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AgustaWestland Products

**SERVICE BULLETIN** 

<sub>N°</sub> 189-262

**DATE:** September 13, 2022

REV.: /

## **TITLE**

ATA 97 - INSTALLATION OF KIT EXTERNAL VIDEO CAMERA

# **REVISION LOG**

First Issue



## 1. PLANNING INFORMATION

## A. EFFECTIVITY

AW189 helicopters from S/N 49007 onwards and from S/N 93001 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 instructions on how to perform the installation of kit external video camera P/N 8G9750F00111.

#### E. DESCRIPTION

The video camera shows the top of the tail section, the upper deck and the main rotor. The flight crew can thus monitor the top of the helicopter. The video shows on the Number 1 Multifunction Display System (MFD1).

The external video camera system kit has the primary components that follow:

- The video camera;
- The power supply.

The video camera is installed on the vertical fin. A support holds the video camera in the correct position. Four screws and four washers attach the video camera to the support. The power supply is installed on the left side of the tail boom. Four screws attach the

power supply to the tail boom.

Part I provides the necessary instructions on how to install external video camera complete provision P/N 8G9750A00111.

Part II provides the necessary instructions on how to install external video camera equipment installation P/N 8G9750A00311.

## 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 ninety-six (96) MMH;

Part II: approximately ten (10) MMH.

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

## H. WEIGHT AND BALANCE

## **PART I**

| - 7                  |          |               |
|----------------------|----------|---------------|
| WEIGHT (Kg)          | •        | 1.179         |
|                      | ARM (mm) | MOMENT (Kgmm) |
| LONGITUDINAL BALANCE | 7848.9   | 9253.8        |
| LATERAL BALANCE      | -180.8   | -213.16       |
| PART II              |          |               |
| WEIGHT (Kg)          |          | 0.64          |
|                      | ARM (mm) | MOMENT (Kgmm) |
| LONGITUDINAL BALANCE | 11485.8  | 7350.9        |
| LATERAL BALANCE      | -120.3   | -76.99        |

#### I. REFERENCES

## 1) PUBLICATIONS

| DATA I | <u>MODULE</u>            | DESCRIPTION                                 | <u>PART</u> |
|--------|--------------------------|---|-------------|
| DM01   | 89-A-00-20-00-00A-120A-A | Helicopter on ground for a safe maintenance | I, II       |
| DM02   | 89-A-06-41-00-00A-010A-A | Access doors and panels -<br>General data   | I, II       |
| DM03   | 89-A-25-80-00-00A-010A-A | Insulation and lining - General data        | I, II       |
| DM04   | 89-A-97-51-01-00A-720A-A | Video camera - Install procedure            | II          |
| DM05   | 89-A-97-51-02-00A-720A-A | Power supply - Install procedure            | II          |
| DM06   | 89-A-11-00-01-00A-720A-A | Decal - Install procedure                   | П           |

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| DATA I | MODULE                   | DESCRIPTION  | <u>PART</u> |
|--------|--------------------------|--|-------------|
| DM07   | 89-A-24-81-00-00B-752A-A | Electrical control display unit -<br>data loading                    | II          |
| DM08   | 89-A-97-51-00-00A-75BA-A | External video camera system kit - Cockpit display - Setup procedure | II          |
| DM09   | 89-A-97-51-00-00A-320A-A | External video camera system kit - Operation test                    | II          |

# 2) ACRONYMS

| AMDI | Aircraft Material Data Information          |
|------|---|
| AMP  | Aircraft Maintenance Publication            |
| СВ   | Circuit Breaker                             |
| DM   | Data Module                                 |
| DOA  | Design Organization Approval                |
| ECDU | Electrical Control Display Unit             |
| EASA | European Aviation Safety Agency             |
| IPD  | Illustrated Parts Data                      |
| ITEP | Illustrated Tools and Equipment Publication |
| LHD  | Leonardo Helicopters Division               |
| MFD  | Multi-Function Display                      |
| MMH  | Maintenance-Man-Hours                       |
| PS   | Power Supply                                |
| REPU | Remote Electric Power Unit                  |
|      |   |

# 3) ANNEX

N.A.

## J. PUBLICATIONS AFFECTED

N.A.



## K. SOFTWARE ACCOMPLISHMENT SUMMARY

Software to be updated (for Software applicability refer to notes paragraph in Required Materials Section):

ECDU Configuration File P/N 8G4620ACXXXX

the scheduled embodiment of this Service Bulletin.

ECDU P/N is depending upon helicopter configuration that can be different from the one reported in relevant helicopter "Commessa di Vendita". Customer must contact AW189 Product Support Engineering (<a href="mailto:engineering.support.lhd@leonardo.com">engineering.support.lhd@leonardo.com</a>) to request the correct ECDU Configuration File at least three months in advance from

