Leonardo S.p.A.
Via Giovanni Agusta, 520
21017 Cascina Costa di Samarate (VA) Italy
Tel.: +39 0331 229111 - Fax: +39 0331 229605/222595

AgustaWestland Products

SERVICE BULLETIN

N° 139-625

DATE: June 8, 2021

REV. : /

TITLE

ATA 33 - UTILITY LIGHT IMPROVEMENT

REVISION LOG

First Issue

1. PLANNING INFORMATION

A. EFFECTIVITY

AB/W139 helicopters equipped with NVG utility light P/N 3G3310A00231 or light assy P/N 90-004-1.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instructions on how to perform the replacement of the utility lights in the cockpit.

E. DESCRIPTION

Due to a logistic issue of the existing utility lights, new utility lights are installed on the overhead control panel and the mission control panel.

Part I (retromod P/N 3G3320P00811) provides the necessary instructions on how to replace the utility light on the overhead panel, pilot side.

Part II (retromod P/N 3G3320P00911) provides the necessary instructions on how to replace the utility light on the overhead panel, copilot side.

Part III (retromod P/N 3G3320P00611) provides the necessary instructions on how to replace the utility light on the mission control panel.

Part IV (retromod P/N 3G3320P01011) provides the necessary instructions on how to replace the utility light on the mission control panel.

Part V (retromod P/N 3G3320P01012) provides the necessary instructions on how to replace the utility light on the mission control panel.

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 LH certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

G. MANPOWER

To comply with this Service Bulletin, the following MMH are deemed necessary:

Part I: five (5) MMH

Part II: five (5) MMH

Part III: four (4) MMH

Part IV: four (4) MMH

Part V: four (4) MMH

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

H. WEIGHT AND BALANCE

N.A.

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

DATA MODULE		DESCRIPTION	PART
DM01	39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	I, II, III, IV, V
DM02	39-A-06-41-00-00A-010A-A	Access doors and panels - General data	I, II, III, IV, V
DM03	39-A-11-00-01-00A-720A-A	Decal - Install procedure	I, II, IV, V
DM04	39-A-25-23-03-00A-520A-K	Utility light - Remove procedure	IV, V
DM05	39-A-33-11-08-00A-520A-A	Right utility light - Remove procedure	I
DM06	39-A-33-11-09-00A-520A-A	Left utility light - Remove procedure	II
DM07	39-A-33-11-08-00B-720A-A	Right utility light - Install procedure	I
DM08	39-A-33-11-09-00B-720A-A	Left utility light - Install procedure	II
DM09	39-E-25-23-04-00A-520A-K	Utility light - Remove procedure	III

DATA MODULE		DESCRIPTION	PART
DM10	39-A-20-10-08-00A-622A-A	Electrical contacts - Crimp	I, II, III, IV, V
DM11	39-A-20-10-18-00A-691A-A	Electrical wires and cables - Marking	I, II, III, IV, V

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
AR	As Required
C/A	Cable Assy
CB	Circuit Breaker
CPLT	Copilot
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
GS	Ground Stud
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
NVG	Night Vision Goggles
PLT	Pilot
P/N	Part Number
SB	Service Bulletin
TB	Terminal Board

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

AW139 AMP

AW139 IPD

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	**3G3320P00811**		**PLT UTILITY LIGHT (NVG) ELECTRICAL RETROMOD**	**REF**	**.**		**-**
2	4F3310V00151		Utility light	1	..		139-625L1
3	AW001CL001-N6		Electrical support	1	..		139-625L1
4	ED300GS500		Decal	1	..		139-625L1
5	A523A-A02		Electrical contact	3	.		139-625L1
6	A596A07		In line junction	1	.		139-625L1
7	MS25036-103		Terminal lug	1	.		139-625L1
8	A556A-T22		Electrical wire	5 m	.		139-625L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
9	**3G3320P00911**		**CPLT UTILITY LIGHT (NVG) ELECTRICAL RETROMOD**	**REF**	**.**		**-**
10	4F3310V00151		Utility light	1	..		139-625L2
11	AW001CL001-N6		Electrical support	1	..		139-625L2
12	ED300GS501		Decal	1	..		139-625L2
13	A523A-A02		Electrical contact	3	.		139-625L2
14	A596A07		In line junction	1	.		139-625L2
15	MS25036-103		Terminal lug	1	.		139-625L2
16	A556A-T22		Electrical wire	5 m	.		139-625L2

PART III

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
17	**3G3320P00611**		**MISSION CNSL UTILITY LIGHT VARIANT**	**REF**	**.**		**-**
18	4F3310V00151		Utility light	1	..		139-625L3
19	A574A01-04		Insulation sleeving	1	..		139-625L3
20	MS21043-3		Nut	2	..		139-625L3
21	A523A-A05		Electrical contact	3	.		139-625L3
22	A596A07		In line junction	1	.		139-625L3
23	MS25036-103		Terminal lug	1	.		139-625L3
24	A556A-T22		Electrical wire	8 m	.		139-625L3

PART IV

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
25	**3G3320P01011**		**MISSION CONSOLE LIGHT RETROMOD**	**REF**	**.**		**-**
26	4F3310V00151		Utility light	1	..		139-625L4
27	AW001CL001-N6		Electrical support	2	..		139-625L4
28	ED300GS2079		Decal	1	..		139-625L4

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
29	A523A-A05		Electrical contact	3	.		139-625L4
30	M39029/56-348		Electrical contact	2	.		139-625L4
31	MS25036-103		Terminal lug	1	.		139-625L4
32	A556A-T22		Electrical wire	2 m	.		139-625L4
33	A596A07		In line junction	1	.		139-625L4

PART V

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
34	**3G3320P01012**		**MISSION CONSOLE LIGHT RETROMOD**	**REF**	**.**		**-**
35	4F3310V00151		Utility light	1	..		139-625L5
36	AW001CL001-N6		Electrical support	2	..		139-625L5
37	ED300GS2079		Decal	1	..		139-625L5
38	A523A-A05		Electrical contact	3	.		139-625L5
39	M39029/56-348		Electrical contact	2	.		139-625L5
40	MS25036-103		Terminal lug	1	.		139-625L5
41	A556A-T22		Electrical wire	2 m	.		139-625L5
42	A596A07		In line junction	1	.		139-625L5

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./LH CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
43	EN6049-003-06-5	Tubular braid	2 m	(1)	III
44	A236A03AB	Edging	1.2 m	(2)	I, II, III, IV, V
45	A582A08 or EN6049-006-08-5	Tubing braided	AR	(2) (3)	I, II, III, IV, V
46	A578A05-9	Marker sleeve	AR	(2)	I, II, III, IV, V
47	199-05-002 Type 2 Class 3	Adhesive (C193)	AR	(1)	I, II, IV, V

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
139-625L1	1		I
139-625L2	1		II
139-625L3	1		III
139-625L4	1		IV
139-625L5	1		V

NOTE

(1) Item to be procured as local supply.

(2) Indicated P/N refer to a specific size. The last digits can be different based on the actual required installation.

(3) This item has to be completed according to the application. Item to be ordered in m.

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

Configuration change.

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 and plastic cable tiedown.

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

d) Protect properly all those equipment not removed from area affected by the modification during installation procedure.

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

f) All lengths are in mm.

PART I

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 1, gain access to the area affected by the installation and perform PLT utility light (NVG) retromod P/N 3G3320P00811 as described in the following procedure:
   - 2.1 In accordance with AMP DM 39-A-33-11-08-00A-520A-A and with reference to Figure 1 View A, remove the PLT utility light (NVG) P/N 3G3310A00231 or the light assy P/N 90-004-1, disconnect it from the terminal board TB508 and retain existing hardware for later reuse.
   - 2.2 With reference to Figure 1 View A, remove the terminal board TB508 and its relevant hardware.
   - 2.3 With reference to Figure 1 View A, install the electrical support P/N AW001CL001-N6 in the indicated position by means of adhesive (C193).

2.4 With reference to Figure 1 View A, locate the in-line junction P/N A596A07 (TB516) on the support P/N AW001CL001-N6.

NOTE

Use the edging P/N A236A on edges which are subject to cause damage to cable assemblies or where abrasion may occur.

NOTE

Install the tubing braided P/N A582A or P/N EN6049-006 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

NOTE

If necessary, in order to ensure a proper installation of the equipment, it is possible to use bolts (length only) and/or screws (length only) and/or spacers (length only) and/or washers (thickness only) of two increments greater or lesser with respect to the indicated ones.

2.5 With reference to Figure 1 and 4 wiring diagram, modify the C/A E1C203 to obtain the PLT utility light NVG var C/A (E1C304) P/N 3G9E01C30401 as described in the following procedure:

2.5.1 With reference to Figure 4 wiring diagram, disconnect the wire “323-22” of the C/A E1C203 from pin 1 of the terminal board TB508.

