Temporary Maintenance Instruction
TMI139-421 Rev F

Left/Right Frame STA5700
P/N 3P5338A13355/3P5338A13455
Installation Procedure

AW139 Helicopter S/N 31201, 31203, 31205, 31208, 31209, 31219, 31240, 31241, 31257, 31296, 31298, 31318, 31325, 31328, 31746, 41363

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The present TMI will be evaluated for its introduction in the standard set of Technical Publication.
If no further notice is received, the present document expires on: August 23th, 2022.

2021-08-23

Introduction

This TMI provides the instructions and requirements to install the AW139 Left Frame STA5700 P/N 3P5338A13355 and and Right Frame STA5700 P/N 3P5338A13455.

Left/Right Frame STA5700 P/N 3P5338A13355/3P5338A13455 Installation Procedure

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39-A-07-11-00-00A-028A-A	Helicopter – Lift on Jacks – General
39-A-06-41-00-00A-010A-A	Access doors and panels - General data
39-A-71-11-07-00A-520A-A	Forward sliding fairing - Remove procedures
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Repair documentation

Table 1B –References

DWG	Title
3G0203R04511	LH upper angle at STA5700 repair
3G0203R04512	RH upper angle at STA5700 repair
SK139-1240	LH/RH profile STA5900 repair
SK139-1241	LH/RH upper door frame repair
SK139-1242	LH/RH upper skin repair
SK139-1243	LH/RH upper plate repair

Table 2 Access Point

Access Panel / Door Id	Data Module
No Access Point	

Table 3 Zones

Zone ID	Data Module

No	Zones

Preliminary requirements

Required conditions

Table 4 Required conditions

Condition	Data Module/Technical Publication
The Helicopter must be safe for maintenance	39-A-00-20-00-00A-120A-A
Left cockpit footstep must be removed (if necessary)	39-A-52-61-01-00A-520A-K or 39-A-52-61-01-00A-520B-K
Right cockpit footstep must be removed (if necessary)	39-A-52-61-02-00A-520A-K or 39-A-52-61-02-00A-520B-K
Left cabin fixed footstep must be removed	39-A-52-63-01-00A-520A-K or 39-B-52-63-01-00A-520A-K
Right cabin fixed footstep must be removed	39-A-52-63-02-00A-520A-K or 39-B-52-63-02-00A-520A-K
Left cabin door must be removed	39-A-52-12-01-00A-520A-A
Right cabin door must be removed	39-A-52-12-02-00A-520A-A
MR head must be removed	39-A-62-22-00-00A-520A-A
Forward sliding fairing must be removed	39-A-71-11-07-00A-520A-A
Top forward cowl must be removed	39-A-71-11-03-00A-520A-A
Left aft cowl must be removed	39-A-71-11-05-00A-520A-A
Right aft cowl must be removed	39-A-71-11-06-00A-520A-A
Main Gearbox Group must be removed	39-A-63-20-00-00A-520A-A
Number 1 Engine must be removed	39-A-71-02-01-00A-520A-A
Number 2 Engine must be removed	39-A-71-02-02-00A-520A-A
Tail section must be removed	39-A-53-40-00-00A-520A-A or 39-A-53-40-00-00A-520B-A
Number 1 drive shaft must be removed	39-A-65-11-01-00A-520A-A or 39-B-65-11-01-00A-520A-A
Left life raft container must be removed	39-A-25-62-03-00A-520A-K
Right life raft container must be removed	39-A-25-62-04-00A-520A-K
Left bottle assembly must be removed	39-A-95-61-05-00A-520A-K
Right bottle assembly must be removed	39-A-95-61-06-00A-520A-K
Aft left submersion switch must be removed	39-A-95-61-10-00A-520A-K
Aft right submersion switch must be removed	39-A-95-61-11-00A-520A-K
Seats must be removed	Refer to applicable DM as function of the cabin configuration
Number 1 tank foam must be removed	39-A-28-13-01-00A-921A-A
Number 2 tank foam must be removed	39-A-28-13-02-00A-921A-A
Aft protection assembly must be removed	39-A-52-67-02-00A-520A-K

Forward protection assembly must be removed	39-A-52-67-01-00A-520A-K
Sponson protection assembly must be removed	39-A-52-67-03-00A-520A-K
Internal liners must be removed	Refer to applicable DM as function of the cabin configuration
Left sponson must be removed	39-A-53-10-01-00A-520A-A
Right sponson must be removed	39-A-53-10-02-00A-520A-A

Support equipment

Table 5 Support equipment

Nomenclature	Identification No.	Qty
1. Structure locking frame	P/N 3G5330G00132 (Note 1)	1
2. Fuselage Ground Support Tool	AAL-111-040-001 or alternative	1

Note: Refer also to ITEP for the special tools required to comply with the AMP Data Module referenced in Procedure and in Required conditions.

Note (1): P/N 3G5330G00133 can also be used as alternative.

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
1.Anchor Nut		
	A407A08C1P	AR
	MS21069L3	AR
	MS21069L4	AR
	NAS1474A3	AR
2.Barrel nut		
	NAS577B6A	AR
3. Hi-lock		
	HL19PB-5-6	AR
	HL19PB-5-7	AR
	HL20PB-5-10	AR
	HL20PB-5-3	AR
	HL20PB-5-4	AR
	HL20PB-5-5	AR
	HL20PB-5-6	AR
	HL20PB-5-7	AR
	HL20PB-5-8	AR
	HL20PB-5-9	AR
	HL20PB-6-5	AR
	HL20PB-6-6	AR

	HL20PB-6-7	AR
4.Peeling shim		
	MIL-S-22499 TY I CL I	AR
5.Retainer		
	NAS578-6A	AR
6.Rivet		
	AGS4719	AR
	AGS4720	AR
	AS46789	AR
	AS46791	AR
	M7885/2-4-02	AR
	M7885/2-4-03	AR
	M7885/3-4-03	AR
	MS20426AD3	AR
	MS20426AD4	AR
	MS20426AD5	AR
	MS20427M3	AR
	MS20427M4	AR
	MS20470AD4	AR
	MS20470AD5	AR
	MS20615	AR
	MS90354S0608	AR
	NAS1097AD4	AR
	NAS1097AD5	AR
	NAS1097U4	AR
	NAS9301B	AR
	NAS9302B	AR
	A297A04TW07	AR
7.Screw		
	AN525-832R10	AR
	AN525-832R11	AR
	AN525-832R12	AR
	AN525-832R7	AR
	MS24694C103	AR
	MS24694C104	AR
	MS24694-C5	AR
	MS24694-S51	AR
	MS24694-S53	AR
	MS24694-S98	AR
	MS27039-0809	AR
	MS27039-1-08	AR
	MS27039-4-08	AR
8.Washer		
	NAS1149D0416K	AR
	NAS1149DN816K	AR
9.Nut plate		

	MS21073L08	AR
10.Sealant		
	Naftoseal MC-780 A2	AR
	Naftoseal MC-780 B2	AR
11.Primer		
	MIL-PRF23377 Typ.I Class C2	AR
12.Collar		
	HL86PB-6	AR
	HL86PB-5	AR
	HL86PBW-5	AR

Note: materials required for repairs are reported on relevant repair document; sealants are reported on Appendix A.

Note: grip length has to be adapted to the installation. before rivet installation in places where fasteners were just removed, check holes diameter and if necessary install oversized rivets. Refer to ASRP.

Spares

Table 7 Spares

Nomenclature	Identification No.	Qty
1. LH Frame STA 5700	P/N 3P5338A13355	1
2. RH Frame STA 5700	P/N 3P5338A13455	1
3. LH Tiedown Rear Fitting Assy	P/N 3G5330A01533	1
4. RH Tiedown Rear Fitting Assy	P/N 3G5330A01633	1
5. LH Left Profile	P/N 3P5338A14752	1
6. RH Left Profile	P/N 3P5338A14852	1
7. Bush	P/N 3P5338A17853A	2
8. Bush	P/N 3P5338A17953A	2
9. Bush	P/N 3P5338A18053A	2

Note: materials required for repairs are reported on relevant repair document.

Safety conditions

WARNING

The materials that follow are dangerous. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for these materials:

- **Sealant (Supply Ref. 10)**
- **Primer (Supply Ref. 11)**

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. During drilling operations pay extreme attention in order to prevent instruments, cables and hosing damage. After drilling, clean the area and remove sharp edges. Apply on bare metal a light film of primer unless the hole is used for ground connection.
C. Before installing new rivets check for holes condition; if holes condition is not suitable use oversize rivets. If necessary install rivets with different grips.
D. All riveting and de-riveting in accordance with the IETP ASRP.
E. All Hi-Lok fasteners installed and removed in accordance with IETP ASRP.
F. Use aliphatic naphtha to degrease. Cleaned surfaces shall be allowed to air dry for at least 30 minutes before bonding.
G. All dimensions are in mm.

Procedure

1. In accordance with AMP 39-A-07-32-00-00A-028A-A, lift the helicopter and put it on fuselage saddles at STA 3900 and STA 4800 (Support Equipment Ref. 2).
2. In accordance with AMP 39-A-32-21-01-00A-520A-A or 39-A-32-21-01-00A-520B-A, remove nose landing gear (if necessary).
3. In accordance with AMP 39-A-32-11-01-00A-520A-A and 39-A-32-12-01-00A-520A-A, remove left and right main landing gears.
4. In accordance with applicable steps in AMP 39-A-07-11-00-00A-028A-A, put in place hydraulic jacks at STA 6700.
5. With reference to AMP 39-A-06-41-00-00A-010A-A, remove floor panels between STA 4800 and STA 5700.
6. In accordance with applicable steps in AMP 39-A-25-62-05-00A-520A-K and 39-A-25-62-06-00A-520A-K, remove the parts that attach the left and right life raft cables to the structure of the left and right sponson, respectively. Secure the portions of cables removed.
7. Get access to left side of the fuselage.
8. Remove LH cabin door locking socket covers on middle, upper and lower door frame.
9. Remove LH cabin door forward lower guide.
10. Remove LH cabin door rear lower guide.
11. Remove LH cabin door forward upper guide (Figure 1).
12. Remove LH cabin door rear upper guide (Figure 1).
13. Remove LH cabin door external lower frame (Figure 2).
14. Get access to LH cabin door near STA 5700 and perform the following steps:
    14.1. Remove track on LH cabin door middle frame (Figure 2).
    14.2. Remove LH cabin door middle frame (Figure 2).
15. Remove LH cabin door internal frames (on cabin side) near STA 5700.
16. Remove LH plate STA 5700 (Figure 3), if necessary.
17. Proceed as follows:
    17.1. According to ASRP 39-A-53-34-04-03D-664A-D, cut fuselage lateral LH lower skin and remove the portion of skin ahead STA 5700 (Figure 4), or as an alternative,
    17.2. Completely remove lower skin between STA 3120 and STA 5700.
18. Remove LH upper profile (Figure 3).
19. Install the structure locking frame tool (Support Equipment Ref. 1)(Figure 5):
    19.1. Put in place the lower guide support.
    19.2. Install the tool lower guide using bolt AN3-() and nutplate already present on L framing (Figure 6).
    19.3. Install the upper guide using bolt MS27039-1-().
    19.4. Put in place the left beam of the tool and adjust its length until it is possible to install attachment bolts.
    19.5. Put in place the right beam of the tool and adjust its length until it is possible to install attachment bolts.
    19.6. Put in place the diagonal beam of the tool and adjust its length until it is possible to install attachment bolts.

20. Remove LH tiedown fitting frame STA5700 (Figure 54 - Figure 57).
21. Proceed as follows:
    21.1. If you performed step 17.1, cut cabin door LH upper frame as per SK139-1241 and remove portion of frame ahead STA 5700 (Figure 2).
    21.2. If you performed step 17.2, completely remove cabin door LH upper frame.
22. Proceed as follows:
    22.1. If you performed step 17.1, cut LH water barrier profile as per SK139-1240 and remove portion of profile ahead of cut line (Figure 7).
    22.2. If you performed step 17.2, cut LH water barrier profile where it has been cut due to application of BT139-262.
23. If you performed step 17.1, remove LH upper profile between upper deck and upper skin, otherwise skip to step 24.
24. Proceed as follows:
    24.1. If you performed step 17.1, cut LH upper skin as per SK139-1242 and remove portion of skin between the cut lines (Figure 8).
    24.2. If you performed step 17.2, completely remove LH upper skin from STA 3120 to STA 6700.
25. If you performed step 17.2, remove LH maintenance step assy (Figure 11), otherwise skip to step 27.
26. If you performed step 17.1, remove bracket assy installed between upper plate and longitudinal longeron BL 800 (Figure 10), otherwise skip to step 27.
27. Access to LH upper plate and proceed as follows:
    27.1. If you performed step 17.1, cut LH upper plate as per SK139-1243 and remove portion of plate ahead STA 5700 (Figure 8).
    27.2. If you performed step 17.2, completely remove LH upper plate.
28. Remove rivets from lateral panel between STA 5700 and STA 6700 (Figure 2); move down the panel to remove it.
29. Remove rivets connecting LH frame STA 5700 to the surrounding structure.
30. Derivet and remove LH lower profile between STA 5700 and STA 6700 (Figure 12).
31. Proceed as follows:
    31.1. If you performed step 17.1, get access to the area between STA 5700 and STA 6700, above fuel tank installation area:
        31.1.1. If necessary, disconnect fuel and hydraulic hoses to get access to the longitudinal wall behind STA 5700 (Figure 13).
        31.1.2. Cut LH longitudinal wall behind STA 5700 as per DWG 3G0203R04511; remove rivets to move down the wall and to allow the access to the upper part of the LH frame STA 5700.
    31.2. If you performed step 17.2, skip to step 32.
32. Remove drain lines between STA 5700 and STA 5795.
33. Disconnect LH lower angle at STA 5700 from frame (Figure 14).
34. Disconnect LH upper angle at STA 5700 from frame (Figure 15).
35. Remove hi-locks on the lower part of the frame STA 5700 (Figure 14).
36. Remove hi-locks on the upper part of the frame STA 5700 (Figure 16).
37. Remove the LH frame STA 5700 (Figure 17).

38. Remove the LH door locking reinforcement assy (Figure 2).
39. On the new LH frame (below WL 1050), ream and install bushings the three holes where bolts attaching frame to MLG sponson and actuator are installed (Figure 18, Figure 19).
40. Put in place and temporary fix the new LH frame STA 5700 P/N 3P5338A13355.
41. Put in place and temporary fix the LH lower profile P/N 3P5338A14752.
42. Report on the new frame and on new profile all the holes already present on structure.

NOTE:
Refer to Appendix A STRUCTURE SEALING to identify parts to be sealed during installation, relevant methods and materials.

NOTE:
Please be aware that hardware used to install frame and surrounding structures can be different from what previsoulsy installed. Refer to applicable figures to identify the hardware.

43. Remove, clean and deburr all the worked parts.
44. With reference to figures from Figure 20 up to Figure 36, install the new frame and apply the following steps:
    44.1. Install hi-locks on the upper part of the frame STA 5700.
    44.2. Install hi-locks on the lower part of the frame STA 5700.
    44.3. Install hi-locks on LH upper angle at STA 5700.
    44.4. Install hi-locks on LH lower angle at STA 5700.
    44.5. Install LH lower profile between STA 5700 and STA 6700.
    44.6. Install drain lines between STA 5700 and STA 5795.
    44.7. Install the LH door locking reinforcement assy.
    44.8. Install the lateral panel between STA 5700 and STA 6700 (refer also to figures from Figure 37 to Figure 53).
    44.9. Complete installation of the frame STA 5700 (refer also to figures from Figure 54 to Figure 57).
45. With reference to figures from Figure 54 to Figure 57 and related rivet part list, install LH tiedown fitting frame STA5700 P/N 3G5330A01533.
46. Access to LH upper plate and proceed as follows:
    46.1. If you performed step 17.1, repair the LH upper plate and install bracket assy as per SK139-1243.
    46.2. If you performed step 17.2, install the LH upper plate (refers to figures from Figure 37 up to Figure 52).
47. Install LH maintenance step assy (refers to figures from Figure 54 to Figure 57) if removed at step 25.
48. . Access to LH upper skin and proceed as follows:
    48.1. If you performed step 17.1, repair LH upper skin as per SK139-1242.
    48.2. If you performed step 17.2, install LH upper skin (refers to figures from Figure 20 up to Figure 57).
49. Install LH profile between upper deck and upper skin (refers to figures from Figure 64 up to Figure 66) if removed at step 23.

50. Access to LH water barrier and proceed as follows:
    50.1. If you performed step 17.1, repair LH water barrier profile as per SK139-1240.
    50.2. If you performed step 17.2, repair LH water barrier profile according to applicable steps of BT139-262.
51. Access to cabin door LH upper frame and proceed as follows:
    51.1. If you performed step 17.1, repair cabin door LH upper frame as per SK139-1241.
    51.2. If you performed step 17.2, install cabin door LH upper frame (refers to figures from Figure 20 up to Figure 57)
52. If you performed step 17.1, repair LH longitudinal wall behind STA 5700 as per DWG 3G0203R04511, and connect fuel and hydraulic hoses in the bay above fuel tank installation area if removed; otherwise skip to step 53.
53. Get access to right side of the fuselage.
54. Repeat steps from 8 to 18 on right side of the fuselage.
55. Repeat steps from 20 to 23 on right side of the fuselage.
56. Proceed as follows:
    56.1. If you performed step 17.1, cut RH upper skin as per SK139-1242 and remove portion of skin between the cut lines (Figure 8).
    56.2. If you performed step 17.2, remove LH upper skin from STA 3120 to the junction located behind the hoists (Figure 9).
57. Repeat steps from 25 to 26 on right side of the fuselage.
58. Cut RH upper plate as per SK139-1243 and remo ve portion of plate ahead STA 5700 (Figure 8).
59. Repeat steps from 28 to 31.1.1 on right side of the fuselage.
60. Access to RH longitudinal wall behind STA 5700 and proceed as follows:
    60.1. If you performed step 17.1, cut RH longitudinal wall behind STA 5700 as per DWG 3G0203R04512; remove rivets to move down the wall and to allow the access to the upper part of the RH frame STA 5700.
    60.2. If you performed step 17.2, skip to step 61.
61. Repeat steps from 32 to 45 on right side of the fuselage, installing RH Frame STA 5700 P/N 3P5338A13455, profile P/N 3P5338A14852 and tiedown fitting P/N 3G5330A01633.
62. Repair the RH upper plate and install bracket assy as per SK139-1243.
63. Repeat steps from 47 to 51 on right side of the fuselage.
64. If you performed step 17.1, repair RH longitudinal wall behind STA 5700 as per DWG 3G0203R04512, otherwise skip to step 65.
65. Remove the structure locking frame tool (Support Equipment Ref. 1):
    65.1. Remove the diagonal beam.
    65.2. Remove the right beam.
    65.3. Remove the left beam.
    65.4. Remove the upper guide.
    65.5. Remove the tool lower guide.
66. Install LH upper profile frames (on cabin side) near STA 5700.
67. Install LH cabin door internal frames (on cabin side) near STA 5700.

68. With reference to figures from Figure 38 to Figure 58, apply the following steps:
    68.1. Install LH cabin door rear upper guide.
    68.2. Install LH cabin door forward upper guide.
    68.3. Install LH cabin door middle frame near STA 5700.
    68.4. Install track on LH cabin door middle frame.
    68.5. Install LH upper profile (Figure 3).
69. Access to LH lower fuselage lateral skin and proceed as follows:
    69.1. If you performed step 17.1, according to ASRP 39-A-53-34-04-03D-664A-D, repair fuselage lateral LH lower skin.
    69.2. If you performed step 17.2, install fuselage lateral LH lower skin.
70. With reference to figures from Figure 38 to Figure 58, apply the following steps:
    70.1. Install LH cabin door external lower frame near STA 5700.
    70.2. Install LH cabin door rear lower guide.
    70.3. Install LH cabin door forward lower guide.
    70.4. Install LH cabin door locking socket covers on middle, upper and lower door frame.
71. Install lower reinforcement plate at STA 5700.
72. Repeat steps from 66 to 71 on right side of the fuselage.
73. In accordance with applicable steps in AMP 39-A-25-62-05-00A-720A-K and 39-A-25-62-06-00A-720A-K, install the portions of cables removed at step 6.
74. With reference to AMP 39-A-06-41-00-00A-010A-A, install floor panels between STA 4800 and STA 5700.
75. Remove hydraulic jacks at STA 6700 (refer to AMP 39-A-07-11-00-00A-028A-A).
76. In accordance with AMP 39-A-32-11-01-00A-720A-A and 39-A-32-12-01-00A-720A-A, install left and right main landing gears.
77. In accordance with AMP 39-A-32-21-01-00A-720A-A or 39-A-32-21-01-00A-720B-A, install nose landing gear.

Requirements after job completion

1. Return helicopter to flight configuration.
2. Remove all the tools and the other items from the work area. Make sure that the work area is clean.
3. Update helicopter documentation and review maintenance tasks applicable to LH/RH frame STA 5700 to take into accont the P/N change.

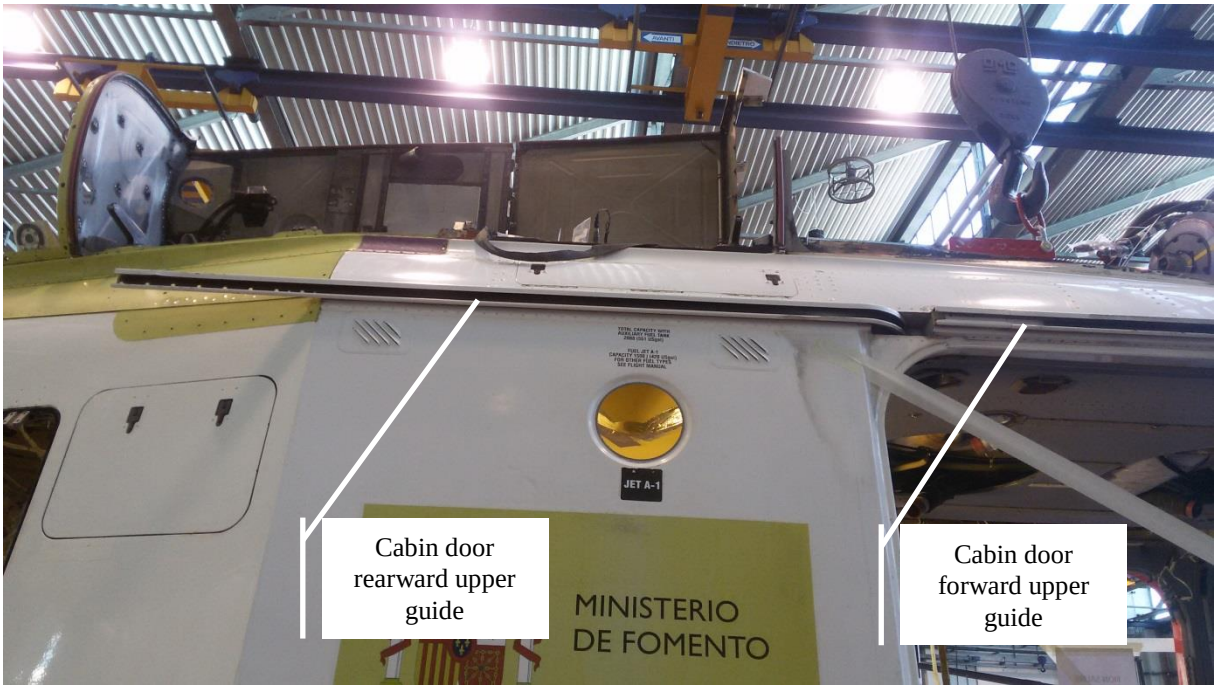

Cabin door rearward upper guide
Cabin door forward upper guide
JET A-1
MINISTERIO DE FOMENTO

Figure 1

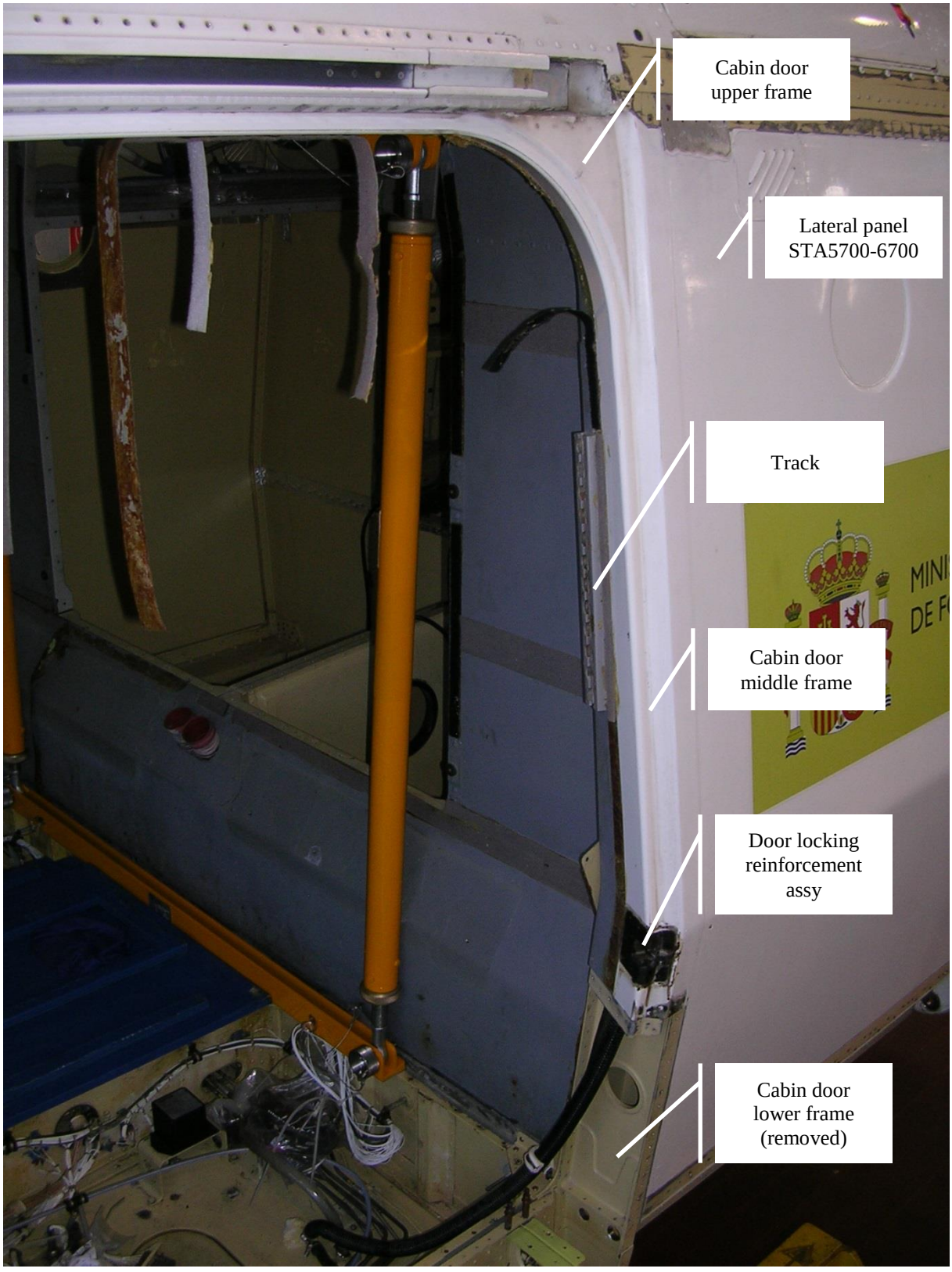

Cabin door upper frame
Lateral panel STA5700-6700
Track
Cabin door middle frame
Door locking reinforcement assy
Cabin door lower frame (removed)

