

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° 139-665

**DATE:** July 8, 2021

**REV.:** A - May 31, 2022

# TITLE

### ATA 34 - ENHANCED GROUND PROXIMITY WARNING SYSTEM INSTALLATION

# **REVISION LOG**

Helicopters that have complied with previous issue of this Service Bulletin do not need any additional action.

Revision A is issued to:

- Extend the effectivity to AW139 Long Nose helicopters.
- Update the procedure to subdivide the SB in three parts:
  - Part I: complete provision for Long Nose helicopters;
  - Part II: complete provision for Long Nose Enhanced Plus helicopters;
  - Part III: equipment installation (the same for the two configurations).

Due to the large amount of modifications introduced in this new revision, revision bars are not shown.



# 1. PLANNING INFORMATION

### A. EFFECTIVITY

Part I: all AW139 helicopters from S/N 31201 thru S/N 31399 and from S/N 41201 thru S/N 41299.

Part II: all AW139 helicopters from S/N 31700 onwards and from S/N 41500 onwards.

Part III: all AW139 helicopters from S/N 31201 thru S/N 31399, from S/N 41201 thru S/N 41299, from S/N 31700 onwards and from S/N 41500 onwards.

#### **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 the kit Enhanced Ground Proximity Warning System (EGPWS) -30 P/N 3G3440F00212.

# **E. DESCRIPTION**

Leonardo Helicopters has developed this Service Bulletin in order to install the kit EGPWS P/N 3G3440F00212.

Part I of this Service Bulletin provides information to perform the installation of the EGPWS complete provision P/N 4G3440A00111, that include the structural provision P/N 3G5310A04512 which perform the installation of supports, and the electrical provision P/N 3G3440A00711, which perform the lay down and the connection of the cables.

Part II of this Service Bulletin provides information to perform the installation of the EGPWS complete provision P/N 4G3440A00113, that include the structural provision P/N 3G5310A04513 which perform the installation of supports, and the electrical provision P/N 3G3440A00713, which perform the lay down and the connection of the cables.

Part III provides the information to perform the EGPWS equipment installation P/N 4G3440A00212, which consists of a display controller, a mounting tray and a computer.



### F. APPROVAL

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

EASA states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives. If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

### **G. MANPOWER**

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

Part I: approximately one hundred and twenty-five (125) MMH

Part II: approximately one hundred and twenty-five (125) MMH

Part III: approximately twenty (20) MMH

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

#### H. WEIGHT AND BALANCE

### **PART I**

WEIGHT (Kg)		3.2
	ARM (mm)	MOMENT (Kgmm)
LONGITUDINAL BALANCE	4856	15539.2
LATERAL BALANCE	310	992
PART II		
WEIGHT (Kg)		3.3
	ARM (mm)	MOMENT (Kgmm)
LONGITUDINAL BALANCE	4581	15117.3
LATERAL BALANCE	300	990

S.B. N°139-665 DATE: July 8, 2021

REVISION: A - May 31, 2022 Page 3 of 62



# PART III

WEIGHT (Kg) 3.8

	ARM (mm)	MOMENT (Kgmm)
LONGITUDINAL BALANCE	4616	17540.8
LATERAL BALANCE	126	478.8

# I. REFERENCES

# 1) PUBLICATIONS

Following Data Modules refer to AMP:

DATA I	MODULE	DESCRIPTION	<u>PART</u>
DM01	39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	I, II, III
DM02	39-A-06-41-00-00A-010A-A	Access doors and panels – General data	I, II, III
DM03	39-A-11-00-01-00A-520A-A	Decal remove procedure	1, 11, 111
DM04	39-A-11-00-01-00A-720A-A	Decal install procedure	I, II, III
DM05	39-A-24-91-04-00A-920A-K	Integrally lighted panel replacement	I, II
DM06	39-A-20-10-08-00A-622A-A	Electrical contacts crimp	I, II
DM07	39-A-34-43-03-00A-720A-K	EGPWS configuration module install procedure	I, II
DM08	39-A-34-43-02-00A-720A-K	EGPWS computer mounting tray install procedure	III
DM09	39-A-34-43-01-00A-720A-K	EGPWS computer install procedure	III
DM10	39-B-31-61-09-00A-720A-A	Number 1 display controller install procedure	III
DM11	39-B-31-61-10-00A-720A-A	Number 2 display controller install procedure	III
DM12	39-A-00-00-00-00A-750A-A	Options and setting file load software procedure	III
DM13	39-B-31-61-00-00A-320B-A	Display controllers operation test	Ш
DM14	39-B-34-43-00-00A-320A-K	Enhanced ground proximity warning system operation test	III

# 2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
C/A	Cable Assy
СВ	Circuit Breaker
DC	Direct Current

S.B. N°139-665 DATE: July 8, 2021 REVISION: A - May 31, 2022

Page 4 of 62



DM Data Module

DOA Design Organization Approval

EASA European Aviation Safety Agency

EGPWS Enhanced Ground Proximity Warning System

IETP Interactive Electronic Technical Publication

LH Left-Hand

LHD Leonardo Helicopters Division

MMH Maintenance Man Hours

NVG Night Vision Goggles

P/N Part Number
RH Right-Hand
S/N Serial Number

### 3) ANNEX

N.A.

# J. PUBLICATIONS AFFECTED

N.A.

### K. SOFTWARE ACCOMPLISHMENT SUMMARY

Software to be updated:

Primus Epic Option File

Option File P/N is depending upon helicopter configuration that can be different from the one reported in relevant helicopter "Commessa di Vendita". Customer must contact Product Support Engineering (<a href="mailto:engineering.support.lhd@leonardo.com">engineering.support.lhd@leonardo.com</a>) to request the correct Option File at least three months in advance from the scheduled embodiment of this Service Bulletin.

S.B. N°139-665 DATE: July 8, 2021



# 2. MATERIAL INFORMATION

# A. REQUIRED MATERIALS

# 1) PARTS

# PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	3G3440F00212		KIT EGPWS - 30	REF			-
2	4G3440A00111		EGPWS COMPLETE PROVISION	REF			-
3	3G5310A04512		EGPWS STRUCTURAL PROVISION	REF			-
4	3G5315A28031		LH support assy	1			139-665L3
5	3G5315A28131		RH support assy	1			139-665L3
6	3G5315A28451		LH joint	1			139-665L3
7	3G5315A28551		RH joint	1			139-665L3
8	3G5315A29151		Panel	1			139-665L3
9	3G5315A19551	3G5315A19551A1	Bracket	1			139-665L3
10	AGS4719-407	NAS1720H4L2A	Rivet	2			139-665L3
11	AGS4719-508	NAS1720H5L2A	Rivet	48			139-665L3
12	MS20426AD3-7		Rivet	0.1 kg			139-665L3
13	MS21075L06	MS21075L06N	Nut	4			139-665L3
14	NAS1097AD4-5		Rivet	0.1 kg			139-665L3
15	NAS1836-3-13		Insert	2			139-665L3
16	MS27039-1-06		Screw	2			139-665L3
17	NAS1149D0332K		Washer	2			139-665L3
18	3G3440A00711		EGPWS ELECTRICAL PROVISION	REF			-
19	3G9A01A26301		EGPWS C/A (A1A263)	1			139-665L3
20	3G9A01B27401		EGPWS C/A (A1B274)	1			139-665L3
21	3G9A02A25002		EGPWS C/A (A2A250)	1			139-665L3
22	3G9A02B25002	202440400744440D	EGPWS C/A (A2B250)	1			139-665L3
23	3G9B01B29601	3G3440A00711A10R =	EGPWS C/A (B1B296)	1			139-665L3
24	3G9B02B23801		EGPWS C/A (B2B238)	1			139-665L3
25	3G9C01B22501		EGPWS C/A (C1B225)	1			139-665L3
26	3G9C02B22301		EGPWS C/A (C2B223)	1			139-665L3
27	3G9C02B24202		EGPWS C/A (C2B242)	1			139-665L3
28	700-1710-001		Configuration module	1		(1)	-
29	A366A3E12C		Stud	1			139-665L3
30	A388A3E08C		Stud	1			139-665L3
31	AW001CL000A-X3	A630A31	Support	2			139-665L3
32	AW001TL3A08	A630A3B	Anchor nut	1			139-665L3
33	DCC-12		Protective dust	1			139-665L3
34	DCC-15		Protective dust	2			139-665L3
35	ED300EGPWS;DA TA		Decal	1			139-665L3
36	MS21042L3		Nut	1			139-665L3
37	AS21919DG01	MS21919WDG1	Clamp	1			139-665L3
38	AS21919WDG04	MS21919WDG4	Clamp	3			139-665L3
39	MS21919WDG6	AS21919WDG06	Clamp	2			139-665L3
40	NAS1149D0332J		Washer	3			139-665L3
41	A590A02		Ferrule	1			139-665L3
42	NAS1190E3P6AK		Screw	1			139-665L3



#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL NOTE	LOG P/N
43	NAS1801-3-10		Screw	1		139-665L3
44	SK3000-2-S879	SK3000/-2	Cover	1		139-665L3
45	MS3320-3		Circuit breaker	1		139-665L3
46	A556A-T20		Electrical wire	2.5 m		139-665L3
47	MS25036-149		Electrical contact	1		139-665L3
48	M39029/56-351		Electrical contact	1		139-665L3
49	ED300CB171		Decal	1		139-665L3
50	3G2490LXXXXX		Integrally lit auxiliary C/B panel	1	(2)	-
51	M39029/56-348		Electrical contact	41		139-665L3
52	M39029/57-354		Electrical contact	19		139-665L3
53	M39029/57-357		Electrical contact	4		139-665L3
54	M39029/58-360		Electrical contact	34		139-665L3
55	M39029/58-363		Electrical contact	6		139-665L3
56	A523A-A05		Electrical contact	1		139-665L3
57	001104-100-02	A523A-A01	Electrical contact	1		139-665L3
58	001104-202-02	A523A-A05	Electrical contact	9		139-665L3
59	M23053/8-004-C		Insulation sleeving	10 m		139-665L3
60	M23053/8-005-C		Insulation sleeving	10 m		139-665L3

# PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
61	3G3440F00212		KIT EGPWS - 30	REF			-
62	4G3440A00113		EGPWS COMPLETE PROVISION	REF			-
63	3G5310A04513		EGPWS STRUCTURAL PROVISION	REF			-
64	3G5315A28031		LH support assy	1			139-665L1
65	3G5315A28131		RH support assy	1			139-665L1
66	3G5315A28451		LH joint	1			139-665L1
67	3G5315A28551		RH joint	1			139-665L1
68	3G5315A29151		Panel	1			139-665L1
69	3G5315A19551	3G5315A19551A1	Bracket	1			139-665L1
70	AGS4719-407	NAS1720H4L2A	Rivet	2			139-665L1
71	AGS4719-508	NAS1720H5L2A	Rivet	48			139-665L1
72	MS20426AD3-7		Rivet	0.1 kg			139-665L1
73	MS21075L06	MS21075L06N	Nut	4			139-665L1
74	NAS1097AD4-5		Rivet	0.1 kg			139-665L1
75	NAS1836-3-13		Insert	2			139-665L1
76	MS27039-1-06		Screw	2			139-665L1
77	NAS1149D0332K		Washer	2			139-665L1
78	3G3440A00713		EGPWS ELECTRICAL PROVISION	REF			-
79	3G9A01A26321	000440404074044D	EGPWS C/A (A1A263)	1			139-665L1
80	3G9A02A25021	3G3440A00713A1R	EGPWS C/A (A2A250)	1			139-665L1
81	3G9A01B27421	0004404040074040D	EGPWS C/A (A1B274)	1			139-665L1
82	3G9A02B25021	3G3440A00713A2R	EGPWS C/A (A2B250)	1			139-665L1
83	3G9B01B55221	00044040074040	EGPWS C/A (B1B552)	1			139-665L1
84	3G9B02B23821	3G3440A00713A3R	EGPWS C/A (B2B238)	1			139-665L1
85	3G9C01B22521		EGPWS C/A (C1B225)	1			139-665L1
86	3G9C02B22321	3G3440A00713A4R	EGPWS C/A (C2B223)	1			139-665L1
87	3G9C02B24221		EGPWS C/A (C2B242)	1			139-665L1
88	700-1710-001		Configuration module	1		(1)	-
89	A366A3E12C		Stud	1			139-665L1
90	A388A3E08C		Stud	1			139-665L1



#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
91	AW001CB02H		Clamp	2			139-665L1
92	AW001CB04H		Clamp	3			139-665L1
93	AW001CB06H		Clamp	2			139-665L1
94	AW001CL001-N6		Support	2			139-665L1
95	AW001TL3A08		Anchor nut	1			139-665L1
96	DCC-12		Protective dust	1			139-665L1
97	DCC-15		Protective dust	2			139-665L1
98	ED300J380		Decal	1			139-665L1
99	MS21042L3		Nut	1			139-665L1
100	NAS1149D0332J		Washer	3			139-665L1
101	A590A02		Ferrule	1			139-665L1
102	NAS1190E3P6AK		Screw	1			139-665L1
103	NAS1801-3-10		Screw	1			139-665L1
104	SK3000-2-S879	SK3000/-2	Cover	1			139-665L1
105	MS3320-3		Circuit breaker	1			139-665L1
106	ED300CB171		Decal	1			139-665L1
107	A556A-T20		Electrical wire	2.5 m			139-665L1
108	MS25036-149		Electrical contact	1			139-665L1
109	M39029/56-351		Electrical contact	5			139-665L1
110	3G2490LXXXXX		Integrally lit auxiliary C/B panel	1		(2)	-
111	M39029/56-348		Electrical contact	41			139-665L1
112	M39029/57-354		Electrical contact	22			139-665L1
113	M39029/57-357		Electrical contact	4			139-665L1
114	M39029/58-360		Electrical contact	34			139-665L1
115	M39029/58-363		Electrical contact	6			139-665L1
116	A523A-A05		Electrical contact	9			139-665L1
117	001104-100-02	A523A-A01	Electrical contact	1			139-665L1
118	001104-202-02	A523A-A05	Electrical contact	8			139-665L1
119	M23053/8-004-C		Insulation sleeving	10 m			139-665L1
120	M23053/8-005-C		Insulation sleeving	10 m			139-665L1

# PART III

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
121	3G3440F00212		KIT EGPWS - 30	REF			-
122	4G3440A00212		EGPWS EQUIPMENT INSTALLATION	REF			-
123	405-0383-001		MK XXII EGPWS mounting tray	1		(1)	-
124	7016683-966	7016683-866	Display controller	2		(3)	-
125	965-1595-030		EGPWS computer	1			139-665L4
126	ED300A106		Decal	1			139-665L4
127	MS24693-S30		Screw	2			139-665L4
128	MS35206-230		Screw	2			139-665L4
129	Primus Epic Option File		S/W	1		(4)	-

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
130	AW001CK03LC	Lacing cord	0.5 m	(5)(6)	I, II
131	900004953	Tape	1	(5)	I, II
132	199-05-002, Type 2, Class II	Adhesive EA934NA (C397)	1	(5)	I, II
133	A582A25 or EN6049-006-25-5	Nomex	1 m	(5)	I, II, III

Refer also to AMDI for the consumable materials required to comply with the AMP DM referenced in the accomplishment instructions.