2.5.2 With reference to Figure 4 wiring diagram, disconnect the wire “324-22N” of the C/A E1C203 from pin 2 of the terminal board TB508.

2.5.3 With reference to Figure 1 and Figure 4 wiring diagram, lay down n°1 wire P/N A556A-T22 of adequate length between the in line junction TB516 and the ground stud GS500.

2.5.4 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 1 and Figure 4 wiring diagram, perform the electrical connections between the in line junction TB516 and the ground stud GS500 by means of the electrical contact P/N A523A-A02 (TB516 side) and the terminal lug P/N MS25036-103 (GS500 side).

2.5.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 4 wiring diagram, mark the wire as “330-22” by means of marker sleeve.

NOTE

If necessary it is possible to install and perform electrical connection between a splice and the wires, in order to reach a correct length installation.

2.5.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 1 and Figure 4 wiring diagram, perform the electrical connections of the wires marked as “323-22” and “324-22N” to the in line junction TB516 by means of n°2 electrical contacts P/N A523A-A02 (TB516 side).

2.5.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 1 and Figure 4 wiring diagram, mark the cable assy so obtained as E1C304 by means of marker sleeve

2.6 In accordance to AMP DM 39-A-33-11-08-00B-720A-A and with reference to Figure 1 and Figure 4 wiring diagram, install the PLT utility light P/N 4F3310V00151 by means of the existing hardware previously removed.

NOTE

Decal to be installed internally on the aircraft.

2.7 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 1, install the decal P/N ED300GS500 on the ground stud GS500.

2.8 Perform a pin-to-pin continuity check of all the electrical connections made.

3. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.

4. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardocompany.com

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

PART II

1. In accordance with 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 Figure 2, gain access to the area affected by the installation and perform CPLT utility light (NVG) retro mod P/N 3G3320P00911 as described in the following procedure:

   2.1 In accordance with AMP DM 39-A-33-11-09-00A-520A-A and with reference to Figure 2 View A, remove the CPLT utility light (NVG) P/N 3G3310A00231 or the light assy P/N 90-004-1, disconnect it from the terminal board TB507 and retain existing hardware for later reuse.

   2.2 With reference to Figure 2 View A, remove the terminal board TB507 and its relevant hardware.

   2.3 With reference to Figure 2 View A, install the electrical support P/N AW001CL001-N6 in the indicated position by means of adhesive (C193).

   2.4 With reference to Figure 2 View A, locate the in-line junction P/N A596A07 (TB517) on the support P/N AW001CL001-N6.

NOTE

Use the edging P/N A236A on edges which are subject to cause damage to cable assemblies or where abrasion may occur.

NOTE

Install the tubing braided P/N A582A or P/N EN6049-006 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

NOTE

If necessary, in order to ensure a proper installation of the equipment, it is possible to use bolts (length only) and/or screws (length only) and/or spacers (length only) and/or washers (thickness only) of two increments greater or lesser with respect to the indicated ones.

   2.5 With reference to Figure 2 and 5 wiring diagram, modify the C/A E1C203 to obtain the PLT utility light NVG var C/A (E1C305) P/N 3G9E01C30501 as described in

the following procedure:

2.5.1 With reference to Figure 5 wiring diagram, disconnect the wire “325-22” of the C/A E1C203 from pin 1 of the terminal board TB507.

2.5.2 With reference to Figure 5 wiring diagram, disconnect the wire “326-22N” of the C/A E1C203 from pin 2 of the terminal board TB507.

2.5.3 With reference to Figure 2 and Figure 5 wiring diagram, lay down n°1 wire P/N A556A-T22 of adequate length between the in line junction TB517 and the ground stud GS501.

2.5.4 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 2 and Figure 5 wiring diagram, perform the electrical connections between the in line junction TB517 and the ground stud GS501 by means of the electrical contact P/N A523A-A02 (TB517 side) and the terminal lug P/N MS25036-103 (GS501 side).

2.5.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 5 wiring diagram, mark the wire as “331-22” by means of marker sleeve.

NOTE

If necessary it is possible to install and perform electrical connection between a splice and the wires, in order to reach a correct length installation.

2.5.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 2 and Figure 5 wiring diagram, perform the electrical connections of the wires marked as “325-22” and “326-22N” to the in line junction TB517 by means of n°2 electrical contacts P/N A523A-A02 (TB517 side).

2.5.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 2 and Figure 5 wiring diagram, mark the cable assy so obtained as E1C305 by means of marker sleeve.

2.6 In accordance with AMP DM 39-A-33-11-09-00B-720A-A and with reference to Figure 2 and Figure 5 wiring, install the CPLT utility light P/N 4F3310V00151 by means of the existing hardware previously removed.

NOTE

Decal to be installed internally on the aircraft.

2.7 In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 2, install the decal P/N ED300GS501 on the ground stud GS501.

2.8 Perform a pin-to-pin continuity check of all the electrical connections made.

3. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
4. Send the attached compliance form to the following mail box:

   engineering.support.lhd@leonardocompany.com

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

PART III

1. In accordance with 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 Figure 3, gain access to the area affected by the installation and perform mission console utility light variant P/N 3G3320P00611 as described in the following procedure:
   2.1 In accordance with AMP DM 39-E-25-23-04-00A-520A-K and with reference to Figure 3 View A, remove the utility light (NVG) P/N 3G3310A00231, remove and retain for later reuse the existing hardware.
   2.2 With reference to Figure 3 View A, remove the terminal board TB289 and its relevant hardware.
   2.3 With reference to Figure 3, locate the in line junction P/N A596A07 (TB2295) on the existing support of the mission consol.

NOTE

Use the edging P/N A236A on edges which are liable to cause damage to cable assemblies or where abrasion may occur.

NOTE

Install the tubing braided P/N A582A or P/N EN6049-006 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

NOTE

If necessary, in order to ensure a proper installation of the equipment, it is possible to use bolts (length only) and/or screws (length only) and/or spacers (length only) and/or washers (thickness only) of two increments greater or lesser with respect to the indicated ones.

   2.4 With reference to Figure 6 wiring diagram, modify the C/A B1P110 to obtain the mission cnsl utility light variant C/A (B1L106) P/N 3G9B01L10601 as described in the following procedure:
      2.4.1 With reference to Figure 6 wiring diagram, disconnect the wire “U6711A22-G” of the C/A B1P110 from the terminal board TB289.

2.4.2 With reference to Figure 6 wiring diagram, disconnect the wire “U6712A22-G” of the C/A B1P110 from the terminal board TB289.

2.4.3 With reference to Figure 3 and Figure 6 wiring diagram, lay down n°1 wire P/N A556A-T22 of adequate length between the in line junction TB2295 and the ground stud GS2101.

2.4.4 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 3 and Figure 6 wiring diagram, perform the electrical connections between the in line junction TB2295 and the ground stud GS2101 by means of the electrical contact P/N A523A-A02 (TB2295 side) and the terminal lug P/N MS25036-103 (GS2101 side).

2.4.5 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 6 wiring diagram, mark the wire as “U7720A22N-G” by means of marker sleeve.

NOTE

If necessary it is possible to install and perform electrical connection between a splice and the wires, in order to reach a correct length installation.

2.4.6 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 3 and Figure 6 wiring diagram, perform the electrical connections of the wires marked as “U6711A22-G” and “U6712A22-G” to the in line junction TB2295 by means of n°2 electrical contacts P/N A523A-A02 (TB2295 side).

2.4.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 3 and Figure 6 wiring diagram, mark the cable assy so obtained as B1L106 by means of marker sleeve.

2.5 With reference to Figure 3, install the tubular braid P/N EN6049-003-06-5 and the insulation sleeving P/N A574A01-04 on the connector P2099.

2.6 With reference to Figure 3 and Figure 6 wiring diagram, install the utility light P/N 4F3310V00151 ad described in the following procedure:

2.6.1 With reference to Figure 3, put the utility light P/N 4F3310V00151 in its position on the mission console structure.

2.6.2 With reference to Figure 3, fix the utility light P/N 4F3310V00151 to the mission console by means of the existing hardware previously removed and n°2 nuts P/N MS21043-3.

2.6.3 With reference to figure 6 wiring diagram perform the electrical connection between the cable on part of the utility light P/N 4F3310V00151 and the terminal board TB2295.

2.7 Perform a pin-to-pin continuity check of all the electrical connections made.

3. Return the helicopter to flight configuration and record for compliance with Part III of this Service Bulletin on the helicopter logbook.

4. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardocompany.com

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

PART IV

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 Figure 7 Isometric View and View A, gain access to the area affected by the installation and perform mission console light retromod P/N 3G3320P01011 as described in the following procedure:

   2.1 In accordance with AMP DM 39-A-25-23-03-00A-520A-K and with reference to Figure 7 View B, remove the light assy P/N 90-004-1, remove and retain for later reuse the existing hardware.