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# 2. MATERIAL INFORMATION

## A. REQUIRED MATERIALS

# 1) PARTS

## PART I

| #  | P/N                  | ALTERNATIVE P/N | DESCRIPTION                            | Q.TY | Q.TY LVL NO |         | LOG P/N   |
|----|----------------------|-----------------|--|------|-------------|---------|-----------|
| 1  | 8G9750F00111         |                 | KIT EXTERNAL VIDEO<br>CAMERA           | REF  |             |         | -         |
| 2  | 8G9750A00111         |                 | EXT. VIDEO CAMERA COMPLETE PROVISION   | REF  |             |         | -         |
| 3  | 8G9750A00211         |                 | EXT. VIDEO CAMERA C/A INSTALLATION     | REF  |             |         | -         |
| 4  | NAS1190E3P6AK        |                 | Screw                                  | 1    |             |         | 189-262L1 |
| 5  | AW001CL002A-X1       |                 | Support                                | 1    |             |         | 189-262L1 |
| 6  | AW001CL001-N6        |                 | Support                                | 8    |             |         | 189-262L1 |
| 7  | A366A3E10C           |                 | Stud                                   | 2    |             |         | 189-262L1 |
| 8  | A388A3E20C75         |                 | Standoff                               | 1    |             |         | 189-262L1 |
| 9  | AW001CL005B01-<br>X1 |                 | Support                                | 2    |             |         | 189-262L1 |
| 10 | AW001CB03H           |                 | Clamp                                  | 5    |             |         | 189-262L1 |
| 11 | AW002FT2             |                 | Grommet                                | 1    |             |         | 189-262L1 |
| 12 | MS21043-3            |                 | Nut                                    | 2    |             |         | 189-262L1 |
| 13 | NAS1149D0332J        |                 | Washer                                 | 3    |             |         | 189-262L1 |
| 14 | 8G9D02A10401         | 8G9D02A10401A5R | External video camera C/A<br>(D2A104)  | 1    |             |         | 189-262L1 |
| 15 | 8G9C01A11701         | 8G9C01A11701A4R | External video camera C/A<br>(C1A117)  | 1    |             |         | 189-262L1 |
| 16 | 8G9C03A10301         | 8G9C03A10301A5R | External video camera C/A<br>(C3A103)  | 1    |             |         | 189-262L1 |
| 17 | 8G9C03A10401         | 8G9C03A10401A5R | External video camera C/A<br>(C3A104)  | 1    |             |         | 189-262L1 |
| 18 | 8G9C03A10601         | 8G9C03A10601A6R | External video camera C/A<br>(C3A106)  | 1    |             |         | 189-262L1 |
| 19 | A523A-A03            |                 | Electrical contact                     | 3    |             |         | 189-262L1 |
| 20 | M39029/58-363        |                 | Electrical contact                     | 1    |             |         | 189-262L1 |
| 21 | M39029/56-348        |                 | Electrical contact                     | 6    |             |         | 189-262L1 |
| 22 | 8G5310A02711         |                 | EXT. VIDEO CAMERA STRUCTURAL PROVISION | REF  |             |         | -         |
| 23 | 8G5310A25151         |                 | Copper strip                           | 1    |             |         | 189-262L1 |
| 24 | 4F9750A00531         |                 | Camera bracket assy                    | 1    |             |         | 189-262L1 |
| 25 | NAS1836C06-13M       |                 | Insert screw thread                    | 4    |             |         | 189-262L1 |
| 26 | A297A04TW04          |                 | Rivet blind                            | 2    |             |         | 189-262L1 |
| 27 | MS27039-1-05         |                 | Screw machine                          | 4    |             |         | 189-262L1 |
| 28 | NAS1149D0363K        |                 | Washer                                 | 4    |             |         | 189-262L1 |
| 29 | 8G4620ACXXXX         |                 | ECDU Configuration file                | 1    |             | (5) (6) | -         |

# <u>PART II</u>

| #  | P/N          | ALTERNATIVE P/N | DESCRIPTION                                    | Q.TY | LVL NOTE | LOG P/N   |
|----|--------------|-----------------|--|------|----------|-----------|
| 30 | 8G9750F00111 |                 | KIT EXTERNAL VIDEO<br>CAMERA                   | REF  |          | -         |
| 31 | 8G9750A00311 |                 | EXT. VIDEO CAMERA<br>EQUIPMENT<br>INSTALLATION | REF  |          | -         |
| 32 | 2029-16-9    |                 | Adapter  | 1    |          | 189-262L2 |



| #  | P/N           | ALTERNATIVE P/N | DESCRIPTION                     | Q.TY | LVL NOTE | LOG P/N   |
|----|---------------|-----------------|---------------------------------|------|----------|-----------|
| 33 | RPC-651ER/3,0 |                 | Utility camera                  | 1    |          | 189-262L2 |
| 34 | RPS-77E       |                 | Power supply 28vdc + emi filter | 1    |          | 189-262L2 |
| 35 | ED300CP5      |                 | Decal                           | 1    |          | 189-262L2 |
| 36 | ED300DS117    |                 | Decal                           | 1    |          | 189-262L2 |
| 37 | ED300PS24     |                 | Decal                           | 1    |          | 189-262L2 |
| 38 | MS27039-1-10  |                 | Screw machine                   | 4    |          | 189-262L2 |
| 39 | MS35206-228   |                 | Screw                           | 4    |          | 189-262L2 |
| 40 | NAS1149D0332J |                 | Washer                          | 4    |          | 189-262L2 |
| 41 | A578A02-9     |                 | Marker sleeve                   | 10   |          | 189-262L2 |