### 3) LOGISTIC MATRIX

In order to apply this Service Bulletin, the following Logistic P/N can be ordered in accordance with the applicable notes:

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
139-665L3	1		Part I
700-1710-001	1	(1)	Part I, II
3G2490LXXXXX	1	(2)	Part I, II
139-665L1	1		Part II
139-665L4	1		
405-0383-001	1	(1)	Part III
7016683-866 or 7016683-966	2	(3)	Fait iii
Primus Epic Option File	1	(4)	

#### **NOTE**

- (1) If Part I, or Part II, and Part III are both accomplished, EGPWS Mounting Tray P/N 405-0383-001 and Configuration Module P/N 700-1710-001 will be supplied as Installation Kit P/N 755-7013-007.
- (2) The P/N is not properly completed because it is depending on the helicopter configuration. Customers must contact Product Support Engineering (<a href="mailto:engineering.support.lhd@leonardo.com">engineering.support.lhd@leonardo.com</a>) to request the new auxiliary CB panel at least three months in advance from the scheduled application of this Service Bulletin.
- (3) The Display Controller NVG P/N 7016683-866 is the NVG-version and may be used as alternative to the Display Controller P/N 7016683-966 (non-NVG version).
- (4) Refer to software accomplishment summary paragraph.
- (5) Item to procured as local supply.
- (6) Lacing cord AW001CK03LC may be used as alternative to tape 900004953.

S.B. N°139-665 DATE: July 8, 2021



# **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 reuse.
- 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) 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) All lengths are in mm.

### **PART I**

#### NOTE

AW139 S/N 31254 must perform only the following steps: 1, 2.2.15, from 2.2.17 to 2.2.22, 2.2.44, 2.2.48, 3 and 4.

- 1. In accordance with DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
- 2. In accordance with DM 39-A-06-41-00-00A-010A-A and with reference to Figures 1 thru 16, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform EGPWS complete provision P/N 4G3440A00111 as described in the following procedure:

S.B. N°139-665 DATE: July 8, 2021



- 2.1 With reference to Figure 1 and Figure 2, perform EGPWS structural provision P/N 3G5310A04512 as described in the following procedure:
  - 2.1.1 With reference to Figure 1 View B and Detail C, temporarily locate the RH support assy P/N 3G5315A28131, the LH support assy P/N 3G5315A28031, the RH joint P/N 3G5315A28551 and the LH joint P/N 3G5315A28451 on the lower frame STA 7200 P/N 3P5340A10453 and countermark n°48 rivet holes positions.
  - 2.1.2 With reference to Figure 1 View B and Detail C, drill n°48 rivet holes in the previously marked positions thru the lower frame STA 7200 P/N 3P5340A10453. Prepare the surface to assure a good ground contact.
  - 2.1.3 With reference to Figure 1 Detail C, remove the existing rivets from the angle STA 7200 P/N 3P5340A13152 and install the rivets P/N NAS1097AD4-5.
  - 2.1.4 With reference to Figure 1 View B and Detail C, install the RH support assy P/N 3G5315A28131, the LH support assy P/N 3G5315A28031, the RH joint P/N 3G5315A28551 and the LH joint P/N 3G5315A28451 on the lower frame STA 7200 P/N 3P5340A10453 by means of n°48 rivets P/N AGS4719-508.
  - 2.1.5 With reference to Figure 1 View D-D, drill n°1 hole thru the LH joint P/N 3G5315A28451 and LH support assy P/N 3G5315A28031 and n°1 hole thru the RH joint P/N 3G5315A28551 RH support assy P/N 3G5315A28131 in accordance with the dimensioning shown.
  - 2.1.6 With reference to Figure 1 View D-D, fix the RH joint P/N 3G5315A28551 to the RH support assy P/N 3G5315A28131, and the LH joint P/N 3G5315A28451 to the LH support assy P/N 3G5315A28031, by means of n°2 rivets P/N AGS4719-407.
  - 2.1.7 With reference to Figure 1 View E, temporarily locate the panel P/N 3G5315A29151 on the RH support assy P/N 3G5315A28131 and the LH support assy P/N 3G5315A28031 and countermark n°8 rivet holes positions.
  - 2.1.8 With reference to Figure 1 View E, drill n°8 rivet holes in the previously marked positions thru the RH support assy P/N 3G5315A28131 and the LH support assy P/N 3G5315A28031. Prepare the surfaces to assure a good ground contact.



- 2.1.9 With reference to Figure 1 View E, install the panel P/N 3G5315A29151 on the RH support assy P/N 3G5315A28131 and the LH support assy P/N 3G5315A28031 by means of n°8 rivets P/N NAS1097AD4-5.
- 2.1.10 With reference to Figure 1 View E and Section F-F, drill n°4 holes Ø4.52÷4.65 thru the panel P/N 3G5315A29151, the RH support assy P/N 3G5315A28131 and the LH support assy P/N 3G5315A28031 in accordance with the dimensioning shown. Prepare the surfaces to assure a good ground contact.
- 2.1.11 With reference to Figure 1 Section F-F, install n°4 nut plates P/N MS21075L06 on the panel P/N 3G5315A29151 by means of n°8 rivets P/N MS20426AD3-7.
- 2.1.12 With reference to Figure 2 Section G-G, drill n°2 holes Ø11.48÷11.61 thru the panel assy RH upper P/N 3G5315A49131.
- 2.1.13 With reference to Figure 2 Section G-G, install n°2 inserts P/N NAS1836-3-13 on the panel assy RH upper P/N 3G5315A49131 by means of the adhesive EA934NA (C397).
- 2.1.14 With reference to Figure 2 Section G-G, install the bracket P/N 3G5315A19551 by means of n°2 washers P/N NAS1149D0332K and n°2 screws P/N MS27039-1-06.
- 2.2 With reference to Figure 3 thru 16, perform EGPWS electrical provision P/N 3G3440A00711 as described in the following procedure:
  - 2.2.1 With reference to Figure 7 View looking rear area RH side, remove the screws P/N MS35207-262, the washers P/N NAS1149D0332J, and the bracket P/N A426A01V110A.
  - 2.2.2 With reference to Figure 7 View looking rear area RH side, install the dust cover P/N SK3000-2-S879.
  - 2.2.3 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, and with reference to Figure 7 View looking rear area RH side, install the decal P/N ED300EGPWS;DATA.
  - 2.2.4 With reference to Figure 7 View looking rear area RH side, install in location n°5 the stud P/N A366A3E12C.
  - 2.2.5 With reference to Figure 9 Detail D, install the stud P/N A388A3E08C (location n°1).
  - 2.2.6 With reference to Figure 9 Detail D, install the n°2 support P/N AW001CL000A-X3 (locations n°3 and n°6)
  - 2.2.7 With reference to Figure 7 View C-C, install in the anchor nut P/N AW001TL3A08 (location n°4).



### **NOTE**

Customer must contact LHD engineering.support.lhd@leonardo.com at least 3 months in advance of embodiment date of this Service Bulletin in order to collect the exact W/D applicable to helicopter configuration.

- 2.2.8 With reference to AMP DM 39-A-24-91-04-00A-920A-K, remove from the Overhead CB panel the existing Integrally-lit panel and install the new integrally-lit panel P/N 3G2490LXXXXX.
- 2.2.9 Install n°1 circuit breaker P/N MS3320-3 in the position indicated as EGPWS on the new integrally-lit panel P/N 3G2490LXXXXX.
- 2.2.10 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, apply decal P/N ED300CB171 in adjacent area.
- 2.2.11 Route one piece of electrical wire P/N A556A-T20 of adequate length between circuit breaker CB171 and overhead circuit breaker panel connector PL1J4.
- 2.2.12 Perform electrical connection of previously routed wire between circuit breaker CB171 pin 2 and overhead circuit breaker panel connector PL1J4 pin S, respectively by means of terminal lug P/N MS25036-149 and electrical contact P/N M39029/56-351.
- 2.2.13 Connect CB171 to 28V DC Main Bus 2 W22B.
- 2.2.14 Perform a pin-to-pin continuity check of all the electrical connections made.

#### **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 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

- 2.2.15 With reference to Figure 3 thru Figure 9, lay down the following cable assemblies on the existing routes unless otherwise indicated on the figures:
  - 3G9A01A26301 EGPWS C/A (A1A263)



- 3G9A01B27401 EGPWS C/A (A1B274)
- 3G9A02A25002 EGPWS C/A (A2A250)
- 3G9A02B25002 EGPWS C/A (A2B250)
- 3G9B01B29601 EGPWS C/A (B1B296)
- 3G9B02B23801 EGPWS C/A (B2B238)
- 3G9C01B22501 EGPWS C/A (C1B225)
- 3G9C02B22301 EGPWS C/A (C2B223)
- 3G9C02B24202 EGPWS C/A (C2B242)
- 2.2.16 With reference to Figure 3 thru Figure 9, secure the cable assemblies lay down at the previous step by means of existing hardware and lacing cords.
- 2.2.17 With reference to Figure 7 View looking rear area RH side, install the clamp P/N MS21919WDG4 on the C/A C2B242 by means of washer P/N NAS1149D0332J and nut P/N MS21042L3.
- 2.2.18 With reference to Figure 8 View looking rear area LH side, install in indicated positions the clamp P/N AS21919DG01 on the C/A C2B242 and C/A C1B225 by means of the existing hardware.
- 2.2.19 With reference to Figure 9 Detail D, install the clamp P/N MS21919WDG4 and the clamp P/N MS21919WDG6 on the C/A C1B225, C/A C2B223 and C/A C2B242 by means of washer P/N NAS1149D0332J and screw P/N NAS1190E3P6AK.
- 2.2.20 With reference to Figure 7 View C-C, install the clamp P/N MS21919WDG4 and the clamp P/N MS21919WDG6 on the C/A C1B225, C/A C2B223 and C/A C2B242 by means of washer P/N NAS1149D0332J and screw P/N NAS1801-3-10.
- 2.2.21 In accordance with AMP DM 39-A-34-43-03-00A-720A-K and with reference to Figure 9 Detail H, install the EGPWS configuration module P/N 700-1710-001.
- 2.2.22 With reference to Figure 9 Detail H and Detail J, connect the wire P/N A556A-T24 to the shield chain A106P2 by means of ferrule P/N A590A02.
- 2.2.23 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, and Figures 12 and 13 Wiring Diagram, perform the electrical connections between the connector A2-3P1 and the module TB116-3.



- 2.2.24 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, and Figures 12 and 13 Wiring Diagram, perform the electrical connections between the connector P101 and the module TB116-3.
- 2.2.25 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, Figure 8 View B-B, and Figures 12 and 13 Wiring Diagram, perform the electrical connections between the connector P106 and the junction module TB116-1.
- 2.2.26 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 5 View looking instrument panel back RH side A.D.O.F., Figure 8 View B-B, and Figure 16 Wiring Diagram, perform the electrical connections between the connector P106 and the junction module TB150-1.
- 2.2.27 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, and Figures 12 and 13 Wiring Diagram, perform the electrical connections between the connector TB116-1 and the junction module TB106P1.
- 2.2.28 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down LH side, Figure 6 Detail A, and Figures 10 and 11 Wiring Diagram, perform the electrical connections between the connector A1-3P2 and the connector J113.
- 2.2.29 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 5 View looking instrument panel back LH side A.D.O.F., Figure 6 Detail A, and Figures 14 and 15 Wiring Diagram, perform the electrical connections between the connector J113, the connector A95P1 and the connector A31P1.
- 2.2.30 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 6 Detail A, View looking STA 1070 to STA 3120, and Figures 10 and 11 Wiring Diagram, perform the electrical connections between the connector PL8P2 and the connector J113.
- 2.2.31 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, Figure 8 View B-B, and Figures 10 and 11 Wiring Diagram, perform the electrical connections between the connector A2-3P2 and the connector P110.
- 2.2.32 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 6 Detail A, Figure 8 View B-B, and Figures 10 and



- 11 Wiring Diagram, perform the electrical connections between the connector P113 and the connector P110.
- 2.2.33 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 6 Detail A, Figure 8 View B-B, and Figures 14 and 15 Wiring Diagram, perform the electrical connections between the connector A30P1, the connector A42P1, the connector P113 and the connector P110.
- 2.2.34 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, Figure 6 View looking STA 1070 to STA 3120, and Figures 10 and 11 Wiring Diagram, perform the electrical connections between the connector PL24P2 and the junction TB106P1.
- 2.2.35 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, Figure 8 View B-B, and Figures 10 and 11 Wiring Diagram, perform the electrical connections between the connector P110 and the junction TB106P1.
- 2.2.36 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 4 View looking down RH side, Figure 6 Detail A, and Figures 10 and 11 Wiring Diagram, perform the electrical connections between the connector P113 and the junction TB106P1.
- 2.2.37 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 8 View looking under floor RH side, View looking rear area LH side, and Figures 12, 13 and 16 Wiring Diagram, perform the electrical connections between the connector J106 and the connector J202.
- 2.2.38 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 7 View looking STA 5700 RH side, Figure 8 View looking rear area LH side, and Figure 16 Wiring Diagram, perform the electrical connections between the module TB2046 and the connector J202.
- 2.2.39 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 6 View looking STA 1070 to STA 3120, Figure 8 View looking rear area LH side, and Figures 10 and 11 Wiring Diagram, perform the electrical connections between the connector PL1P4 and the connector J202.
- 2.2.40 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 8 View looking under floor RH side, View looking rear



- area LH side, and Figures 10, 11, 14 and 15 Wiring Diagram, perform the electrical connections between the connector J110 and the connector J208.
- 2.2.41 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 7 View looking rear area RH side, Figure 8 View looking rear area LH side, and Figure 9 Detail D and Figures 12 and 13 Wiring Diagram, perform the electrical connections between the DC power ground TB306, the ground module TB310 and the connector A106P1.
- 2.2.42 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 8 View looking rear area LH side, and Figure 9 Detail D and to Figure 12 thru 15 Wiring Diagram, perform the electrical connections between the connector P208 and the connector A106P1.
- 2.2.43 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 8 View looking rear area LH side, and Figure 9 Detail D and Figures 12 and 13 Wiring Diagram, perform the electrical connections between the connector P208 and the connector A106P2.
- 2.2.44 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 8 View looking rear area LH side, and Figure 9 Detail D and Figure 16 Wiring Diagram, perform the electrical connections between the DC power ground TB350 and the connector A106P3.
- 2.2.45 With reference to Figure 4 View looking down RH side, View looking down LH side and Figure 12 and 13 Wiring Diagram, perform the electrical connection of the connector A1-3P1 to the modular avionic unit A1, and the connector J101 to the connector P101.
- 2.2.46 Perform a pin-to-pin continuity check of all the electrical connections made.

