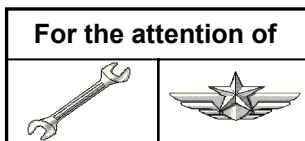


# Information Notice

**SUBJECT: LIGHTS**

## OBSOLESCENCE INFORMATION NOTICE



AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
EC155	B, B1	

To help you with your operational needs, Airbus Helicopters has launched an update of its Obsolescence Management approach. As obsolescence can have a direct impact on spares and repair supply, we will inform all customers about specific obsolescence issues.

Airbus Helicopters has been informed by its suppliers that the following equipment has become obsolete.

**Affected equipment:**

Description	Position Light (green)	Position Light (red)	Position Light (white)
AH P/N	704A46831029	704A46831030	706A36832001

**Solutions:**

- No spare support and no Last Buy Order (LBO) will be possible.
- No repair can be provided through Airbus Helicopters.
- A design solution has been developed by Airbus Helicopters under STC for the installation of alternative Position Lights:

Description	Position Light (green)	Position Light (red)	Position Light (white)
SB	EC155-SB No. 33.41.02-AHE	EC155-SB No. 33.41.02-AHE	EC155-SB No. 33.41.01-AHE
P/N	U334A10T1001	U334A10T1002	U334A10T1003

Note: For a military application of this STC, the certification must be validated by the competent governmental authority, as required.

### No. 3769-I-33

If you have any questions or need further information, feel free to contact our generic obsolescence e-mail address: [contact.customer-obsolescence-support.ah@airbus.com](mailto:contact.customer-obsolescence-support.ah@airbus.com), your Airbus Helicopters Customer Support Manager (CSM) or Logistic Key Account Manager.

Parts can be ordered directly from the Airbus Helicopters España (AHE) Order Administration [support.sparescom.ah@airbus.com](mailto:support.sparescom.ah@airbus.com), as defined in the Service Bulletins.

**Disclaimer:**

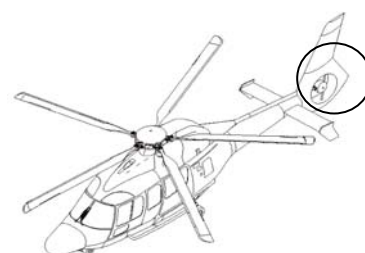
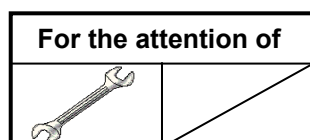
The information provided in this Obsolescence Information Notice does not supersede any type certifications or airworthiness instructions.

Civil versions: B, B1.



## SERVICE BULLETIN

**SUBJECT:** LIGHTS – Position lights  
Obsolescence of the tail position light



Revision No.	Date of issue
Revision 0	2021-11-05

**Summary:**

The original tail position light with manufacturer P/N 4000115-001 or Airbus Helicopters (AH) P/N 706A36832001 has become obsolete. The purpose of this Service Bulletin (SB) is to replace the obsolete tail position light.

**Compliance:**

It is the operator's decision to comply or not to comply with this SB.

**Approval:**

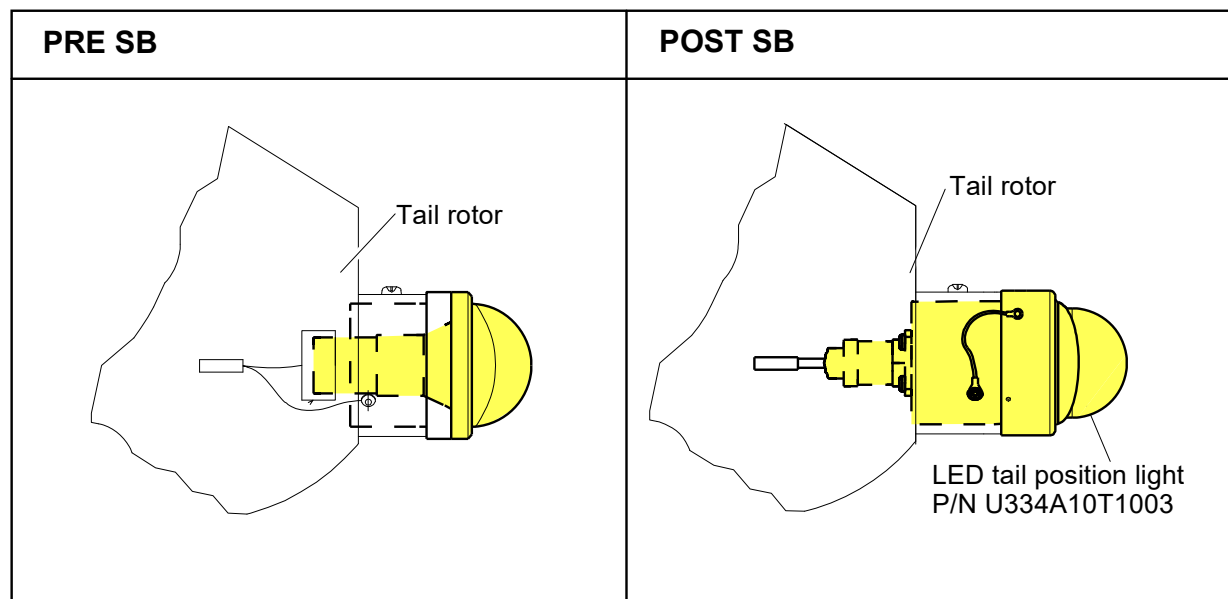
The information and instructions of this document is approved under the authority of DOA no. EASA.21J.090.

## 1. PLANNING INFORMATION

### 1.A. EFFECTIVITY

#### 1.A.1. Helicopters/installed equipment and parts

- a) Helicopters EC155B S/N 6544, 6545, 6546, 6547, 6558, 6559, 6562, 6569, 6576, 6577, 6581, 6586, 6595, 6599, 6601, 6613 and 6643.  
Helicopters EC155B1 S/N 6620, 6627, 6659, 6663, 6896, 6920, 6940, 6945 and 6947.
- b) Tail position light P/N 4000115-001 (AH P/N 706A36832001).



#### 1.A.2. Non-installed equipment and parts

None.

### 1.B. ASSOCIATED REQUIREMENTS

None.

### 1.C. REASON

Due to the obsolescence of the original tail position light (manufactured by CPC), Airbus Helicopters España (AHE) offers with this SB the replacement of the current one with a new alternative LED tail position light (manufactured by JPC Aviation).

### 1.D. DESCRIPTION

This SB consists of:

- Removal of the existing tail position light and lamp adapter.
- Installation of the new tail position light.

## 1.E. COMPLIANCE

### 1.E.1. Compliance at H/C manufacturer level

Helicopters/installed equipment or parts:

Not affected.

Non-installed equipment or parts:

Not affected.

### 1.E.2. Compliance in service

Helicopters/installed equipment or parts:

It is the operator's decision to comply or not to comply with this SB.

Non-installed equipment or parts:

Not affected.

## 1.F. APPROVAL

The modification linked to this Service Bulletin has been approved through MAS 2017M-EC155 on 15/10/2021.

The information and instructions of this document is approved on 05/11/2021 under the authority of DOA no. EASA.21J.090.

## 1.G. MANPOWER

Qualification:

For compliance with this SB, AHE recommends the following personnel qualifications:

Qualifications: - 1 Mechanic Technician,  
- 1 Avionic Technician,

Estimated Man-hours:

The estimated man-hours is indicated for reference purposes only and based on a standard helicopter configuration.

Estimated man-hours: - 4 hour for Mechanic Technician,  
- 4 hour for Avionic Technician,

Estimated Helicopter downtime:

Estimated helicopter downtime is indicated for reference purposes only and based on a standard helicopter configuration.

Helicopter downtime is estimated at 1 day.

## 1.H. WEIGHT AND BALANCE

Weight: + 0.099 kg

Balance: Not affected.

## 1.I. POWER CONSUMPTION

Electrical load analysis is affected.

Decrease in DC loads: 0.961 A

Power consumption: 3.1 watts.

### 1.J. SOFTWARE UPGRADES/UPDATES

Not changed.

### 1.K. REFERENCES

IN 3481-I-00: The Marketplace: an AirbusWorld eOrdering service.  
AMM EC155 and Standard Practices Manual (MTC).