Figure 2

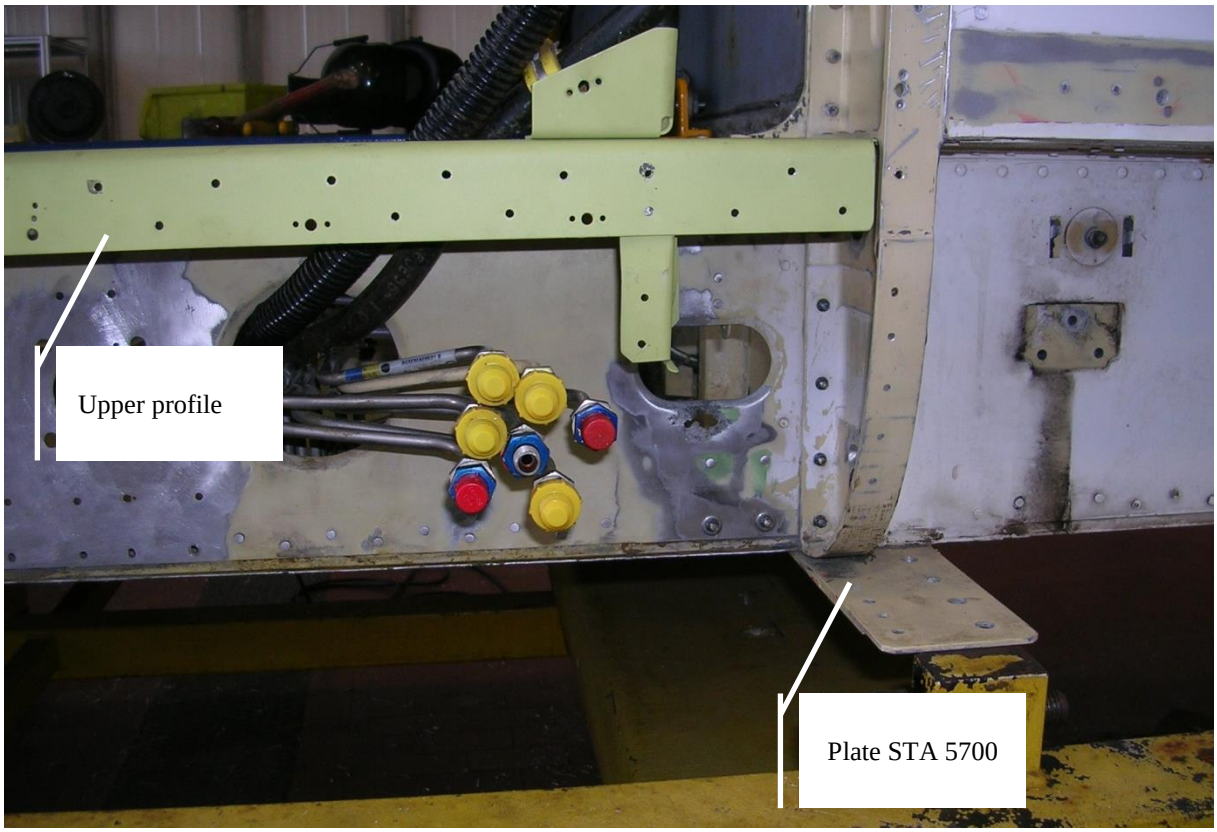


Figure 3

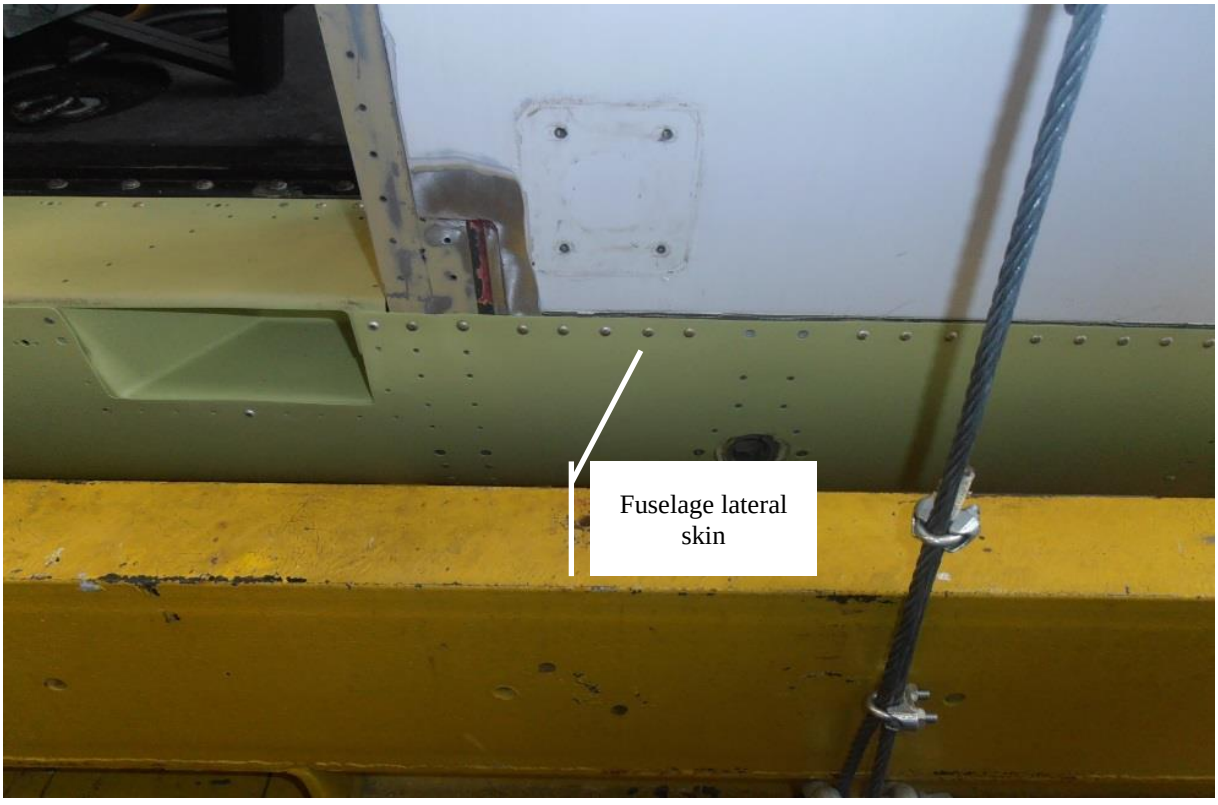


Figure 4

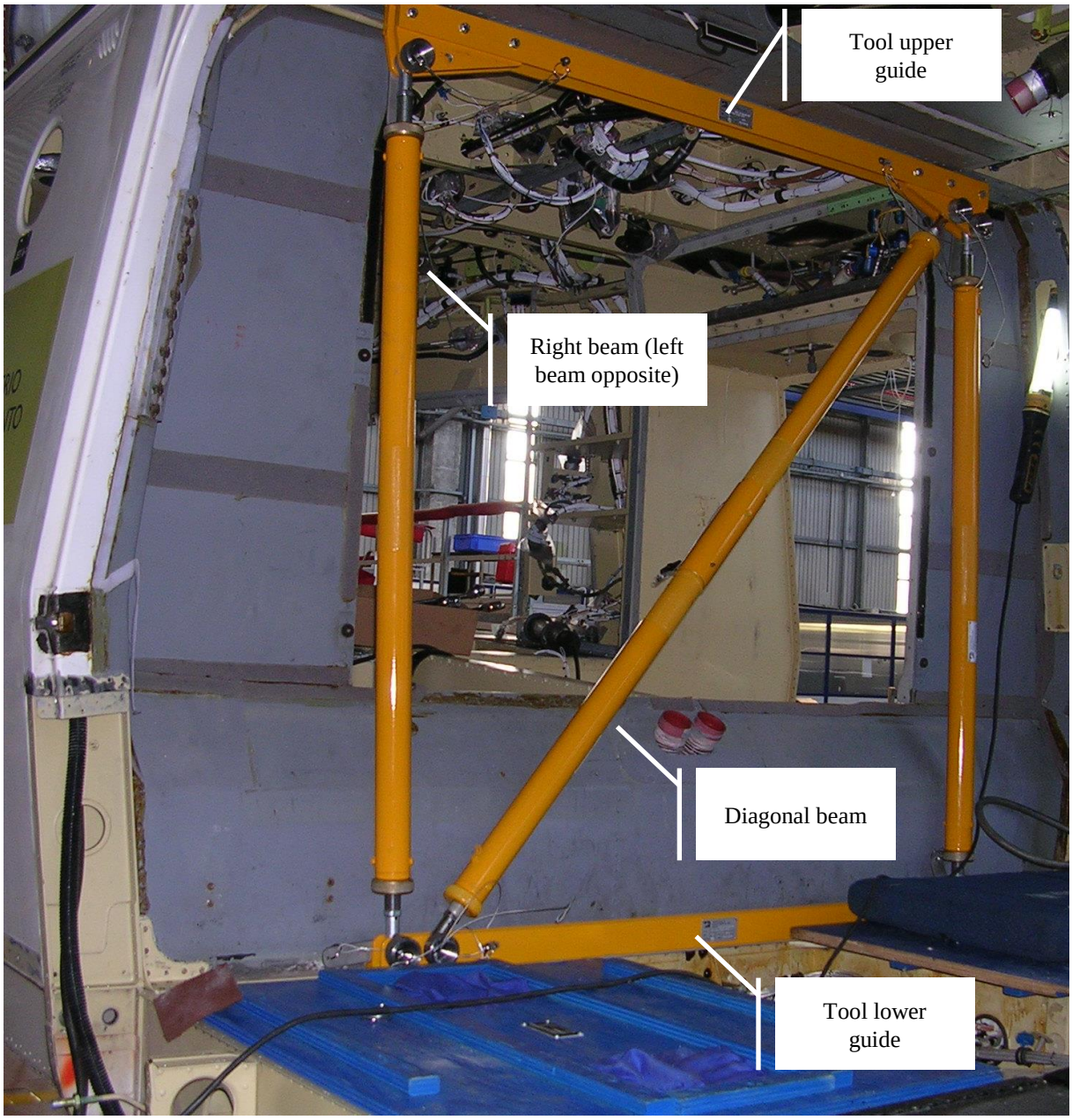

Tool upper guide
Right beam (left beam opposite)
Diagonal beam
Tool lower guide

Figure 5

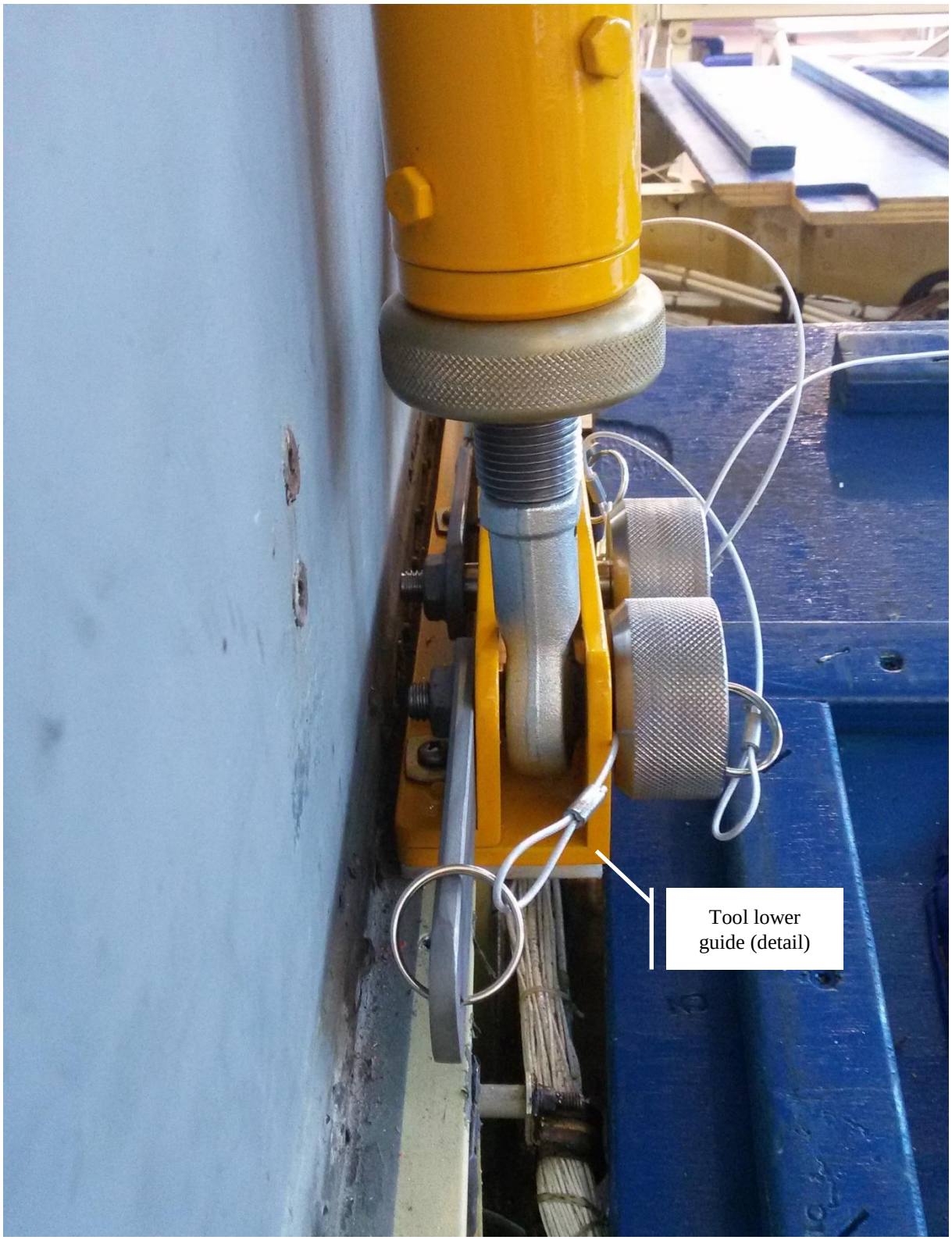


Figure 6

Figure 7

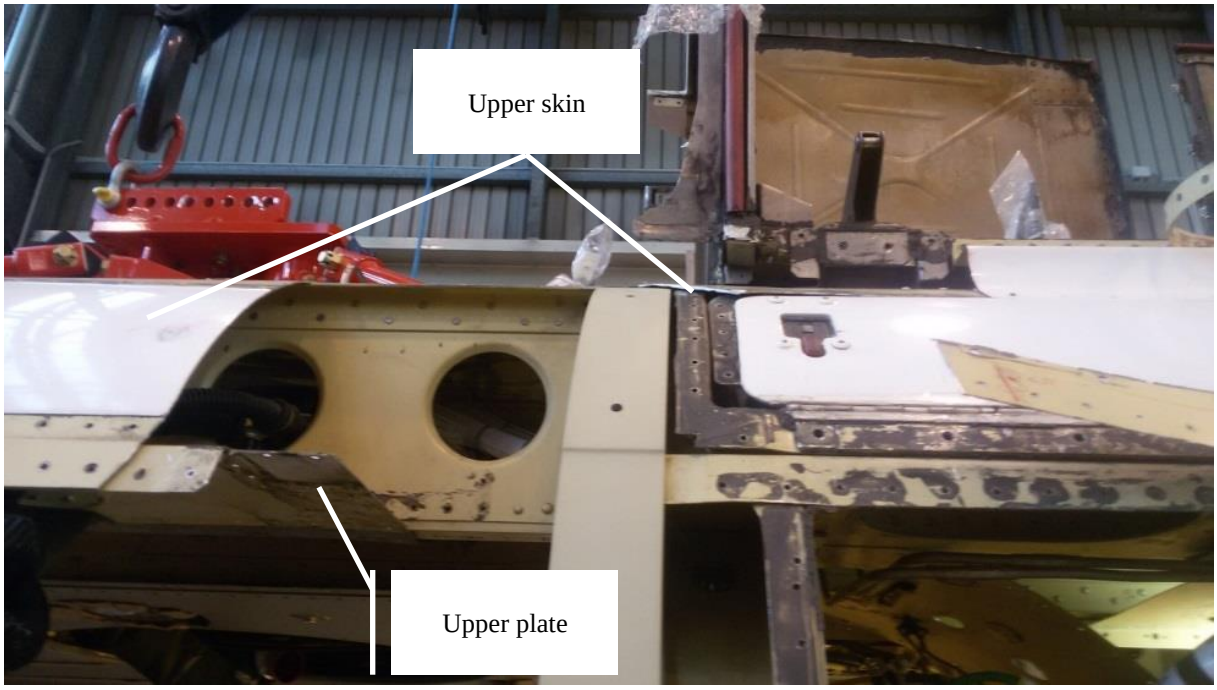


Figure 8

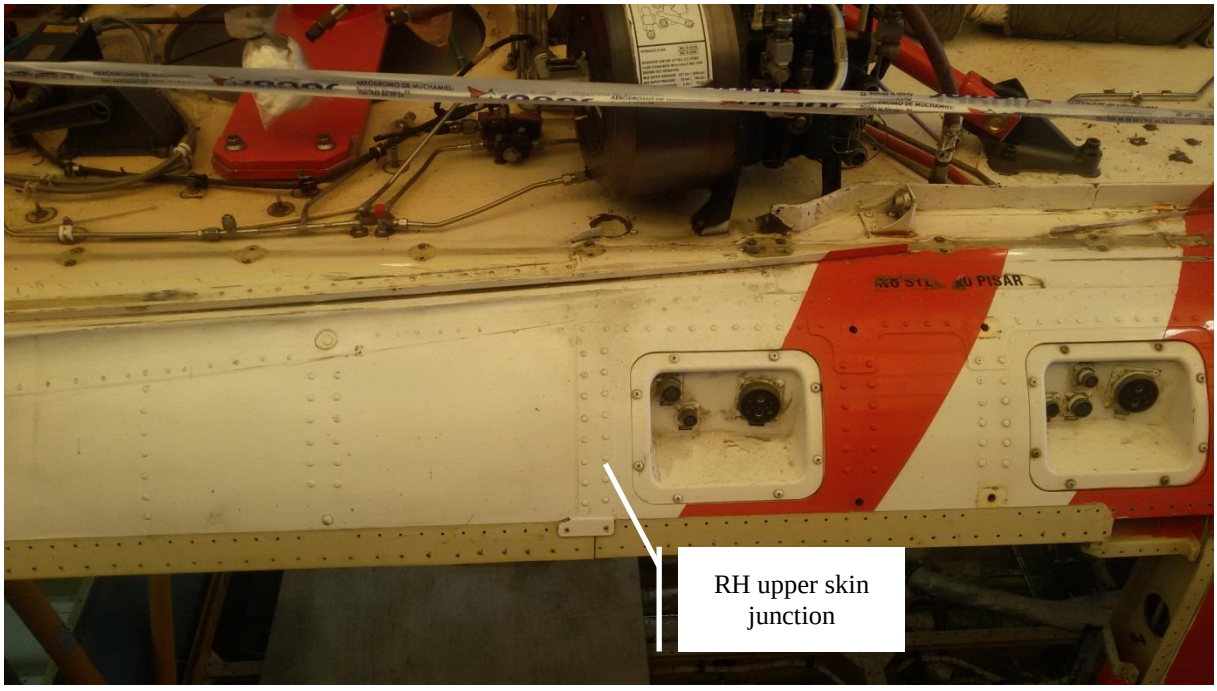


Figure 9

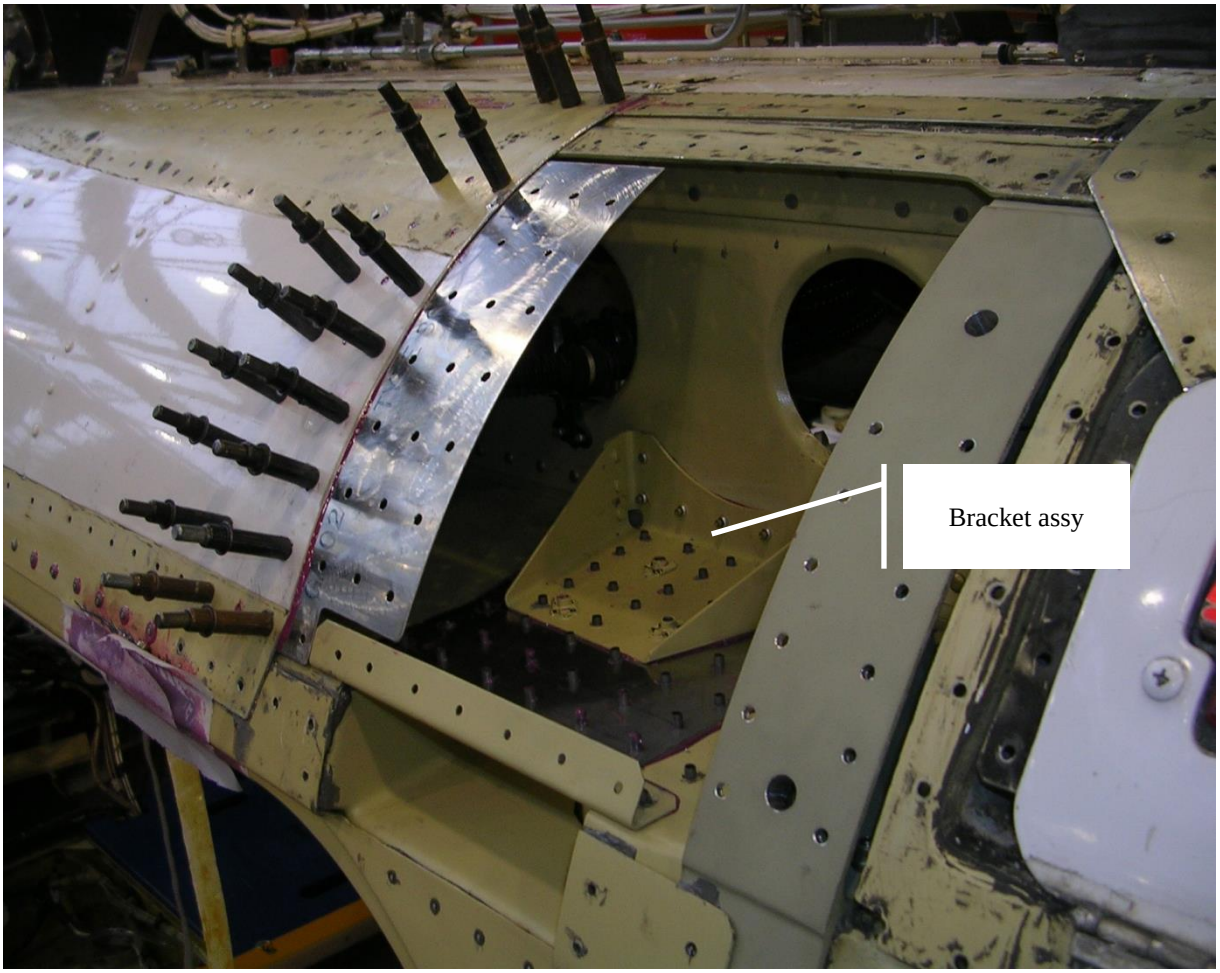


Figure 10

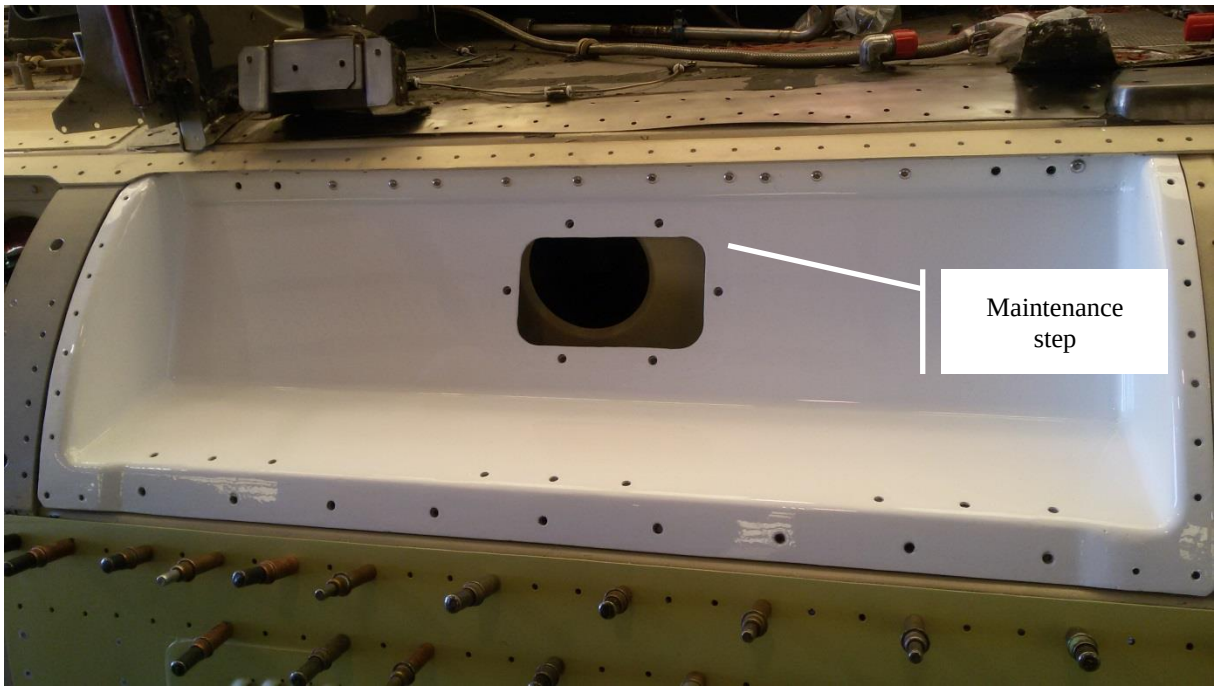


Figure 11

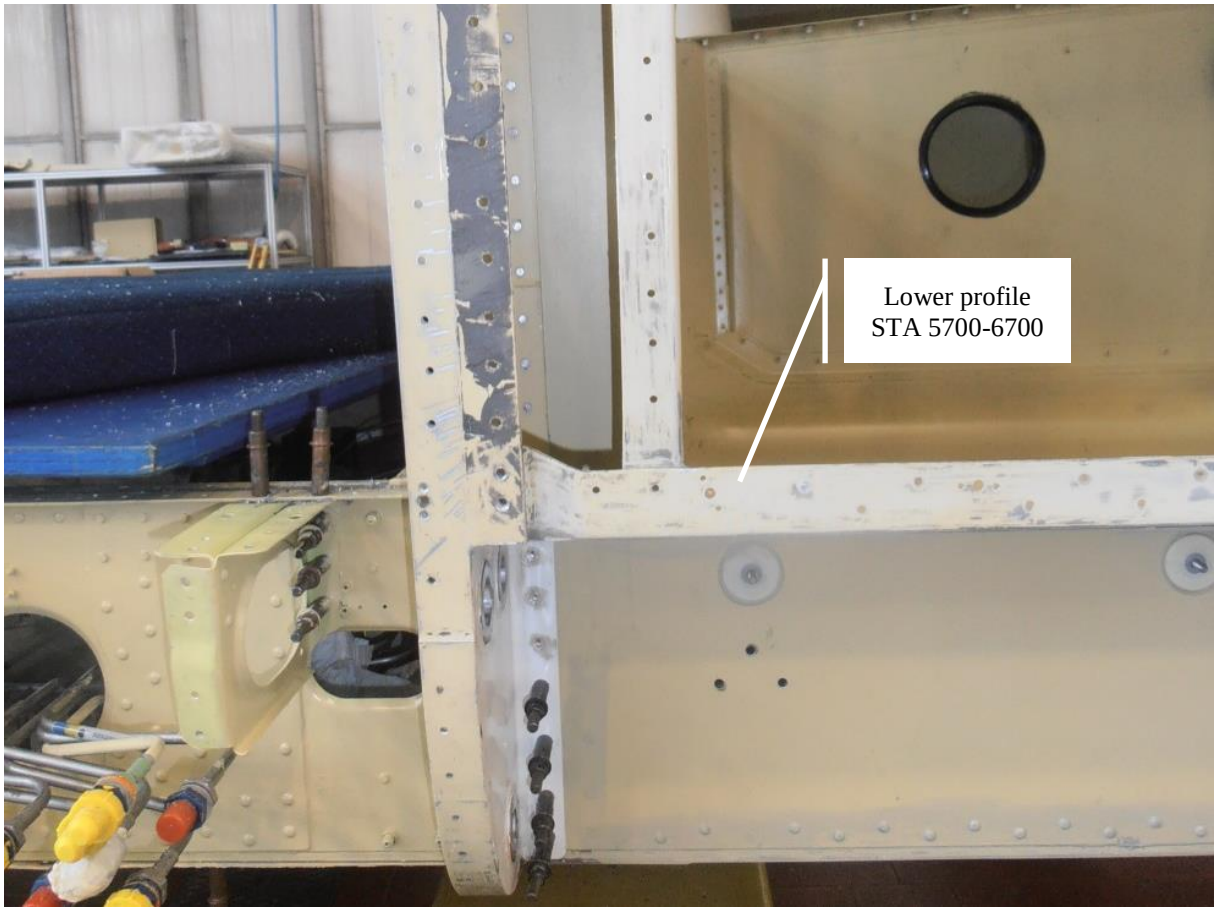


Figure 12

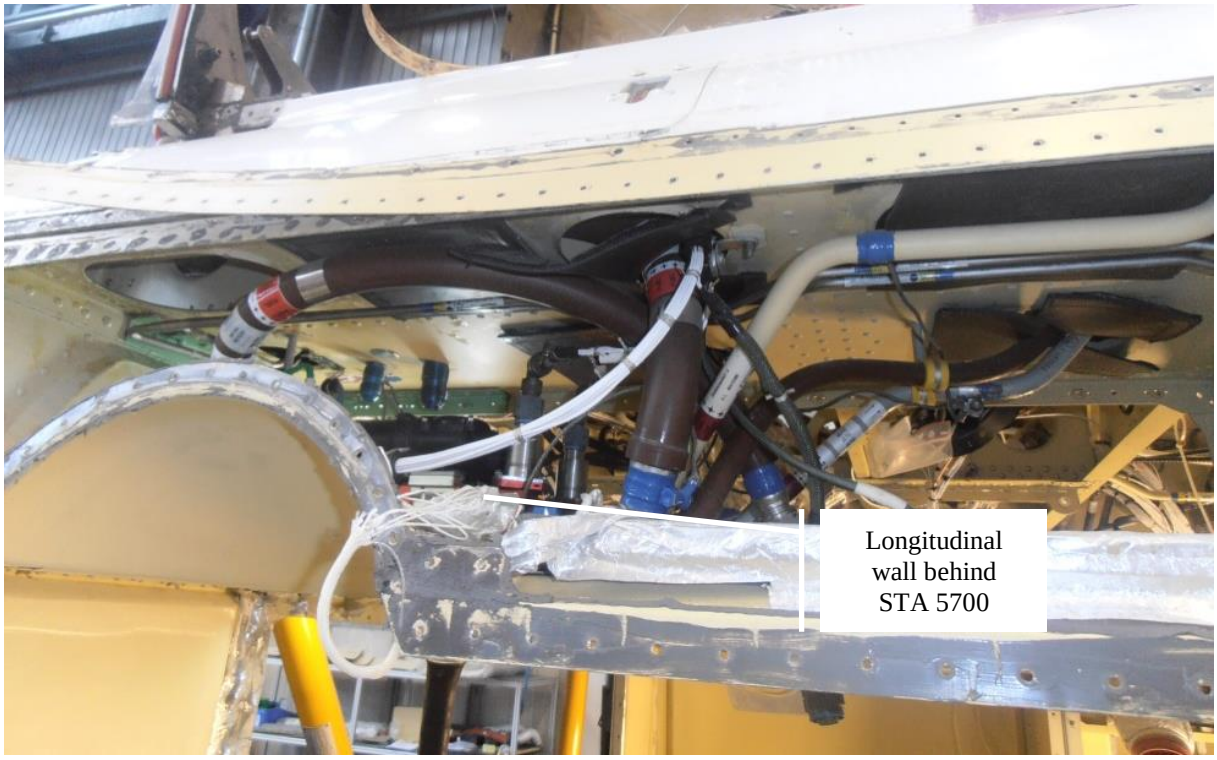


Figure 13

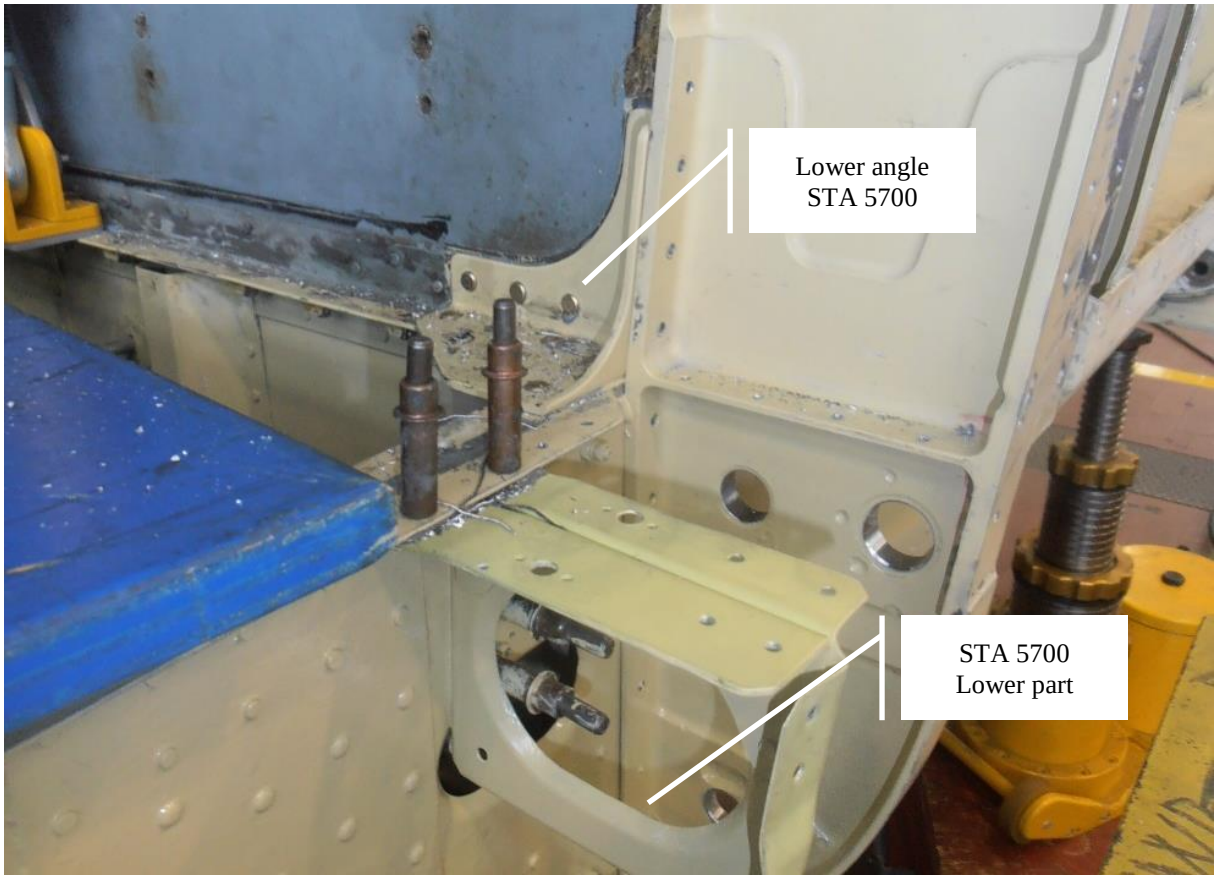


Figure 14

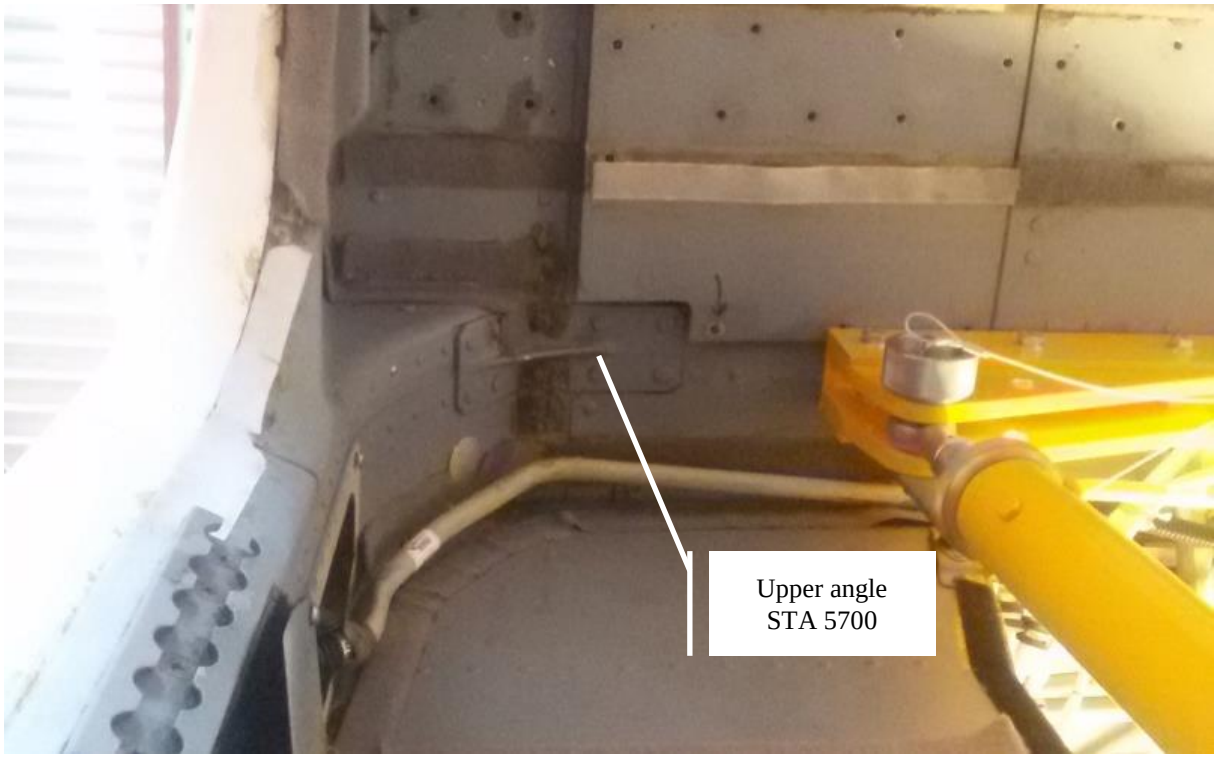


Figure 15

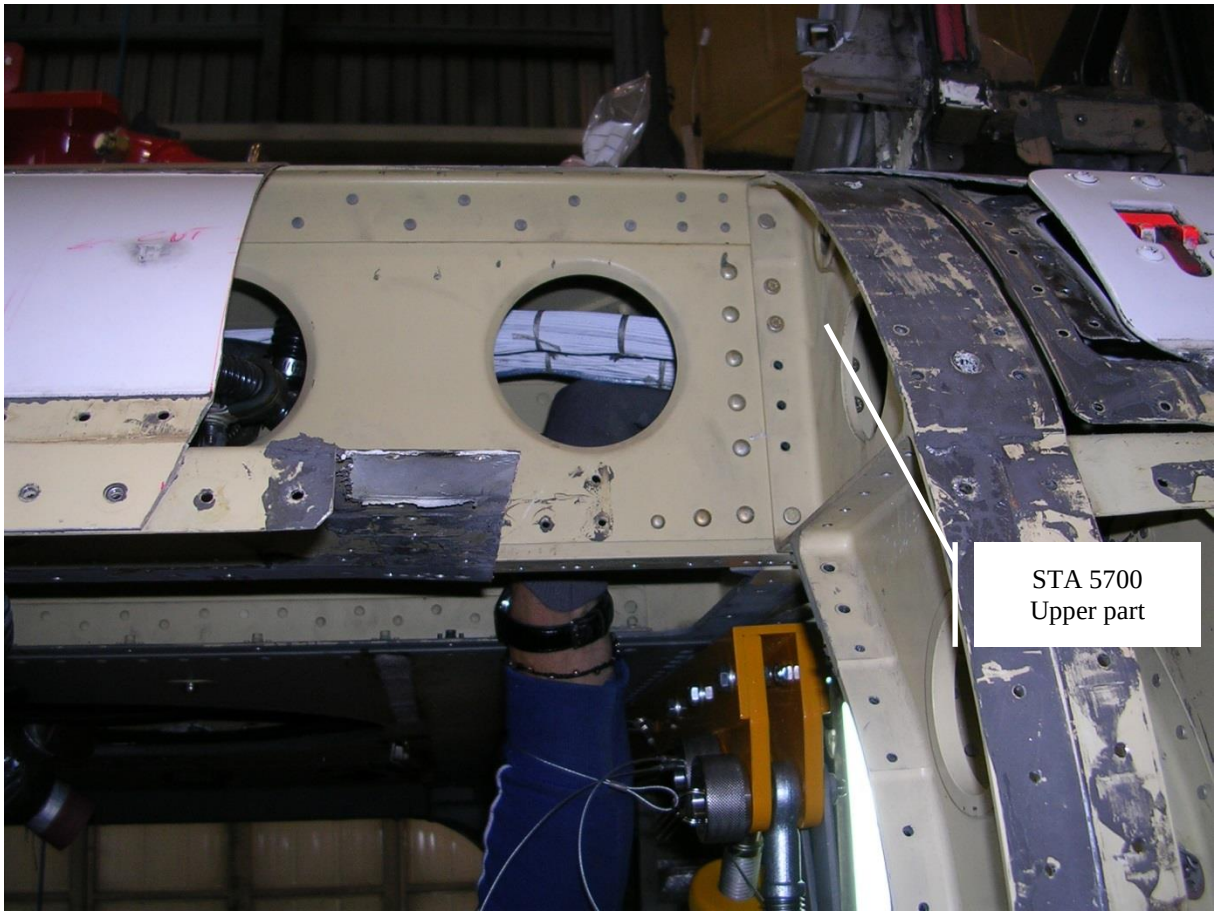


Figure 16

Figure 17

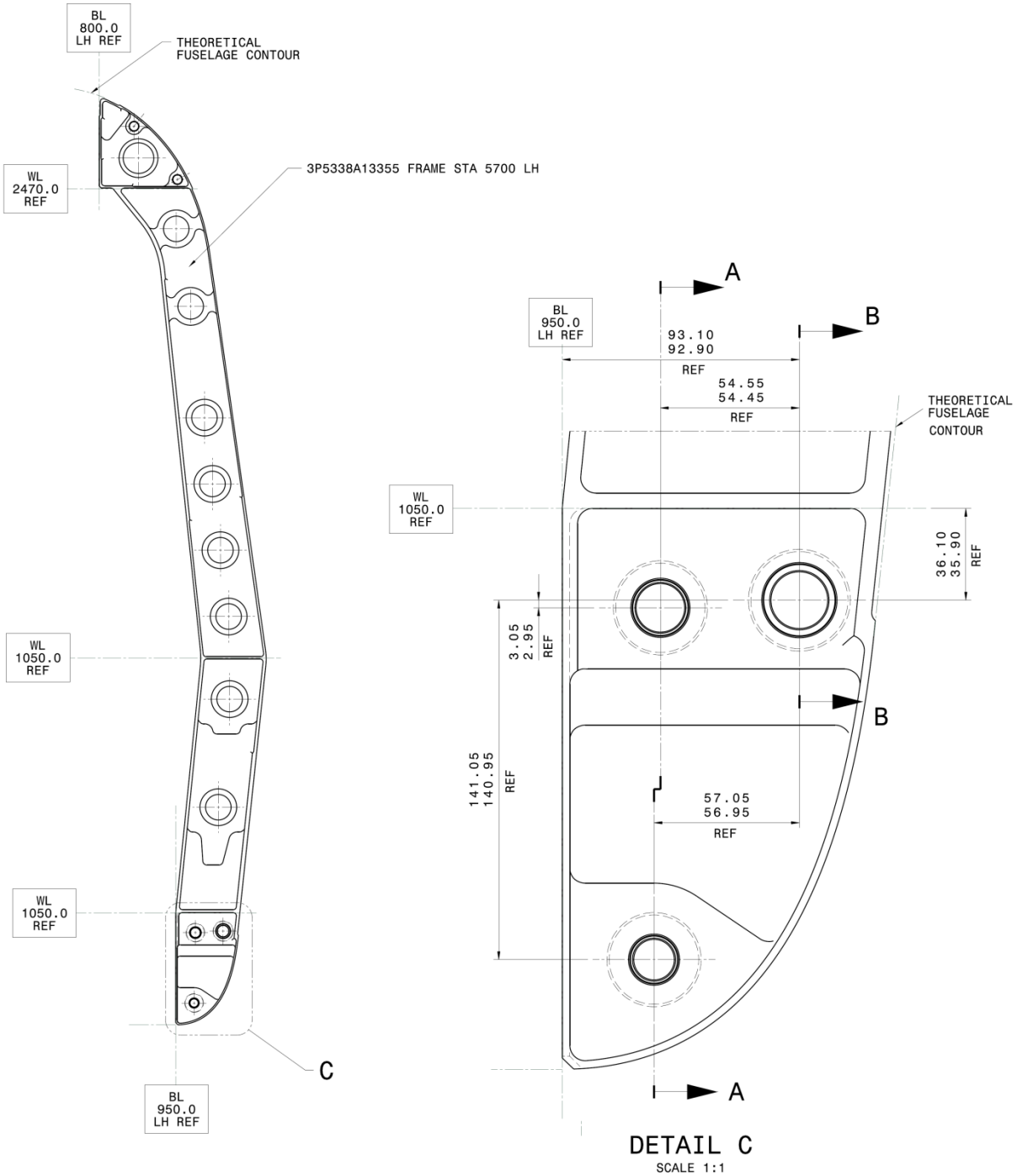

BL
800.0
LH REF
THEORETICAL
FUSELAGE CONTOUR
WL
2470.0
REF
3P5338A13355 FRAME STA 5700 LH
WL
1050.0
REF
WL
1050.0
REF
C
BL
950.0
LH REF
A
B
BL
950.0
LH REF
93.10
92.90
REF
54.55
54.45
REF
THEORETICAL
FUSELAGE
CONTOUR
WL
1050.0
REF
36.10
35.90
REF
3.05
2.95
REF
B
141.05
140.95
REF
57.05
56.95
REF
A
DETAIL C
SCALE 1:1

Figure 18

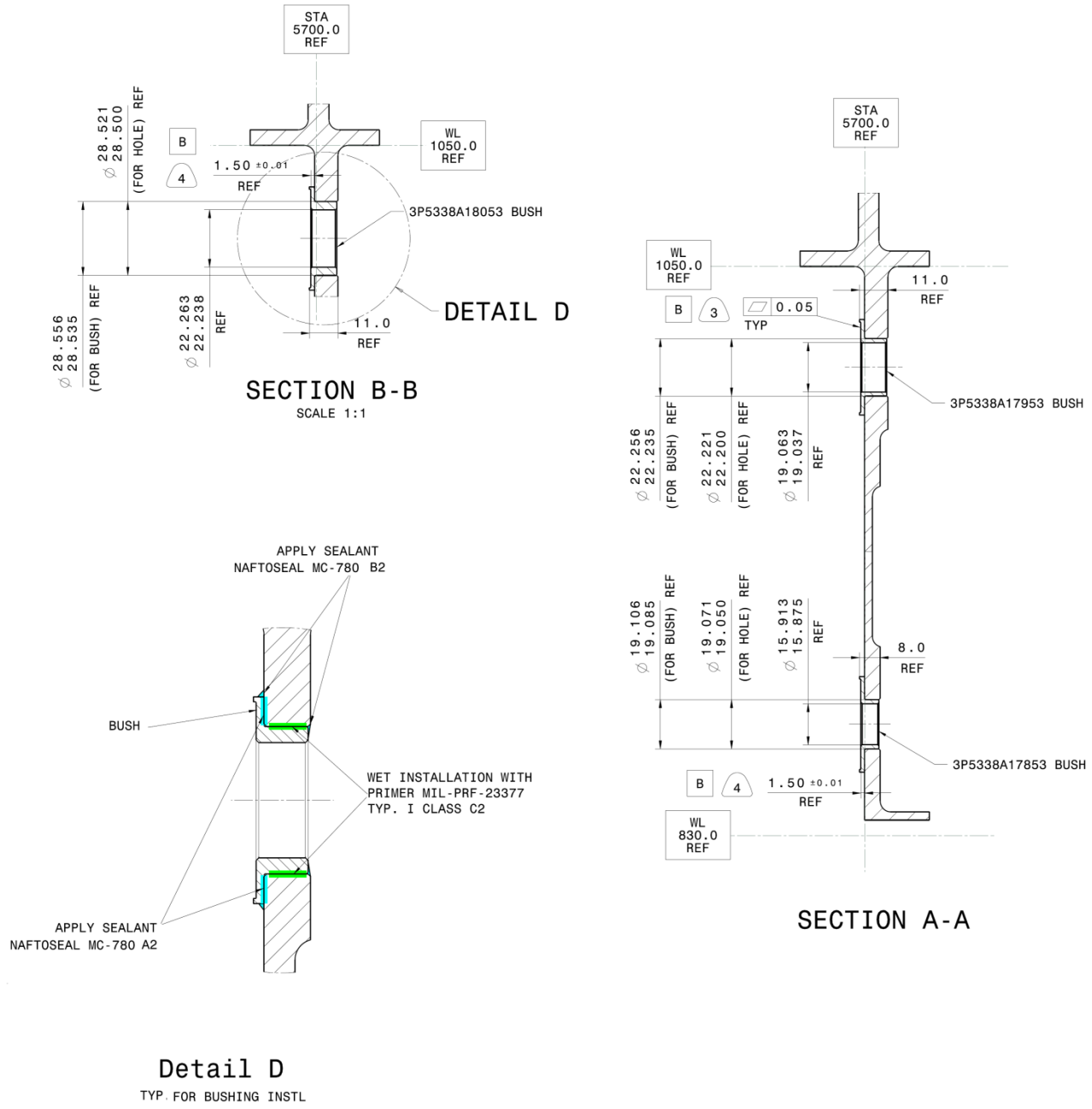

STA 5700.0 REF
WL 1050.0 REF
B
4
1.50 ±0.01 REF
28.521 28.500 (FOR HOLE) REF
3P5338A18053 BUSH
DETAIL D
28.556 28.535 (FOR BUSH) REF
22.263 22.238 REF
11.0 REF
SECTION B-B
SCALE 1:1
APPLY SEALANT NAFTOSEAL MC-780 B2
BUSH
WET INSTALLATION WITH PRIMER MIL-PRF-23377 TYP. I CLASS C2
APPLY SEALANT NAFTOSEAL MC-780 A2
Detail D
TYP FOR BUSHING INSTL
STA 5700.0 REF
WL 1050.0 REF
B
3
0.05 TYP
11.0 REF
3P5338A17953 BUSH
22.256 22.235 (FOR BUSH) REF
22.221 22.200 (FOR HOLE) REF
19.063 19.037 REF
19.106 19.085 (FOR BUSH) REF
19.071 19.050 (FOR HOLE) REF
15.913 15.875 REF
8.0 REF
3P5338A17853 BUSH
B
4
1.50 ±0.01 REF
WL 830.0 REF
SECTION A-A

Figure 19

Notes

1. Deleted.
2. If necessary, it is possible to cool bushes using liquid nitrogen before installing.
   Use MIL-PRF-23366 Typ. 1, Cl. C,epoxy primer to install the bush.
   Apply sealant MC-780 C-2 under the bush flange and make sure the squeeze out is present all around the flange following installation.
3. Flatness tollerance valid for bushes p/n 3P5338A17853/17953/18053.
4. Dimension is valid for R.50 around bush axis.

