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AgustaWestland Products

SERVICE BULLETIN

N° 139-559

DATE: June 22, 2021

REV. : /

TITLE

ATA 71 - FIREWALLS RETROMOD

REVISION LOG

First Issue

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I: AW139 helicopters from SN 31400 to S/N 31871 (except 31870), from S/N 41300 to S/N 41572 and from S/N 41801 to S/N 41803.

Part II: AB/AW139 helicopters from SN 31005 to S/N 31398 (except S/N 31007) and from S/N 41001 to S/N 41293 (except S/N 41237).

Part III: AW139 helicopters S/N 31870, from S/N 31872 to S/N 31955, S/N 41573 to S/N 41579 and from S/N 41804 to S/N 41808.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instruction to reinforce the firewalls by performing the installation of the firewalls retro modifications P/N 3G7130P01411 and P/N 3G7130P01412.

E. DESCRIPTION

The introduction of the firewalls retro modifications P/N 3G7130P01411 and P/N 3G7130P01412 reinforces the firewall installation so to be aligned with the latest design.

Part I gives the instruction to perform the firewall retromod P/N 3G7130P01411.

Part II gives the instruction to perform the firewall retromod P/N 3G7130P01412.

Part III gives the instruction to complete the installation of the firewall retromod P/N 3G7130P01411. It is dedicated to those helicopters which performed the previous version of the retromod itself.

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 one hundred (100) MMH.

Part II: approximately one hundred (100) MMH.

Part III: approximately twenty-five (25) MMH.

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

H. WEIGHT AND BALANCE

PART I

WEIGHT (kg)	0.6	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	6850	4110.0
LATERAL BALANCE	0	0.0

PART II

WEIGHT (kg)	1.195	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	6850	8185.8
LATERAL BALANCE	0	0.0

PART III

WEIGHT (kg)	0.444	
	ARM (mm)	**MOMENT (kgmm)**
LONGITUDINAL BALANCE	6850	3041.4
LATERAL BALANCE	0	0.0

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

DATA MODULE		**DESCRIPTION**	**PART**
DM01	39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	I, II, III

DATA MODULE		DESCRIPTION	PART
DM02	39-A-06-40-00-00A-028A-A	Access provisions - General.	I, II, III

Following Data Module refer to CSRP:

DATA MODULE		DESCRIPTION	PART
DM03	CSRP-A-51-71-00-00A-028A-D	Rivet pattern discrepancies – General data	I

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
ASRP	Aircraft Structural Repair Publication
CSRP	Common Structural Repair 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

AW139 AMP

AW139 ASRP

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	**3G7130P01411**		**FIREWALLS RETRO MOD**	**REF**	**.**		**-**
2	3G7130A32651	3G7130A32651M01 or 3G7130A32651M02	FWD doubler LH	1	..	(1)	139-559L1
3	3G7130A32751	3G7130A32751M01 or 3G7130A32751M02	FWD doubler RH	1	..	(1)	139-559L1
4	3G7130A32851	3G7130A32851M01 or 3G7130A32851M02	FWD doubler LH	1	..	(2)	139-559L1
5	3G7130A32951	3G7130A32951M01 or 3G7130A32951M02	FWD doubler RH	1	..	(2)	139-559L1
6	3G7130A33451	3G7130A33451M01 or 3G7130A33451M02	Rear doubler LH	1	..	(3)	139-559L1
7	3G7130A33551	3G7130A33551M01 or 3G7130A33551M02	Rear doubler RH	1	..	(3)	139-559L1
8	3G7130A33651	3G7130A33651M01 or 3G7130A33651M02	Rear doubler LH	1	..	(4)	139-559L1
9	3G7130A33751	3G7130A33751M01 or 3G7130A33751M02	Rear doubler RH	1	..	(4)	139-559L1
10	3G7130A36751	3G7130A36751M01	Reinforcement LH	1	..	(5)	139-559L1
11	3G7130A36851	3G7130A36851M01	Reinforcement RH	1	..	(5)	139-559L1
12	3G7130A36951	3G7130A36951M01	Reinforcement LH	1	..	(6)	139-559L1
13	3G7130A37051	3G7130A37051M01	Reinforcement RH	1	..	(6)	139-559L1
14	MS20427M3-3		Rivet	0.1 kg	..		139-559L1
15	MS20427M3-4		Rivet	0.1 kg	..		139-559L1
16	MS20427M3-4-5		Rivet	20	..		139-559L1
17	MS20615-4M3R		Rivet	110	..		139-559L1
18	MS20615-4M4		Rivet	0.2 kg	..		139-559L1
19	MS20615-4M4R		Rivet	2	..		139-559L1
20	MS20615-4M5R		Rivet	6	..		139-559L1
21	MS20615-4M6		Rivet	0.1 kg	..		139-559L1
22	NAS1200-4-3		Rivet	2	..		139-559L1
23	NAS1200-4-4		Rivet	16	..		139-559L1
24	NAS1200-4-4-5		Rivet	10	..		139-559L1
25	NAS1200-5-5		Rivet	18	..		139-559L1
26	NAS43HT3-32		Spacer	2	..		139-559L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
27	**3G7130P01412**		**FIREWALLS RETRO MOD**	**REF**	**.**		**-**
28	3G7130A32651	3G7130A32651M01 or 3G7130A32651M02	FWD doubler LH	1	..	(1)	139-559L2
29	3G7130A32751	3G7130A32751M01 or 3G7130A32751M02	FWD doubler RH	1	..	(1)	139-559L2
30	3G7130A32851	3G7130A32851M01 or 3G7130A32851M02	FWD doubler LH	1	..	(2)	139-559L2
31	3G7130A32951	3G7130A32951M01 or 3G7130A32951M02	FWD doubler RH	1	..	(2)	139-559L2
32	3G7130A33051		Center doubler	1	..		139-559L2
33	3G7130A33151		Center doubler	1	..		139-559L2

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
34	3G7130A33251		Center doubler LH	1	..		139-559L2
35	3G7130A33351		Center doubler RH	1	..		139-559L2
36	3G7130A33451	3G7130A33451M01 or 3G7130A33451M02	Rear doubler LH	1	..	(3)	139-559L2
37	3G7130A33551	3G7130A33551M01 or 3G7130A33551M02	Rear doubler RH	1	..	(3)	139-559L2
38	3G7130A33651	3G7130A33651M01 or 3G7130A33651M02	Rear doubler LH	1	..	(4)	139-559L2
39	3G7130A33751	3G7130A33751M01 or 3G7130A33751M02	Rear doubler RH	1	..	(4)	139-559L2
40	MS20427M3-3		Rivet	0.1 kg	..		139-559L2
41	MS20427M3-4		Rivet	0.1 kg	..		139-559L2
42	MS20427M3-4-5		Rivet	12	..		139-559L2
43	MS20615-4M3R		Rivet	120	..		139-559L2
44	MS20615-4M4		Rivet	0.1 kg	..		139-559L2
45	MS20615-4M4R		Rivet	18	..		139-559L2
46	MS20615-4M5R		Rivet	10	..		139-559L2
47	MS20615-4M6		Rivet	0.1 kg	..		139-559L2
48	NAS1200-4-3		Rivet	2	..		139-559L2
49	NAS1200-4-4-5		Rivet	10	..		139-559L2
50	NAS1200-5-4		Rivet	18	..		139-559L2
51	NAS43HT3-32		Spacer	2	..		139-559L2
52	NAS9307M-4-01		Rivet	26	..		139-559L2

PART III

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
53	**3G7130P01411**		**UPGRADE FIREWALLS RETRO MOD**	**REF**	**.**		
54	3G7130A36751	3G7130A36751M01	Reinforcement LH	1	..	(5)	139-559L3
55	3G7130A36851	3G7130A36851M01	Reinforcement RH	1	..	(5)	139-559L3
56	3G7130A36951	3G7130A36951M01	Reinforcement LH	1	..	(6)	139-559L3
57	3G7130A37051	3G7130A37051M01	Reinforcement RH	1	..	(6)	139-559L3
58	MS20615-4M4		Rivet	0.2 kg	..		139-559L3
59	MS20615-4M6		Rivet	0.1 kg	..		139-559L3
60	NAS1200-4-3		Rivet	2	..		139-559L3
61	NAS1200-4-4		Rivet	16	..		139-559L3

2) CONSUMABLES

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

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
62	Code No. 500203980	Proseal 700 (C032)	AR	(7)	I, II, III

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
139-559L1	1		Part I
139-559L2	1		Part II
139-559L3	1		Part III

NOTE

(1) FWD doubler P/N 3G7130A32651 and P/N 3G7130A32751 can be obtained each from raw material with following properties: SHEET TITANIUM Dimension 180mm x 80mm, Thickness 0.64mm (ref. to Fig. 13).

(2) FWD doubler P/N 3G7130A32851 and P/N 3G7130A32951 can be obtained each from raw material with following properties: SHEET TITANIUM Dimension 220mm x 130mm, Thickness 0.51mm (ref. to Fig. 14 and Fig. 15).

(3) Rear doubler P/N 3G7130A33451 and P/N 3G7130A33551 can be obtained each from raw material with following properties: SHEET TITANIUM Dimension 230mm x 190mm, Thickness 0.81mm (ref. to Fig. 16 and Fig. 17).

(4) Rear doubler P/N 3G7130A33651 and P/N 3G7130A33751 can be obtained each from raw material with following properties: SHEET TITANIUM Dimension 320mm x 200mm, Thickness 0.51mm (ref. to Fig. 18 and Fig. 19).

(5) FWD reinforcement P/N 3G7130A36751 and P/N 3G7130A36851 can be obtained each from raw material with following properties: SHEET TITANIUM Dimension 220mm x 130mm, Thickness 0.51mm (ref. to Fig. 20).

(6) FWD reinforcement P/N 3G7130A36951 and P/N 3G7130A37051 can be obtained each from raw material with following properties: SHEET TITANIUM Dimension 220mm x 130mm, Thickness 0.51mm (ref. to Fig. 21).

(7) 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

Product Enhancement.

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.

f) If a crack or a repair is found in one of the installation areas, contact the PSE at the following mail box: engineering.support.lhd@leonardocompany.com.

PART I

1. In accordance with 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.

NOTE

It is possible to fabricate the doubler and reinforcements installed in following step from raw materials, if necessary. Dimensions in the figures are for reference, it is possible to adjust these dimensions to be compliant with standard practices contained in DM CSRP-A-51-71-00-00A-028A-D.

2. In accordance with DM 39-A-06-40-00-00A-028A-A and with reference to Figure 1, gain access to the area affected by the installation and perform the firewalls retromod P/N 3G7130P01411 as described in the following procedure:

   2.1 With reference to Figure 3 view C, remove and retain for later reuse the pin assy alignment eccentric P/N AAP141CH160-2, the n°4 anchor nuts P/N MS21069-3K and the clamp P/N 7C31-1AA.

2.2 With reference to Figure 3 view C, install the FWD doubler LH 3G7130A32851 by means of n°8 rivets P/N MS20615-4M3R.

2.3 With reference to Figure 3 view C, install the n°4 anchor nuts P/N MS21069-3K by means of n°8 rivets P/N MS20427M3-4.

2.4 With reference to Figure 3 view C, view D and detail A, install the FWD doubler LH P/N 3G7130A32651 by means of n°17 rivets P/N MS20615-4M4.

2.5 With reference to Figure 3 view C, re-install the clamp P/N 7C31-1AA by means of rivet P/N MS20615-4M4 and rivet P/N MS20615-4M4R.

2.6 With reference to Figure 3 view C, re-install the pin assy alignment eccentric P/N AAP141CH160-2.

2.7 With reference to Figure 3 view C, install the n°3 rivets P/N MS20615-4M6 and the n°3 rivets P/N MS20615-4M5R.

2.8 With reference to Figure 4 view F, remove and retain for later reuse the bolt P/N NAS1801-08-10 and washer P/N NAS1149CN832R. Remove and discard the indicated existing rivet.

2.9 With reference to Figure 4 detail B and view F, install the rear doubler LH P/N 3G7130A33651 by means of n°38 rivets P/N MS20615-4M3R and n°2 rivets P/N MS20615-4M4.

2.10 With reference to Figure 4 view F, install the previously removed bolt P/N NAS1801-08-10 and washer P/N NAS1149CN832R.

2.11 With reference to Figure 6 view E, remove and discard the corner LH P/N 3P7119A23552 and the existing rivets. Retain for later reuse the n°4 anchor nuts P/N MS21071L3K and the n°2 anchor nuts P/N MS21069L3K.

2.12 With reference to Figure 6 view E, drill rivet holes Ø 0.2 in correspondence of weld joints position.

2.13 With reference to Figure 6 view E, remove and retain for later reuse the bolt P/N AN3C10A, the washer P/N NAS1149C0363R, and the anchor nut P/N MS21069L3K. Remove and discard the spacer P/N NAS43TH3-34.

2.14 With reference to Figure 8 view J, temporarily remove the left upper connector P/N 3P7119A31752 and the existing rivets.

2.15 With reference to Figure 8 view J, remove the connector P/N 3G7130A29651 and the existing rivets. Retain for later reuse the n°2 anchor nuts P/N MS21069L3K.

2.16 With reference to Figure 8 view J, remove the left lower connector P/N 3P7119A31351 and the existing rivets.

2.17 With reference to Figure 6 view E, install the rear doubler LH P/N 3G7130A33451 and re-install the left upper connector P/N 3P7119A31752 by means of n°7 rivets P/N MS20615-4M3R, n°9 rivets P/N NAS1200-5-5 and n°5 rivets P/N NAS1200-4-4-5.

2.18 With reference to Figure 6 view E, reinstall the n°4 anchor nuts P/N MS21071L3K and the n°2 anchor nuts P/N MS21069L3K by means of n°6 rivets P/N MS20427M3-4 and n°6 rivets P/N MS20427M3-4-5.

2.19 With reference to Figure 6 view E, re-install the anchor nut P/N MS21069L3K by means of n°2 rivets P/N MS20427M3-3.

2.20 With reference to Figure 6 view E, install the spacer P/N NAS43TH3-32 by means of previously removed bolt P/N AN3C10A and washer P/N NAS1149C0363R.

2.21 With reference to Figure 8 view J and view K, temporarily locate the reinforcement LH P/N 3G7130A36751 and the reinforcement LH P/N 3G7130A36951 on the drawpiece LH P/N 3P7119A25752 and countermark the necessary rivet holes.

2.22 With reference to Figure 8 view J and view K, drill the necessary rivet holes thru the drawpiece LH P/N 3P7119A25752 on the previously countermarked positions.

NOTE

It is allowed to use rivets P/N MS20615-4M4 instead of rivets P/N NAS1200-4-4.

2.23 With reference to Figure 4 view F and section H-H and Figure 8 view J and K, install the rear doubler LH P/N 3G7130A33651, the reinforcement LH P/N 3G7130A36751, the reinforcement LH P/N 3G7130A36951 and re-install the left upper connector P/N 3P7119A31752 by means of n°36 rivets P/N MS20615-4M4, n° 8 rivets P/N NAS1200-4-4 and the rivet P/N NAS1200-4-3.

