069L4 on the lower angle P/N 3G5318A60851 by means of n°2 rivets P/N NAS1399C3.
3. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 4 and 5, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the IPSL structural provision P/N 3G5311A64911 as described in the following procedure:
- 3.1 With reference to Figure 4 View A-A, section D-D and Section E-E, temporarily locate the drilling template tool P/N 4G2520F27911A004A-2-1 on the aft RH floor panel and pilot the n° 15 holes with a #30 drill through the panel.
 - 3.2 With reference to Figure 4 View A-A, section D-D and Section E-E drill n°1 hole $\varnothing 6.70 \div 6.85$ and n°14 holes $\varnothing 6.45 \div 6.75$ thru the aft RH floor panel.
 - 3.3 With reference to Figure 4 Section E-E, counterbore the n°14 holes to $\varnothing 9.50 \div 9.60$.

NOTE

It is allowed to shim the insert under the head by means of a washer type NAS1149 (finish code J) to prevent gap between the panel's thickness and insert's length.

- 3.4 With reference to Figure 4 Section E-E, install n°14 inserts P/N AW007TE-40-125 on the aft RH floor panel by means of adhesive EA 934NA Aero (C397).
- 3.5 With reference to Figure 4 Section D-D, install the nut plate P/N MS21071L4 on the frame at STA 5489.8 and BL 266.70 by means of n°2 rivets P/N MS20426AD3-4-5.
- 3.6 Repeat step from 3.1 thru 3.5 for the aft LH floor panel.
- 3.7 With reference to Figure 5 View F-F, Detail G and Section H-H, temporarily locate the drilling template tool P/N 4G2520F27911A004A-1-1 on the panel and pilot the n° 7 holes with a #30 drill through the panel.
- 3.8 With reference to Figure 5 View F-F, Detail G and Section H-H drill n°1 hole $\varnothing 4.90 \div 5.05$ and n°6 holes $\varnothing 6.45 \div 6.75$ thru the panel.

- 3.9 With reference to Figure 5 Section H-H, counterbore the n°6 holes to $\varnothing 9.50 \div 9.60$.
- 3.10 With reference to Figure 5 Section H-H, install n°6 inserts P/N AW007TE-40-108 by means of adhesive EA 934NA Aero (C397).
- 3.11 With reference to Figure 5 Detail G, install the nut plate P/N MS21069L3 by means of n°2 rivets P/N MS20426AD3-4-5.
- 3.12 Repeat steps from 3.5 thru 3.11 for the LH side.
4. In accordance with AMP DM 39-A-06-41-00-00A-010A-A, re-install all external panels, internal panels and internal liners previously removed.
5. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
6. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardo.com

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

PART II

1. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 6, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the IPSL structural provision P/N 3G5311A64911 as described in the following procedure:
2. In accordance with DM 39-A-06-41-00-00A-010A-A and with reference to Figure 6, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the fire extinguisher structural provision P/N 3G2620A06511 as described in the following procedure:
 - 2.1 With reference to Figure 6 View A, Section B-B and Section C-C, temporarily locate the drilling template tool P/N 3G2620A06511A003A on the LH lower bonded skin and pilot the n° 2 insert holes with a #30 through the lower bonded skin and drill the nut plate hole with a #30 through the panel and frame.
 - 2.2 With reference to Figure 6 View A, Section B-B and Section C-C drill n°2 insert holes to $\varnothing 11.48 \div 11.61$ thru the L/H lower bonded skin and n°1 nut plate hole to $\varnothing 4.90 \div 5.03$ through the panel and frame according with dimensions shown.
 - 2.3 With reference to Figure 6 Section B-B, install n°2 inserts P/N NAS1836-3-13 on the LH lower bonded panel by means of adhesive EA 934NA Aero (C397).
 - 2.4 With reference to Figure 6 Section C-C, install the anchor nut P/N MS21069L3 on the frame REF. STA 5685 and BL 694.00 by means of n°2 rivets P/N MS20426AD3-5.
3. In accordance with AMP DM 39-A-06-41-00-00A-010A-A, re-install all external panels, internal panels and internal liners previously removed.
4. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
5. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardo.com