## 2) CONSUMABLES

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

| #  | Spec./LHD code number                               | DESCRIPTION                          | Q.TY | NOTE    | PART  |
|----|---|--------------------------------------|------|---------|-------|
| 42 | BM110P0009  | Chromate free jointing compound      | AR   | (1) (2) | I     |
| 43 | BMS3-38, Code No.<br>99999999000017311              | Corban 27L                           | AR   | (1) (2) | I     |
| 44 | DTD 900AA/4488A                                     | Corrosion preventive compound (C001) | AR   | (1) (2) | I     |
| 45 | 199-05-002 Type II, Class 2                         | Adhesive EA934NA (C054)              | AR   | (1)     | I     |
| 46 | 199-05-002 Type I, Class II                         | Adhesive EA9309.3NA (C021)           | AR   | (1)     | I     |
| 47 | 199-05-002 Type II, Class 3                         | Adhesive EA9309.3NA (C193)           | AR   | (1)     | I     |
| 48 | AFS 1646 - DTD5577                                  | Acrylic adhesive (C249)              | AR   | (1)     | I     |
| 49 | CB200-40  | Adhesive (C356)                      | AR   | (1)     | I     |
| 50 | MIL-PRF-16173E, Class 1, Grade 1                    | Corrosion inhibitor (C385)           | AR   | (1) (3) | I     |
| 51 | MIL-PRF-16173E, grade 2                             | Corrosion inhibitor (C003)           | AR   | (1) (3) | I     |
| 52 | A236A01AB or A236A02AB or<br>A236A03AB or A236A04AB | Edging                               | AR   | (1)     | I     |
| 53 | NASM21266   | Edging                               | AR   | (1)     | I     |
| 54 | EN6049-006  | Tubing braided                       | AR   | (1)     | I     |
| 55 | MIL-Spec A-A-52084-C-3                              | Lacing cord (C311)                   | AR   | (1)     | I     |
| 56 | Commercial  | Lint-free cloth (C011)               | AR   | (1)     | I, II |
| 57 | TT-I-735, Grade A                                   | Isopropyl alcohol (C039)             | AR   | (1)     | I     |
| 58 | P-C-451   | Abrasive paper (C017)                | AR   | (1)     | I, II |
| 59 | Commercial  | Abrasive paper (C181)                | AR   | (1)     | I     |
| 60 | ASTM D4080-00                                       | Solvent (C133)                       | AR   | (1)     | I     |
| 61 | ASTM-D-4376   | Solvent (C151)                       | AR   | (1)     | I     |
| 62 | Commercial  | Cleaning compound (C257)             | AR   | (1) (4) | I     |
| 63 | MIL-C-25769   | Cleaning compound (C063)             | AR   | (1) (4) | I     |
| 64 | DEF STAN 80-16                                      | Paint Remover                        | AR   | (1)     | I     |
|    |   |                                      |      |         |       |

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    |
|--------------|-----------------|---------|---------|
| 189-262L1    | 1               |         | Dort I  |
| 8G4620ACXXXX | 1               | (5) (6) | Part I  |
| 189-262L2    | 1               |         | Part II |

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#### **NOTES**

- (1) Item to be procured as local supply.
- (2) Corban 27L or Corrosion preventive compound (C001) can be used as alternative to Chromate free jointing compound.
- (3) Corrosion inhibitor (C003) can be used as alternative to Corrosion inhibitor (C385).
- (4) To be used as alternative to trichloroethylene or perchloroethylene vapor degreasing.
- (5) This software will not be supplied; it will be available, along with relevant certification document, in "My Software" sub-section of Leonardo AW Customer Portal website <a href="https://leonardo.agustawestland.com">https://leonardo.agustawestland.com</a>.
- (6) Refer to Software Accomplishment Summary section.

#### **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) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.
- c) 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.
- d) Unless otherwise specified, holes, including pilot holes, are normal to the surface on which they are defined.
- e) Protect properly all those equipment not removed from area affected by the modification during installation procedure.
- f) Let the adhesive cure at room temperature for at least 24 hours, unless otherwise specified.
- g) All lengths are in mm.

#### PART I

1. In accordance with AMP DM 89-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.

#### **NOTE**

To improve accessibility to the area, in case Emergency Floatation System kit is installed, it is suggested to temporarily remove the Aft left floatation assembly with the applicable AMP DMs.

## **NOTE**

To improve accessibility to the area, it is suggested to temporarily remove the Instrument Panel with the applicable AMP DMs.

2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, AMP DM 89-A-25-80-00-00A-

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010A-A and with reference to Figures 1 thru 5, gain access to the area affected by the installation and perform External Video Camera complete provision P/N 8G9750A00111 as described in the following procedure:

- 2.1 With reference to Figures 1 thru 5, perform the external video camera structural provision P/N 8G5310A02711 as described in the following procedure:
  - 2.1.1 With reference to Figure 1 Detail B, temporarily locate the camera bracket assy P/N 4F9750A00531 on the FWD spar assy P/N 8G5350A03231 and countermark.

#### **NOTE**

Unless otherwise specified hole centres shall be kept within a diameter of 0.25 mm of the proper centre line.

2.1.2 With reference to Figure 1 Detail B, drill n°4 holes Ø5.512÷5.639 thru the FWD spar assy P/N 8G5350A03231.

## **WARNING**

THE ISOPROPYL ALCOHOL (C039), IS A DANGEROUS MATERIAL. BEFORE YOU DO THIS PROCEDURE, MAKE SURE THAT YOU KNOW ALL THE SAFETY PRECAUTIONS AND FIRST AID INSTRUCTIONS FOR THIS MATERIAL.