2.24 With reference to Figure 8 view J, re-install the n°2 anchor nuts P/N MS21069L3K by means of n°4 rivets P/N MS20427M3-4-5 on the reinforcement LH P/N 3G7130A36751.

2.25 With reference to Figure 6 view G and Figure 8 view K, install the reinforcement LH P/N 3G7130A36951 and the rear doubler LH P/N 3G7130A33451 by means of n°2 rivets MS20615-4M4 and n°2 rivets MS20615-4M6.

2.26 With reference to Figures 1, 3, 4, 6 and 8, repeat steps from 2.1 to 2.25 for the FWD doubler RH P/N 3G7130A32751, the FWD doubler RH P/N 3G7130A32951, the rear doubler RH P/N 3G7130A33551, the rear doubler RH P/N 3G7130A33751, the reinforcement RH P/N 3G7130A36851 and the reinforcement RH P/N 3G7130A37051.

2.27 Overcoat all rivets and joints in the LH and RH Firewall Assemblies using Proseal 700 (C032).

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

   engineering.support.lhd@leonardocompany.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 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.

NOTE

It is possible to fabricate some of the doubler and reinforcements installed in following step from raw materials, if necessary. Dimensions in the figures are for reference, it is possible to adjust these dimensions to be compliant with standard practices contained in DM CSRP-A-51-71-00-00A-028A-D.

2. In accordance with DM 39-A-06-40-00-00A-028A-A and with reference to Figure 2, gain access to the area affected by the installation and perform the firewalls retromod P/N 3G7130P01412 as described in the following procedure:
   - 2.1 With reference to Figure 3 view C, remove and retain for later reuse the pin assy alignment eccentric P/N AAP141CH160-2, the n°4 anchor nuts P/N MS21069-3K and clamp P/N 7C31-1AA.
   - 2.2 With reference to Figure 3 view C, install the FWD doubler LH 3G7130A32851 by means of n°8 rivets P/N MS20615-4M3R.
   - 2.3 With reference to Figure 3 view C, install the n°4 anchor nuts P/N MS21069-3K by means of n°8 rivets P/N MS20427M3-4.
   - 2.4 With reference to Figure 3 view D and detail A, install the FWD doubler LH P/N 3G7130A32651 by means of n°17 rivets P/N MS20615-4M4.
   - 2.5 With reference to Figure 3 view C, re-install the clamp P/N 7C31-1AA by means of rivet P/N MS20615-4M4 and rivet P/N MS20615-4M4R.
   - 2.6 With reference to Figure 3 view C, re-install the pin assy alignment eccentric P/N AAP141CH160-2.
   - 2.7 With reference to Figure 3 view C, install the n°3 rivets P/N MS20615-4M6 and the n°3 rivets P/N MS20615-4M5R.
   - 2.8 With reference to Figure 9 detail C and view K, install the central doubler LH P/N 3G7130A33051 by means of n°4 rivets P/N MS20615-4M3R, n°5 rivets P/N MS20615-4M4 and n°13 rivets P/N NAS9307M-4-01.
   - 2.9 With reference to Figure 9 view J, install the central doubler LH P/N 3G7130A33251 by means of n°10 rivets P/N MS20615-4M4 and n°8 rivets P/N MS20615-4M4R.

2.10 With reference to Figure 5 view F, remove and retain for later reuse the bolt P/N NAS1801-08-10 and the washer P/N NAS1149CN832R. Remove and discard the indicated existing rivet.

2.11 With reference to Figure 5 view F and detail B, install the rear doubler LH P/N 3G7130A33651 by means of n°39 rivets P/N MS20615-4M3R and n°3 rivets P/N MS20615-4M4.

2.12 With reference to Figure 5 view F, install the previously removed bolt P/N NAS1801-08-10 and washer P/N NAS1149CN832R.

2.13 With reference to Figure 5 view F and section H-H, install the rivet P/N NAS1200-4-3.

2.14 With reference to Figure 7 view E, remove and discard the corner LH P/N 3P7119A23552 and the existing rivets. Retain for later reuse the n°4 anchor nuts P/N MS21071L3K and the n°2 anchor nuts P/N MS21069L3K.

2.15 With reference to Figure 7 view E, drill rivet holes Ø 0.2 in correspondence of weld joints position.

2.16 With reference to Figure 7 view E, remove and retain for later reuse the bolt P/N AN3C10A, the washer P/N NAS1149C0363R, and the anchor nut P/N MS21069L3K. Remove and discard the spacer P/N NAS43TH3-34.

NOTE

If necessary the use of rivet P/N NAS1200-6-4 instead of NAS1200-5-4 is allowed.

2.17 With reference to Figure 7 view E and view G, install the rear doubler LH P/N 3G7130A33451 by means of n°9 rivets P/N MS20615-4M3R, n°9 rivets P/N NAS1200-5-4, n°5 rivets P/N NAS1200-4-4-5 and n°2 rivets P/N MS20615-4M5R.

2.18 With reference to Figure 7 view E, reinstall the n°4 anchor nuts P/N MS21071L3K by means of n°8 rivets P/N MS20427M3-4-5 and the n°2 anchor nuts P/N MS21069L3K by means of n°4 rivets P/N MS20427M3-4-5.

2.19 With reference to Figure 7 view E, re-install the anchor nut P/N MS21069L3K by means of n°2 rivets P/N MS20427M3-3.

2.20 With reference to Figure 7 view E, install the spacer P/N NAS43TH3-32 by means of previously removed bolt P/N AN3C10A and washer P/N NAS1149C0363R.

2.21 With reference to Figures 2, 3, 5, 7 and 9, repeat steps from 2.1 to 2.20 for RH side.

2.22 Overcoat all rivets and joints in the LH and RH Firewall Assemblies using Proseal 700 (C032).

3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
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@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 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.

NOTE

It is possible to fabricate the doubler and reinforcements installed in following step from raw materials, if necessary. Dimensions in the figures are for reference, it is possible to adjust these dimensions to be compliant with standard practices contained in DM CSRP-A-51-71-00-00A-028A-D.

2. In accordance with DM 39-A-06-40-00-00A-028A-A and with reference to Figure 1, gain access to the area affected by the installation and perform the upgrade of the firewalls retromod P/N 3G7130P01411 from Rev. B to Rev. D as described in the following procedure:
   - 2.1 With reference to Figure 10 detail B and view F, remove and discard the three existing rivets.
   - 2.2 With reference to Figure 11 view E and view G and Figure 12 view K, remove and discard the four existing rivets from the rear doubler LH P/N 3G7130A33451.
   - 2.3 With reference to Figure 12 view J, remove and discard five existing from the left upper connector P/N 3P7119A31752.
   - 2.4 With reference to Figure 12 view J, remove the connector P/N 3G7130A29651 and the existing rivets. Retain for later reuse the n°2 anchor nuts P/N MS21069L3K.
   - 2.5 With reference to Figure 12 view J, remove the left lower connector P/N 3P7119A31351 and the existing rivets.
   - 2.6 With reference to Figure 12 view J and view K, temporarily locate the reinforcement LH P/N 3G7130A36751 and the reinforcement LH P/N 3G7130A36951 on the drawpiece LH P/N 3P7119A25752 and countermark the necessary rivet holes.
   - 2.7 With reference to Figure 12 view J and view K, drill the necessary rivet holes thru the drawpiece LH P/N 3P7119A25752 on the previously countermarked positions.

NOTE

It is allowed to use rivets P/N MS20615-4M4 instead of rivets P/N NAS1200-4-4.

2.8 With reference to Figure 10 view F and section H-H and Figure 12 view J and view K, install the reinforcement LH P/N 3G7130A36751 and the reinforcement LH P/N 3G7130A36951 by means of n°36 rivets P/N MS20615-4M4, n° 8 rivets P/N NAS1200-4-4 and the rivet P/N NAS1200-4-3.

2.9 With reference to Figure 12 view J, re-install the n°2 anchor nuts P/N MS21069L3K by means of n°4 rivets P/N MS20427M3-4-5 on the reinforcement LH P/N 3G7130A36751.

2.10 With reference to Figure 11 view G and Figure 12 view K, install the reinforcement LH P/N 3G7130A36951 on the rear doubler LH P/N 3G7130A33451 by means of n°2 rivets MS20615-4M4 and n°2 rivets MS20615-4M6.

2.11 With reference to Figures 1, 10, 11 and 12, repeat steps from 2.1 to 2.10 for the FWD doubler RH P/N 3G7130A32751, the FWD doubler RH P/N 3G7130A32951, the rear doubler RH P/N 3G7130A33551, the rear doubler RH P/N 3G7130A33751, the reinforcement RH P/N 3G7130A36851 and the reinforcement RH P/N 3G7130A37051.

2.12 Overcoat all rivets and joints in the LH and RH Firewall Assemblies using Proseal 700 (C032).

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

   engineering.support.lhd@leonardocompany.com

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

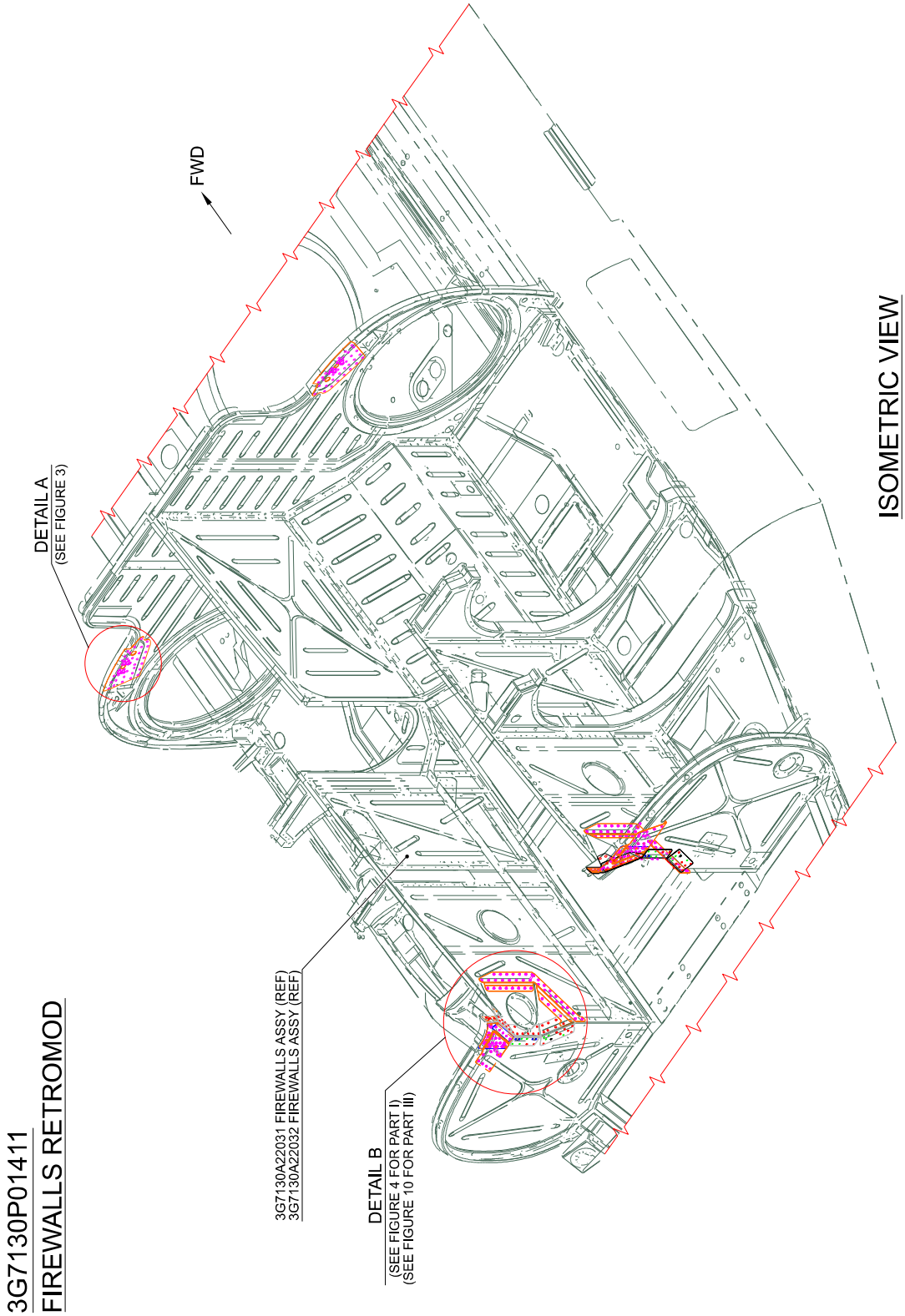

3G7130P01411
FIREWALLS RETROMOD
ISOMETRIC VIEW
FWD
DETAIL A
(SEE FIGURE 3)
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
DETAIL B
(SEE FIGURE 4 FOR PART I)
(SEE FIGURE 10 FOR PART III)