   2.2 With reference to Figure 7 View B, remove the existing terminal board TB2055 and its relevant hardware.

   2.3 With reference to Figure 7 View B, install n° 2 electrical supports P/N AW001CL001-N6 in the indicated position by means of adhesive (C193).

   2.4 With reference to Figure 7 View B, locate the in-line junction P/N A596A07 (TB2283) on the support P/N AW001CL001-N6 at location n°1.

NOTE

Use the edging P/N A236A on edges which are liable to cause damage to cable assemblies or where abrasion may occur.

NOTE

Install the tubing braided P/N A582A or P/N EN6049-006 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

NOTE

If necessary, in order to ensure a proper installation of the equipment, it is possible to use clamps (diameter only) and/or bolts (length only) and/or screws (length only) and/or spacers (length only) and/or washers (thickness only) of two increments greater or lesser with respect to the indicated ones.

   2.5 With reference to Figures 9 and 10 wiring diagrams, modify the existing cable assemblies to obtain the mission console light retromod C/A (B1L196)

P/N 3G9B01L19611 as described in the following procedure:

NOTE

Do the following two steps only if helicopter is equipped with C/A B1A727.

2.5.1 With reference to Figure 9 wiring diagram, disconnect the wire “U3012A22-G” of the C/A B1A727 from pin 1 of the terminal board TB2055 and from pin 1 of the connector P271.

2.5.2 With reference to Figure 9 wiring diagram, disconnect the wire “U3013A22-G” of the C/A B1A727 from pin 2 of the terminal board TB2055 and from pin 2 of the connector P271.

NOTE

Do the following two steps only if helicopter is equipped with C/A B1A837.

2.5.3 With reference to Figure 9 wiring diagram, disconnect the wire “U3554A22-G” of the C/A B1A837 from pin 1 of the terminal board TB2055 and from pin 1 of the connector P271.

2.5.4 With reference to Figure 9 wiring diagram, disconnect the wire “U3555A22-G” of the C/A B1A837 from pin 2 of the terminal board TB2055 and from pin 2 of the connector P271.

NOTE

Do the following two steps only if helicopter is equipped with C/A B1A339.

2.5.5 With reference to Figure 9 wiring diagram, disconnect the wire “U530A22-G” of the C/A B1A339 from pin 1 of the terminal board TB2055 and from pin 1 of the connector P271.

2.5.6 With reference to Figure 9 wiring diagram, disconnect the wire “U531A22-G” of the C/A B1A339 from pin 2 of the terminal board TB2055 and from pin 2 of the connector P271.

2.5.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the disconnected wires as “U3554A22-G” and “U3555A22-G” by means of marker sleeve.

2.5.8 With reference to Figure 10 wiring diagram, lay down wire P/N A556A-T22 of adequate length between the in line junction TB2283 and the ground stud GS2079.

2.5.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 10 wiring diagram, perform the electrical connections

between the in line junction TB2283 and the ground stud GS2079 by means of the electrical contact P/N A523A-A05 (TB2283 side) and the terminal lug P/N MS25036-103 (GS2079 side).

2.5.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wire as "U3563A22N-G" by means of marker sleeve.

NOTE

If necessary it is possible to install and perform electrical connection between a splice and the wires, in order to reach a correct length installation.

2.5.11 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 10 wiring diagram, perform the electrical connections of the wires marked as "U3554A22-G" and "U3555A22-G" between the in line junction TB2283 and the connector J271 by means of n°2 electrical contacts P/N A523A-A02 (TB2283 side) and n°2 electrical contacts P/N M39029/56-348 (J271 side).

2.5.12 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 7 and Figure 10 wiring diagram, mark the cable assy so obtained as B1L196 by means of marker sleeve.

2.6 With reference to Figure 7 and Figure 10 wiring diagram, install the utility light P/N 4F3310V00151 ad described in the following procedure:

2.6.1 With reference to Figure 7 View B, put the utility light P/N 4F3310V00151 in its position on the mission console structure.

2.6.2 With reference to Figure 7 View B, fix the utility light P/N 4F3310V00151 to the mission console by means of the existing hardware previously removed.

2.6.3 With reference to Figure 10 wiring diagram perform the electrical connection between the cable on part of the utility light P/N 4F3310V00151 and the terminal board TB2283.

2.7 Perform a pin-to-pin continuity check of all the electrical connections made.

3. In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 7 View B, install the decal P/N ED300GS2079 on the ground stud GS2079.
4. Return the helicopter to flight configuration and record for compliance with Part IV of this Service Bulletin on the helicopter logbook.
5. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardocompany.com

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

PART V

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 Figure 8 Isometric View and View A, gain access to the area affected by the installation and perform mission console light retromod P/N 3G3320P01012 as described in the following procedure:

   2.1 In accordance with AMP DM 39-A-25-23-03-00A-520A-K and with reference to Figure 8 View B, remove the light assy P/N 90-004-1, remove and retain for later reuse the existing hardware.

   2.2 With reference to Figure 8 View B, remove the existing terminal board TB2055 and its relevant hardware.

   2.3 With reference to Figure 8 View B, install n° 2 electrical supports P/N AW001CL001-N6 in the indicated position by means of adhesive (C193).

   2.4 With reference to Figure 8 View B, locate the in-line junction P/N A596A07 (TB2283) on the support P/N AW001CL001-N6 at location n°1.

NOTE

Use the edging P/N A236A on edges which are liable to cause damage to cable assemblies or where abrasion may occur.

NOTE

Install the tubing braided P/N A582A or P/N EN6049-006 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

NOTE

If necessary, in order to ensure a proper installation of the equipment, it is possible to use clamps (diameter only) and/or bolts (length only) and/or screws (length only) and/or spacers (length only) and/or washers (thickness only) of two increments greater or lesser with respect to the indicated ones.

   2.5 With reference to Figures 9 thru 10 wiring diagram, modify the existing cable assemblies to obtain the mission console light retromod C/A (B1L196)

P/N 3G9B01L19612 as described in the following procedure:

NOTE

Do the following two steps only if helicopter is equipped with C/A B1A727.

2.5.1 With reference to Figure 9 wiring diagram, disconnect the wire “U3012A22-G” of the C/A B1A727 from pin 1 of the terminal board TB2055 and from pin 1 of the connector P271.

2.5.2 With reference to Figure 9 wiring diagram, disconnect the wire “U3013A22-G” of the C/A B1A727 from pin 2 of the terminal board TB2055 and from pin 2 of the connector P271.

NOTE

Do the following two steps only if helicopter is equipped with C/A B1A837.

2.5.3 With reference to Figure 9 wiring diagram, disconnect the wire “U3554A22-G” of the C/A B1A837 from pin 1 of the terminal board TB2055 and from pin 1 of the connector P271.

2.5.4 With reference to Figure 9 wiring diagram, disconnect the wire “U3555A22-G” of the C/A B1A837 from pin 2 of the terminal board TB2055 and from pin 2 of the connector P271.

NOTE

Do the following two steps only if helicopter is equipped with C/A B1A339.

2.5.5 With reference to Figure 9 wiring diagram, disconnect the wire “U530A22-G” of the C/A B1A339 from pin 1 of the terminal board TB2055 and from pin 1 of the connector P271.

2.5.6 With reference to Figure 9 wiring diagram, disconnect the wire “U531A22-G” of the C/A B1A339 from pin 2 of the terminal board TB2055 and from pin 2 of the connector P271.

2.5.7 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the disconnected wires as “U3554A22-G” and “U3555A22-G” by means of marker sleeve.

2.5.8 With reference to Figure 10 wiring diagram, lay down wire P/N A556A-T22 of adequate length between the in line junction TB2283 and the ground stud GS2079.

2.5.9 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 10 wiring diagram, perform the electrical connections

between the in line junction TB2283 and the ground stud GS2079 by means of the electrical contact P/N A523A-A05 (TB2283 side) and the terminal lug P/N MS25036-103 (GS2079 side).

2.5.10 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 10 wiring diagram, mark the wire as "U3563A22N-G" by means of marker sleeve.

NOTE

If necessary it is possible to install and perform electrical connection between a splice and the wires, in order to reach a correct length installation.

2.5.11 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 10 wiring diagram, perform the electrical connections of the wires marked as "U3554A22-G" and "U3555A22-G" between the in line junction TB2283 and the connector J271 by means of n°2 electrical contacts P/N A523A-A02 (TB2283 side) and n°2 electrical contacts P/N M39029/56-348 (J271 side).

2.5.12 In accordance with AMP DM 39-A-20-10-18-00A-691A-A and with reference to Figure 8 and Figure 10 wiring diagram, mark the cable assy so obtained as B1L196 by means of marker sleeve.

