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AgustaWestland Products

SERVICE BULLETIN

N° 139-587

DATE: March 25, 2021

REV. : /

TITLE

ATA 30 - WINDSHIELD WASHING SYSTEM INSTALLATION

REVISION LOG

First Issue

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

1. PLANNING INFORMATION

A. EFFECTIVITY

NOTE

If different wiper arms are installed on the helicopter, refer to SB 139-506 Part I and Part II to obtain the correct configuration.

All AB139/AW139 helicopters equipped with wiper arm LH P/N 3G3040V00951 and wiper arm RH P/N 3G3040V01051.

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 on how to perform the installation of kit windshield washing P/N 4G3040F00116.

E. DESCRIPTION

The windshield washing system supplies a sufficient quantity of cleaning (de-icing) liquid to the two wiper blades spray hoses to clean the windshield surface.

The system consists of a pump and a reservoir installed on the structure inside the helicopter nose, spray nozzles on the two wiper blades and a control panel installed on the interseat console.

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 eighty (80) MMH are deemed necessary.

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

H. WEIGHT AND BALANCE

WEIGHT (Kg)	1.82	
	ARM (mm)	**MOMENT (Kgmm)**
LONGITUDINAL BALANCE	1300	2366
LATERAL BALANCE	270	491.4

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.	-
DM02	39-A-06-41-00-00A-010A-A	Access doors and panels - General data.	-
DM03	39-A-11-00-01-00A-720A-A	Decal - Install procedure.	-
DM04	39-A-20-10-08-00A-622A-A	Electrical contacts - Crimp	-
DM05	39-B-30-42-01-00A-720A-K	Windshield washing pump - Install procedure	-
DM06	39-B-30-42-02-00A-720A-K	Windshield washing fluid reservoir - Install procedure	-
DM07	39-B-30-42-03-00A-520A-K	Windshield wiping/washing control panel - Remove procedure	-
DM08	39-B-30-42-03-00A-720A-K	Windshield wiping/washing control panel - Install procedure	-
DM09	39-A-30-41-00-00A-320A-A	Windshield wiping system - Operation test	-

Following Data Modules refer to CSRP:

DATA MODULE		**DESCRIPTION**	**PART**
DM10	CSRP-A-51-42-00-00A-720A-D	Potted inserts - Install procedure	-

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
CSRP	Common Structural Repair Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IPD	Illustrated Part Data
ITEP	Illustrated Tool and Equipment Publication
LH	Leonardo Helicopters
MMH	Maintenance Man Hours

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**4G3040F00116**		**KIT WINDSHIELD WASHING**	**REF**	**.**		**-**
2	223350054		Rubber Tube	0.5 m	..		139-587L1
3	2320M-33-1		Pump	1	..		139-587L1
4	3G3040A01651		Pipe Joint	2	..		139-587L1
5	**3G3040A02731**		**WIPER ARM ASSY LH**	**REF**	**..**		**-**
6	223350054		Rubber Tube	2 m	...		139-587L1
7	**3G3040A02831**		**WIPER ARM ASSY RH**	**REF**	**..**		**-**
8	223350054		Rubber Tube	2 m	...		139-587L1
9	**3G3040A02931**		**WIPER BLADE ASSY LH**	**REF**	**..**		**-**
10	3G3040V01151		Wiper Blade Spray Nozzle	1	...		139-587L1
11	**3G3040A03031**		**WIPER BLADE ASSY RH**	**REF**	**..**		**-**
12	3G3040V01151		Wiper Blade Spray Nozzle	1	...		139-587L1
13	3G3040L00151		Reservoir	1	..		139-587L1
14	3G3040V00255		Windshield Wiping/Washing Control Panel	1	..		139-587L1
15	**3G5310A34211**		**RESERVOIR WINDSHIELD STRUCTURAL PROVISION**	**REF**	**..**		**-**
16	3G5316A39351		Cover	1	...		139-587L1
17	999-5001-10-103	AW010FP103	Plug	2	...		139-587L1
18	999-5001-10-104	AW010FP104	Plug	4	...		139-587L1
19	MS27039-0804		Screw	1	...		139-587L1
20	NAS1149DN816K		Washer	1	...		139-587L1
21	NAS1836-08-11		Insert	1	...		139-587L1
22	3G5315A82331		Pump Support Assy	1	..		139-587L1
23	3G5315A82731		Connector Support Assy	1	..		139-587L1
24	3G5331A48051		Rubber Shim	1	..		139-587L1
25	3G5331A48151		Rubber Shim	1	..		139-587L1
26	3P5331A82951		Rubber Shim	2	..		139-587L1
27	3P5331A83051		Rubber Shim	2	..		139-587L1
28	**4G3040A00113**		**WINDSCREEN WASHING C/A ELECTRICAL PROVISION**	**REF**	**..**		**-**
29	3G9A01A25721	3G9A01A25721A10R	Windscreen Washing C/A (A1A257)	1	...		139-587L1
30	3G9A01B26721	3G9A01B26721A10R	Windscreen Washing C/A (A1B267)	1	...		139-587L1
31	A236A01AB		Nonmetallic Channel	3 m	...		139-587L1
32	A236A02AB		Nonmetallic Channel	3 m	...		139-587L1
33	A236A03AB		Nonmetallic Channel	3 m	...		139-587L1
34	A582A05	EN6049-006-05-5	Nomex	5 m	...		139-587L1
35	A582A08	EN6049-006-08-5	Nomex	5 m	...		139-587L1
36	A582A12	EN6049-006-13-5	Nomex	5 m	...		139-587L1
37	A582A32	EN6049-006-32-5	Nomex	5 m	...		139-587L1
38	AW001CB04H		Clamp	2	...		139-587L1
39	AW001CL001-N6		Support	2	...		139-587L1
40	D38999/33W9R		Cover	1	...		139-587L1
41	ED300S30J1		Decal	1	...		139-587L1
42	M85049/138-33A		Cap	1	...		139-587L1
43	M85049/95-10A-A		Flange	1	...		139-587L1

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
44	NAS1149DN416J		Washer	4	...		139-587L1
45	NAS1802-04-6		Screw	4	...		139-587L1
46	NAS1802-3-6		Screw	1	...		139-587L1
47	NAS1802-3-8		Screw	1	...		139-587L1
48	A115A1916AB		Strip	5 m	..		139-587L1
49	A629A04HS	AW001CK04HS	Tiedown	50	..		139-587L1
50	A954AW015EH		Stencil	1	..		139-587L1
51	B7444-1-1-12C		Sleeve	5 m	..		139-587L1
52	MS20995C32		Lock Wire	0,45 kg	..		139-587L1
53	MS21042L3		Nut	4	..		139-587L1
54	MS27039-1-08		Screw	4	..		139-587L1
55	MS27039-4-12		Screw	4	..		139-587L1
56	MS35206-228		Screw	2	..		139-587L1
57	MS35206-231		Screw	2	..		139-587L1
58	NAS1149D0332K		Washer	4	..		139-587L1
59	NAS1149D0432K		Washer	4	..		139-587L1
60	NAS1149DN616J		Washer	2	..		139-587L1
61	M39029/56-348		Electrical Contact	11	.		139-587L1
62	M39029/56-351		Electrical Contact	24	.		139-587L1
63	M39029/57-354		Electrical Contact	1	.		139-587L1
64	M39029/58-363		Electrical Contact	4	.		139-587L1

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

2) CONSUMABLES

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

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
65	199-05-002 Type II, Class 2 Code No. 900004603	Adhesive EA934NA (C397)	AR	(1)	-
66	199-05-002 Type II, Class 3 Code No. 900005009	Adhesive EA 956 AERO (C193)	AR	(1)	-
67	Commercial	Glass dry fabric cloth HexForce 20759 M 1200 (C930)	AR	(1)	-
68	AWMS05-001, Type I, Class B, Grade 2 Code No. 999999999000005966	Sealing compound MC-780 B (C465)	AR	(1)	-
69	199-05-107 Type 1 Class 1 MMM-A-121	Adhesive EC1357 (C455)	AR	(1)	-
70	199-05-152 Type I, Class 1 Code No. 9000002972	Adhesive DAPCO 3300 (C227)	AR	(1)	-

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
139-587L1	1		-

NOTE

(1) Item to procured as local supply.

B. SPECIAL TOOLS

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

C. INDUSTRY SUPPORT INFORMATION

Customization.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.

b) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords.

c) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.

d) After drilling, remove all swarf and sharp edges. Apply on bare metal a light film of primer unless the hole is used for ground connection.

e) During the installation of bonding braids or components requiring grounding, clean the surface structure in order to obtain a good ground contact.

f) Let adhesive cure at room temperature for at least 24 hours unless otherwise specified.

g) Exposed thread surface and nut must be protected using a layer of tectyl according to MIL-C-16173 grade I.

h) All lengths are in mm.

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 1 thru 3, gain access to the area affected by the installation and perform the installation of reservoir windshield structural provision P/N 3G5310A34211 as described in the following procedure:
3. With reference to Figure 2 Detail B, perform the indicated cut-out on the panel.
4. With reference to Figure 2 Detail B and Section F-F, apply one ply of fiberglass (C930) on the cutout edges by means of adhesive EA 956 AERO (C193).

5. With reference to Figure 2 Section F-F, drill a hole Ø 11.48÷11.61 through the RH FWD panel P/N 3G5306P13452.
6. In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 2 Section F-F, install insert P/N NAS1836-08-11 by means of adhesive EA934NA (C397).
7. With reference to Figure 3, drill n°4 holes Ø 6.70÷6.86 and n°2 holes Ø 3.86÷3.99 in correspondence of indicated positions on machined longeron RH P/N 3G5331A04453.
8. With reference to Figure 3 Section D-D, fill with adhesive EA934NA (C397) all around previously drilled holes.
9. With reference to Figure 10 View Q and Section S-S, install n°2 rubber shims P/N 3P5331A83051 by means of adhesive EC1357 (C455).
10. With reference to Figure 10 View Q and Section R-R, install n°2 rubber shims P/N 3P5331A82951 by means of adhesive EC1357 (C455).
11. With reference to Figure 9 View M and Section P-P, install rubber shim P/N 3G5331A48051 and rubber shim P/N 3G5331A48151 by means of adhesive EC1357 (C455).
12. With reference to Figure 9 View M and View N, install indicated strips P/N A115A1916AB by means of adhesive DAPCO 3300 (C227).
13. In accordance with AMP DM 39-B-30-42-02-00A-720A-K and with reference to Figure 5 View looking inboard right side, install reservoir P/N 3G3040L00151.
14. In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 4 View H, install stencil P/N A954AW015EH on RH FWD panel P/N 3G5306P13452 in an area adjacent to reservoir plug.
15. With reference to Figure 7 Detail W, install pump support assy P/N 3G5315A82331 by means of n°4 screws P/N MS27039-4-12 and n°4 washers P/N NAS1149D0432K.
16. In accordance with AMP DM 39-B-30-42-01-00A-720A-K and with reference to Figure 5 and Figure 7 Detail W, install pump P/N 2320M-33-1 by means of n°4 screws P/N MS27039-1-08, n°4 washers P/N NAS1149D0332K and n°4 nuts MS21042L3.
17. With reference to Figure 5 View looking inboard right side, install rubber tube P/N 223350054 of adequate length between pump P/N 2320M-33-1 and reservoir P/N 3G3040L00151 by means of n°2 straps P/N A629A04HS.
18. With reference to Figure 7 Detail W, install connector support assy P/N 3G5315A82731 by means of n°2 screws P/N MS35206-231 or n°2 screws P/N MS35206-228 (for SAR helicopter) and n°2 washers P/N NAS1149DN616J.
19. With reference to Figure 8 View V, remove the clips from wiper blade spray nozzles P/N 3G3040V01151 and retain for later re-use.