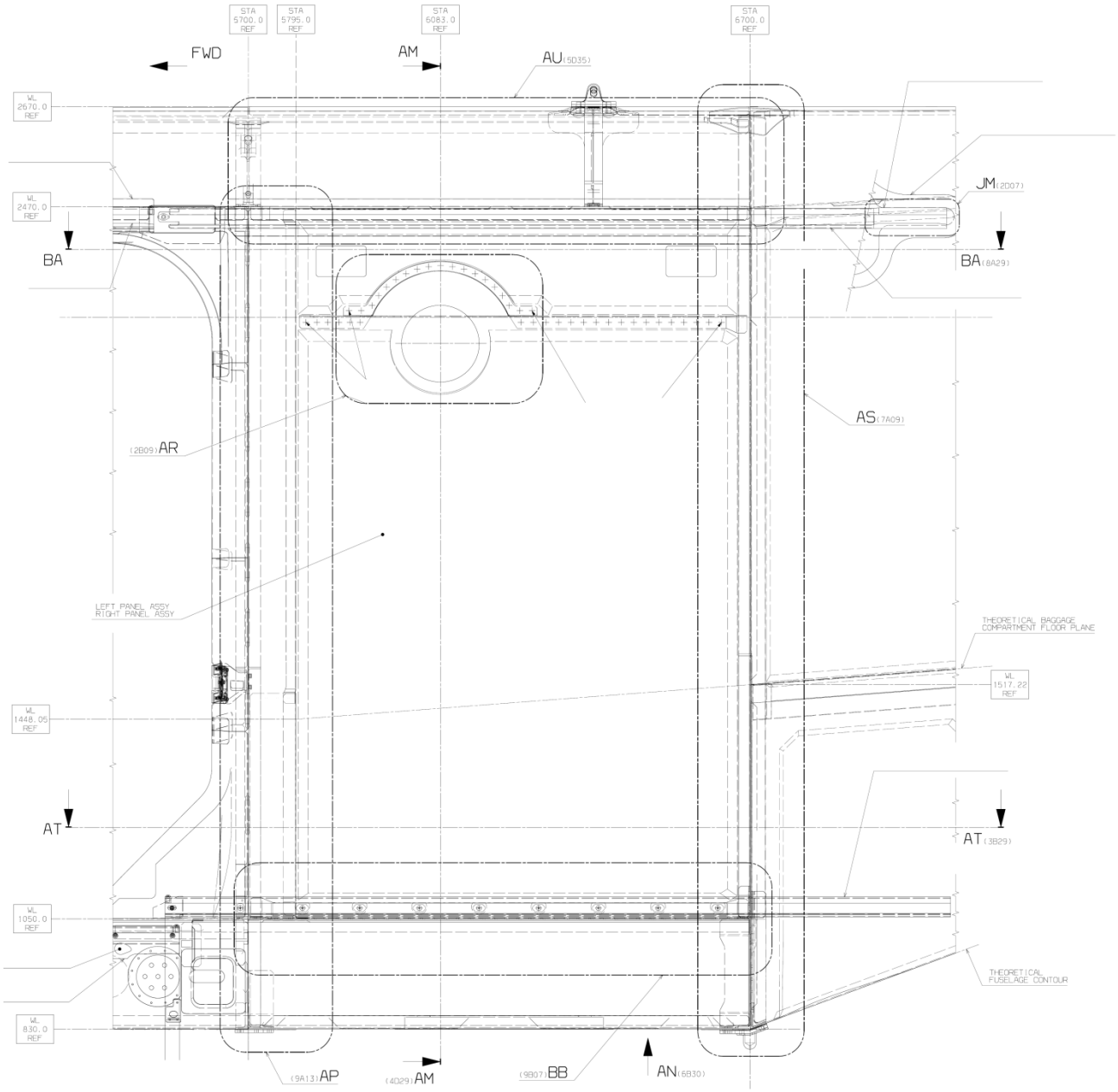

STA 5700.0 REF
STA 5795.0 REF
STA 5083.0 REF
STA 6700.0 REF
FWD
AM
AU (5035)
WL 2670.0 REF
WL 2470.0 REF
JM (2007)
BA
BA (8A29)
AS (7A09)
(2B09) AR
LEFT PANEL ASSY
RIGHT PANEL ASSY
THEORETICAL BAGGAGE COMPARTMENT FLOOR PLANE
WL 1517.22 REF
WL 1448.05 REF
AT
AT (3B29)
WL 1050.0 REF
THEORETICAL FUSELAGE CONTOUR
WL 830.0 REF
(9A13) AP
(4D29) AM
(9B07) BB
AN (6B30)

Figure 20

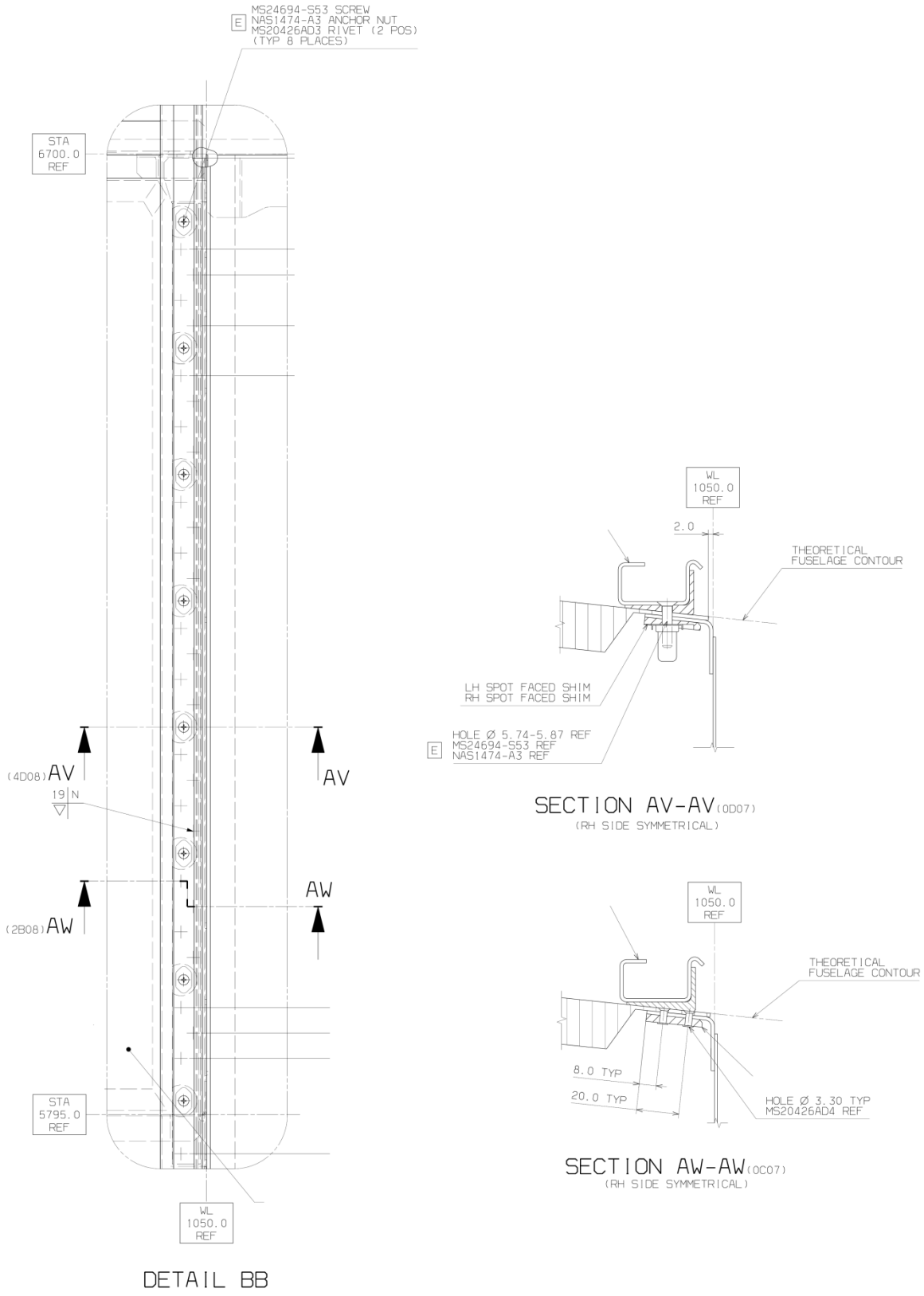

E MS24694-S53 SCREW
NAS1474-A3 ANCHOR NUT
MS20426AD3 RIVET (2 POS)
(TYP 8 PLACES)
STA 6700.0 REF
(4D08) AV
19 N
AV
AW
(2B08) AW
STA 5795.0 REF
WL 1050.0 REF
DETAIL BB
WL 1050.0 REF
2.0
THEORETICAL FUSELAGE CONTOUR
LH SPOT FACED SHIM
RH SPOT FACED SHIM
E HOLE Ø 5.74-5.87 REF
MS24694-S53 REF
NAS1474-A3 REF
SECTION AV-AV (0D07)
(RH SIDE SYMMETRICAL)
WL 1050.0 REF
THEORETICAL FUSELAGE CONTOUR
8.0 TYP
20.0 TYP
HOLE Ø 3.30 TYP
MS20426AD4 REF
SECTION AW-AW (0C07)
(RH SIDE SYMMETRICAL)

Figure 21

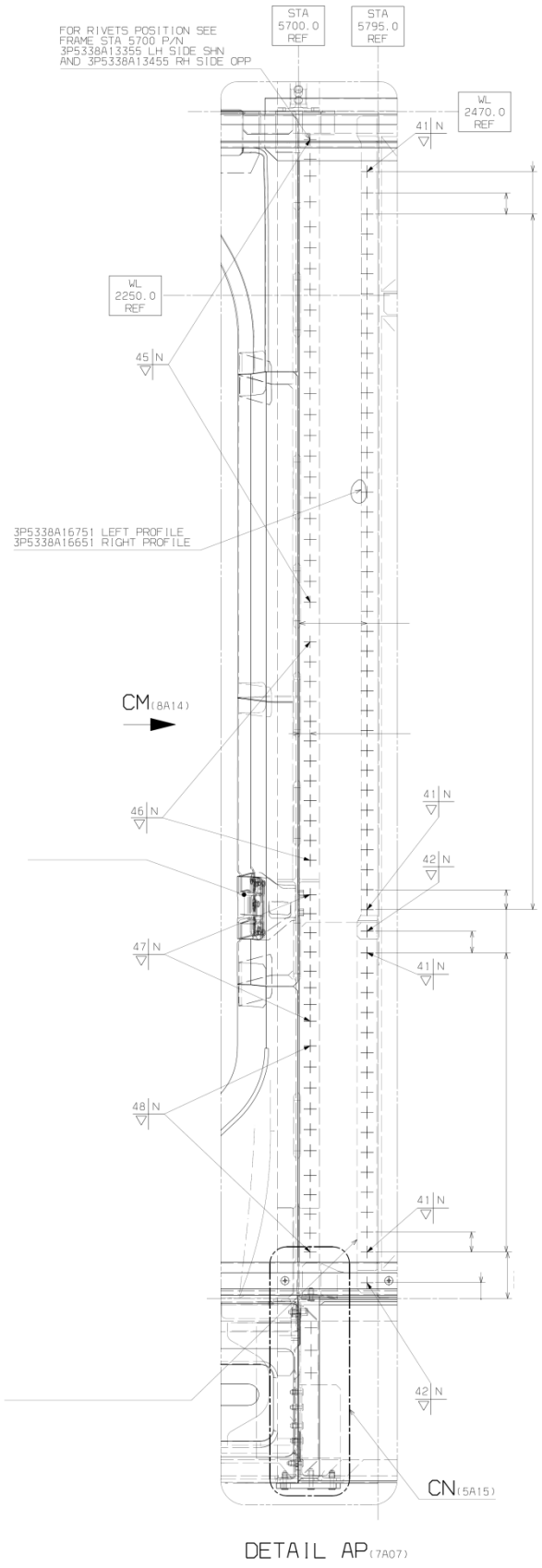

FOR RIVETS POSITION SEE FRAME STA 5700 P/N 3P5338A13355 LH SIDE SHN AND 3P5338A13455 RH SIDE OPP
STA 5700.0 REF
STA 5795.0 REF
WL 2470.0 REF
WL 2250.0 REF
41 N
45 N
3P5338A16751 LEFT PROFILE
3P5338A16651 RIGHT PROFILE
CM (8A14)
46 N
41 N
42 N
47 N
41 N
48 N
41 N
42 N
CN (5A15)
DETAIL AP (7A07)

Figure 22

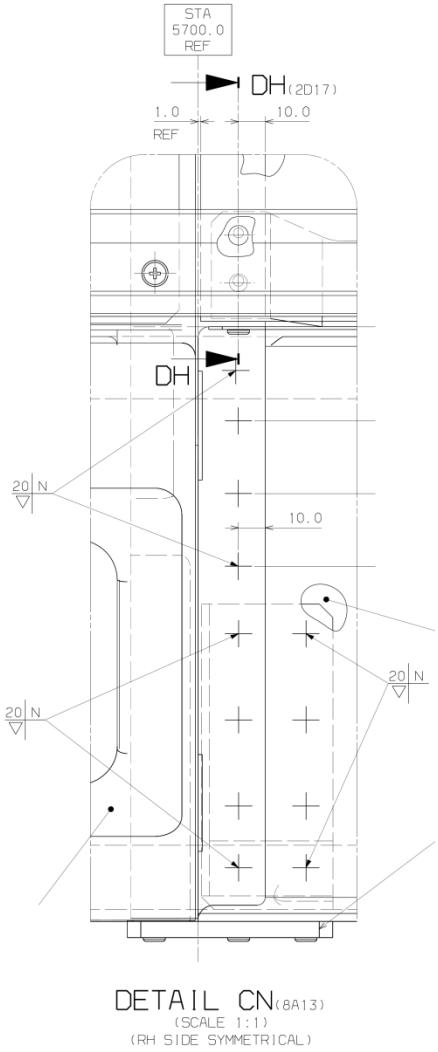

STA
5700.0
REF
DH(2D17)
1.0
REF
10.0
DH
20 N
10.0
20 N
20 N
DETAIL CN(8A13)
(SCALE 1:1)
(RH SIDE SYMMETRICAL)

Figure 23

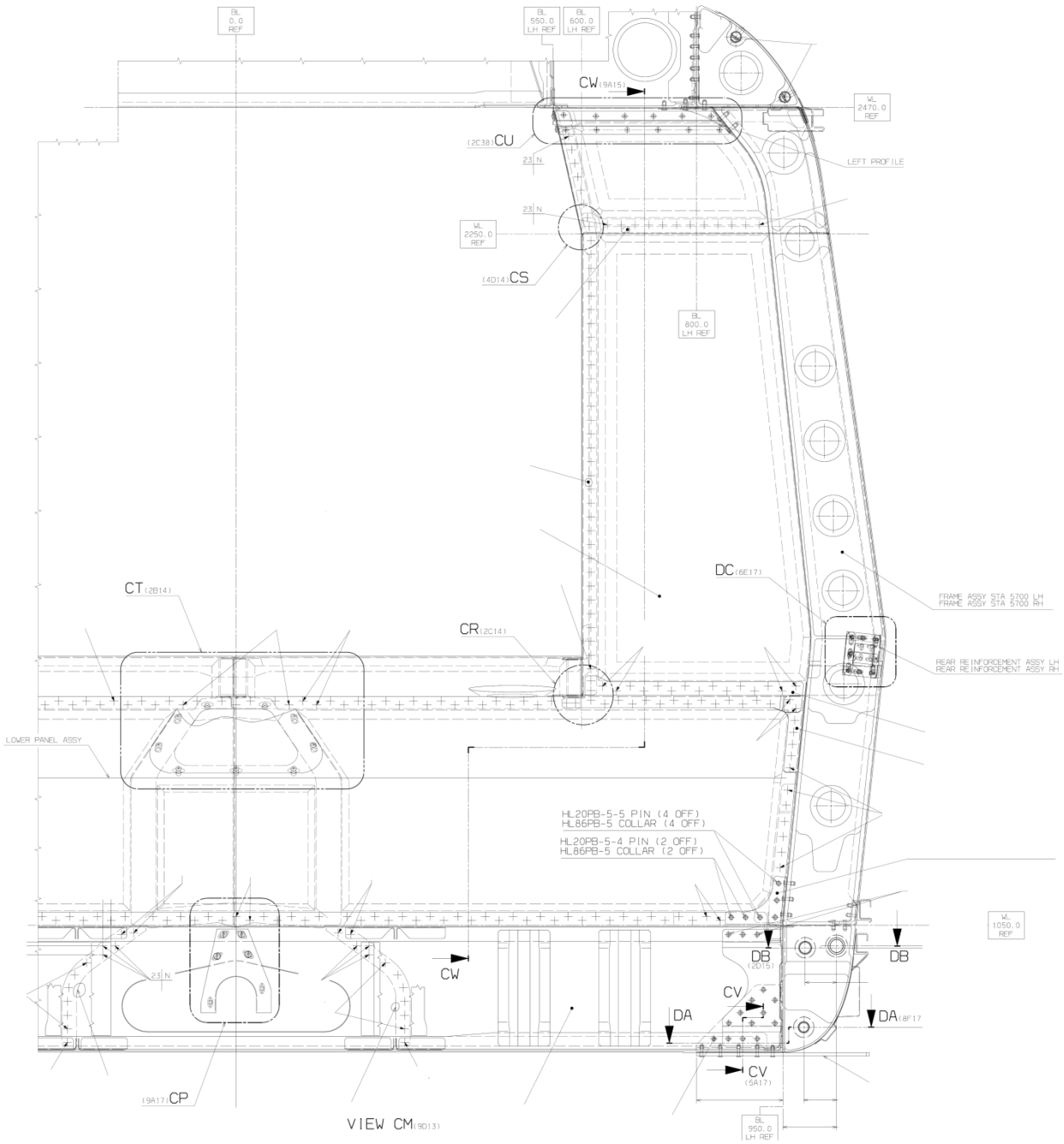

BL 0.0 REF
BL 550.0 LH REF
BL 600.0 LH REF
CW (9A15)
WL 2470.0 REF
(2C38) CU
23 N
LEFT PROFILE
WL 2250.0 REF
(4D14) CS
BL 800.0 LH REF
DC (6E17)
CT (2B14)
CR (2C14)
FRAME ASSY STA 5700 LH
FRAME ASSY STA 5700 RH
REAR REINFORCEMENT ASSY LH
REAR REINFORCEMENT ASSY RH
LOWER PANEL ASSY
HL20PB-5-5 PIN (4 OFF)
HL86PB-5 COLLAR (4 OFF)
HL20PB-5-4 PIN (2 OFF)
HL86PB-5 COLLAR (2 OFF)
WL 1050.0 REF
DB (2D15)
DB
CW
CV
DA
DA (8F17)
CV (5A17)
(9A17) CP
VIEW CM (9D13)
BL 950.0 LH REF

Figure 24

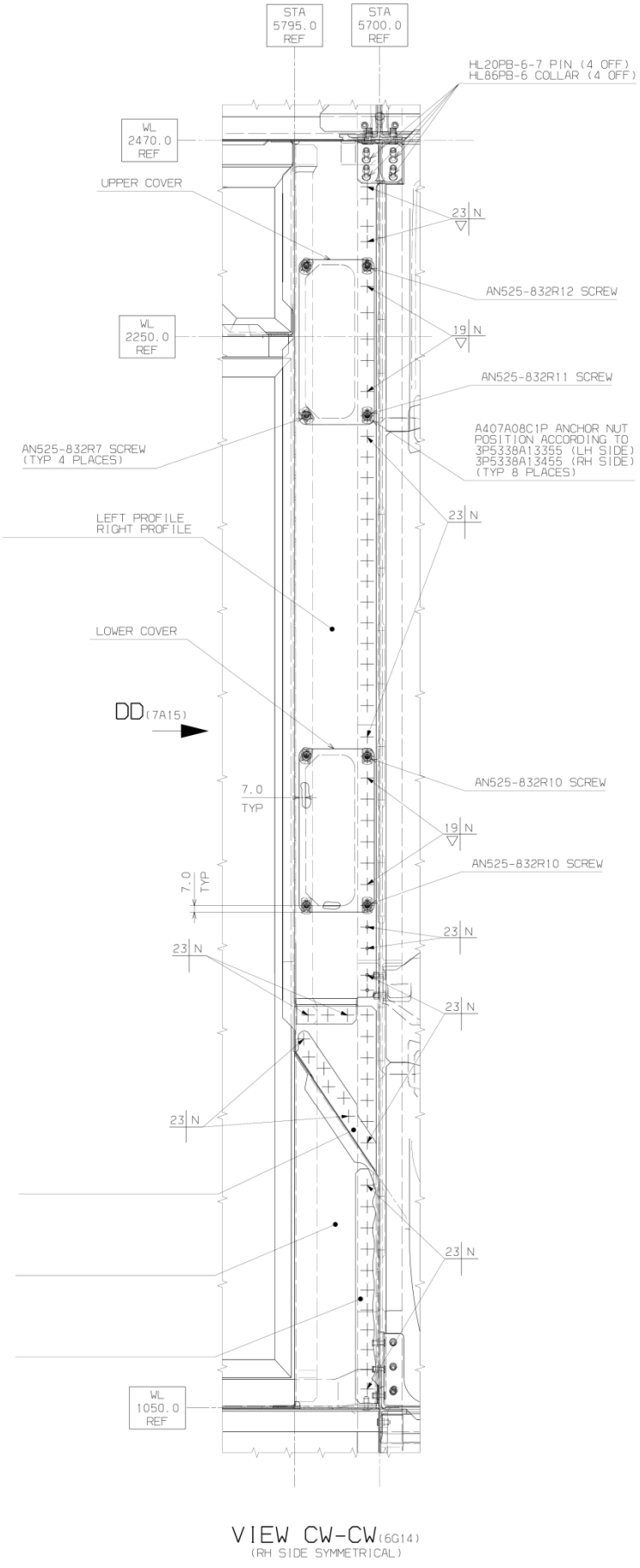
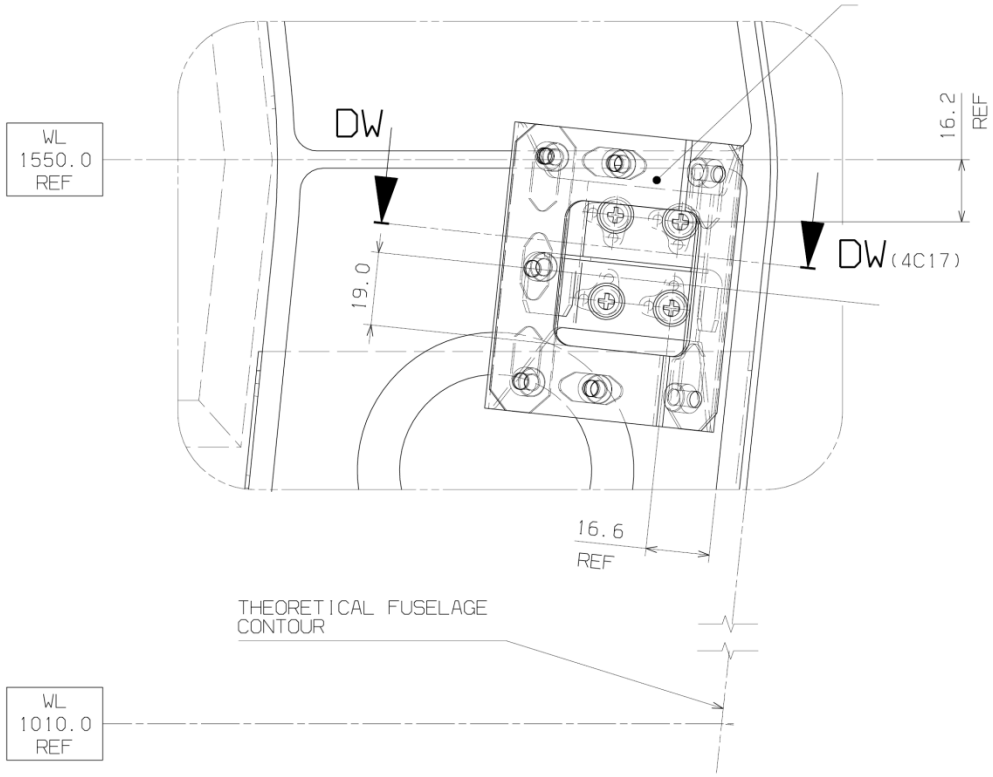
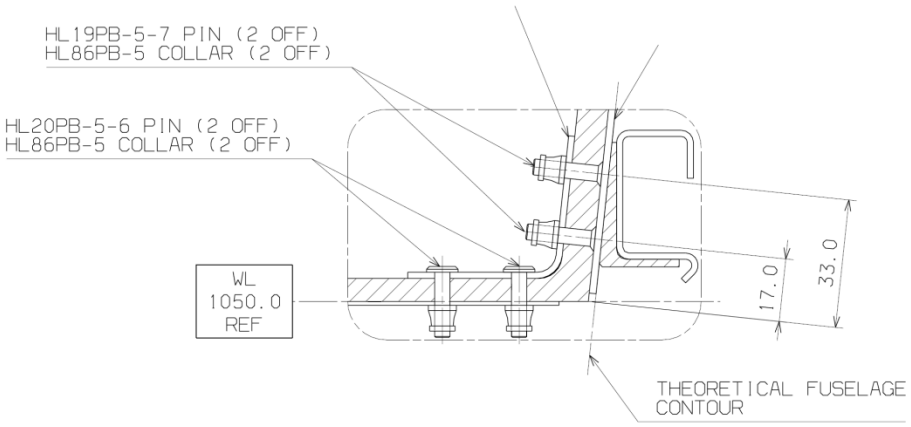

STA 5795.0 REF
STA 5700.0 REF
HL20PB-6-7 PIN (4 OFF)
HL86PB-6 COLLAR (4 OFF)
WL 2470.0 REF
UPPER COVER
23 N
AN525-832R12 SCREW
WL 2250.0 REF
19 N
AN525-832R11 SCREW
A407A08C1P ANCHOR NUT POSITION ACCORDING TO 3P5338A13355 (LH SIDE) 3P5338A13455 (RH SIDE) (TYP 8 PLACES)
AN525-832R7 SCREW (TYP 4 PLACES)
LEFT PROFILE
RIGHT PROFILE
LOWER COVER
DD (7A15)
AN525-832R10 SCREW
7.0 TYP
19 N
AN525-832R10 SCREW
7.0 TYP
23 N
23 N
23 N
23 N
23 N
WL 1050.0 REF
VIEW CW-CW (6G14)
(RH SIDE SYMMETRICAL)

Figure 25



DETAIL DC (5D14)
(RH SIDE SYMMETRICAL)



SECTION DH-DH (4D15)
(RH SIDE SYMMETRICAL)

Figure 26

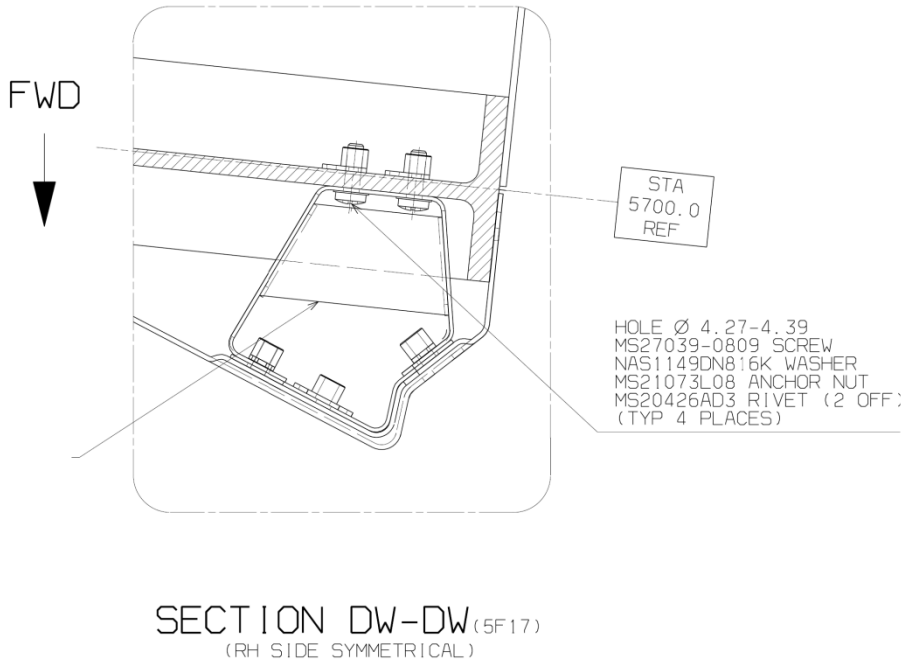
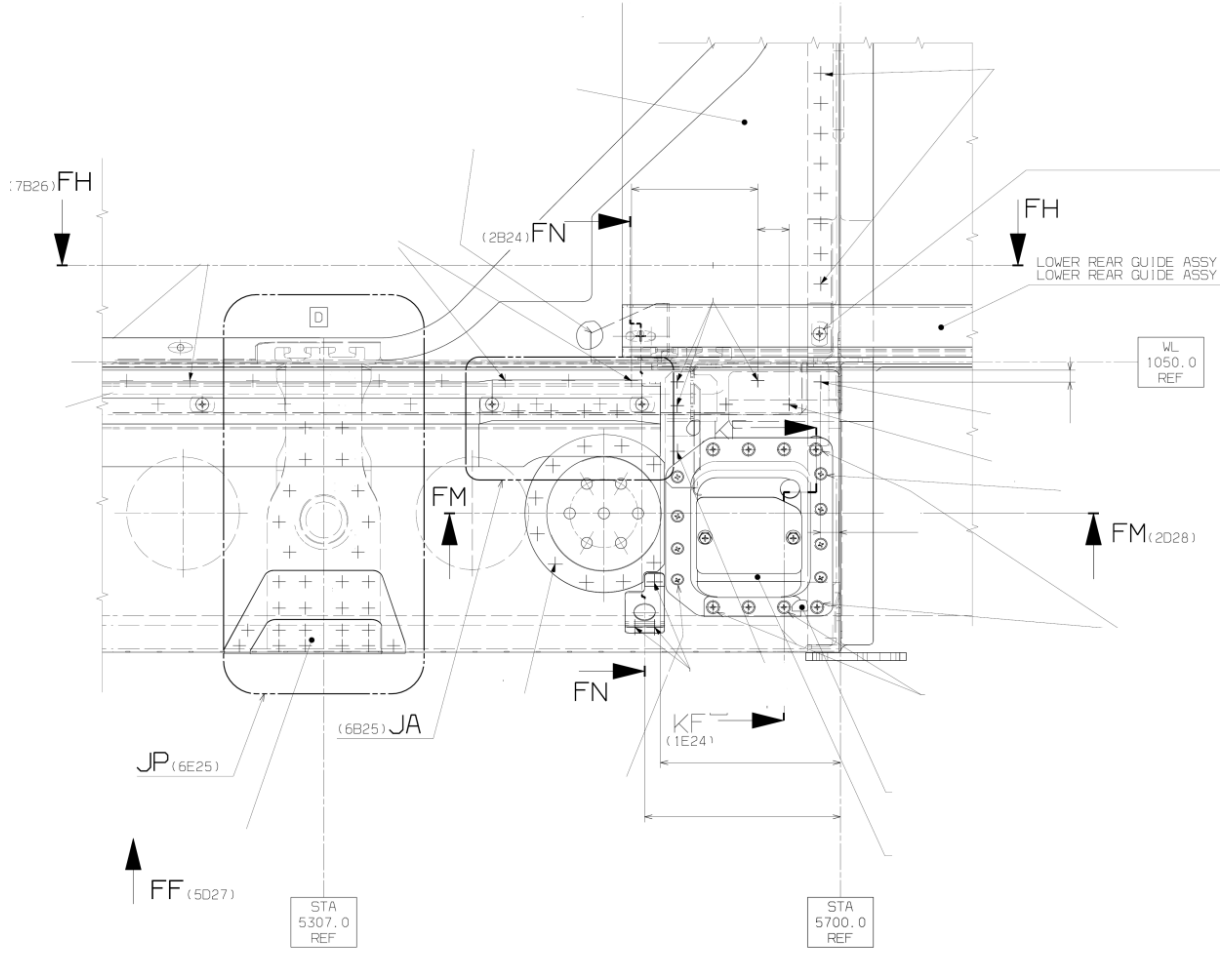
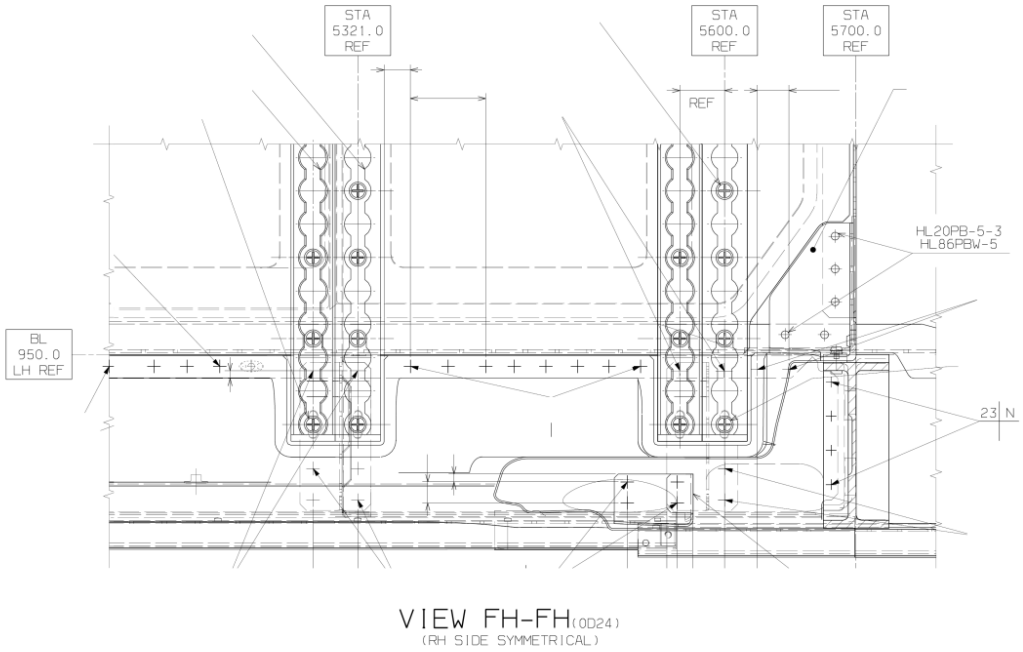

FWD
STA
5700.0
REF
HOLE Ø 4.27-4.39
MS27039-0809 SCREW
NAS1149DN816K WASHER
MS21073L08 ANCHOR NUT
MS20426AD3 RIVET (2 OFF)
(TYP 4 PLACES)
SECTION DW-DW (5F17)
(RH SIDE SYMMETRICAL)

Figure 27



LH SIDE - LOOKING INBOARD



VIEW FH-FH (0D24)
(RH SIDE SYMMETRICAL)

Figure 28

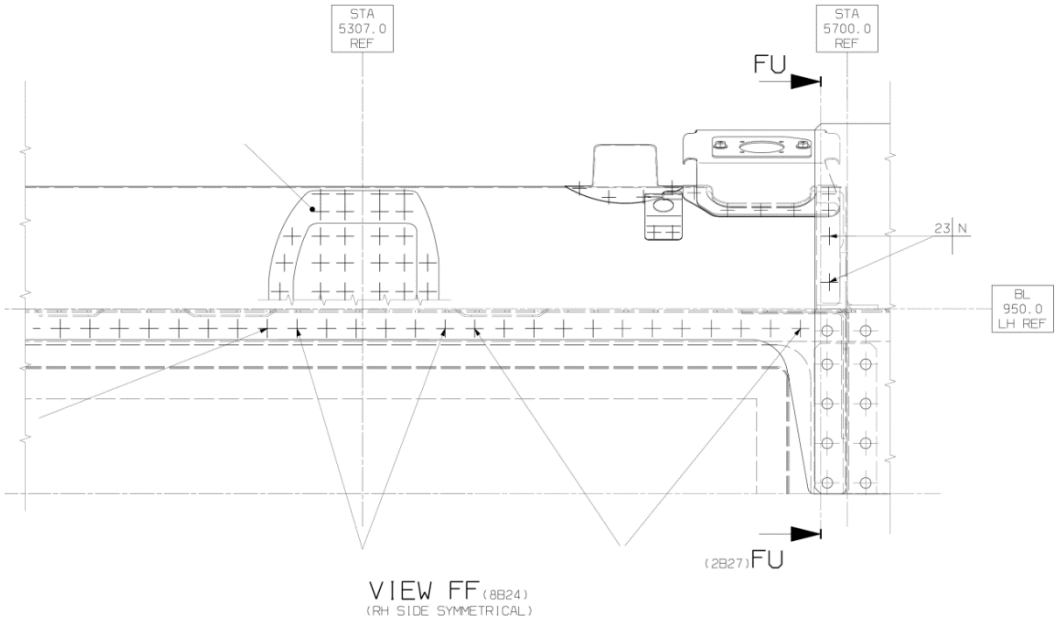
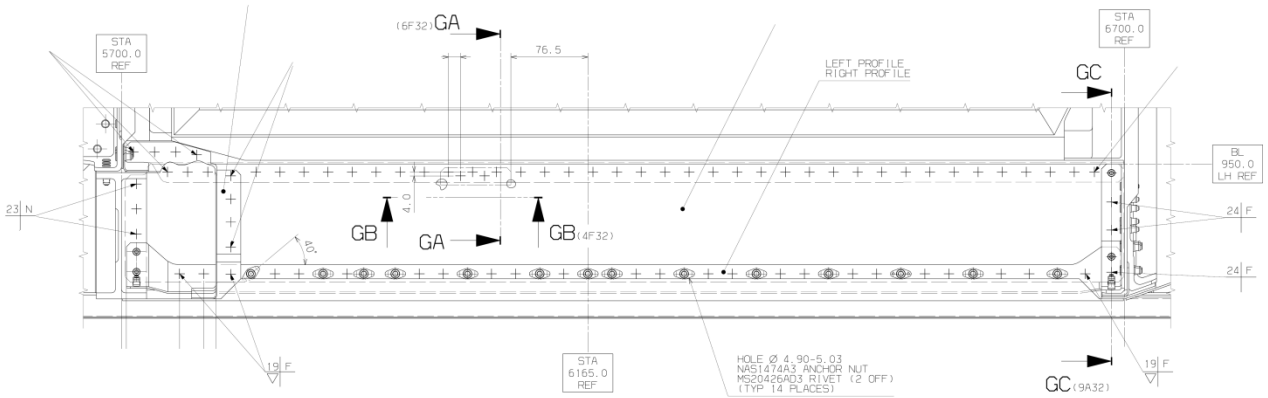
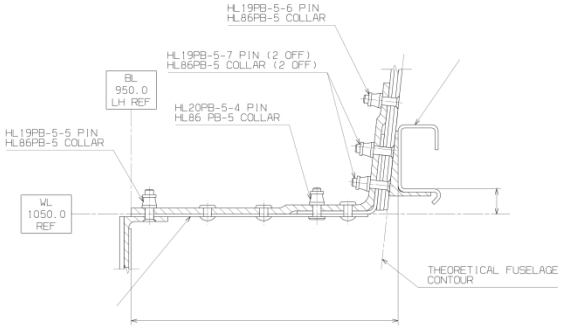