Figure 1

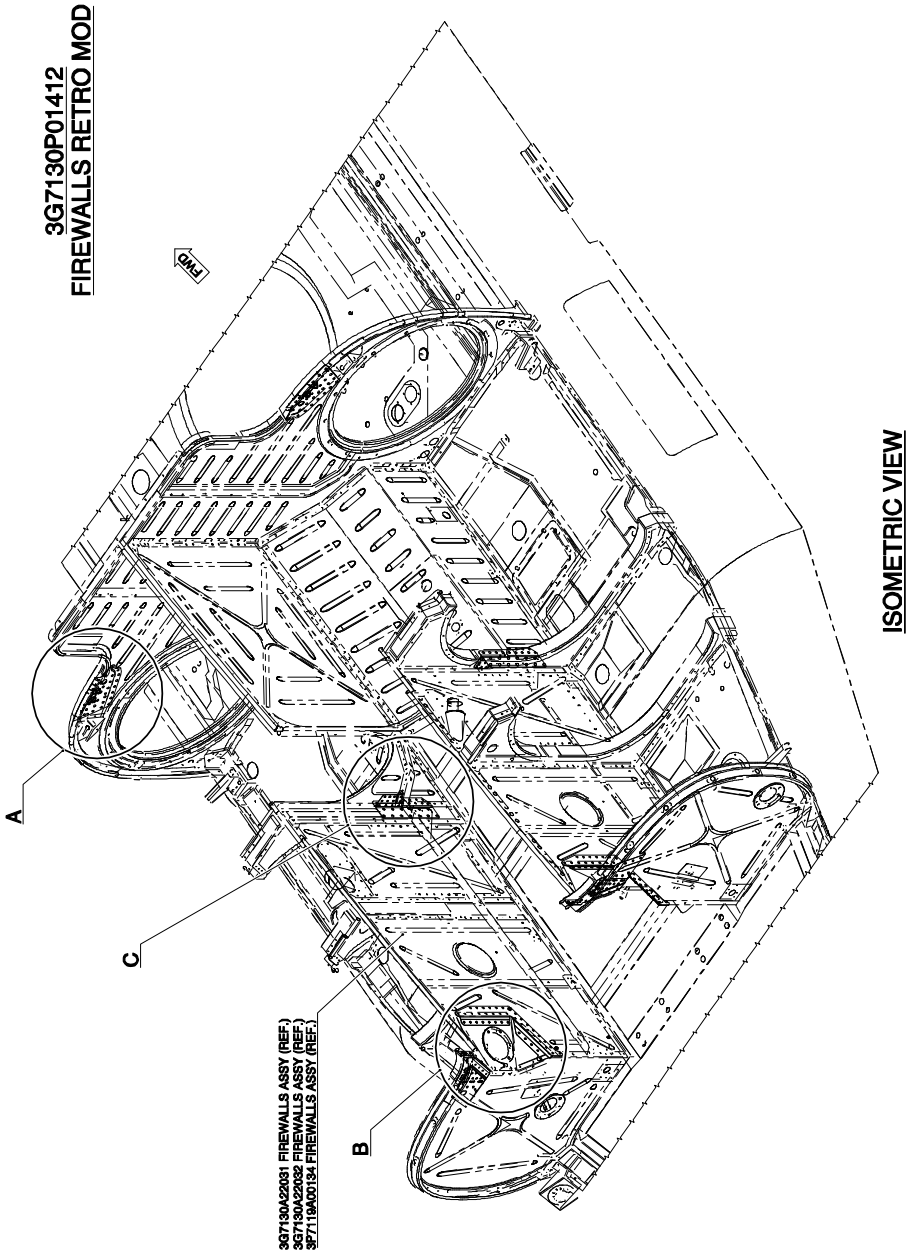
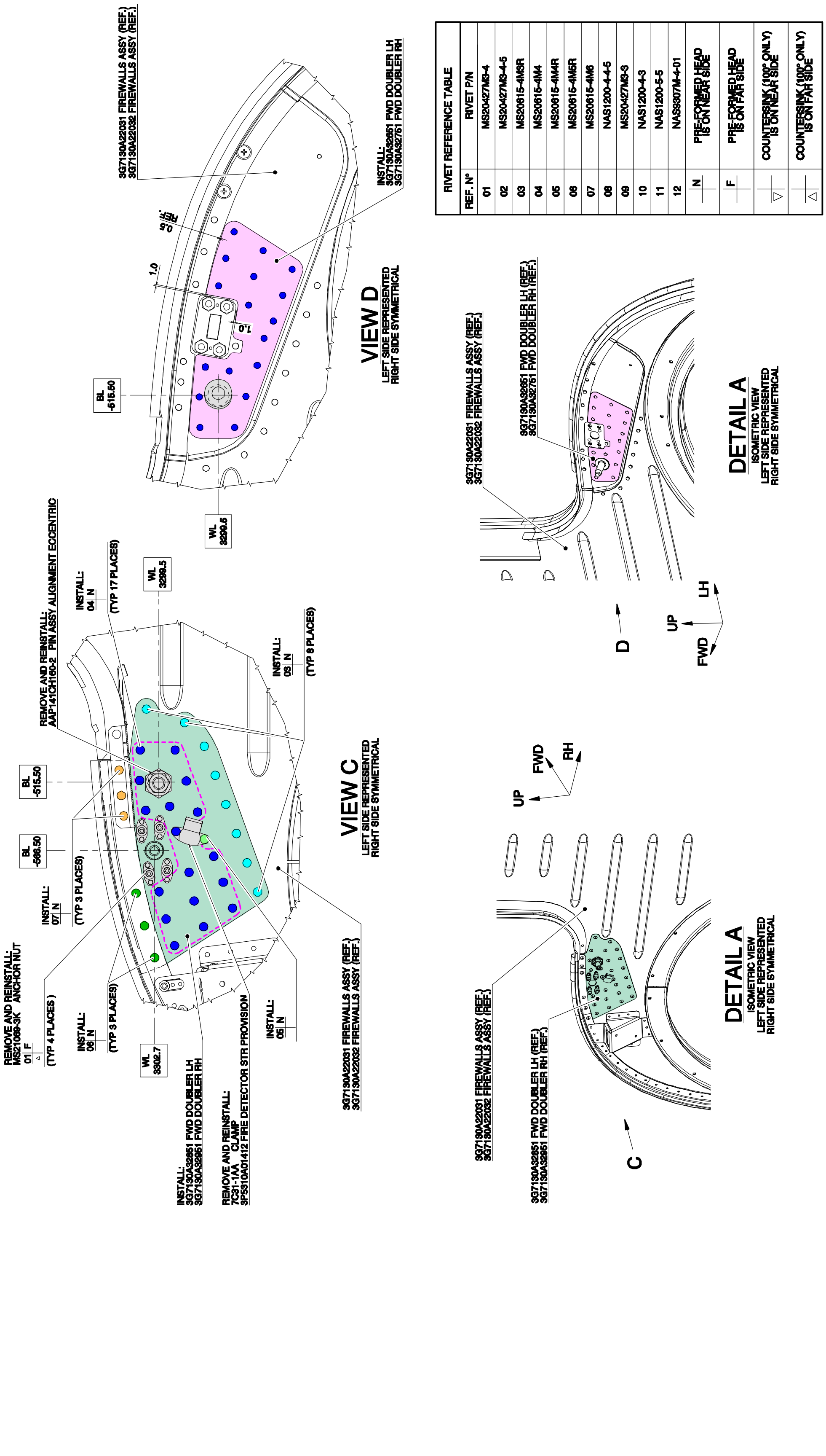

3G7130P01412
FIREWALLS RETRO MOD
FWD
A
C
B
3G7130A22091 FIREWALLS ASSY (REF.)
3G7130A22032 FIREWALLS ASSY (REF.)
3P7119A00134 FIREWALLS ASSY (REF.)
ISOMETRIC VIEW

Figure 2



RIVET REFERENCE TABLE	
REF. N°	RIVET P/N
01	MS20427M3-4
02	MS20427M3-4-5
03	MS20615-4M3R
04	MS20615-4M4
05	MS20615-4M4R
06	MS20615-4M5R
07	MS20615-4M6
08	NAS1200-4-4-5
09	MS20427M3-3
10	NAS1200-4-3
11	NAS1200-5-5
12	NAS9307M-4-01
N	PRE-FORMED HEAD IS ON NEAR SIDE
F	PRE-FORMED HEAD IS ON FAR SIDE
▷	COUNTERSINK (100° ONLY) IS ON NEAR SIDE
◁	COUNTERSINK (100° ONLY) IS ON FAR SIDE

Figure 3

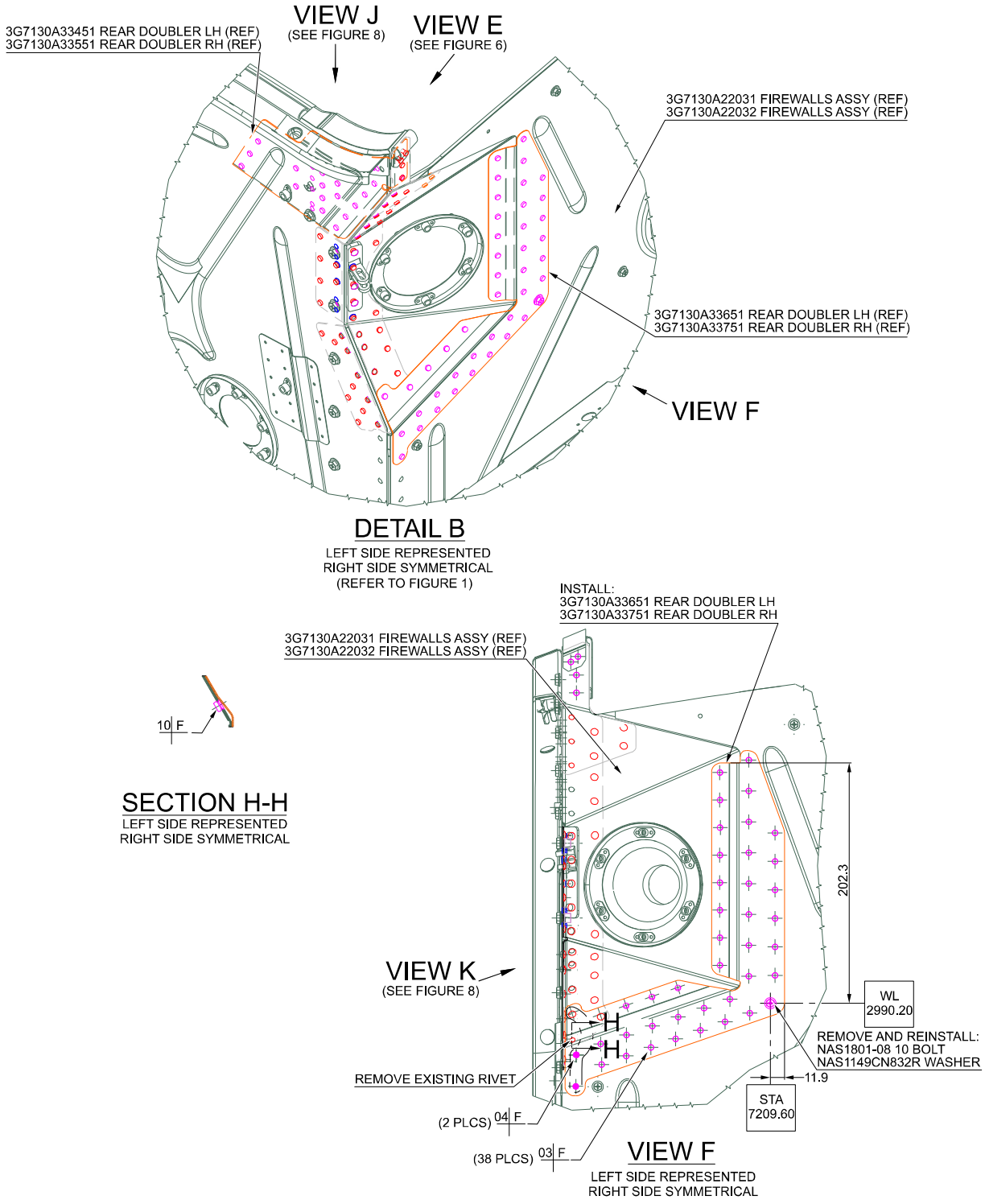

3G7130A33451 REAR DOUBLER LH (REF)
3G7130A33551 REAR DOUBLER RH (REF)
VIEW J
(SEE FIGURE 8)
VIEW E
(SEE FIGURE 6)
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
3G7130A33651 REAR DOUBLER LH (REF)
3G7130A33751 REAR DOUBLER RH (REF)
VIEW F
DETAIL B
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 1)
INSTALL:
3G7130A33651 REAR DOUBLER LH
3G7130A33751 REAR DOUBLER RH
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
10 F
SECTION H-H
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
VIEW K
(SEE FIGURE 8)
H
H
202.3
WL
2990.20
REMOVE AND REINSTALL:
NAS1801-08 10 BOLT
NAS1149CN832R WASHER
11.9
STA
7209.60
REMOVE EXISTING RIVET
(2 PLCS) 04 F
(38 PLCS) 03 F
VIEW F
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

Figure 4

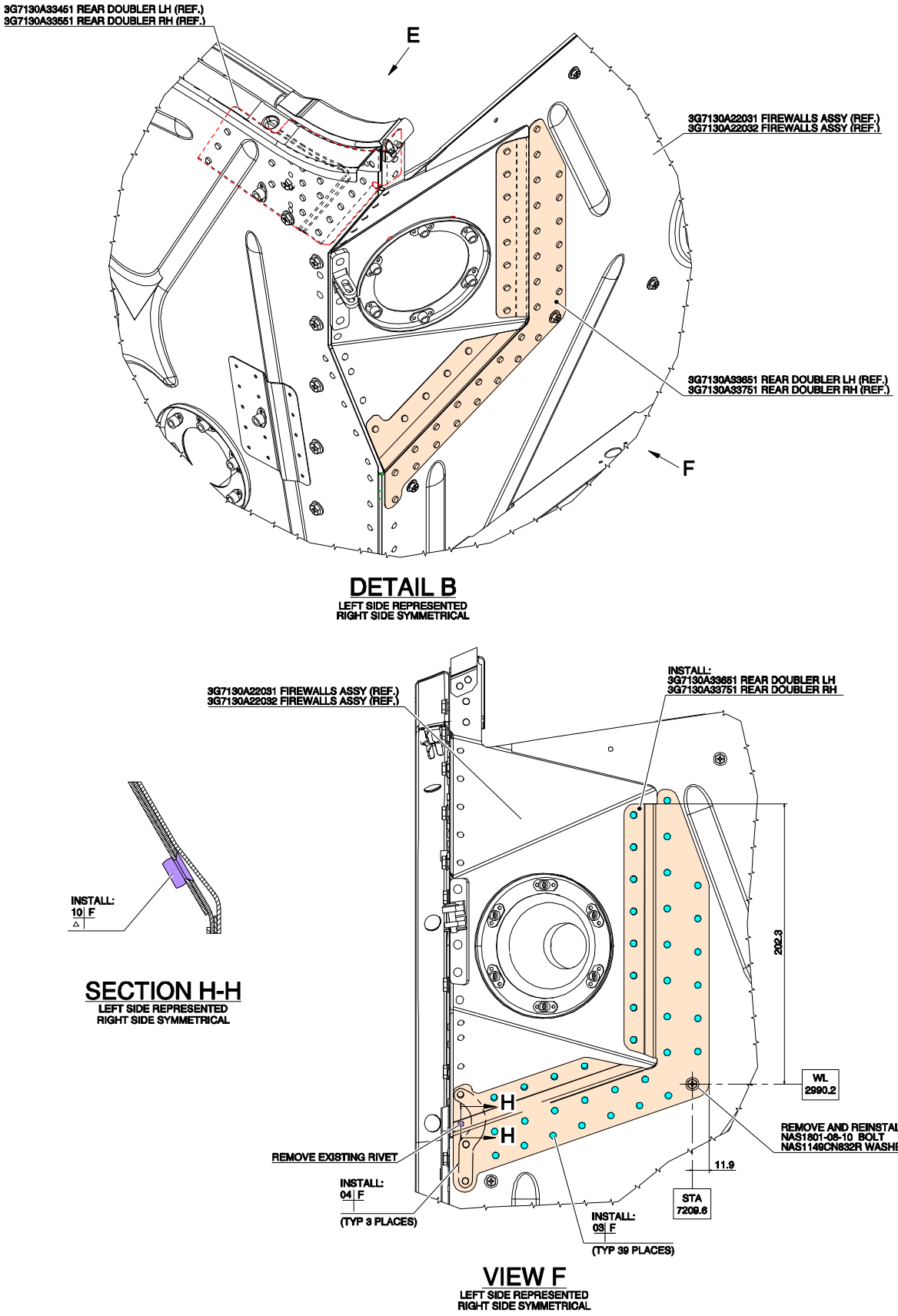

3G7130A33451 REAR DOUBLER LH (REF.)
3G7130A33551 REAR DOUBLER RH (REF.)
E
3G7130A22031 FIREWALLS ASSY (REF.)
3G7130A22032 FIREWALLS ASSY (REF.)
3G7130A33651 REAR DOUBLER LH (REF.)
3G7130A33751 REAR DOUBLER RH (REF.)
F
DETAIL B
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
INSTALL:
10 F
SECTION H-H
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
3G7130A22031 FIREWALLS ASSY (REF.)
3G7130A22032 FIREWALLS ASSY (REF.)
INSTALL:
3G7130A33651 REAR DOUBLER LH
3G7130A33751 REAR DOUBLER RH
202.3
WL
2990.2
H
H
REMOVE AND REINSTALL:
NAS1801-08-10 BOLT
NAS1149CN832R WASHER
11.9
STA
7209.6
REMOVE EXISTING RIVET
INSTALL:
04 F
(TYP 3 PLACES)
INSTALL:
03 F
(TYP 39 PLACES)
VIEW F
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