20. With reference to Figure 6 and Figure 8 View V, install n°2 wiper blade spray nozzle P/N 3G3040V01151 on RH and LH wiper blade and relevant clips.
21. With reference to Figure 6 and Figure 7 Section J-J, remove and discard pipe end P/N 3G3040A01751.
22. With reference to Figure 7 Section J-J, install pipe joint P/N 3G3040A01651 on LH shaft assy P/N 3G3040A03131.
23. With reference to Figure 7 Section J-J, use sealing compound MC-780 B (C465) on the external perimeter of pipe joint previously installed.
24. Repeat steps 21 thru 23 on RH shaft assy P/N 3G3040A03231.
25. With reference to Figure 8 View T, install rubber tube P/N 223350054 of adequate length on wiper arm LH P/N 3G3040V00951.
26. With reference to Figure 8 View T, install rubber tube P/N 223350054 of adequate length on wiper arm RH P/N 3G3040V01051.
27. With reference to Figure 7 Section J-J and View K, fix rubber tubes previously installed to pipe joints P/N 3G3040A01651 and to wiper blade spray nozzles P/N 3G3040V01151 by means of n°4 straps P/N A629A04HS.
28. In accordance with AMP DM 39-B-30-42-03-00A-520A-K and with reference to Figure 4, remove windshield wiping control panel P/N 3G3040V00251. Retain existing hardware for later re-use.
29. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 11 thru 15, gain access to the area affected by the installation and perform the windscreen washing C/A electrical provision P/N 4G3040A00113 as described in the following procedure:
30. With reference to Figure 12 View looking nose RH side, at positions n°1, install clamp P/N AW001CB04H using existing hardware.
31. With reference to Figure 12 View looking nose RH side, at positions n°2, remove screw P/N NAS1802-3-6 and install clamp P/N AW001CB04H on existing hardware by means of screw P/N NAS1802-3-8.

NOTE

Use ending P/N A236A on metallic edges which can damage cable assemblies and where abrasion may occur. Use braided tubing P/N A582A where cable assemblies chafing or contact with structure may occur.

32. With reference to Figures 11 thru 14, lay down windscreen washing C/A P/N 3G9A01A25721 (A1A257) and windscreen washing C/A P/N 3G9A01B26721 (A1B267) following the existing route unless otherwise indicated on the figures. Secure the cables by means of existing hardware and lacing cord.

NOTE

Where necessary in accordance with AMP DM 39-A-20-10-08-00A-622A-A crimp indicated electrical contacts on wires by means of proper crimping tool.

33. With reference to Figure 15 wiring diagram, perform the electrical connection of C/A A1A257 between MAU1 connector A1-1P2, copilot converter connector B15P1, wiping/washing control panel connector PL12P1, sectioning connectors J101 and J109. If necessary, use the following electrical contacts:
    - Electrical contact P/N M39029/57-354 for A1-1P2 side;
    - Electrical contact P/N M39029/56-351 for B15P1, J101 and J109 sides;
    - Electrical contact P/N M39029/56-348 for PL12P1 side.
34. With reference to Figure 15 wiring diagram, perform the electrical connection of C/A A1B267 between washer pump connector B16P1, pilot converter connector B14P1, wiping/washing control panel connector PL12P2, terminal board connector TB128P1, sectioning connectors S30J1, P101 and P109. If necessary use the following electrical contacts:
    - Electrical contact P/N M39029/56-351 for B14P1, B16P1 and S30J1 sides;
    - Electrical contact P/N M39029/58-363 for P101 and P109 sides;
    - Electrical contact P/N M39029/56-351 for TB128P1 side;
    - Electrical contact P/N M39029/56-348 for PL12P2 side.
35. With reference to Figure 12 View looking nose RH side, install connector S30J1 on connector support assy P/N 3G5315A82731 by means of flange P/N M85049/95-10A-A, n° 4 screws P/N NAS1802-04-6 and n°4 washers P/N NAS1149DN416J.

36. In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 12, install decal P/N ED300S30J1 in an area adjacent to the previously installed connector S30J1.
    Perform a pin-to-pin continuity check of all the electrical connection made.
37. With reference to Figure 12 Detail X, connect the connector B16P1 to the washer pump B16.
38. In accordance with AMP DM 39-B-30-42-03-00A-720A-K and with reference to Figure 4 Detail G, install windshield wiping/washing control panel P/N 3G3040V00255 to interseat console by means of existing hardware.
39. In accordance with AMP DM 39-A-30-41-00-00A-320A-A, perform the windshield wiping system operational test.
40. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
41. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
42. 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”.

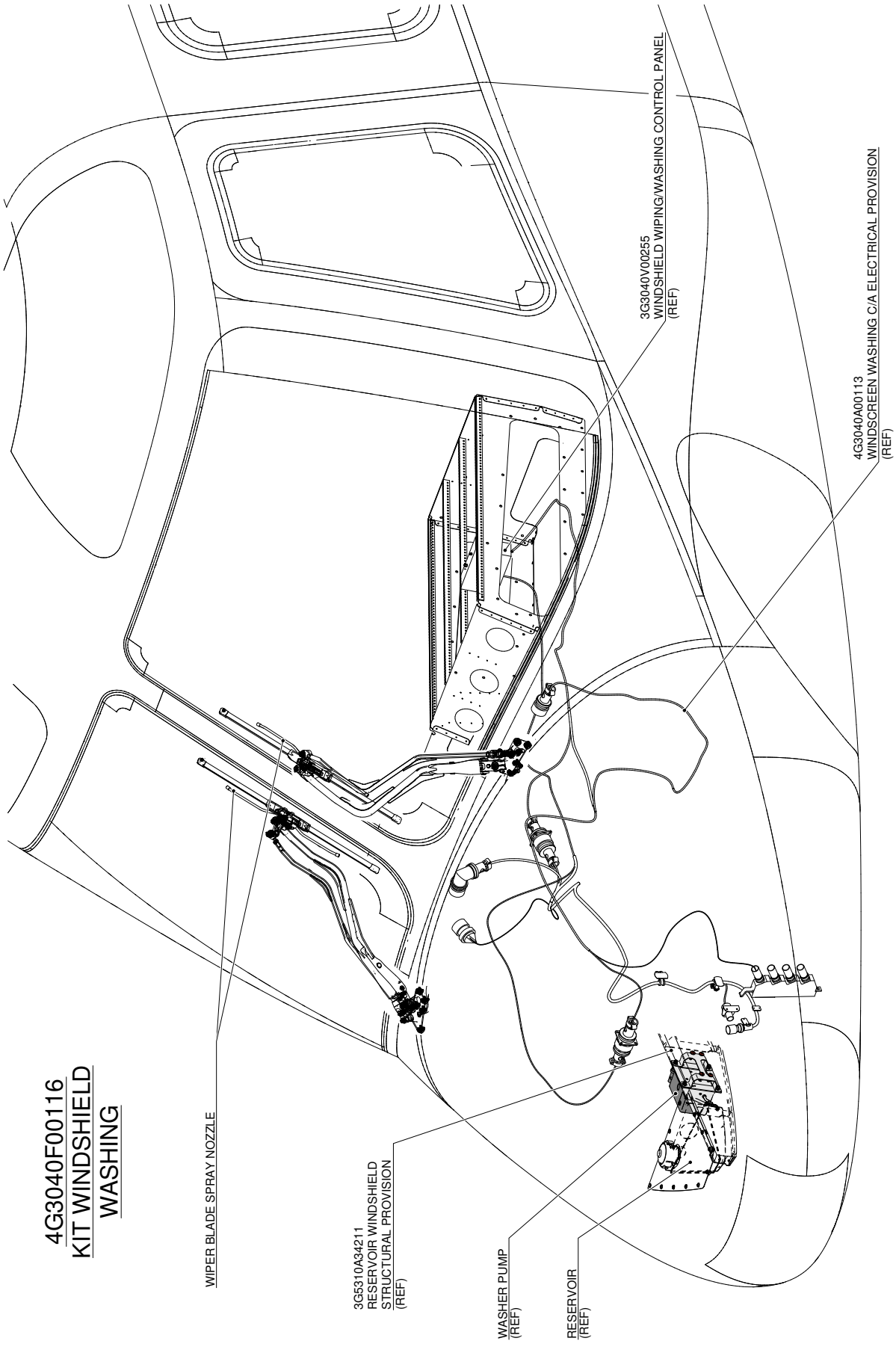

4G3040F00116
KIT WINDSHIELD
WASHING
WIPER BLADE SPRAY NOZZLE
3G5310A34211
RESERVOIR WINDSHIELD
STRUCTURAL PROVISION
(REF)
WASHER PUMP
(REF)
RESERVOIR
(REF)
3G3040V00255
WINDSHIELD WIPING/WASHING CONTROL PANEL
(REF)
4G3040A00113
WINDSCREEN WASHING C/A ELECTRICAL PROVISION
(REF)