### 1.L. OTHER AFFECTED PUBLICATIONS

The modification is integrated by AHE in the following document:

- Customization Manual (CM-EC155B-B1-33410101).

This document will be circulated to the Subscribers.

### 1.M. PART INTERCHANGEABILITY OR MIXABILITY

#### Interchangeability

After accomplishment of this SB, the tail position light P/N 4000115-001 (AH P/N 706A36832001) and the lamp adapter P/N L334M1807101 must not be used anymore.

#### Mixability

Not affected.

## 2. MATERIAL INFORMATION

### 2.A. MATERIAL: PRICE – AVAILABILITY – PROCUREMENT

Information on price and availability of the required material kit will be provided by AHE on request.  
For information of the material kit delivery time, contact AHE Order Administration.

### 2.B. LOGISTIC INFORMATION

None.

### 2.C. MATERIAL REQUIRED PER HELICOPTER/COMPONENT

Material kit to be ordered for one helicopter:

Item	Keyword	Qty.	New P/N	Old P/N	Remarks
<b>Material kit SB-EC155-33.41.01-2C1: Tail position light installation</b>					
1	Round head screw	3	LN9139M4X10	LN9139M4X10	A
2	Washer	3	XBAX040TL	XBAX040TL	A
3	Tail (white) position light	1	U334A10T1003	4000115-001 or 706A36832001	B, C
4	Label	1	ECS0731W34T9L	ECS0731W34T9L	A
5	Solder sleeve	2	MBBN3403-11	-	-
6	Wire splice	1	MBBN3498E20	MBBN3498F20	B
7	Contact	6	EN3155-016M2018	MBBN3495Y20	B
8	Connector endshell	1	VG95343T18B001A	-	-
9	Union	1	EN3660-063F09BA	-	-
10	Sealing plug	1	EN4529-003N20	-	-
11	Band-it	1	E0805-02	-	-
12	Connector	1	EN3645M6AN98BN	-	-
13	Contact	2	EN3155-009F2018	-	-

Remark:

A = Replace if needed.

B = Replace.

C = The P/N 706A36832001 is the AH P/N. The manufacturer P/N is 4000115-001.

Material to be ordered separately:

Item	Keyword	Qty.	New P/N	Old P/N	Remarks
1	Wire	0.30 m	EN2267-010A010S	-	A
2	Cable	0.15 m	EN2714-013B010F	-	A

Remark:

A = The quantity indicated is the necessary to do the modification. If this material is requested to AHE Order Administration, a complete roll of wire will be received.

Consumables to be ordered separately:



**WARNING**

**RESPECT THE SAFETY DATA SHEET OF THE MANUFACTURER.**

No.	Keyword	Qty. (approx.)	Specification**	CM	Rem.
1	Sealing compound	a.n.*	-	6001	-
2	Locking compound	a.n.*	-	620	-
* a.n.= as needed					
** Specification i.a.w. MTC 20-01-01-102.					

The consumables can be ordered from the AirbusWorld Marketplace through e-ordering (see IN 3481-I-00 for instructions).

If you cannot get access to e-ordering, please contact your Logistic Focal Point.

## 2.D. MATERIAL TO BE RETURNED

None.



## 3. ACCOMPLISHMENT INSTRUCTIONS

### 3.A. GENERAL

1. Read and comply with the general instructions for protection of electrical wiring during maintenance operations (MTC 20-02-01-418).
2. Read and comply with the general instructions for joining screws and nuts (MTC 20-02-05-404).

### 3.B. WORK STEPS

#### 3.B.1. Preliminary steps

1. Park aircraft in hangar.
2. Install suitable access means.
3. Disconnect all electrical power supply sources.

#### 3.B.2. Procedure

1. Remove the existing tail position light (3, Fig. 1) (AMM 33-41-01-062). Discard the tail position light (3).
2. Remove the existing adapter (17), with the screws (1) and washers (2). Discard the adapter (17).
3. Installation of the new tail position light (3):
  - a. If the existing wires in the helicopter are long enough, go to step c.
  - b. If the existing wires in the helicopter are not long enough:
    - If there is an existing wire splice (8), remove and discard it.
    - Cut the new wires of the cable (6) to length.
    - Strip the wires of the cable (6) (MTC 20-80-20-407) and crimp contacts (9) on each wire at only one end (MTC 20-80-20-408), for the connection to the wire splice (8).
    - Replace the contacts of the helicopter's cable wires with two contacts (9, Fig. 1) (MTC 20-80-20-408).
    - Connect the helicopter's cable shielding and the shielding of the cable (6) to two solder sleeves (7) (MTC 20-80-20-418), one for each shielding, and connect two wires (5) to them. Refer to Wiring Diagram (Fig. 2).
    - Strip these wires at the other end (5) (MTC 20-80-20-407) and crimp contacts (9) (MTC 20-80-20-408), one for each wire (5). Refer to Wiring Diagram (Fig. 2).
    - Connect the wire splice (8) to the wires of the helicopter's, also the wires (5) from the shielding and to the new wires of the new cable (6), also the wires (5) from the shielding. Refer to Wiring Diagram (Fig. 2).
  - c. Crimp two contacts (15) on each of the other ends of the helicopter's cable wires or the wires of cable (6) (MTC 20-80-20-408).
  - d. Slide the connector endshell (10, Fig. 1) over the helicopter's cable or the cable (6).
  - e. Slide the union (11) over the helicopter's cable or the cable (6).
  - f. Connect the wires of the helicopter's cable or the wires of the cable (6) and the sealing plug (12) to the connector (14).
  - g. Connect the union (11) to the connector (14) and install the cable's shielding with one band-it (13) to the union (11) (MTC 20-80-20-420).
  - h. Protect the end of the helicopter's cable or the cable (6) and the union (11) with the connector endshell (10) (MTC 20-80-20-428).
  - i. Connect connector (14) to the tail position light (3).
  - j. If the existing label (4, Fig. 1) is damaged, replace it with a new label (4). Write "16L" on the label (4) using a permanent marker.

- k. Attach the tail position light (3) to the helicopter with three screws (1), three washers (2) and the light retainer cable (16) of the tail position light (3).
- l. Secure the screws (1) with locking compound (CM 620). Let the locking compound dry, refer to the manufacturer's instructions.
- m. Seal the joint between the helicopter and the tail position light (3) with sealing compound (CM 6001). Let the sealing compound dry, refer to the manufacturer's instructions.

### **3.B.3. Final steps**

- 1. Clean the work areas and the helicopter.
- 2. Remove access means.
- 3. Restore the helicopter to flight condition.

### **3.B.4. Test**

- 1. Perform the bonding test (see Appendix).
- 2. Perform the functional test of the tail position light (AMM 33-41-02-721).

## **3.C. COMPLIANCE CONFIRMATION**

### Compliance with this document:

Record full compliance with this SB, with the revision number, in the helicopter documents.

Record full compliance with this SB, with the revision number, in the log card of the equipment (if a log card exists).

### Tracking of modifications in the documentation:

Record embodiment of MAS 2017M-EC155 in the helicopter documents.

