
SERVICE BULLETIN

N° 139-658

DATE: July 6, 2021

REV. : /

TITLE

ATA 23 - SATCOM FLIGHTCELL DZMX (4G) UPGRADE RETROMOD

REVISION LOG

First Issue

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

1. PLANNING INFORMATION

A. EFFECTIVITY

AW139 helicopters S/N 41567, 41568, 41569 and 41570.

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 SATCOM Flightcell DZMX (4G) upgrade retromod P/N 3G4390P00811.

E. DESCRIPTION

This Service Bulletin provides the necessary instructions to perform the upgrade from the configuration with both the kit P/N 4G4390F00811 SATCOM Flightcell DZMX (4G) and the kit P/N 4G4390F00911 SATCOM Flightcell Wireless router installed to the kit P/N 4G4390F01111 SATCOM Flightcell DZMX 4G-WIFI.

The kit P/N 4G4390F01111 introduces a new transceiver, the DZP_04-800-BFW, replacing the P/N DZP_04-800, which is included in kit P/N 4G4390F00811. The new transceiver features a new cellular module, a new processor and an integrated Wi-Fi router. Differently from P/N DZP_04-800, external routers are no longer required to provide Wi-Fi connection capabilities.

In addition, this Service Bulletin provides all necessary instructions on how to remove the SATCOM Flightcell WIFI router, part of the kit P/N 4G4390F00911 SATCOM Flightcell Wireless router (with wiring stowage and blocking of the relative circuit breaker).

F. APPROVAL

The technical content of this Service Bulletin is approved under the authority of DOA nr. EASA.21.J.005. For helicopters registered under other Aviation Authorities, before applying the Service Bulletin, applicable Aviation Authority approval must be checked within Leonardo Helicopters customer portal.

EASA states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives.

If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

G. MANPOWER

To comply with this Service Bulletin thirty (30) 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)	ARM (mm)	MOMENT (Kgmm)
		-0.5
LONGITUDINAL BALANCE	2786	-1393
LATERAL BALANCE	-202	101

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	-
DM02 39-A-06-41-00-00A-010A-A	Access doors and panels - General data	-
DM03 39-C-23-97-01-00A-520A-K	Telephone transceiver - Remove procedure	-
DM04 39-E-23-97-00-00A-320A-A	Airborne telephone system - Operation test	-

2) ACRONYMS & ABBREVIATIONS

AMD	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
DM	Data Module

DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IPD	Illustrated Parts Data Publication
ITEP	Illustrated Tool and Equipment Publication
LHD	Leonardo Helicopters Division
MMH	Maintenance Man Hours
SATCOM	SATellite COMmunications
WIFI	Wireless Fidelity

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

AW139 Aircraft Maintenance Publication (AMP)

AW139 Illustrated Parts Data Publication (IPD)

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	3G4390P00811		SATCOM FLIGHTCELL DZMX (4G) UPGRADE RETROMOD	REF	.		-
2	999-0500-85-207		Blank plate	1	..		139-658L1
3	AW001CL001-N6		Support	2	..		139-658L1
4	AW001YC01RED		Lock ring	1	..		139-658L1
5	DZP_04-800-BFW		DZMX transceiver	1	..		139-658L1
6	NAS813-18		Protective plug	1	..		139-658L1

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
7	AW001CK03LC	Tie strap	AR	(1)	-
8	EN6049-006-25-5	Fibre sleeve (Nomex)	AR	(1)	-
9	199-05-002 Type I, Class 2	Adhesive Hysol EA9309 NA (C231) or EA9309.3NA	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
139-658L1	1	-	-