## **NOTE**

Skip steps 2.2.47 and 2.2.48 if Part III is accomplished immediately after Part I.

2.2.47 With reference to Figure 9 Detail D and Figure 9 Detail E, protect and stow the connectors C1B225 and C2B223 by means of protective caps P/N DCC-15, tie straps P/N 900004953 and nomex P/N A582A25.



- 2.2.48 With reference to Figure 9 Detail D and Figure 9 Detail F, protect and stow the connector C2B242 by means of protective cap P/N DCC-12, tie strap P/N 900004953 and nomex P/N A582A25.
- 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@leonardo.com

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

S.B. N°139-665 DATE: July 8, 2021



### **PART II**

- 1. In accordance with DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
- 2. In accordance with DM 39-A-06-41-00-00A-010A-A and with reference to Figures 17 thru 31, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform EGPWS complete provision P/N 4G3440A00113 as described in the following procedure:
  - 2.1 With reference to Figure 17 and Figure 18, perform EGPWS structural provision P/N 3G5310A04513 as described in the following procedure:
    - 2.1.1 With reference to Figure 17 View B and Detail C, temporarily locate the RH support assy P/N 3G5315A28131, the LH support assy P/N 3G5315A28031, the RH joint P/N 3G5315A28551 and the LH joint P/N 3G5315A28451 on the lower frame STA 7200 P/N 3P5340A10453 and countermark n°48 rivet holes positions.
    - 2.1.2 With reference to Figure 17 View B and Detail C, drill n°48 rivet holes in the previously marked positions thru the lower frame STA 7200 P/N 3P5340A10453. Prepare the surface to assure a good ground contact.
    - 2.1.3 With reference to Figure 17 Detail C, remove the existing rivets from the angle STA 7200 P/N 3P5340A13152 and install the rivets P/N NAS1097AD4-5.
    - 2.1.4 With reference to Figure 17 View B and Detail C, install the RH support assy P/N 3G5315A28131, the LH support assy P/N 3G5315A28031, the RH joint P/N 3G5315A28551 and the LH joint P/N 3G5315A28451 on the lower frame STA 7200 P/N 3P5340A10453 by means of n°48 rivets P/N AGS4719-508.
    - 2.1.5 With reference to Figure 17 View D-D, drill n°1 hole thru the LH joint P/N 3G5315A28451 and LH support assy P/N 3G5315A28031 and n°1 hole thru the RH joint P/N 3G5315A28551 RH support assy P/N 3G5315A28131 in accordance with the dimensioning shown.
    - 2.1.6 With reference to Figure 17 View D-D, fix the RH joint P/N 3G5315A28551 to the RH support assy P/N 3G5315A28131, and the LH joint P/N 3G5315A28451 to the LH support assy P/N 3G5315A28031, by means of n°2 rivets P/N AGS4719-407.
    - 2.1.7 With reference to Figure 17 View E, temporarily locate the panel P/N 3G5315A29151 on the RH support assy P/N 3G5315A28131 and



- the LH support assy P/N 3G5315A28031 and countermark n°8 rivet holes positions.
- 2.1.8 With reference to Figure 17 View E, drill n°8 rivet holes in the previously marked positions thru the RH support assy P/N 3G5315A28131 and the LH support assy P/N 3G5315A28031. Prepare the surfaces to assure a good ground contact.
- 2.1.9 With reference to Figure 17 View E, install the panel P/N 3G5315A29151 on the RH support assy P/N 3G5315A28131 and the LH support assy P/N 3G5315A28031 by means of n°8 rivets P/N NAS1097AD4-5.
- 2.1.10 With reference to Figure 17 View E and Section F-F, drill n°4 holes Ø4.52÷4.65 thru the panel P/N 3G5315A29151, the RH support assy P/N 3G5315A28131 and the LH support assy P/N 3G5315A28031 in accordance with the dimensioning shown. Prepare the surfaces to assure a good ground contact.
- 2.1.11 With reference to Figure 17 Section F-F, install n°4 nut plates P/N MS21075L06 on the panel P/N 3G5315A29151 by means of n°8 rivets P/N MS20426AD3-7.
- 2.1.12 With reference to Figure 18 Section G-G and Section H-H, drill n°2 holes Ø11.48÷11.61 thru the panel assy RH upper P/N 3G5315A49131.
- 2.1.13 With reference to Figure 18 Section G-G and Section H-H, install n°2 inserts P/N NAS1836-3-13 on the panel assy RH upper P/N 3G5315A49131 by means of the adhesive EA934NA (C397).
- 2.1.14 With reference to Figure 18 Section G-G and Section H-H, install the bracket P/N 3G5315A19551 by means of n°2 washers P/N NAS1149D0332K and n°2 screws P/N MS27039-1-06.
- 2.2 With reference to Figure 19 thru 31, perform EGPWS electrical provision P/N 3G3440A00713 as described in the following procedure:
  - 2.2.1 With reference to Figure 23 View looking rear area RH side, remove the screws P/N MS35207-262, the washers P/N NAS1149D0332J, and the bracket P/N A426A01V110A.
  - 2.2.2 In accordance with AMP DM 39-A-11-00-01-00A-520A-A, and with reference to Figure 23 View looking rear area RH side, remove the data decal P/N ED300GPW.
  - 2.2.3 With reference to Figure 23 View looking rear area RH side, install the dust cover P/N SK3000-2-S879.



- 2.2.4 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, and with reference to Figure 23 View looking rear area RH side, install the decal P/N ED300J380.
- 2.2.5 With reference to Figure 23 View looking rear area RH side, install in location number 1 the stud P/N A366A3E12C.
- 2.2.6 With reference to Figure 24 Detail C, install the stud P/N A388A3E08C (location n°3).
- 2.2.7 With reference to Figure 24 Detail C, install the n°2 support P/N AW001CL001-N6 (locations n°4 and n°5).
- 2.2.8 With reference to Figure 24 View B-B, install the anchor nut P/N AW001TL3A08 (location n°2).

### **NOTE**

Customer must contact LHD engineering.support.lhd@leonardo.com at least 3 months in advance of embodiment date of this Service Bulletin in order to collect the exact W/D applicable to helicopter configuration.

- 2.2.9 With reference to AMP DM 39-A-24-91-04-00A-920A-K, remove from the Overhead CB panel the existing Integrally-lit panel and install the new integrally-lit panel P/N 3G2490LXXXXX.
- 2.2.10 Install n°1 circuit breaker P/N MS3320-3 in the position indicated as EGPWS on the new integrally-lit panel P/N 3G2490LXXXXX.
- 2.2.11 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, apply decal P/N ED300CB171 in adjacent area.
- 2.2.12 Route one piece of electrical wire P/N A556A-T20 of adequate length between circuit breaker CB171 and overhead circuit breaker panel connector PL1J4.
- 2.2.13 Perform electrical connection of previously routed wire between circuit breaker CB171 pin 2 and overhead circuit breaker panel connector PL1J4 pin S, respectively by means of terminal lug P/N MS25036-149 and electrical contact P/N M39029/56-351.
- 2.2.14 Connect CB171 to 28V DC Main Bus 2 W22B.
- 2.2.15 Perform a pin-to-pin continuity check of all the electrical connections made.



### **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 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

- 2.2.16 With reference to Figure 19 thru Figure 24, lay down the following cable assemblies on the existing routes unless otherwise indicated on the figures:
  - 3G9A01A26321 EGPWS C/A (A1A263)
  - 3G9A02A25021 EGPWS C/A (A2A250)
  - 3G9A01B27421 EGPWS C/A (A1B274)
  - 3G9A02B25021 EGPWS C/A (A2B250)
  - 3G9B01B55221 EGPWS C/A (B1B552)
  - 3G9B02B23821 EGPWS C/A (B2B238)
  - 3G9C01B22521 EGPWS C/A (C1B225)
  - 3G9C02B22321 EGPWS C/A (C2B223)
  - 3G9C02B24221 EGPWS C/A (C2B242)
- 2.2.17 With reference to Figure 19 thru Figure 24, secure the cable assemblies lay down at the previous step by means of existing hardware and lacing cords.
- 2.2.18 With reference to Figure 23 View looking rear area RH side, install the clamp P/N AW001CB04H on the C/A C2B242 by means of washer P/N NAS1149D0332J and nut P/N MS21042L3.
- 2.2.19 With reference to Figure 23 View looking rear area RH side, install in indicated positions n°2 clamps P/N AW001CB02H on the C/A C2B242 by means of the existing hardware.
- 2.2.20 With reference to Figure 24 Detail C, install the clamp P/N AW001CB04H and the clamp P/N AW001CB06H on the C/A C1B225, C/A C2B223 and C/A C2B242 by means of washer P/N NAS1149D0332J and screw P/N NAS1190E3P6AK.
- 2.2.21 With reference to Figure 24 View B-B, install the clamp P/N AW001CB04H and the clamp P/N AW001CB06H on the

S.B. N°139-665 DATE: July 8, 2021



- C/A C1B225, C/A C2B223 and C/A C2B242 by means of washer P/N NAS1149D0332J and screw P/N NAS1801-3-10.
- 2.2.22 In accordance with AMP DM 39-A-34-43-03-00A-720A-K and with reference to Figure 24 Detail F, install the EGPWS configuration module P/N 700-1710-001.
- 2.2.23 With reference to Figure 24 Detail F and Detail G, connect the wire P/N A556A-T24 to the shield chain A106P2 by means of ferrule P/N A590A02.
- 2.2.24 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, and Figures 27 and 28 Wiring Diagram, perform the electrical connections between the connector A2-3P1 and the module TB116-3.
- 2.2.25 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, and Figures 27 and 28 Wiring Diagram, perform the electrical connections between the connector P101 and the module TB116-3.
- 2.2.26 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, Figure 22 View A-A, and Figures 27 and 28 Wiring Diagram, perform the electrical connections between the connector P106 and the junction module TB116-1.
- 2.2.27 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 21 View looking instrument panel back RH side A.D.O.F., Figure 22 View A-A, and Figure 31 Wiring Diagram, perform the electrical connections between the connector P106 and the junction module TB150-1.
- 2.2.28 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, and Figures 27 and 28 Wiring Diagram, perform the electrical connections between the connector TB116-1 and the junction module TB106P1.
- 2.2.29 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down LH side, Figure 21 View looking instrument panel back RH side A.D.O.F., and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector A1-3P2 and the connector J113.
- 2.2.30 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 21 View looking instrument panel back RH side



- A.D.O.F., and Figures 29 and 30 Wiring Diagram, perform the electrical connections between the connector J113, the connector A95P1 and the connector A31P1.
- 2.2.31 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 21 View looking instrument panel back RH side A.D.O.F., Figure 22 View looking STA 1070 to STA 3120, and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector PL8P2 and the connector J113.
- 2.2.32 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, Figure 22 View A-A, and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector A2-3P2 and the connector P110.
- 2.2.33 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 21 View looking instrument panel back RH side A.D.O.F., Figure 22 View A-A, and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector P113 and the connector P110.
- 2.2.34 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 21 View looking instrument panel back RH side A.D.O.F., Figure 22 View A-A, and Figures 29 and 30 Wiring Diagram, perform the electrical connections between the connector A30P1, the connector A42P1, the connector P113 and the connector P110.
- 2.2.35 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, Figure 22 View looking STA 1070 to STA 3120, and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector PL24P2 and the junction TB106P1.
- 2.2.36 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, Figure 22 View A-A, and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector P110 and the junction TB106P1.
- 2.2.37 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 20 View looking down RH side, Figure 21 View looking instrument panel back RH side A.D.O.F., and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector P113 and the junction TB106P1.



- 2.2.38 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 22 View looking under floor RH side, Figure 23 View looking rear area RH side, and Figures 27, 28 and 29 Wiring Diagram, perform the electrical connections between the connector J106 and the connector J202.
- 2.2.39 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 23 View looking rear area RH side, and Figure 31 Wiring Diagram, perform the electrical connections between the module TB2240 and the connector J202.
- 2.2.40 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 22 View looking STA 1070 to STA 3120, Figure 23 View looking rear area RH side, and Figures 25 and 26 Wiring Diagram, perform the electrical connections between the connector PL1P4 and the connector J202.
- 2.2.41 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 22 View looking under floor RH side, Figure 23 View looking rear area RH side, and Figures 25, 26, 29 and 30 Wiring Diagram, perform the electrical connections between the connector J110 and the connector J208.
- 2.2.42 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 23 View looking rear area RH side, and Figure 24 Detail C and Figures 27 and 28 Wiring Diagram, perform the electrical connections between the DC power ground TB306, the ground module TB310 and the connector A106P1.
- 2.2.43 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 23 View looking rear area RH side, and Figure 24 Detail C and to Figure 27 thru 30 Wiring Diagram, perform the electrical connections between the connector P208 and the connector A106P1.
- 2.2.44 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 23 View looking rear area RH side, and Figure 24 Detail C and Figures 27 and 28 Wiring Diagram, perform the electrical connections between the connector P208 and the connector A106P2.
- 2.2.45 In accordance with AMP DM 39-A-20-10-08-00A-622A-A and with reference to Figure 23 View looking rear area RH side, and Figure 24 Detail C and Figure 31 Wiring Diagram, perform the electrical connections between the DC power ground TB350 and the connector A106P3.