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

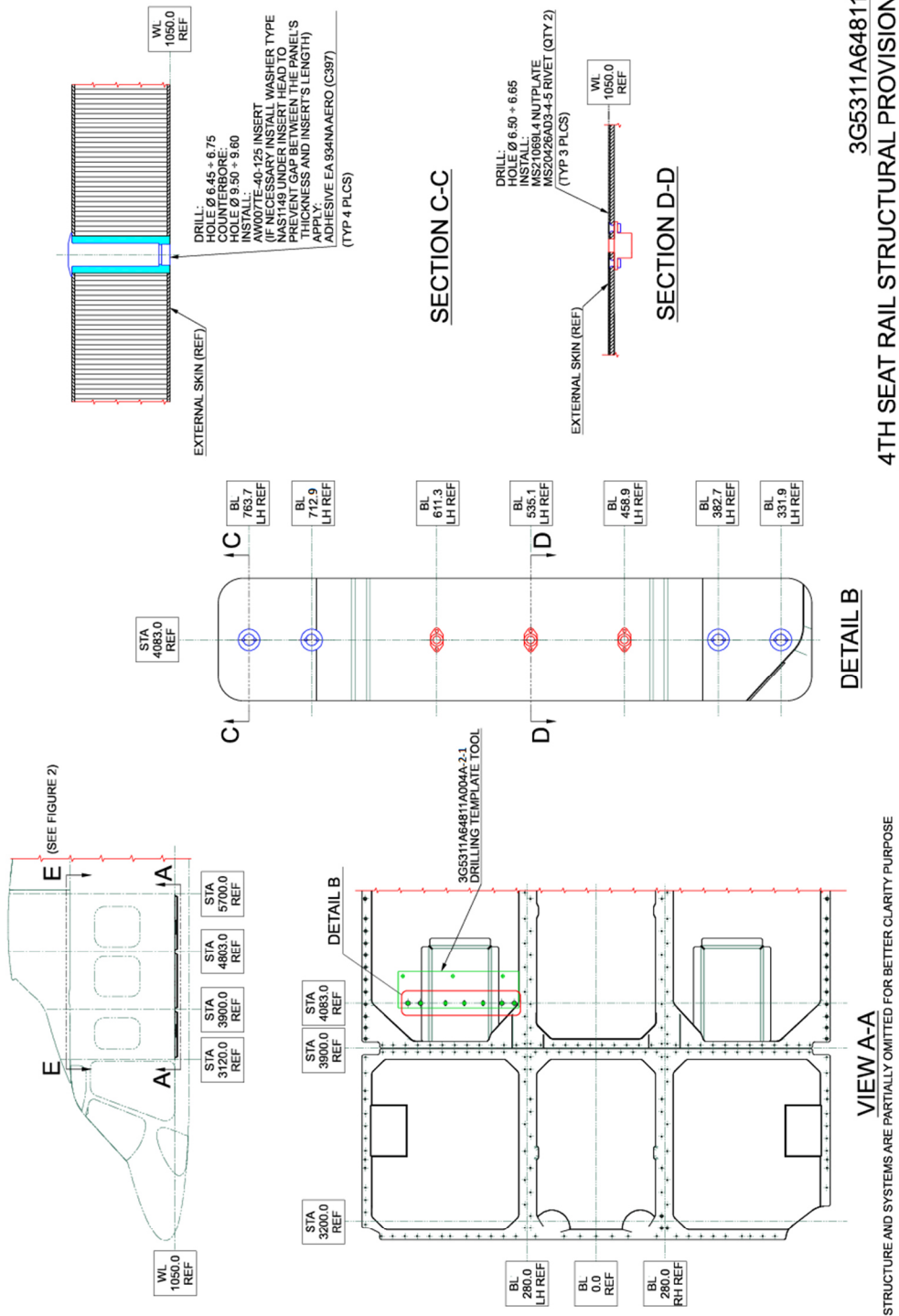
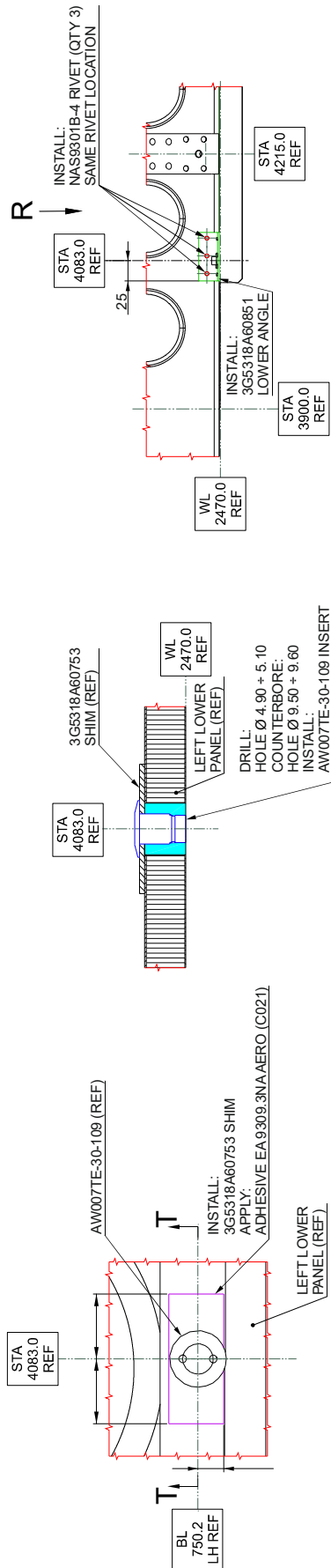