## **3.D. OPERATING AND MAINTENANCE INSTRUCTIONS**

### Operating instructions:

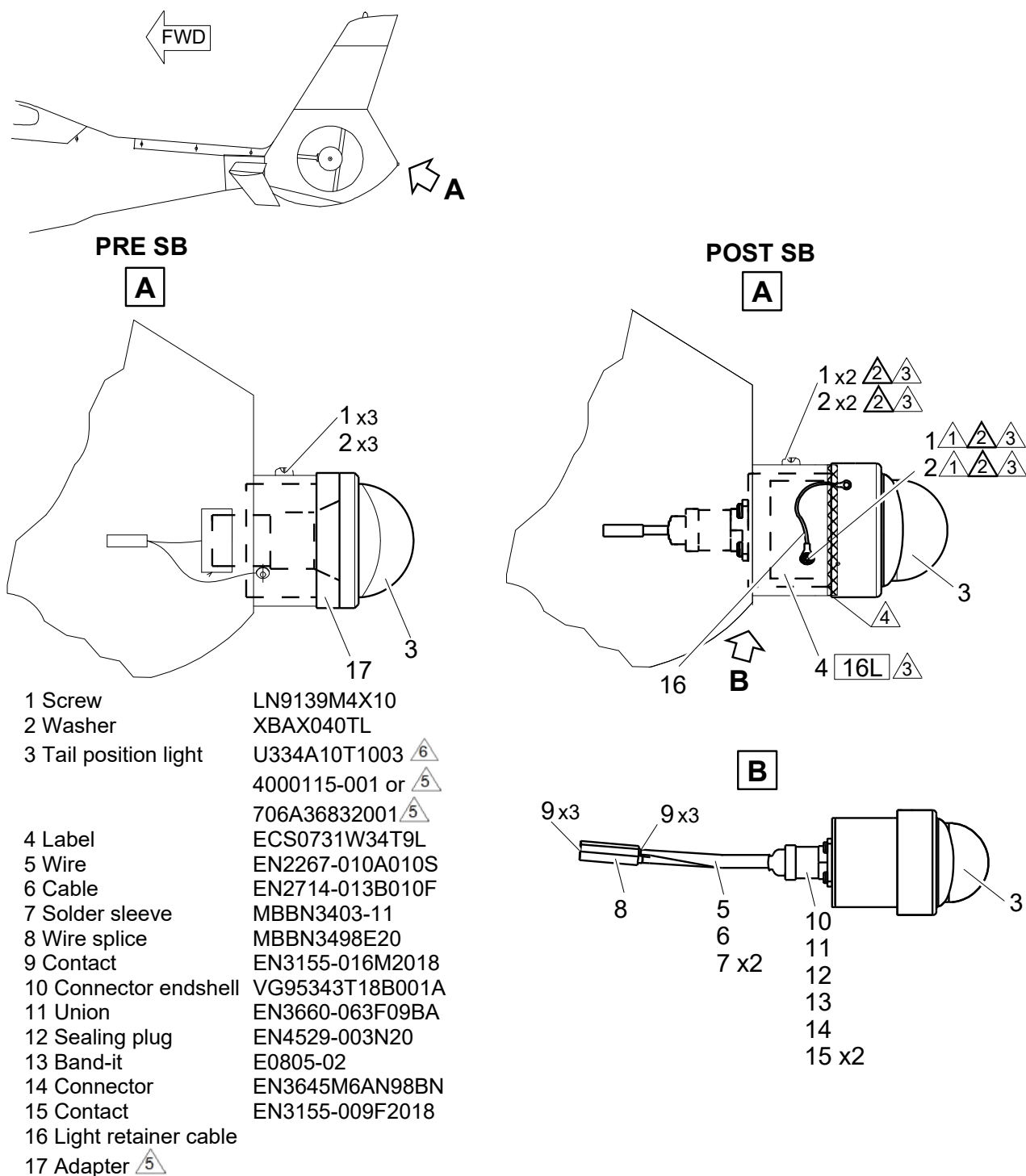
None.

### Maintenance instructions:

Refer to Customization Manual CM-EC155B-B1-33410101.

## **4. APPENDIX**

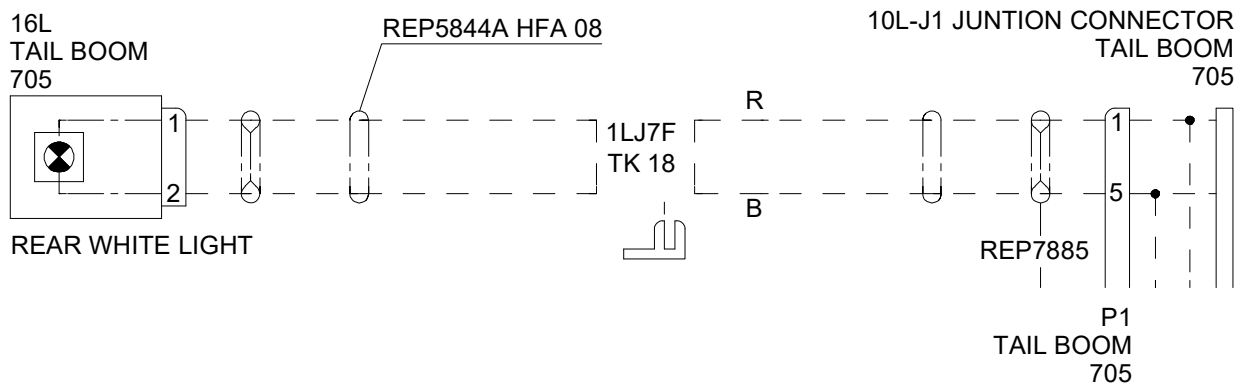
Bonding test.



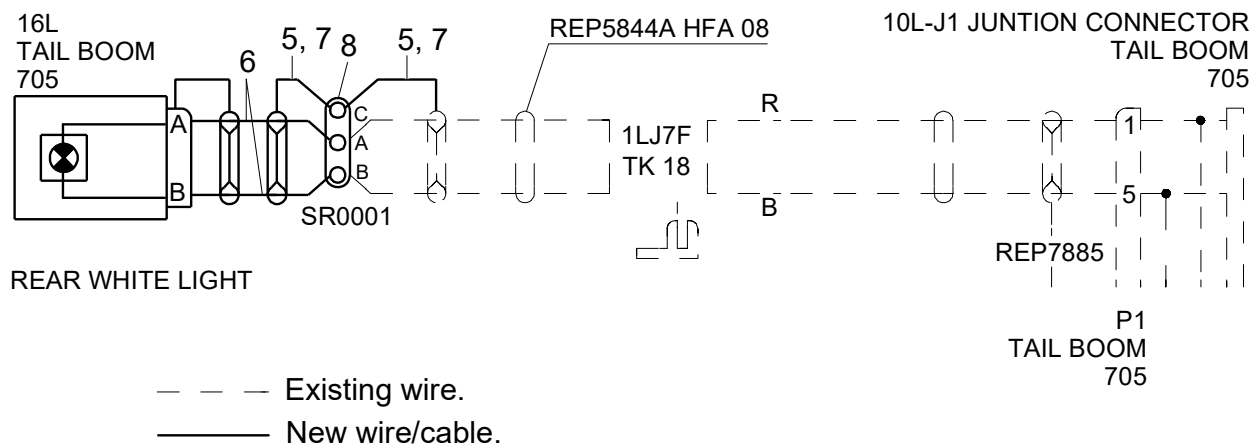
- <sup>1</sup> Fix the light retainer cable (16) with one screw (1) and one washer (2) during the installation.
- <sup>2</sup> Installed with locking compound (CM 620).
- <sup>3</sup> Replace if needed.
- <sup>4</sup> Seal the union between the helicopter and the tail position light (3) with sealing compound (CM 6001).
- <sup>5</sup> Pre SB.
- <sup>6</sup> Post SB.

**Figure 1: Removal / Installation of tail position light**

## PRE SB



## POST SB



- |                 |                 |
|-----------------|-----------------|
| 5 Wire          | EN2267-010A010S |
| 6 Cable         | EN2714-013B010F |
| 7 Solder sleeve | MBBN3403-11     |
| 8 Wire splice   | MBBN3498E20     |

Figure 2: Wiring Diagram

END OF DOCUMENT

# APPENDIX – BONDING TEST

## BONDING TEST

This test will be conducted according to the electrical bonding requirements defined below for the Rear Position Light installation.

The bonding test consists on measuring resistances between Rear Position Light and H/C ground, in order to verify a low-impedance path to ground for fault currents, warranting that any problem will occur during the installation and ensuring a safety operation of the system.

The test will be performed with an Ohmmeter MEGGER BT-51 Range (0-20m), or similar (e.g. Milliohmmeetre SEFELEC model RCP2A), provided that can be able to be used in the same range of measurement, under the same currents.

To perform the bonding test, following general recommendations must be taken into account:

- a) Values of electrical resistance higher than the maximal values defined have to be documented with applicable official procedure of none conformity and inform to EMC Lightning department.
- b) All precautions shall be taken into account to prevent damage in the electrical installation.
- c) All equipment used during test must be calibrated before performing the test.
- d) The terminals of the ohmmeter must not touch any part of the equipment installed in H/C excepted “Points” identified for measurements. It must also not touch in visual zones where is possible to make damage or marks easy seeing.
- e) Before a measurement is performed, the measuring locations shall be cleaned from any paint or protective mean to guarantee a good electrical contact. After the measurement is conducted, the original state shall be restored, providing the adequate paint or protective means.
- f) Precise measurement points are depicted as “Point 1” and “Point 2” for each required measurement in Table 1.