2.6 With reference to Figure 8 and Figure 10 wiring diagram, install the utility light P/N 4F3310V00151 ad described in the following procedure:

2.6.1 With reference to Figure 8 View B, put the utility light P/N 4F3310V00151 in its position on the mission console structure.

2.6.2 With reference to Figure 8 View B, fix the utility light P/N 4F3310V00151 to the mission console by means of the existing hardware previously removed.

2.6.3 With reference to Figure 10 wiring diagram perform the electrical connection between the cable on part of the utility light P/N 4F3310V00151 and the terminal board TB2283.

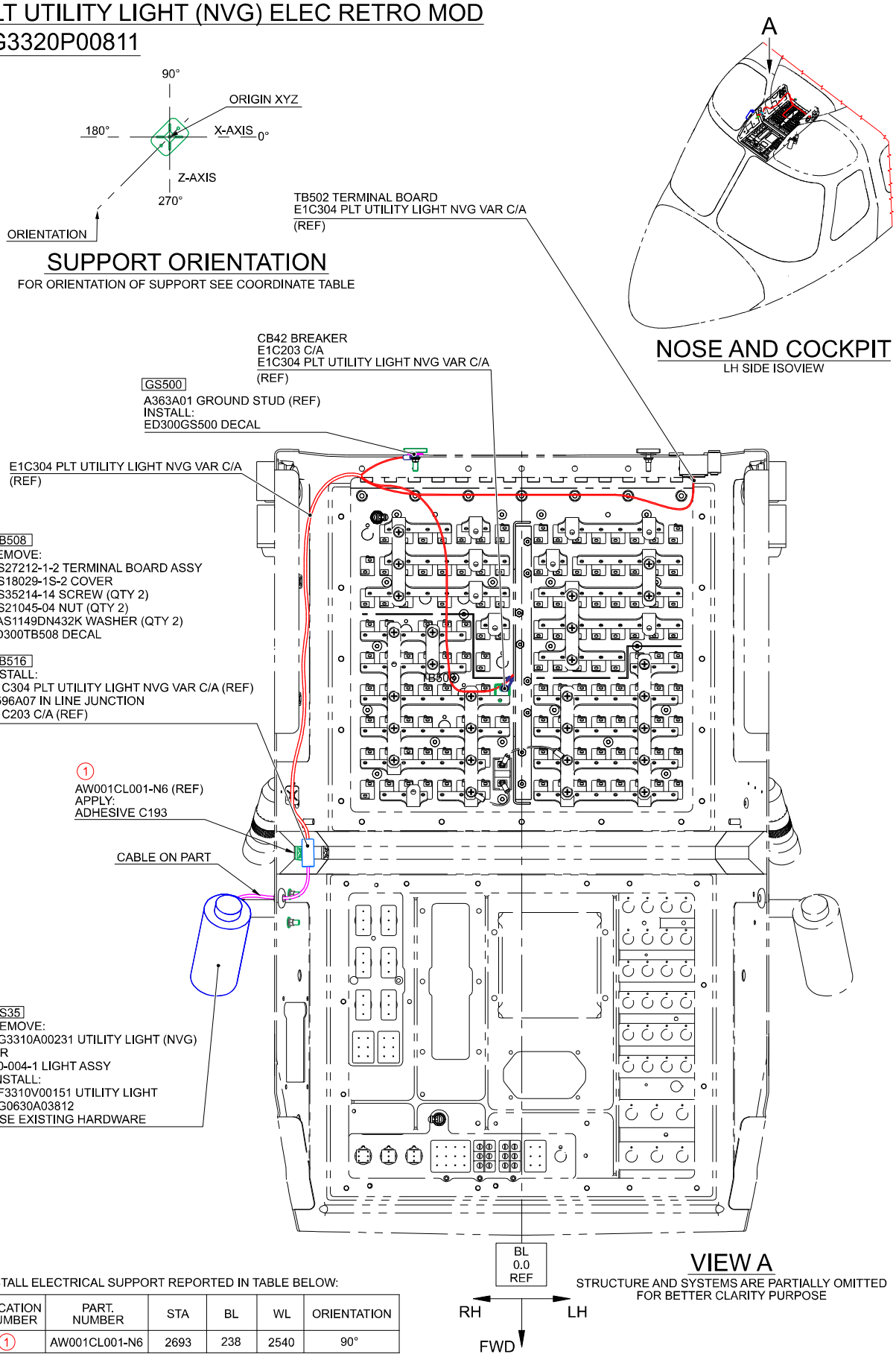
2.7 Perform a pin-to-pin continuity check of all the electrical connections made.

3. In accordance with AMP DM 39-A-11-00-01-00A-720A-A and with reference to Figure 8 View B, install the decal P/N ED300GS2079 on the ground stud GS2079.
4. Return the helicopter to flight configuration and record for compliance with Part V of this Service Bulletin on the helicopter logbook.
5. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardocompany.com

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

PLT UTILITY LIGHT (NVG) ELEC RETRO MOD 3G3320P00811

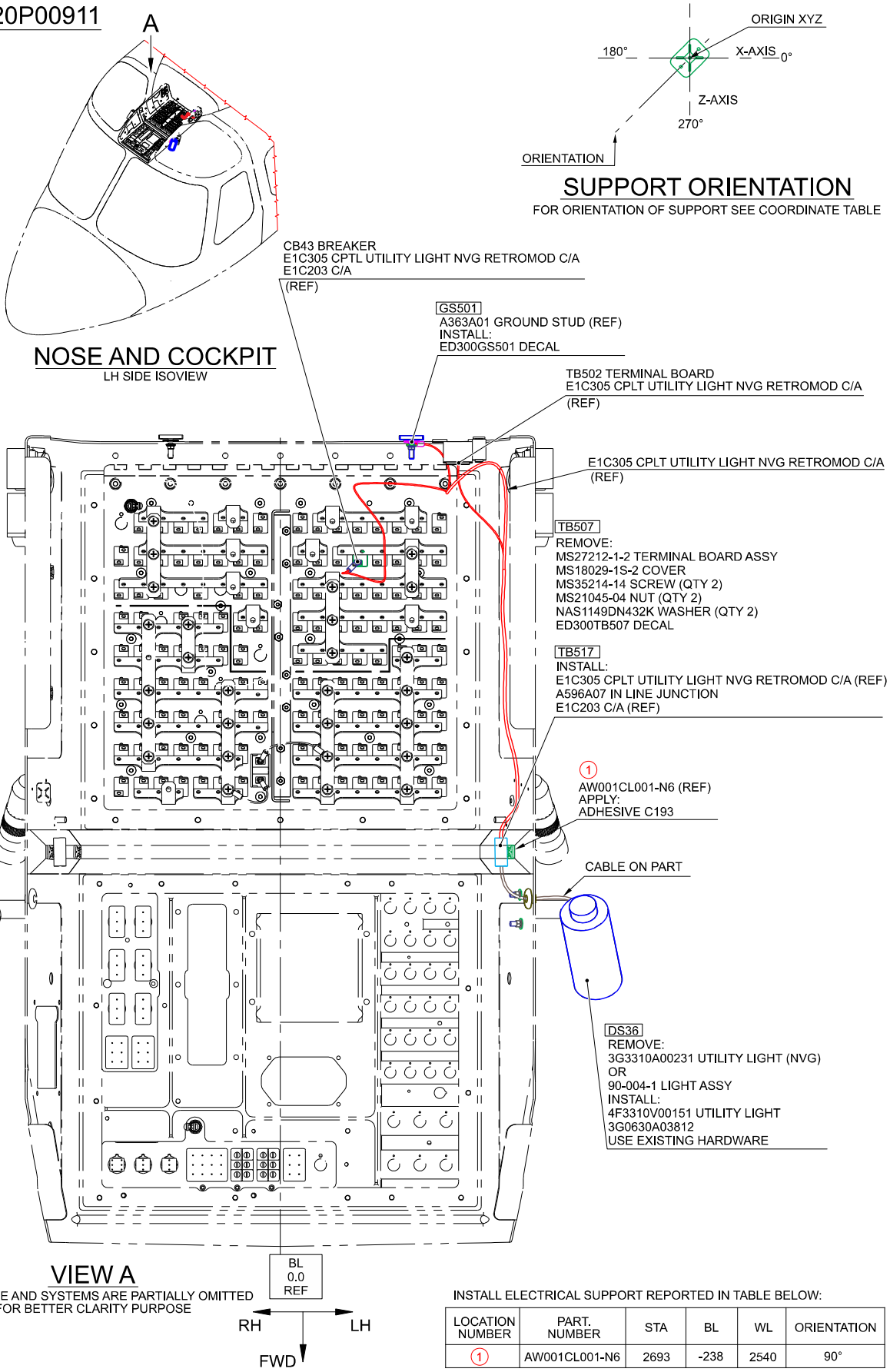


INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
1	AW001CL001-N6	2693	238	2540	90°