Figure 1

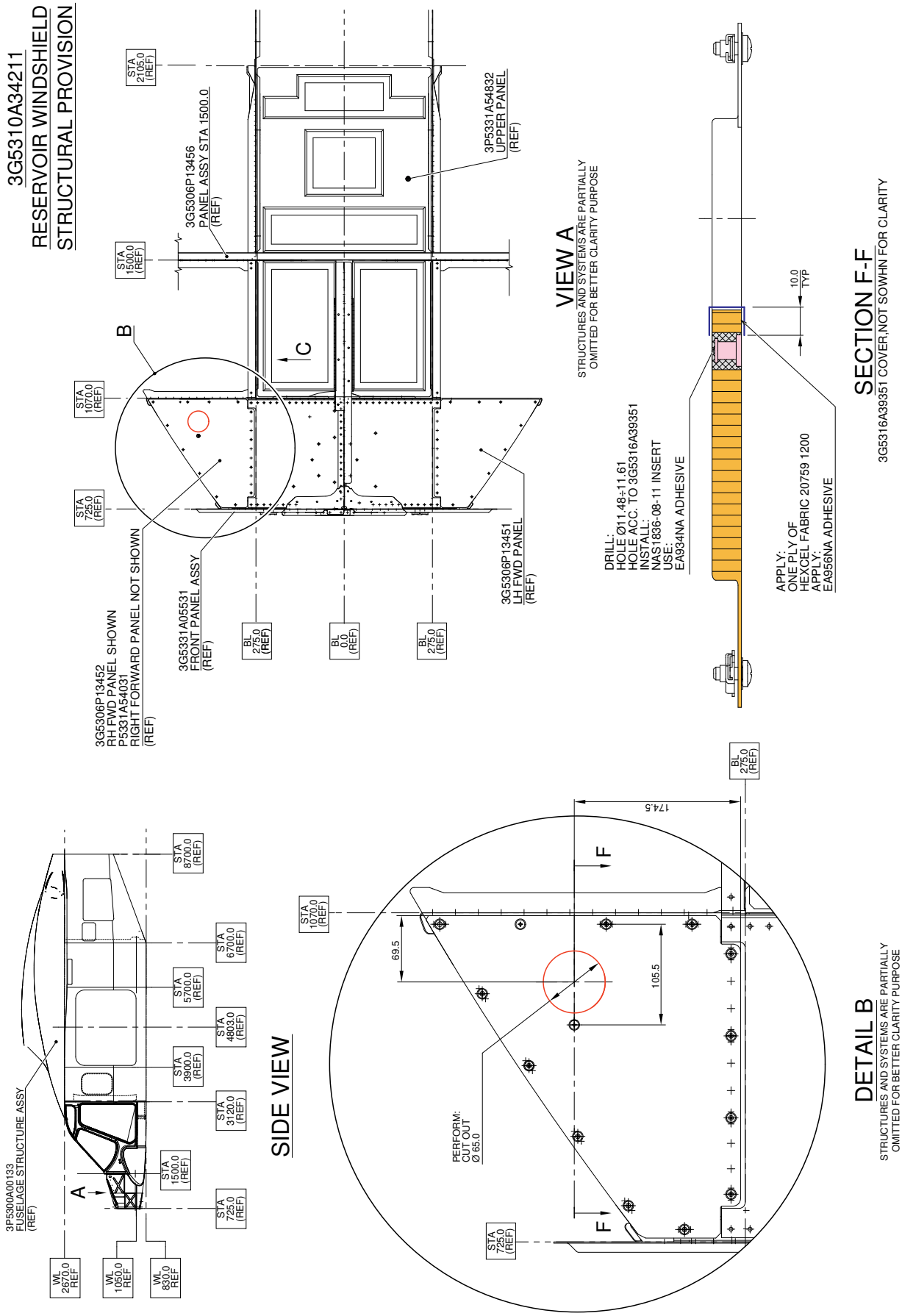

3G5310A34211
RESERVOIR WINDSHIELD
STRUCTURAL PROVISION
3G5306P13456
PANEL ASSY STA 1500.0
(REF)
3P5331A54832
UPPER PANEL
(REF)
STA 2105.0 (REF)
STA 1500.0 (REF)
STA 1070.0 (REF)
STA 725.0 (REF)
B
C
3G5306P13452
RH FWD PANEL SHOWN
P5331A54031
RIGHT FORWARD PANEL NOT SHOWN
(REF)
3G5331A05531
FRONT PANEL ASSY
(REF)
BL 275.0 (REF)
BL 0.0 (REF)
BL 275.0 (REF)
3G5306P13451
LH FWD PANEL
(REF)
VIEW A
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
DRILL:
HOLE Ø11.48÷11.61
HOLE ACC. TO 3G5316A39351
INSTALL:
NAS1836-08-11 INSERT
USE:
EA934NA ADHESIVE
10.0
TYP
APPLY:
ONE PLY OF
HEXCEL FABRIC 20759 1200
APPLY:
EA956NA ADHESIVE
SECTION F-F
3G5316A39351 COVER,NOT SOWHN FOR CLARITY
3P5300A00133
FUSELAGE STRUCTURE ASSY
(REF)
A
STA 8700.0 (REF)
STA 6700.0 (REF)
STA 5700.0 (REF)
STA 4803.0 (REF)
STA 3900.0 (REF)
STA 3120.0 (REF)
STA 1500.0 (REF)
STA 725.0 (REF)
WL 2670.0 REF
WL 1050.0 REF
WL 83.0 REF
SIDE VIEW
BL 275.0 (REF)
174.5
F
69.5
105.5
PERFORM:
CUT OUT
Ø 65.0
STA 1070.0 (REF)
STA 725.0 (REF)
DETAIL B
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 2

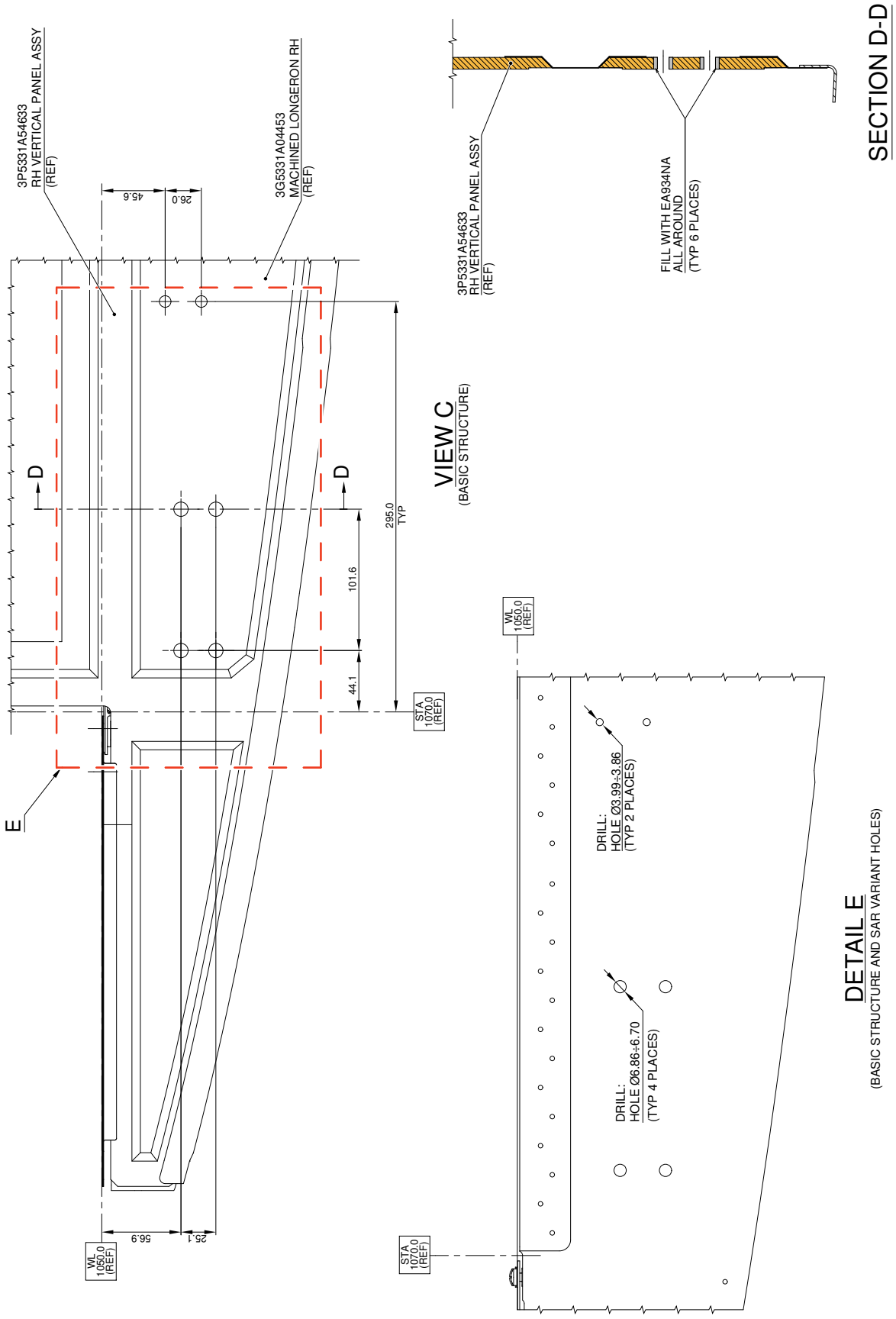

3P5331A54633
RH VERTICAL PANEL ASSY
(REF)
3G5331A04453
MACHINED LONGERON RH
(REF)
45.6
26.0
D
D
295.0
TYP
101.6
44.1
E
WL
1050.0
(REF)
STA
1070.0
(REF)
56.9
25.1
VIEW C
(BASIC STRUCTURE)
SECTION D-D
3P5331A54633
RH VERTICAL PANEL ASSY
(REF)
FILL WITH EA934NA
ALL AROUND
(TYP 6 PLACES)
DRILL:
HOLE Ø3.99÷3.86
(TYP 2 PLACES)
DRILL:
HOLE Ø6.86÷6.70
(TYP 4 PLACES)
DETAIL E
(BASIC STRUCTURE AND SAR VARIANT HOLES)