STA
5307.0
REF
STA
5700.0
REF
FU
23 N
BL
950.0
LH REF
(2B27)FU
VIEW FF (8B24)
(RH SIDE SYMMETRICAL)

Figure 29

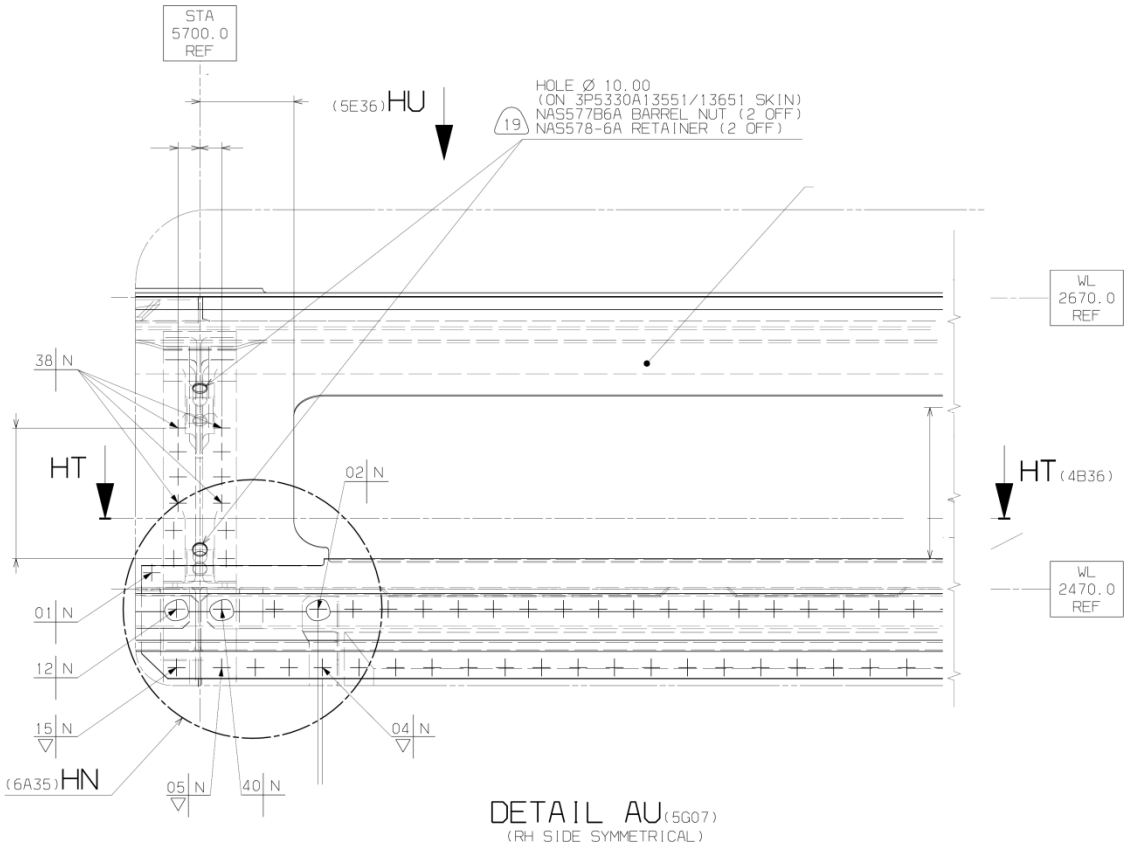


VIEW AT-AT (3C07)
(RH SIDE SYMMETRICAL)



SECTION GC-GC (2B29)
(ROTATED 90° CCW)
(RH SIDE SYMMETRICAL)

Figure 30


STA
5700.0
REF
(5E36)HU
HOLE Ø 10.00
(ON 3P5330A13551/13651 SKIN)
19
NAS577B6A BARREL NUT (2 OFF)
NAS578-6A RETAINER (2 OFF)
WL
2670.0
REF
38 N
HT
02 N
HT (4B36)
WL
2470.0
REF
01 N
12 N
15 N
04 N
(6A35)HN
05 N
40 N
DETAIL AU(5G07)
(RH SIDE SYMMETRICAL)

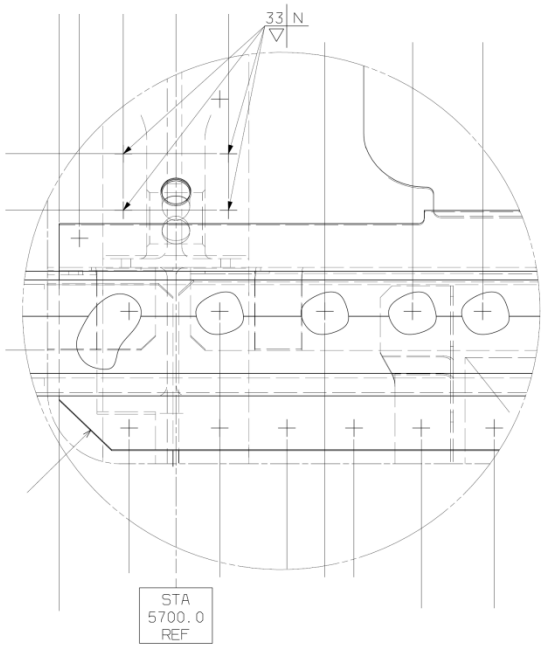

33 N
STA
5700.0
REF
DETAIL HN(8E35)
(RH SIDE SYMMETRICAL)

Figure 31

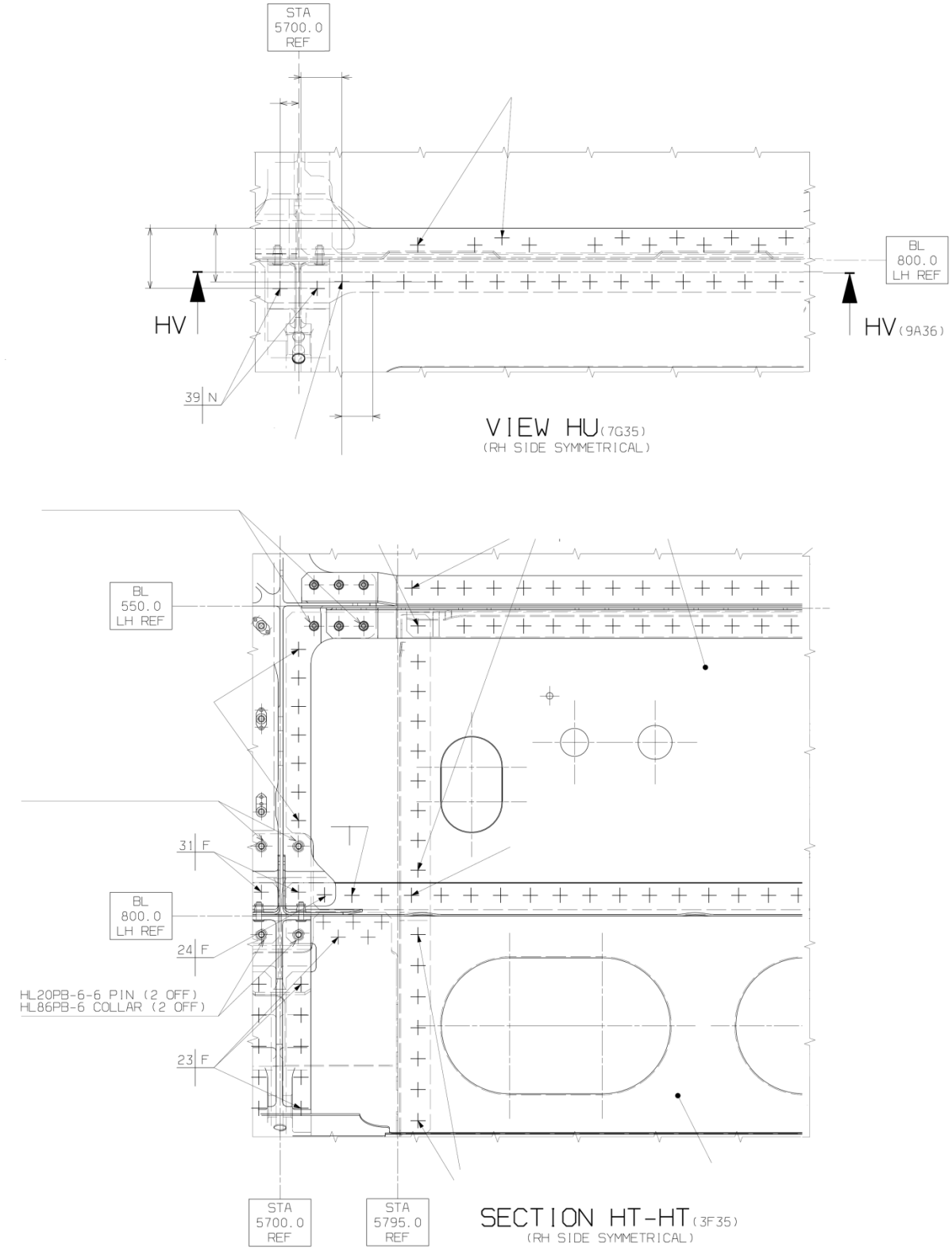

STA
5700.0
REF
BL
800.0
LH REF
HV
HV (9A36)
39 N
VIEW HU (7G35)
(RH SIDE SYMMETRICAL)
BL
550.0
LH REF
31 F
BL
800.0
LH REF
24 F
HL20PB-6-6 PIN (2 OFF)
HL86PB-6 COLLAR (2 OFF)
23 F
STA
5700.0
REF
STA
5795.0
REF
SECTION HT-HT (3F35)
(RH SIDE SYMMETRICAL)

Figure 32

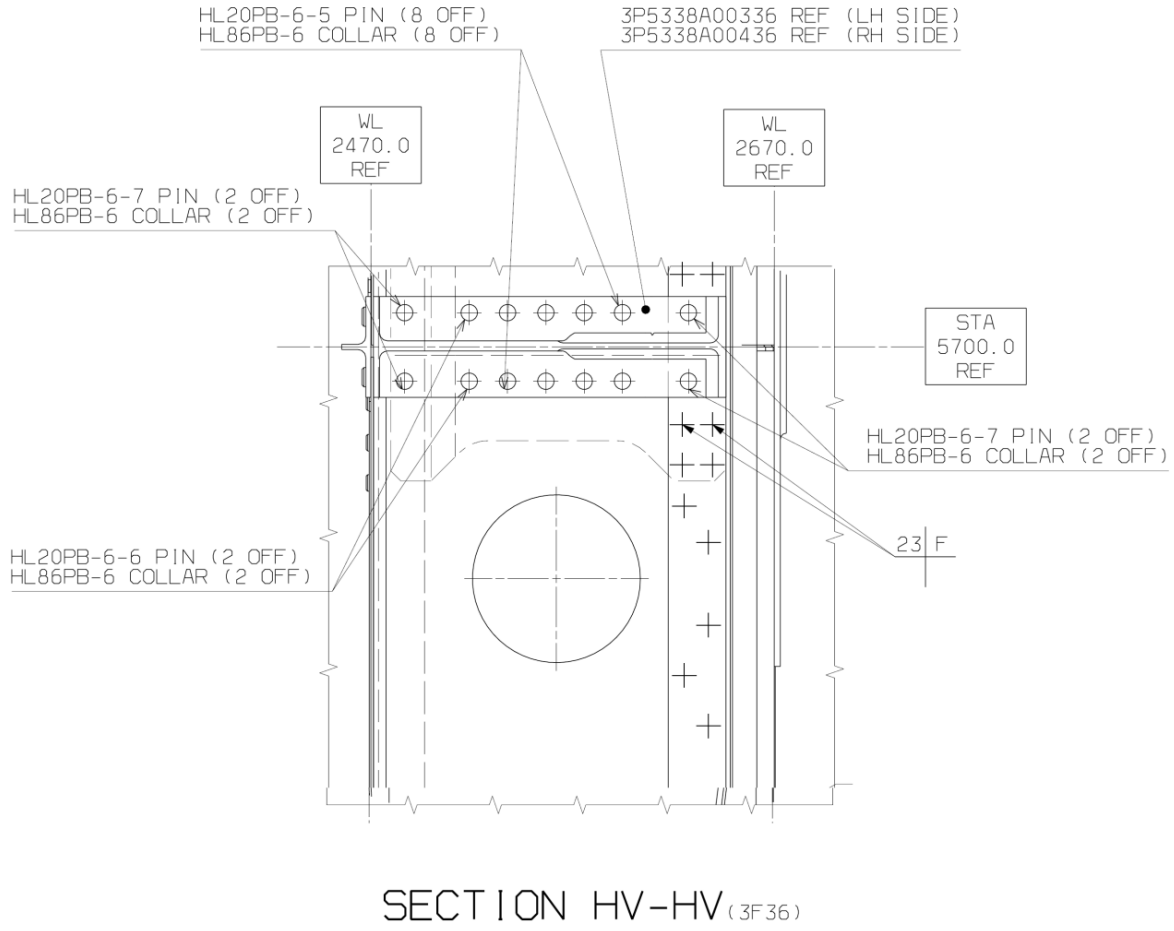

HL20PB-6-5 PIN (8 OFF)
HL86PB-6 COLLAR (8 OFF)
3P5338A00336 REF (LH SIDE)
3P5338A00436 REF (RH SIDE)
WL 2470.0 REF
WL 2670.0 REF
HL20PB-6-7 PIN (2 OFF)
HL86PB-6 COLLAR (2 OFF)
STA 5700.0 REF
HL20PB-6-7 PIN (2 OFF)
HL86PB-6 COLLAR (2 OFF)
23 F
HL20PB-6-6 PIN (2 OFF)
HL86PB-6 COLLAR (2 OFF)
SECTION HV-HV (3F36)

Figure 33

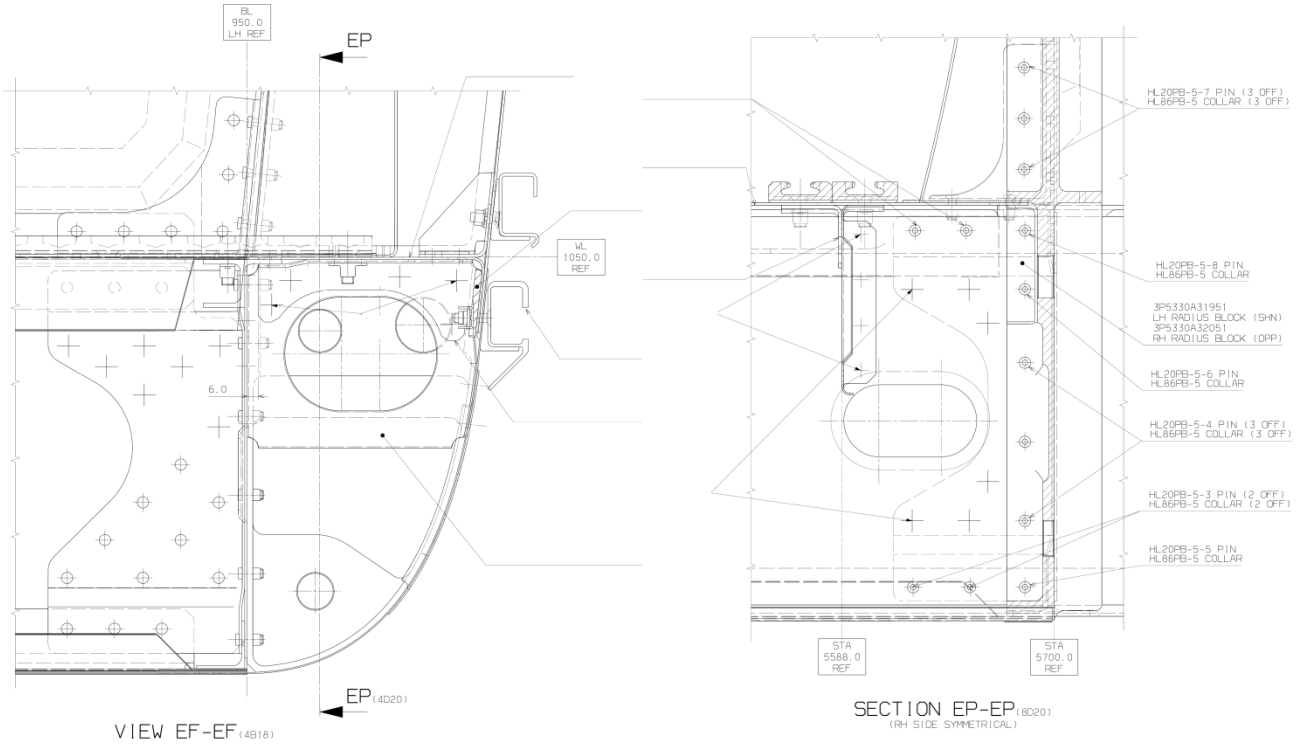

BL
950.0
LH REF
EP
WL
1050.0
REF
6.0
EP (4D20)
VIEW EF-EF (4B18)
HL20PB-5-7 PIN (3 OFF)
HL86PB-5 COLLAR (3 OFF)
HL20PB-5-8 PIN
HL86PB-5 COLLAR
3P5330A31951
LH RADIUS BLOCK (SHN)
3P5330A32051
RH RADIUS BLOCK (OPP)
HL20PB-5-6 PIN
HL86PB-5 COLLAR
HL20PB-5-4 PIN (3 OFF)
HL86PB-5 COLLAR (3 OFF)
HL20PB-5-3 PIN (2 OFF)
HL86PB-5 COLLAR (2 OFF)
HL20PB-5-5 PIN
HL86PB-5 COLLAR
STA
5588.0
REF
STA
5700.0
REF
SECTION EP-EP (8D20)
(RH SIDE SYMMETRICAL)

Figure 34

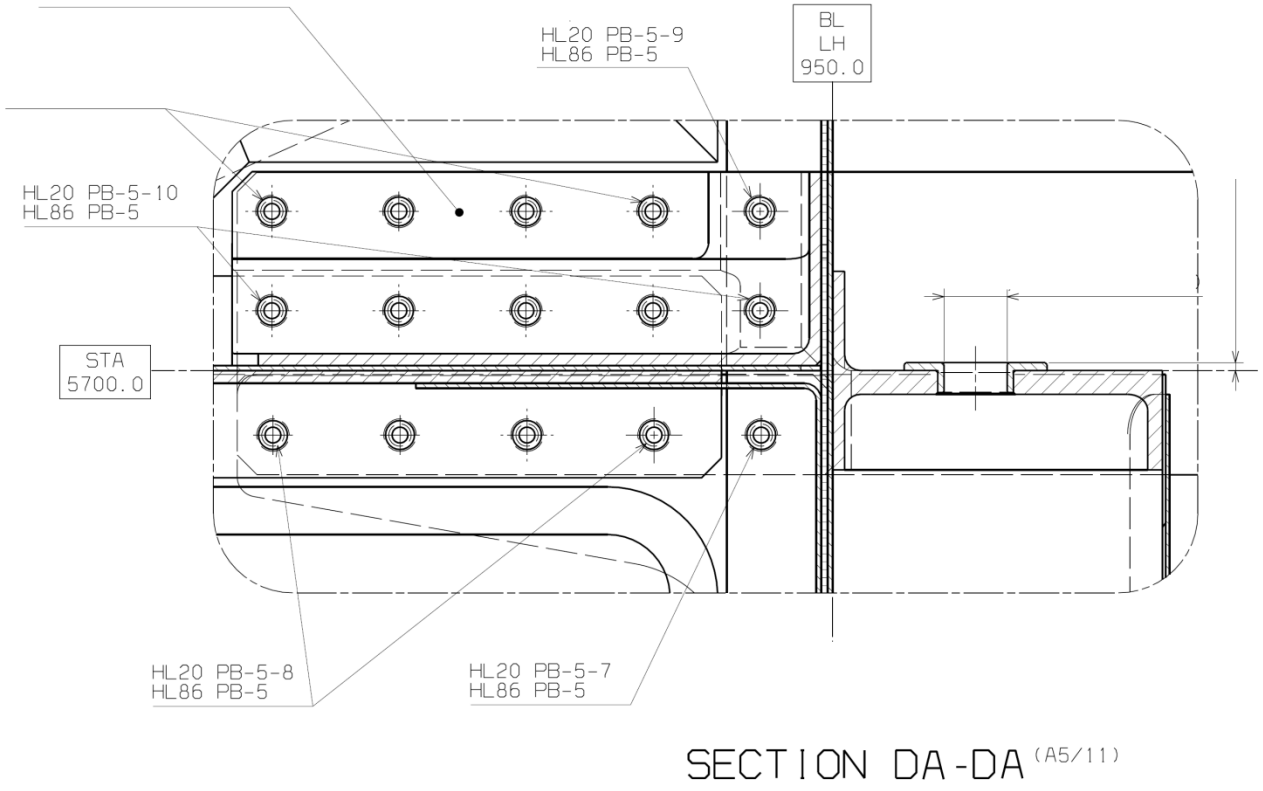

HL20 PB-5-9
HL86 PB-5
BL
LH
950.0
HL20 PB-5-10
HL86 PB-5
STA
5700.0
HL20 PB-5-8
HL86 PB-5
HL20 PB-5-7
HL86 PB-5
SECTION DA-DA (A5/11)

Figure 35

Rivet List related to Figure from Figure 20 to Figure 35

REF. No	RIVET PART NUMBER	REF. No	RIVET PART NUMBER
01	AGS4719-407	29	MS20615-5M7R
02	AGS4719-409	30	MS90354S0605
03	AGS4720-407	31	MS90354S0608
04	AGS4720-409	32	NAS1097AD4
05	AGS4720-411	33	NAS1097AD5
06	AS46789-407	34	NAS1097U4
07	AS46789-409	35	NAS9301B-4-02
08	AS46789-411	36	NAS9301B-4-03
09	AS46789-413	37	NAS9301B-4-04
10	AS46789-415	38	NAS9301B-5-03
11	AS46789-512	39	NAS9301B-5-04
12	AS46789-514	40	NAS9301B-5-05
13	AS46791-407	41	NAS9302B-4-02
14	AS46791-409	42	NAS9302B-4-03
15	AS46791-411	43	NAS9302B-4-04
16	AS46791-413	44	NAS9302B-5-03
17	AS46791-415	45	NAS9302B-5-04
18	MS20426AD3	46	NAS9302B-5-05
19	MS20426AD4	47	NAS9302B-5-06
20	MS20426AD5	48	NAS9302B-5-07
21	MS20427M4	49	A297A04TW01
22	MS20470AD3	50	A298A05TW02
23	MS20470AD4	51	A297A04TW02
24	MS20470AD5	52	NAS1721C4-4P
25	MS20615-4M5	53	NAS1721C4-5P
26	MS20615-4M8	54	A297A05TW03
27	MS20615-5M6R	55	A298A05TW03
28	MS20615-5M7	56	NAS1721C5-4P

Figure 36

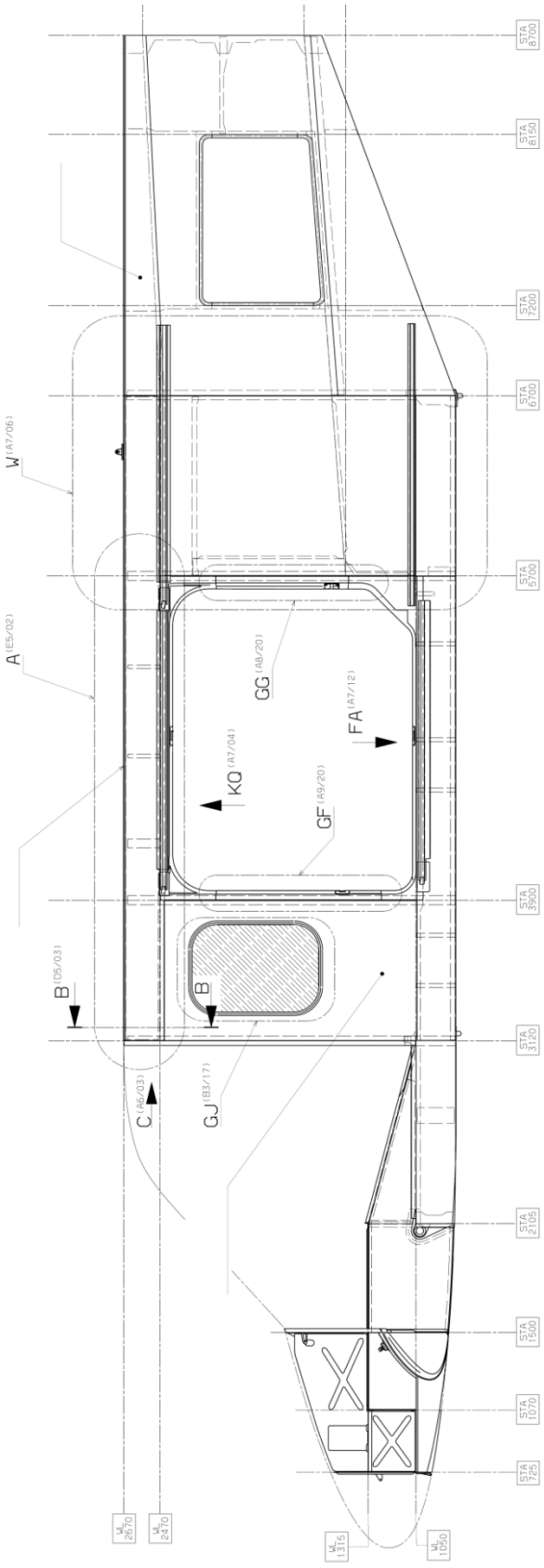

STA 6100
STA 6150
STA 6200
STA 6700
STA 5700
STA 3900
STA 3120
STA 2105
STA 1300
STA 1070
STA 725
W (A7/06)
A (E5/02)
GG (A8/20)
FA (A7/12)
KQ (A7/04)
GF (A9/20)
B (D5/03)
B
C (A6/03)
GJ (B3/17)
WL 2670
WL 2470
WL 1315
WL 1050

Figure 37

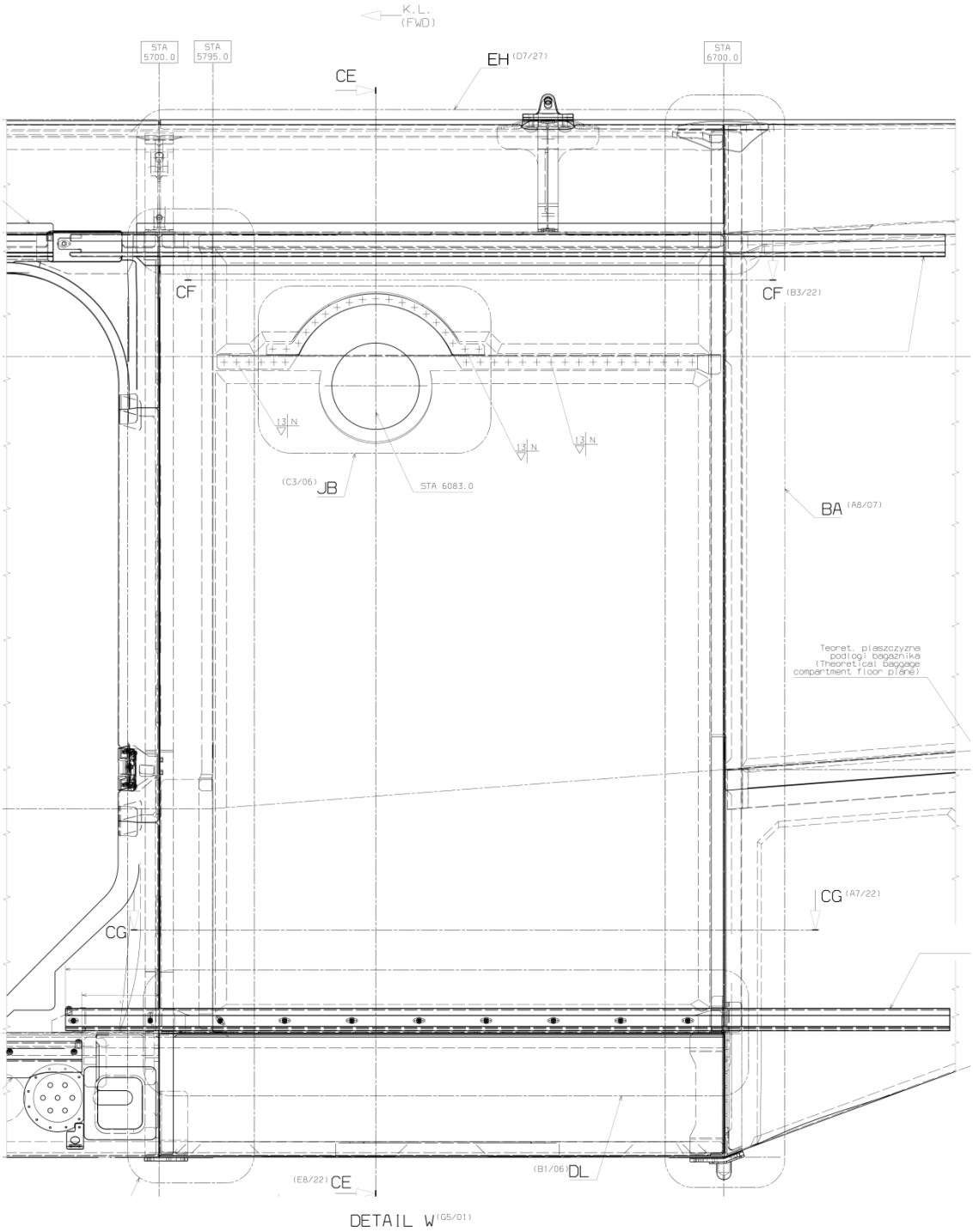

K.L.
(FWD)
STA 5700.0
STA 5795.0
STA 6700.0
CE
EH (D7/27)
CF
CF (B3/22)
13 N
(C3/06) JB
STA 6083.0
BA (A8/07)
Teoret. płaszczyzna podłogi bagażnika
(Theoretical baggage compartment floor plane)
CG (A7/22)
CG
(E8/22) CE
(B1/06) DL
DETAIL W (G5/01)
04 N
3P5338A19351
DETAIL JB (E8/06)
LH SIDE ONLY

Figure 38

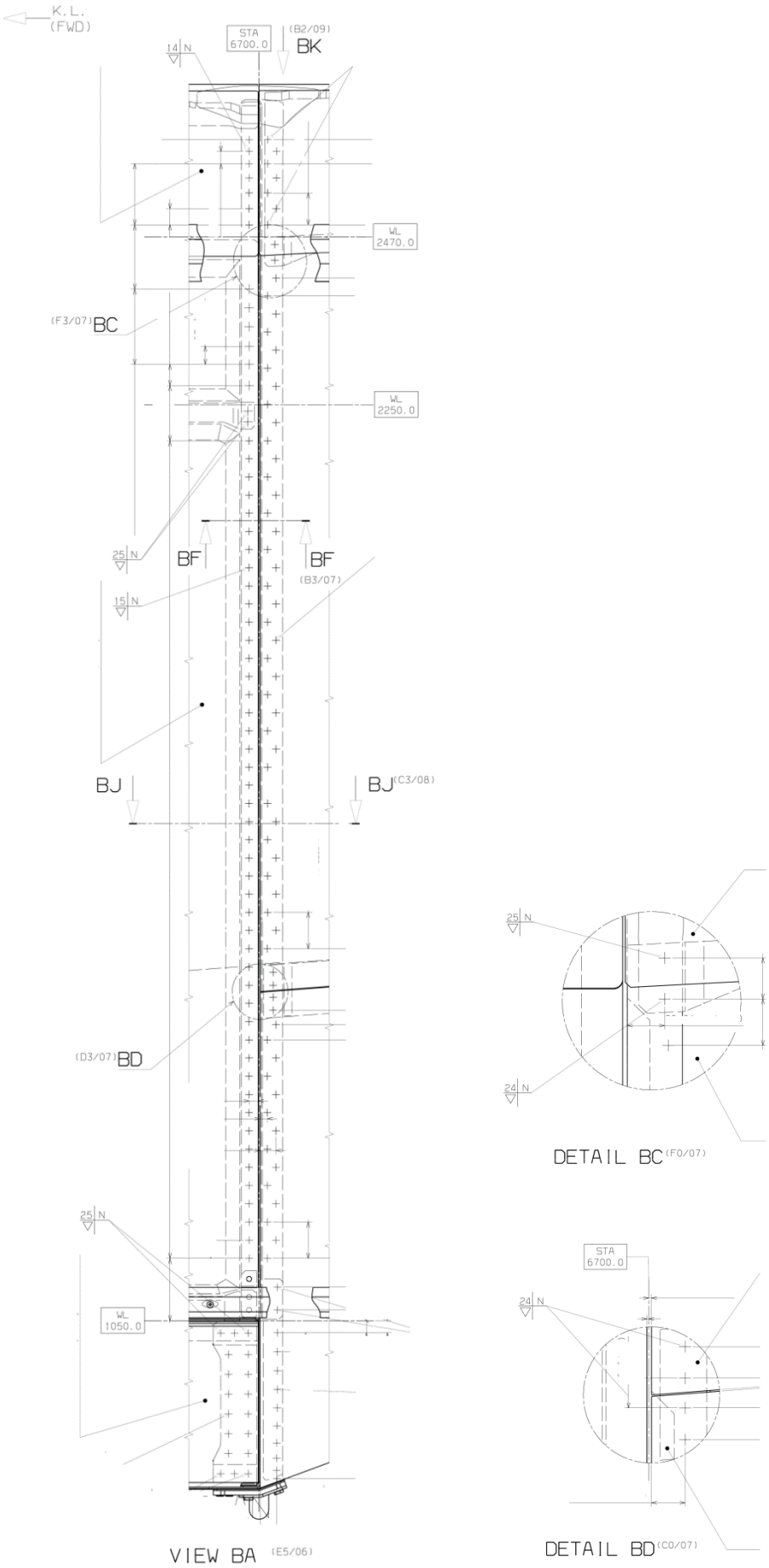

K.L.
(FWD)
STA
6700.0
(B2/09)
BK
14 N
WL
2470.0
(F3/07)
BC
WL
2250.0
25 N
BF
BF
(B3/07)
15 N
BJ
BJ (C3/08)
(D3/07)
BD
25 N
WL
1050.0
VIEW BA (E5/06)
25 N
24 N
DETAIL BC (F0/07)
STA
6700.0
24 N
DETAIL BD (C0/07)

Figure 39

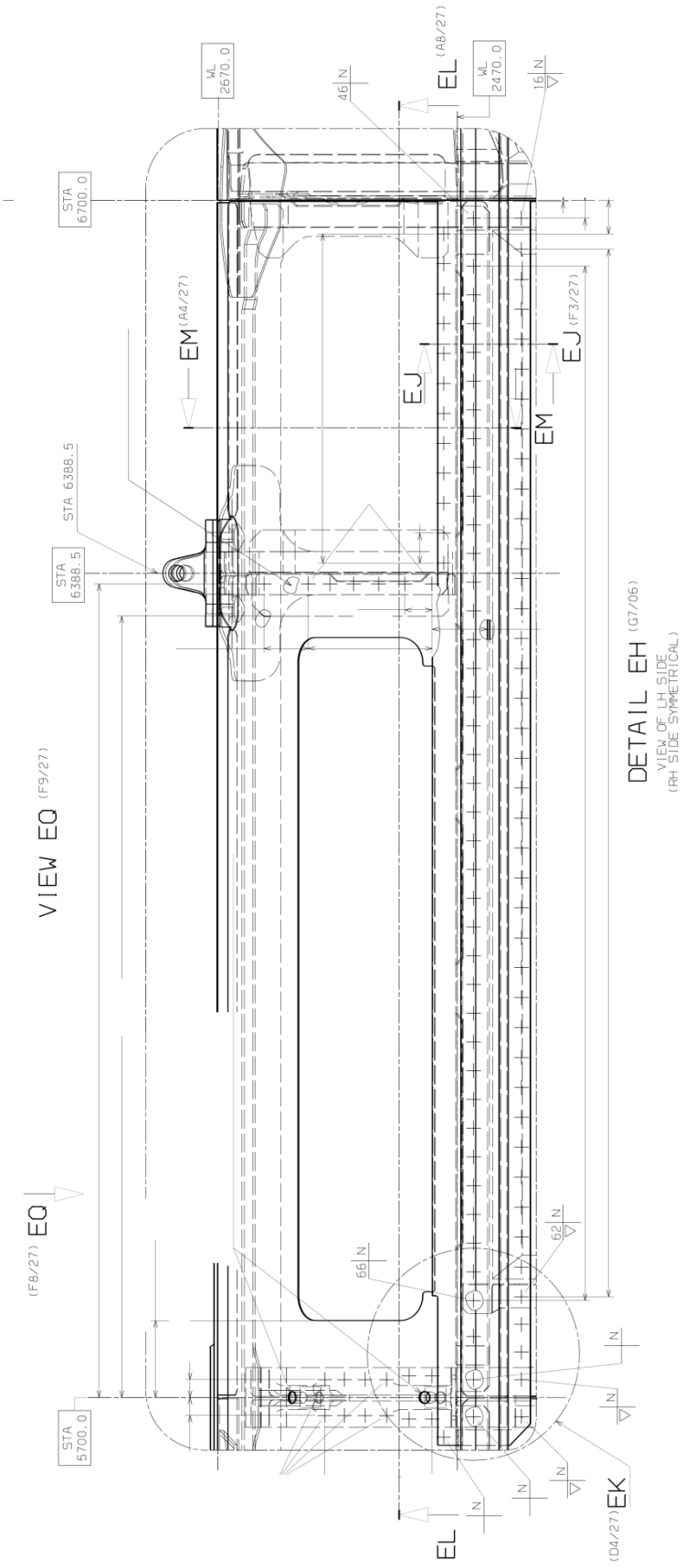

WL 2670.0
46 N
EL (A8/27)
WL 2470.0
16 N
STA 6700.0
EM (A4/27)
EJ
EJ (F3/27)
EM
STA 6388.5
STA 6388.5
DETAIL EH (G7/06)
VIEW OF LH SIDE
(RH SIDE SYMMETRICAL)
VIEW EQ (F9/27)
(F8/27) EQ
66 N
62 N
N
STA 5700.0
EL
(D4/27) EK