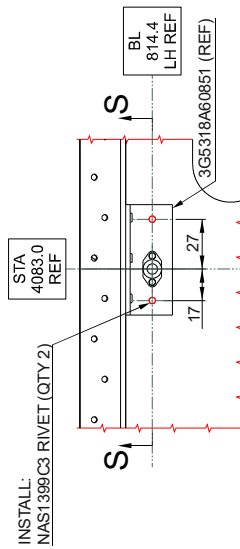
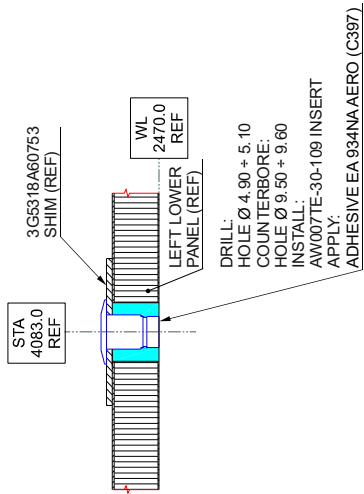
Figure 1



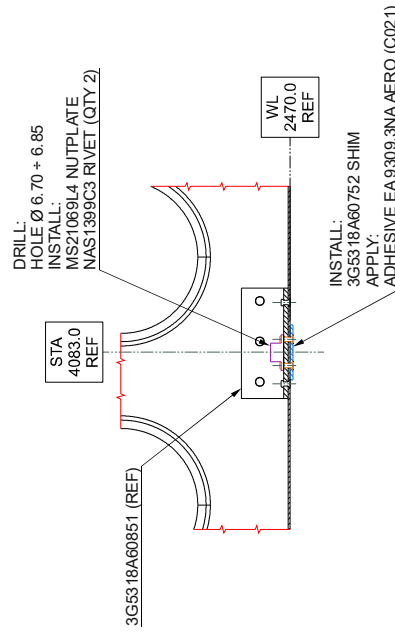
DETAIL H
(REFER TO FIGURE 2)

VIEW P
(REFER TO FIGURE 2)