#### **NOTE**

Prepare the bonding surface with a clean cloth (C011), using the isopropyl alcohol (C039).

2.1.3 With reference to Figure 1 Detail B, install the camera bracket assy P/N 4F9750A00531 on the FWD spar assy P/N 8G5350A03231 by means of the chromate free jointing compound.

#### **WARNING**

THE CORROSION INHIBITORS (C385) AND (C003), ARE DANGEROUS MATERIALS. BEFORE YOU DO THIS PROCEDURE, MAKE SURE THAT YOU KNOW ALL THE SAFETY PRECAUTIONS AND FIRST AID INSTRUCTIONS FOR THESE MATERIALS.



#### **NOTE**

protect all removable fasteners that are not fully coated with polyurethane paint, using Corrosion inhibitor (C385) or (C003).

#### **NOTE**

Apply chromate free jointing compound under the head and on the shank of fasteners.

2.1.4 With reference to Figure 1 Detail B, fix the camera bracket assy P/N 4F9750A00531 on the FWD spar assy P/N 8G5350A03231 by means of n°4 screws P/N MS27039-1-05 and n°4 washers P/N NAS1149D0363K.

## **NOTE**

The surface, to be bonded shall be:

- Cleaned completely, by abrasive blasting at a pressure of between 3.5 and 5.5 atm (50 to 80 psi) and all visible residues of abrasive material removed.
   Abrade the resin to expose the copper bonding strip.
- The metallic surfaces shall be subjected to vapor degreasing, with one of the following solvents, making sure to maintain boiling temperatures.
   Trichloroethylene (87 to 90°C) or Perchloroethylene (120 to 124°C).
- 2.1.5 Apply the dry abrasive blast to the copper strip P/N 8G5310A25151 by means of 80 grit aluminium oxide (C181).

#### **WARNING**

THE SOLVENT (C133), THE CLEANING COMPOUND (C257) ARE A DANGEROUS MATERIAL. BEFORE YOU DO THIS PROCEDURE, MAKE SURE THAT YOU KNOW ALL THE SAFETY PRECAUTIONS AND FIRST AID INSTRUCTIONS FOR THESE MATERIALS. YOU MUST USE RUBBER GLOVES WHEN YOU MOVE THE COMPONENTS DURING CLEANING.

#### **CAUTION**

After cleaning, do not touch the metal components with your bare hands. Put on clean, lint-free cotton gloves

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before you touch the metal components. Contamination from your bare hands will cause corrosion of the metal components.

#### **NOTE**

As alternative to vapor degreasing use emulsion cleaner (C257) or alkaline degreaser (C063).

- 2.1.6 Apply the vapor degreasing to the copper strip P/N 8G5310A25151 by means of Trichloroethylene (C133) or Perchloroethylene (C151).
- 2.1.7 With reference to Figure 2 Section D-D and View L, temporarily locate the power supply P/N RPS-77E and the copper strip P/N 8G5310A25151 on the LH tail panel assy P/N 8G5350A03931 in accordance with the dimensions shown. Countermark and drill n°4 holes Ø11.48÷11.61 thru the copper strip and the LH tail panel assy.
- 2.1.8 With reference to Figure 2 Section D-D, install n°4 inserts P/N NAS1836C06-13M by means of adhesive EA934NA (C054).

#### **WARNING**

THE ISOPROPYL ALCOHOL (C039), IS A DANGEROUS MATERIAL. BEFORE YOU DO THIS PROCEDURE, MAKE SURE THAT YOU KNOW ALL THE SAFETY PRECAUTIONS AND FIRST AID INSTRUCTIONS FOR THIS MATERIAL.

#### **NOTE**

Dry assembly required in these areas. Prepare the bonding surface with a clean cloth (C011), using the isopropyl alcohol (C039).

2.1.9 With reference to Figure 2 Detail C, install the copper strip P/N 8G5310A25151 on the LH tail panel assy P/N 8G5350A03931 by means of adhesive EA9309.3NA (C021).



## **NOTE**

Use the edging P/N A236A and P/N NASM21266 on edges which are liable to cause damage to cable assemblies or where abrasion may occur.

#### **NOTE**

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

#### **NOTE**

Remove the parts used to stow the connectors (clamps, spacers, etc.) when the equipments are installed. Do not remove the bonded supports.

#### **NOTE**

When necessary replace existing clamp with suitable clamp.

#### **NOTE**

To ensure a proper installation, it is allowed to install screws and/or washers two dash shorter or longer than the nominal one.

- 2.2 With reference to Figures 1 thru 5 and Figure 6 and 7 Wiring Diagram, perform the EXT video camera C/A installation P/N 8G9750A00211 as described in the following procedure:
  - 2.2.1 With reference to Figure 1 Detail B, install the support P/N AW001CL001-N6 by means of adhesive EA9309.3NA (C193).
  - 2.2.2 With reference to Figure 1 Detail B, install the standoff P/N A388A3E20C75 by means of acrylic adhesive (C249) and the adhesive (C356).
  - 2.2.3 With reference to Figure 2 Detail C, install n°3 supports P/N AW001CL001-N6 by means of adhesive EA9309.3NA (C193).
  - 2.2.4 With reference to Figure 3 Detail F install n° 2 studs P/N A366A3E10C by means of acrylic adhesive (C249) and the adhesive (C356).