Figure 40

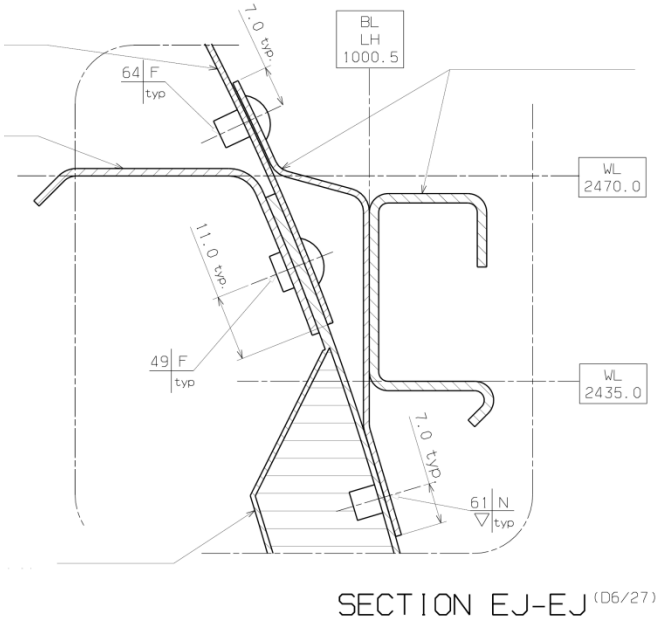

7.0 typ.
BL
LH
1000.5
64 F
typ
WL
2470.0
11.0 typ.
49 F
typ
WL
2435.0
7.0 typ.
61 N
typ
SECTION EJ-EJ (D6/27)

Figure 41

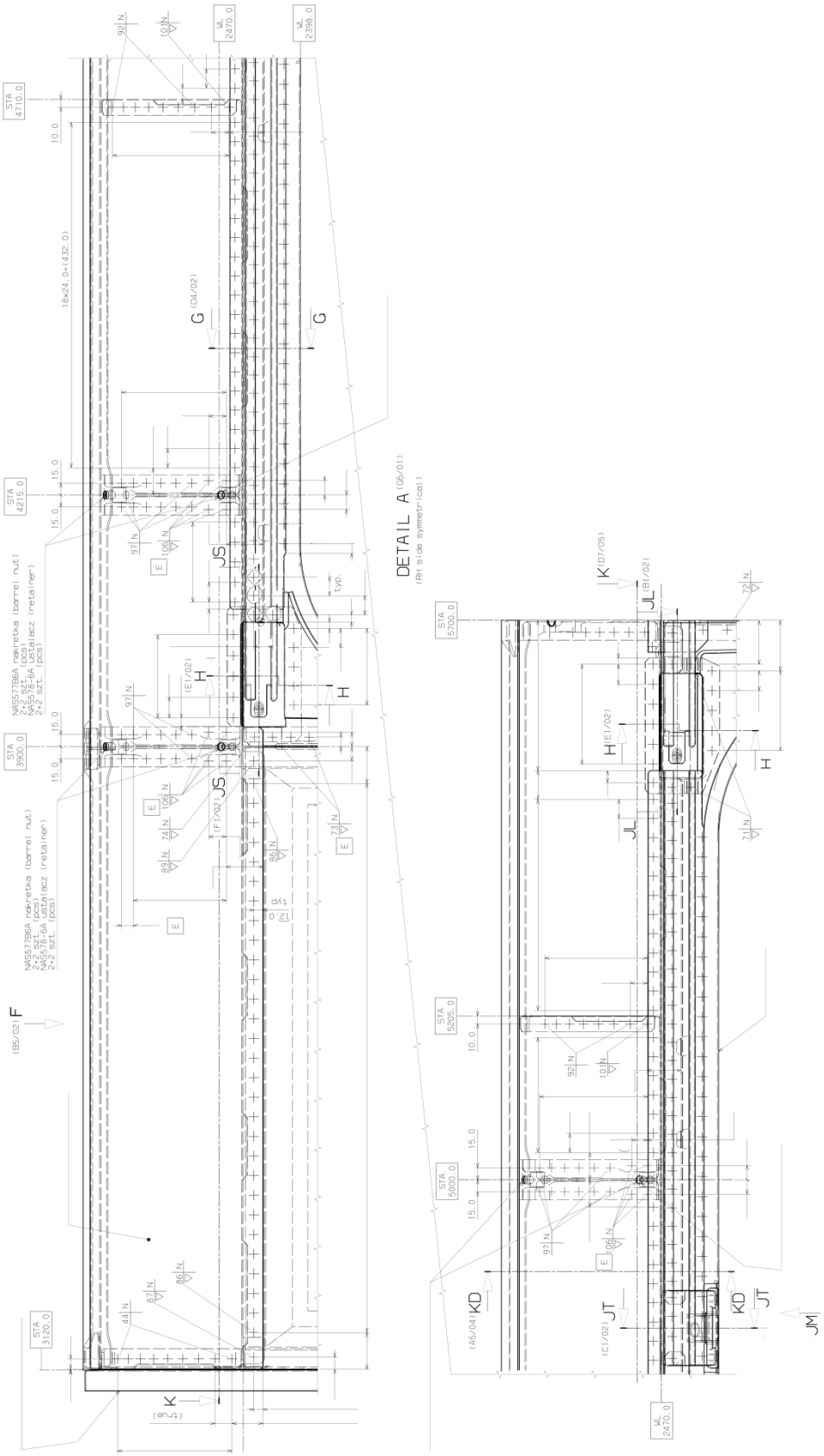

DETAIL A (06/01)
(RH side symmetrical)
STA 4710.0
STA 4215.0
STA 3500.0
STA 3120.0
STA 5700.0
STA 5205.0
STA 5000.0
WL 2470.0
WL 2394.0
18x24.0=432.0
10.0
15.0
NAS6708A nakrętka (barrel nut)
NAS6708A śruba (bolt)
NAS6708A kołnierz (retainer)
2+2 szt. (pcs)
typ.
G (04/02)
H (E1/02)
JS (F1/02)
JL (B1/02)
K (D7/05)
KD (A5/04)
JT (C1/02)
JM
F (B5/02)

Figure 42

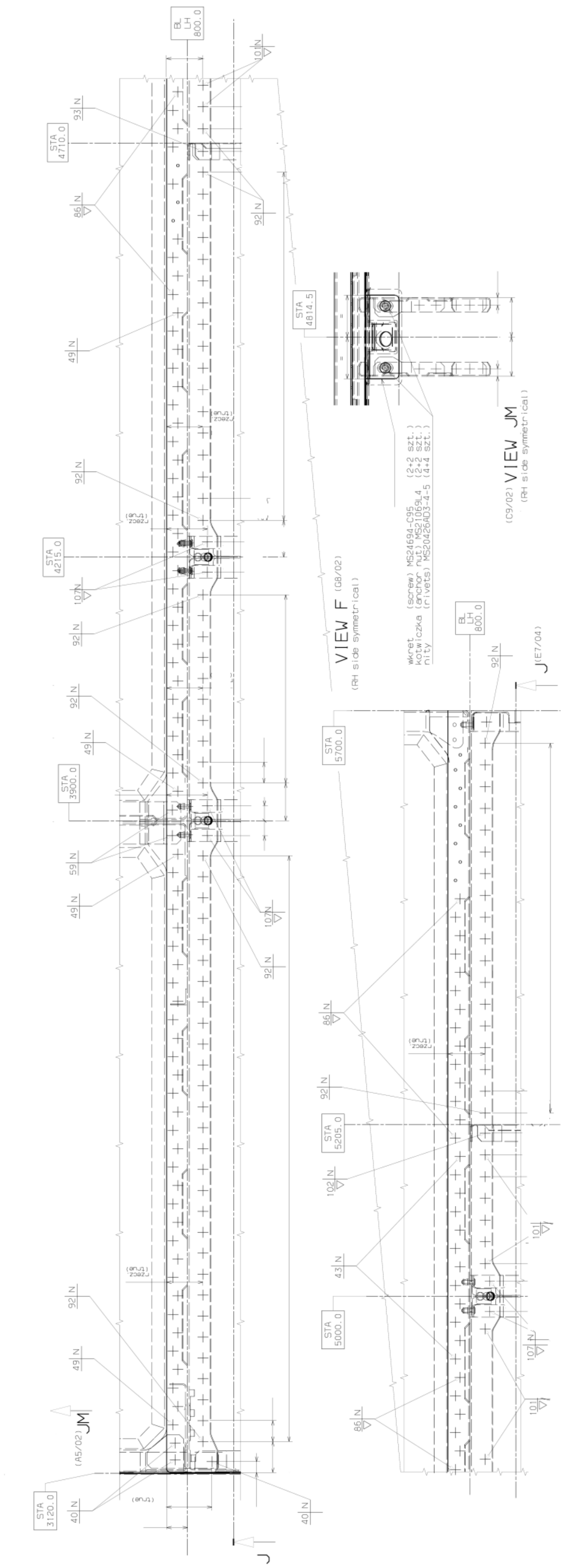

VIEW F (G8/02)
(RH side symmetrical)
VIEW JM (C9/02)
(RH side symmetrical)
wkret (screw) MS24694-C95 (2+2 szt.)
kotwiczka (anchor nut) MS21069L4 (2+2 szt.)
nity (rivets) MS20426AD3-4-5 (4+4 szt.)
BL LH 800.0
STA 4710.0
STA 4814.5
STA 4215.0
STA 3900.0
STA 3120.0
STA 5700.0
STA 5205.0
STA 5000.0
J (E7/04)
JM (A5/02)

Figure 43

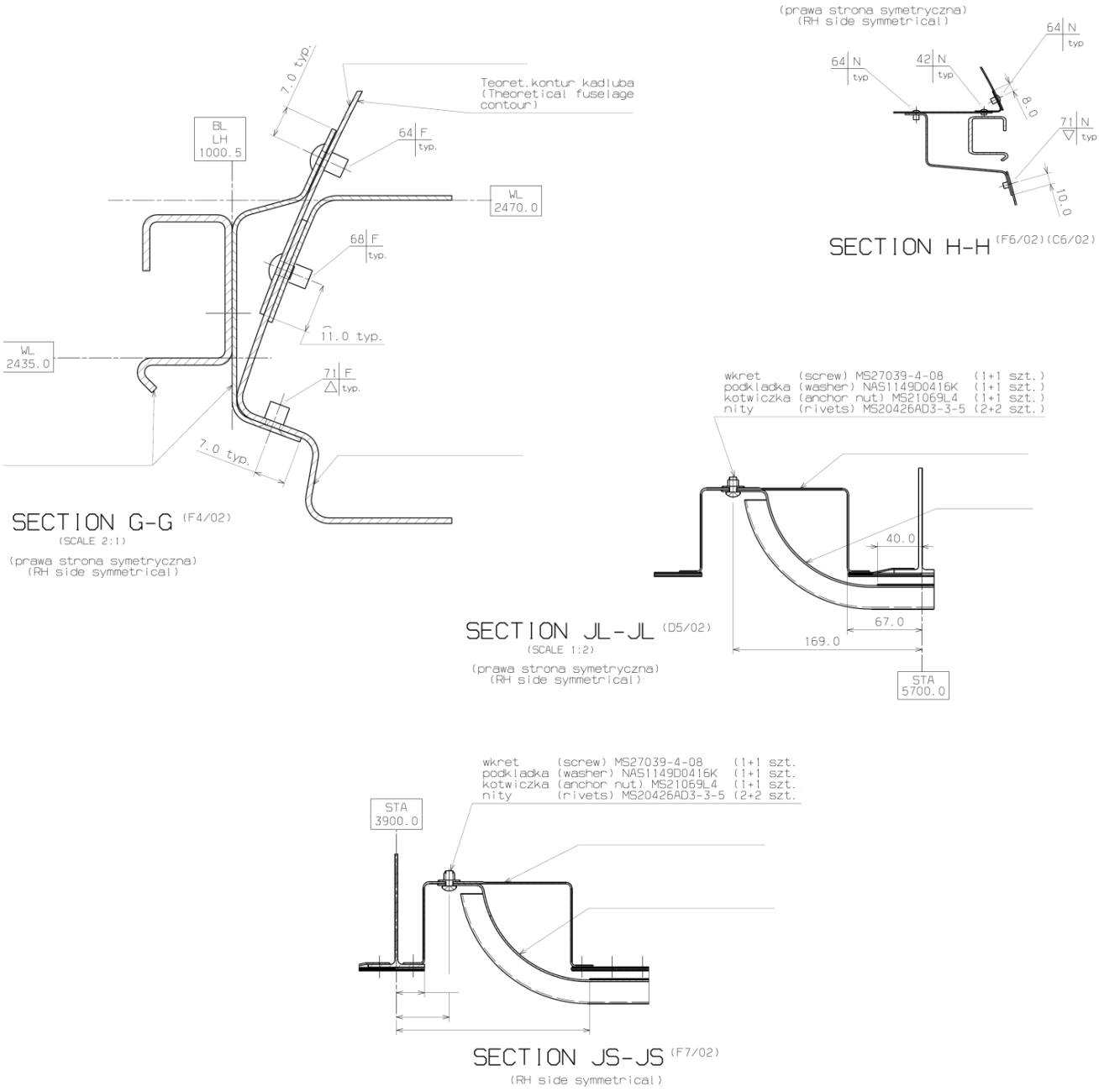

(prawa strona symetryczna)
(RH side symetrical)
64 N typ
64 N typ
42 N typ
8.0
71 N typ
10.0
SECTION H-H (F6/02)(C6/02)
Teoret. kontur kadluba
(Theoretical fuselage contour)
7.0 typ.
BL LH 1000.5
64 F typ.
WL 2470.0
68 F typ.
11.0 typ.
WL 2435.0
71 F typ.
7.0 typ.
SECTION G-G (F4/02)
(SCALE 2:1)
(prawa strona symetryczna)
(RH side symetrical)
wkret (screw) MS27039-4-08 (1+1 szt.)
podkladka (washer) NAS1149D0416K (1+1 szt.)
kotwiczka (anchor nut) MS21069L4 (1+1 szt.)
nity (rivets) MS20426AD3-3-5 (2+2 szt.)
40.0
67.0
169.0
STA 5700.0
SECTION JL-JL (D5/02)
(SCALE 1:2)
(prawa strona symetryczna)
(RH side symetrical)
wkret (screw) MS27039-4-08 (1+1 szt.)
podkladka (washer) NAS1149D0416K (1+1 szt.)
kotwiczka (anchor nut) MS21069L4 (1+1 szt.)
nity (rivets) MS20426AD3-3-5 (2+2 szt.)
STA 3900.0
SECTION JS-JS (F7/02)
(RH side symetrical)

Figure 44

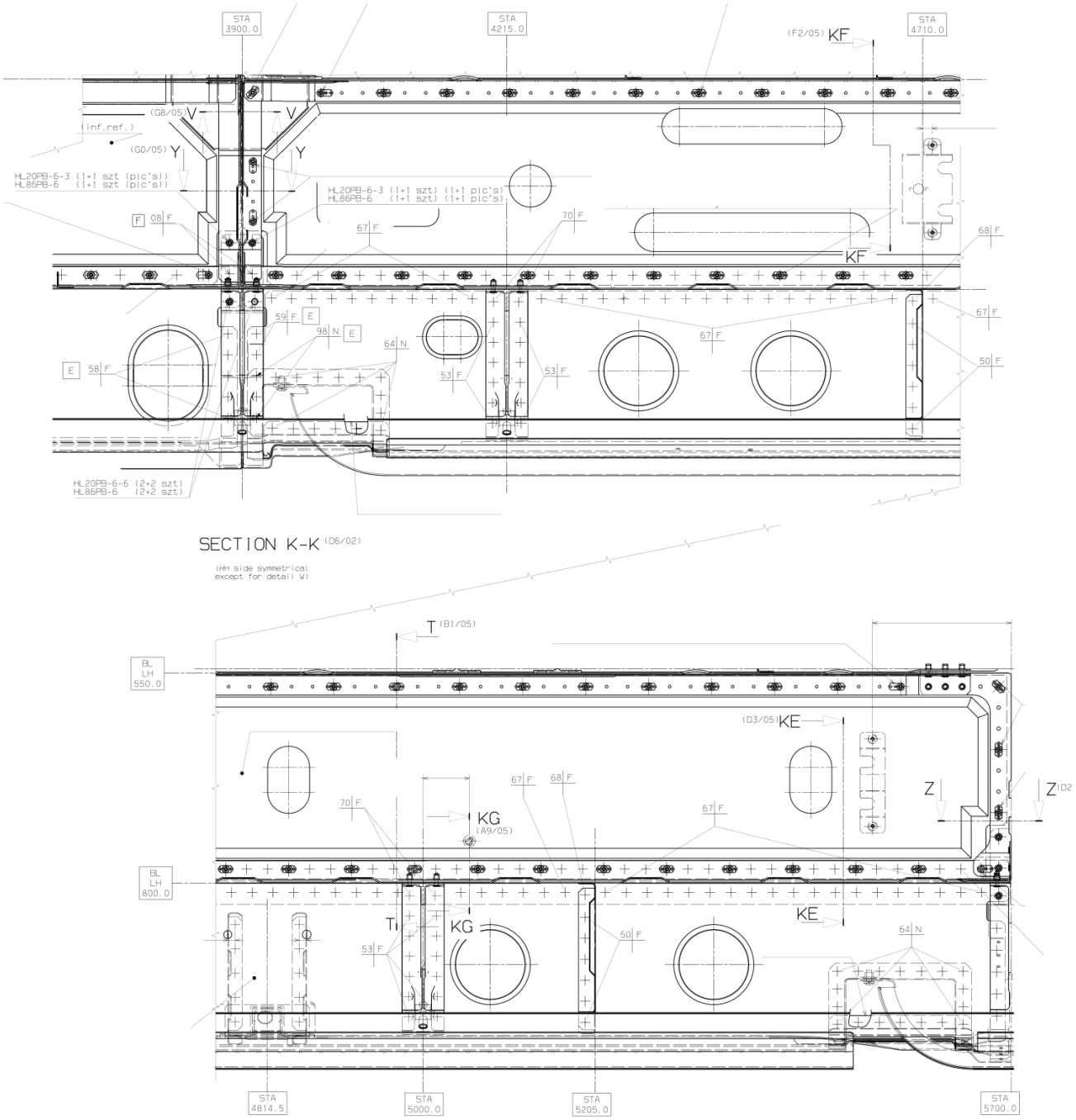

STA 3900.0
STA 4215.0
STA 4710.0
(F2/05) KF
(G8/05) V
(inf.ref.)
(G0/05) Y
HL20PB-6-3 (1+1 szt (plc's))
HL86PB-6 (1+1 szt (plc's))
HL20PB-6-3 (1+1 szt) (1+1 plc's)
HL86PB-6 (1+1 szt) (1+1 plc's)
67 F
70 F
68 F
KF
59 F E
98 N E
64 N
67 F
53 F
50 F
E 58 F
HL20PB-6-6 (2+2 szt)
HL86PB-6 (2+2 szt)
SECTION K-K (D6/02)
(HH side symmetrical except for detail W)
T (B1/05)
BL LH 550.0
(D3/05) KE
70 F
67 F
68 F
KG (A9/05)
Z
Z (D2
BL LH 800.0
Ti
KG
KE
53 F
50 F
64 N
STA 4814.5
STA 5000.0
STA 5205.0
STA 5700.0

Figure 45

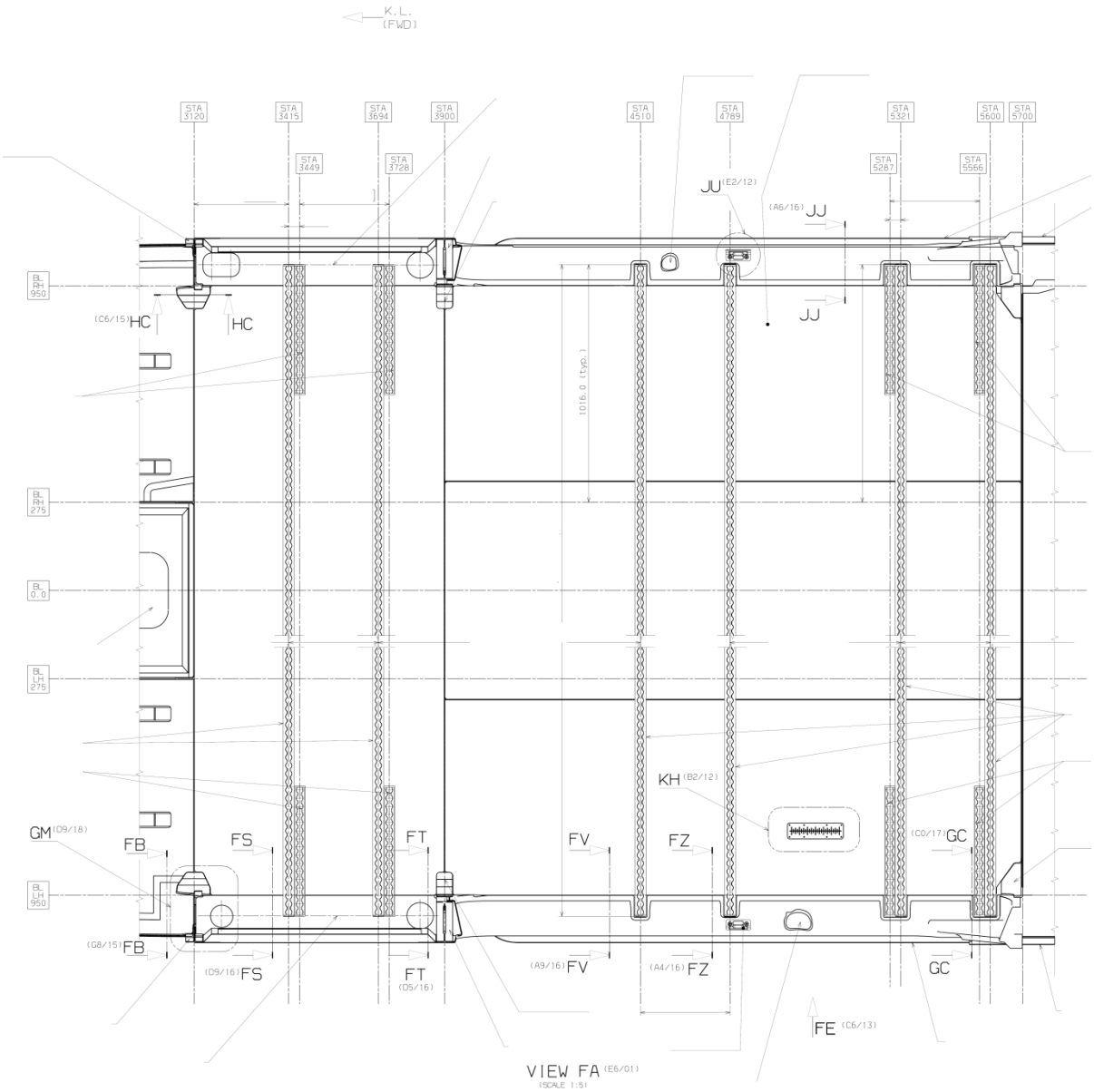

K.L.
(FWD)
STA 3120
STA 3415
STA 3449
STA 3694
STA 3728
STA 3900
STA 4510
STA 4789
STA 5287
STA 5321
STA 5566
STA 5600
STA 5700
JU (E2/12)
(A6/16) JJ
JJ
(C6/15) HC
HC
1016.0 (typ.)
BL RH 950
BL RH 275
BL 0.0
BL LH 275
BL LH 950
KH (B2/12)
GM (D9/18)
FB
FS
FT
FV
FZ
(C0/17) GC
(G8/15) FB
(D9/16) FS
FT (D5/16)
(A9/16) FV
(A4/16) FZ
GC
FE (C6/13)
VIEW FA (E6/01)
(SCALE 1:5)

Figure 46

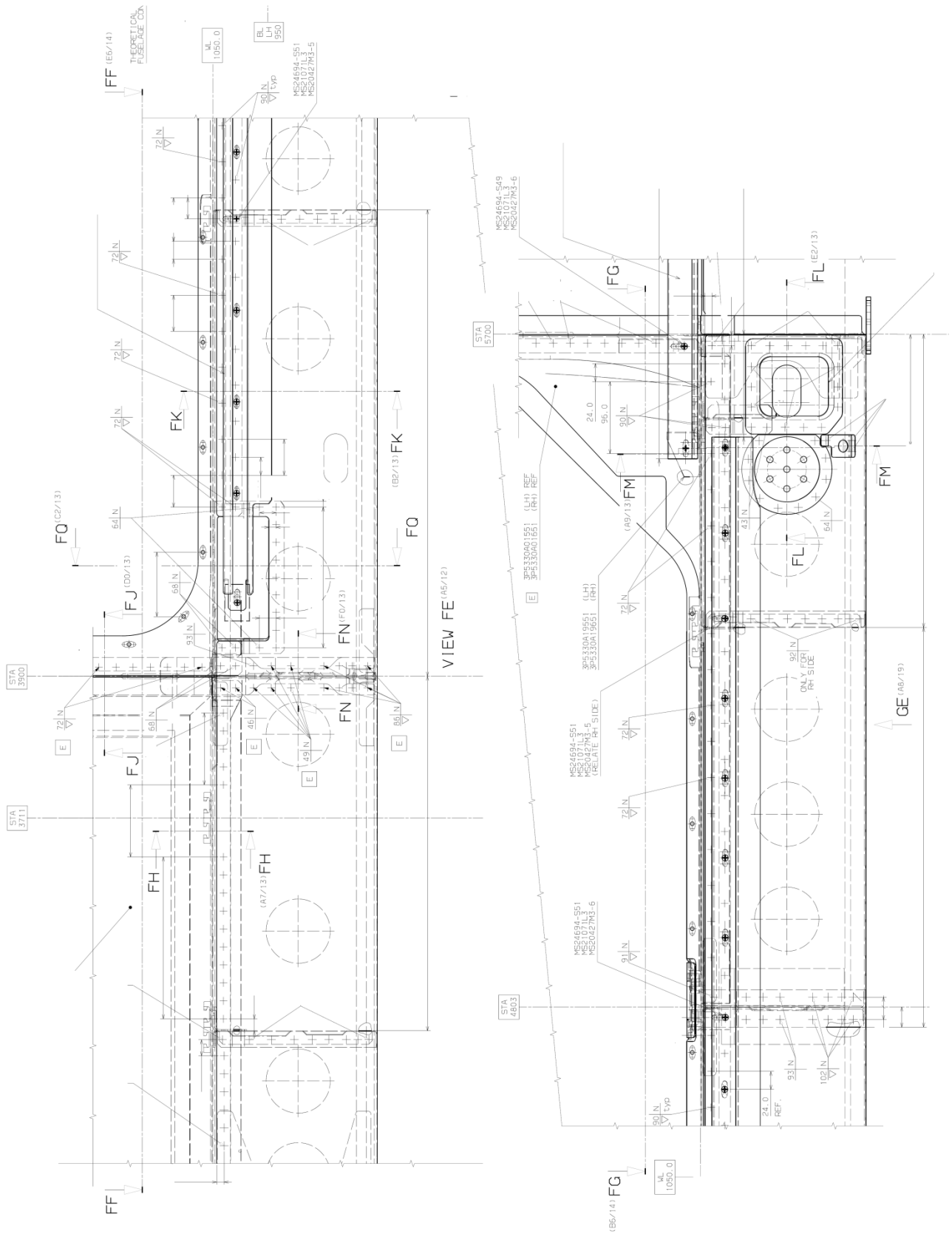

VIEW FE (A5/12)
FF (E6/14)
FG
FH
FJ (D0/13)
FK (B2/13)
FL (E2/13)
FM (A9/13)
FN (F0/13)
FQ (C2/13)
GE (A6/19)
STA 3900
STA 3711
STA 5700
STA 4803
WL 1050.0
BL LH 950
MS24694-551
MS21071L3
MS2042M3-5
MS24694-549
MS2042M3-6
3P5330A0155 (LH) REF
3P5330A0165 (RH) REF
3P5330A1965 (LH)
3P5330A1965 (RH)
ONLY FOR RH SIDE
(RELATIVE RH SIDE)
TYP
REF

Figure 47

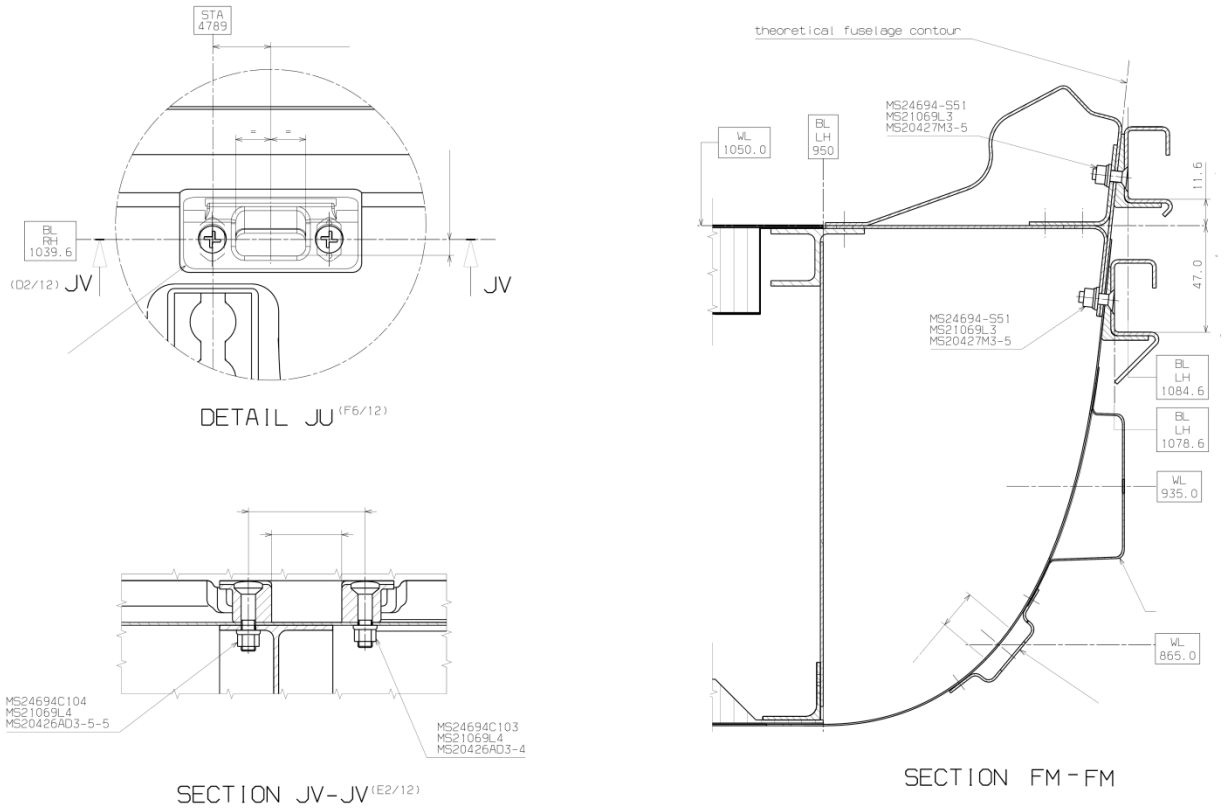

STA
4789
BL
RH
1039.6
(D2/12) JV
JV
DETAIL JU (F6/12)
MS24694C104
MS21069L4
MS20426AD3-5-5
MS24694C103
MS21069L4
MS20426AD3-4
SECTION JV-JV (E2/12)
theoretical fuselage contour
MS24694-S51
MS21069L3
MS20427M3-5
WL
1050.0
BL
LH
950
11.6
47.0
MS24694-S51
MS21069L3
MS20427M3-5
BL
LH
1084.6
BL
LH
1078.6
WL
935.0
WL
865.0
SECTION FM-FM

Figure 48

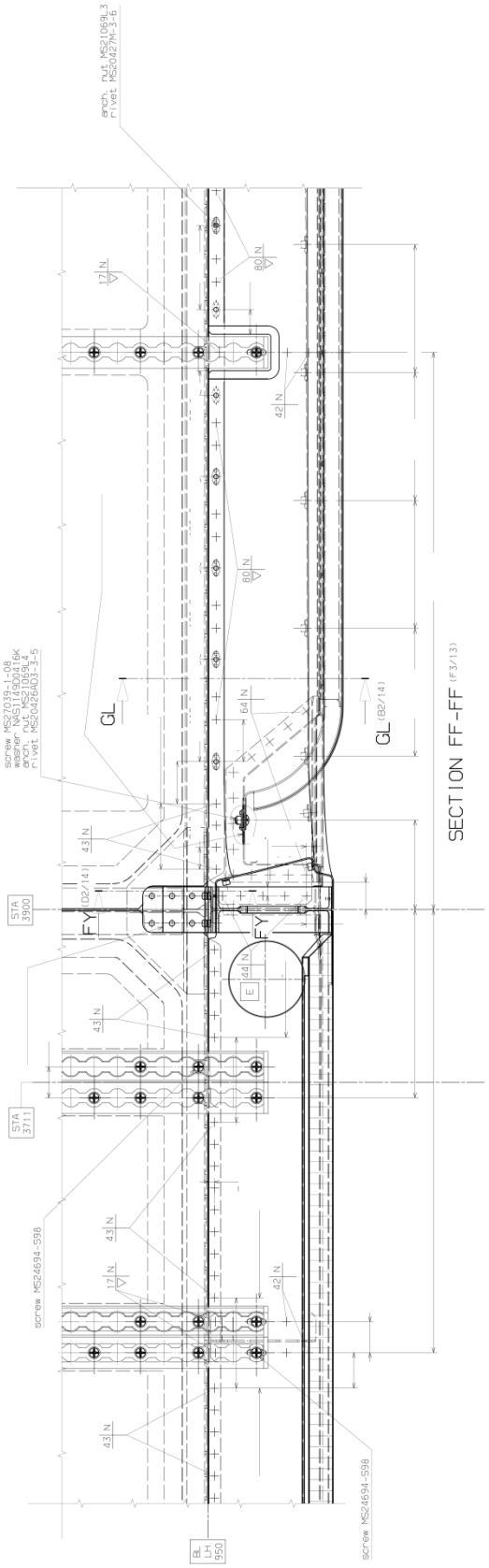

anch. nut MS21069L3
rivet MS20427M-3-6
17 N
80 N
42 N
80 N
screw MS27039-1-08
washer NAS1149D0414K
anch. nut MS21069L4
rivet MS20426AD3-3-5
GL
64 N
GL (B2/14)
SECTION FF-FF (F3/13)
43 N
STA 3900
FY (D2/14)
FY
44 N
E
43 N
STA 3711
screw MS24694-S98
43 N
17 N
42 N
43 N
BL LH 950
screw MS24694-S98

Figure 49

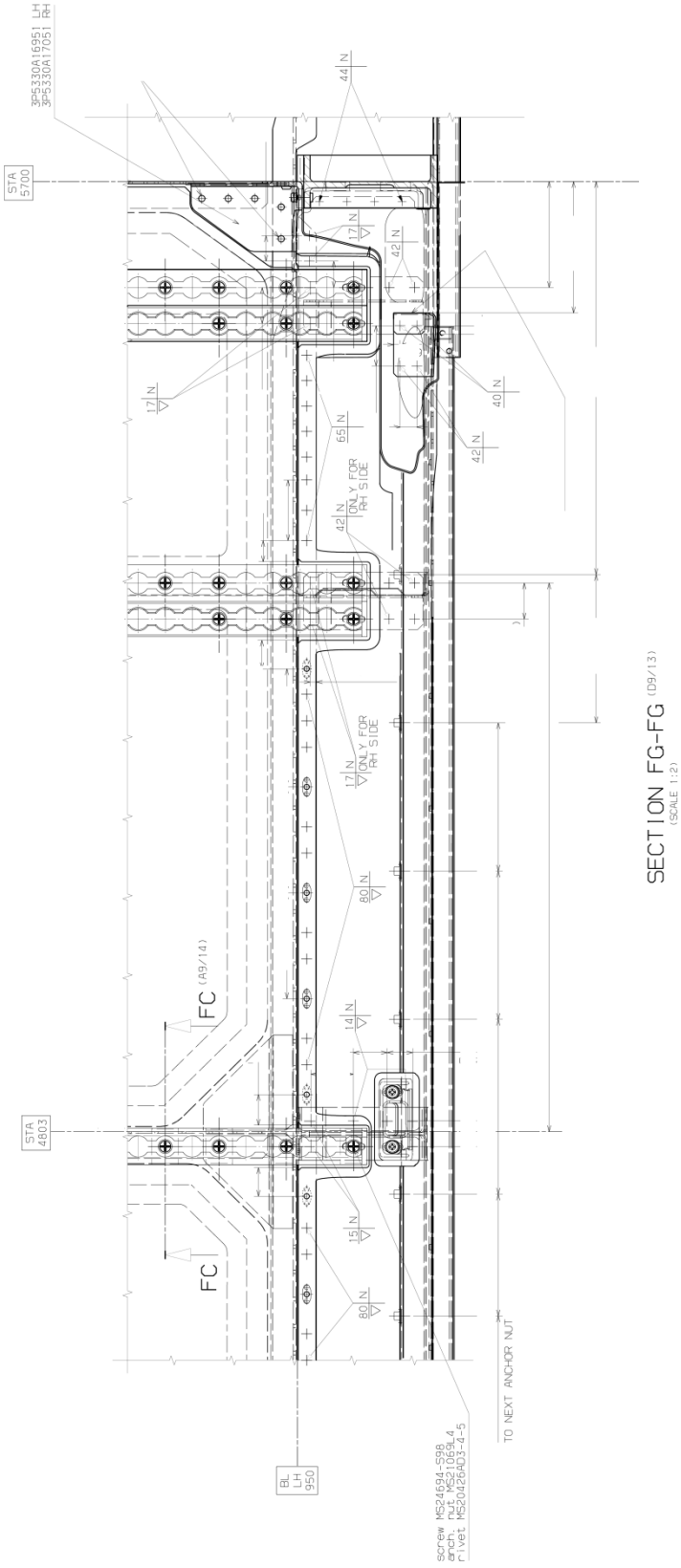

3P5330A16951 LH
3P5330A17051 RH
STA 5700
STA 4803
BL LH 950
44 N
17 N
42 N
40 N
65 N
ONLY FOR RH SIDE
80 N
14 N
15 N
FC (A9/14)
FC
TO NEXT ANCHOR NUT
SECTION FG-FG (09/13)
(SCALE 1:2)