Figure 5

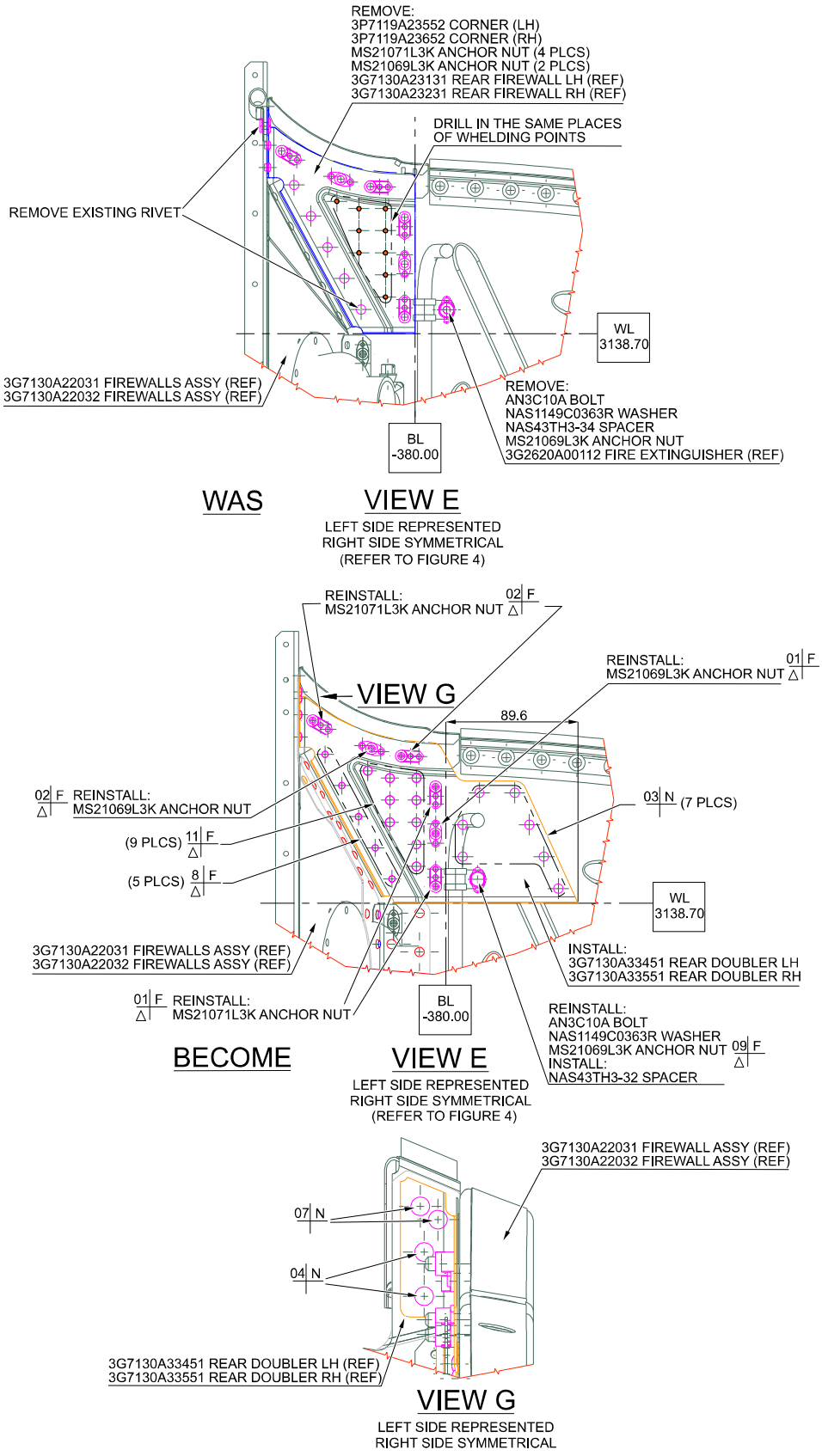

REMOVE:
3P7119A23552 CORNER (LH)
3P7119A23652 CORNER (RH)
MS21071L3K ANCHOR NUT (4 PLCS)
MS21069L3K ANCHOR NUT (2 PLCS)
3G7130A23131 REAR FIREWALL LH (REF)
3G7130A23231 REAR FIREWALL RH (REF)
DRILL IN THE SAME PLACES OF WHELDING POINTS
REMOVE EXISTING RIVET
WL 3138.70
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
BL -380.00
REMOVE:
AN3C10A BOLT
NAS1149C0363R WASHER
NAS43TH3-34 SPACER
MS21069L3K ANCHOR NUT
3G2620A00112 FIRE EXTINGUISHER (REF)
WAS
VIEW E
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 4)
REINSTALL:
MS21071L3K ANCHOR NUT 02 F
REINSTALL:
MS21069L3K ANCHOR NUT 01 F
VIEW G
89.6
02 F REINSTALL:
MS21069L3K ANCHOR NUT
(9 PLCS) 11 F
(5 PLCS) 8 F
03 N (7 PLCS)
WL 3138.70
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
01 F REINSTALL:
MS21071L3K ANCHOR NUT
BL -380.00
INSTALL:
3G7130A33451 REAR DOUBLER LH
3G7130A33551 REAR DOUBLER RH
REINSTALL:
AN3C10A BOLT
NAS1149C0363R WASHER
MS21069L3K ANCHOR NUT 09 F
INSTALL:
NAS43TH3-32 SPACER
BECOME
VIEW E
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 4)
3G7130A22031 FIREWALL ASSY (REF)
3G7130A22032 FIREWALL ASSY (REF)
07 N
04 N
3G7130A33451 REAR DOUBLER LH (REF)
3G7130A33551 REAR DOUBLER RH (REF)
VIEW G
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

Figure 6

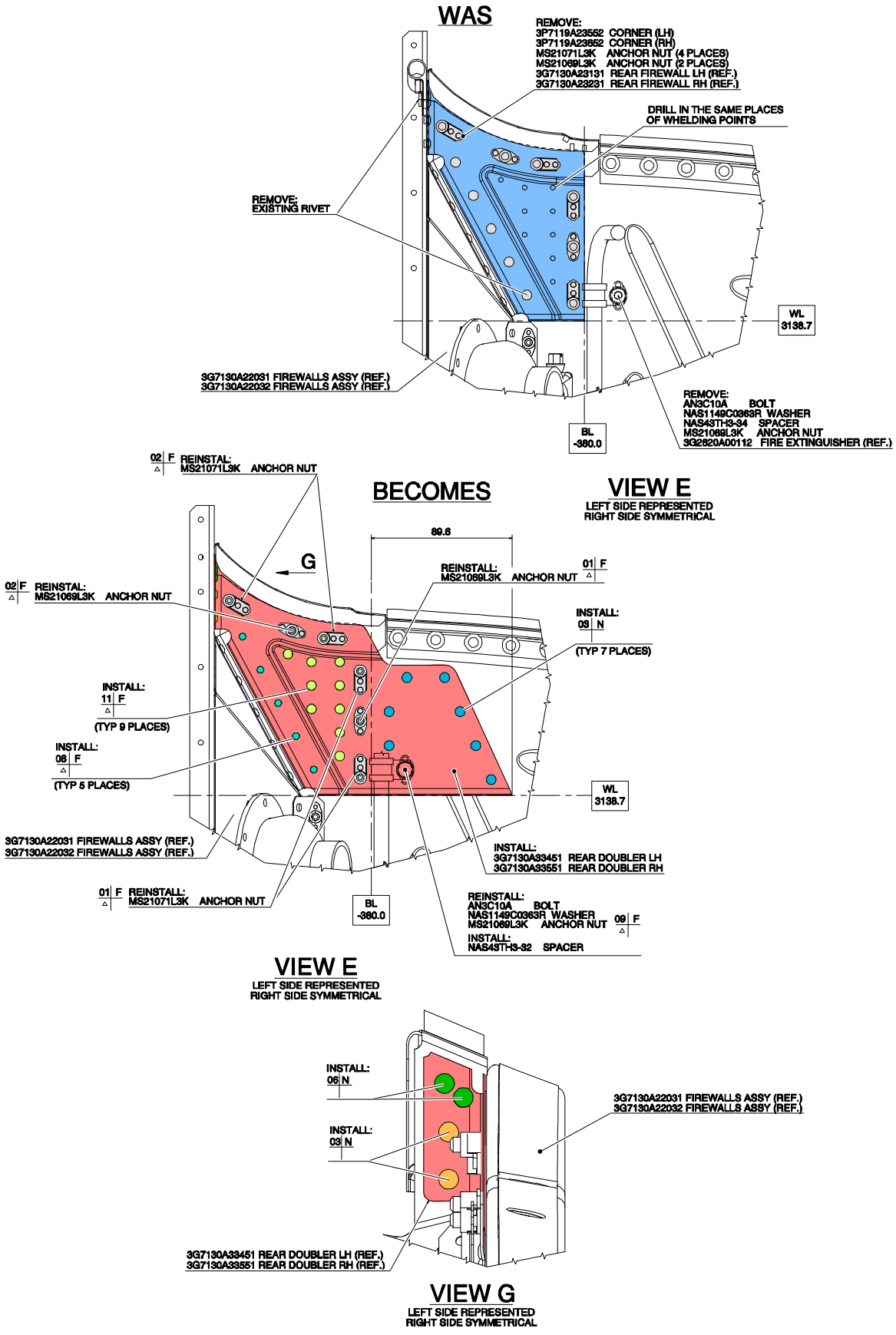
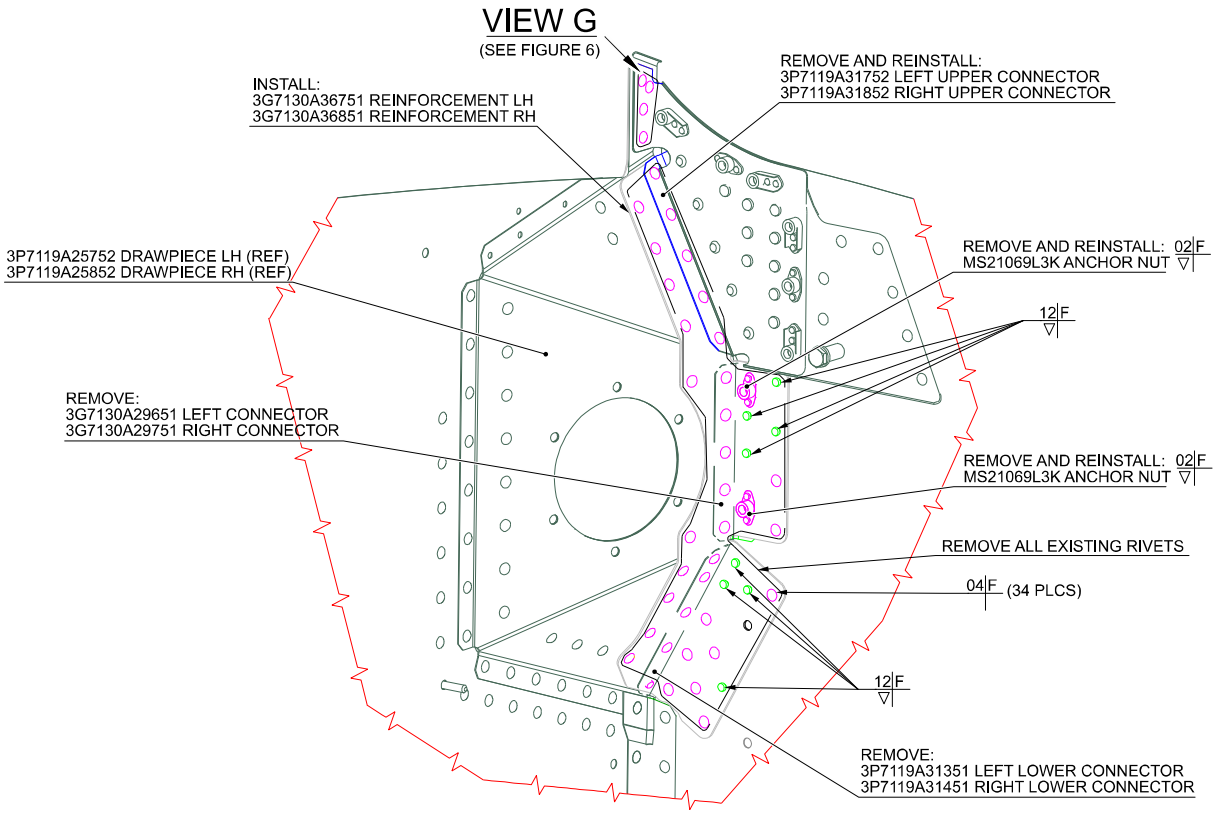
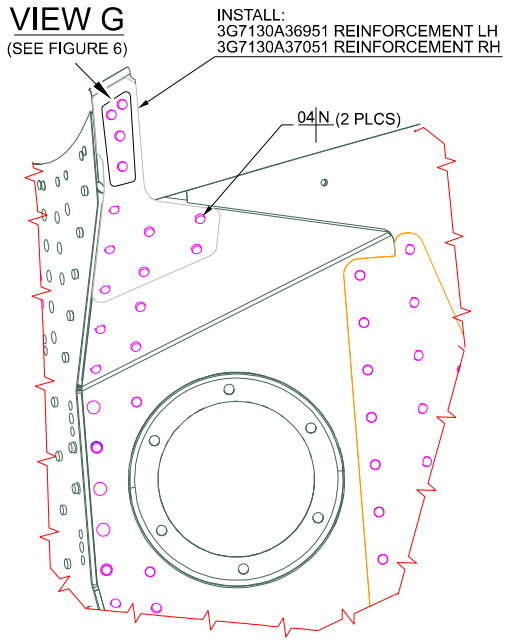