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- 2.2.5 With reference to Figure 4 Detail G, install n°2 supports P/N AW001CL005B01-X1 and n°2 supports P/N AW001CL001-N6 by means of adhesive EA9309.3NA (C193).
- 2.2.6 With reference to Figure 5 Detail L, install the support P/N AW001CL002A-X1 and n°2 supports P/N AW001CL001-N6 by means of adhesive EA9309.3NA (C193).
- 2.2.7 With reference to Figures 1 thru 5, lay down the following cable assemblies on the existing routes:
  - External video camera C/A (D2A104) P/N 8G9D02A10401;
  - External video camera C/A (C1A117) P/N 8G9C01A11701;
  - External video camera C/A (C3A106) P/N 8G9C03A10601;
  - External video camera C/A (C3A103) P/N 8G9C03A10301;
  - External video camera C/A (C3A104) P/N 8G9C03A10401.
- 2.2.8 With reference to Figures 1 thru 5, fix the cables at the existing and/or previously installed fixing hardware by means of lacing cord (C311).
- 2.2.9 With reference to Figure 1 Detail B, fix the cable D2A104 at the previously installed fixing hardware by means of the clamp P/N AW001CB03H, the screw P/N NAS1190E3P6AK and the washer P/N NAS1149D0332J.
- 2.2.10 With reference to Figure 3 Detail F, fix the cable D2A104 at the previously installed fixing hardware by means of the clamp P/N AW001CB03H, the nut P/N MS21043-3 and the washer P/N NAS1149D0332J.
- 2.2.11 With reference to Figure 3 Detail F, fix the cable C3A106 at the previously installed fixing hardware by means of n°3 clamps P/N AW001CB03H, the nut P/N MS21043-3, the washer P/N NAS1149D0332J and the grommet P/N AW002FT2.
- 2.2.12 With reference to Figure 3 Detail E and Figure 6 Wiring Diagram, perform the electrical connection of C/A C1A117 to the connector Q3PB6. Use the electrical contact P/N M39029/58-363.
- 2.2.13 With reference to Figure 3 Detail E and Figure 6 Wiring Diagram, perform the electrical connection of C/A C1A117 to the terminal board TB315. Use n° 3 electrical contacts P/N A523A-A03.
- 2.2.14 With reference to Figure 5 Detail K and Figure 7 Wiring Diagram, perform the electrical connection of C/A C3A103 to the connector A95P3. Use n°3 electrical contacts P/N M39029/56-348.



- 2.2.15 With reference to Figure 5 Detail K and Figure 7 Wiring Diagram, perform the electrical connection of C/A C3A104 to the connector A42P3. Use n°3 electrical contacts P/N M39029/56-348.
- 2.2.16 Perform a pin-to-pin continuity check of all the electrical connections made.

## **NOTE**

Perform step 3 only if Part II is not intended to be embodied immediately after Part I. Otherwise perform Part II.

- 3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
- 4. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
- 5. 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".

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#### **PART II**

## NOTE

Perform Part II only if the helicopter is already equipped with external video camera complete provision P/N 8G9750A00111.

## **NOTE**

To improve accessibility to the area, it is suggested to temporarily remove the Instrument Panel with the applicable AMP DMs.

- 1. In accordance with AMP DM 89-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
- 2. In accordance with AMP DM 89-A-06-41-00-00A-010A-A, AMP DM 89-A-25-80-00-00A-010A-A and with reference to Figures 1 thru 5, gain access to the area affected by the installation and perform external video camera equipment installation P/N 8G9750A00311 of kit external video camera P/N 8G9750F00111 as described in the following procedure:
  - 2.1 With reference to Figure 5 Detail L, install the adapter P/N 2029-16-9 and connect it to n°2 connectors P/N 190712 and the connector P/N 190728.
  - 2.2 In accordance with AMP DM 89-A-11-00-01-00A-720A-A with reference to Figure 5 Detail L, install the decal P/N ED300CP5.
  - 2.3 In accordance with AMP DM 89-A-97-51-01-00A-720A-A and with reference to Figure 1 Detail B, install the utility camera P/N RPC-651ER/3,0 by means of n°4 screws P/N MS27039-1-10 and n°4 washers P/N NAS1149D0332J.
  - 2.4 In accordance with AMP DM 89-A-11-00-01-00A-720A-A with reference to Figure 1 Detail B, install the decal P/N ED300DS117.

#### NOTE

With reference to step 2.8, before installing the power supply P/N RPS-77E with REF-DES PS24, remove paint under the angle contact surface (surface in contact with the structure) by performing steps 2.5 thru 2.7.