The reference values for the electrical bonding measurements on equipment are shown in following table; test results measures must be below these values.

BONDING MEASURE ON EQUIPMENT			
Reference	POINT 1	POINT 2	VALUE (Max.)
REAR POSITION LIGHT			
a	Rear Position Light (Point 1) (*)	H/C ground connection point	50 mΩ

Table 1 – Electrical Bonding Measures to be tested.

(\*) In case that the Light housing surface protection does not allow a proper electrical bonding measurement, “Point 1” may be the Light connector’s screw instead of the Light housing (Light needs to be detached from H/C structure to perform the measurement).

# APPENDIX – BONDING TEST

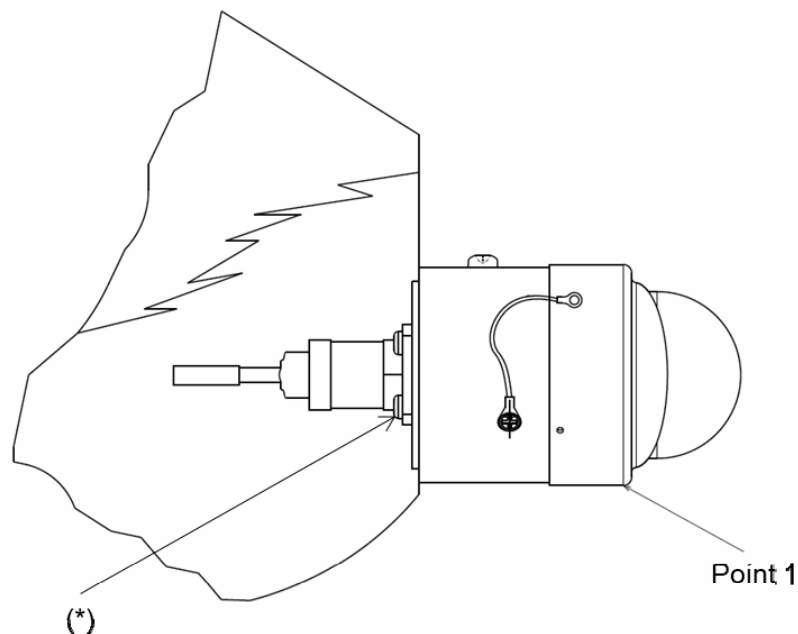


Figure 1 – Rear Position Rear Position Light installed.

In case of fault results, of acceptance values, it may be caused by faulty of bond itself or given value in the table is incorrect; if an “out of limit” value is measured, the measurement shall be repeated to confirm the result, taking care to ensure that:

- the test equipment setup is correct and the equipment is functioning correctly.
- the measurements probes are in the correct locations of the specific test.
- the probe contact areas are clean and free of all contaminants (e.g. grease, paint or resin)
- the measurement probes make good contact with the measurement point.
- the attachments shall be cleaned, tighten torque verified on bonding screws, and inspected the proper connection of supports, inserts, grounding straps, etc.

If a measurement continues to return a value which is in excess of the defined limit for that electrical bonding, then it shall be reported to Airbus for acceptance. Airbus may then:

- accept the “out of limit “ and if needed, required value will be updated by Airbus in this document.
- not accept the “out of limit” due to judgement that the route cause is a faulty bond, and therefore, the bonding link shall be re-worked to fulfil the required value.

# APPENDIX – BONDING TEST

## BONDING TEST REPORT

BONDING MEASURE ON EQUIPMENT				
Reference	POINT 1	POINT 2	VALUE (Max.)	VALUE Measured
REAR POSITION LIGHT				
a	Rear Position Light (Point 1)	H/C ground connection point	50 mΩ	
Remarks:				

Performed  
(Name/Signature/date)

Checked  
(Name/Signature/Date)

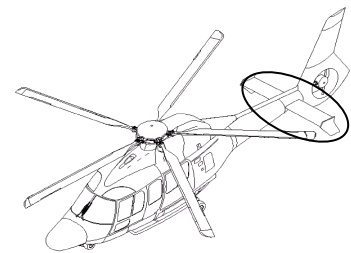
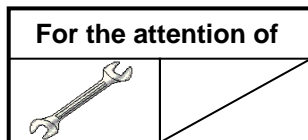
Accepted  
(Name/Signature/Date)

Civil versions: B, B1.



## SERVICE BULLETIN

**SUBJECT:** LIGHTS – Position lights  
Replacement of the lateral position lights



Revision No.	Date of issue
Revision 0	2021-11-05

**Summary:**

The purpose of this Service Bulletin (SB) is to replace the lateral position lights with new alternative LED position lights.

**Compliance:**

It is the operator's decision to comply or not to comply with this SB.

**Approval:**

The information and instructions of this document is approved under the authority of DOA no. EASA.21J.090.

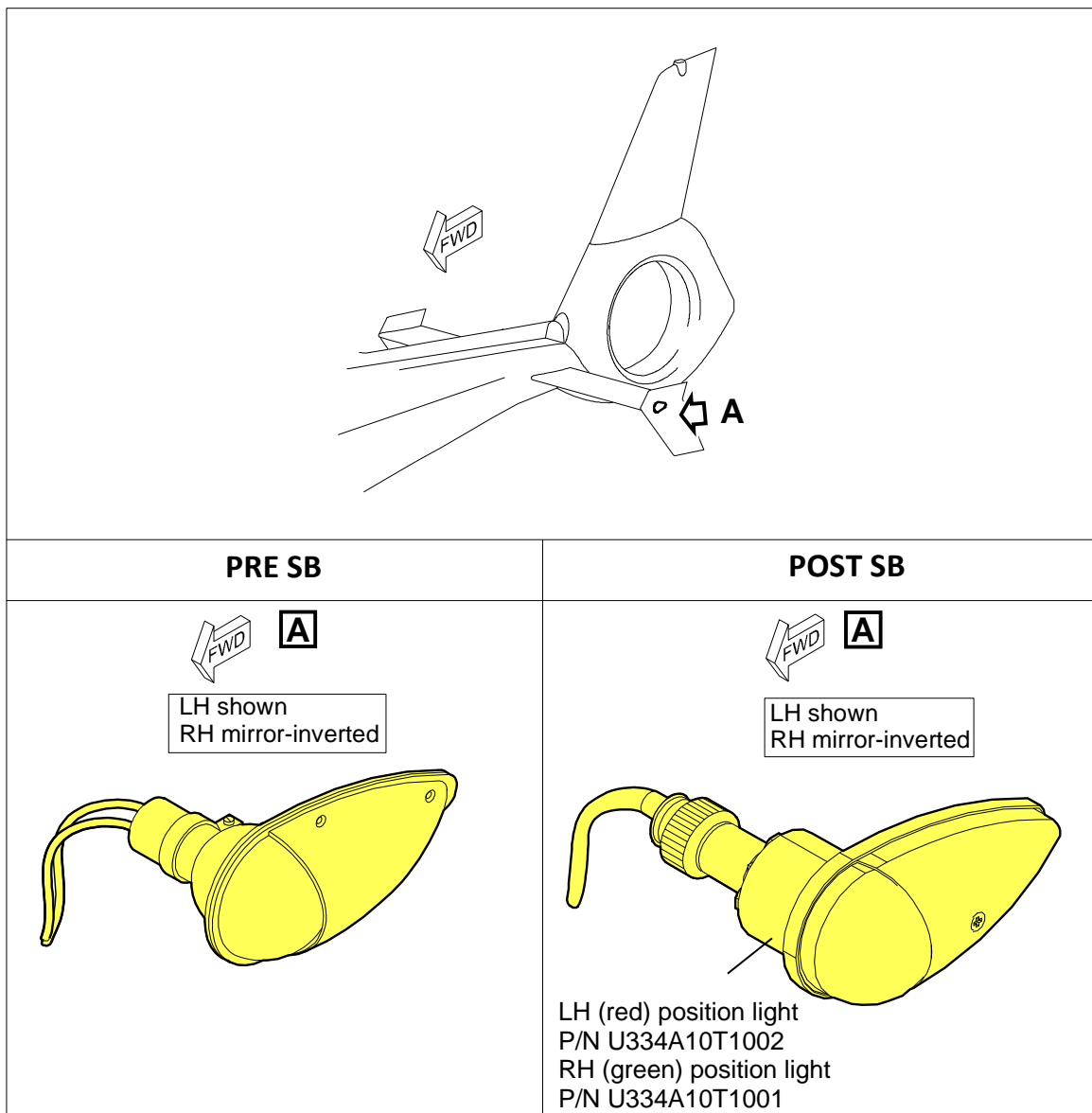


## 1. PLANNING INFORMATION

### 1.A. EFFECTIVITY

#### 1.A.1. Helicopters/installed equipment and parts

- a) Helicopters EC155 B, B1, all S/N.
- b) LH (red) position light          P/N 2LA455358-00 (AH P/N 704A46831030) or  
P/N 3124545 or  
P/N 31071 or  
P/N 6490811.  
RH (green) position light      P/N 2LA455359-00 (AH P/N 704A46831029) or  
P/N 3124538 or  
P/N 31073 or  
P/N 6490821.