NOTE

(1) Item to be 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

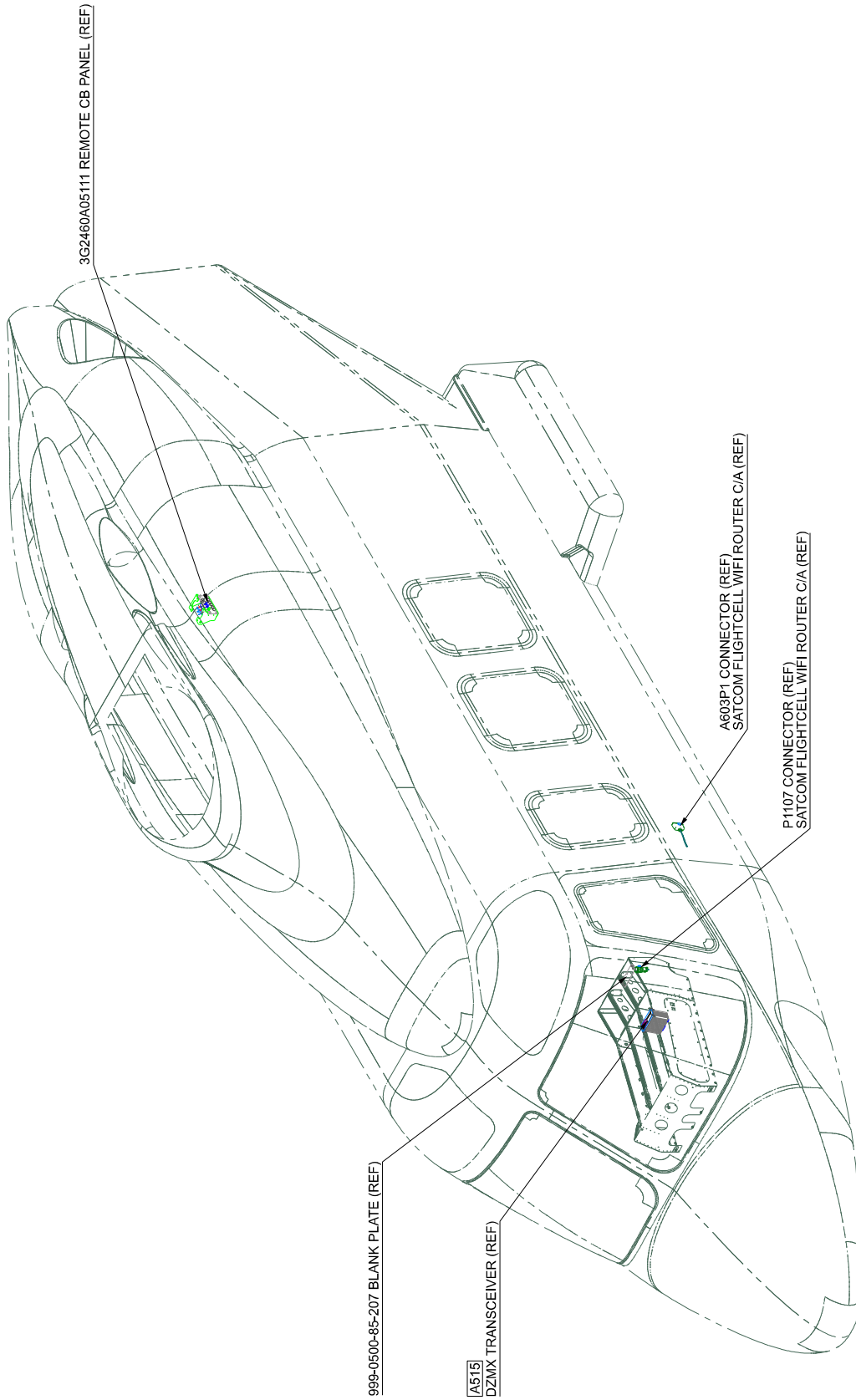
GENERAL NOTES

- 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.
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 SATCOM Flightcell DZMX (4G) upgrade retromod P/N 3G4390P00811 as described in the following procedure:
 - 2.1 In accordance with AMP DM 39-C-23-97-01-00A-520A-K and with reference to Figure 1 Isometric View and Figure 2 View Looking Interseat Console LH Side, remove the DZMX transceiver P/N DZP_04-800.
 - 2.2 With reference to Figure 1 Isometric View and Figure 2 View Looking Interseat Console LH Side, install the DZMX transceiver P/N DZP_04-800-BFW and connect the connectors A515P1, A515P2, A515P3, A515P4 and A515P5.
 - 2.3 With reference to Figure 1 Isometric View and Figure 2 View Looking Interseat Console LH Side, disconnect the connector P1107 and install the support P/N AW001CL001-N6 by means of Adhesive Hysol EA9309 NA (C231) or EA9309.3NA.
 - 2.4 With reference to Figure 2 View A, protect the connector P1107 with protective plug P/N NAS813-18, fibre sleeve (Nomex) P/N EN6049-006-25-5 and tie strap P/N AW001CK03LC.
 - 2.5 With reference to Figure 1 Isometric View and Figure 2 View Looking Interseat Console LH Side, remove the dummy connector plate P/N 3G5315P03751 and install the blank plate P/N 999-0500-85-207 with previously removed hardware.
 - 2.6 With reference to Figure 1 Isometric View and Figure 3 View Looking Cabin,