Figure 1

CPLT UTILITY LIGHT (NVG) ELEC RETRO MOD 3G3320P00911



INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
1	AW001CL001-N6	2693	-238	2540	90°

Figure 2

MISSION CNSL UTILITY LIGHT VARIANT
3G3320P00611

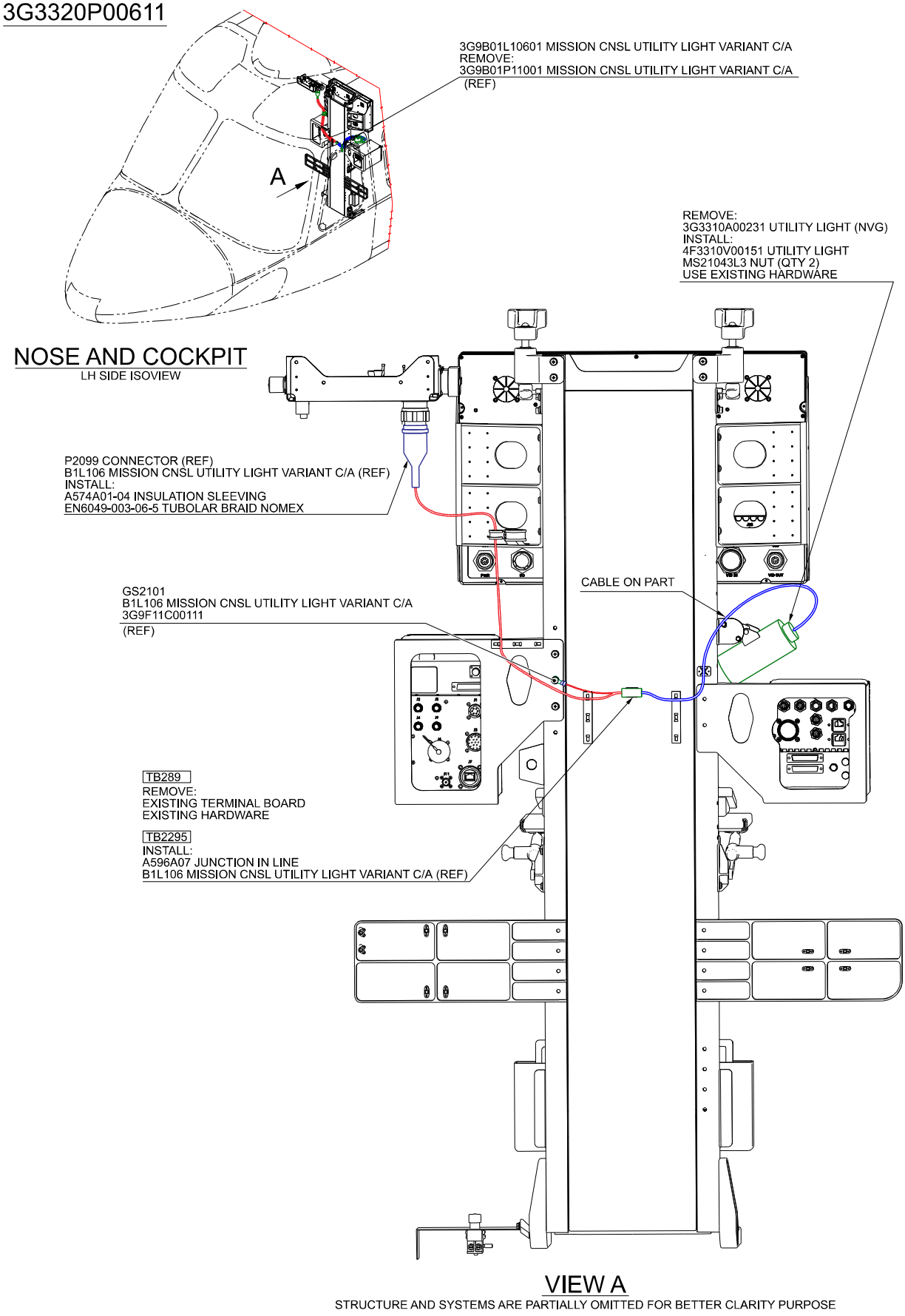


Figure 3

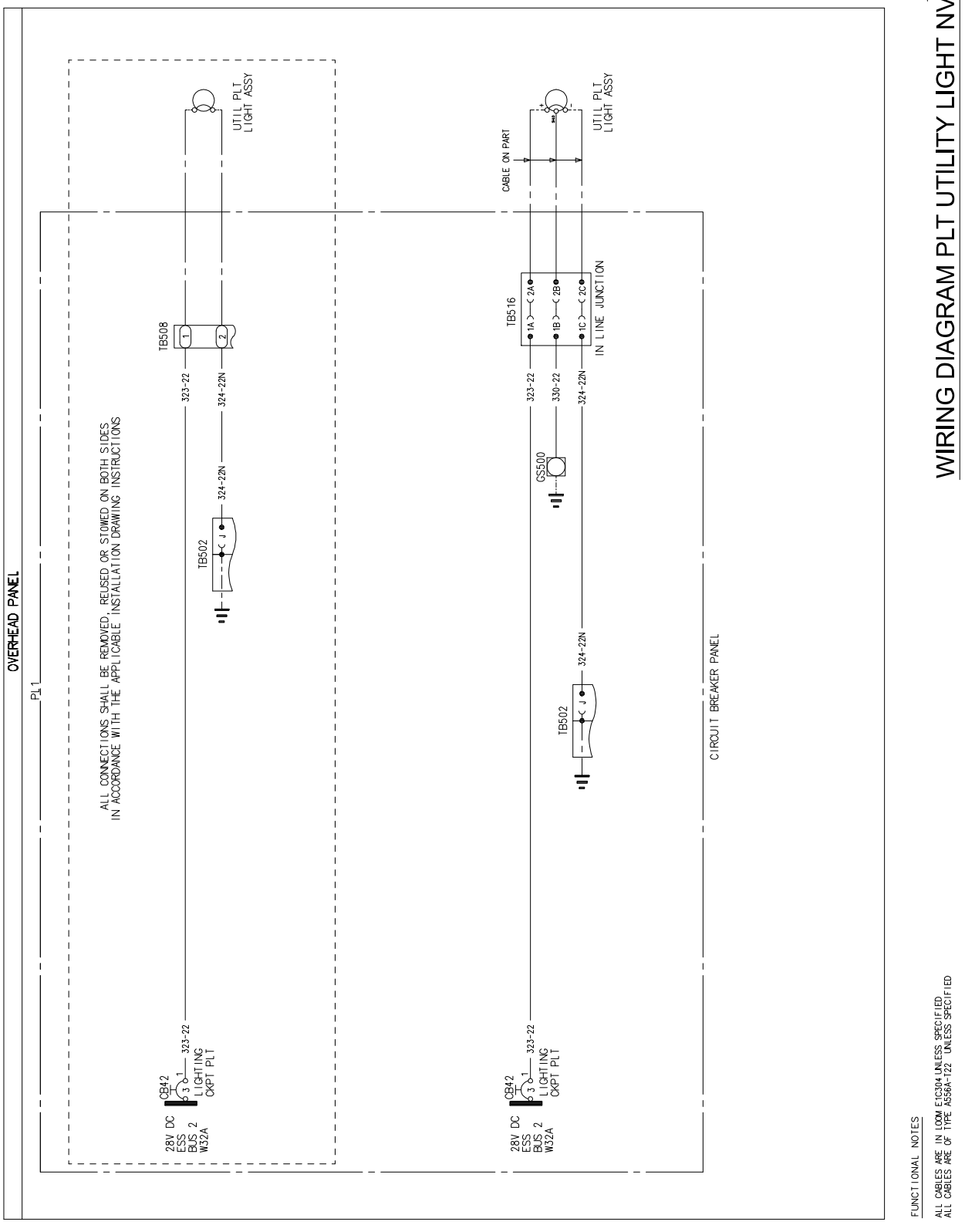

3G3320W05111
WIRING DIAGRAM PLT UTILITY LIGHT NVG RETROMOD
OVERHEAD PANEL
P1 1
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
UTIL PLT
LIGHT ASSY
TB508
323-22
324-22N
TB502
CB42
28V DC
ESS
BUS 2
W32A
LIGHTING
CKPT PLT
CABLE ON PART
TB516
1A
2A
1B
2B
1C
2C
IN LINE JUNCTION
330-22
CS500
CIRCUIT BREAKER PANEL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM E1C304 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A-122 UNLESS SPECIFIED