Figure 50

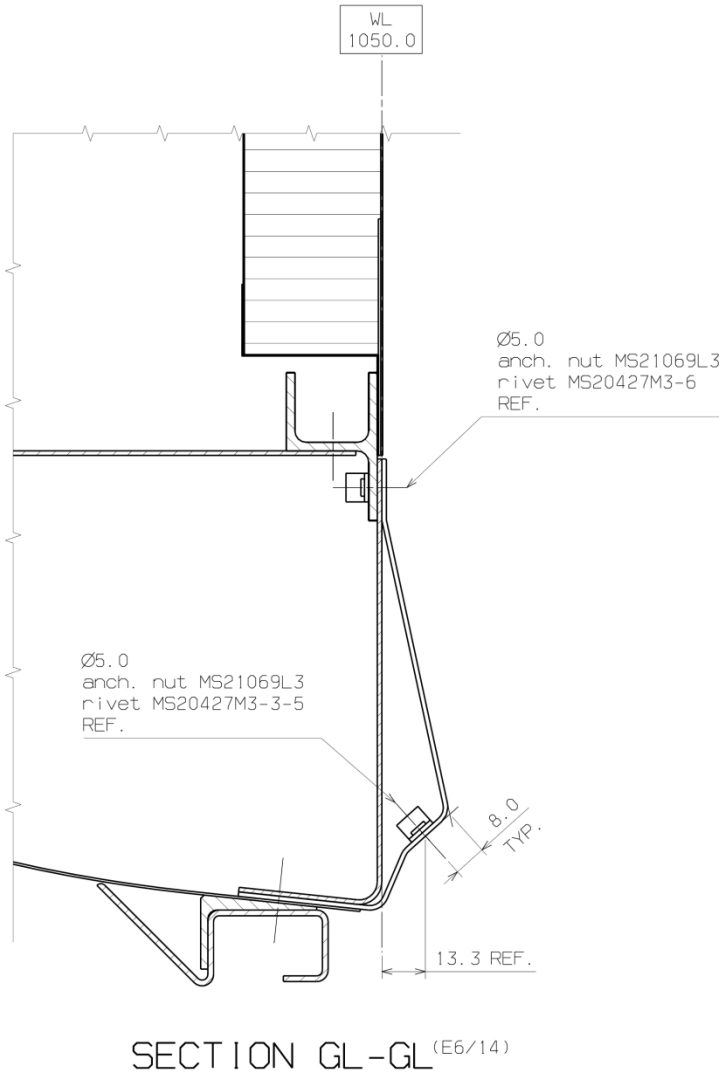

WL
1050.0
Ø5.0
anch. nut MS21069L3
rivet MS20427M3-6
REF.
Ø5.0
anch. nut MS21069L3
rivet MS20427M3-3-5
REF.
8.0
TYP.
13.3 REF.
SECTION GL-GL (E6/14)

Figure 51

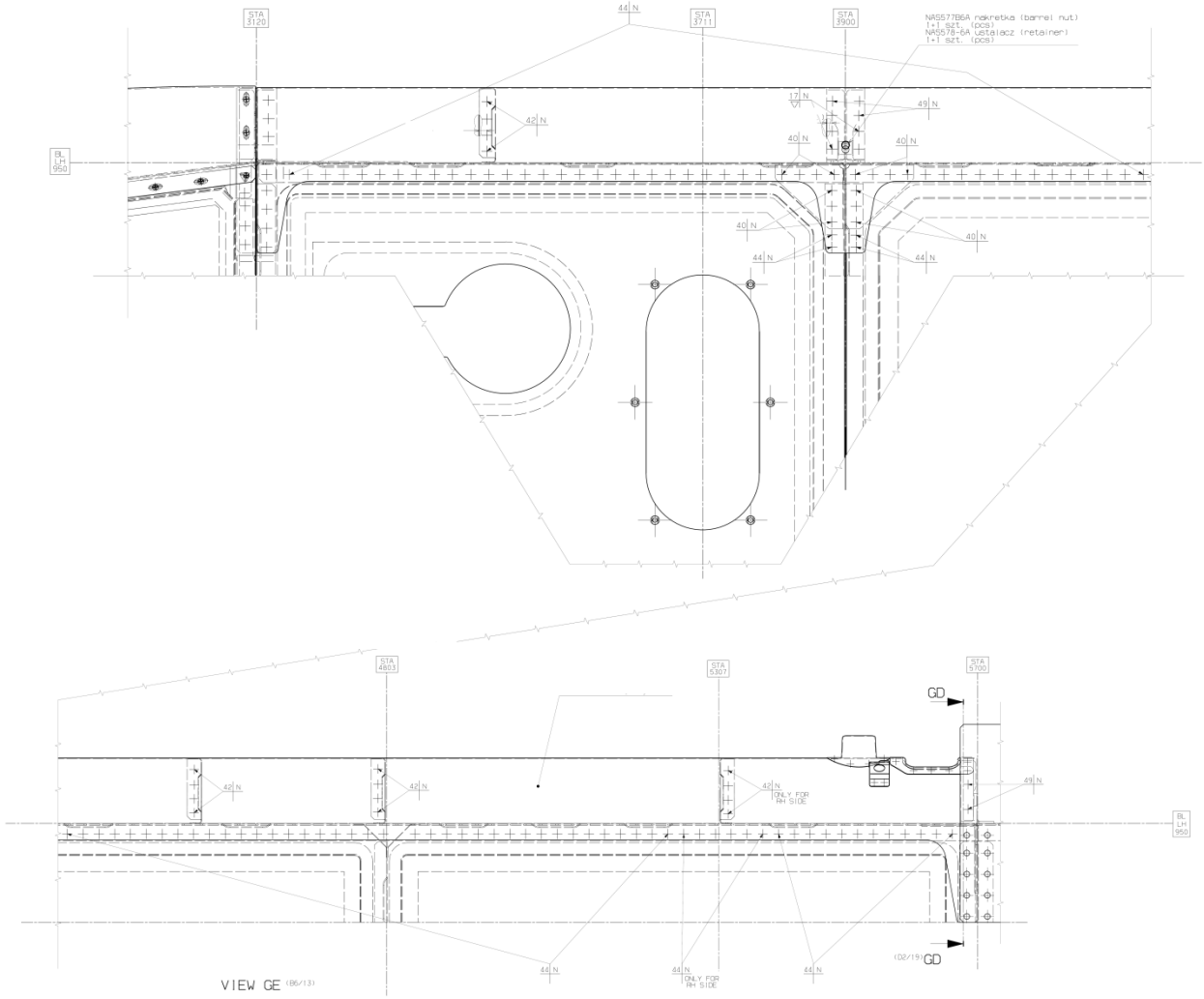
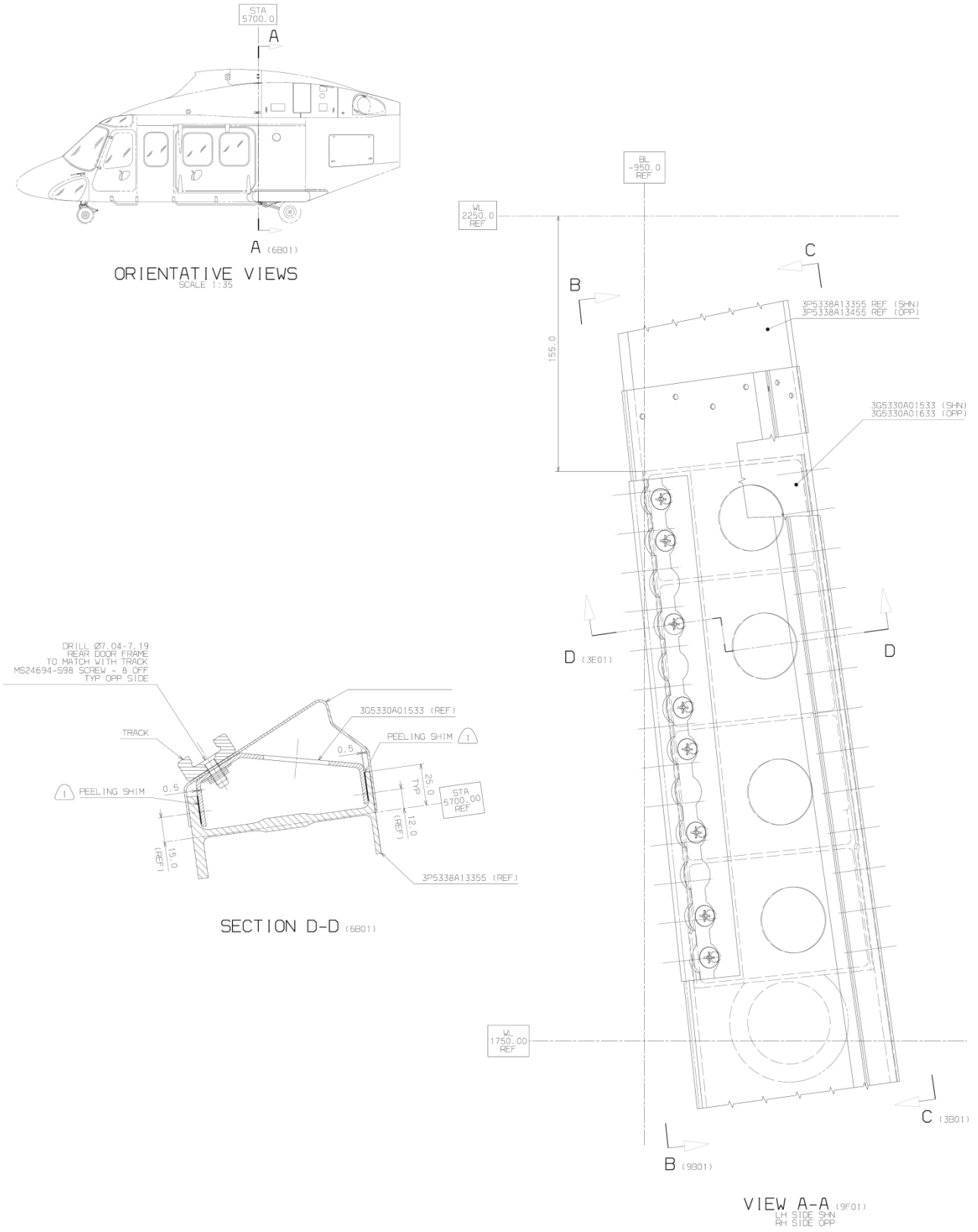

STA 5120
STA 3711
STA 3900
NAS577B6A nakretka (barrel nut)
1+1 szt. (pcs)
NAS578-6A ustalacz (retainer)
1+1 szt. (pcs)
BL LH 950
STA 4803
STA 5307
STA 5700
GD
ONLY FOR RH SIDE
VIEW GE (B6/13)
(D2/19)GD

Figure 52

Rivet List related to Figure from Figure 37 to Figure 52.

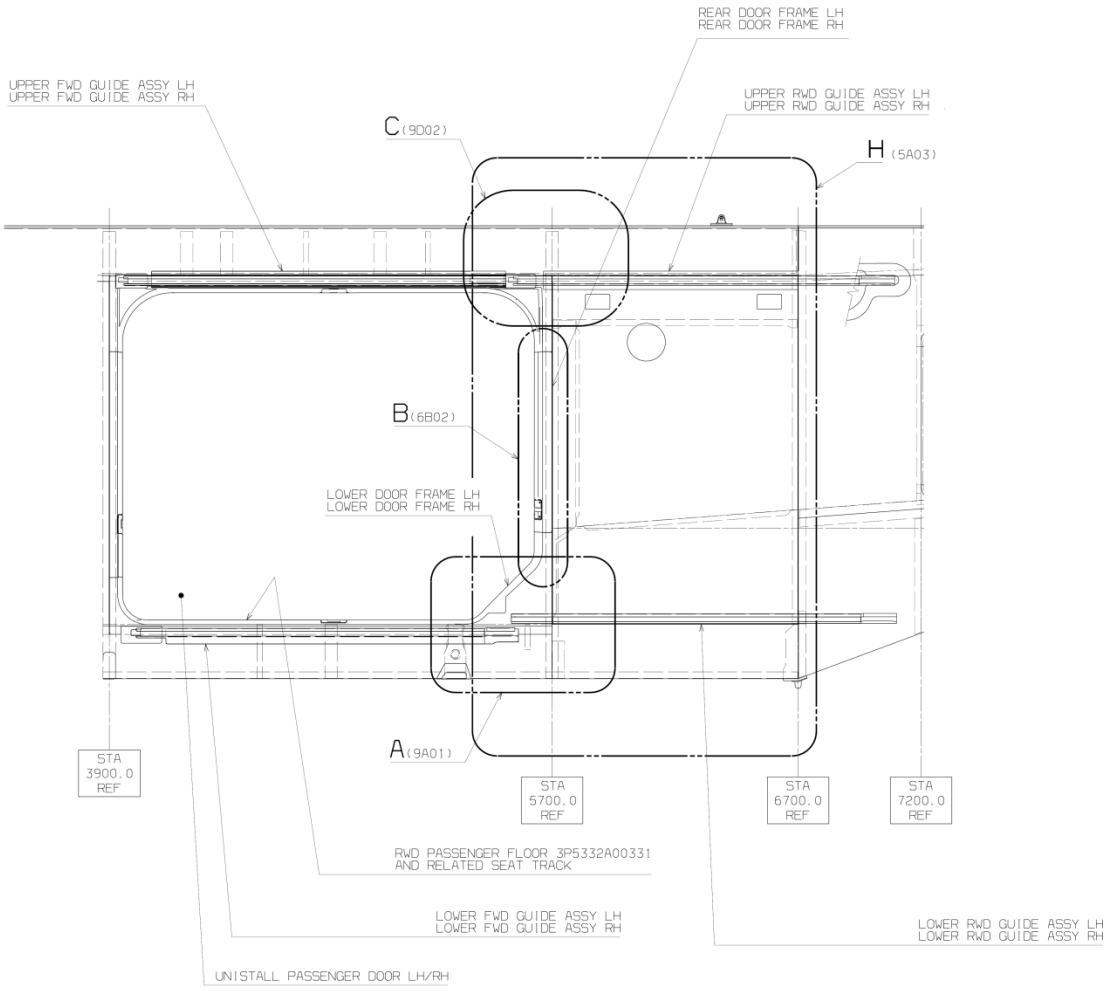
REF. No	RIVET PART NUMBER	REF. No	RIVET PART NUMBER
01	MS20426 AD3-2	56	MS20470 AD5-9
02	MS20426 AD3-3	57	MS20470 AD5-10
03	MS20426 AD3-4	58	MS20470 AD5-6-5
04	MS20426 AD3-5	59	MS20470 AD5-7-5
05	MS20426 AD3-6	60	MS20470 AD5-11
06	MS20426 AD3-5-5	61	AGS4720-407
07	MS20426 AD3-7-5	62	AGS4720-409
08	MS90354S0605	63	AGS4720-411
09	MS90354S0608	64	AGS4719-407
10	MS20426 AD4-4-5	65	MS20615-4M5
11	MS20426 AD4-3	66	AGS4719-409
12	MS20426 AD4-4	67	AS46789-407
13	MS20426 AD4-5	68	AS46789-409
14	MS20426 AD4-6	69	AS46789-411
15	MS20426 AD4-7	70	AS46789-512
16	MS20426 AD4-8	71	AS46791-407
17	MS20426 AD4-5-5	72	AS46791-409
18	MS20426 AD4-6-5	73	AS46791-411
19	MS20426 AD4-9	74	AS46791-413
20		75	AS46789-514
21	MS20426 AD5-4	76	MS20427M4-4
22	MS20426 AD5-5	77	MS20427M4-4-5
23	MS20426 AD5-6	78	MS20427M4-5
24	MS20426 AD5-7	79	MS20427M4-5-5
25	MS20426 AD5-8	80	MS20427M4-6
26	MS20426 AD5-9	81	MS20427M4-7
27	MS20426 AD5-10	82	MS20615-5M6R
28		83	MS20615-5M7
29		84	MS20615-5M7R
30		85	NAS1097AD4-5
31	MS20470 AD3-3	86	NAS1097AD4-5-5
32	MS20470 AD3-4	87	NAS1097AD4-7
33	MS20470 AD3-5	88	NAS1097AD5-5
34	MS20470 AD3-6	89	NAS1097AD5-8
35	MS20470 AD3-7	90	NAS1097U4-5
36		91	NAS1097U4-7
37		92	M7885/2-4-02
38		93	M7885/2-4-03
39	MS20470 AD4-7-5	94	M7885/2-4-04
40	MS20470 AD4-6-5	95	AS46789-413
41	MS20470 AD4-3	96	MS20615-4M8
42	MS20470 AD4-4	97	M7885/2-5-03
43	MS20470 AD4-5	98	M7885/2-5-04
44	MS20470 AD4-6	99	M7885/2-5-05
45	MS20470 AD4-7	100	
46	MS20470 AD4-8	101	M7885/3-4-02
47	MS20470 AD4-9	102	M7885/3-4-03
48	MS20470 AD4-10	103	M7885/3-4-04
49	MS20470 AD4-5-5	104	
50	MS20470 AD4-4-5	105	
51	MS20470 AD5-4	106	M7885/3-5-03
52	MS20470 AD5-5	107	M7885/3-5-04
53	MS20470 AD5-6	108	M7885/3-5-05
54	MS20470 AD5-7	109	M7885/3-5-06
55	MS20470 AD5-8	110	AS46789-415

Figure 53



1. FILL VOID WITH PEELING SHIM PER MIL-S-22499 TY I CL I,THICKNESS MAX 1.0 MM.

Figure 54


REAR DOOR FRAME LH
REAR DOOR FRAME RH
UPPER FWD GUIDE ASSY LH
UPPER FWD GUIDE ASSY RH
UPPER RWD GUIDE ASSY LH
UPPER RWD GUIDE ASSY RH
C (9D02)
H (5A03)
B (6B02)
LOWER DOOR FRAME LH
LOWER DOOR FRAME RH
A (9A01)
STA 3900.0 REF
STA 5700.0 REF
STA 6700.0 REF
STA 7200.0 REF
RWD PASSENGER FLOOR 3P5332A00331
AND RELATED SEAT TRACK
LOWER FWD GUIDE ASSY LH
LOWER FWD GUIDE ASSY RH
LOWER RWD GUIDE ASSY LH
LOWER RWD GUIDE ASSY RH
UNISTALL PASSENGER DOOR LH/RH

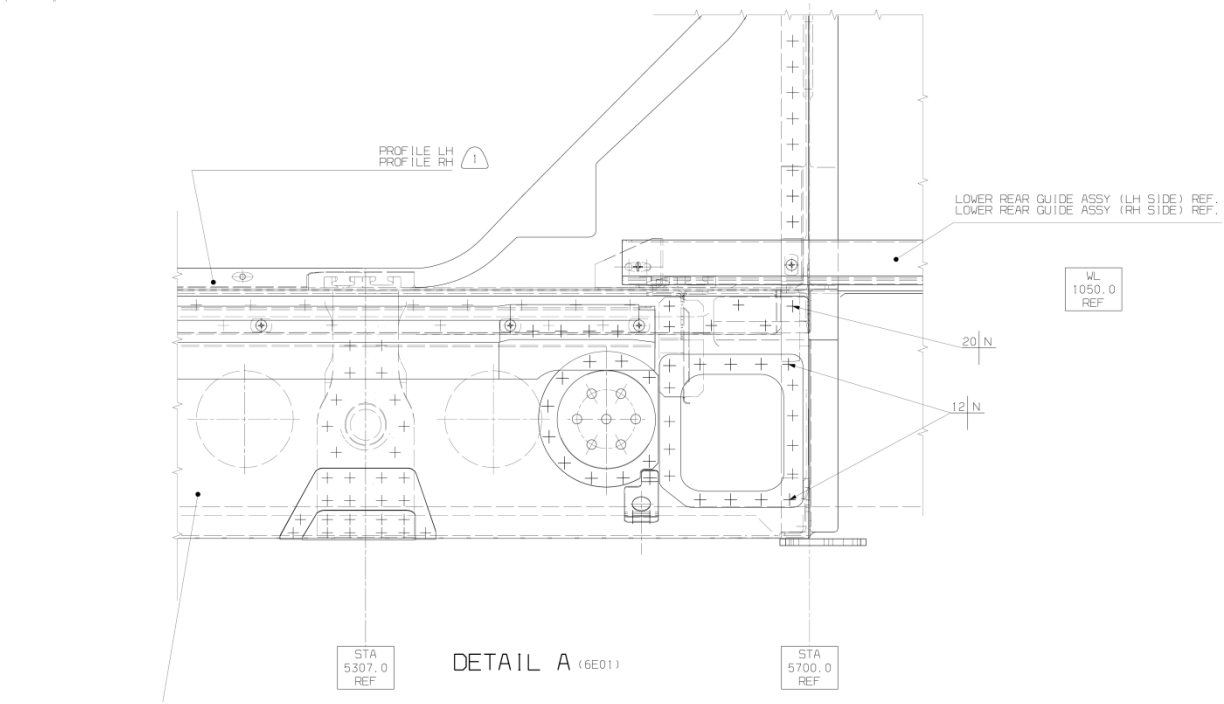

PROFILE LH
PROFILE RH
1
LOWER REAR GUIDE ASSY (LH SIDE) REF.
LOWER REAR GUIDE ASSY (RH SIDE) REF.
WL 1050.0 REF
20 N
12 N
STA 5307.0 REF
DETAIL A (6E01)
STA 5700.0 REF

Figure 55

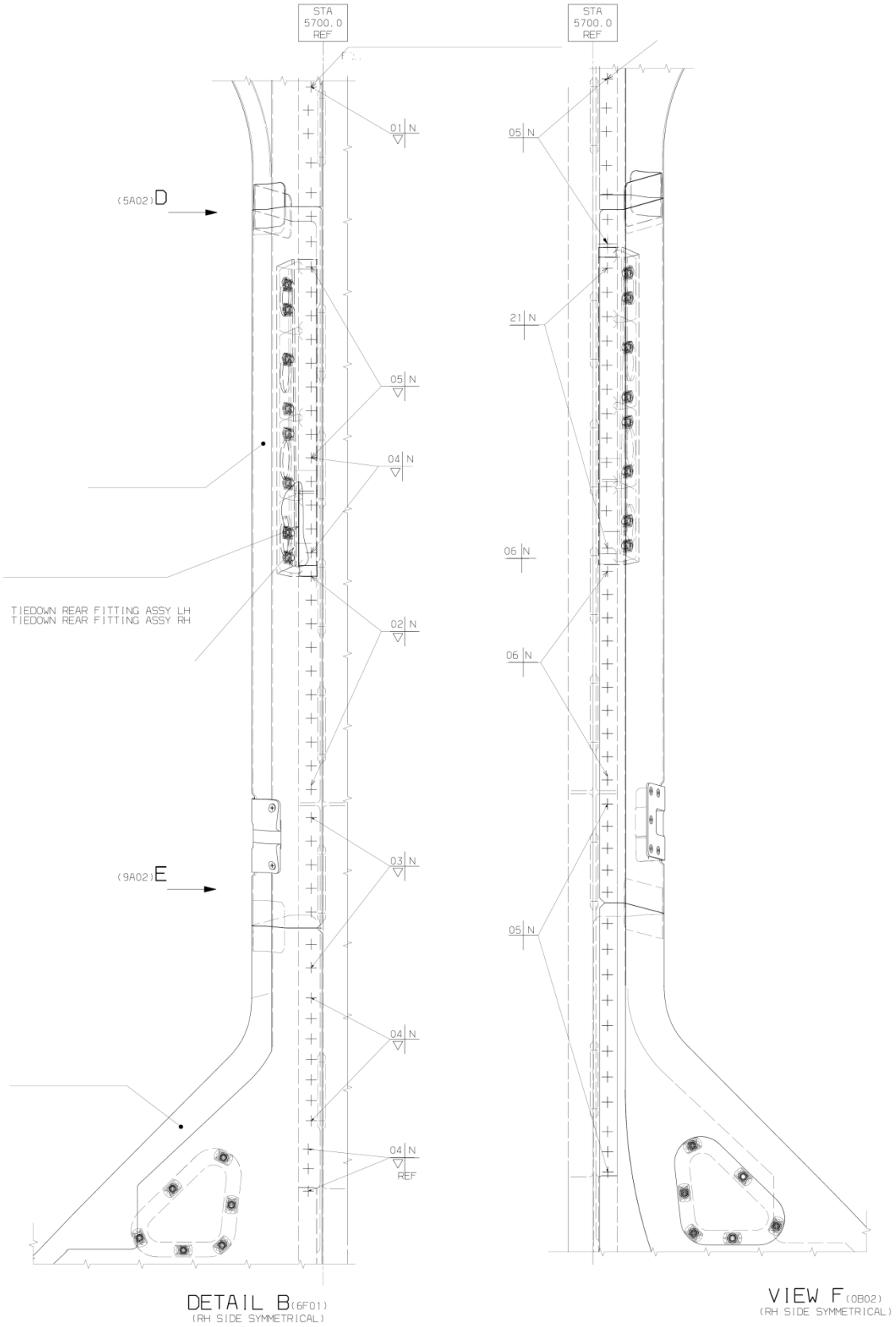

STA 5700.0 REF
STA 5700.0 REF
(5A02) D
(9A02) E
01 N
05 N
21 N
05 N
04 N
06 N
TIEDOWN REAR FITTING ASSY LH
TIEDOWN REAR FITTING ASSY RH
02 N
06 N
03 N
05 N
04 N
04 N
REF
DETAIL B (6F01)
(RH SIDE SYMMETRICAL)
VIEW F (0B02)
(RH SIDE SYMMETRICAL)

Figure 56

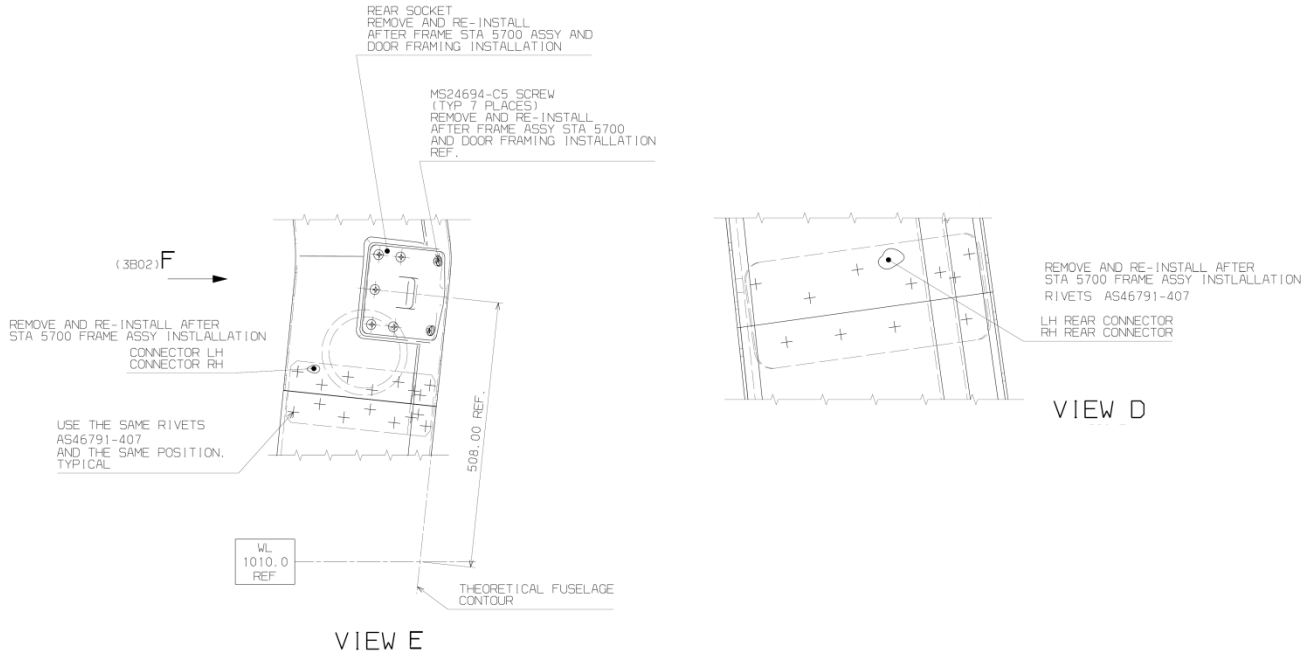
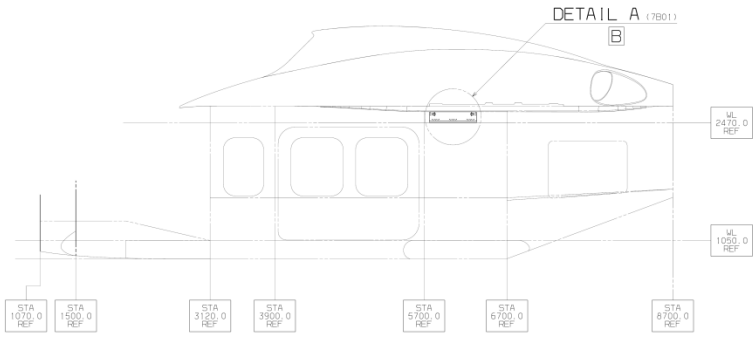

REAR SOCKET
REMOVE AND RE-INSTALL
AFTER FRAME STA 5700 ASSY AND
DOOR FRAMING INSTALLATION
MS24694-C5 SCREW
(TYP 7 PLACES)
REMOVE AND RE-INSTALL
AFTER FRAME ASSY STA 5700
AND DOOR FRAMING INSTALLATION
REF.
(3B02)F
REMOVE AND RE-INSTALL AFTER
STA 5700 FRAME ASSY INSTLALLATION
CONNECTOR LH
CONNECTOR RH
USE THE SAME RIVETS
AS46791-407
AND THE SAME POSITION.
TYPICAL
508.00 REF.
WL
1010.0
REF
THEORETICAL FUSELAGE
CONTOUR
VIEW E
REMOVE AND RE-INSTALL AFTER
STA 5700 FRAME ASSY INSTLALLATION
RIVETS AS46791-407
LH REAR CONNECTOR
RH REAR CONNECTOR
VIEW D

Figure 57

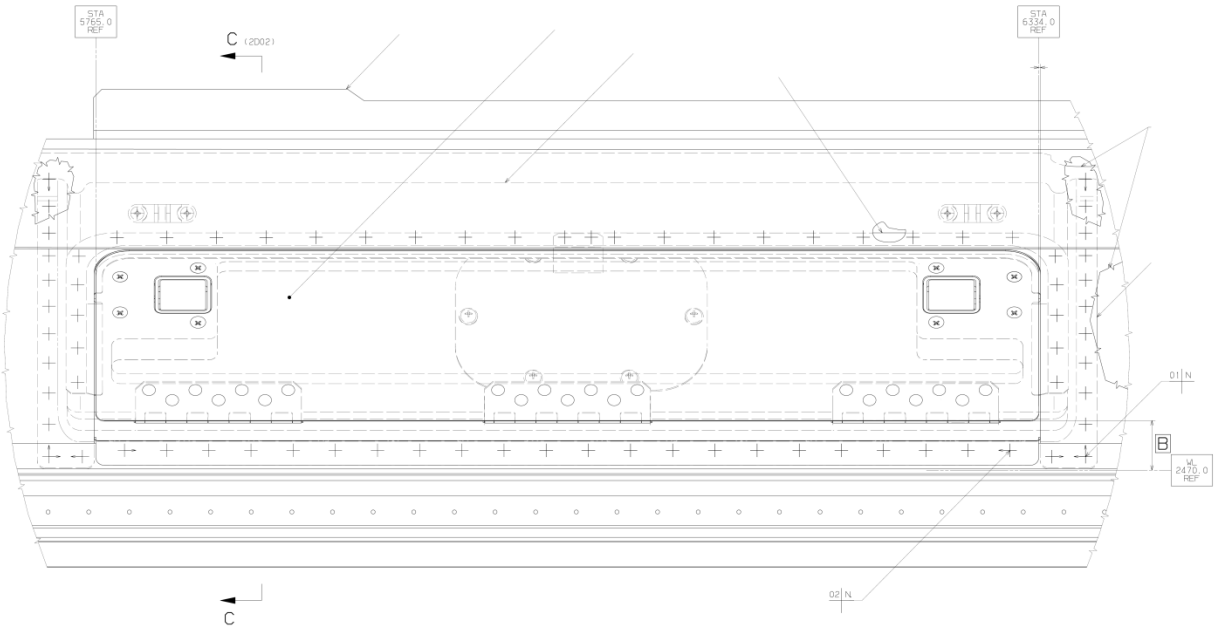
Rivet List related to Figure from Figure 54 to Figure 57.

REF.No	RIVET PART NUMBER	REF.No	RIVET PART NUMBER
01	AS46791-409		
02	AG46791-411		
03	AS46791-413		
04	AG46791-415		
05	AS46789-413		
06	AS46789-411		
07	NAS9302B-5-04		
08	NAS9302B-5-05		
09	NAS9302B-5-06		
10	NAS9302B-5-07		
11	MS20426AD5		
12	MS20470AD4		
13	MS20426AD4		
14	NAS9301B-5-03		
15	AS46789-514		
16	AGS4720-411		
17	NAS9301B-5-05		
18	NAS1097AD5		
19	NAS9301B-5-04		
20	MS20615-4M8		
21	A297A04TW07		

Figure 58



VIEW LOOKING INBOARD LEFT SIDE
SCALE 1:20



DETAIL A (7G01)

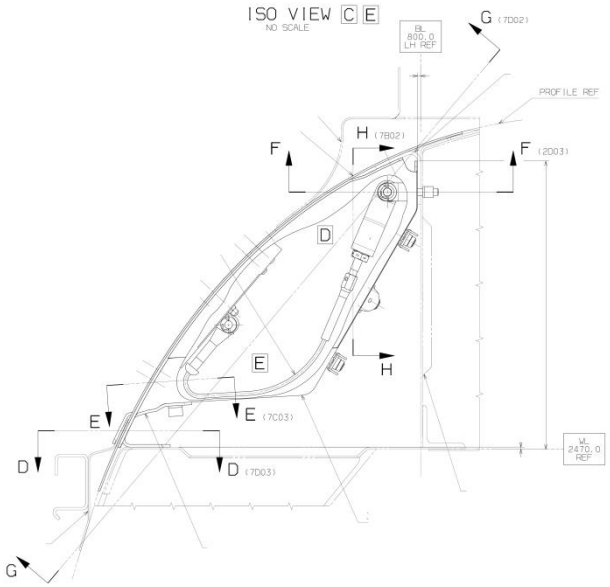


Figure 59

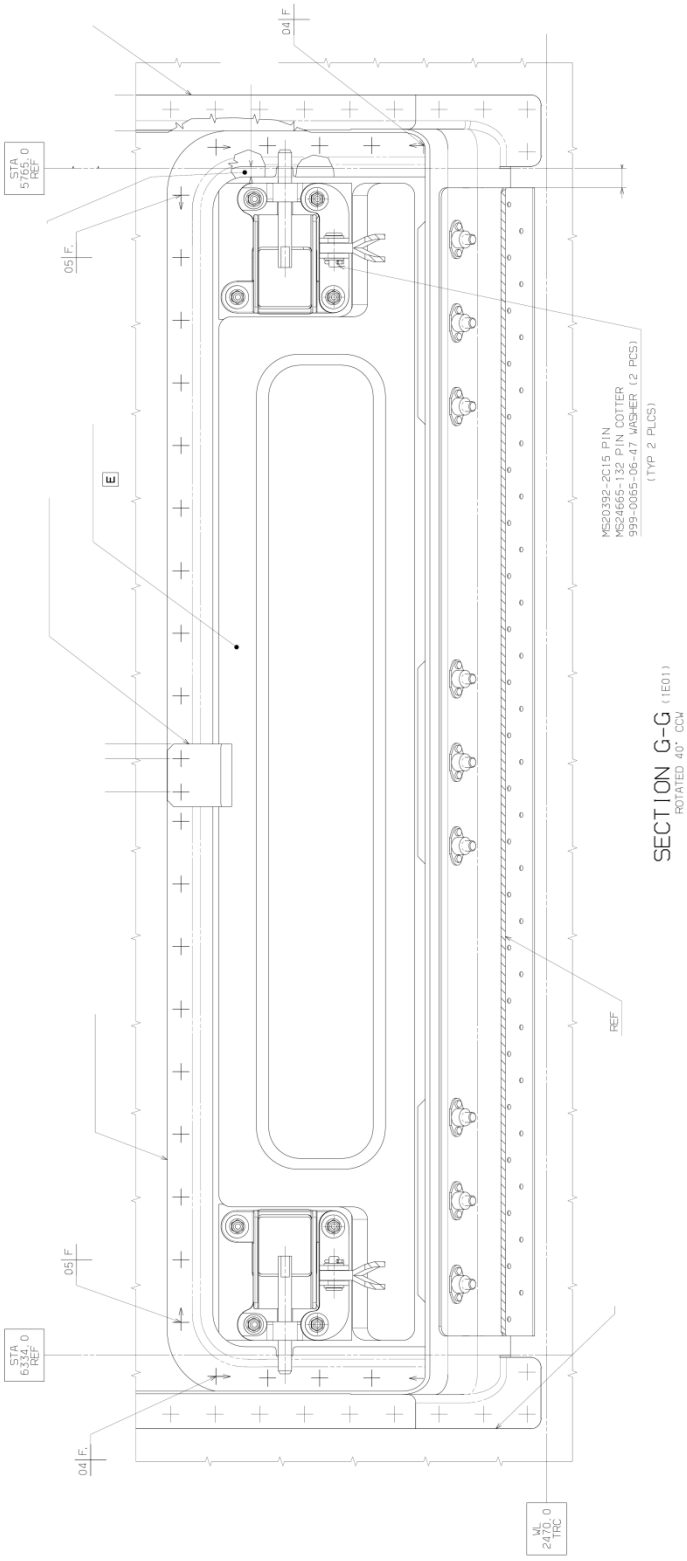

04 F
STA 5765.0 REF
05 F
E
MS20392-2C15 PIN
MS24665-132 PIN COTTER
999-0065-06-47 WASHER (2 PCS)
(TYP 2 PLCS)
SECTION G-G (1E01)
ROTATED 40° CCW
REF
05 F
STA 6324.0 REF
04 F
WL 2270.0 TRC

Figure 60

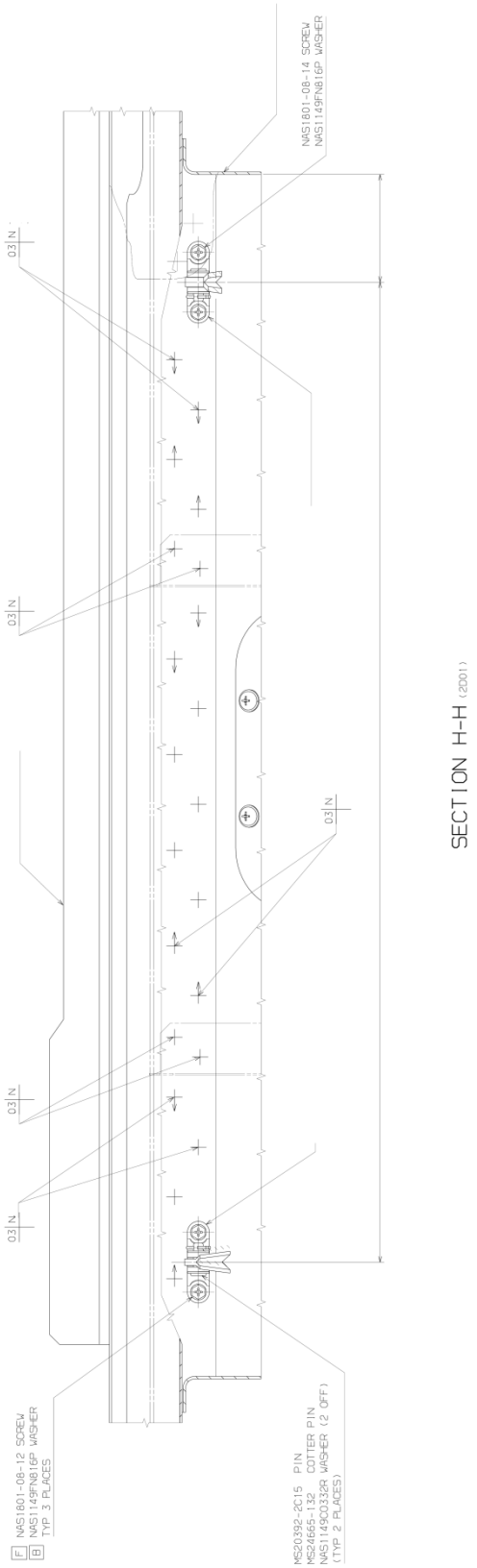

NAS1801-08-14 SCREW
NAS1149FN816P WASHER
03 N
03 N
03 N
03 N
03 N
SECTION H-H (2001)
F NAS1801-08-12 SCREW
B NAS1149FN816P WASHER
TYP 3 PLACES
MS20392-2C15 PIN
MS24665-132 COTTER PIN
NAS1149D0332R WASHER (2 OFF)
(TYP 2 PLACES)

Figure 61

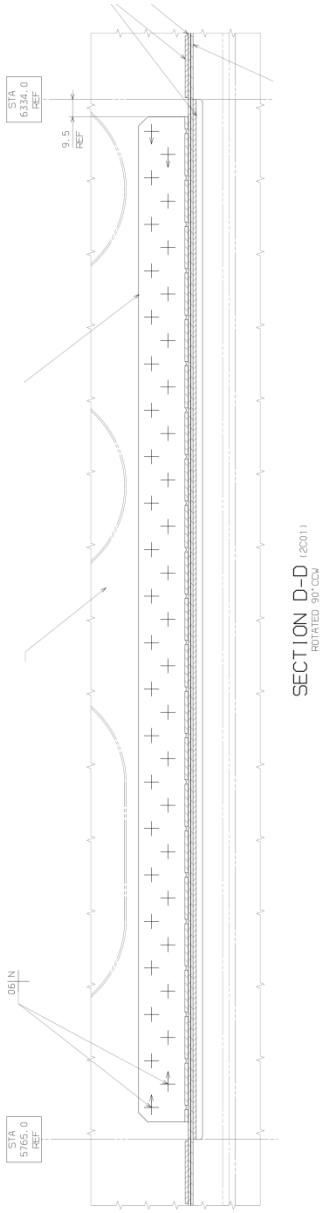

STA
6334.0
REF
9.5
REF
SECTION D-D (2001)
ROTATED 90° CCW
06 IN
STA
5765.0
REF

Figure 62

Rivet List related to Figure from Figure 59 to Figure 62.