## 1.A.2. Non-installed equipment and parts

None.

## 1.B. ASSOCIATED REQUIREMENTS

None.

## 1.C. REASON

Airbus Helicopters España (AHE) offers with this SB the replacement of the lights with new alternative LED position lights (manufactured by JPC Aviation).

## 1.D. DESCRIPTION

This SB consists of:

- Removal of the installed lateral position lights.
- Installation of the new lateral position lights.

## 1.E. COMPLIANCE

### 1.E.1. Compliance at H/C manufacturer level

Helicopters/installed equipment or parts:

Not affected.

Non-installed equipment or parts:

Not affected.

### 1.E.2. Compliance in service

Helicopters/installed equipment or parts:

It is the operator's decision to comply or not to comply with this SB.

Non-installed equipment or parts:

Not affected.

## 1.F. APPROVAL

The modification linked to this Service Bulletin has been approved through MAS 2109M-EC155v2 on 19/10/2021.

The information and instructions of this document is approved on 05/11/2021 under the authority of DOA no. EASA.21J.090.

## 1.G. MANPOWER

Qualification:

For compliance with this SB, AHE recommends the following personnel qualifications:

- Qualifications:
- 1 Mechanic Technician,
  - 1 Avionic Technician,

## Estimated Man-hours:

The estimated man-hours is indicated for reference purposes only and based on a standard helicopter configuration.

Estimated man-hours: - 4 hour for Mechanic Technician (each light),  
- 4 hour for Avionic Technician (each light),

## Estimated Helicopter downtime:

Estimated helicopter downtime is indicated for reference purposes only and based on a standard helicopter configuration.

Helicopter downtime is estimated at 1 day.

## **1.H. WEIGHT AND BALANCE**

Additional Weight: - 0.127 kg

Balance: Not affected.

## **1.I. POWER CONSUMPTION**

Electrical load analysis is affected:

Decrease in DC loads: 0.42 A (0.21 A each position light).

Power consumption: 8.4 W (4.2 W each position light).

## **1.J. SOFTWARE UPGRADES/UPDATES**

Not changed.

## **1.K. REFERENCES**

IN 3481-I-00: The Marketplace: an AirbusWorld eOrdering service.

AMM EC155 and Standard Practices Manual (MTC).

## **1.L. OTHER AFFECTED PUBLICATIONS**

The modification is integrated by AHE in the following document:

- Customization Manual (CM-EC155B-B1-33410102).

This document will be circulated to the Subscribers.

## **1.M. PART INTERCHANGEABILITY OR MIXABILITY**

### Interchangeability

After accomplishment of this SB, the LH red position light and RH green lateral position light indicated in Section 1.A.1. b) must not be used anymore.

### Mixability

It is permitted to mix one new lateral position light in one side with the old lateral position light in the other side.

## 2. MATERIAL INFORMATION

### 2.A. MATERIAL: PRICE – AVAILABILITY – PROCUREMENT

Information on price and availability of the required material kit will be provided by AHE on request.  
For information of the material kit delivery time, contact AHE Order Administration.

### 2.B. LOGISTIC INFORMATION

None.

### 2.C. MATERIAL REQUIRED PER HELICOPTER/COMPONENT

Material kits to be ordered for one helicopter:

No	Keyword	Qty.	New P/N	Old P/N	Remarks
<b>Material kit SB-EC155-33.41.02-2C1: RH lateral position light installation</b>					
1	RH position light	1	U334A10T1001	2LA455359-00 (704A46831029) or 3124538 or 31073 or 6490821	A, B
2	Screw	3	22272BC030008L	22256BC040044L or 22256BC040026L	D
3	Skyflex washer	3	GSC-21-95400-0804	-	-
4	Insert	3	DIN65307-0312B	DHS443-141.03	D
5	Electrical connector	1	EN3645M6AN98BN	-	-
6	Contact	2	EN3155-009F2018	-	-
7	Sealing plug	1	EN4529-003N20	-	-
8	Union	1	EN3660-063F09BA	-	-
9	Band-it	1	E0805-02	-	-
10	Connector endshell	1	VG95343T18B001A	-	-

No	Keyword	Qty.	New P/N	Old P/N	Remarks
<b>Material kit SB-EC155-33.41.02-2C2: LH lateral position light installation</b>					
1	LH position light	1	U334A10T1002	2LA455358-00 (704A46831030) or 3124545 or 31071 or 6490811	A, C
2	Screw	3	22272BC030008L	22256BC040044L or 22256BC040026L	D
3	Skyflex washer	3	GSC-21-95400-0804	-	-
4	Insert	3	DIN65307-0312B	DHS443-141.03	D
5	Electrical connector	1	EN3645M6AN98BN	-	-
6	Contact	2	EN3155-009F2018	-	-
7	Sealing plug	1	EN4529-003N20	-	-
8	Union	1	EN3660-063F09BA	-	-
9	Band-it	1	E0805-02	-	-
10	Connector endshell	1	VG95343T18B001A	-	-

Remark:

A = Replace.

B = The P/N 704A46831029 is the AH P/N. The manufacturer P/N is 2LA455359-00.

C = The P/N 704A46831030 is the AH P/N. The manufacturer P/N is 2LA455358-00.

D = Replace if needed.

Consumables to be ordered separately:



**WARNING**

**RESPECT THE SAFETY DATA SHEET OF THE MANUFACTURER.**

No.	Keyword	Qty. (approx.)	Specification**	CM	Rem.
1	Colle	a.n.*	-	616	-
2	Locking compound	a.n.*	-	620	-
3	Sealing compound	a.n.*	-	6001	-
4	Fabric	0.2 m <sup>2</sup>	-	7246	-

\* a.n.= as needed  
 \*\* Specification i.a.w. MTC 20-01-01-102.

The consumables can be ordered from the AirbusWorld Marketplace through e-ordering (see IN 3481-I-00 for instructions).

If you cannot get access to e-ordering, please contact your Logistic Focal Point.

## 2.D. MATERIAL TO BE RETURNED

None.

## 3. ACCOMPLISHMENT INSTRUCTIONS

### 3.A. GENERAL

1. Read and comply with the general instructions for protection of electrical wiring during maintenance operations (MTC 20-80-20-449).
2. Read and comply with the general instructions for joining screws and nuts (MTC 20-02-05-404).

### 3.B. WORK STEPS

#### 3.B.1. Preliminary steps

1. Park aircraft in hangar.
2. Install suitable access means.
3. Disconnect all electrical power supply sources.

#### 3.B.2. Procedure

#### **NOTE**

*The procedure that follows and Fig. 1, Fig. 2 and Fig.3 give the instructions to remove the LH lateral position light. The procedure for the RH side is mirror-inverted.*

1. Remove the lateral position light (2, Fig. 1) (AMM 33-41-01-061). Discard it.
2. Do a check of the inserts (4, Fig. 1) installed in the end-plate (1):
  - a. If the inserts (4) are size M3, go to step 4.
  - b. If the inserts (4) are not size M3, do the procedure that follows:
    - Remove the inserts (4) (MTC 20-02-08-406).
    - Do a check of the holes of the inserts:
      - If the holes of the inserts do not touch the edge of borehole (5), install three inserts (2, Fig. 2) with colle (CM 616) (MTC 20-02-08-406) in the end-plate (3). Go to step 4.
      - If the holes of the inserts touch the edge of the borehole (5, Fig. 1), continue with step 3.
3. Repair the installation area of the inserts (2, Fig. 2) as follows:
  - Repair the edge of the borehole (1) with colle (CM 616). Let the colle dry, refer to the manufacturer's instructions.
  - Pre-cut one layer of fabric (CM 7246) with an enlarged size relative to sizes as shown in View B Step 1.
  - Determine the mass of colle (CM 616) required to the layer. The ratio of fabric (CM 7246) / colle (CM 616) is 50/50.
  - Squeeze out trapped air and extra colle (CM 616) from the centre to the outside by applying pressure with a spatula or roller.
  - Cut to size the layer of fabric (CM 7246) refer to View B Step 1.
  - Remove the films used for the soaking of the fabric at the time of laying. First, remove the bottom film from the surface that comes in contact with the repair area.