- 2.5 Mask the site area to a boundary of between 1 mm and 3 mm outside the power supply contact area on all sides.
- 2.6 Swab degrease the masked area by means of a clean cloth (C011) and abrade by means of Abrasive paper (C017).
- 2.7 Strip paint from the masked area using paint remover.
- 2.8 In accordance with AMP DM 89-A-97-51-02-00A-720A-A and with reference to



- Figure 2 Detail C, install the power supply P/N RPS-77E and n°2 terminal lugs P/N MS25036-102.
- 2.9 In accordance with AMP DM 89-A-11-00-01-00A-720A-A with reference to Figure 2 Detail C, install the decal P/N ED300PS24.
- 3. In accordance with AMP DM 89-A-24-81-00-00B-752A-A, perform the installation of ECDU configuration table P/N 8G4620ACXXXX.
- 4. In accordance with AMP DM 89-A-97-51-00-00A-75BA-A perform the setup procedure on the cockpit display of the external video camera system kit.
- 5. In accordance with AMP DM 89-A-97-51-00-00A-320A-A perform the external video camera system kit operation test.
- 6. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
- 7. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
- 8. Send the attached compliance form to the following mail box:

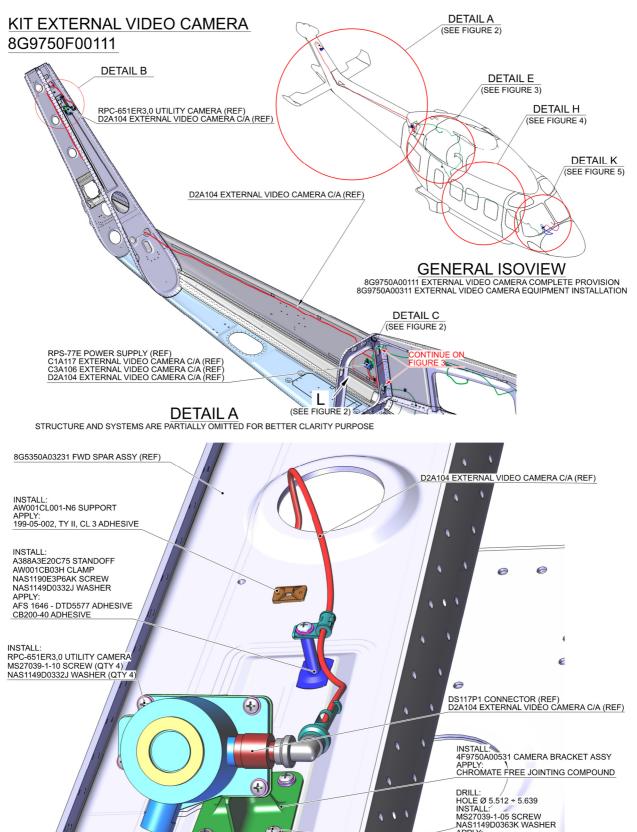
engineering.support.lhd@leonardo.com

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

S.B. N°189-262

DATE: September 13, 2022





**DETAIL B** 

Figure 1

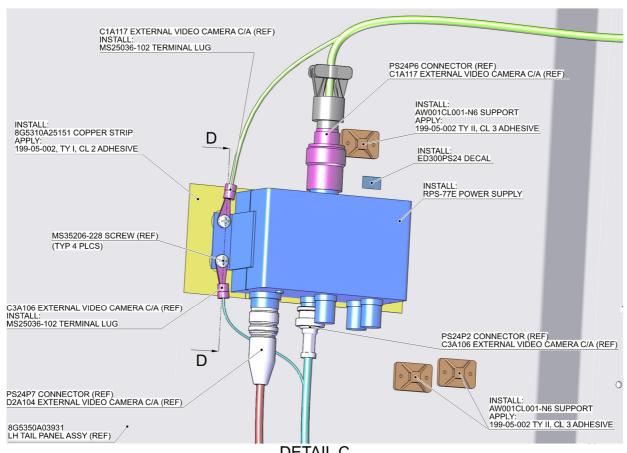
S.B. N°189-262 DATE: September 13, 2022 REVISION: /

APPLY: \*\*CHROMATE FREE JOINTING COMPOUND

(TYP 4 PLCS)

INSTALL:
ED300DS117 DECAL





DETAIL C
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 1)

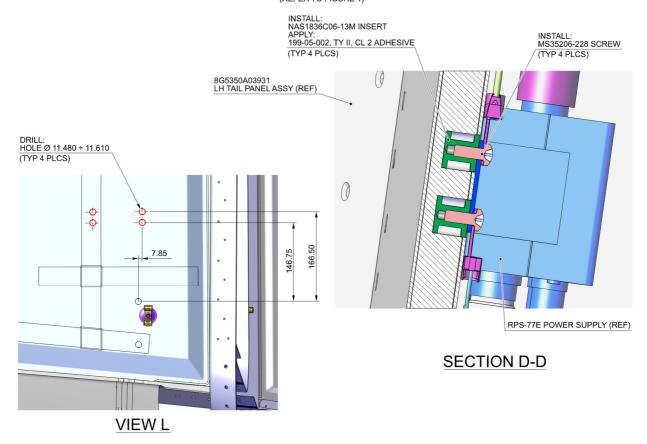
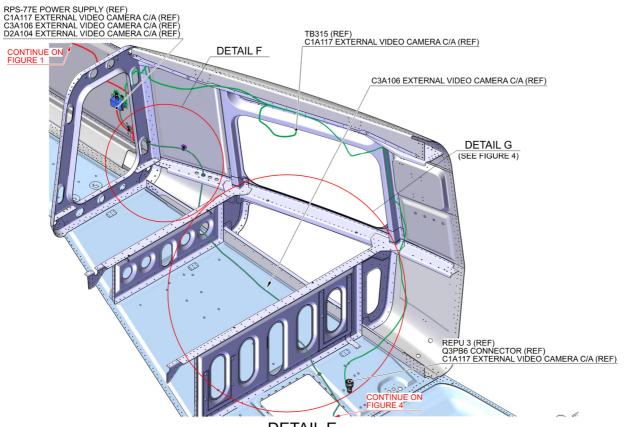