- 2.2.46 With reference to Figure 20 View looking down RH side, View looking down LH side and Figure 27 Wiring Diagram, perform the electrical connection of the connector A1-3P1 to the modular avionic unit A1, and the connector J101 to the connector P101.
- 2.2.47 Perform a pin-to-pin continuity check of all the electrical connections made.

# **NOTE**

Skip steps 2.2.48 and 2.2.49 if Part III is accomplished immediately after Part II.

- 2.2.48 With reference to Figure 24 Detail C and Figure 23 Detail D, protect and stow the connectors C1B225 and C2B223 by means of protective caps P/N DCC-15, tie straps P/N 900004953 and nomex P/N A582A25.
- 2.2.49 With reference to Figure 24 Detail C and Figure 23 Detail E, protect and stow the connector C2B242 by means of protective cap P/N DCC-12, tie strap P/N 900004953 and nomex P/N A582A25.
- 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@leonardo.com

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

S.B. N°139-665 DATE: July 8, 2021

REVISION: A - May 31, 2022 Page 27 of 62



### **PART III**

- 1. In accordance with DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
- 2. In accordance with DM 39-A-06-41-00-00A-010A-A and with reference to Figure 32 and Figure 33, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the EGPWS equipment installation P/N 4G3440A00212 as described in the following procedure:
  - 2.1 In accordance with AMP DM 39-A-34-43-02-00A-720A-K, and with reference to Figure 32 and Figure 33 View A, install the EGPWS computer mounting tray P/N 405-0383-001, by means of n°2 screws P/N MS35206-230 and n°2 screws MS24693-S30.

### **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 where protection against chafing and prevention of contact with structure may occur, but the tubing protection is not substitute for good routing practice.

- 2.2 In accordance with AMP DM 39-A-34-43-01-00A-720A-K, and with reference to Figure 32 and Figure 33 View A, install the EGPWS computer P/N 965-1595-030.
- 2.3 In accordance with AMP DM 39-A-11-00-01-00A-720A-A, and with reference to Figure 33 View A, install the decal P/N ED300A106 on the EGPWS computer P/N 965-1595-030.
- 2.4 In accordance with AMP DM 39-B-31-61-09-00A-720A-A and AMP DM 39-B-31-61-10-00A-720A-A, and with reference to Figure 32 and Figure 33 View B, install the display controllers P/N 7016683-966.

# **NOTE**

Customer must contact AW139 Product Support Engineering <a href="mailto:engineering.support.lhd@leonardo.com">engineering.support.lhd@leonardo.com</a> to request the correct Option File at least three months in advance from the scheduled application of this Service Bulletin.

2.5 In accordance with AMP DM 39-A-00-00-00A-750A-A, ensure that the

S.B. N°139-665 DATE: July 8, 2021 REVISION: A - May 31, 2022

Page 28 of 62



- applicable Option File has been installed for the S/W kit installation.
- 2.6 In accordance with applicable steps of AMP DM 39-B-31-61-00-00A-320B-A, perform the operation test of the display controllers P/N 7016683-966.
- 2.7 In accordance with AMP DM 39-B-34-43-00-00A-320A-K, perform the operation test of the kit EGPWS-030 P/N 3G3440F00212.
- 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@leonardo.com

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

S.B. N°139-665 DATE: July 8, 2021



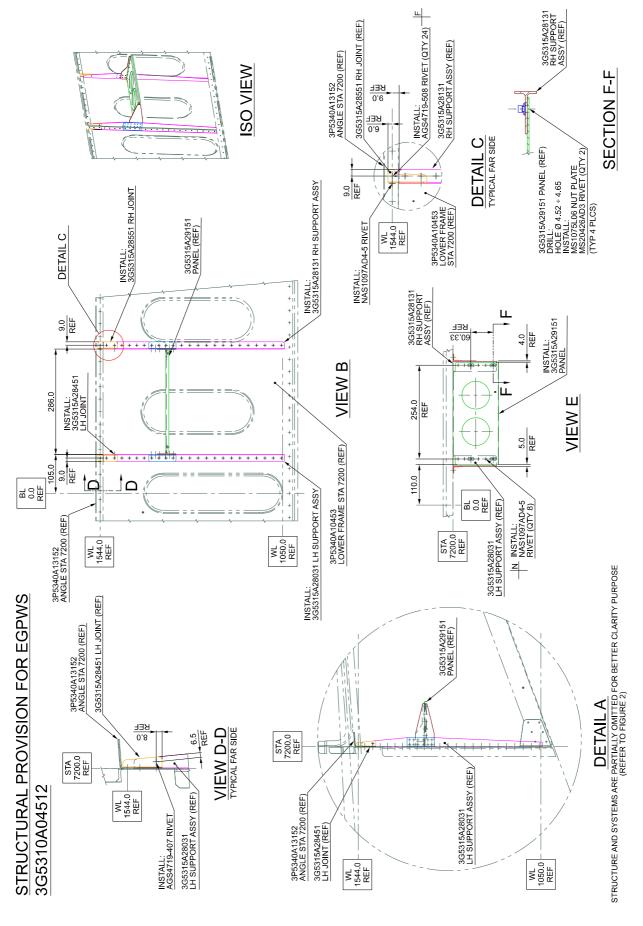
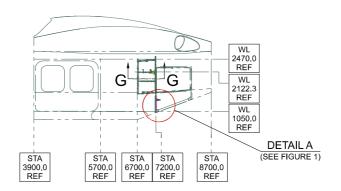
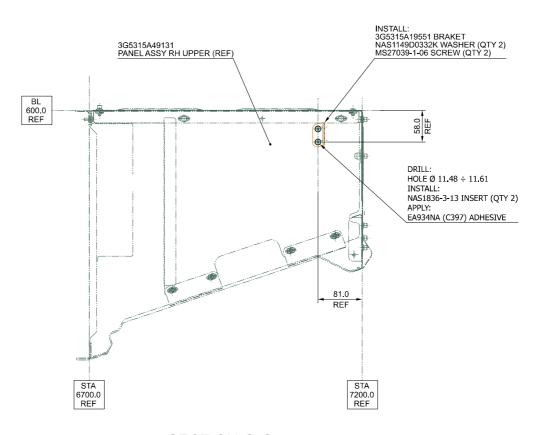