#### **NOTE**

*It is not necessary to point to any recommended orientation.*

- Do the borehole (1) in the layer of fabric (CM 7246) (4) as shown in View B Step 2, put the layer of fabric (CM 7246) (4) in the inner surface of the borehole (1).

- Use colle (CM 616) to laminate the fabric (CM 7246) on the end-plate (3) and within the borehole (1).
  - Produce a vacuum bag on the repaired surface (MTC 20-03-06-406).
  - Cure in accordance with the manufacturer's specifications or MTC 20-03-06-406.
  - Remove unwanted colle (CM 616).
  - Drill three holes with a drill bit diameter of 3.5 mm in the layer of fabric (CM 7246) (4), as shown in View B Step 2.
  - Deburr boreholes diameter 3.5 mm and clean work areas (MTC 20-04-01-401).
  - Install the three inserts (2) with colle (CM 616) in the end-plate (3) (MTC 20-02-08-406).
  - Paint the end-plate (3) with the same paint as the helicopter. Let the paint dry, refer to the manufacturer's instructions.
4. Install the lateral position light (2, Fig. 3) as follows:
- a. Strip the wires of the existing cable (7) and crimp on contacts (9) (MTC 20-80-20-408). Refer to the Wiring Diagram (Fig. 4).
  - b. If is not installed, connect cable shielding on the existing wires. Refer to the Wiring Diagram (Fig. 4).
  - c. Slide the connector endshell (13, Fig. 3) over the cable (7).
  - d. Slide the union (11, Fig. 3) over the cable (7).
  - e. Connect the wires of the cable (7, Fig. 3) and the sealing plug (10) to the connector (8).
  - f. Connect the union (11, Fig. 3) to the connector (8) and install the cable shield with a band-it (12) to the union (11) (MTC 20-80-20-420).
  - g. Protect the end of the cable (7, Fig. 3) and the union (11) with the connector endshell (13) (MTC 20-80-20-428).
  - h. Connect the connector (8, Fig. 3) to the lateral position light (2).
  - i. Remove the screw (6, Fig. 3) and the cover (5) from the lateral position light (2).
  - j. Apply locking compound (CM 620) to the screws (4, Fig. 3).
  - k. Install the lateral position light (2, Fig. 3) on the end-plate (1) with the screws (4) and washers (3). Align the washers with the screws.
  - l. Seal the joint between the helicopter and the lateral position light (2, Fig. 3) with sealing compound (CM 6001). Let the sealing compound dry, refer to the manufacturer's instructions.
  - m. Apply locking compound (CM 620) in the screw (6, Fig. 3).
  - n. Install the cover (5, Fig. 3) on the lateral position light with the screw (6). Let the locking compound dry, refer to the manufacturer's instructions.

### **3.B.3. Final steps**

1. Clean the work areas and the helicopter.
2. Remove access means.
3. Restore the helicopter to flight condition.

### **3.B.4. Test**

1. Perform the bonding test (see Appendix).
2. Perform the functional test of the lateral position light (AMM 33-41-02-721).

### 3.C. COMPLIANCE CONFIRMATION

Compliance with this document:

Record full compliance with this SB, with the revision number, in the helicopter documents.

Record full compliance with this SB, with the revision number, in the log card of the equipment (if a log card exists).

Tracking of modifications in the documentation:

Record embodiment of MAS 2109M-EC155v2 in the helicopter documents.

### 3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Operating instructions:

None.

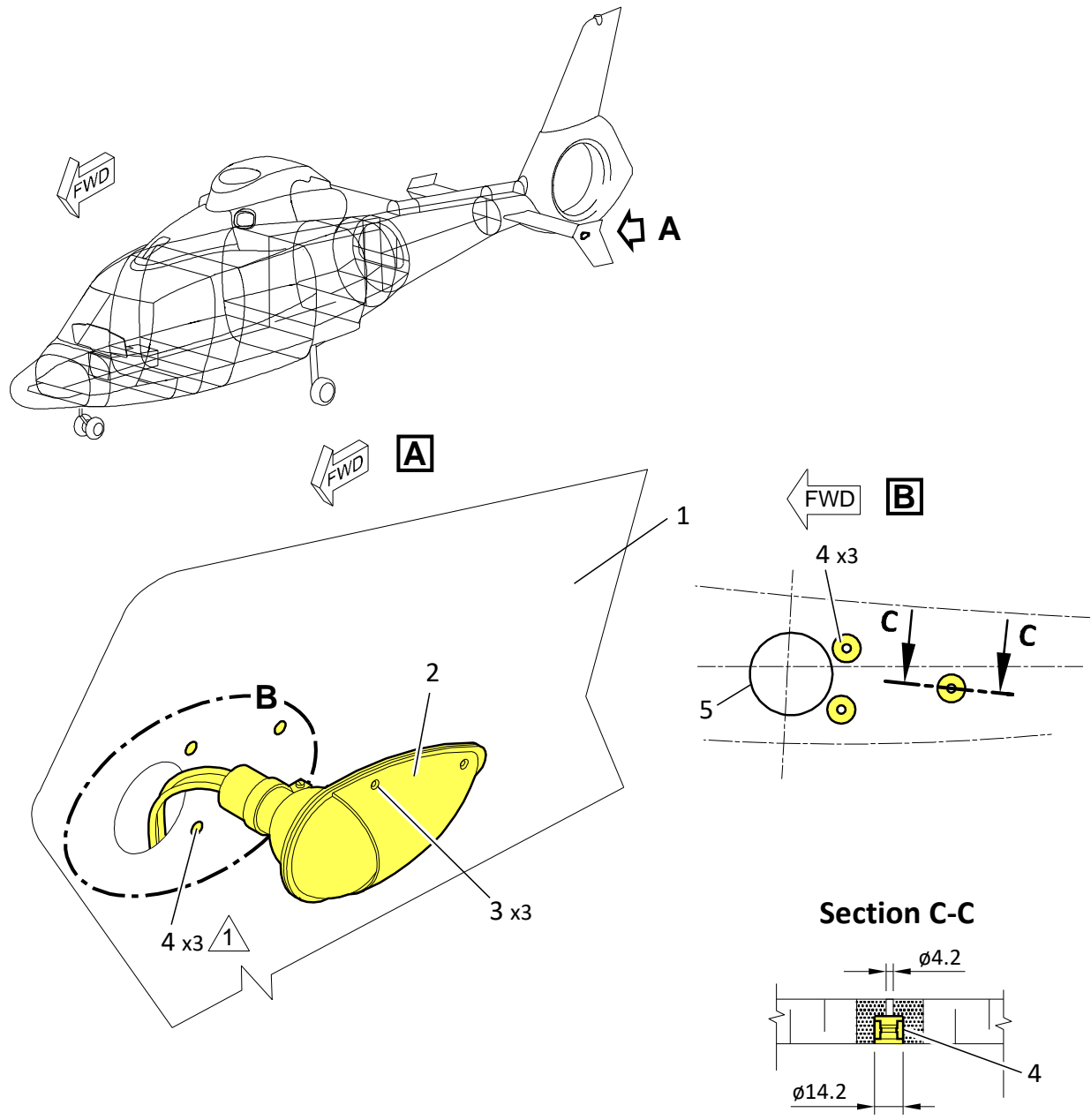
Maintenance instructions:

Refer to Customization Manual CM-EC155B-B1-33410102.

### 4. APPENDIX

Bonding test.