REF No/ No RIF	RIVET PART NUMBER/ NUMERO PEZZO RIVETTO	REF No/ No RIF	RIVET PART NUMBER/ NUMERO PEZZO RIVETTO
01	A297A04TW02	05	MS20470AD4-5
02	A297A04TW03	06	M7885/2-4-02
03	A297A04TW04		
04	MS20470AD4-4		

Figure 63

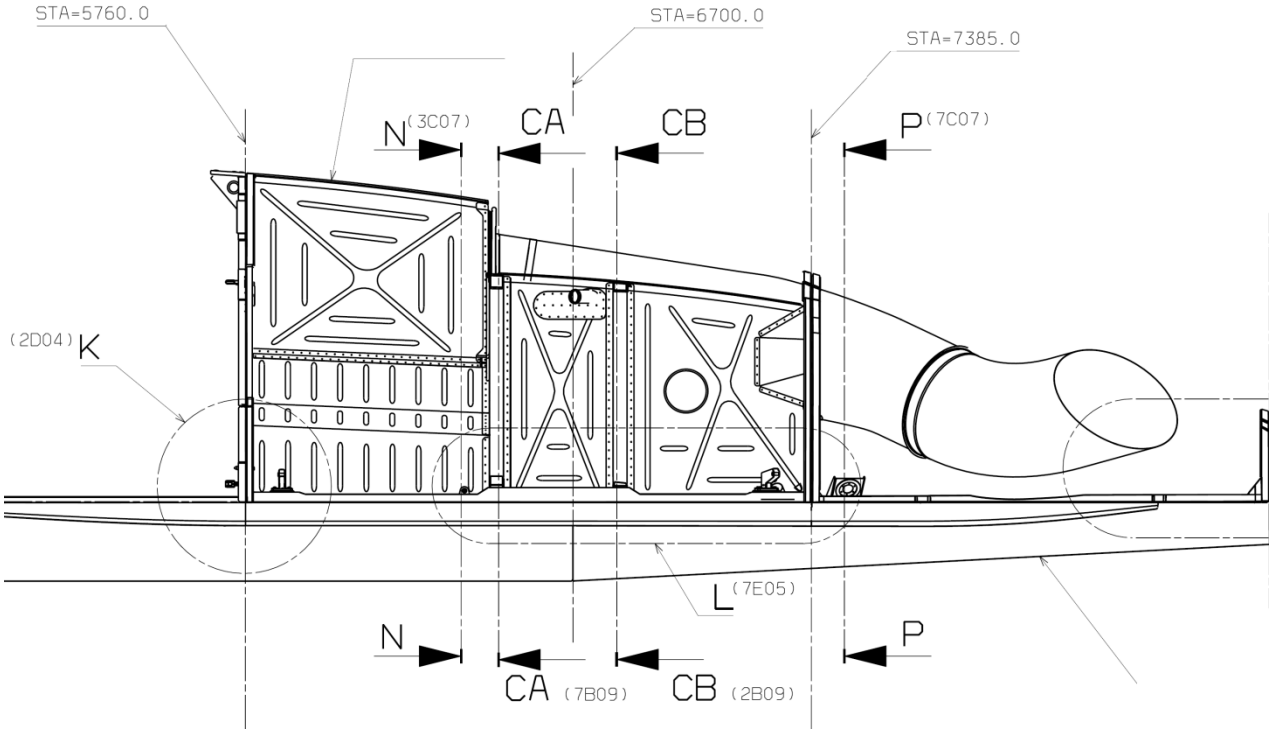

STA=5760.0
STA=6700.0
STA=7385.0
N (3C07)
CA
CB
P (7C07)
(2D04) K
L (7E05)
N
CA (7B09)
CB (2B09)
P

Figure 64

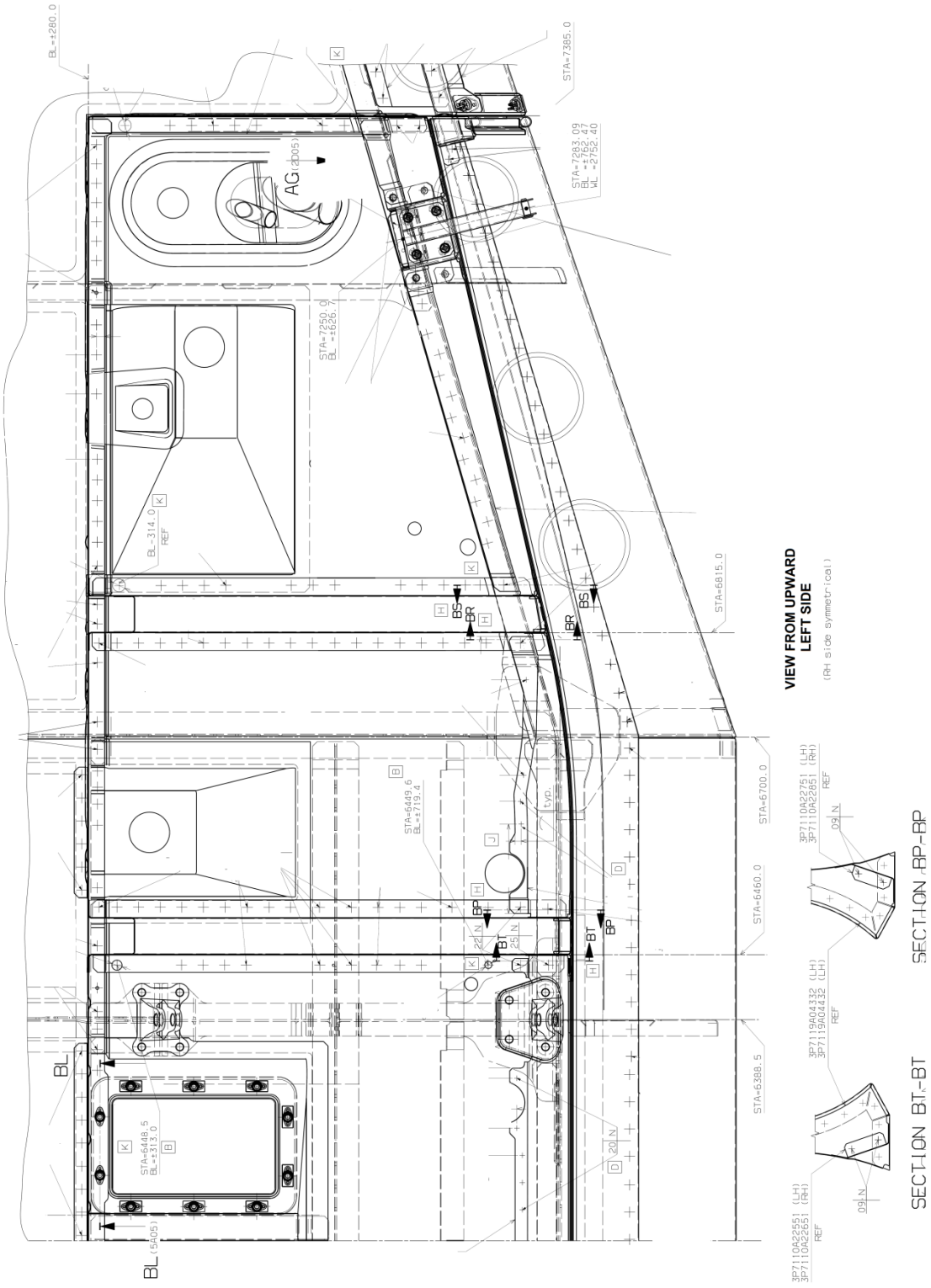
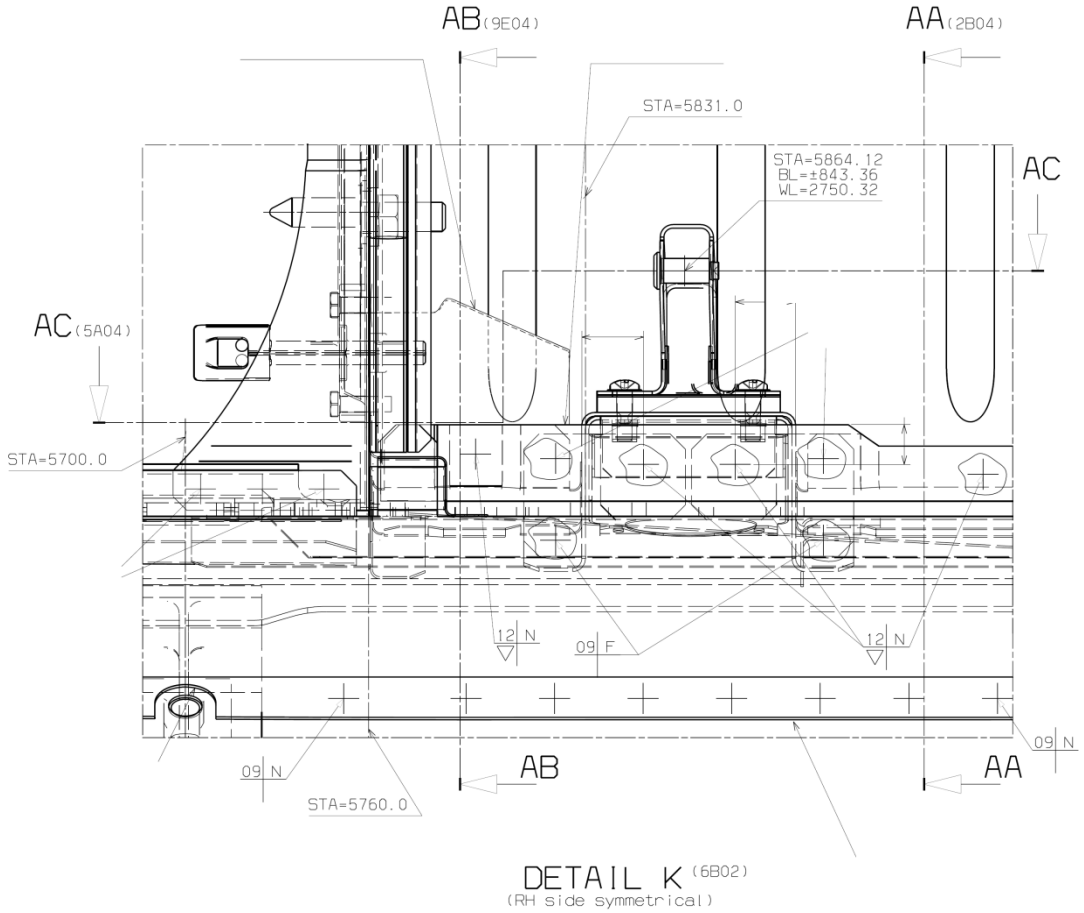

VIEW FROM UPWARD
LEFT SIDE
(RH side symmetrical)
SECTION BP-BP
SECTION BT-BT
STA=7385.0
STA=6815.0
STA=6700.0
STA=6460.0
STA=6388.5
BL=±280.0
BL=314.0
REF
STA=7250.0
BL=±626.7
STA=7283.09
BL=±762.47
WL=2752.40
STA=6449.6
BL=±719.4
STA=6448.5
BL=±313.0
BL (5405)
BS
BR
BP
BT
typ.
22 N
25 N
20 N
09 N
3P7110A2251 (LH)
3P7110A2651 (RH)
REF
3P7119804332 (LH)
3P7119404432 (LH)
REF

Figure 65


AB (9E04)
AA (2B04)
STA=5831.0
STA=5864.12
BL=±843.36
WL=2750.32
AC
AC (5A04)
STA=5700.0
12 N
09 F
12 N
09 N
09 N
AB
AA
STA=5760.0
DETAIL K (6B02)
(RH side symmetrical)

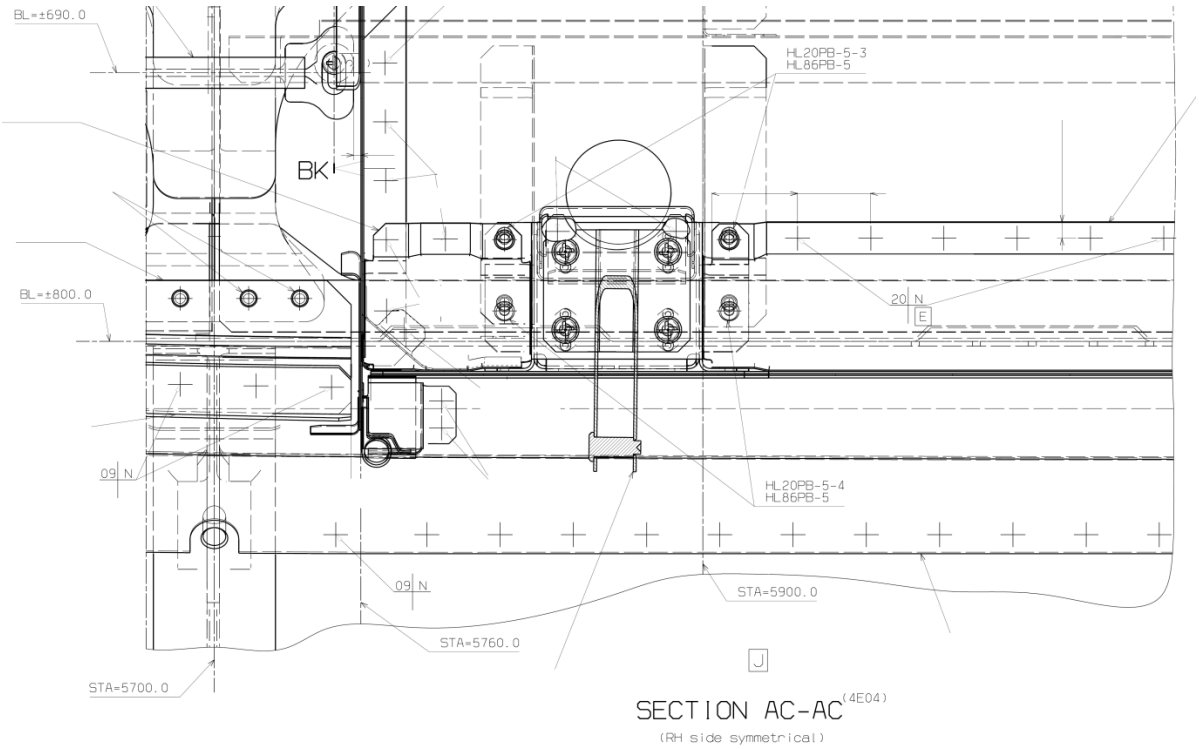

BL=±690.0
HL20PB-5-3
HL86PB-5
BK
BL=±800.0
20 N
E
09 N
HL20PB-5-4
HL86PB-5
09 N
STA=5900.0
STA=5760.0
J
STA=5700.0
SECTION AC-AC (4E04)
(RH side symmetrical)

Figure 66

Rivet List related to Figure from Figure 64 to Figure 66.

NR KOL/ REF.No	NORMA NITA/ RIVET PART NUMBER	NR KOL/ REF.No	NORMA NITA/ RIVET PART NUMBER
1	AGS 4719-405	8	AS 46789-405
2	AGS 4719-407	9	AS 46789-407
3	AGS 4719-409	10	AS 46789-409
4	AGS 4719-411	11	AS 46789-512
5	A298A04TW02	12	AS 46791-407
6	AGS 4720-407	13	AS 46791-409
7		14	

NR KOL/ REF.No	NORMA NITA/ RIVET PART NUMBER	NR KOL/ REF.No	NORMA NITA/ RIVET PART NUMBER
15	MS20427M3-3 D	33	MS20470AD4-4-5
16	MS20427M4-3-5	34	MS20470AD4-5
17		35	MS20470AD4-5-5
18	MS20427M4-4-5	36	MS20470AD4-6
19	MS20427M4-5	37	
20	MS20615-4M3 D	38	NAS9307MP4-02 B
21	MS20615-4M3R	39	
22	MS20615-4M4	40	M7885/2-4-03
23	MS20615-4M4R	41	
24	MS20615-4M5	42	
25	MS20615-4M5R	43	
26	MS20426AD4-3-5	44	M7885/2-5-04
27	MS20426AD4-4	45	
28	MS20426AD4-4-5	46	M7885/2-5-06
29	MS20426AD4-5	47	
30	MS20426AD4-5-5	48	MS20615-3M4R E
31	MS20470AD4-3-5	49	MS20615-4M6R
32		50	

Figure 67

Appendix A - STRUCTURE SEALING

A.1 Sealant

Type	Specifications	Type and/or class	Material characteristics	Commercial name
1A 1B	199-05-004	Type II CL A2 Type II CL B2	High adhesion sealant, fuel resistant	Proseal 890 (Note 1)
3	AMS 3374 (superceeds MIL-S-38249)	Type I	High temperature sealant for engines area and firewalls	Proseal 700

Note (1): Naftoseal MC-780 (Chemetall) can be used as alternative.

A.2 Seal Method

A.2.1 Surfaces cleaning

Sealing compounds shall be applied on surfaces carefully cleaned and free from foreign materials as oils, greases, swarfs, dust, etc. For conventional sealants, clean small areas at one time with rags free from flints soaked in Methyl Ethyl Ketone or ethyl acetates.
Always pour solvent on the rag in order to avoid contamination of the latter, carefully wipe dry with clean cloths before solvent evaporates in order to avoid that contaminants redeposit.

A.2.2 Surfaces check

Sealing products listed in this specification can be applied both on bare surface and on surfaces coated with chromate free epoxy primer (XPF). It is to be noted however that the finishing general specification for FHD helicopters requires primer coating in nearly every joint.
Before applying the sealant compound on a surface coated with epoxy primer check coat anchorage. Apply on the area to be checked a strip of adhesive paper tape, which has not exceeded the expiry date more than six months, then quickly tear it off perpendicularly to the surface to be examined.
Surface must be intact and no primer traces must be evident on the tape.

A.2.3 Preparation of sealant compound

Mix the base compound quantity with the catalyst compound according to the technical specification requirements of sealants. Pour the accelerating compound into the base compound and mix them until catalyst is uniformly distributed into the base compound.

CAUTION: Do not use glass containers to keep or to mix sealing compound.

A.2.4 Method I –Sealing by interposition

a) Prepare surfaces to be bonded and mix the compound (refer to paragraphs A.2.1, A.2.2, A.2.3).
b) Apply sealant on both surfaces to joint (see Fig. 2 and Fig. 5). If necessary smooth it with a spatula paying attention not to create depressions or protrusions.
c) Assemble parts with the sealant not yet cured and anyway within a time not exceeding 10 hours. If necessary during curing clamp matching parts by means of tack rivets in order to avoid relative movements of the surfaces.
d) Exceeding sealant squeeze out from edge shall be visible and constant (Fig. 3 and Fig. 6); remove squeeze out sealant by means of a suitable plexiglass or wood spatula (Fig. 4 and Fig. 7).

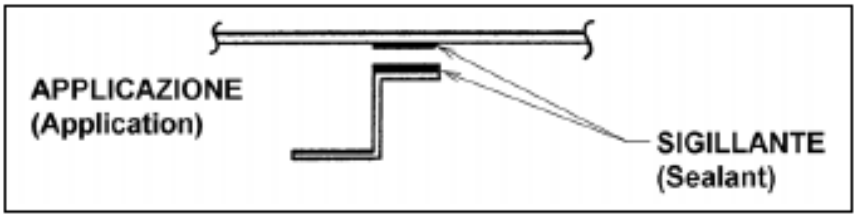


Fig. 2: Sealant application

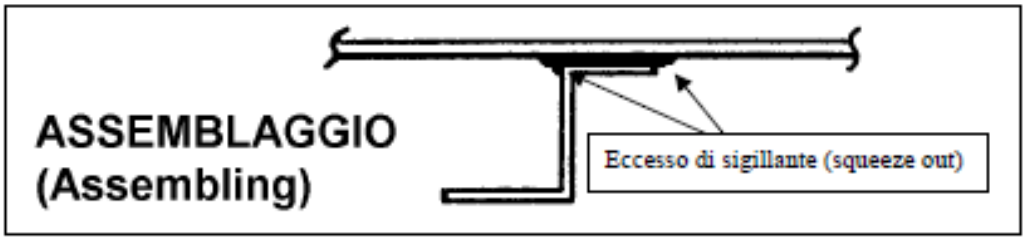


Fig. 3: Check that the squeeze out of sealant is uniform along the edge, visible and enough to allow the correct final finishing of the sealing.

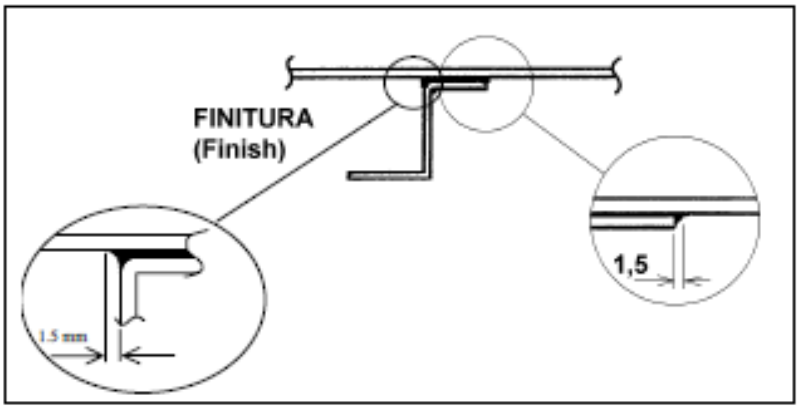


Fig. 4: Final finishing of the sealing

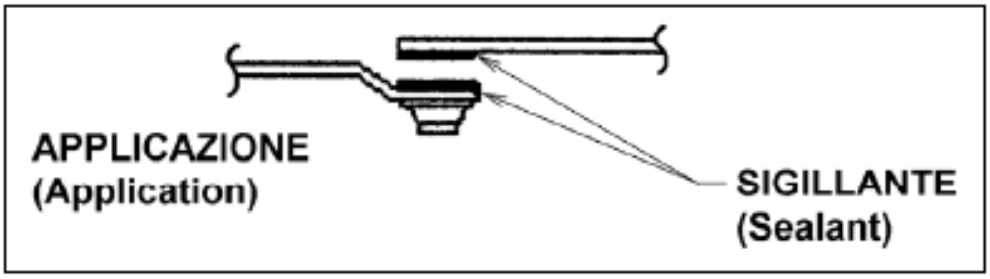


Fig. 5: sealant application

Fig. 6: Check that the squeeze out of sealant is uniform along the edge, visible and enough to allow the correct final finishing of the sealing.

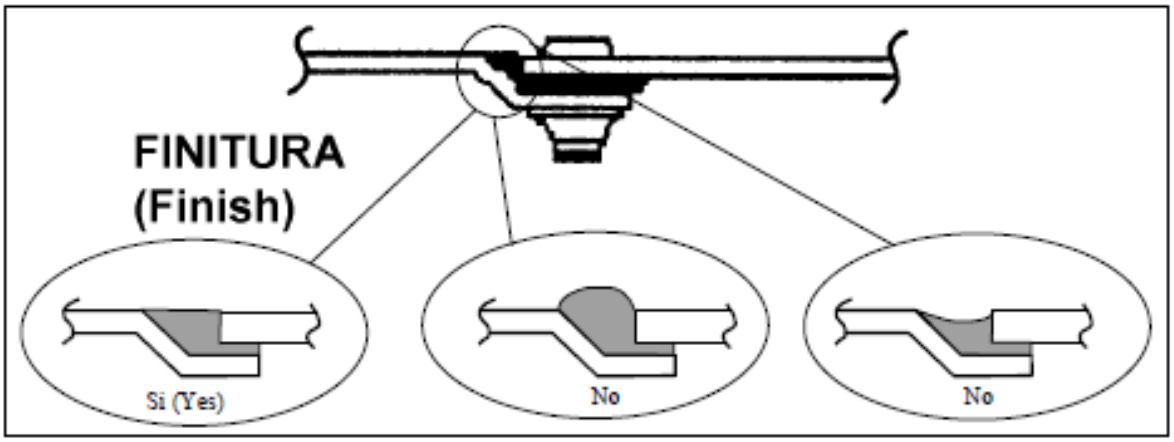


Fig. 7: Final finishing of the sealing

A.2.5 Method III – Bead sealing

a) Clean and surfaces to be sealed, prepare sealant compound (refer to paragraphs A.2.1, A.2.2, A.2.3).
b) Mask with self-adhesive tape edge of parts to be sealed at a distance of about 2 mm from each edge in order to obtain a sealing compound strap included between the two edges of tape.
c) With a gun or syringe apply (within 10 hours) the sealing compound properly mixed, paying attention not to include air bubbles inside the bead (Fig. 9 and Fig. 10).
d) Eventually spread sealant with a plexiglass/wood spatula to make the sealant layer uniform by radiusing it to the structure itself. Bead height shall not exceed 2 mm.
e) Remove protective self-adhesive tape after about 48 hours from sealant application.

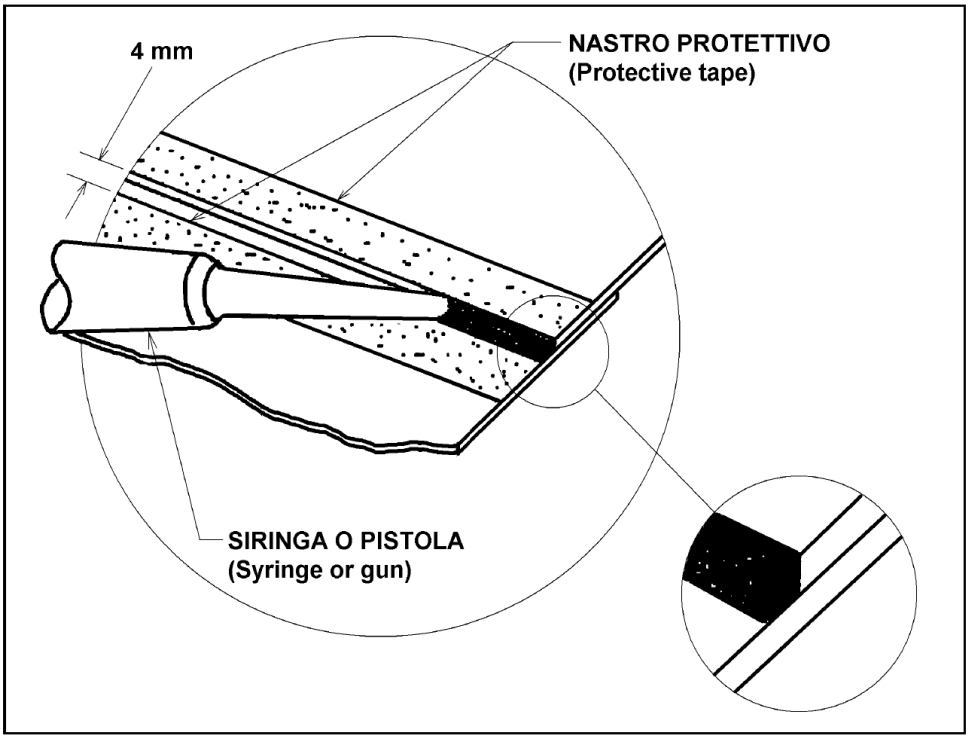


Fig. 9: Bead sealing (overlapping sheets)

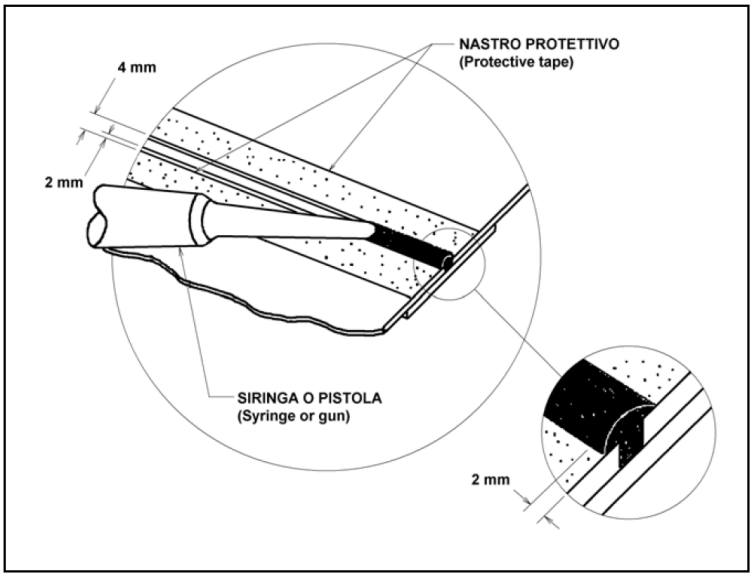


Fig. 10: Bead sealing (butt joint)

A.2.6 Method IV – Fasteners sealing

Rivets, blind rivet and Hi-Lok

a) For “WET” installation of RIVETS, BLIND RIVETS and HI-LOK, dip fastener into TYPE 1A or TYPE 3 sealant (high temperature areas) before installation (Fig. 11) and install it with sealant still wet.
b) During riveting protect eyes from possible sealant splashes with suitable protective glasses.
c) Clean sealant in excess from the affected area with Methyl Ethyl Ketone.

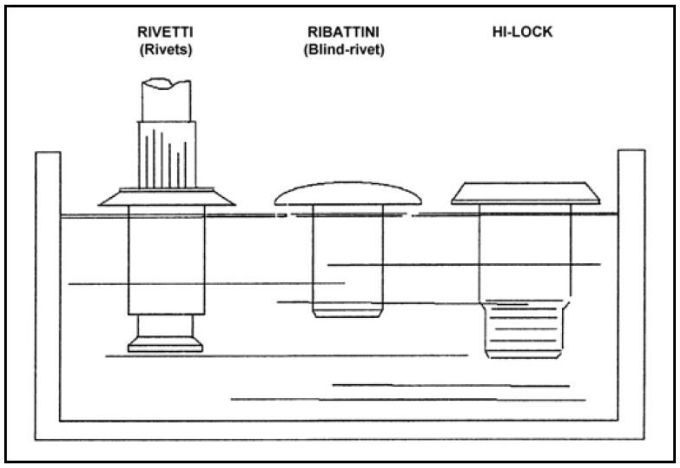


Fig. 11: Wet sealing

Bolts

a) Prepare surfaces to seal and mix sealing compound (refer to paragraphs A.2.1, A.2.2, A.2.3).
b) If necessary, protect surface not subject to sealing with protective self-adhesive tape.
c) Apply sealant as indicated in Fig. 12 with a pressure gun or syringe and eventually spread it with a wood or plexiglass spatula.

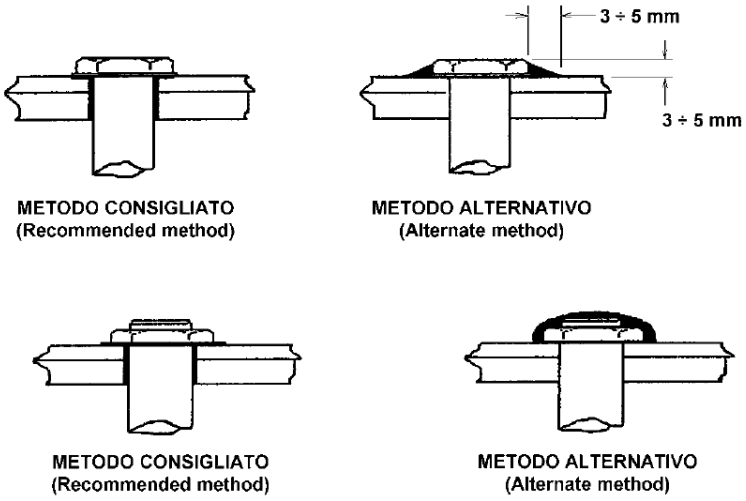


Fig. 12: Bolt sealing

Nut, cap; nut, blind rivet

a) Prepare surfaces to seal and mix sealing compound (refer to paragraphs A.2.1, A.2.2, A.2.3).
b) If necessary, protect surface not affected by sealing with protective self-adhesive tape
c) Apply sealant with a pressure gun or syringe and eventually spread it with a wood or plexiglass spatula
d) Install nut or rivet-nut and perform the peripheral bead as shown in Fig. 13 and Fig. 14

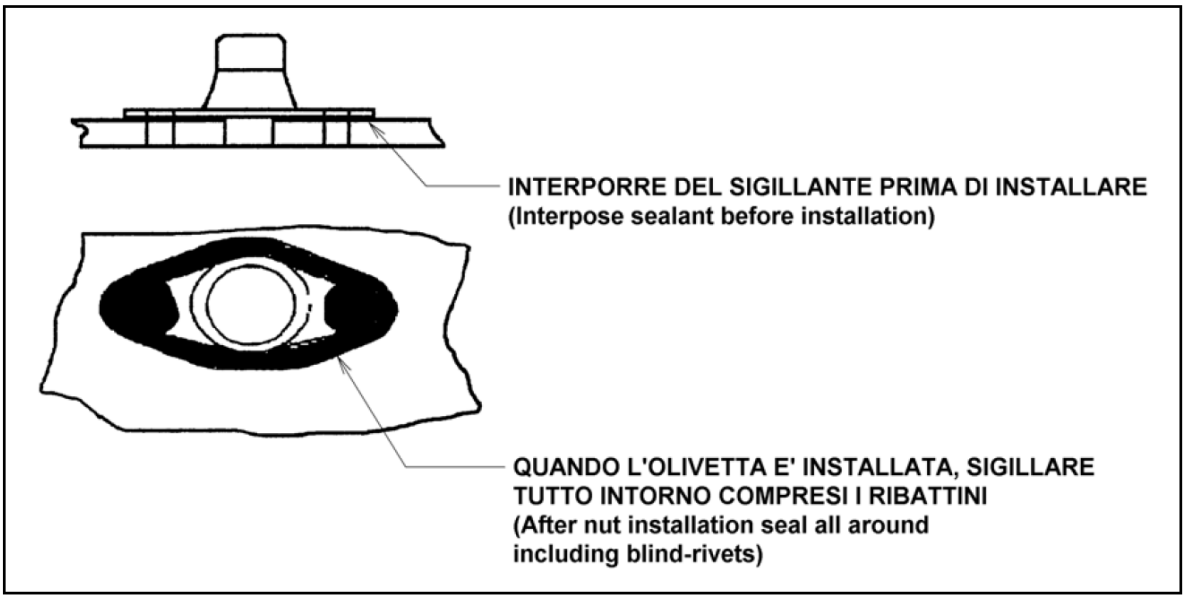


Fig. 13: anchor nut sealing

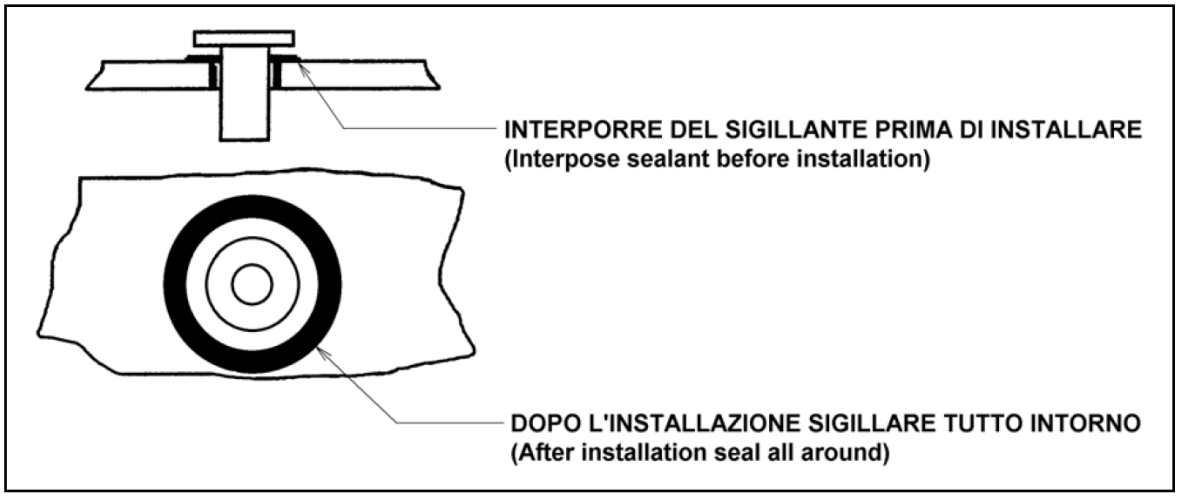


Fig. 14: Rivet nut sealing

A.2.6 Method VI – Brush sealing

a) Prepare surfaces to seal and mix sealing compound (refer to paragraphs A.2.1, A.2.2, A.2.3).
c) Pour the so obtained compound into a suitable container where a medium bristle brush may be dipped.
d) Mask subject area with adhesive paper tape, positioning it so as to obtain a strip with a width equal to about 3 times the rivet diameters and however not less than 15.0 mm (see Fig. 15 and Fig. 16). The longitudinal axis of this so obtained strip shall fall on the installation axis of rivets themselves.
e) Dip brush into the sealant and operate by short sections taking care not to include air bubbles above all near coupling parts.
f) Remove protective self adhesive tape after 48 hours from sealant application.