Figure 1





LH VIEW STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



**SECTION G-G** 

Figure 2



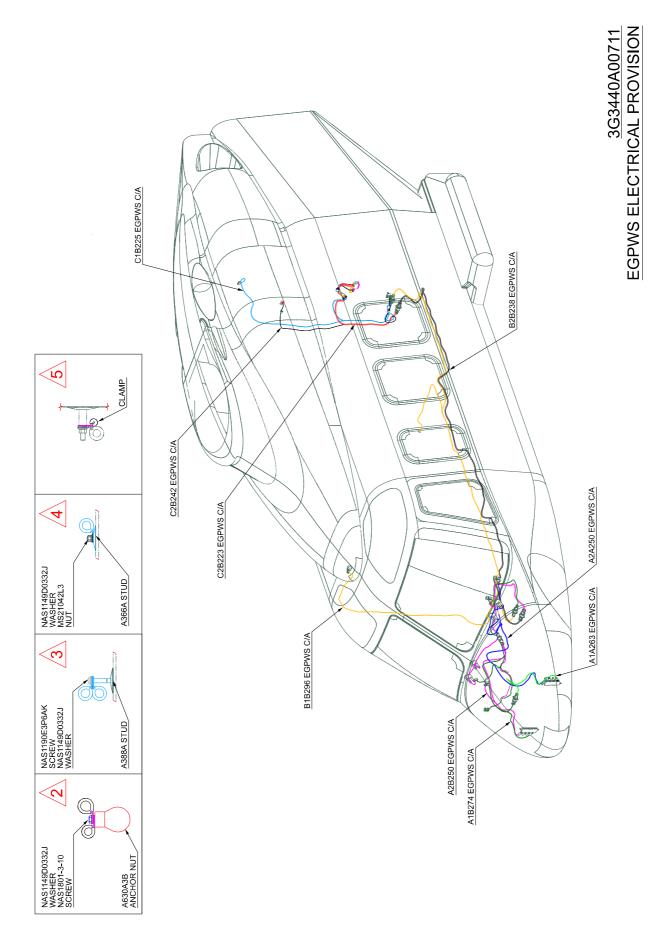


Figure 3



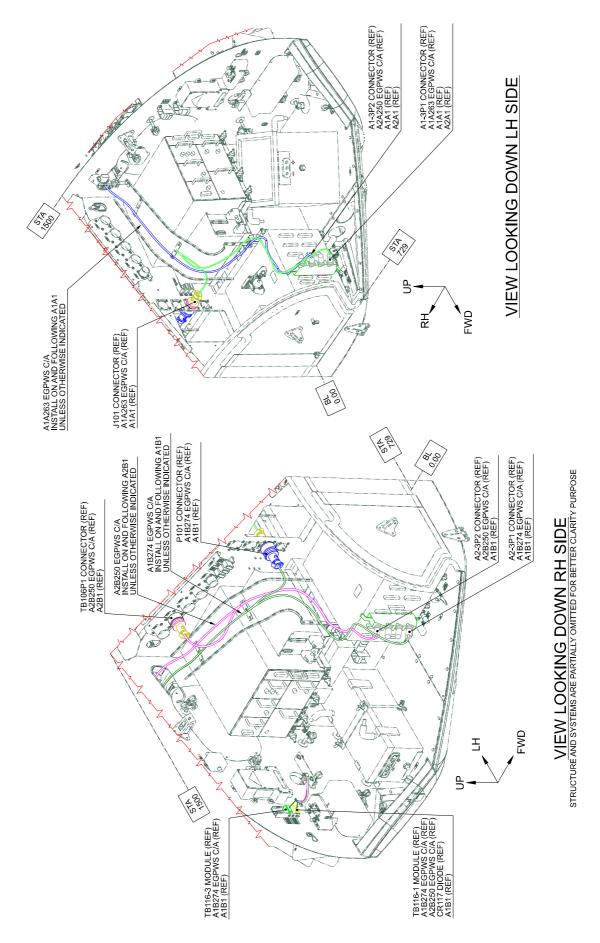


Figure 4



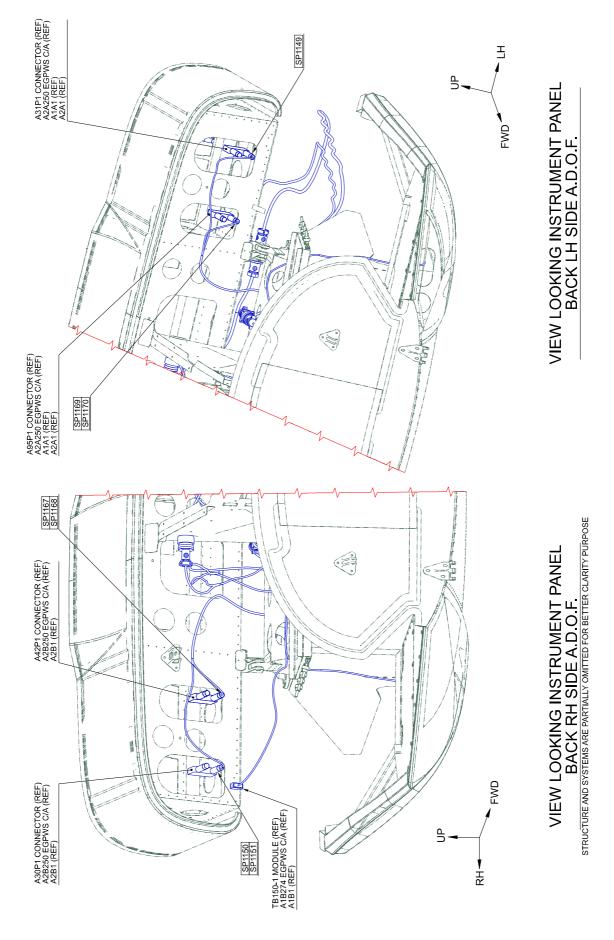


Figure 5



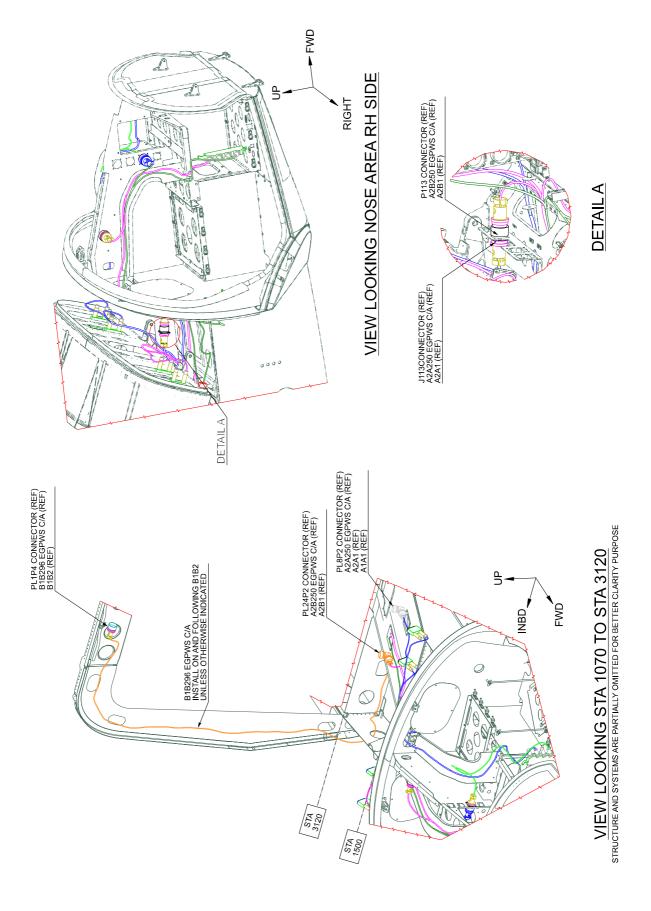


Figure 6



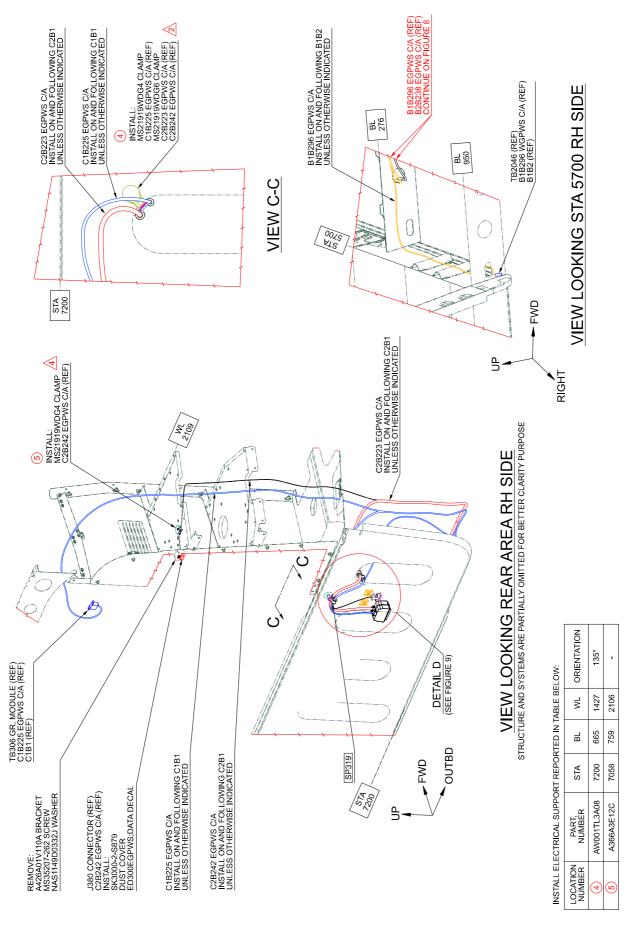


Figure 7



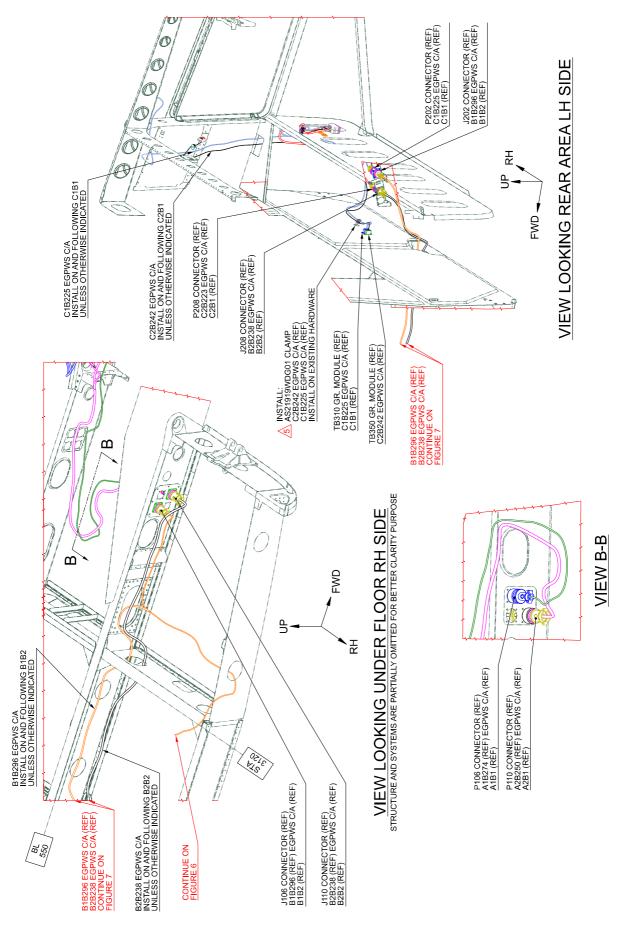


Figure 8



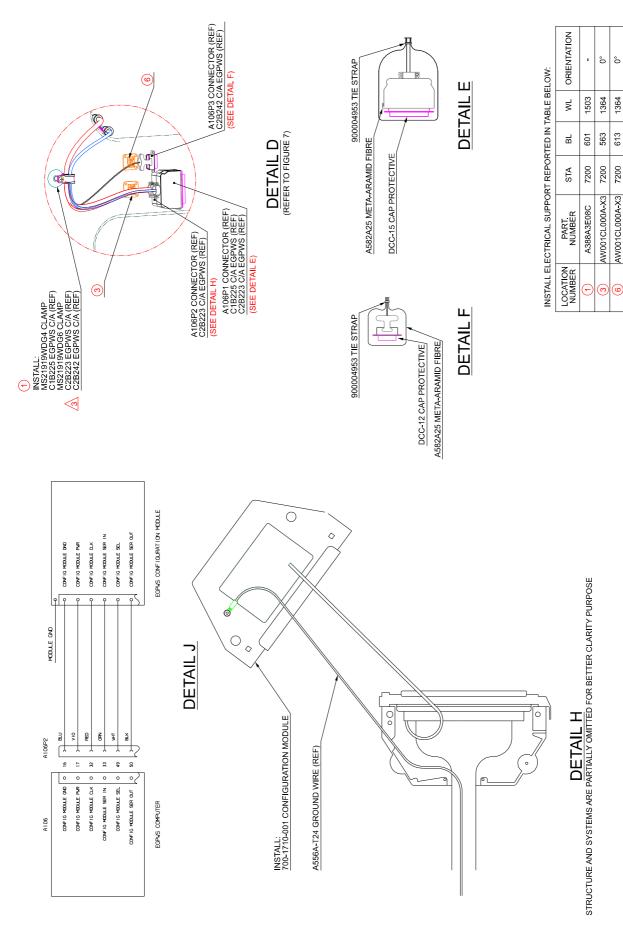


Figure 9



WIRING DIAGRAM EGPWS 3G3440W00311

REAR FUSELAGE <√2 J202 P202 J208 P208 \$105B22-\$(WH) +1 C 20 - \$106022-5(BL) \(\frac{1}{\cup \chi\_{\text{od}}}\) S109B22-S(BL) S105B22-S(BL) (1) - \$107B22-\$(WH) <del>(1) C</del> 2 S109B22-S(WH) FWD FUSELAGE A556AT ¥ ᇳ 酉 PL 1P4 OVERHEAD PANEL 28V DC
AUX CB PANEL
CIRCUIT BREAKER
PANEL 10 7 + S105B22-S(WH) ++ S106C22-S(WH) П P110 J110 S109C22-S(BL) 👆 7 - S108A22-S(WH) (1) - 11. S109C22-S(WH) fi ● 7 +++ S105C22-S(WH) 37 + 3107C22-S(BL) COCKP11 | 8 | • → + + S105E22-S(WH) TB106 J113 P113 TB106P1 WARNING ALDIO 3 HI PO m THE STOSF22-S(MH) MH WARNING J J J J S 3 105D22-S(BL) - (18) S107022-S(BL) PL8P2 - S108A22-S(BL) S109C22-S(BL) -++ S109C22-S(WH) COPILOT ICS PANEL PILOT ICS PANEL WARNING AUDIO 3 HI PL24 PL8 EGMPS CONTROL • 22 7 7 4429 (H1) • 23 7 A429 (L0) EGMPS A429 • 19 NOSE AVIONIC BAY EGMPS CONTROL A429 (HI) EGMPS CONTROL A429 (L0) EGMPS A429 BUS (HI) EGMPS A429 BUS (L0) MAU. ₩

Figure 10

S.B. N°139-665 DATE: July 8, 2021

REVISION: A - May 31, 2022

ΚĒ

DRAWING REF. SHEET NO. 2

 $\triangleleft$ 

FUNCTIONAL NOTES

ALL CABLES ARE IN LOOM A2B250 UNLESS SPECIFIED ALL CABLES ARE OF TYPE A561A12 22 UNLESS SPECIFIED



### EGPWS C/A (A2B250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2B250	A2-3P2	22	M39029/57-354	M23053/8-004-C
A2B250	A2-3P2	23	M39029/57-354	M23053/8-004-C
A2B250	A2-3P2	18	M39029/57-354	M23053/8-004-C
A2B250	A2-3P2	19	M39029/57-354	M23053/8-004-C
A2B250	P110	13	M39029/58-360	M23053/8-004-C
A2B250	P110	22	M39029/58-360	M23053/8-004-C
A2B250	P110	6	M39029/58-360	M23053/8-004-C
A2B250	P110	7	M39029/58-360	M23053/8-004-C
A2B250	P110	11	M39029/58-360	M23053/8-004-C
A2B250	P110	20	M39029/58-360	M23053/8-004-C
A2B250	P110	12	M39029/58-360	M23053/8-004-C
A2B250	P110	21	M39029/58-360	M23053/8-004-C
A2B250	P110	10	M39029/58-360	M23053/8-004-C
A2B250	P110	19	M39029/58-360	M23053/8-004-C
A2B250	P113	9	M39029/58-360	M23053/8-004-C
A2B250	P113	36	M39029/58-360	M23053/8-004-C
A2B250	P113	10	M39029/58-360	M23053/8-004-C
A2B250	P113	37	M39029/58-360	M23053/8-004-C
A2B250	P113	8	M39029/58-360	M23053/8-004-C
A2B250	P113	35	M39029/58-360	M23053/8-004-C
A2B250	PL24P2	J	M39029/57-357	M23053/8-004-C
A2B250	PL24P2	М	M39029/57-357	M23053/8-004-C
A2B250	TB106P1	45	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	33	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	35	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	47	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	34	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	46	M39029/56-348	M23053/8-004-C

## EGPWS C/A (A2A250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2A250	A1-3P2	22	M39029/57-354	M23053/8-004-C
A2A250	A1-3P2	23	M39029/57-354	M23053/8-004-C
A2A250	A1-3P2	18	M39029/57-354	M23053/8-004-C
A2A250	A1-3P2	19	M39029/57-354	M23053/8-004-C
A2A250	PL8P2	М	MS39029/57-357	M23053/8-004-C
A2A250	PL8P2	J	MS39029/57-357	M23053/8-004-C
A2A250	J113	8	M39029/56-348	M23053/8-004-C
A2A250	J113	35	M39029/56-348	M23053/8-004-C
A2A250	J113	9	M39029/56-348	M23053/8-004-C
A2A250	J113	36	M39029/56-348	M23053/8-004-C
A2A250	J113	10	M39029/56-348	M23053/8-004-C
A2A250	J113	37	M39029/56-348	M23053/8-004-C

### EGPWS C/A (B2B238)

			•	•
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B2B238	J110	10	M39029/56-348	M23053/8-004-C
B2B238	J110	19	M39029/56-348	M23053/8-004-C
B2B238	J110	11	M39029/56-348	M23053/8-004-C
B2B238	J110	20	M39029/56-348	M23053/8-004-C
B2B238	J110	12	M39029/56-348	M23053/8-004-C
B2B238	J110	21	M39029/56-348	M23053/8-004-C
B2B238	J110	13	M39029/56-348	M23053/8-004-C
B2B238	J110	22	M39029/56-348	M23053/8-004-C
B2B238	J110	6	M39029/56-348	M23053/8-004-C
B2B238	J110	7	M39029/56-348	M23053/8-004-C
B2B238	J208	20	M39029/56-348	M23053/8-004-C
B2B238	J208	31	M39029/56-348	M23053/8-004-C
B2B238	J208	21	M39029/56-348	M23053/8-004-C
B2B238	J208	32	M39029/56-348	M23053/8-004-C
B2B238	J208	22	M39029/56-348	M23053/8-004-C
B2B238	J208	33	M39029/56-348	M23053/8-004-C
B2B238	J208	23	M39029/56-348	M23053/8-004-C
B2B238	J208	34	M39029/56-348	M23053/8-004-C
B2B238	J208	24	M39029/56-348	M23053/8-004-C
B2B238	J208	35	M39029/56-348	M23053/8-004-C

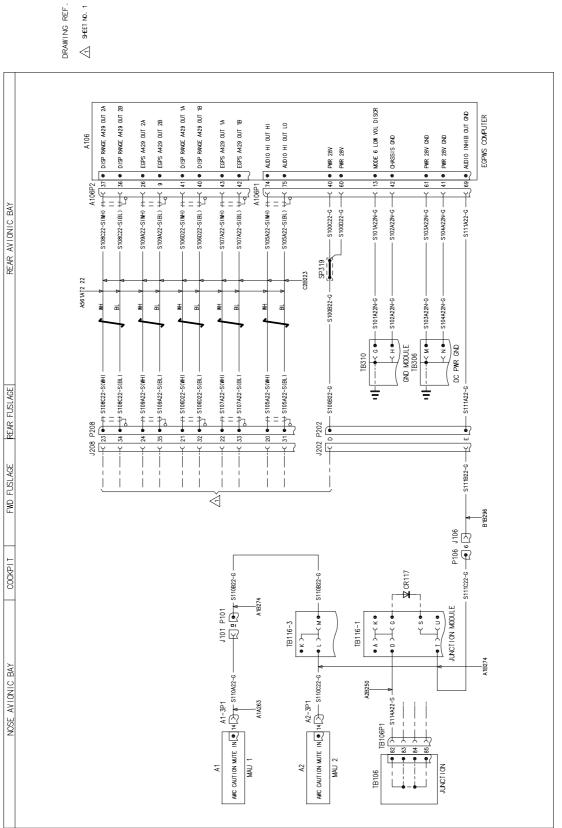
## EGPWS C/A (B1B296)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B1B296	J202	D	M39029/56-351	-
B1B296	PL1P4	s	M39029/58-363	-