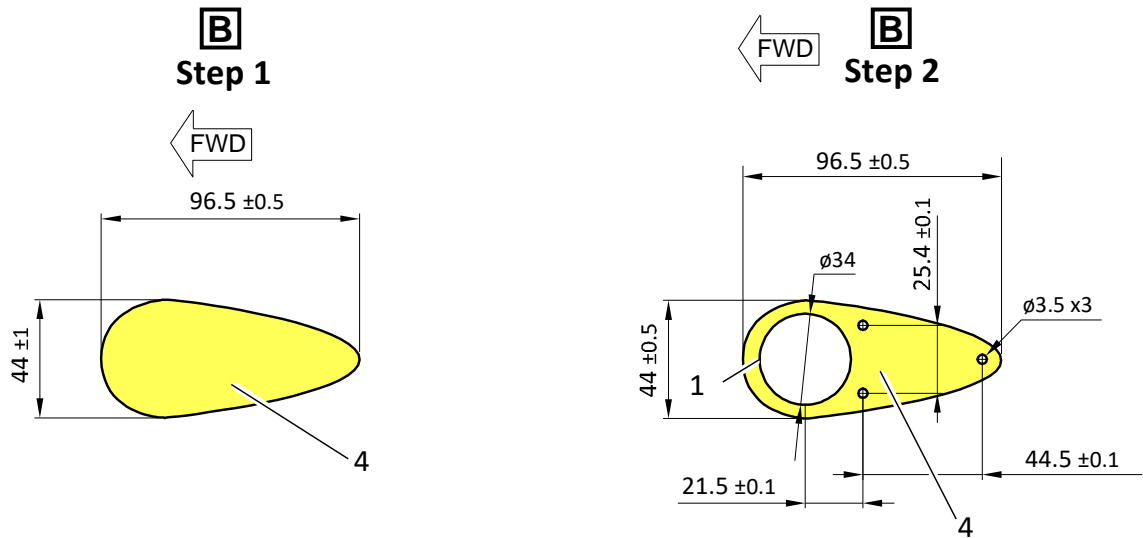


- 1 End-plate
- 2 Position light
- 3 Screw
- 4 Insert
- 5 Borehole

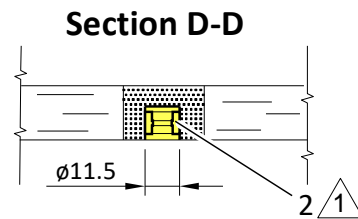
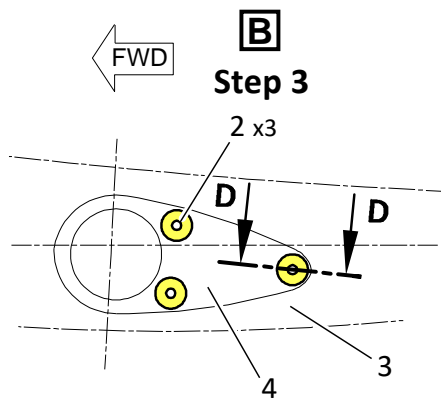
If the inserts (4) are removed, check if the holes of the inserts touch the edge of the borehole (5).

**Figure 1: Removal of the lateral position light**

Main view in Fig. 1



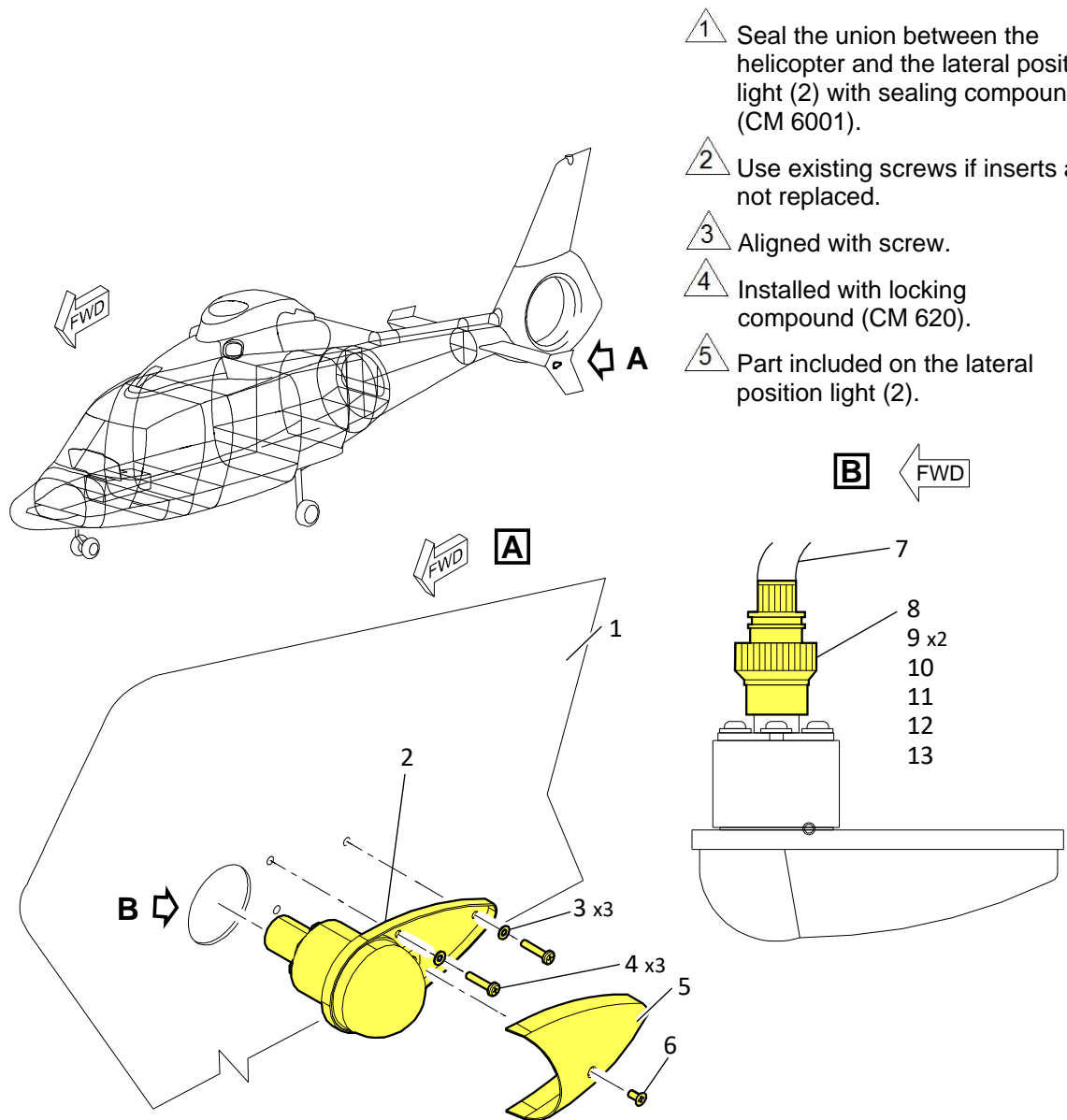
All dimensions in mm.



- 1 Borehole
- 2 Insert      DIN65307-0312B
- 3 End-plate
- 4 Layer of fabric (CM 7246).

△ 1 Installed with colle (CM 616).