Figure 2

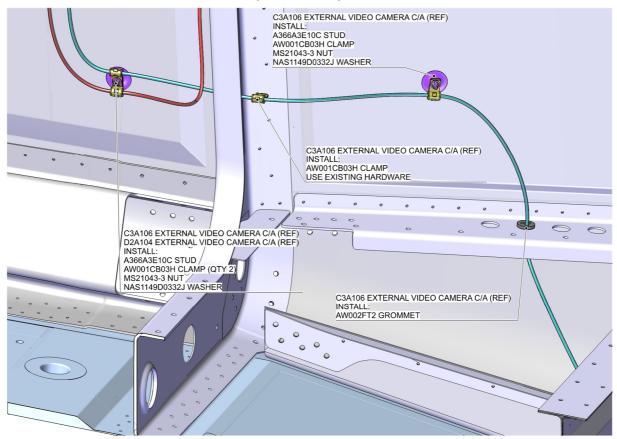
S.B. N°189-262

DATE: September 13, 2022





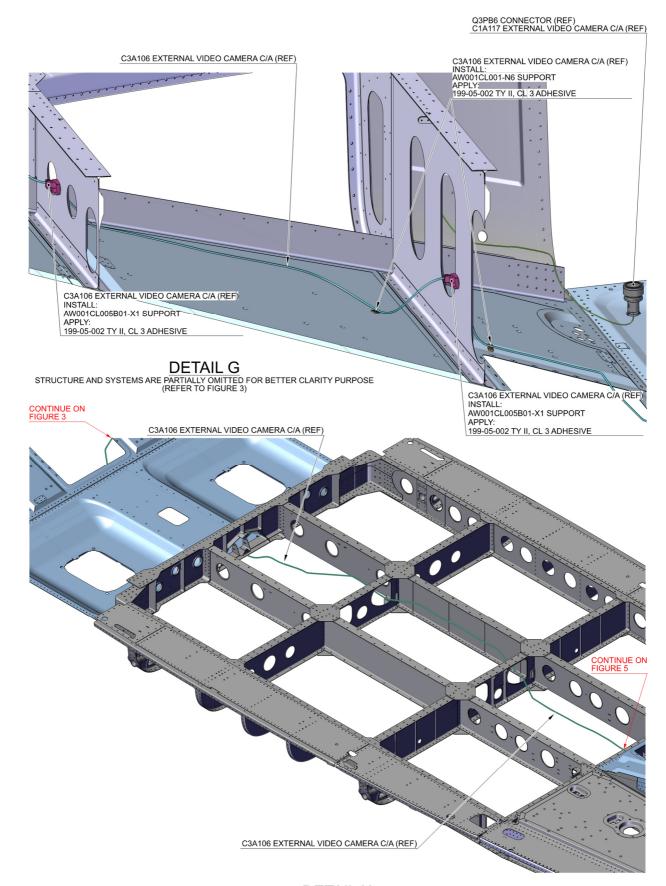
DETAIL E
STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 1)