3G3440W00311 WIRING DIAGRAM EGPWS

Figure 11





ALL CABLES ARE IN LOOM C1B225 UNLESS SPECIFIED ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED FUNCTIONAL NOTES

Figure 12

**REVISION: A - May 31, 2022** 

ΚĒ

SHEET NO. 1



### EGPWS C/A (C1B225)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C1B225	P202	D	M39029/58-363	-
C1B225	P202	E	M39029/58-363	-
C1B225	TB306	Ν	001104-202-02	-
C1B225	TB306	М	001104-202-02	-
C1B225	TB310	G	001104-202-02	-
C1B225	TB310	н	001104-202-02	-

#### EGPWS C/A (B1B296)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B1B296	J106	6	M39029/56-348	-
B1B296	J202	Е	M39029/56-351	-

### EGPWS C/A (A2B250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2B250	TB106P1	82	M39029/56-348	-
A2B250	TB116-1	D	001104-202-02	-

#### EGPWS C/A (A1B274)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1B274	A2-3P1	14	M39029/57-354	-
A1B274	P101	Α	M39029/58-363	-
A1B274	P106	6	M39029/58-360	-
A1B274	TB116-1	т	001104-202-02	-
A1B274	TB116-3	٦	001104-202-02	-
A1B274	TB116-3	М	001104-202-02	-

#### EGPWS C/A (C2B223)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2B223	A106P1	74	M39029/57-354	M23053/8-004-C
C2B223	A106P1	75	M39029/57-354	M23053/8-004-C
C2B223	P208	20	M39029/58-360	M23053/8-004-C
C2B223	P208	31	M39029/58-360	M23053/8-004-C
C2B223	P208	21	M39029/58-360	M23053/8-004-C
C2B223	P208	32	M39029/58-360	M23053/8-004-C
C2B223	P208	22	M39029/58-360	M23053/8-004-C
C2B223	P208	33	M39029/58-360	M23053/8-004-C
C2B223	P208	23	M39029/58-360	M23053/8-004-C
C2B223	P208	34	M39029/58-360	M23053/8-004-C
C2B223	P208	24	M39029/58-360	M23053/8-004-C
C2B223	P208	35	M39029/58-360	M23053/8-004-C

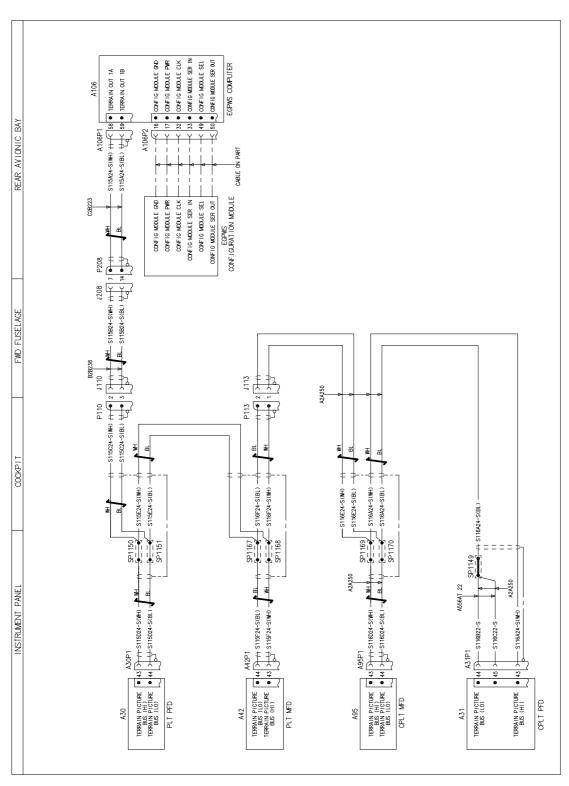
## EGPWS C/A (A1A263)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1A263	A1-3P1	14	M39029/57-354	-
A1A263	J101	А	M39029/56-351	-

3G3440W00311 WIRING DIAGRAM EGPWS

Figure 13





ALL CABLES ARE IN LOOM A2B250 UNLESS SPECIFIED ALL CABLES ARE OF TYPE M17-176-00002 UNLESS SPECIFIED FUNCTIONAL NOTES

Figure 14

S.B. N°139-665 DATE: July 8, 2021



### EGPWS C/A (A2B250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2B250	A30P1	43	M39029/57-354	M23053/8-005-C
A2B250	A30P1	44	M39029/57-354	M23053/8-005-C
A2B250	A42P1	44	M39029/57-354	M23053/8-005-C
A2B250	A42P1	43	M39029/57-354	M23053/8-005-C
A2B250	P110	2	M39029/58-360	M23053/8-004-C
A2B250	P110	3	M39029/58-360	M23053/8-004-C
A2B250	P113	2	M39029/58-360	M23053/8-005-C
A2B250	P113	1	M39029/58-360	M23053/8-005-C

# EGPWS C/A (A2A250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2A250	A31P1	44	M39029/57-354	-
A2A250	A31P1	45	M39029/57-354	-
A2A250	A31P1	43	M39029/57-354	M23053/8-005-C
A2A250	A95P1	43	M39029/57-354	M23053/8-005-C
A2A250	A95P1	44	M39029/57-354	M23053/8-005-C
A2A250	J113	1	M39029/56-348	M23053/8-005-C
A2A250	J113	2	M39029/56-348	M23053/8-005-C

### EGPWS C/A (B2B238)

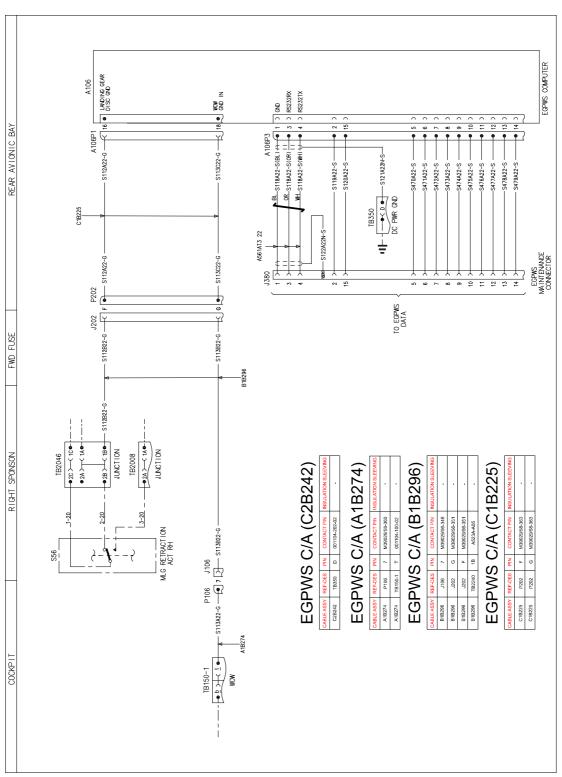
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2B250	J110	2	M39029/56-348	M23053/8-005-C
A2B250	J110	3	M39029/56-348	M23053/8-005-C
A2B250	J208	7	M39029/56-348	M23053/8-005-C
A2B250	J208	14	M39029/56-348	M23053/8-005-C

### EGPWS C/A (C2B223)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2B223	A106P1	58	M39029/57-354	M23053/8-005-C
C2B223	A106P1	59	M39029/57-354	M23053/8-005-C
C2B223	P208	7	M39029/58-360	M23053/8-005-C
C2B223	P208	14	M39029/58-360	M23053/8-005-C