Figure 3

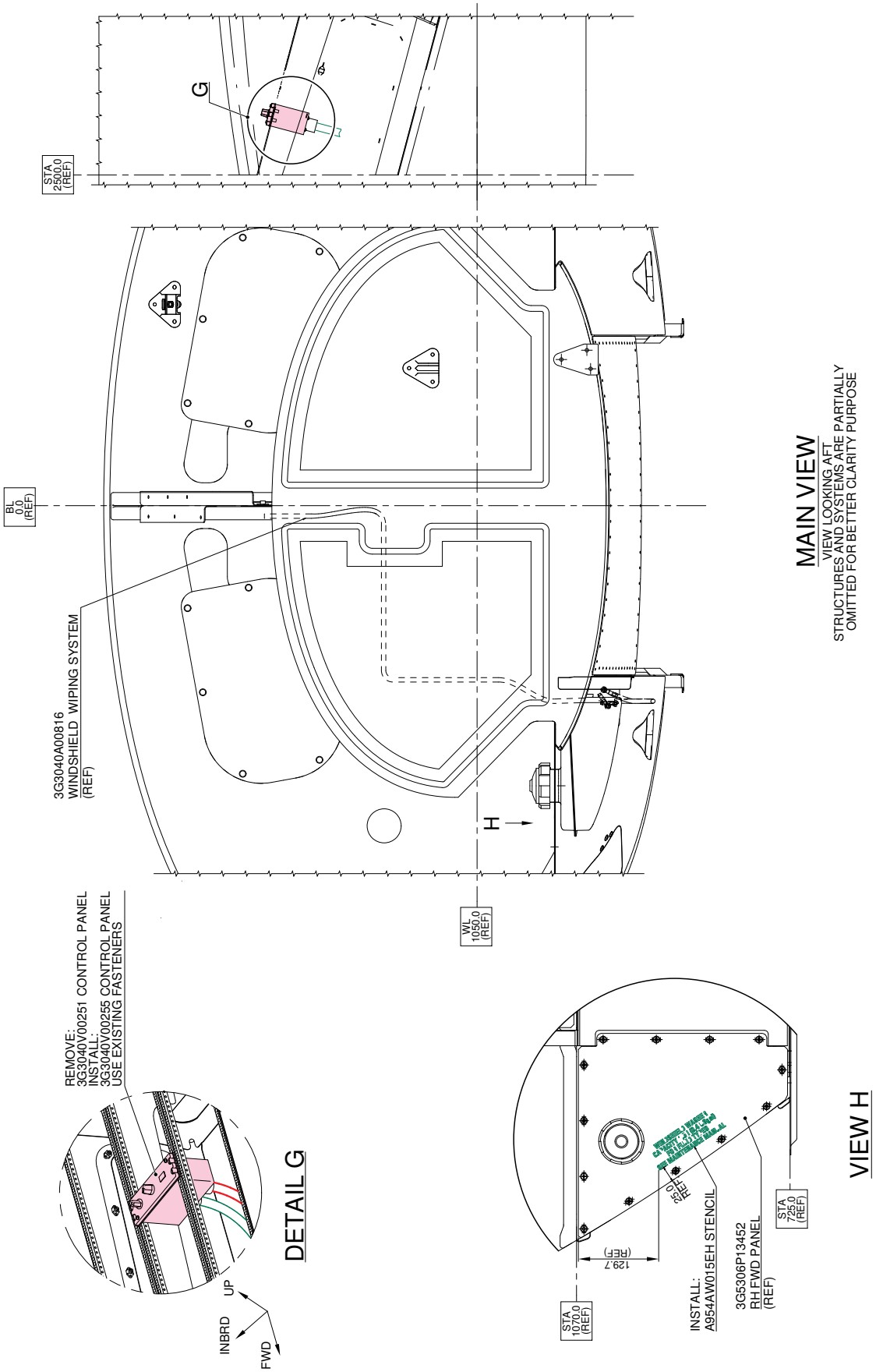
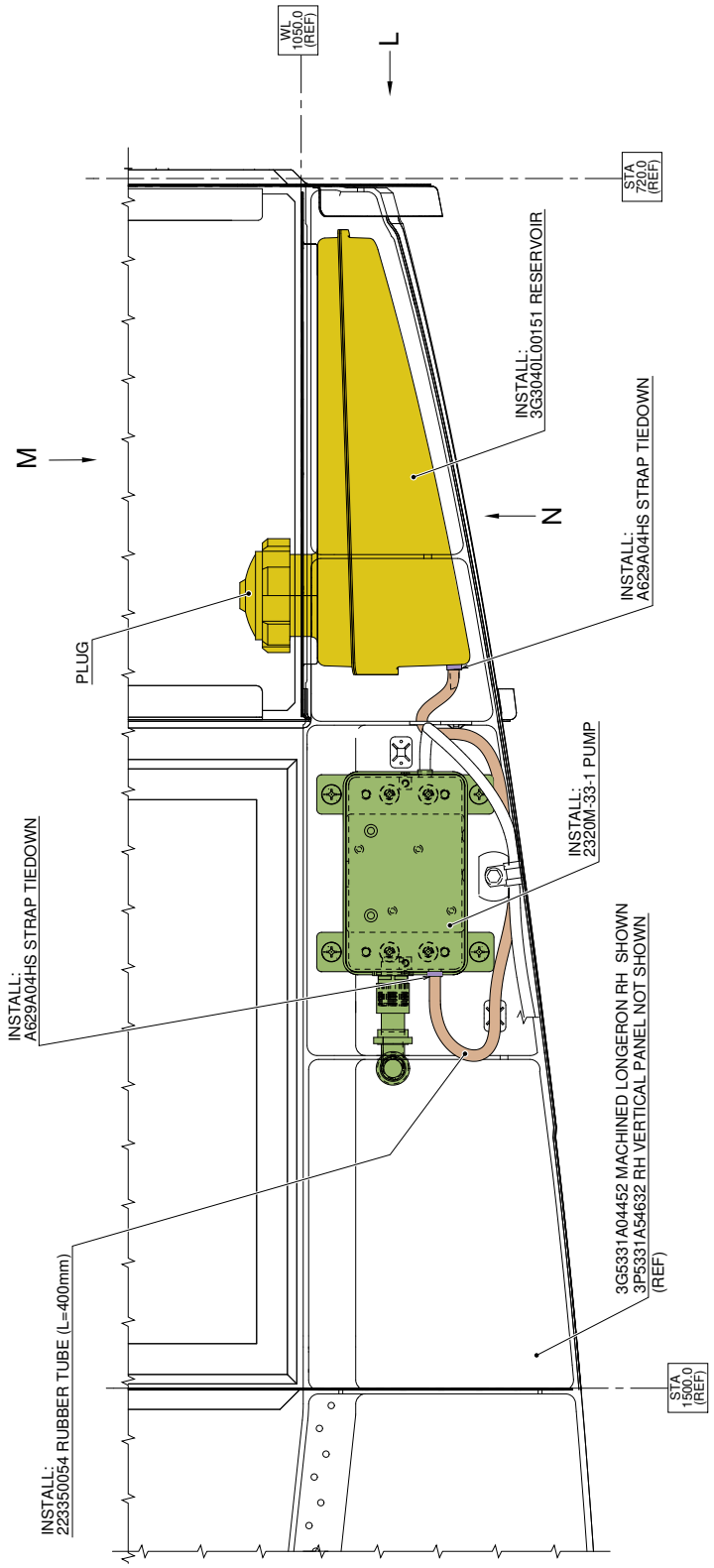

MAIN VIEW
VIEW LOOKING AFT
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
STA 2500.0 (REF)
BL 0.0 (REF)
WL 1050.0 (REF)
G
H
3G3040A00816
WINDSHIELD WIPING SYSTEM
(REF)
REMOVE:
3G3040V00251 CONTROL PANEL
INSTALL:
3G3040V00255 CONTROL PANEL
USE EXISTING FASTENERS
DETAIL G
UP
INBRD
FWD
VIEW H
STA 1070.0 (REF)
129.7 (REF)
INSTALL:
A954AW015EH STENCIL
3G5306P13452
RH FWD PANEL
(REF)
STA 725.0 (REF)

Figure 4



VIEW LOOKING INBOARD RIGHT SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 5

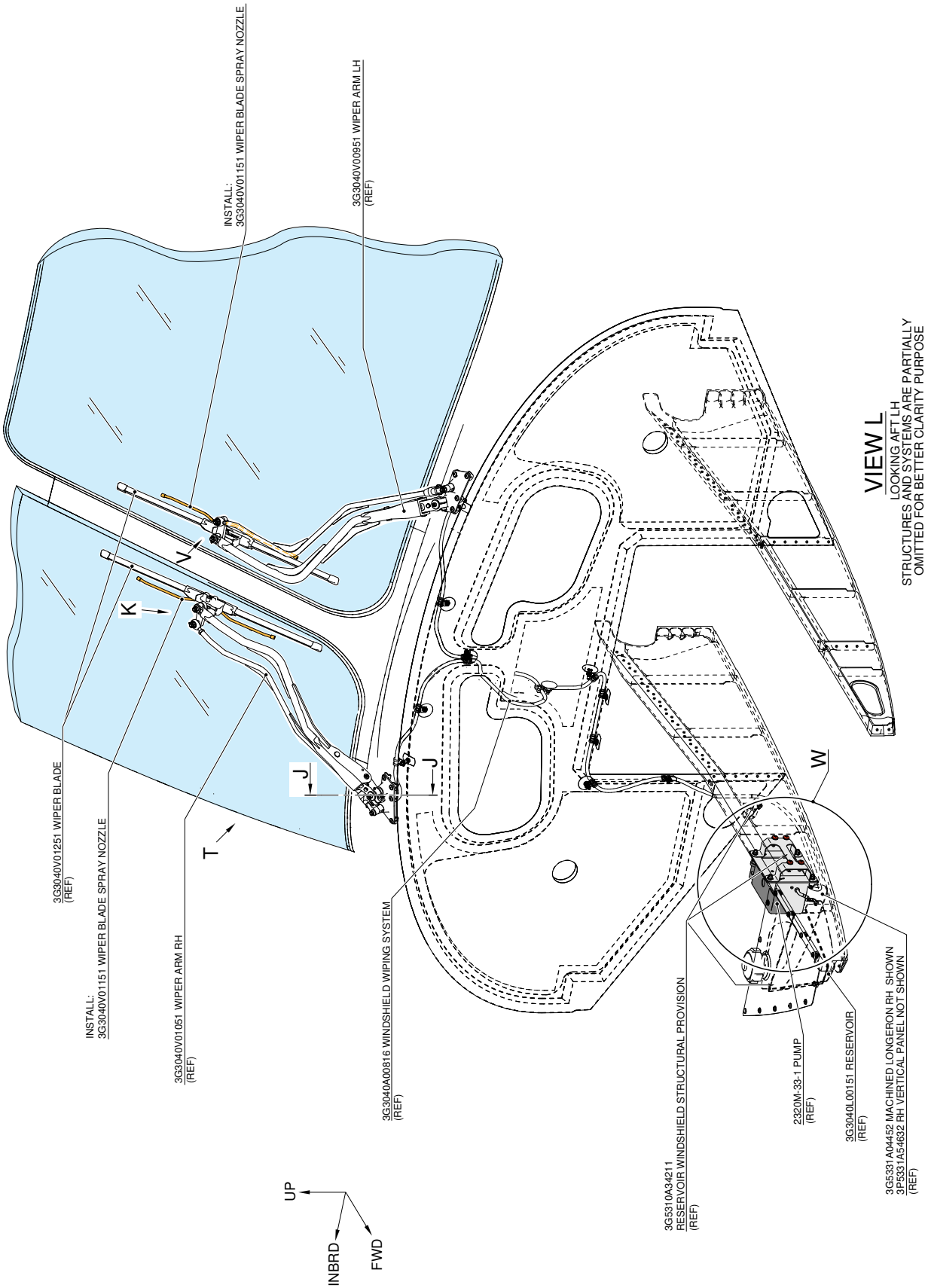

INSTALL:
3G3040V01151 WIPER BLADE SPRAY NOZZLE
3G3040V00951 WIPER ARM LH
(REF)
V
K
J
J
T
W
3G3040V01251 WIPER BLADE
(REF)
INSTALL:
3G3040V01151 WIPER BLADE SPRAY NOZZLE
3G3040V01051 WIPER ARM RH
(REF)
3G3040A00816 WINDSHIELD WIPING SYSTEM
(REF)
3G5310A34211
RESERVOIR WINDSHIELD STRUCTURAL PROVISION
(REF)
2320M-33-1 PUMP
(REF)
3G3040L00151 RESERVOIR
(REF)
3G5331A04452 MACHINED LONGERON RH SHOWN
3P5331A54632 RH VERTICAL PANEL NOT SHOWN
(REF)
VIEW L
LOOKING AFT LH
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
UP
INBRD
FWD