Figure 4

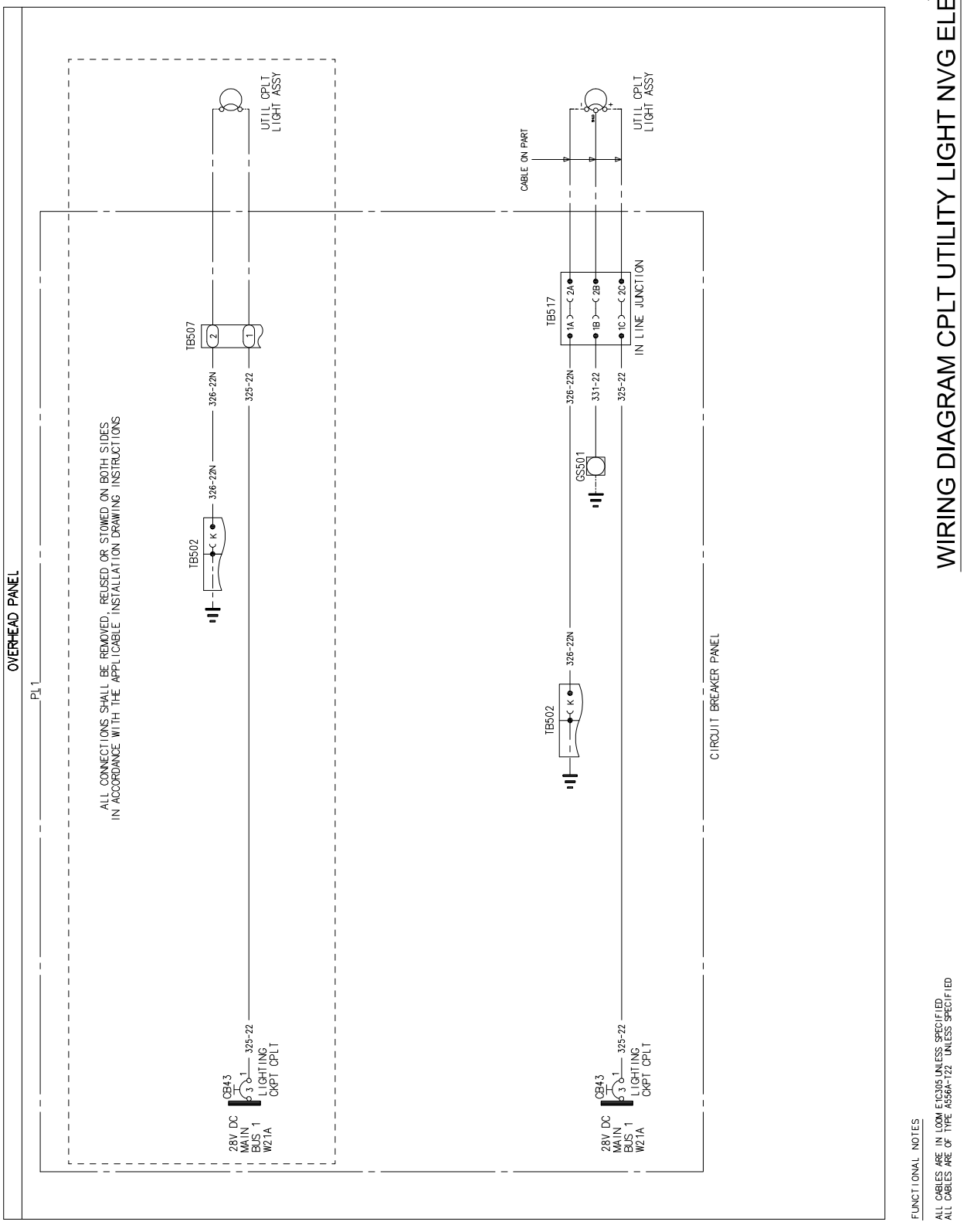

3G3320W05211
WIRING DIAGRAM CPLT UTILITY LIGHT NVG ELEC RETROMOD
OVERHEAD PANEL
P1 1
ALL CONNECTIONS SHALL BE REMOVED , REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
TB507
TB502
326-22N
325-22
UTIL CPLT LIGHT ASSY
CB43
28V DC MAIN BUS 1 W21A
LIGHTING CKPT CPLT
CABLE ON PART
TB517
IN LINE JUNCTION
1A
2A
1B
2B
1C
2C
331-22
CS501
CIRCUIT BREAKER PANEL
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM E1G305 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS56A-122 UNLESS SPECIFIED

Figure 5

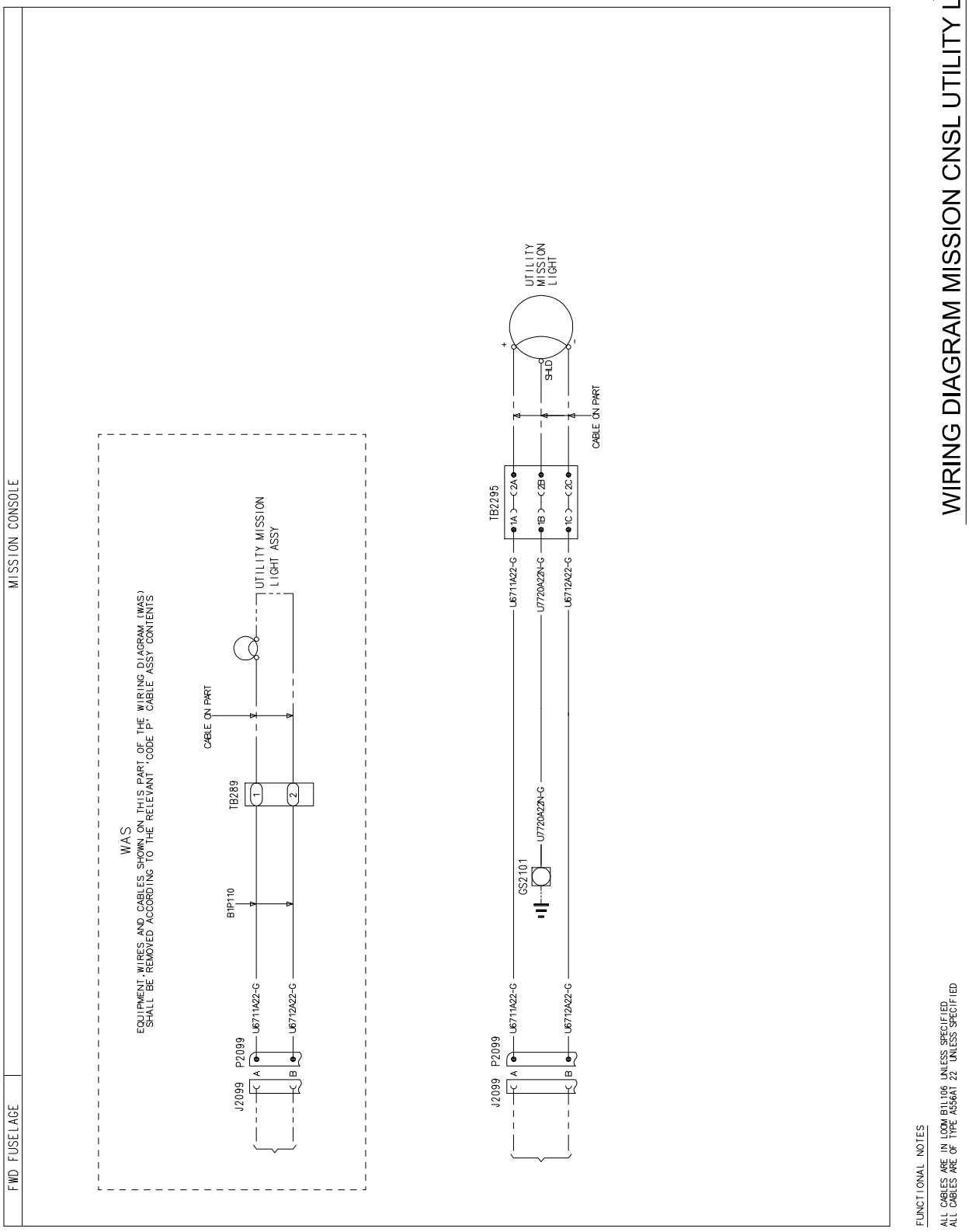
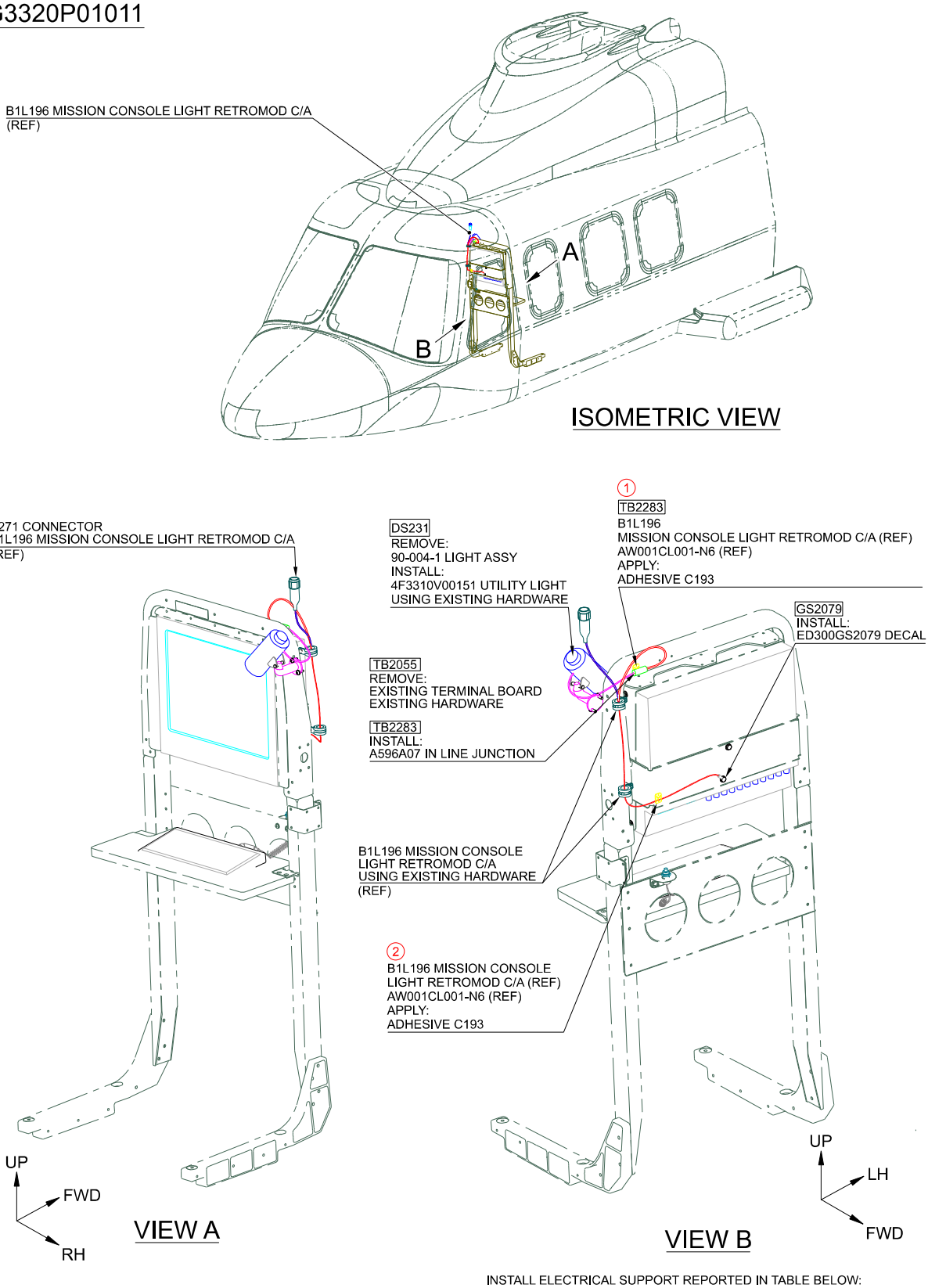