3G3440W00311 WIRING DIAGRAM EGPWS





ALL CABLES ARE IN LOOM C2B242 UNLESS SPECIFIED ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED FUNCTIONAL NOTES

Figure 16



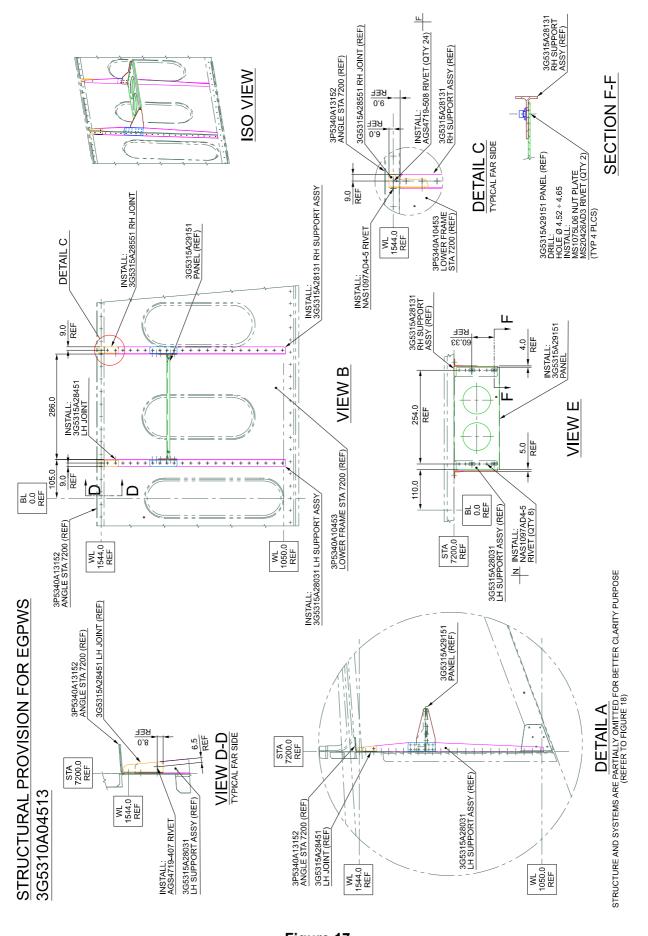


Figure 17



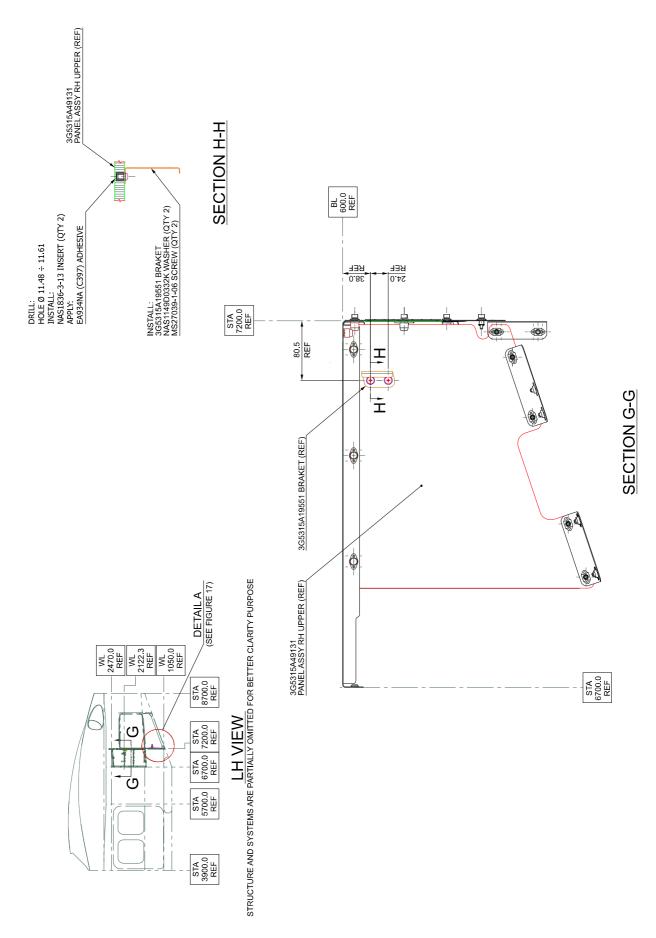


Figure 18



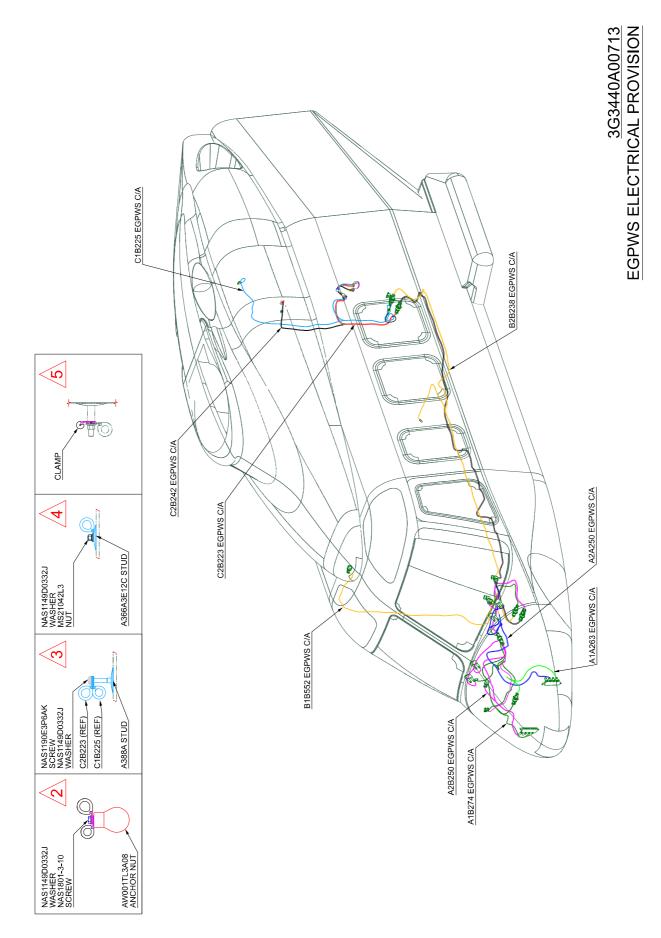


Figure 19



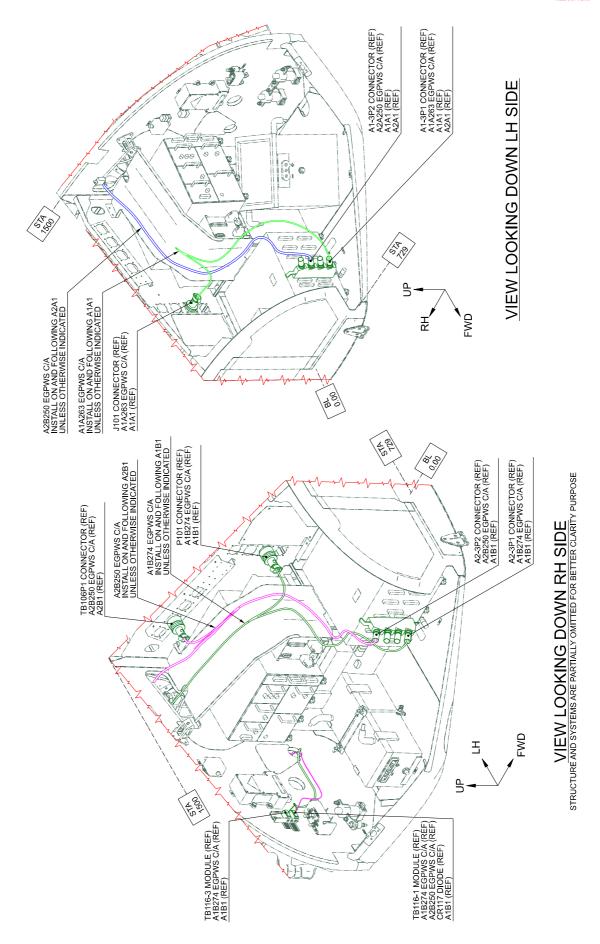


Figure 20



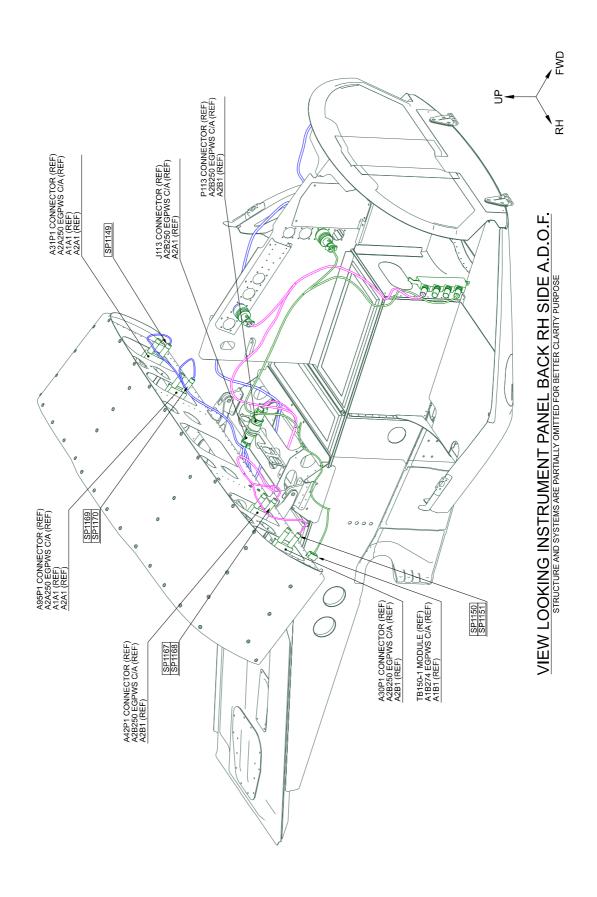


Figure 21



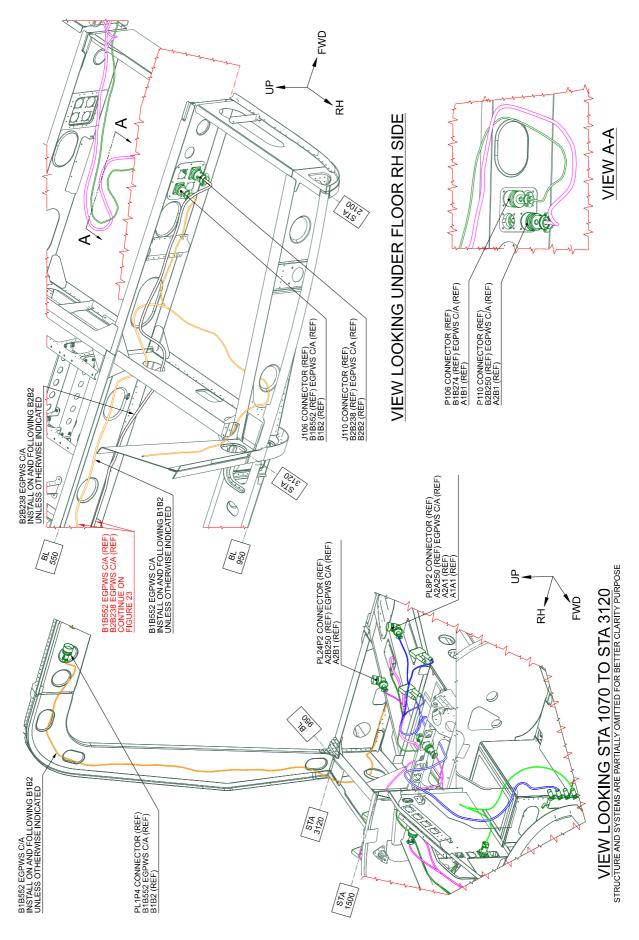


Figure 22



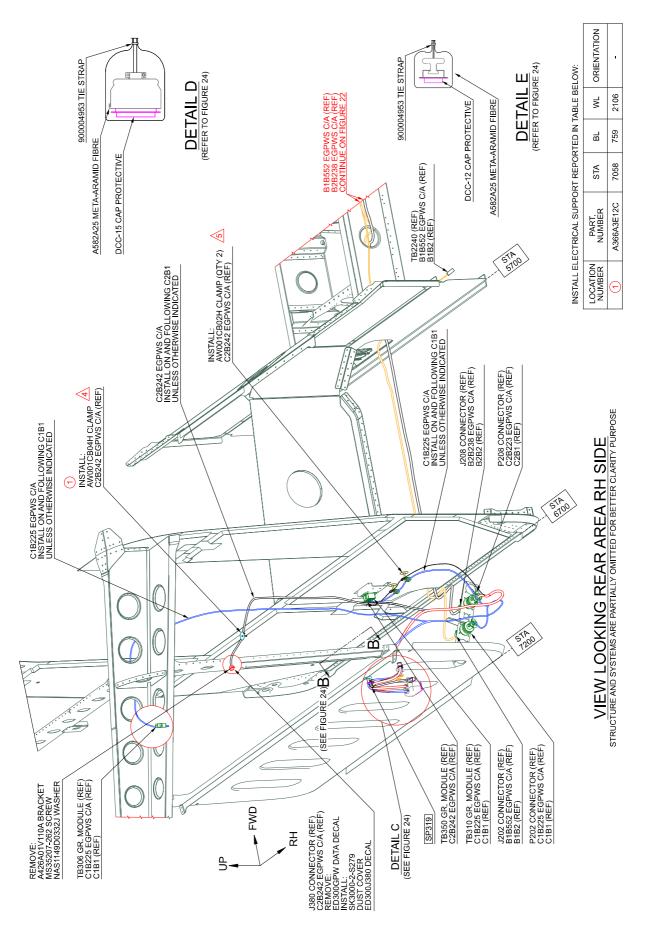


Figure 23



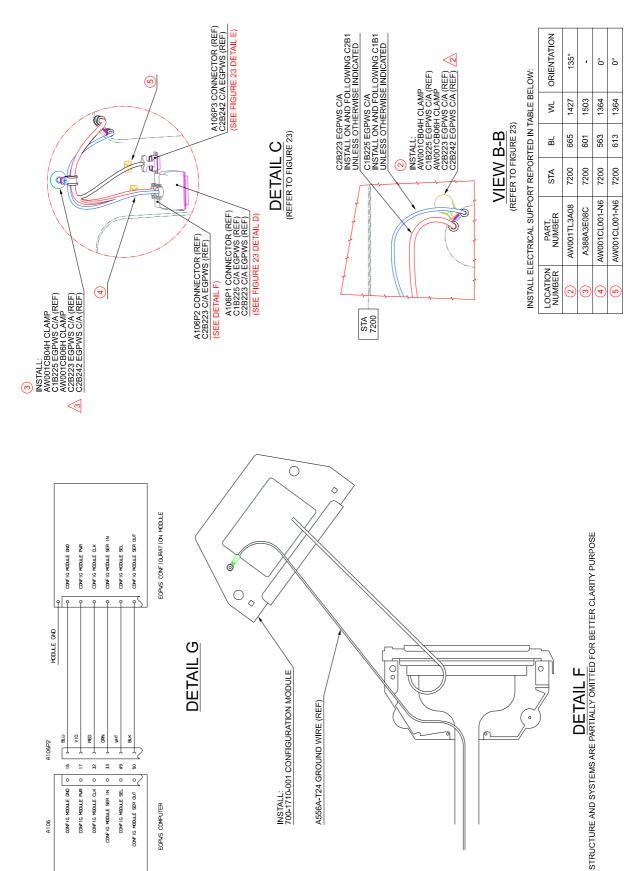


Figure 24

A556A-T24 GROUND WIRE (REF)

S.B. N°139-665 DATE: July 8, 2021

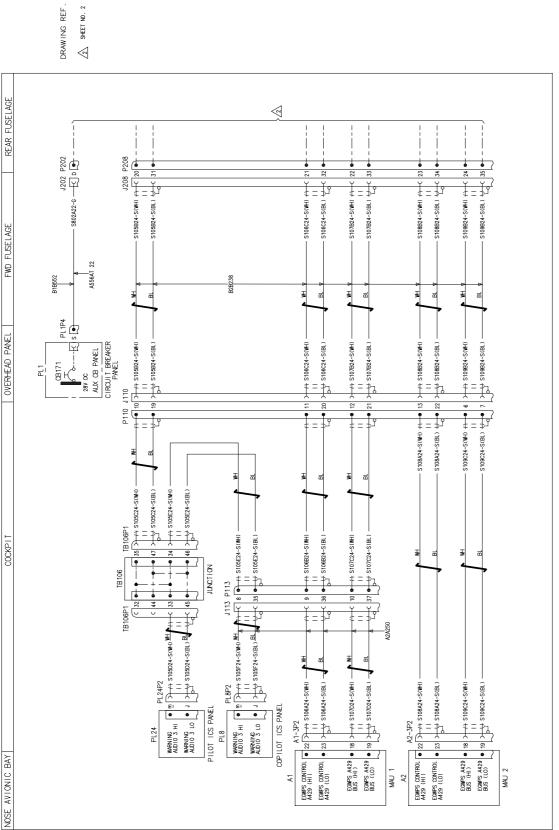
A106P2

CONFIG MODULE GND CONFIG MODULE PUR CONFIG MODULE CLK CONFIG MODULE SER IN CONFIG MODULE SEL CONFIG MODULE SER OUT

EGPWS COMPUTER



SHEET 1



ALL CABLES ARE IN LOOM A2B250 UNLESS SPECIFIED ALL CABLES ARE OF TYPE A561A12 24 UNLESS SPECIFIED

FUNCTIONAL NOTES

Figure 25

ΥË

SHEET NO. 2



## EGPWS C/A (A2B250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2B250	A2-3P2	22	M39029/57-354	M23053/8-004-C
A2B250	A2-3P2	23	M39029/57-354	M23053/8-004-C
A2B250	A2-3P2	18	M39029/57-354	M23053/8-004-C
A2B250	A2-3P2	19	M39029/57-354	M23053/8-004-C
A2B250	P110	13	M39029/58-360	M23053/8-004-C
A2B250	P110	22	M39029/58-360	M23053/8-004-C
A2B250	P110	6	M39029/58-360	M23053/8-004-C
A2B250	P110	7	M39029/58-360	M23053/8-004-C
A2B250	P110	11	M39029/58-360	M23053/8-004-C
A2B250	P110	20	M39029/58-360	M23053/8-004-C
A2B250	P110	12	M39029/58-360	M23053/8-004-C
A2B250	P110	21	M39029/58-360	M23053/8-004-C
A2B250	P110	10	M39029/58-360	M23053/8-004-C
A2B250	P110	19	M39029/58-360	M23053/8-004-C
A2B250	P113	9	M39029/58-360	M23053/8-004-C
A2B250	P113	36	M39029/58-360	M23053/8-004-C
A2B250	P113	10	M39029/58-360	M23053/8-004-C
A2B250	P113	37	M39029/58-360	M23053/8-004-C
A2B250	P113	8	M39029/58-360	M23053/8-004-C
A2B250	P113	35	M39029/58-360	M23053/8-004-C
A2B250	PL24P2	J	M39029/57-357	M23053/8-004-C
A2B250	PL24P2	м	M39029/57-357	M23053/8-004-C
A2B250	TB106P1	45	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	33	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	35	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	47	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	34	M39029/56-348	M23053/8-004-C
A2B250	TB106P1	46	M39029/56-348	M23053/8-004-C

## EGPWS C/A (A2A250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2A250	A1-3P2	22	M39029/57-354	M23053/8-004-C
A2A250	A1-3P2	23	M39029/57-354	M23053/8-004-C
A2A250	A1-3P2	18	M39029/57-354	M23053/8-004-C
A2A250	A1-3P2	19	M39029/57-354	M23053/8-004-C
A2A250	PL8P2	м	MS39029/57-357	M23053/8-004-C
A2A250	PL8P2	J	M\$39029/57-357	M23053/8-004-C
A2A250	J113	8	M39029/56-348	M23053/8-004-C
A2A250	J113	35	M39029/56-348	M23053/8-004-C
A2A250	J113	9	M39029/56-348	M23053/8-004-C
A2A250	J113	36	M39029/56-348	M23053/8-004-C
A2A250	J113	10	M39029/56-348	M23053/8-004-C
A2A250	J113	37	M39029/56-348	M23053/8-004-C