WAS
REMOVE:
3P7119A23552 CORNER (LH)
3P7119A23852 CORNER (RH)
MS21071L3K ANCHOR NUT (4 PLACES)
MS21069L3K ANCHOR NUT (2 PLACES)
3G7130A23131 REAR FIREWALL LH (REF.)
3G7130A23231 REAR FIREWALL RH (REF.)
DRILL IN THE SAME PLACES OF WHELDING POINTS
REMOVE: EXISTING RIVET
WL 3138.7
3G7130A22031 FIREWALLS ASSY (REF.)
3G7130A22032 FIREWALLS ASSY (REF.)
REMOVE:
AN3C10A BOLT
NAS1149C0363R WASHER
NAS43TH3-34 SPACER
MS21069L3K ANCHOR NUT
3G2620A00112 FIRE EXTINGUISHER (REF.)
BL -380.0
BECOMES
VIEW E
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
02 F REINSTAL: MS21071L3K ANCHOR NUT
99.6
G
REINSTAL: MS21069L3K ANCHOR NUT 01 F
02 F REINSTAL: MS21069L3K ANCHOR NUT
INSTALL: 09 N
(TYP 7 PLACES)
INSTALL: 11 F
(TYP 9 PLACES)
INSTALL: 08 F
(TYP 5 PLACES)
WL 3138.7
3G7130A22031 FIREWALLS ASSY (REF.)
3G7130A22032 FIREWALLS ASSY (REF.)
INSTALL:
3G7130A33451 REAR DOUBLER LH
3G7130A33551 REAR DOUBLER RH
01 F REINSTALL: MS21071L3K ANCHOR NUT
BL -380.0
REINSTALL:
AN3C10A BOLT
NAS1149C0363R WASHER
MS21069L3K ANCHOR NUT 09 F
INSTALL:
NAS43TH3-32 SPACER
VIEW E
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
INSTALL: 06 N
INSTALL: 03 N
3G7130A22031 FIREWALLS ASSY (REF.)
3G7130A22032 FIREWALLS ASSY (REF.)
3G7130A33451 REAR DOUBLER LH (REF.)
3G7130A33551 REAR DOUBLER RH (REF.)
VIEW G
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

Figure 7



VIEW J
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 4)



VIEW K
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 4)

Figure 8

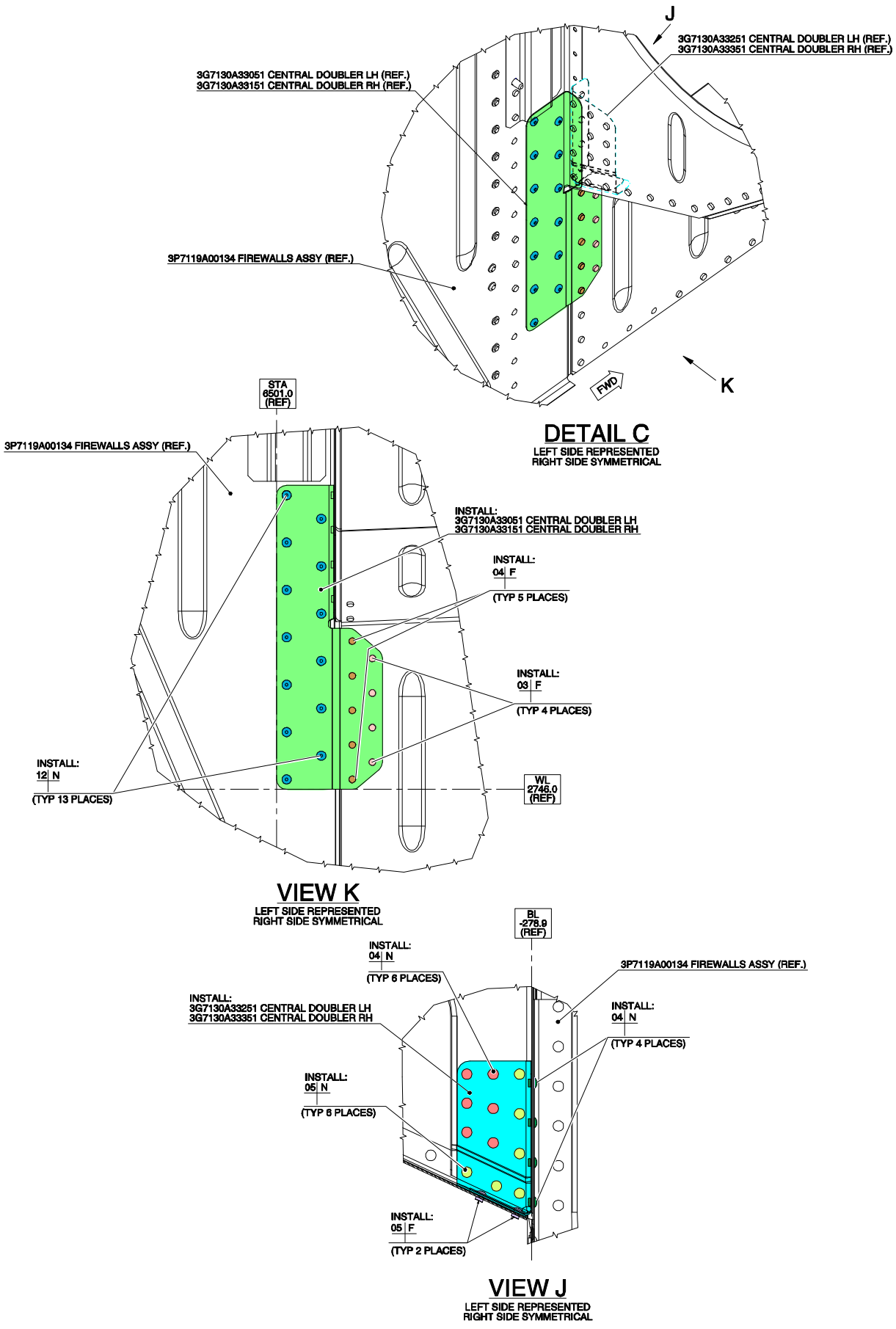

J
3G7130A33251 CENTRAL DOUBLER LH (REF.)
3G7130A33351 CENTRAL DOUBLER RH (REF.)
3G7130A33051 CENTRAL DOUBLER LH (REF.)
3G7130A33151 CENTRAL DOUBLER RH (REF.)
3P7119A00134 FIREWALLS ASSY (REF.)
K
FWD
DETAIL C
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
STA
6501.0
(REF)
3P7119A00134 FIREWALLS ASSY (REF.)
INSTALL:
3G7130A33051 CENTRAL DOUBLER LH
3G7130A33151 CENTRAL DOUBLER RH
INSTALL:
04 F
(TYP 5 PLACES)
INSTALL:
03 F
(TYP 4 PLACES)
INSTALL:
12 N
(TYP 13 PLACES)
WL
2746.0
(REF)
VIEW K
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
BL
-278.9
(REF)
INSTALL:
04 N
(TYP 6 PLACES)
3P7119A00134 FIREWALLS ASSY (REF.)
INSTALL:
3G7130A33251 CENTRAL DOUBLER LH
3G7130A33351 CENTRAL DOUBLER RH
INSTALL:
04 N
(TYP 4 PLACES)
INSTALL:
05 N
(TYP 6 PLACES)
INSTALL:
05 F
(TYP 2 PLACES)
VIEW J
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

Figure 9

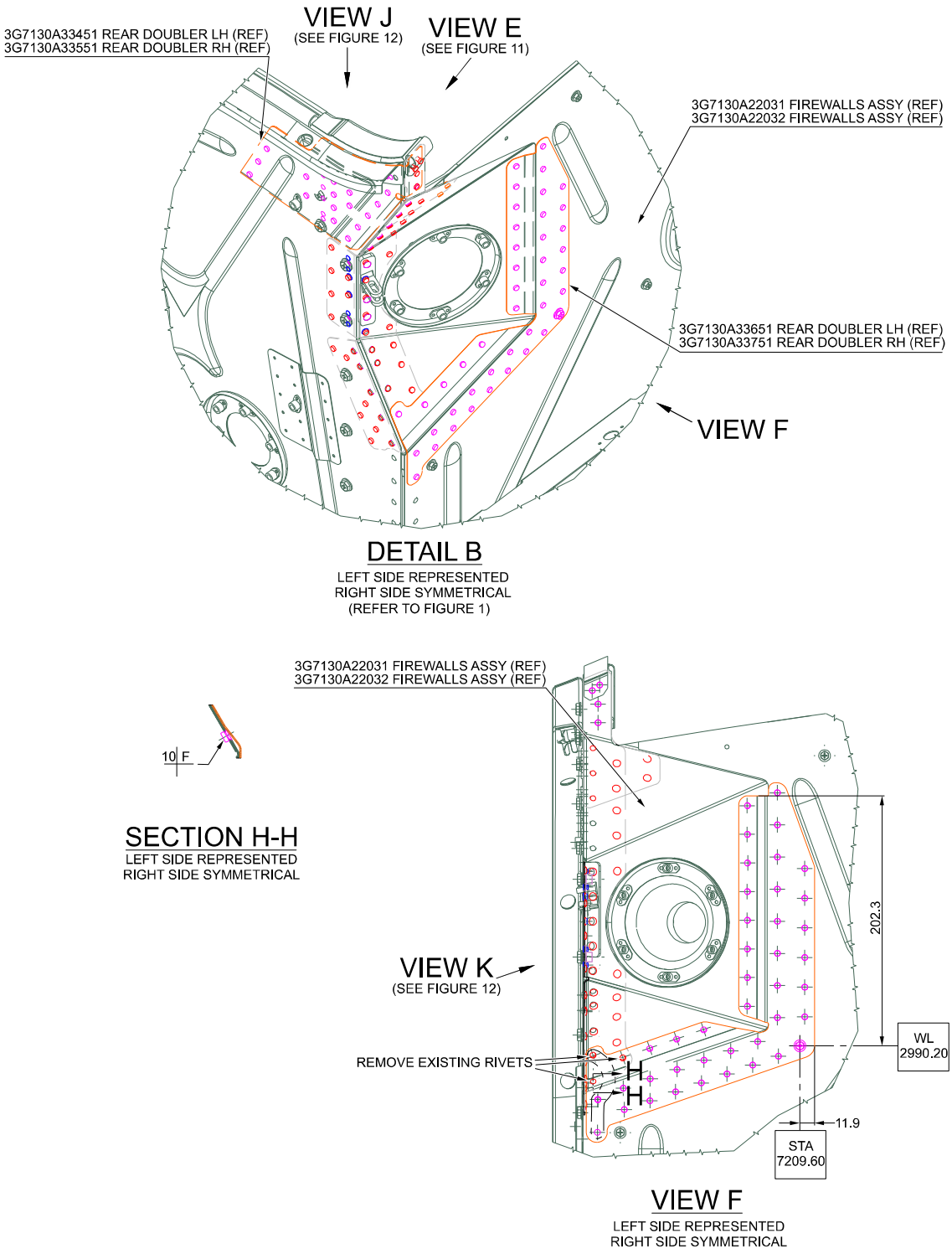
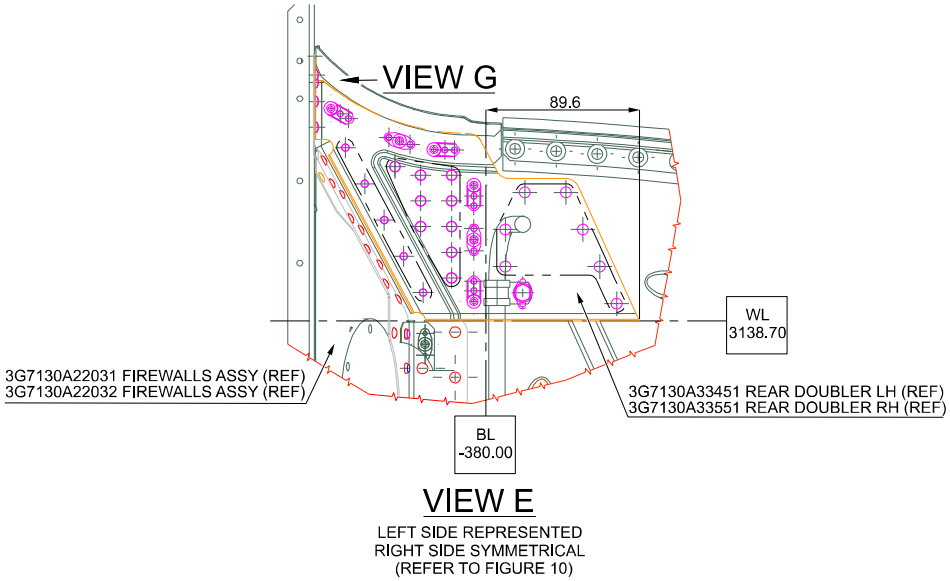
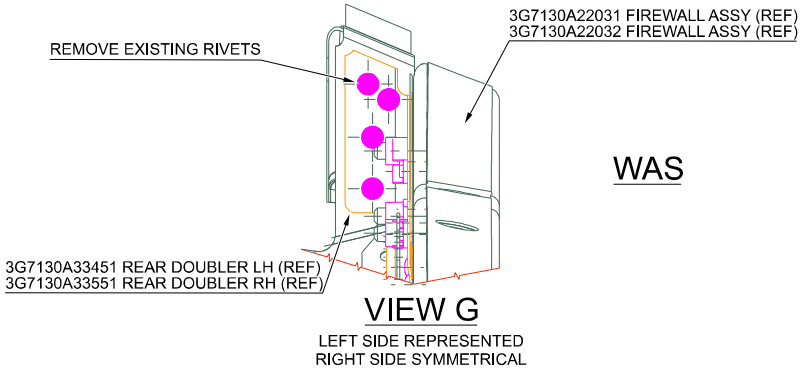

3G7130A33451 REAR DOUBLER LH (REF)
3G7130A33551 REAR DOUBLER RH (REF)
VIEW J
(SEE FIGURE 12)
VIEW E
(SEE FIGURE 11)
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
3G7130A33651 REAR DOUBLER LH (REF)
3G7130A33751 REAR DOUBLER RH (REF)
VIEW F
DETAIL B
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 1)
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
10 F
SECTION H-H
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
VIEW K
(SEE FIGURE 12)
REMOVE EXISTING RIVETS
H
H
202.3
WL
2990.20
11.9
STA
7209.60
VIEW F
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

Figure 10


VIEW G
89.6
WL
3138.70
3G7130A22031 FIREWALLS ASSY (REF)
3G7130A22032 FIREWALLS ASSY (REF)
3G7130A33451 REAR DOUBLER LH (REF)
3G7130A33551 REAR DOUBLER RH (REF)
BL
-380.00
VIEW E
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 10)


REMOVE EXISTING RIVETS
3G7130A22031 FIREWALL ASSY (REF)
3G7130A22032 FIREWALL ASSY (REF)
WAS
3G7130A33451 REAR DOUBLER LH (REF)
3G7130A33551 REAR DOUBLER RH (REF)
VIEW G
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