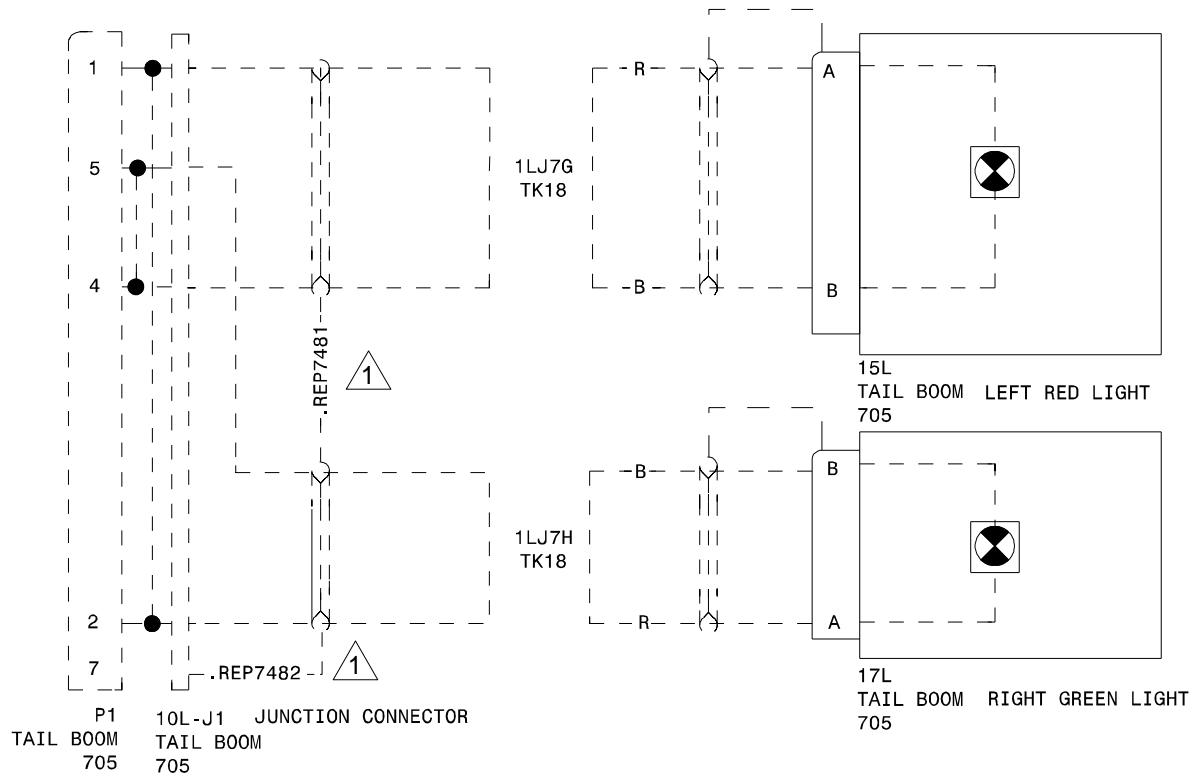
Figure 2: Replacement of the inserts



- ① Seal the union between the helicopter and the lateral position light (2) with sealing compound (CM 6001).
- ② Use existing screws if inserts are not replaced.
- ③ Aligned with screw.
- ④ Installed with locking compound (CM 620).
- ⑤ Part included on the lateral position light (2).

- |                       |                            |
|-----------------------|----------------------------|
| 1 End-plate           |                            |
| 2 LH position light   | U334A10T1002 ①             |
| RH position light     | U334A10T1001 ①             |
| 3 Washer              | GSC-21-95400-0804 ③        |
| 4 Screw               | 22272BC030008L or Note ② ④ |
| 5 Cover ⑤             |                            |
| 6 Screw ④ ⑤           |                            |
| 7 Cable               |                            |
| 8 Connector           | EN3645M6AN98BN             |
| 9 Contact             | EN3155-009F2018            |
| 10 Sealing plug       | EN4529-003N20              |
| 11 Union              | EN3660-063F09BA            |
| 12 Band-it            | E0805-02                   |
| 13 Connector endshell | VG95343T18B001A            |

**Figure 3: Installation of the lateral position light**



**Figure 4: Wiring Diagram**

END OF DOCUMENT

# APPENDIX – BONDING TEST

## BONDING TEST

This test will be conducted according to the electrical bonding requirements defined below for the Rear Position Light installation.

The bonding test consists on measuring resistances between Rear Position Light and H/C ground, in order to verify a low-impedance path to ground for fault currents, warranting that any problem will occur during the installation and ensuring a safety operation of the system.

The test will be performed with an Ohmmeter MEGGER BT-51 Range (0-20m), or similar (e.g. Milliohmmeetre SEFELEC model RCP2A), provided that can be able to be used in the same range of measurement, under the same currents.

To perform the bonding test, following general recommendations must be taken into account:

- a) Values of electrical resistance higher than the maximal values defined have to be documented with applicable official procedure of none conformity and inform to EMC Lightning department.
- b) All precautions shall be taken into account to prevent damage in the electrical installation.
- c) All equipment used during test must be calibrated before performing the test.
- d) The terminals of the ohmmeter must not touch any part of the equipment installed in H/C excepted “Points” identified for measurements. It must also not touch in visual zones where is possible to make damage or marks easy seeing.
- e) Before a measurement is performed, the measuring locations shall be cleaned from any paint or protective mean to guarantee a good electrical contact. After the measurement is conducted, the original state shall be restored, providing the adequate paint or protective means.
- f) Precise measurement points are depicted as “Point 1” and “Point 2” for each required measurement in Table 1.

The reference values for the electrical bonding measurements on equipment are shown in following table; test results measures must be below these values.

BONDING MEASURE ON EQUIPMENT			
Reference	POINT 1	POINT 2	VALUE (Max.)
REAR POSITION LIGHT			
a	Rear Position Light (Point 1) (*)	H/C ground connection point	50 mΩ

Table 1 – Electrical Bonding Measures to be tested.

(\*) In case that the Light housing surface protection does not allow a proper electrical bonding measurement, “Point 1” may be the Light connector’s screw instead of the Light housing (Light needs to be detached from H/C structure to perform the measurement).

# APPENDIX – BONDING TEST

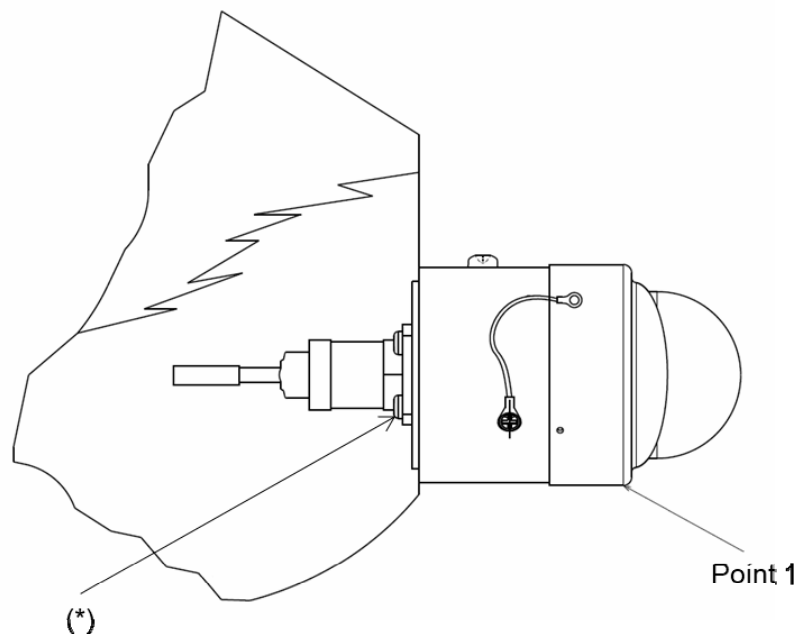


Figure 1 – Rear Position Rear Position Light installed.

In case of fault results, of acceptance values, it may be caused by faulty of bond itself or given value in the table is incorrect; if an “out of limit” value is measured, the measurement shall be repeated to confirm the result, taking care to ensure that:

- the test equipment setup is correct and the equipment is functioning correctly.
- the measurements probes are in the correct locations of the specific test.
- the probe contact areas are clean and free of all contaminants (e.g. grease, paint or resin)
- the measurement probes make good contact with the measurement point.
- the attachments shall be cleaned, tighten torque verified on bonding screws, and inspected the proper connection of supports, inserts, grounding straps, etc.

If a measurement continues to return a value which is in excess of the defined limit for that electrical bonding, then it shall be reported to Airbus for acceptance. Airbus may then:

- accept the “out of limit “ and if needed, required value will be updated by Airbus in this document.
- not accept the “out of limit” due to judgement that the route cause is a faulty bond, and therefore, the bonding link shall be re-worked to fulfil the required value.

# APPENDIX – BONDING TEST

## BONDING TEST REPORT

BONDING MEASURE ON EQUIPMENT				
Reference	POINT 1	POINT 2	VALUE (Max.)	VALUE Measured
REAR POSITION LIGHT				
a	Rear Position Light (Point 1)	H/C ground connection point	50 mΩ	
Remarks:				

Performed  
(Name/Signature/date)

Checked  
(Name/Signature/Date)

Accepted  
(Name/Signature/Date)