### EGPWS C/A (B2B238)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B2B238	J110	10	M39029/56-348	M23053/8-004-C
B2B238	J110	19	M39029/56-348	M23053/8-004-C
B2B238	J110	11	M39029/56-348	M23053/8-004-C
B2B238	J110	20	M39029/56-348	M23053/8-004-C
B2B238	J110	12	M39029/56-348	M23053/8-004-C
B2B238	J110	21	M39029/56-348	M23053/8-004-C
B2B238	J110	13	M39029/56-348	M23053/8-004-C
B2B238	J110	22	M39029/56-348	M23053/8-004-C
B2B238	J110	6	M39029/56-348	M23053/8-004-C
B2B238	J110	7	M39029/56-348	M23053/8-004-C
B2B238	J208	20	M39029/56-348	M23053/8-004-C
B2B238	J208	31	M39029/56-348	M23053/8-004-C
B2B238	J208	21	M39029/56-348	M23053/8-004-C
B2B238	J208	32	M39029/56-348	M23053/8-004-C
B2B238	J208	22	M39029/56-348	M23053/8-004-C
B2B238	J208	33	M39029/56-348	M23053/8-004-C
B2B238	J208	23	M39029/56-348	M23053/8-004-C
B2B238	J208	34	M39029/56-348	M23053/8-004-C
B2B238	J208	24	M39029/56-348	M23053/8-004-C
B2B238	J208	35	M39029/56-348	M23053/8-004-C

## EGPWS C/A (B1B552)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B1B552	J202	D	M39029/56-351	-
B1B552	PL1P4	s	M39029/58-363	-

3G3440W00321 WIRING DIAGRAM EGPWS SHEET 1

Figure 26

S.B. N°139-665 DATE: July 8, 2021



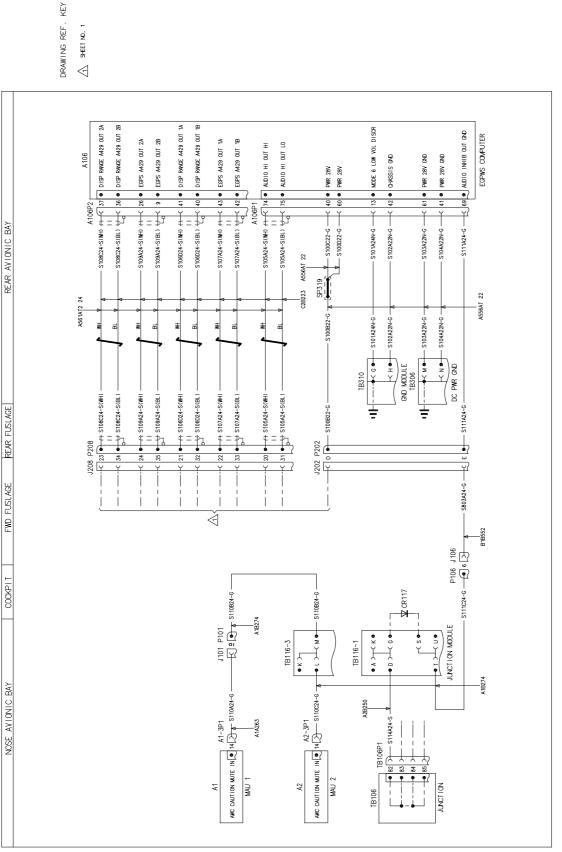


Figure 27

ALL CABLES ARE IN LOOM C18225 UNLESS SPECIFIED ALL CABLES ARE OF TYPE A556AT 24 UNLESS SPECIFIED

FUNCTIONAL NOTES



### EGPWS C/A (C1B225)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C1B225	P202	D	M39029/58-363	-
C1B225	P202	Е	M39029/58-363	-
C1B225	TB306	N	001104-202-02	-
C1B225	TB306	м	001104-202-02	-
C1B225	TB310	G	001104-202-02	-
C1B225	TB310	н	001104-202-02	-

### EGPWS C/A (B1B552)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
B1B552	J106	6	M39029/56-348	-
B1B552	J202	Е	M39029/56-351	-

### EGPWS C/A (A2B250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2B250	TB106P1	82	M39029/56-348	M23053/8-004-C
A2B250	TB116-1	D	001104-202-02	-

#### EGPWS C/A (A1B274)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1B274	A2-3P1	14	M39029/57-354	-
A1B274	P101	А	M39029/58-363	-
A1B274	P106	6	M39029/58-360	-
A1B274	TB116-1	т	001104-202-02	-
A1B274	TB116-3	L	001104-202-02	-
A1B274	TB116-3	м	001104-202-02	-

#### EGPWS C/A (C2B223)

			•	
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2B223	A106P1	74	M39029/57-354	M23053/8-004-C
C2B223	A106P1	75	M39029/57-354	M23053/8-004-C
C2B223	P208	20	M39029/58-360	M23053/8-004-C
C2B223	P208	31	M39029/58-360	M23053/8-004-C
C2B223	P208	21	M39029/58-360	M23053/8-004-C
C2B223	P208	32	M39029/58-360	M23053/8-004-C
C2B223	P208	22	M39029/58-360	M23053/8-004-C
C2B223	P208	33	M39029/58-360	M23053/8-004-C
C2B223	P208	23	M39029/58-360	M23053/8-004-C
C2B223	P208	34	M39029/58-360	M23053/8-004-C
C2B223	P208	24	M39029/58-360	M23053/8-004-C
C2B223	P208	35	M39029/58-360	M23053/8-004-C

## EGPWS C/A (A1A263)

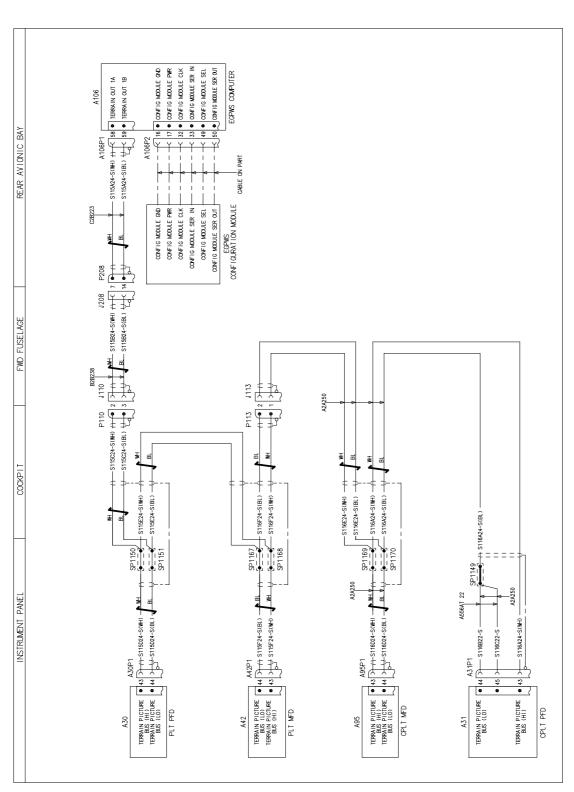
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A1A263	A1-3P1	14	M39029/57-354	-
A1A263	J101	A	M39029/56-351	-

3G3440W00321 WIRING DIAGRAM EGPWS SHEET 2

Figure 28

S.B. N°139-665 DATE: July 8, 2021

SHEET 3



4, CABLES ARE IN LOOM A2B250 UNIESS SPECIFIED ALL CABLES ARE OF TYPE M17-176-00002 UNLESS SPECIFIED

FUNCTIONAL NOTES

Figure 29



## EGPWS C/A (A2B250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING		
A2B250	A30P1	43	M39029/57-354	M23053/8-005-C		
A2B250	A30P1	44	M39029/57-354 M23053/8-005			
A2B250	A42P1	44	M39029/57-354	M23053/8-005-C		
A2B250	A42P1	43	M39029/57-354	M23053/8-005-C		
A2B250	P110	2	M39029/58-360	M23053/8-004-C		
A2B250	P110	3	M39029/58-360	M23053/8-004-C		
A2B250	P113	2	M39029/58-360	M23053/8-005-C		
A2B250	P113	- 1	M39029/58-360	M23053/8-005-C		

## EGPWS C/A (A2A250)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
A2A250	A31P1	44	M39029/57-354	-
A2A250	A31P1	45	M39029/57-354	-
A2A250	A31P1	43	M39029/57-354	M23053/8-005-C
A2A250	A95P1	43	M39029/57-354	M23053/8-005-C
A2A250	A95P1	44	M39029/57-354	M23053/8-005-C
A2A250	J113	1	M39029/56-348	M23053/8-005-C
A2A250	J113	2	M39029/56-348	M23053/8-005-C

### EGPWS C/A (B2B238)

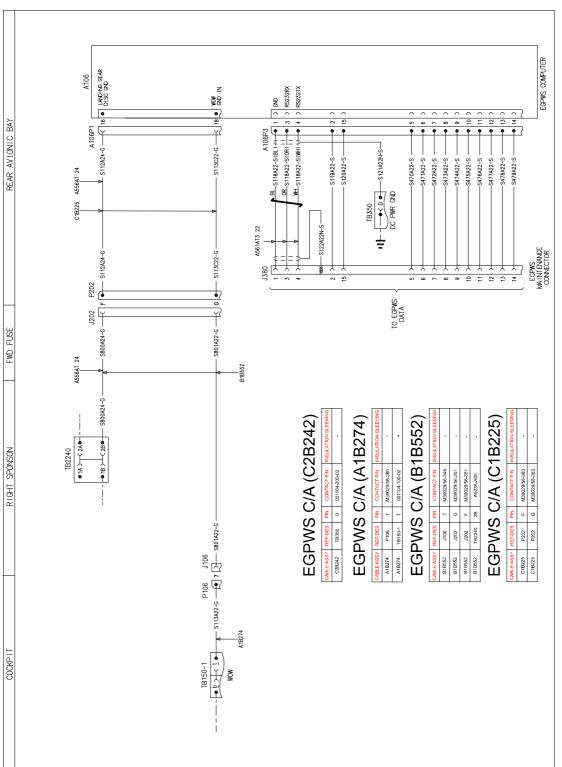
CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING	
A2B250	J110	2 M39029/56-348		M23053/8-005-C	
A2B250	J110	3	M39029/56-348	M23053/8-005-C	
A2B250	J208	7	M39029/56-348	M23053/8-005-C	
A2B250	J208	14	M39029/56-348	M23053/8-005-C	

## EGPWS C/A (C2B223)

CABLE ASSY	REF-DES	PIN	CONTACT P/N	INSULATION SLEEVING
C2B223	A106P1	58	M39029/57-354	M23053/8-005-C
C2B223	A106P1	59	M39029/57-354	M23053/8-005-C
C2B223	P208	7	M39029/58-360	M23053/8-005-C
C2B223	P208	14	M39029/58-360	M23053/8-005-C

3G3440W00321 WIRING DIAGRAM EGPWS SHEET 3





ALL CABLES ARE IN LOOM C2B242 UNLESS SPECIFIED ALL CABLES ARE OF TYPE A556AT 22 UNLESS SPECIFIED FUNCTIONAL NOTES

Figure 31





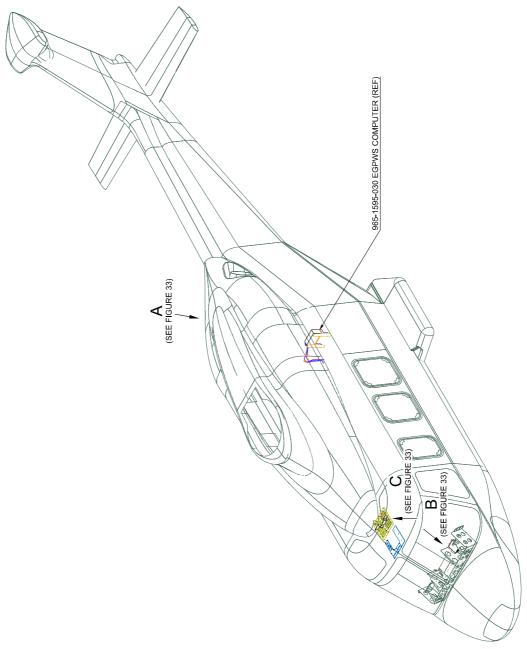


Figure 32



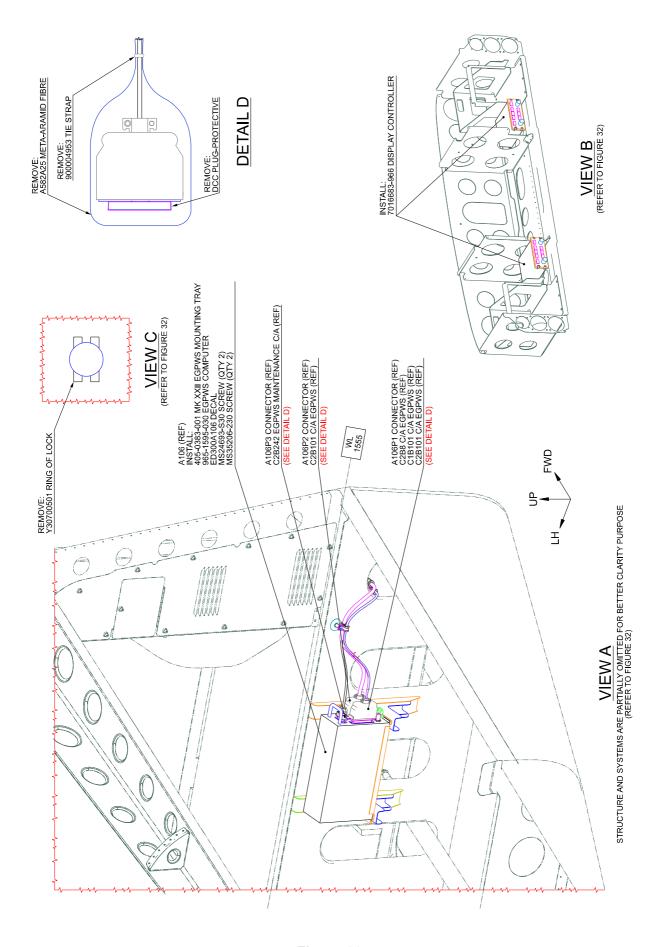


Figure 33



Please send to the following address:		SERVICE BULLETIN COMPLIANCE FORM			Date:		
LEONARDO S.p.A.							
CUSTOMER SUPPORT & SE		Number:					
PRODUCT SUPPORT ENGINEE	RING & LICENSES DEPT.						
Via Giovanni Agusta, 520 21017 Cascina Costa di Samara	ate (VA) - ITALY	Revision:					
Tel.: +39 0331 225036 Fax: +39							
Customer Name and Addre	ess:	Telephone:					
				Fax:			
				B.T. Compliance Date:			
Helicopter Model	S/N		Total N	umber	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.