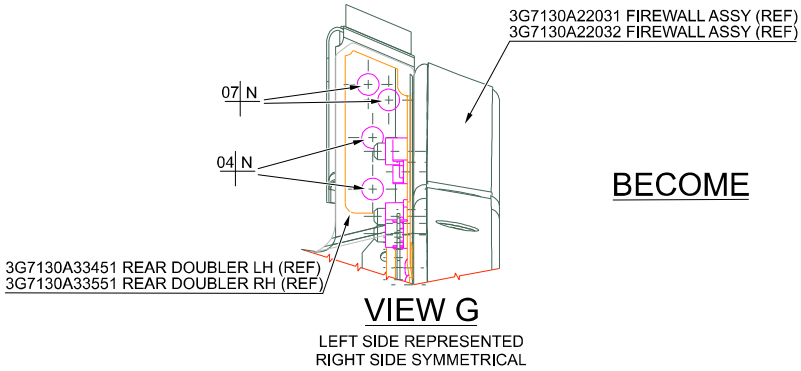
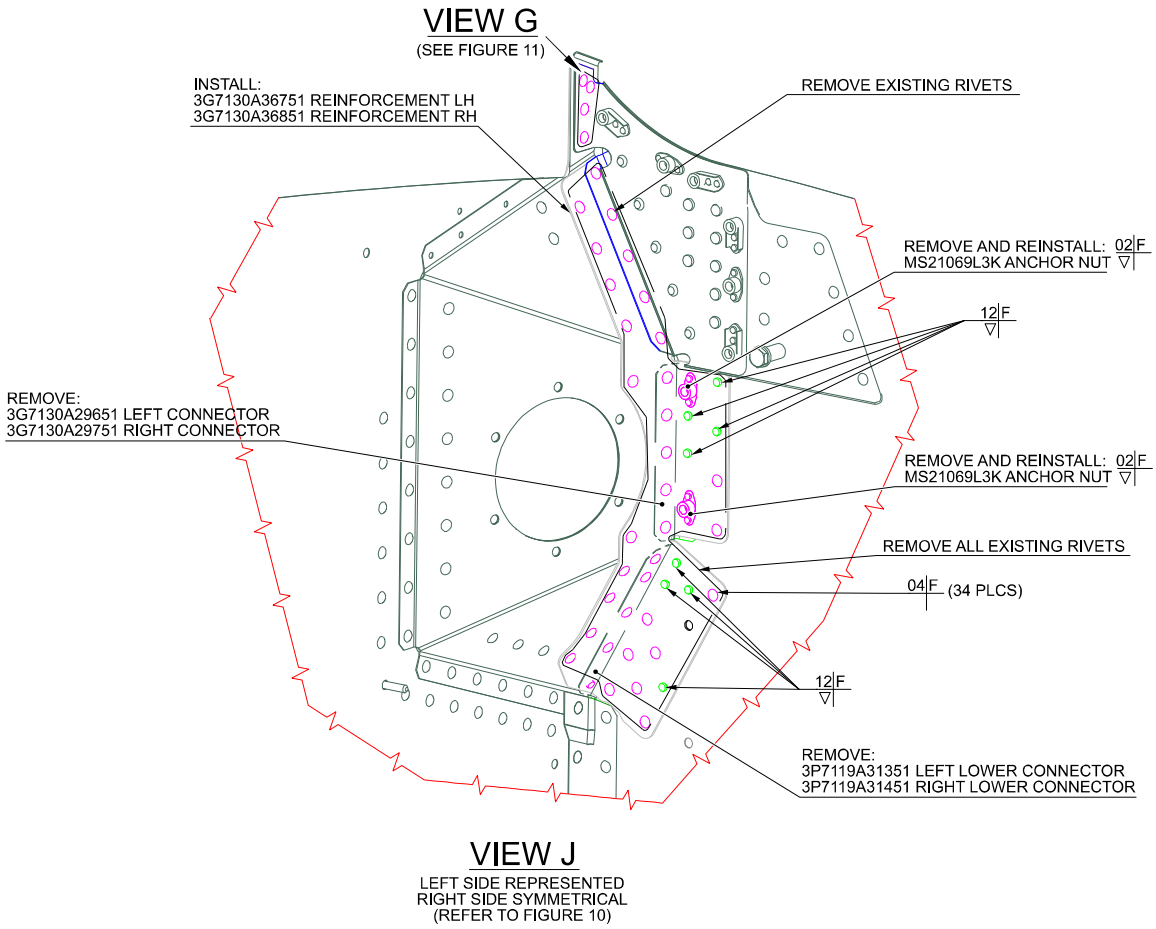

3G7130A22031 FIREWALL ASSY (REF)
3G7130A22032 FIREWALL ASSY (REF)
07 N
04 N
BECOME
3G7130A33451 REAR DOUBLER LH (REF)
3G7130A33551 REAR DOUBLER RH (REF)
VIEW G
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL

Figure 11


VIEW G
(SEE FIGURE 11)
INSTALL:
3G7130A36751 REINFORCEMENT LH
3G7130A36851 REINFORCEMENT RH
REMOVE EXISTING RIVETS
REMOVE AND REINSTALL: 02|F
MS21069L3K ANCHOR NUT
12|F
REMOVE:
3G7130A29651 LEFT CONNECTOR
3G7130A29751 RIGHT CONNECTOR
REMOVE AND REINSTALL: 02|F
MS21069L3K ANCHOR NUT
REMOVE ALL EXISTING RIVETS
04|F (34 PLCS)
12|F
REMOVE:
3P7119A31351 LEFT LOWER CONNECTOR
3P7119A31451 RIGHT LOWER CONNECTOR
VIEW J
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 10)

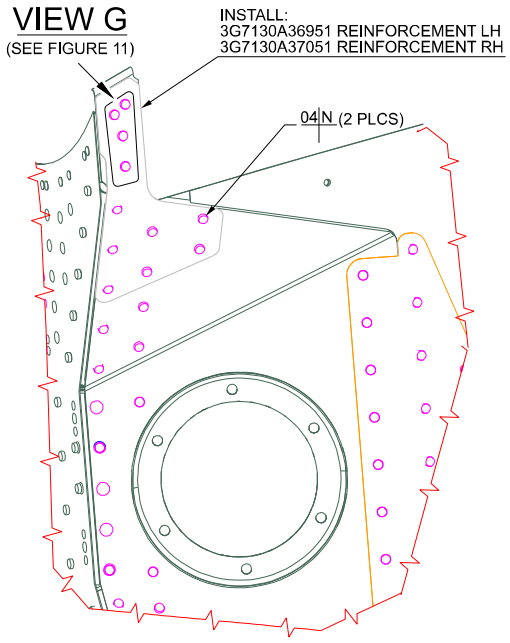

VIEW G
(SEE FIGURE 11)
INSTALL:
3G7130A36951 REINFORCEMENT LH
3G7130A37051 REINFORCEMENT RH
04|N (2 PLCS)
VIEW K
LEFT SIDE REPRESENTED
RIGHT SIDE SYMMETRICAL
(REFER TO FIGURE 10)

Figure 12

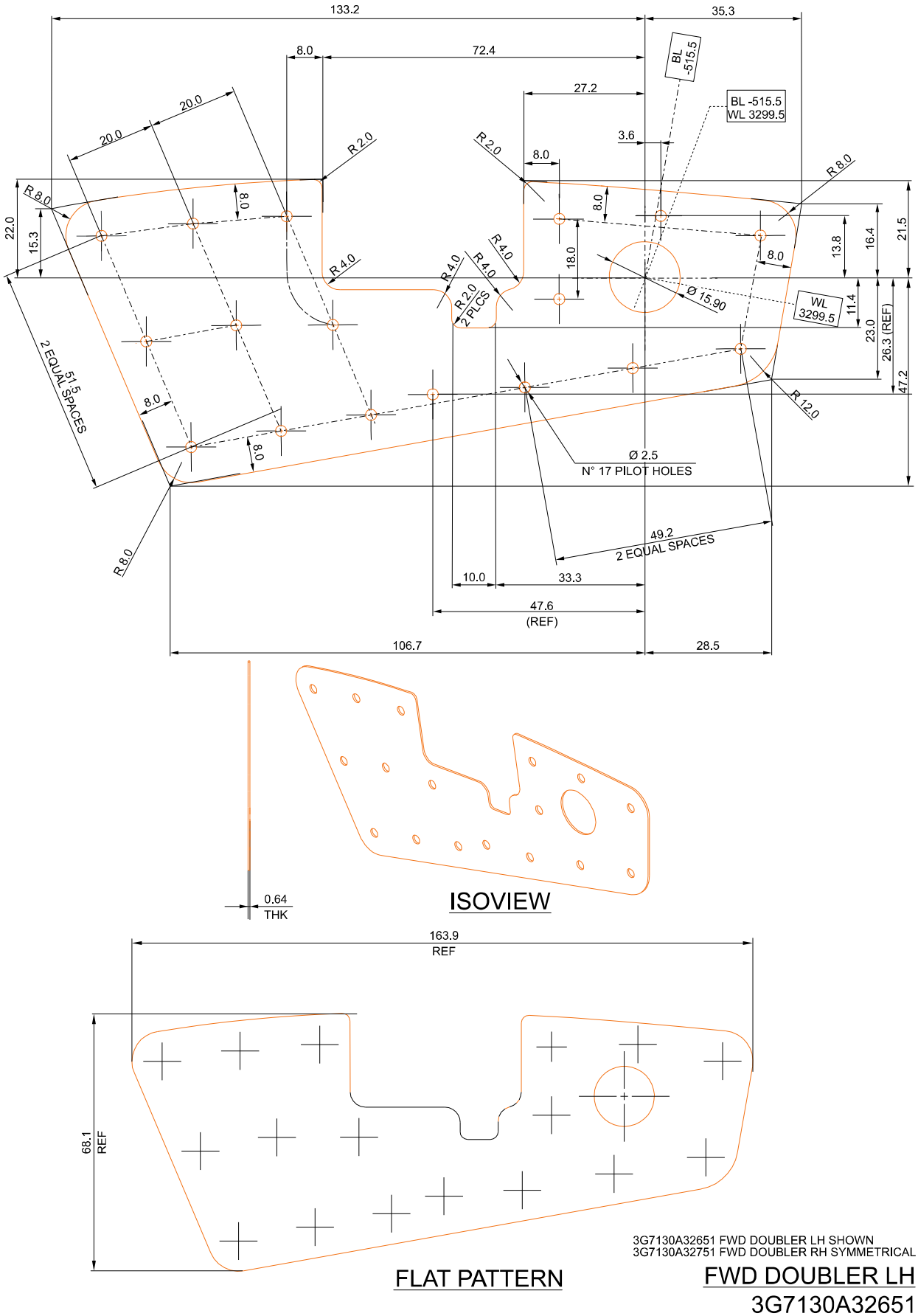

133.2
35.3
8.0
72.4
27.2
BL -515.5
BL -515.5
WL 3299.5
20.0
20.0
R 2.0
R 2.0
3.6
8.0
R 8.0
R 8.0
22.0
15.3
8.0
8.0
18.0
13.8
16.4
21.5
R 4.0
R 4.0
R 4.0
R 4.0
R 2.0
2 PLCS
Ø 15.90
WL 3299.5
11.4
23.0
26.3 (REF)
47.2
2 EQUAL SPACES
51.5
8.0
8.0
R 12.0
Ø 2.5
N° 17 PILOT HOLES
R 8.0
49.2
2 EQUAL SPACES
10.0
33.3
47.6
(REF)
106.7
28.5
0.64
THK
ISOVIEW
163.9
REF
68.1
REF
FLAT PATTERN
3G7130A32651 FWD DOUBLER LH SHOWN
3G7130A32751 FWD DOUBLER RH SYMMETRICAL
FWD DOUBLER LH
3G7130A32651