Figure 6

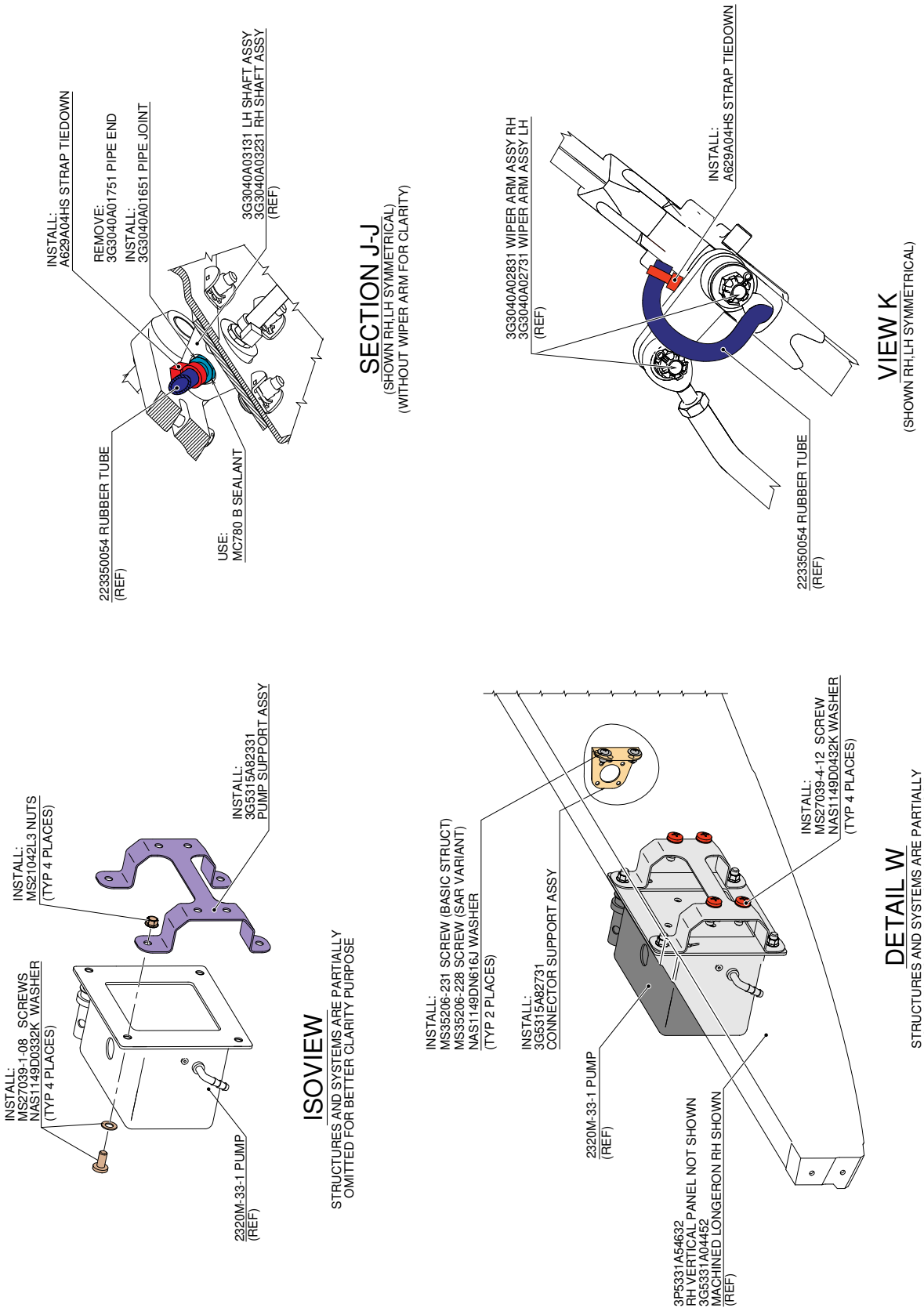

INSTALL:
A629A04HS STRAP TIEDOWN
REMOVE:
3G3040A01751 PIPE END
INSTALL:
3G3040A01651 PIPE JOINT
3G3040A03131 LH SHAFT ASSY
3G3040A03231 RH SHAFT ASSY
(REF)
223350054 RUBBER TUBE
(REF)
USE:
MC780 B SEALANT
SECTION J-J
(SHOWN RH,LH SYMMETRICAL)
(WITHOUT WIPER ARM FOR CLARITY)
3G3040A02831 WIPER ARM ASSY RH
3G3040A02731 WIPER ARM ASSY LH
(REF)
INSTALL:
A629A04HS STRAP TIEDOWN
223350054 RUBBER TUBE
(REF)
VIEW K
(SHOWN RH,LH SYMMETRICAL)
INSTALL:
MS21042L3 NUTS
(TYP 4 PLACES)
INSTALL:
3G5315A82331
PUMP SUPPORT ASSY
INSTALL:
MS27039-1-08 SCREWS
NAS1149D0332K WASHER
(TYP 4 PLACES)
2320M-33-1 PUMP
(REF)
ISOVIEW
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
INSTALL:
MS35206-231 SCREW (BASIC STRUCT)
MS35206-228 SCREW (SAR VARIANT)
NAS1149DN616J WASHER
(TYP 2 PLACES)
INSTALL:
3G5315A82731
CONNECTOR SUPPORT ASSY
INSTALL:
MS27039-4-12 SCREW
NAS1149D0432K WASHER
(TYP 4 PLACES)
2320M-33-1 PUMP
(REF)
3P5331A54632
RH VERTICAL PANEL NOT SHOWN
3G5331A04452
MACHINED LONGERON RH SHOWN
(REF)
DETAIL W
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 7

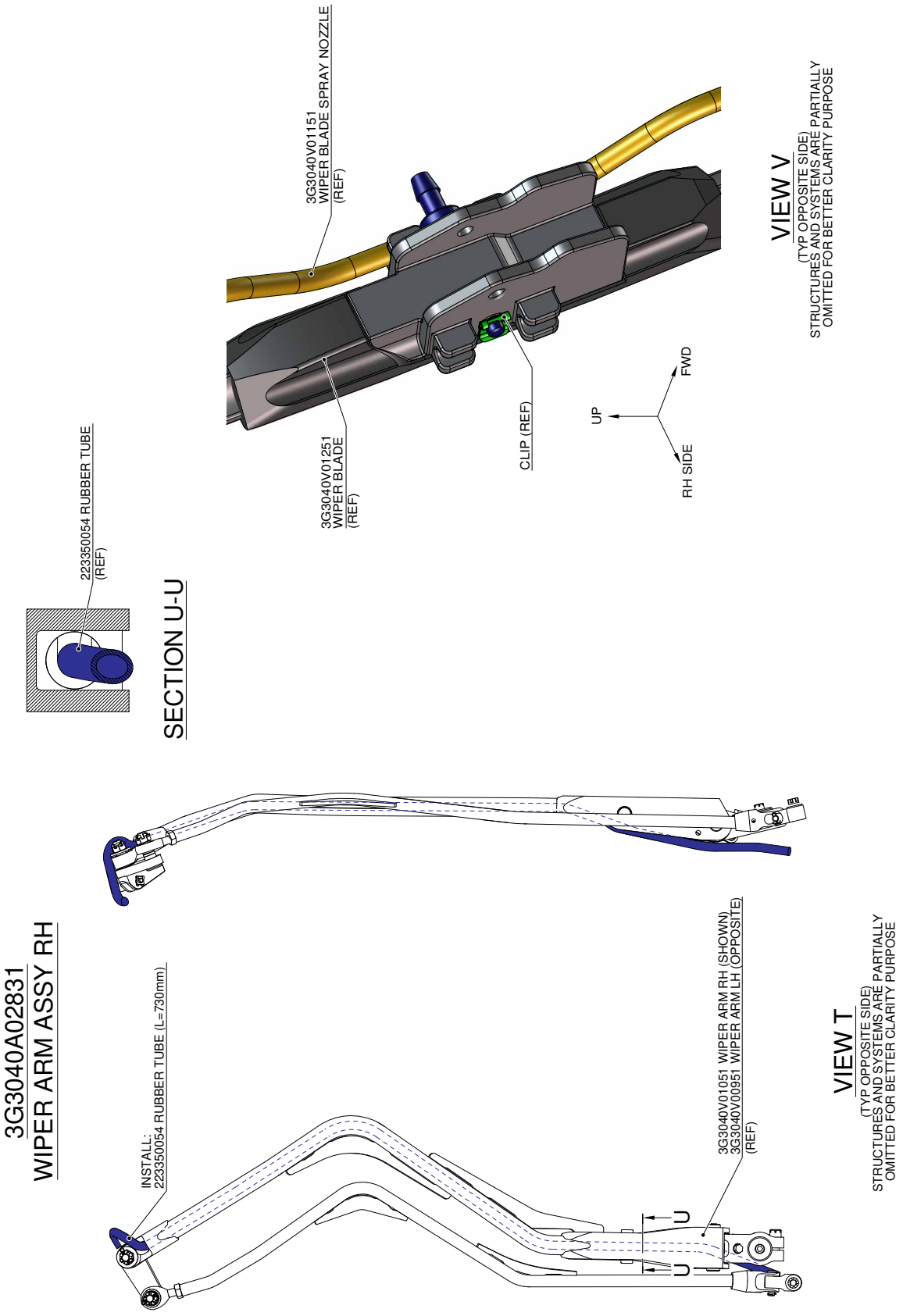

3G3040A02831
WIPER ARM ASSY RH
INSTALL:
223350054 RUBBER TUBE (L=730mm)
3G3040V01051 WIPER ARM RH (SHOWN)
3G3040V00951 WIPER ARM LH (OPPOSITE)
(REF)
U
U
VIEW T
(TYP OPPOSITE SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
223350054 RUBBER TUBE
(REF)
SECTION U-U
3G3040V01151
WIPER BLADE SPRAY NOZZLE
(REF)
3G3040V01251
WIPER BLADE
(REF)
CLIP (REF)
UP
FWD
RH SIDE
VIEW V
(TYP OPPOSITE SIDE)
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 8