3G3320W04711
WIRING DIAGRAM MISSION CNSL UTILITY LIGHT VARIANT
MISSION CONSOLE
FWD FUSELAGE
WAS
EQUIPMENT, WIRES AND CABLES SHOWN ON THIS PART OF THE WIRING DIAGRAM (WAS)
SHALL BE REMOVED ACCORDING TO THE RELEVANT 'CODE P' CABLE ASSY CONTENTS
UTILITY MISSION LIGHT ASSY
CABLE ON PART
TB289
B1P110
J2099
P2099
U6711A22-G
U6712A22-G
GS2101
U7720A22A-G
TB2295
1A
1B
1C
2A
2B
2C
SHLD
UTILITY MISSION LIGHT
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM B11106 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE AS56AT 22 UNLESS SPECIFIED

Figure 6

MISSION CONSOLE LIGHT RETRO MOD
3G3320P01011

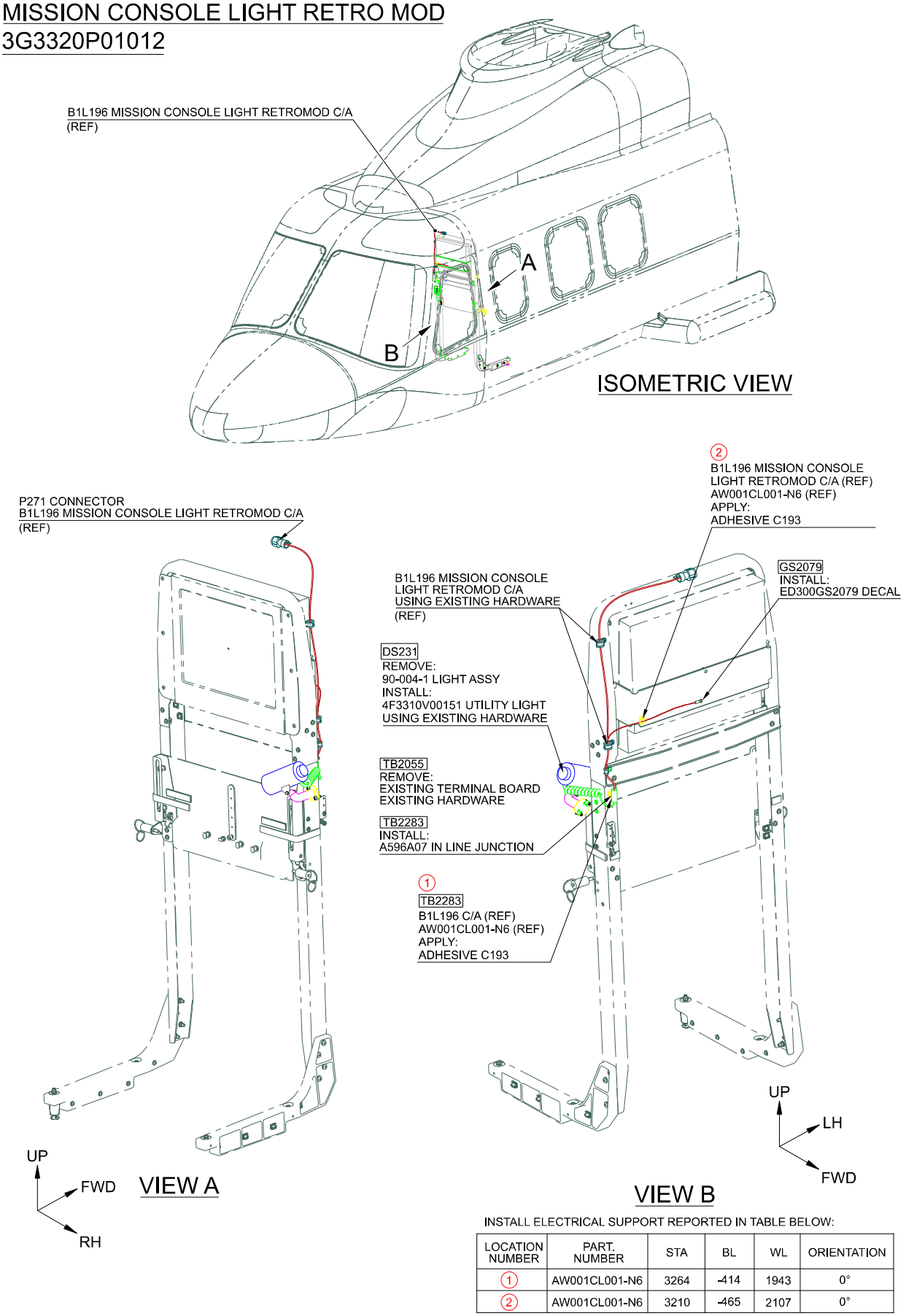


INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
1	AW001CL001-N6	3282	-470	2252	0°
2	AW001CL001-N6	3216	-465	1987	0°

Figure 7

MISSION CONSOLE LIGHT RETRO MOD 3G3320P01012



INSTALL ELECTRICAL SUPPORT REPORTED IN TABLE BELOW:

LOCATION NUMBER	PART. NUMBER	STA	BL	WL	ORIENTATION
1	AW001CL001-N6	3264	-414	1943	0°
2	AW001CL001-N6	3210	-465	2107	0°

Figure 8

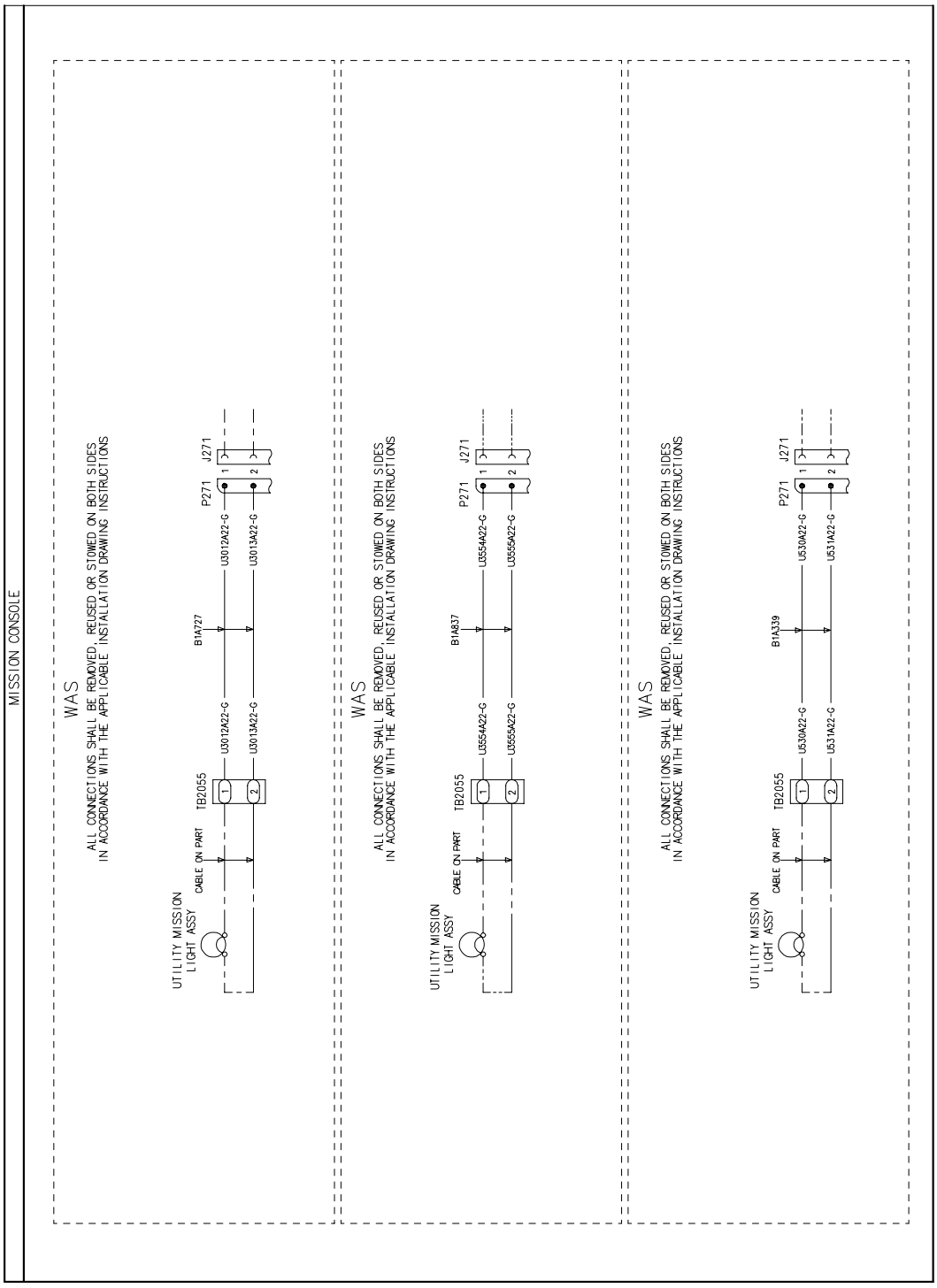

MISSION CONSOLE
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
UTILITY MISSION LIGHT ASSY
CABLE ON PART
TB2055
U3012A22-G
U3013A22-G
B1A727
P271
J271
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
UTILITY MISSION LIGHT ASSY
CABLE ON PART
TB2055
U3554A22-G
U3555A22-G
B1A837
P271
J271
WAS
ALL CONNECTIONS SHALL BE REMOVED, REUSED OR STOWED ON BOTH SIDES
IN ACCORDANCE WITH THE APPLICABLE INSTALLATION DRAWING INSTRUCTIONS
UTILITY MISSION LIGHT ASSY
CABLE ON PART
TB2055
U530A22-G
U531A22-G
B1A339
P271
J271

Figure 9

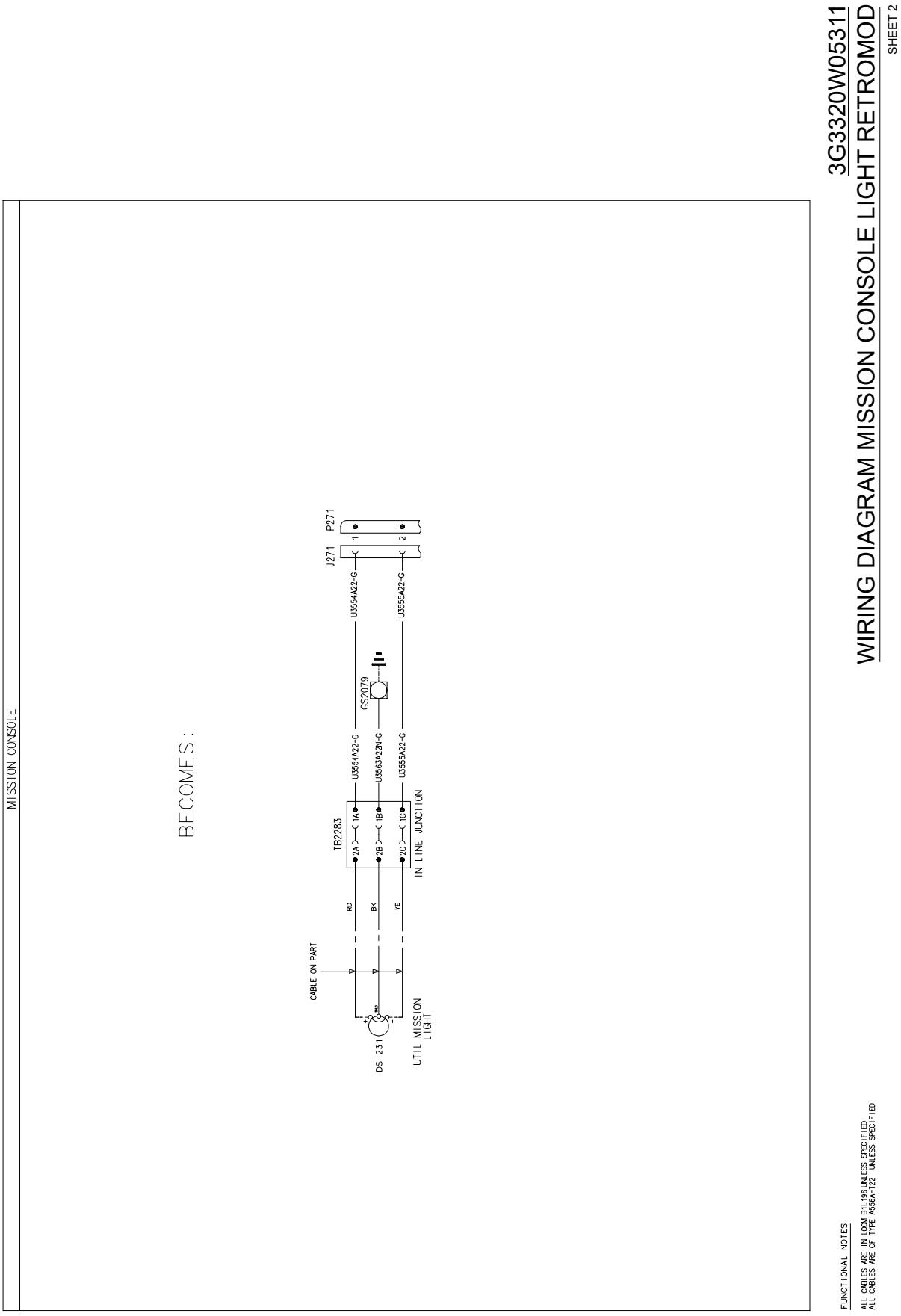

3G3320W05311
WIRING DIAGRAM MISSION CONSOLE LIGHT RETROMOD
SHEET 2
MISSION CONSOLE
BECOMES :
J271
P271
1
2
U3554A22-G
U3555A22-G
GS2079
TB2283
1A
1B
1C
2A
2B
2C
U3554A22-G
U3563A22N-G
U3555A22-G
IN LINE JUNCTION
RD
BK
YE
CABLE ON PART
DS 231
UTIL MISSION LIGHT
FUNCTIONAL NOTES
ALL CABLES ARE IN LOOM B11196 UNLESS SPECIFIED
ALL CABLES ARE OF TYPE A556A-122 UNLESS SPECIFIED

Figure 10

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.