Figure 13

3G7130A32851 FWD DOUBLER LH SHOWN
3G7130A32951 FWD DOUBLER RH SYMMETRICAL

FWD DOUBLER LH
3G7130A32851

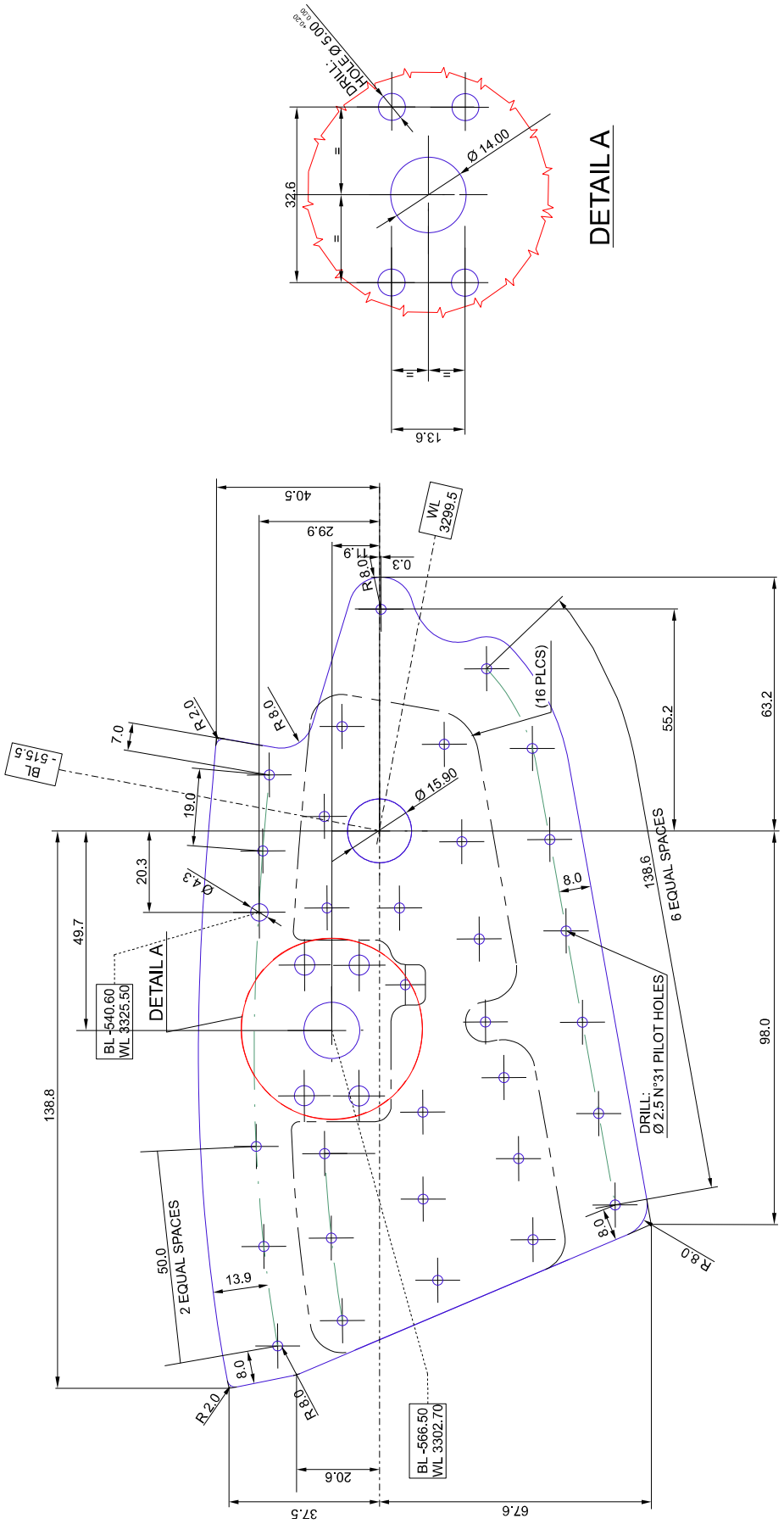


Figure 14

3G7130A32851 FWD DOUBLER LH SHOWN
3G7130A32951 FWD DOUBLER RH SYMMETRICAL

FWD DOUBLER LH
3G7130A32851

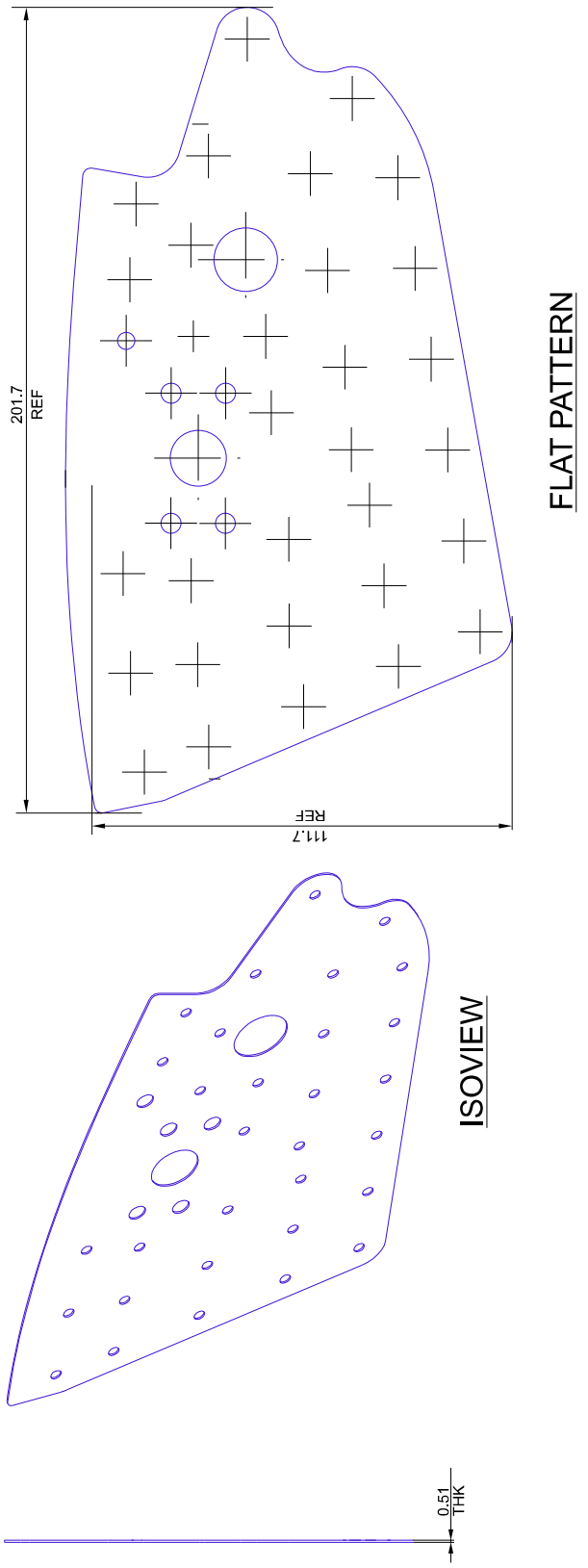


Figure 15

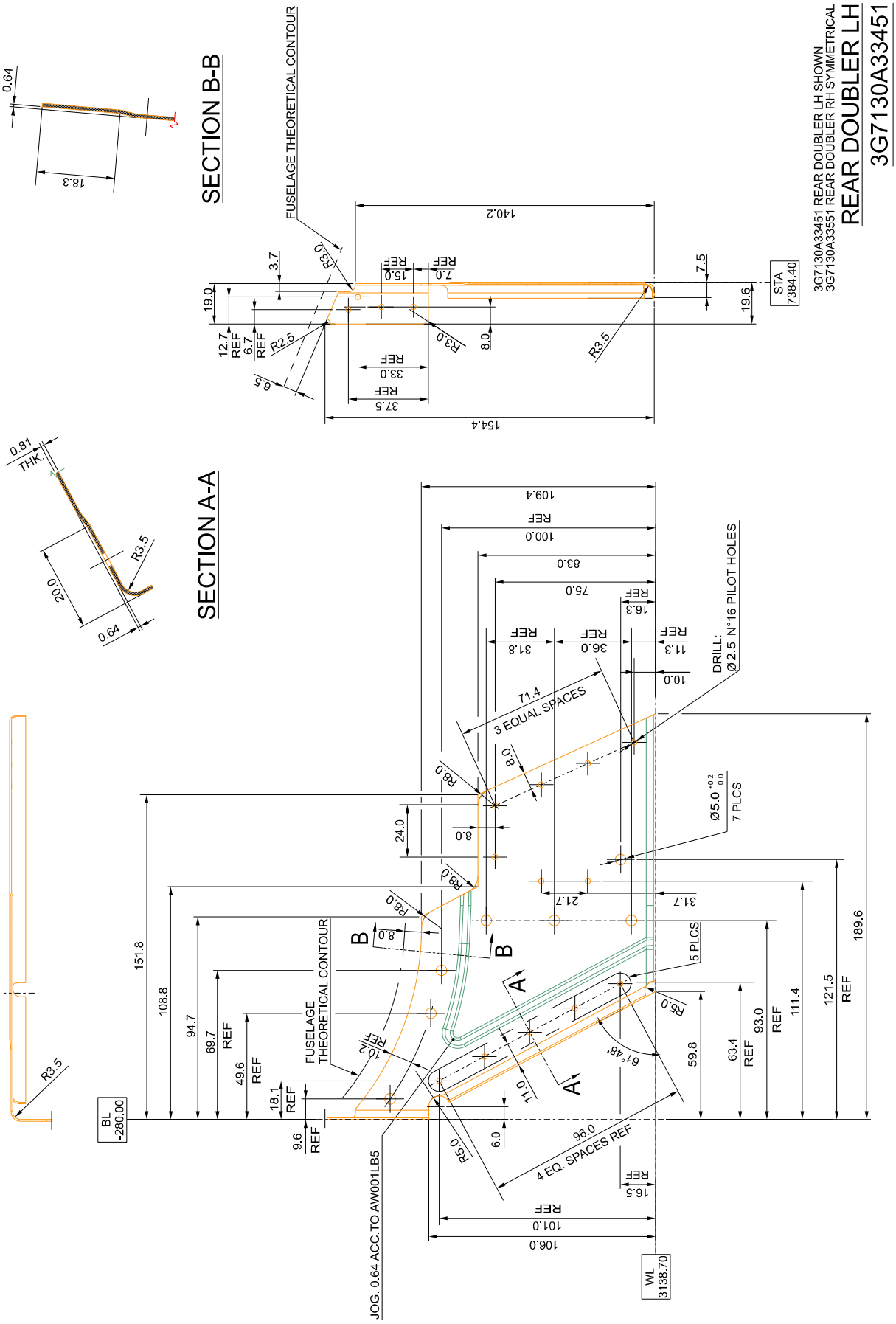
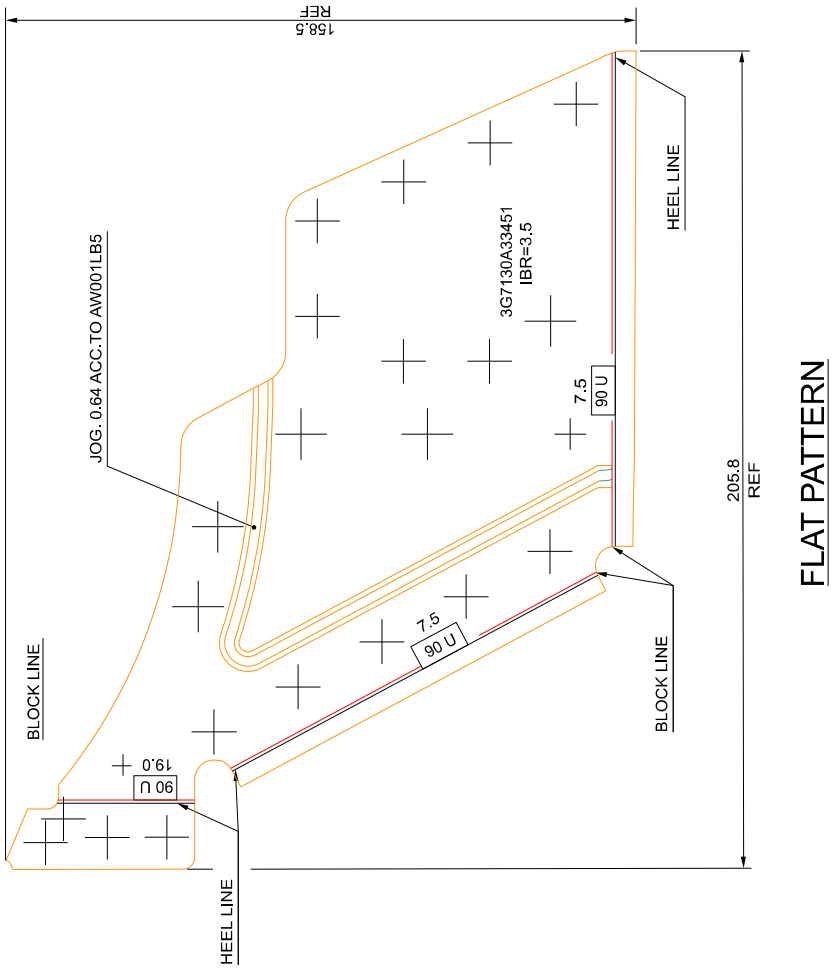
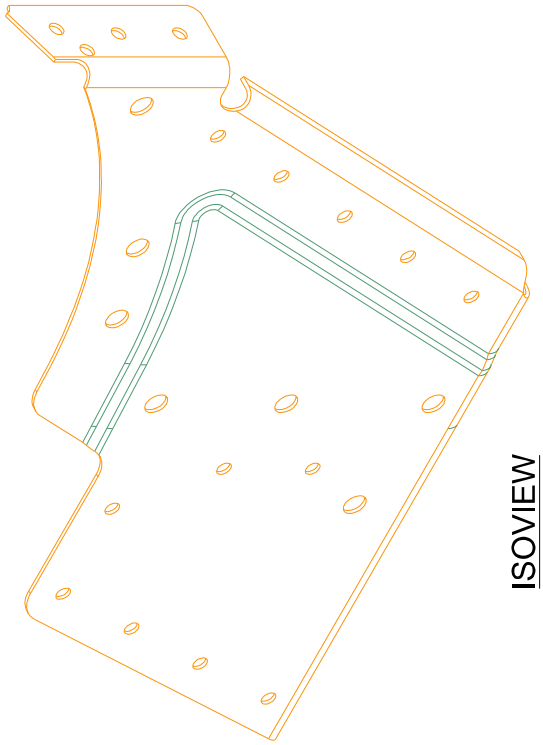

3G7130A33451 REAR DOUBLER LH SHOWN
3G7130A33551 REAR DOUBLER RH SYMMETRICAL
REAR DOUBLER LH
3G7130A33451
SECTION B-B
SECTION A-A
FUSELAGE THEORETICAL CONTOUR
STA 7384.40
BL -280.00
WL 3138.70
DRILL: Ø2.5 N°16 PILOT HOLES
7 PLCS
5 PLCS
3 EQUAL SPACES
4 EQ. SPACES REF
JOG. 0.64 ACC. TO AW001LB5

Figure 16



FLAT PATTERN



ISOVIEW

3G7130A33451 REAR DOUBLER LH SHOWN
3G7130A33551 REAR DOUBLER RH SYMMETRICAL

REAR DOUBLER LH
3G7130A33451

Figure 17

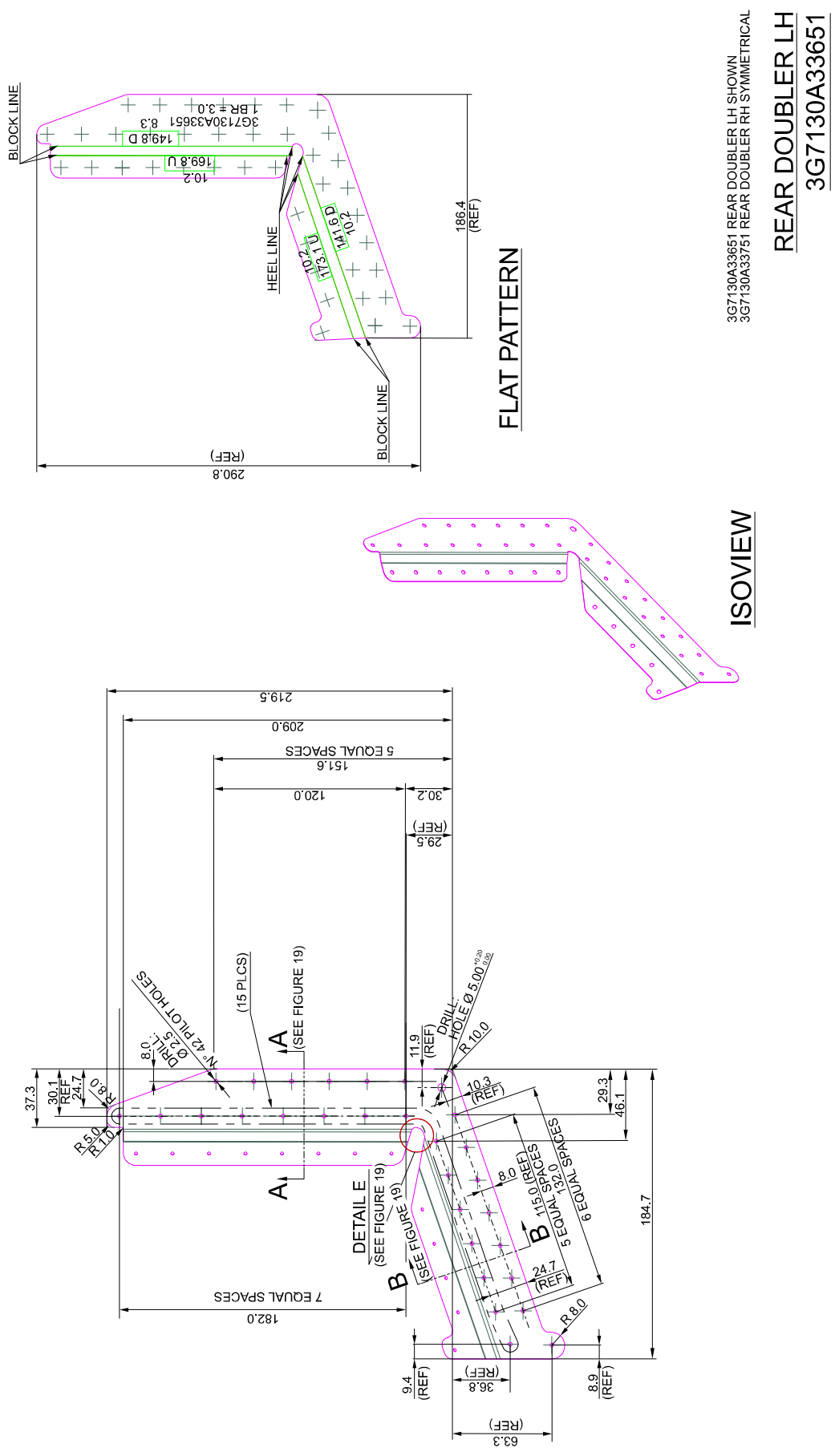

REAR DOUBLER LH
3G7130A33651
3G7130A33651 REAR DOUBLER LH SHOWN
3G7130A33751 REAR DOUBLER RH SYMMETRICAL
FLAT PATTERN
ISOVIEW
BLOCK LINE
HEEL LINE
BLOCK LINE
186.4 (REF)
290.8 (REF)
219.5
209.0
5 EQUAL SPACES
151.6
120.0
30.2
29.5 (REF)
(15 PLCS)
(SEE FIGURE 19)
DRILL Ø2.5 Nº 42 PILOT HOLES
DRILL HOLE Ø 5.00
R 10.0
11.9 (REF)
37.3
30.1
24.7 REF
R8.0
R5.0
R1.0
10.3 (REF)
29.3
46.1
DETAIL E
(SEE FIGURE 19)
8.0
11.5 (REF)
5 EQUAL SPACES
132.0
6 EQUAL SPACES
184.7
24.7 (REF)
R 8.0
7 EQUAL SPACES
182.0
9.4 (REF)
36.8 (REF)
8.9 (REF)
63.3 (REF)