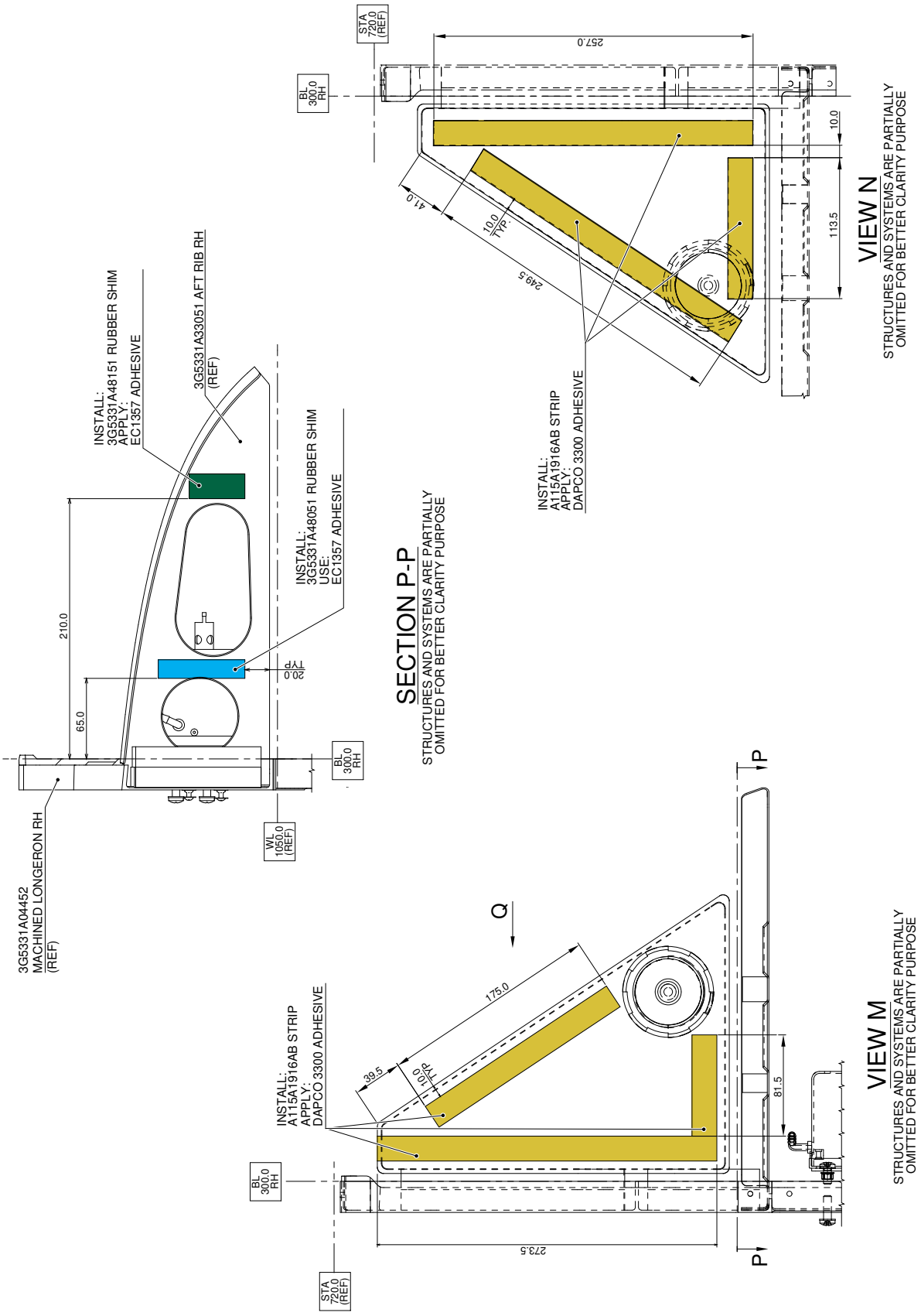
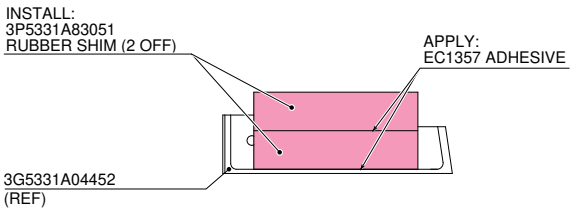
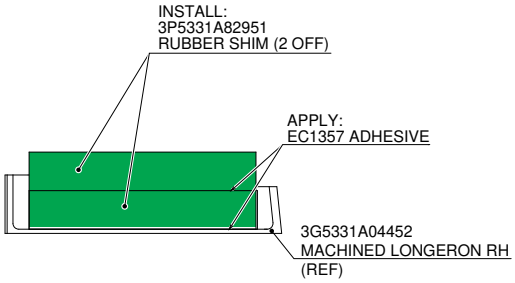

STA 720.0 (REF)
BL 300.0 RH
267.0
10.0
113.5
41.0
10.0 TYP
249.5
VIEW N
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
INSTALL: A115A1916AB STRIP APPLY: DAPCO 3300 ADHESIVE
INSTALL: 3G5331A48151 RUBBER SHIM APPLY: EC1357 ADHESIVE
3G5331A33051 AFT RIB RH (REF)
INSTALL: 3G5331A48051 RUBBER SHIM USE: EC1357 ADHESIVE
SECTION P-P
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
210.0
65.0
20.0 TYP
BL 300.0 RH
WL 1055.0 (REF)
3G5331A04452 MACHINED LONGERON RH (REF)
P
Q
175.0
39.5
10.0 TYP
INSTALL: A115A1916AB STRIP APPLY: DAPCO 3300 ADHESIVE
81.5
273.5
VIEW M
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
BL 300.0 RH
STA 720.0 (REF)

Figure 9



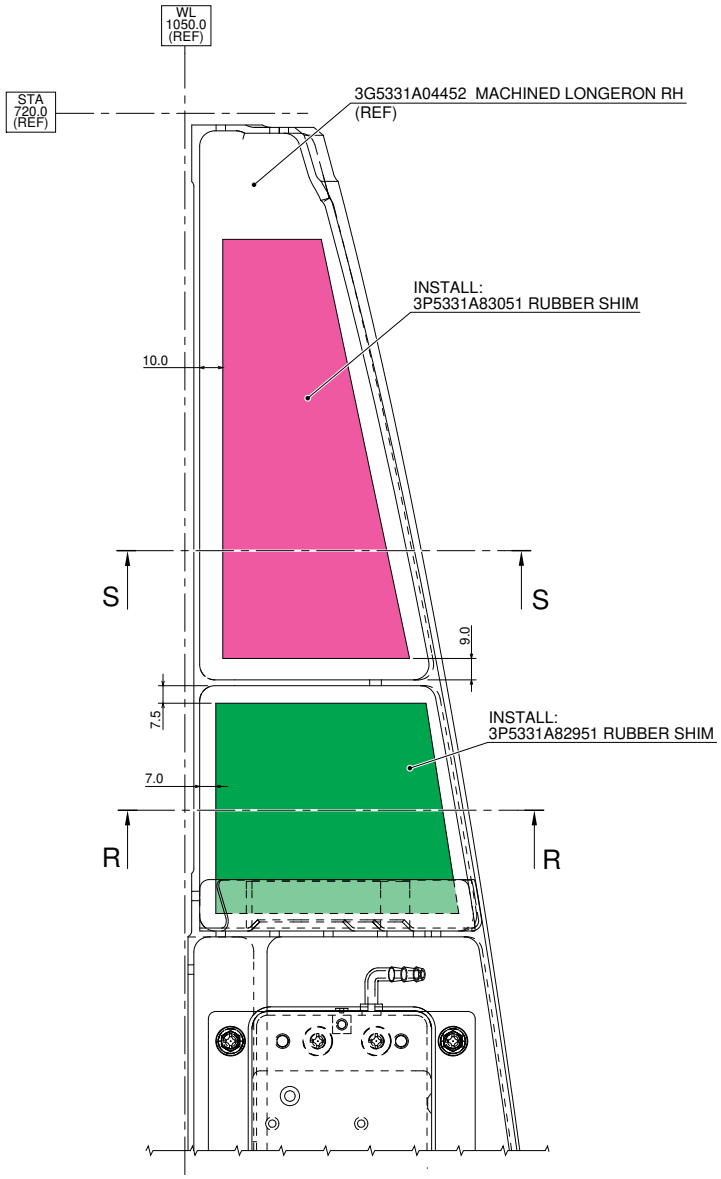
SECTION S-S

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



SECTION R-R

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



VIEW Q

3G3040L00151 RESERVOIR IS OMITTED FOR CLARITY
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 10