- disconnect the connector A603P1 from the WIFI router P/N 910-00014-503.
- 2.7 With reference to Figure 3 View Looking Cabin, remove the WIFI router P/N 910-00014-503 (including WIFI antenna P/N 117-00003-001) from the structure by means of n°6 screws P/N NAS1802-3-6, n°6 washers P/N NAS1149D0332J and bonding C/A P/N A601A3B32 and remove the decal P/N ED300A603.
 - 2.8 With reference to Figure 3 View Looking Cabin install the support P/N AW001CL001-N6 by means of Adhesive Hysol EA9309 NA (C231) or EA9309.3NA.
 - 2.9 With reference to Figure 3 View B, protect the connector A603P1 with protective plug (if available), fibre sleeve (Nomex) P/N EN6049-006-25-5 and tie strap P/N AW001CK03LC.
 - 2.10 With reference to Figure 1 Isometric View and Figure 3 View Looking Forward Rear, install the lock ring P/N AW001YC01RED on the SATCOM WIFI circuit breaker of the remote circuit breaker panel.
3. In accordance with the applicable steps of AMP DM 39-E-23-97-00-00A-320A-A perform the airborne telephone system operational test.
 4. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
 5. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
 6. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardocompany.com

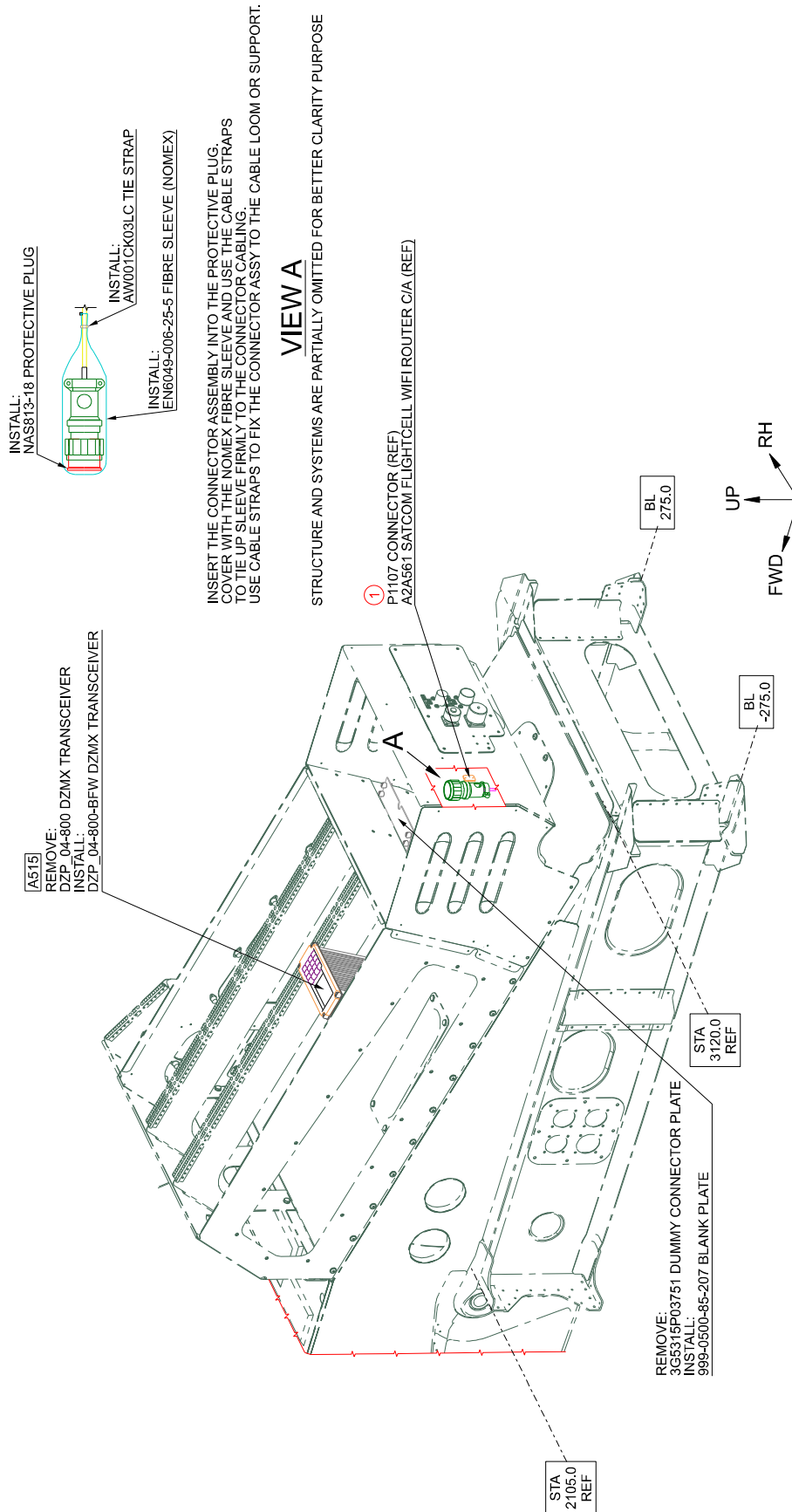
As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".