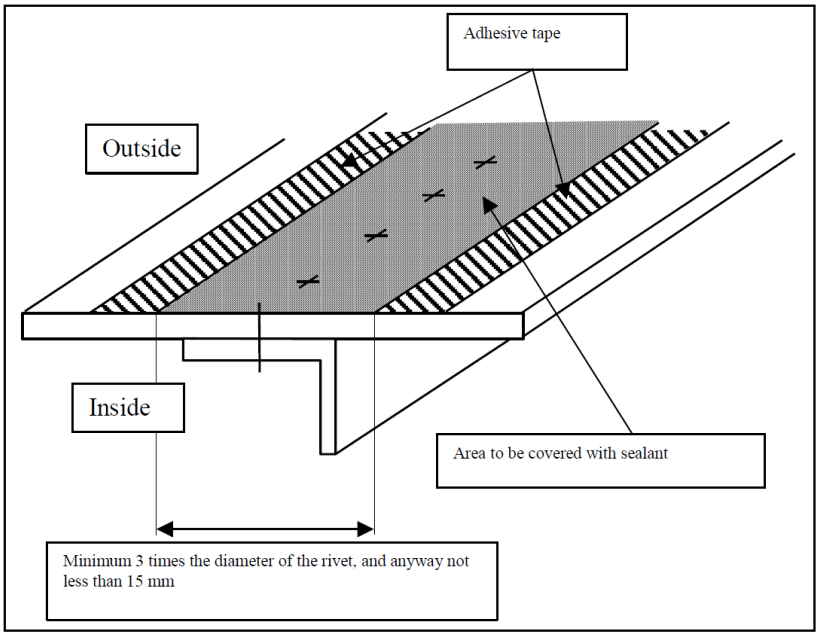


Fig. 15: brush sealing

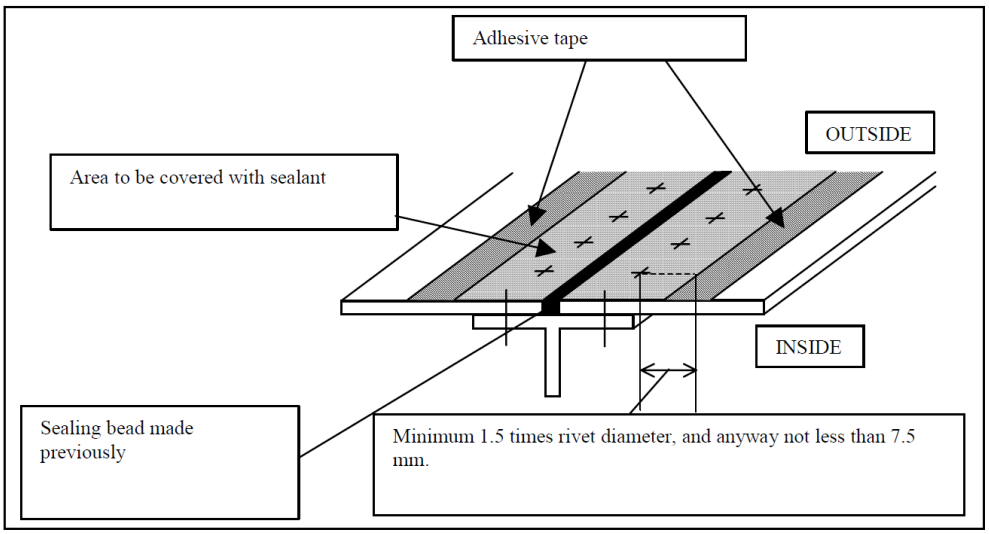


Fig. 16: brush sealing

A.3. Fuselage structure

1. Seal with method I and IV using type 1A and 1B sealant:
   - 1.1 the joints between lateral panels STA 5700 – 6700 and frame STA5700 (3P5338A0033x/43x) and the joints between panels STA 3120 – 3900 and vertical frames of sideswalls - see Figure A-1;
   - 1.2 joints related to upper covers - see Figure A-2;
   - 1.3 all the joints related to lower skins (sealing is not needed in the area under the pax door due to the fact that the door frame overlaps the joint) - see Figure A-3;
   - 1.4 joints between pax door frames and structural frames at STA5700 - see Figure A-4;
   - 1.5 joints related to boxes that are housing for door upper guide terminal part. The upper side of these boxes is closed by WL2470 longeron and an L-shapd local reinforcement. Seal also between longeron and local reinforcement. Seal in the same way the lower boxes - see Figure A-8;
   - 1.6 joints between skin panels and external and internal profiles, using sealant also between the external profile and reinforcement. Finish the sealing with skin panels with method VI using type 1A sealant in the area outside the engine bay, and type 3 sealant in the area inside the engine bay - see Figure A-9.

1. Seal with method I and type B sealant:
   - 1.1 joint between the lower frame of pax door and lower external skin (joint includes also the horizontal upper plate but sealant is needed only between external skin and pax door frame) - see Figure A-5.
   - 1.2 joints related to pax door upper forward and aft guide assy. Finish the sealing of the joint with upper skin with method III and same sealant - see Figure A-6.

2. Seal with method III and type 1B sealant:
   - 2.1 joint between lower forward and aft guide assy and fuselage skin (near STA5700, the aft lower guide assy joint involves also the lower frame of pax door) - see Figure A-7.

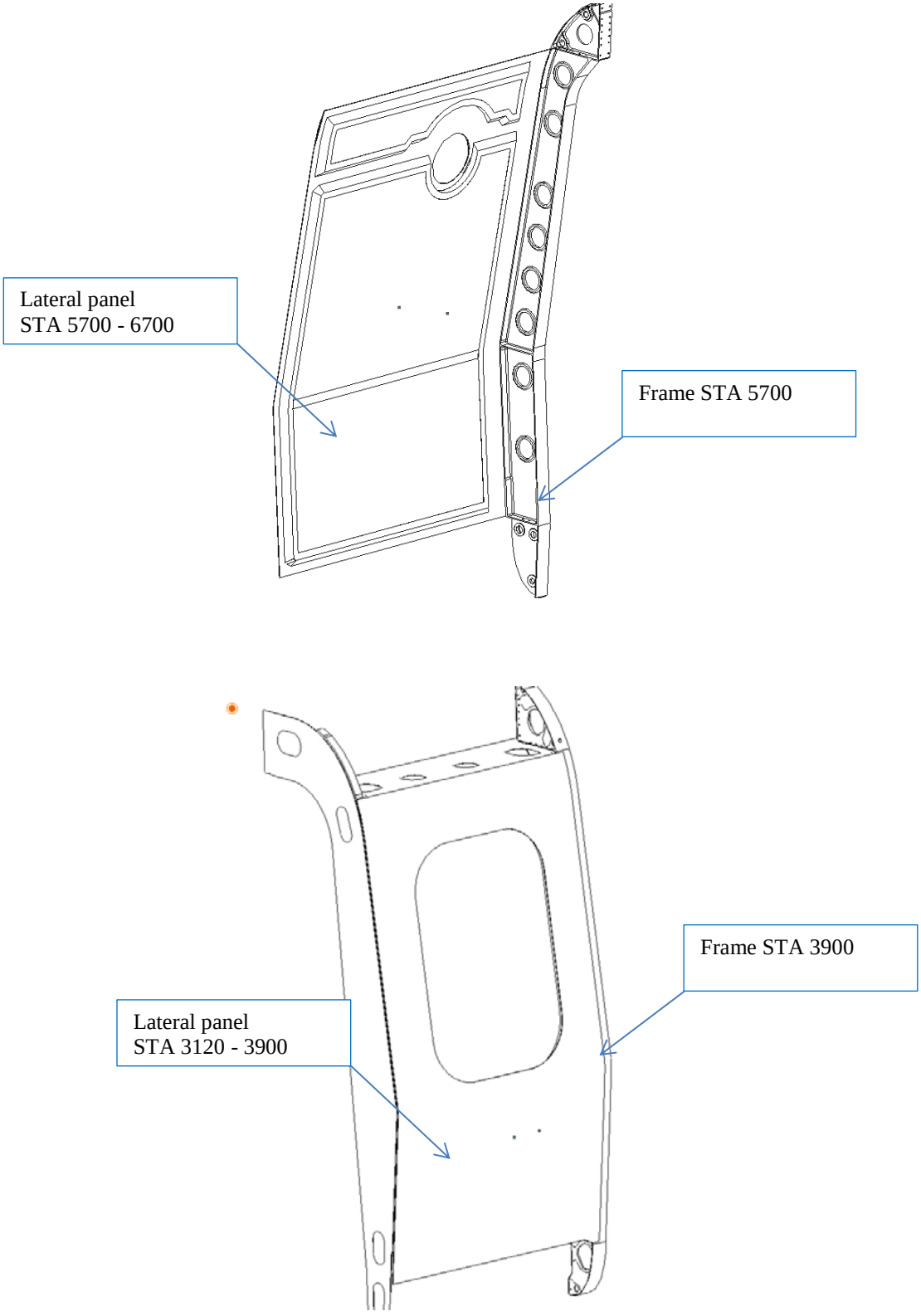

Lateral panel
STA 5700 - 6700
Frame STA 5700
Frame STA 3900
Lateral panel
STA 3120 - 3900

Figure A-1

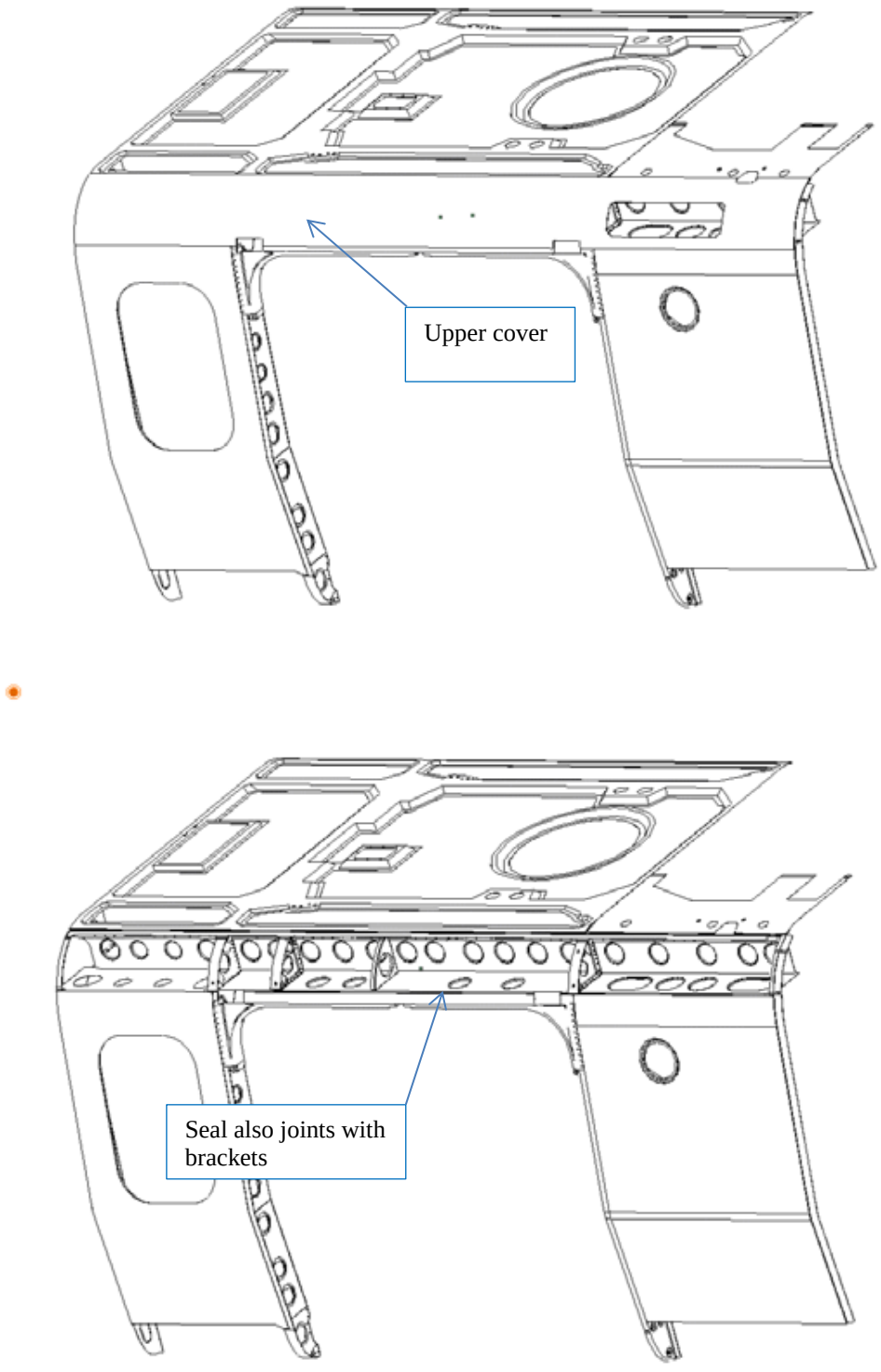


Figure A-2

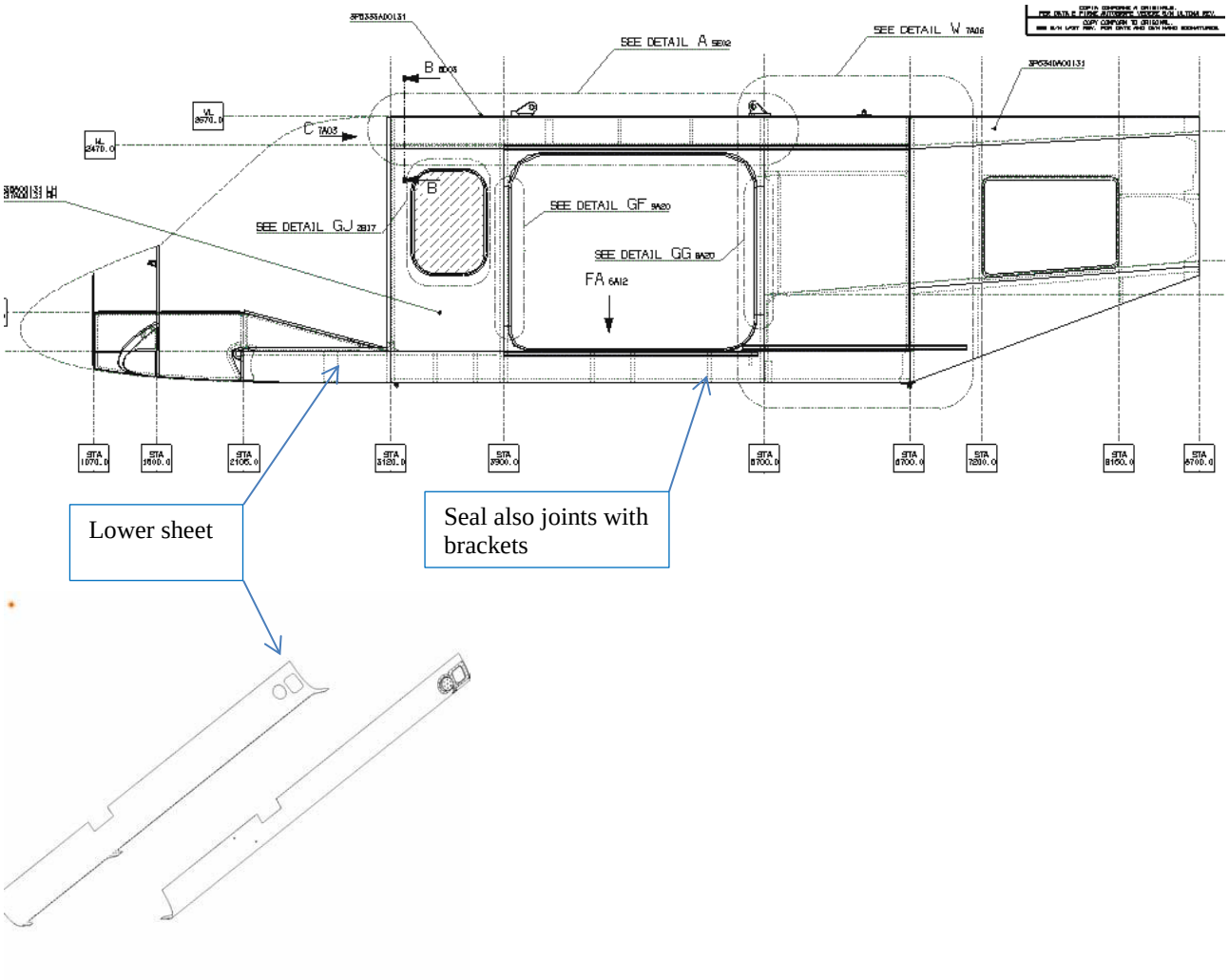

SEE DETAIL A
SEE DETAIL W
SEE DETAIL GJ
SEE DETAIL GF
SEE DETAIL GG
FA
Lower sheet
Seal also joints with brackets

Figure A-3

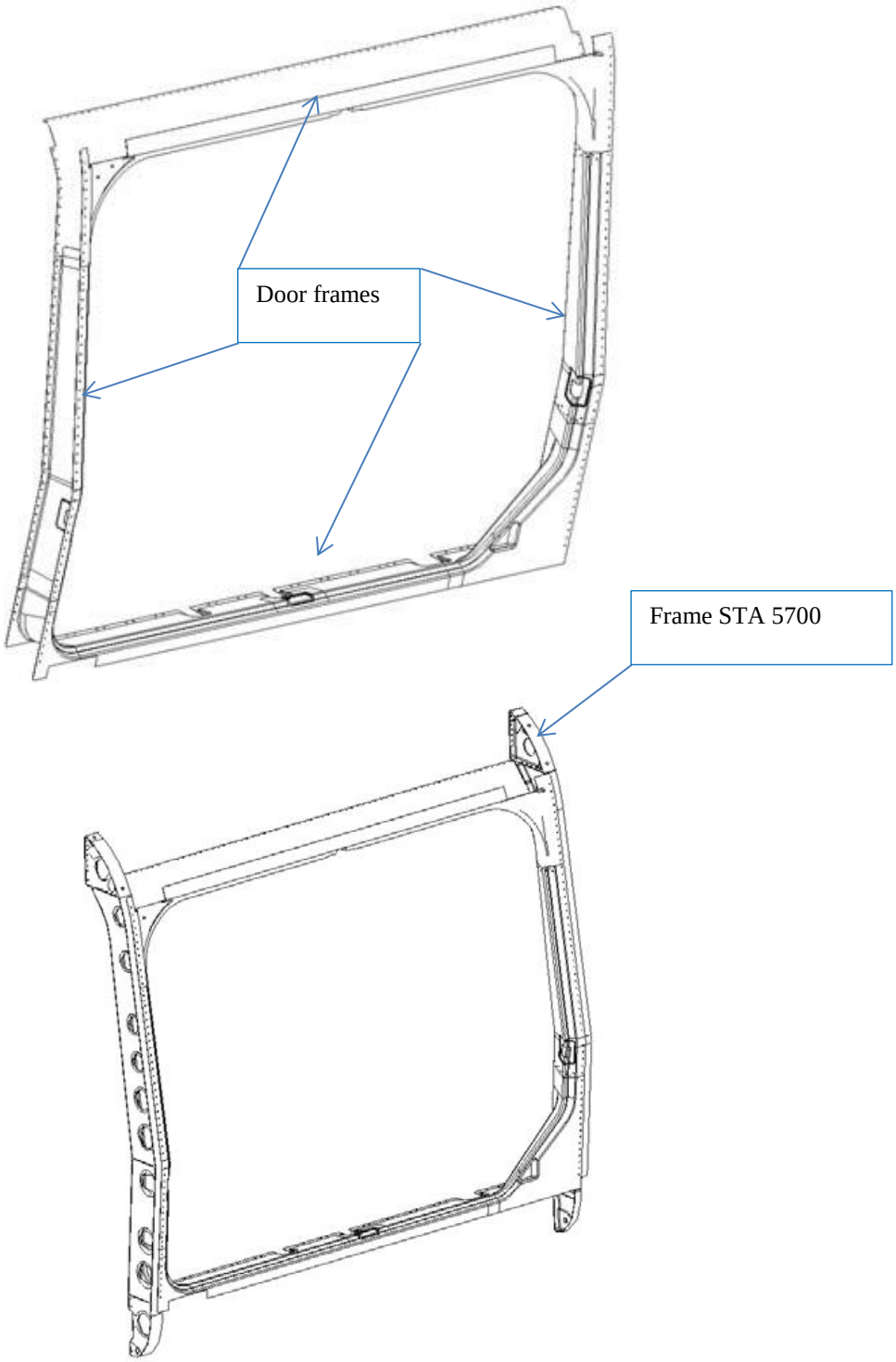


Figure A-4

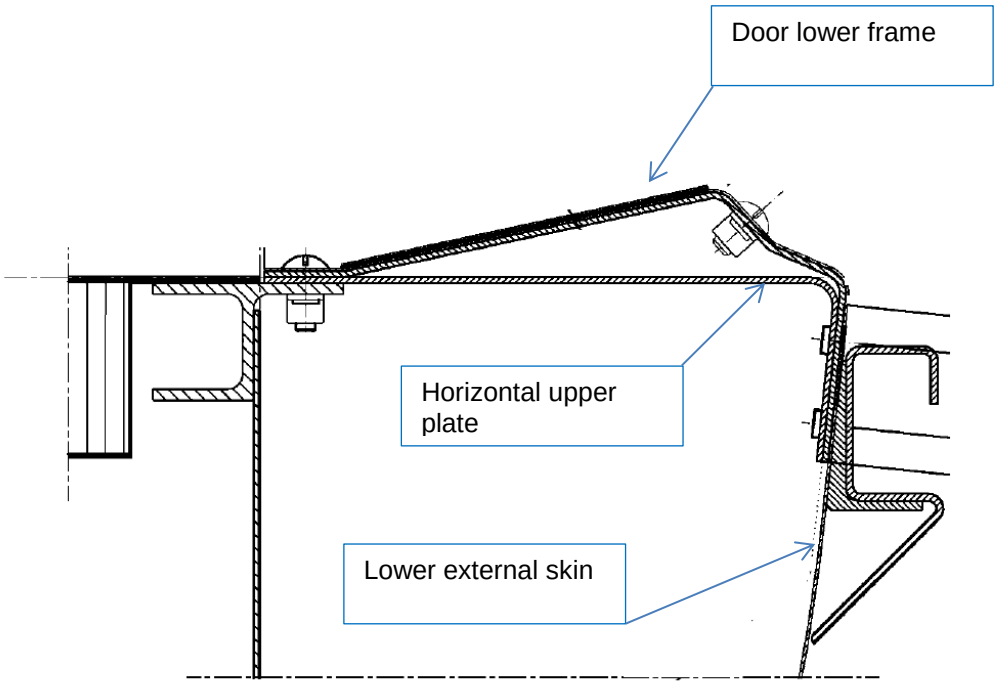

Door lower frame
Horizontal upper plate
Lower external skin

Figure A-5

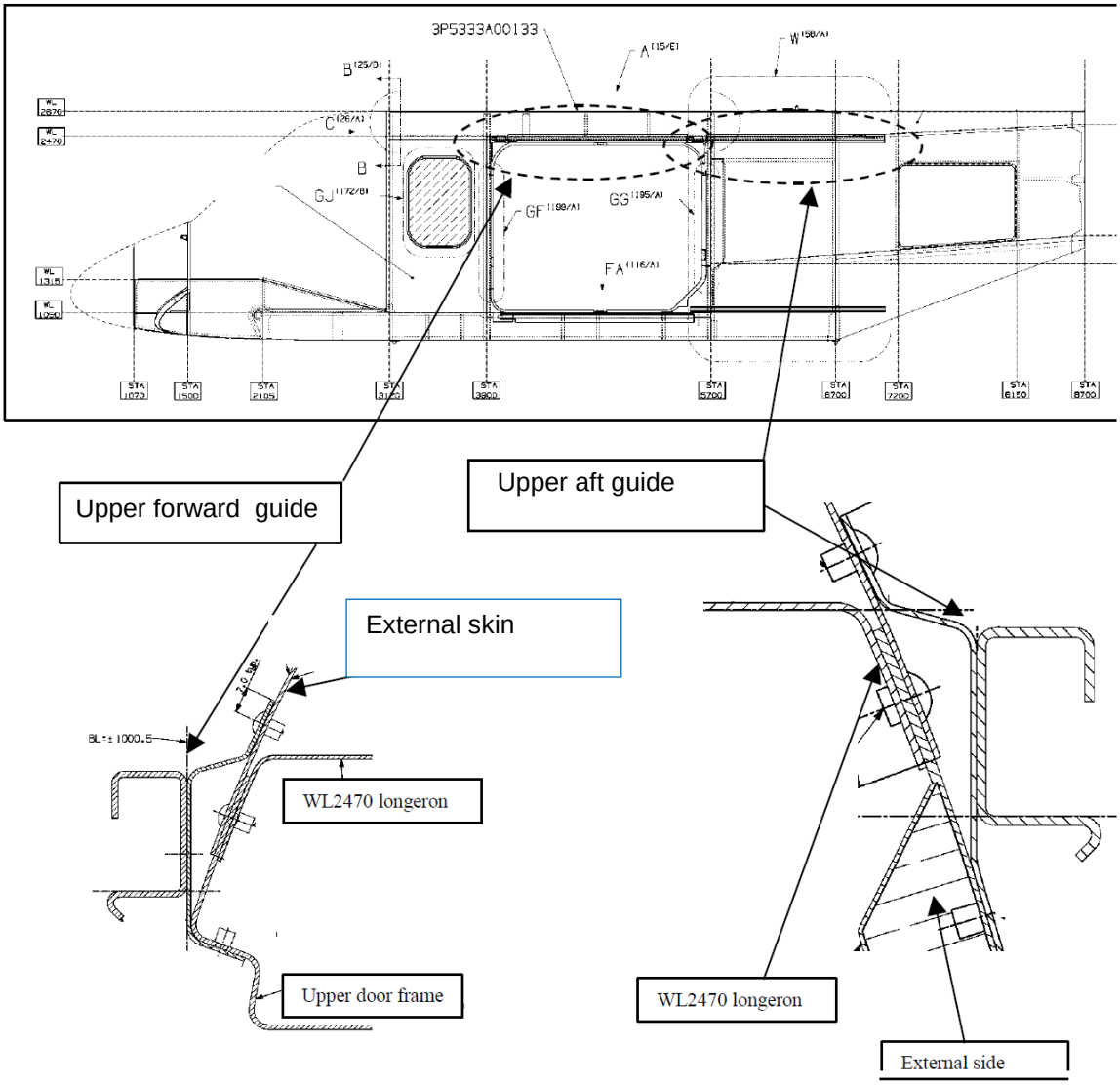

3P5333A00133
Upper forward guide
Upper aft guide
External skin
WL2470 longeron
Upper door frame
WL2470 longeron
External side

Figure A-6

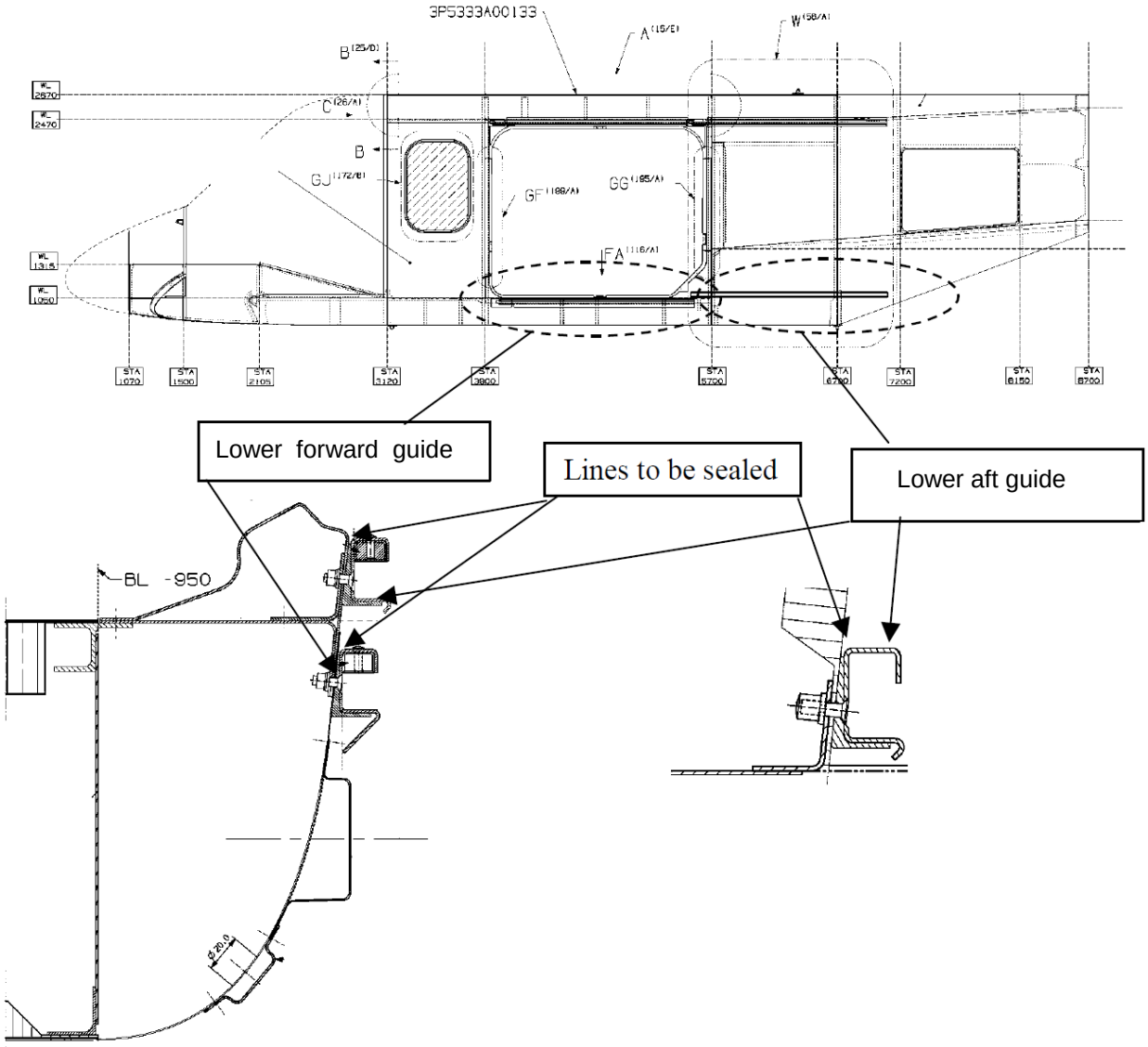

3P5333A00133
Lower forward guide
Lines to be sealed
Lower aft guide
BL -950

Figure A-7

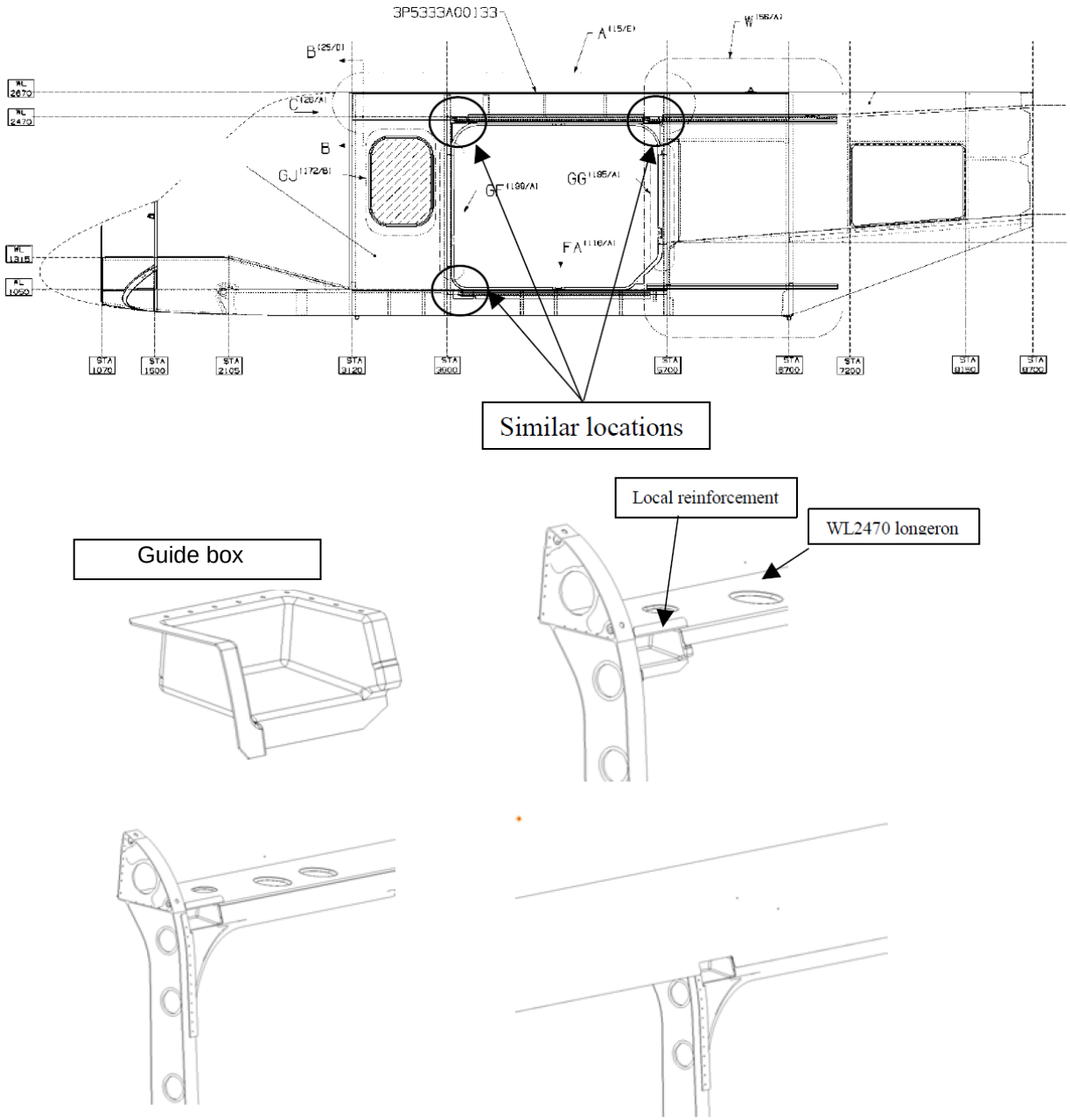

3P5333A00133
Similar locations
Local reinforcement
WL2470 longeron
Guide box

Figure A-8

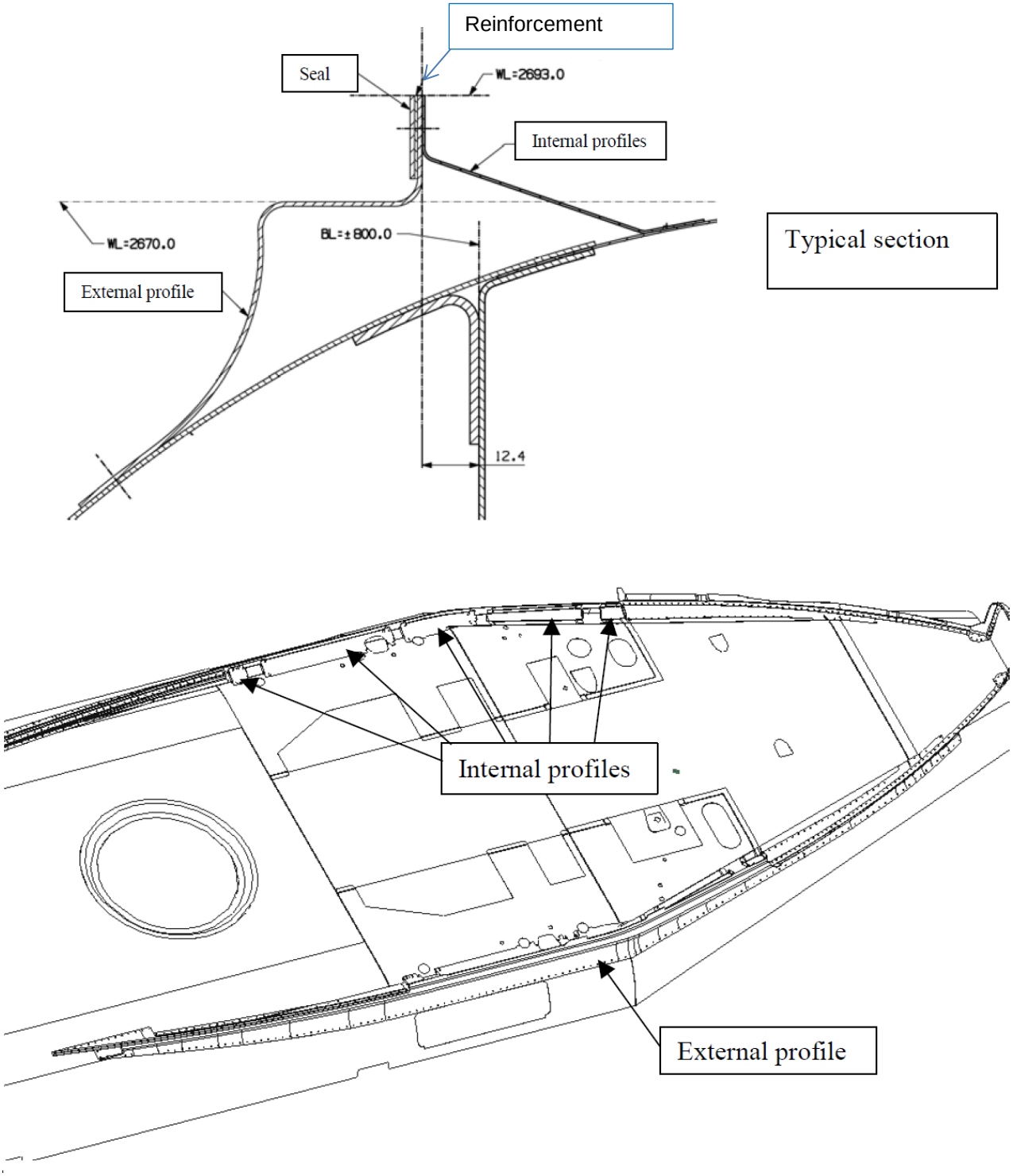

Reinforcement
Seal
WL=2693.0
Internal profiles
WL=2670.0
BL=±800.0
External profile
Typical section
12.4
Internal profiles
External profile

Figure A-9

Appendix B - Repair drawings

- 3G0203R04511 LH upper angle at STA5700 repair
- 3G0203R04512 RH upper angle at STA5700 repair
- SK139-1240 LH/RH profile STA5900 repair
- SK139-1241 LH/RH upper door frame repair
- SK139-1242 LH/RH upper skin repair
- SK139-1243 LH/RH upper plate repair