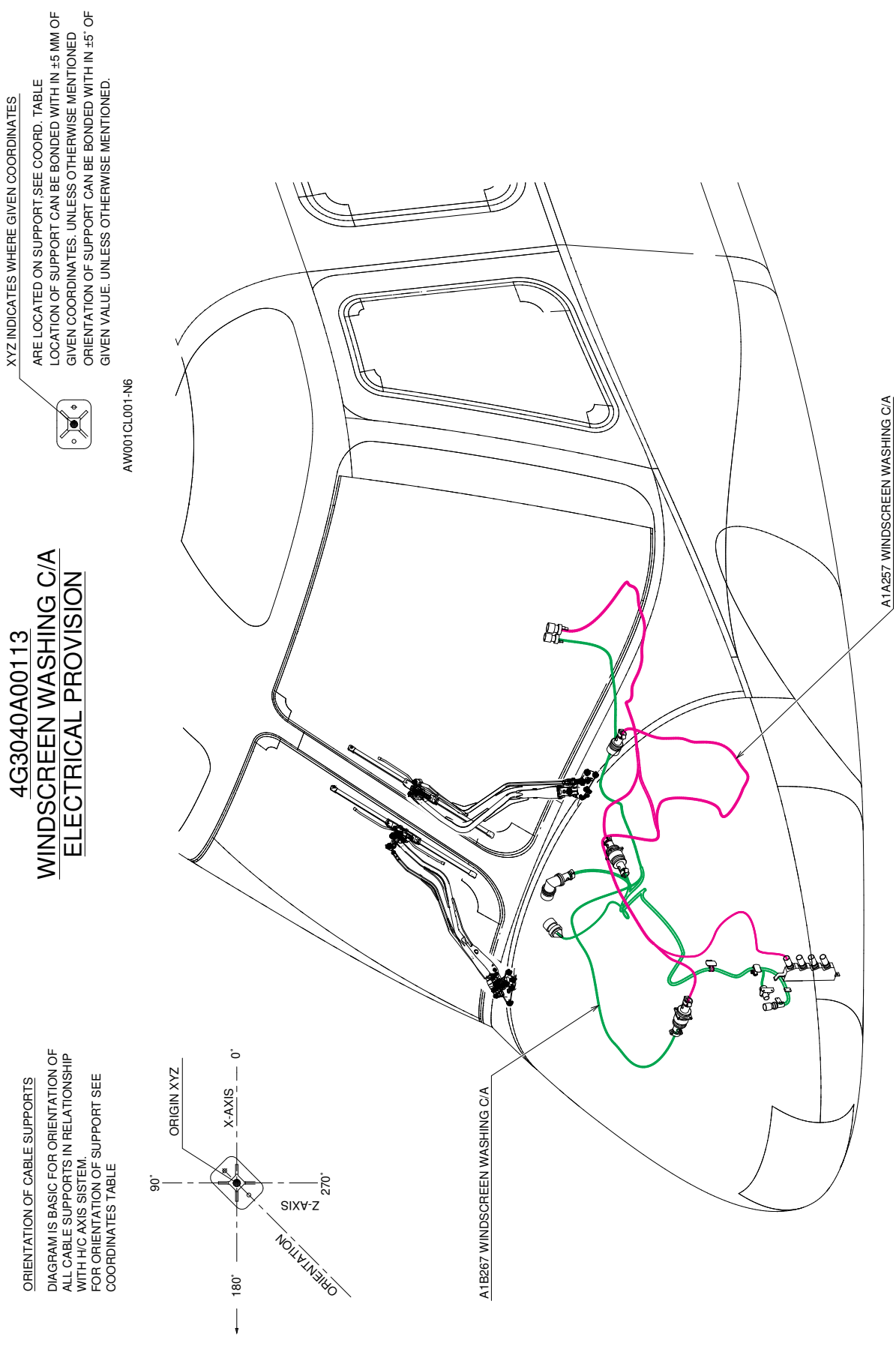
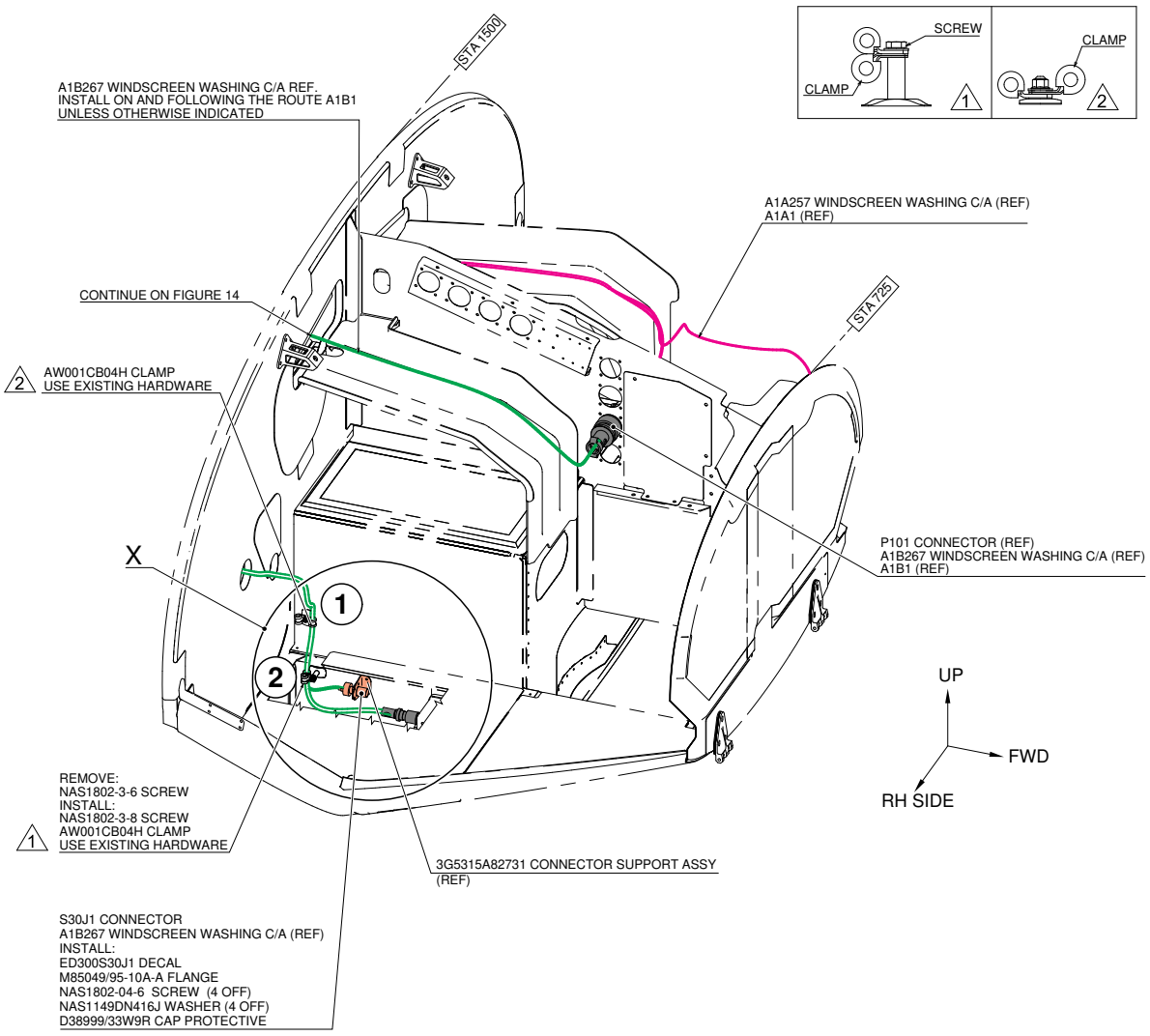
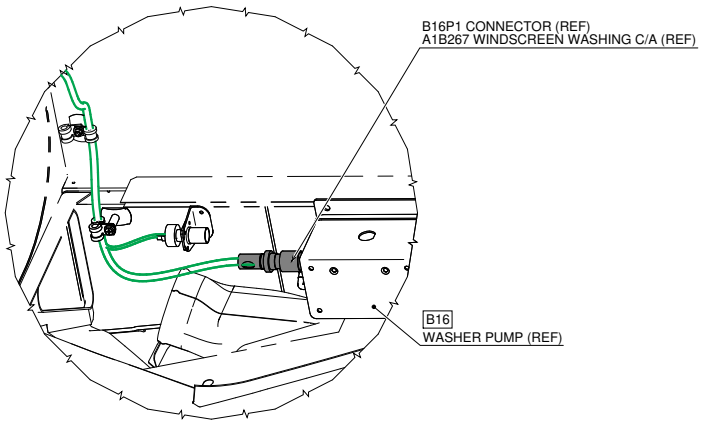

4G3040A00113
WINDSCREEN WASHING C/A
ELECTRICAL PROVISION
AW001CL001-N6
XYZ INDICATES WHERE GIVEN COORDINATES
ARE LOCATED ON SUPPORT,SEE COORD. TABLE
LOCATION OF SUPPORT CAN BE BONDED WITH IN ±5 MM OF
GIVEN COORDINATES. UNLESS OTHERWISE MENTIONED
ORIENTATION OF SUPPORT CAN BE BONDED WITH IN ±5° OF
GIVEN VALUE. UNLESS OTHERWISE MENTIONED.
ORIENTATION OF CABLE SUPPORTS
DIAGRAM IS BASIC FOR ORIENTATION OF
ALL CABLE SUPPORTS IN RELATIONSHIP
WITH H/C AXIS SISTEM.
FOR ORIENTATION OF SUPPORT SEE
COORDINATES TABLE
ORIGIN XYZ
X-AXIS
0°
90°
270°
Z-AXIS
ORIENTATION
180°
A1B267 WINDSCREEN WASHING C/A
A1A257 WINDSCREEN WASHING C/A

Figure 11



VIEW LOOKING NOSE RH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE



DETAIL X
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE

Figure 12

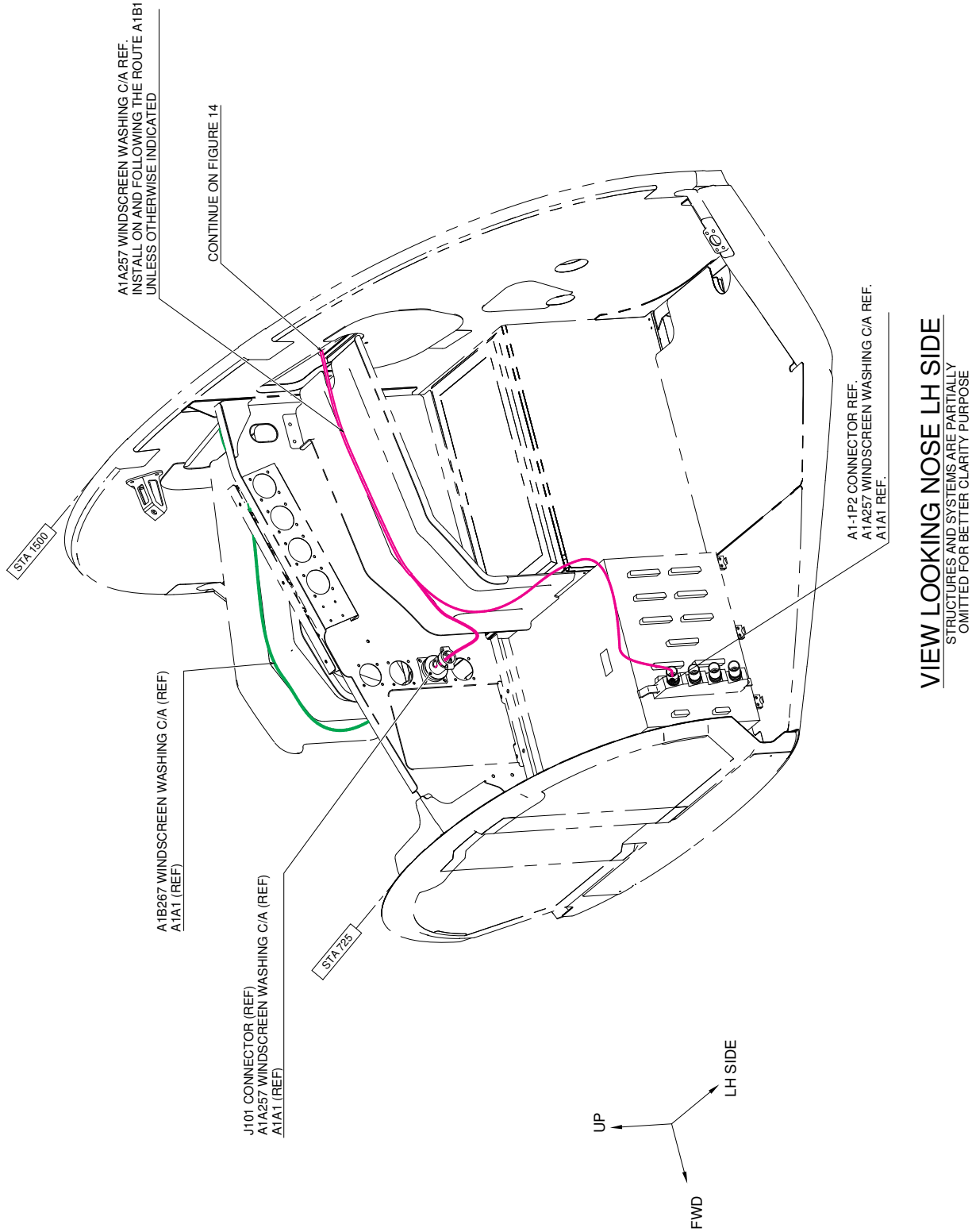

A1A257 WINDSCREEN WASHING C/A REF.
INSTALL ON AND FOLLOWING THE ROUTE A1B1
UNLESS OTHERWISE INDICATED
CONTINUE ON FIGURE 14
STA 1500
A1B267 WINDSCREEN WASHING C/A (REF)
A1A1 (REF)
J101 CONNECTOR (REF)
A1A257 WINDSCREEN WASHING C/A (REF)
A1A1 (REF)
STA 725
A1-1P2 CONNECTOR REF.
A1A257 WINDSCREEN WASHING C/A REF.
A1A1 REF.
VIEW LOOKING NOSE LH SIDE
STRUCTURES AND SYSTEMS ARE PARTIALLY
OMITTED FOR BETTER CLARITY PURPOSE
UP
LH SIDE
FWD