SECTION T-T



VIEW R



SECTION S-S

Figure 3

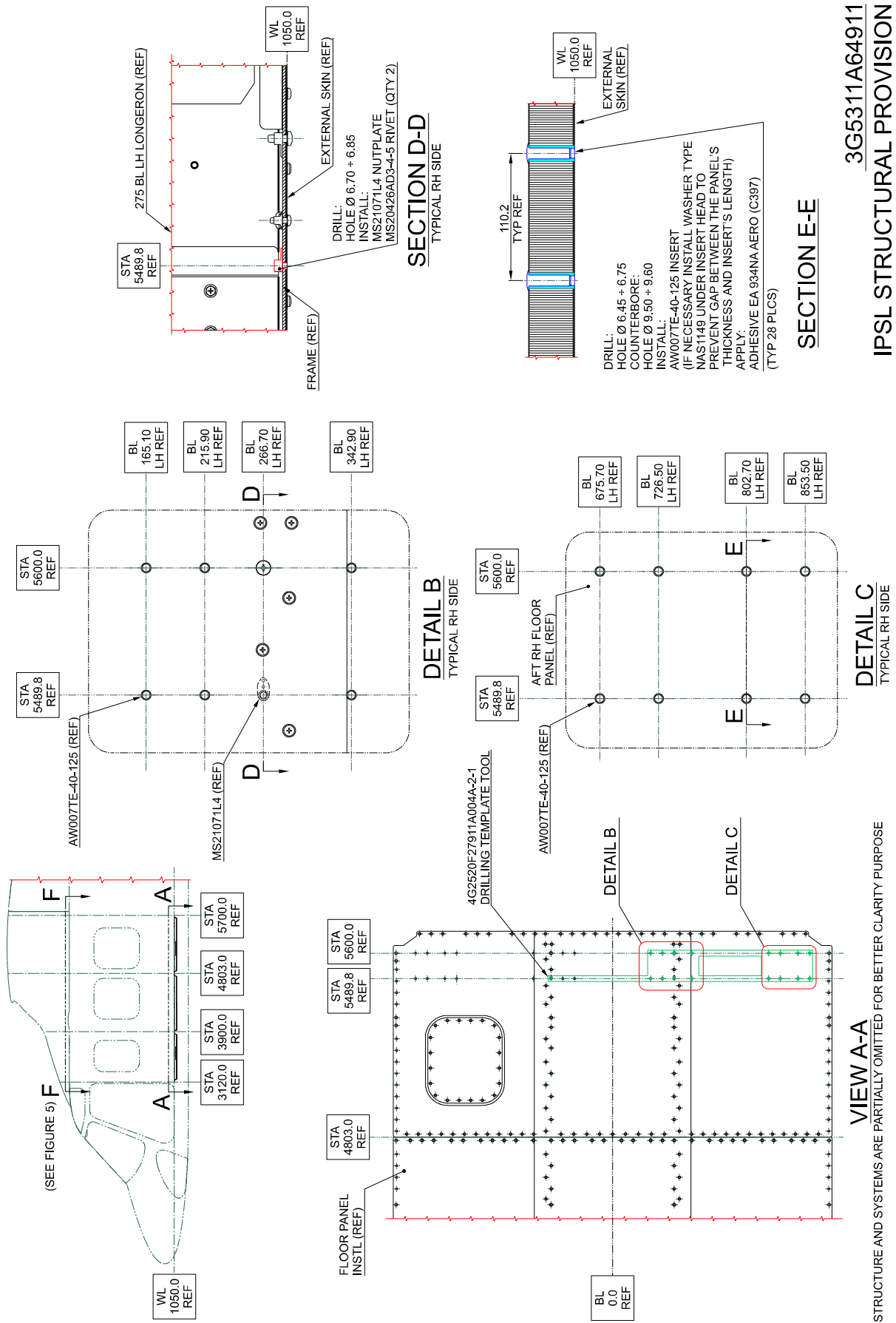
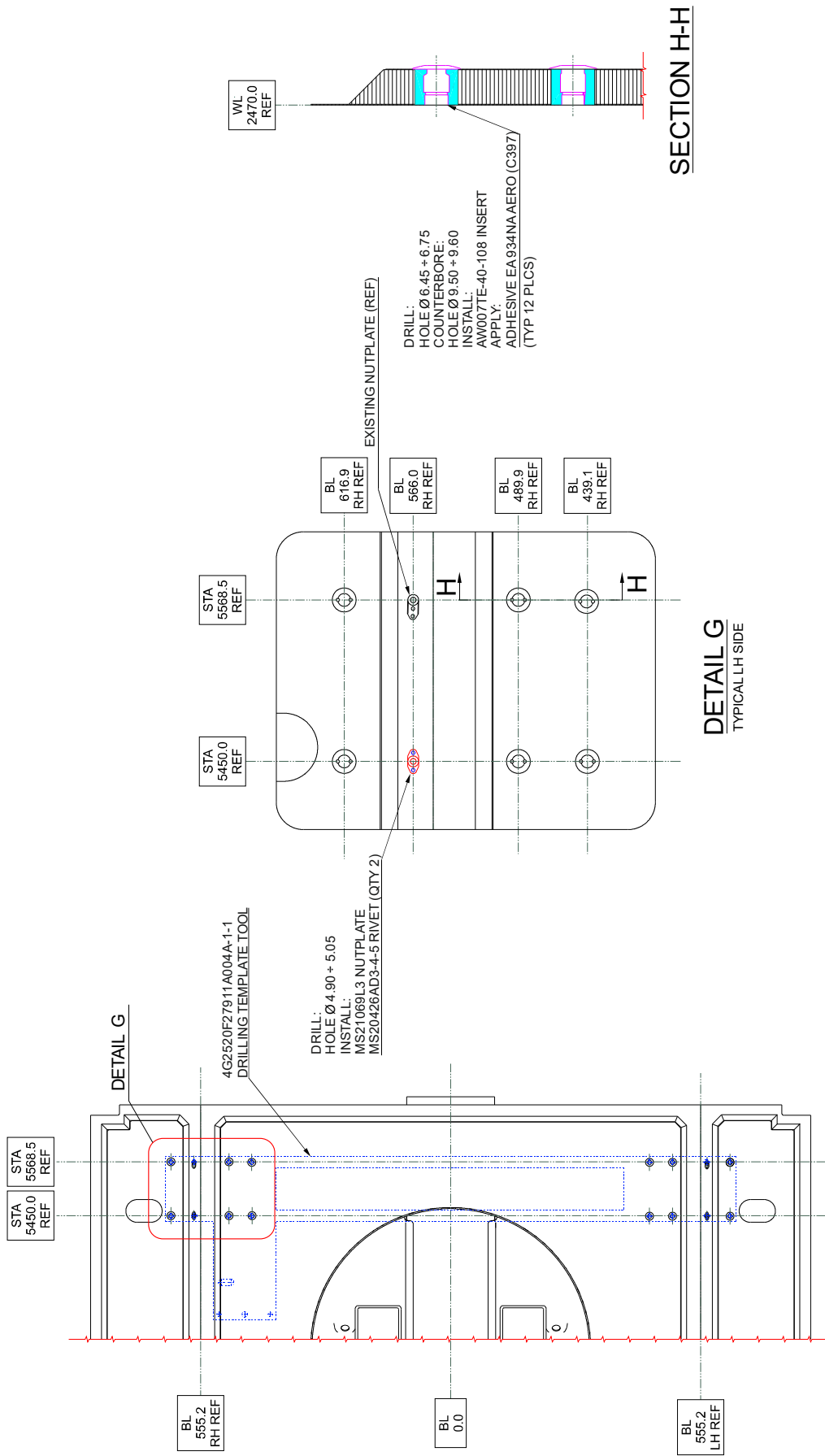