Figure 18

3G7130A33651 REAR DOUBLER LH SHOWN
3G7130A33751 REAR DOUBLER RH SYMMETRICAL

REAR DOUBLER LH
3G7130A33651

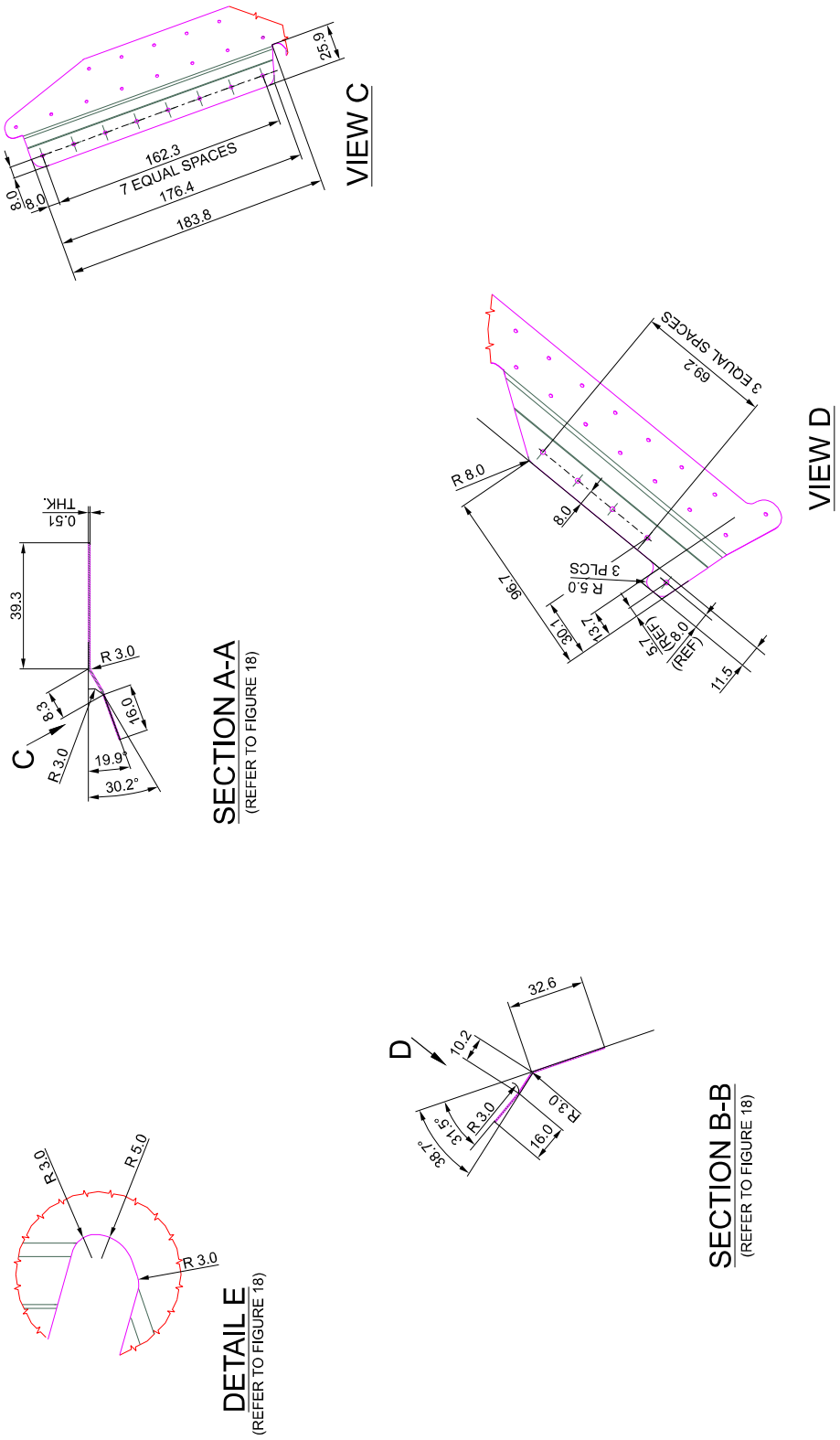


Figure 19

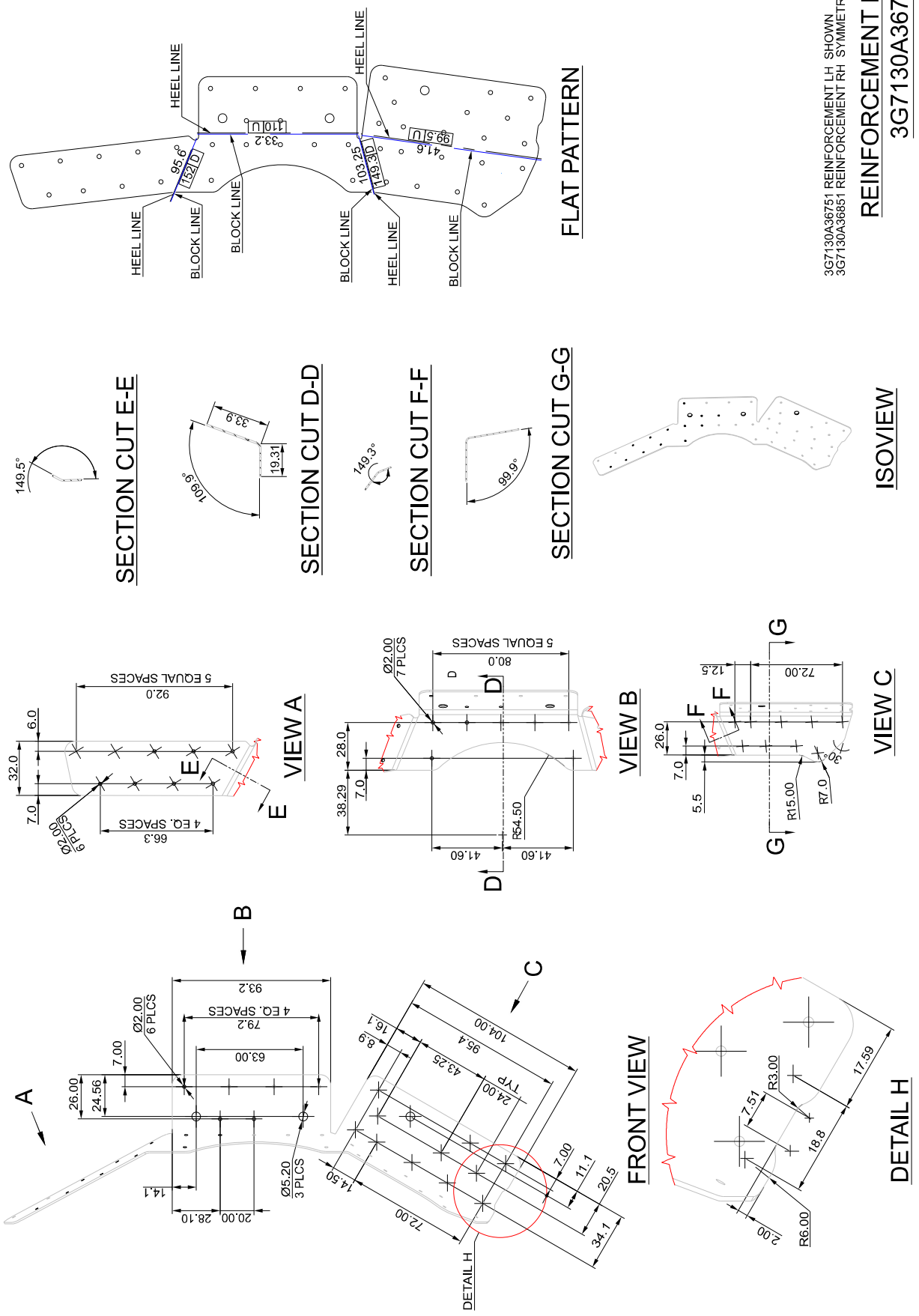

REINFORCEMENT LH
3G7130A36751
3G7130A36751 REINFORCEMENT LH SHOWN
3G7130A36851 REINFORCEMENT RH SYMMETRICAL
FLAT PATTERN
HEEL LINE
BLOCK LINE
SECTION CUT E-E
SECTION CUT D-D
SECTION CUT F-F
SECTION CUT G-G
ISOVIEW
VIEW A
VIEW B
VIEW C
FRONT VIEW
DETAIL H
5 EQUAL SPACES
4 EQ. SPACES
Ø2.00 6 PLCS
Ø2.00 7 PLCS
Ø5.20 3 PLCS

Figure 20

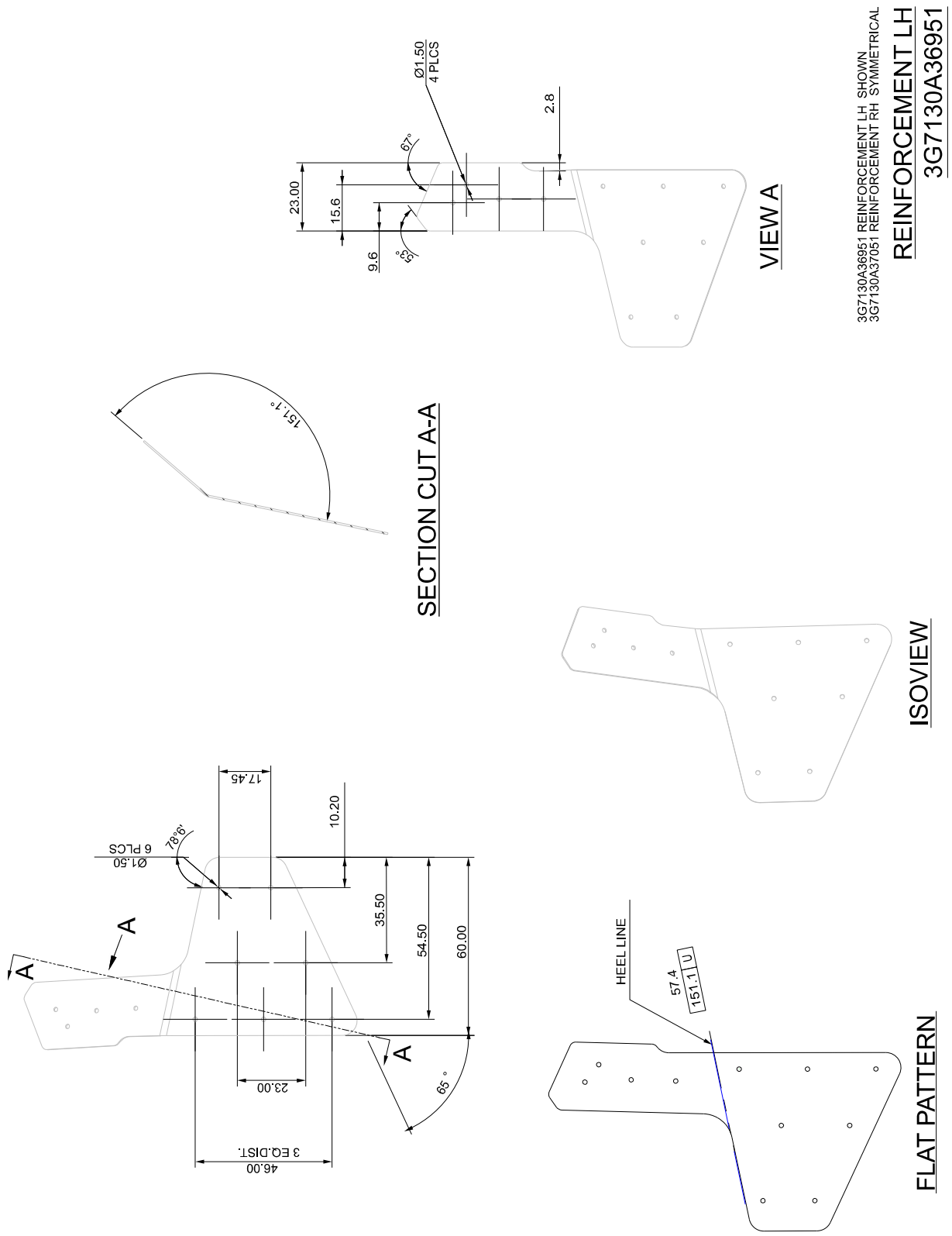

3G7130A36951 REINFORCEMENT LH SHOWN
3G7130A37051 REINFORCEMENT RH SYMMETRICAL
REINFORCEMENT LH
3G7130A36951
VIEW A
Ø1.50
4 PLCS
2.8
67°
23.00
15.6
9.6
65°
SECTION CUT A-A
151.7°
ISOVIEW
FLAT PATTERN
HEEL LINE
57.4
151.1
U
17.45
10.20
Ø1.50
6 PLCS
78°6'
35.50
54.50
60.00
A
A
A
65°
23.00
46.00
3 EQ.DIST.

Figure 21

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.