Figure 13

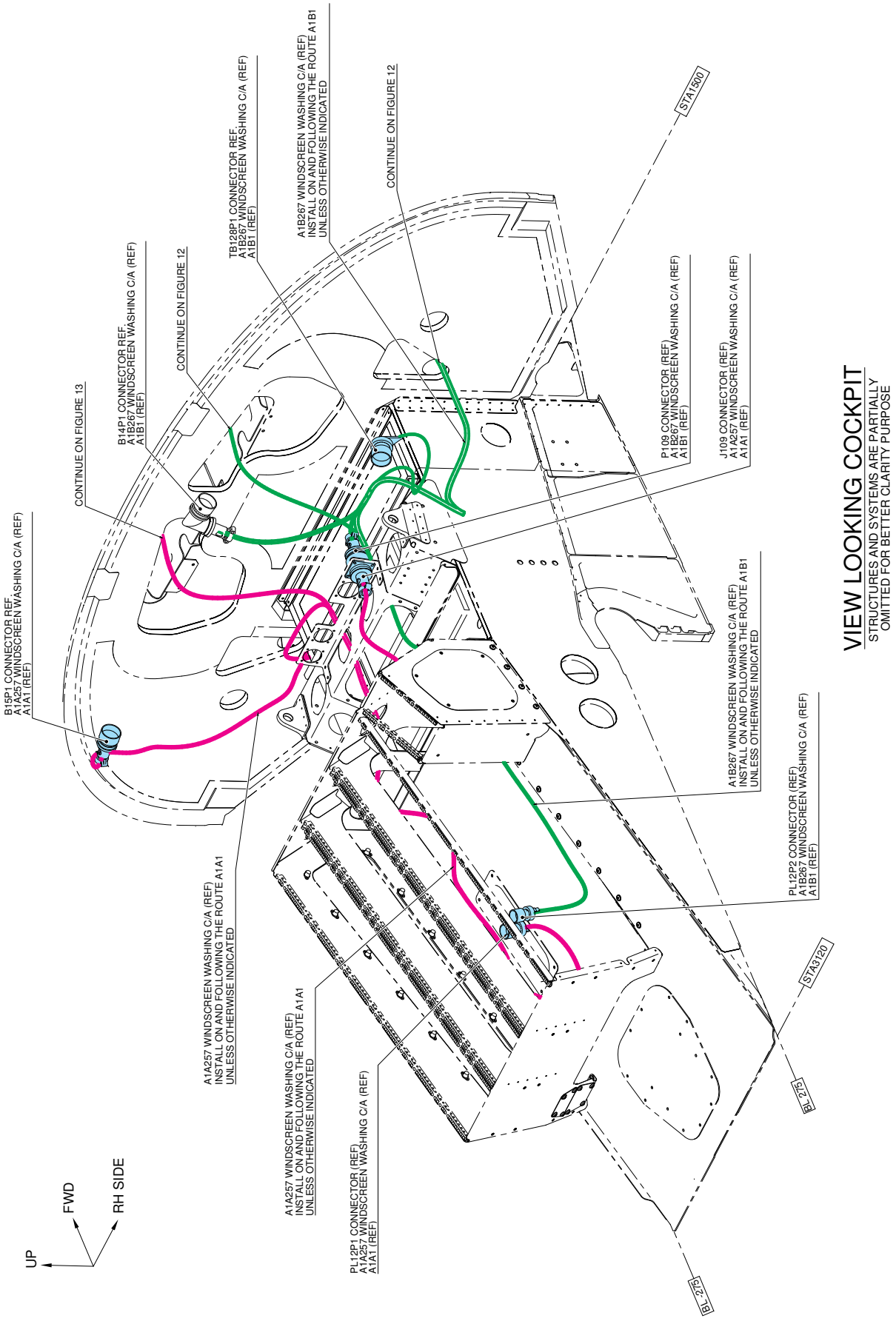

VIEW LOOKING COCKPIT
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE
B15P1 CONNECTOR REF.
A1A257 WINDSCREEN WASHING C/A (REF)
A1A1 (REF)
CONTINUE ON FIGURE 13
B14P1 CONNECTOR REF.
A1B267 WINDSCREEN WASHING C/A (REF)
A1B1 (REF)
CONTINUE ON FIGURE 12
TB128P1 CONNECTOR REF.
A1B267 WINDSCREEN WASHING C/A (REF)
A1B1 (REF)
A1B267 WINDSCREEN WASHING C/A (REF)
INSTALL ON AND FOLLOWING THE ROUTE A1B1
UNLESS OTHERWISE INDICATED
CONTINUE ON FIGURE 12
STA1500
P109 CONNECTOR (REF)
A1B267 WINDSCREEN WASHING C/A (REF)
A1B1 (REF)
J109 CONNECTOR (REF)
A1A257 WINDSCREEN WASHING C/A (REF)
A1A1 (REF)
A1B267 WINDSCREEN WASHING C/A (REF)
INSTALL ON AND FOLLOWING THE ROUTE A1B1
UNLESS OTHERWISE INDICATED
PL12P2 CONNECTOR (REF)
A1B267 WINDSCREEN WASHING C/A (REF)
A1B1 (REF)
A1A257 WINDSCREEN WASHING C/A (REF)
INSTALL ON AND FOLLOWING THE ROUTE A1A1
UNLESS OTHERWISE INDICATED
A1A257 WINDSCREEN WASHING C/A (REF)
INSTALL ON AND FOLLOWING THE ROUTE A1A1
UNLESS OTHERWISE INDICATED
PL12P1 CONNECTOR (REF)
A1A257 WINDSCREEN WASHING C/A (REF)
A1A1 (REF)
STA3120
BL 275
BL 275
UP
FWD
RH SIDE

Figure 14

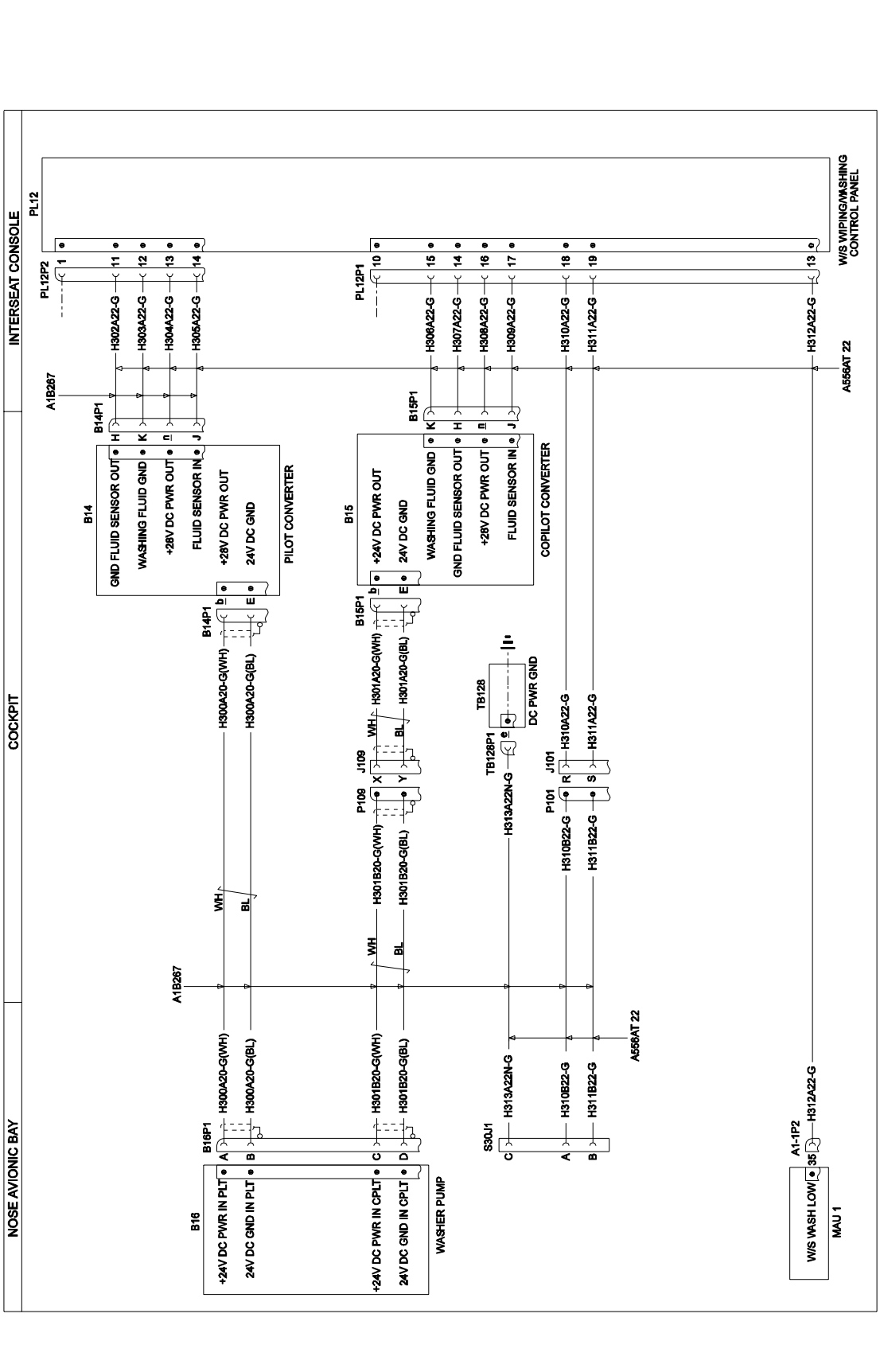

3G3040W00211
WIRING DIAGRAM WINDSCREEN WASHING
NOSE AVIONIC BAY
COCKPIT
INTERSEAT CONSOLE
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM A1A257 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A561AT2 20 UNLESS SPECIFIED
WASHER PUMP
PILOT CONVERTER
COPILOT CONVERTER
W/S WIPING/WASHING CONTROL PANEL
MAU 1
A1B267
A556AT 22
PL12
PL12P2
PL12P1
B14
B15
B16
B14P1
B15P1
B16P1
J109
P109
J101
P101
TB128
TB128P1
S30J1
A1-1P2
GND FLUID SENSOR OUT
WASHING FLUID GND
+28V DC PWR OUT
FLUID SENSOR IN
24V DC GND
+24V DC PWR OUT
GND FLUID SENSOR OUT
+24V DC PWR IN PLT
24V DC GND IN PLT
+24V DC PWR IN CPLT
24V DC GND IN CPLT
W/S WASH LOW
DC PWR GND
H300A20-G(WH)
H300A20-G(BL)
H301A20-G(WH)
H301A20-G(BL)
H301B20-G(WH)
H301B20-G(BL)
H302A22-G
H303A22-G
H304A22-G
H305A22-G
H306A22-G
H307A22-G
H308A22-G
H309A22-G
H310A22-G
H311A22-G
H312A22-G
H313A22N-G
H310B22-G
H311B22-G
WH
BL

Figure 15

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.