ISOMETRIC VIEW

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

Figure 1



INSERT THE CONNECTOR ASSEMBLY INTO THE PROTECTIVE PLUG. COVER WITH THE NOMEX FIBRE SLEEVE AND USE THE CABLE STRAPS TO TIE UP SLEEVE FIRMLY TO THE CONNECTOR CABLING. USE CABLE STRAPS TO FIX THE CONNECTOR ASSY TO THE CABLE LOOM OR SUPPORT.

VIEW A

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

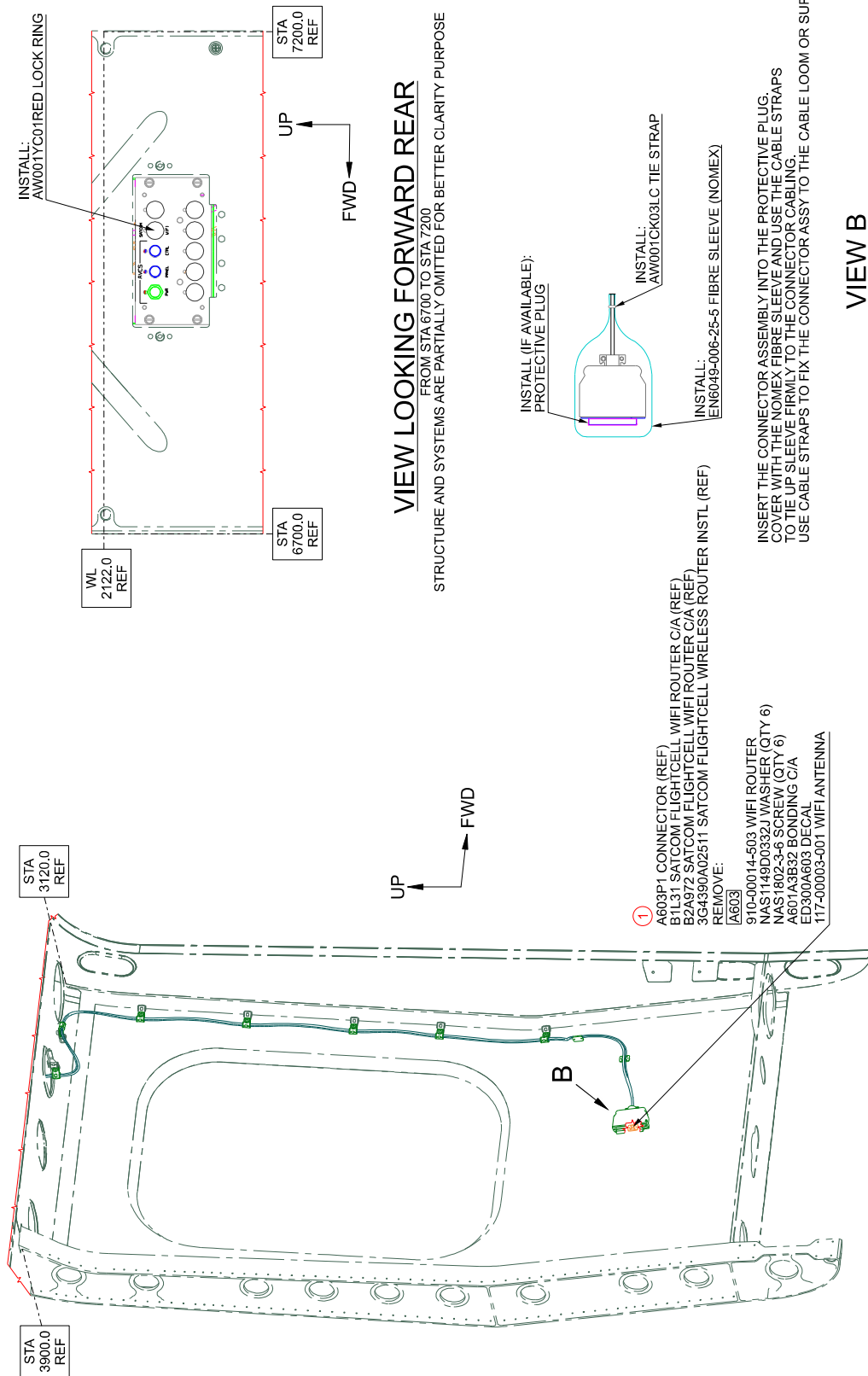
VIEW LOOKING INTERSEAT CONSOLE LH SIDE

STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
①	AW001CL001-N6	3164	-199.5	1306	90°

Figure 2



INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART NUMBER	STA	BL	WL	ORIENTATION
①	AW001CL001-N6	3460	-1078	1310	0°

Figure 3