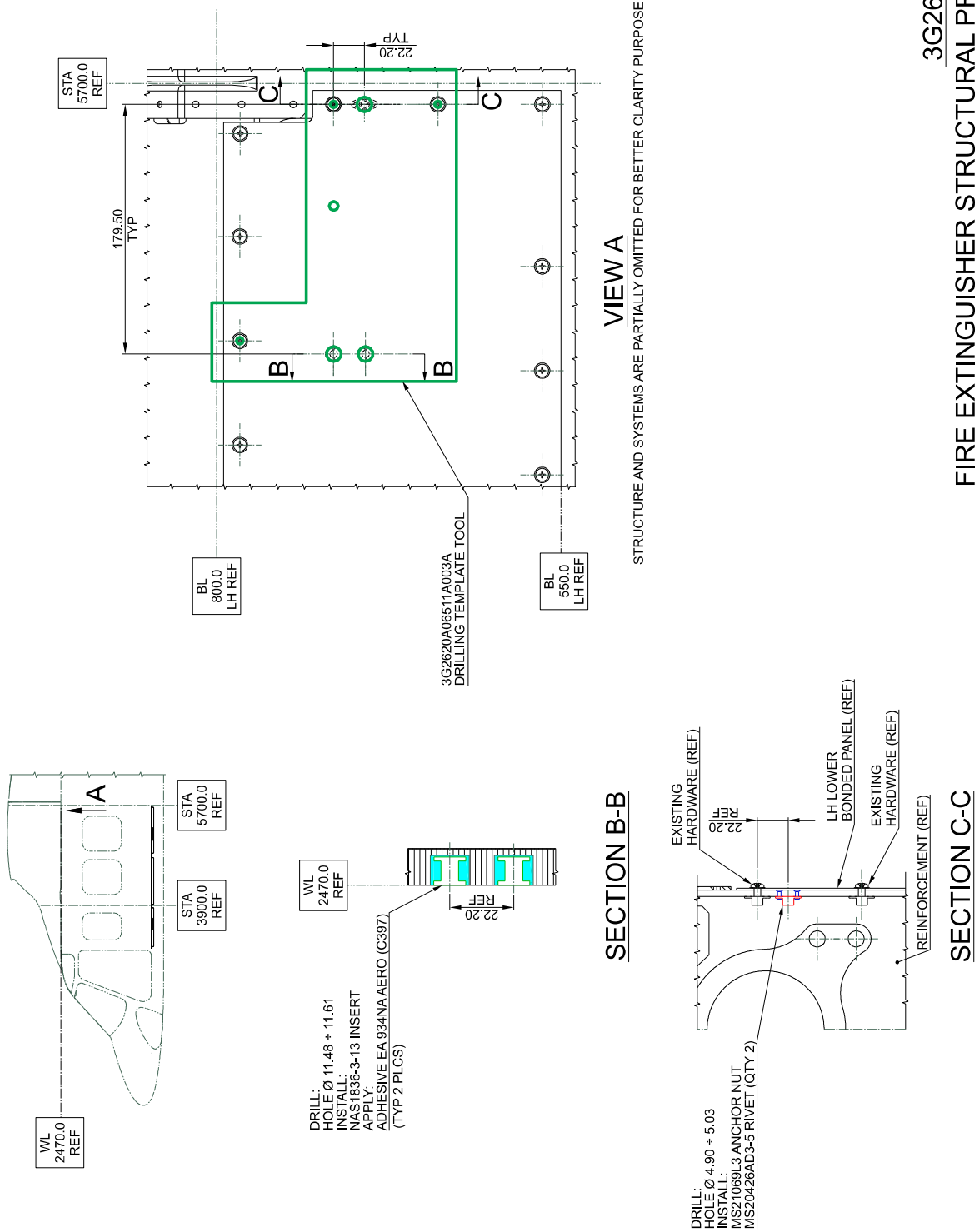


Figure 4



VIEW F-F
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
(REFER TO FIGURE 4)

Figure 5



3G2620A06511
FIRE EXTINGUISHER STRUCTURAL PROVISION

Figure 6