**DETAIL F** 

Figure 3





# DETAIL H STRUCTURE AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE (REFER TO FIGURE 1)

## Figure 4

S.B. N°189-262

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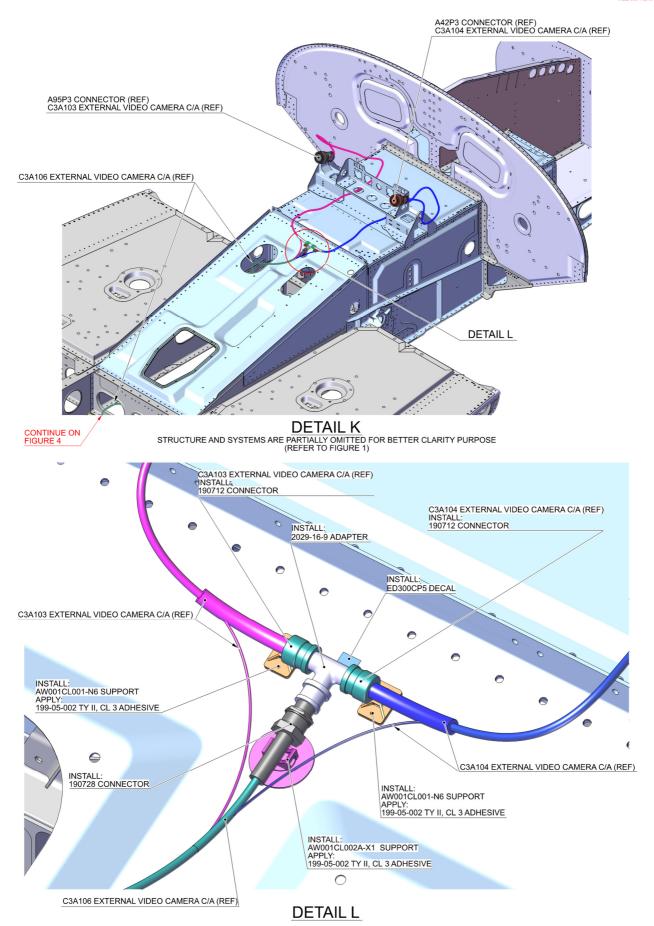
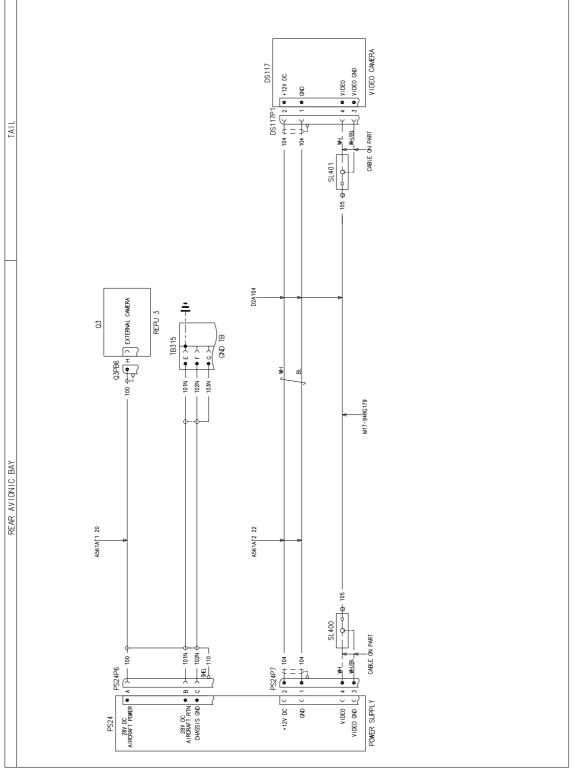


Figure 5



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Figure 6

S.B. N°189-262

DATE: September 13, 2022

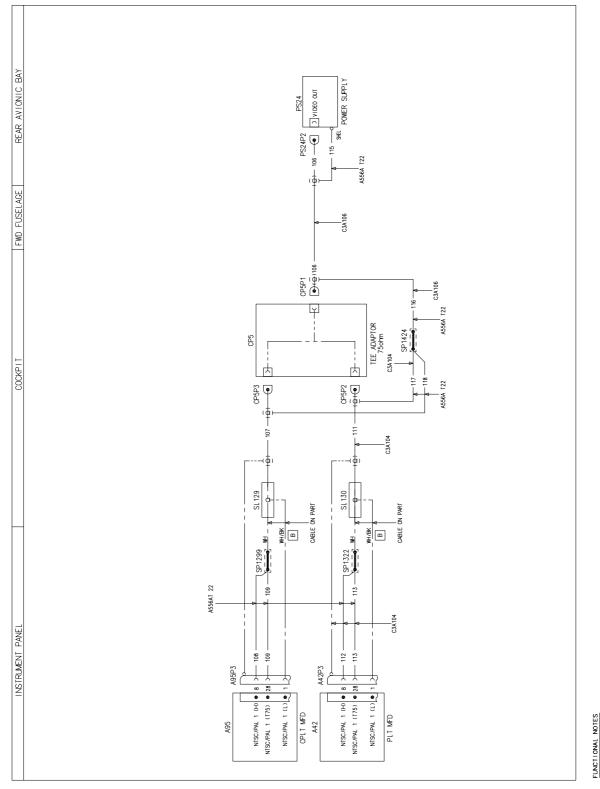


Figure 7



| Please send to the following address:                          |   | SERVICE BULLETIN COMPLIANCE FORM |   |                                     |   | Date:   |  |
|--|---|----------------------------------|---|-------------------------------------|---|---|--|
| LEONARDO S.p.A.  |   |                                  |   |                                     |   |   |  |
| CUSTOMER SUPPORT & SERVICES - ITALY                            |   | Number:                          |   |                                     |   |   |  |
| PRODUCT SUPPORT ENGINEE  | RING & LICENSES DEPT.                                     |                                  |   |                                     |   |   |  |
| Via Giovanni Agusta, 520<br>21017 Cascina Costa di Samara      | ate (VA) - ITALY  | Revision:                        |   |                                     |   |   |  |
| Tel.: +39 0331 225036 Fax: +39                                 | 0331 225988   |                                  |   |                                     |   |   |  |
| Customer Name and Addre  | ess:  |                                  |   | Telephone:                          |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   | Fax:                                |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   | B.T. Compli                         | iance Date:   |   |  |
|  |   |                                  |   |                                     |   |   |  |
| Helicopter Model   | S/N   |                                  | Total N                                 | umber                               | Total Hours   | T.S.O.  |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
| Remarks:   |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
|  |   |                                  |   |                                     |   |   |  |
| Information:   |   |                                  |   |                                     |   |   |  |
| We request your cooperation in its parts and sent to the above | n filling this form, in order to address or you can commu | keep out sta                     | atistical data rel<br>oplication also v | evant to aircrai<br>ia Technical Bi | ft configuration up-to-date. Thulletin Application Communic | ne form should be filled in all ation Section placed in |  |

Leonardo AW Customer Portal - MyCommunications Area. We thank you beforehand for the information given.