



No. EC155-67-015

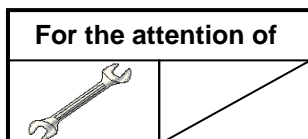
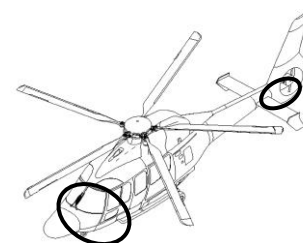
Civil version(s): B, B1

SERVICE BULLETIN

PRODUCT IMPROVEMENT

ROTOR FLIGHT CONTROLS Replacement of the Old Generation SEMA by the New Generation 2 SEMA

Corresponds to modification 0722B81



| Revision No. | Date of issue |
|--------------|---------------|
| Revision 0 | 2021-07-20 |

Summary:

The purpose of this Service Bulletin is to replace the Old Generation (OG) serial actuator SEMA (Smart Electro-Mechanical Actuator) by the New Generation 2 (NG2) SEMA to reduce recurrent maintenance costs, backlash and sealing problems.

Compliance:

Compliance with this Service Bulletin is left to the operator's initiative.

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1. PLANNING INFORMATION



CAUTION

THIS SERVICE BULLETIN IS WRITTEN BASED ON THE ORIGINAL HELICOPTER CONFIGURATION (AS DEFINED IN THE INDIVIDUAL INSPECTION LOG BOOK (RIC)). IT ALSO TAKES INTO ACCOUNT ALL AIRBUS HELICOPTERS APPROVED CONFIGURATION CHANGES MADE AFTER DELIVERY, IF AIRBUS HELICOPTERS WAS INFORMED OF THEM. IT IS THE RESPONSIBILITY OF THE OPERATOR TO CHECK THE COMPATIBILITY OF ANY MODIFICATIONS WITH THE CURRENT HELICOPTER CONFIGURATION. IF MODIFICATIONS ARE NOT COMPATIBLE, IT IS THE RESPONSIBILITY OF THE OPERATOR TO DEFINE THE NECESSARY ADAPTATION WORK AND HAVE THEM APPROVED BY THE AIR TRANSPORT AUTHORITIES IN THE COUNTRY CONCERNED, AND TO MAKE SURE THAT THEIR AIRWORTHINESS IS FOLLOWED-UP.

1.A. EFFECTIVITY

1.A.1. Helicopters/installed equipment or parts

- Helicopters EC155 version B POST MOD 0722B42 and PRE MOD 0722B81.
- Helicopters EC155 version B1 PRE MOD 0722B81.

NOTE

Refer to the Individual Inspection Log Book (RIC AMS) and/or Aircraft Log Book to identify the current modification status of the helicopter.

1.A.2. Non-installed equipment or parts

Actuator MP/N 418-00876-800

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

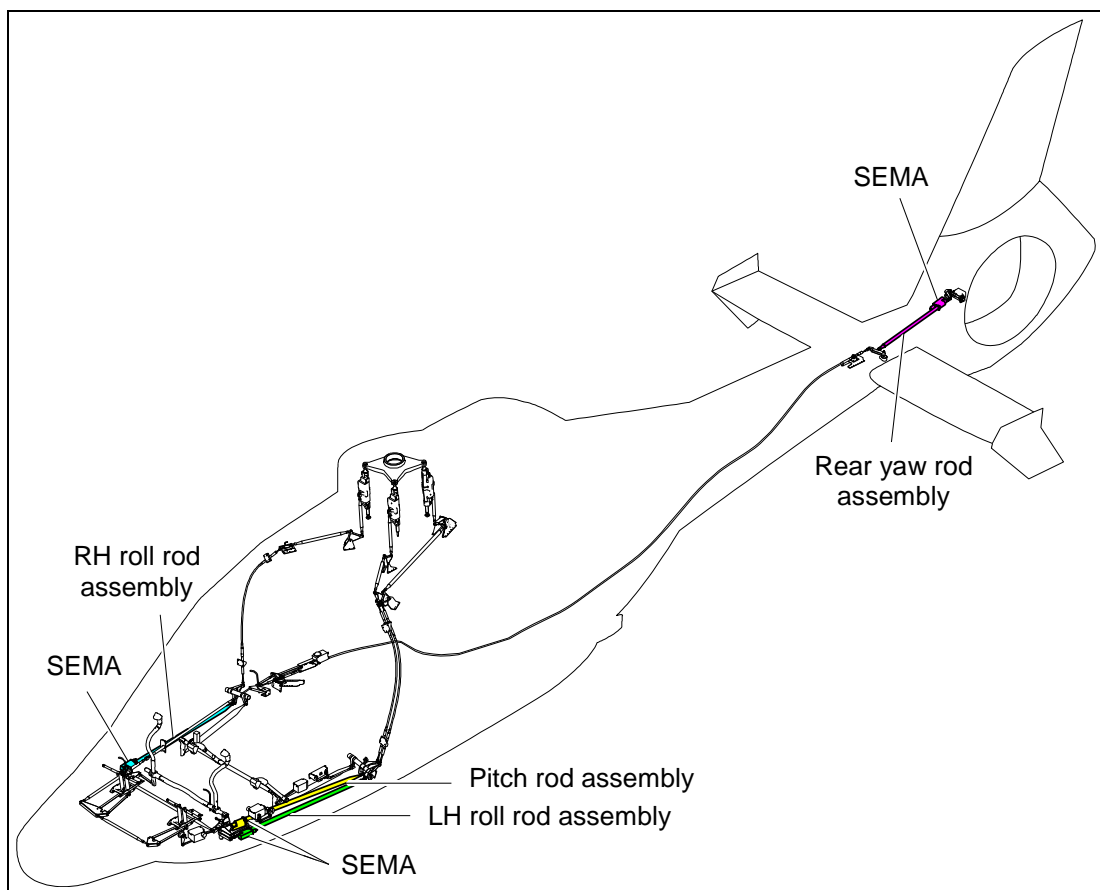
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1.C. REASON

The purpose of this Service Bulletin is to replace the Old Generation (OG) serial actuator SEMA (Smart Electro-Mechanical Actuator) by the New Generation 2 (NG2) SEMA to reduce recurrent maintenance costs, backlash and sealing problems.

1.D. DESCRIPTION

This Service Bulletin consists in replacing the OG SEMA and its screws by the NG2 SEMA and its screws.



1.E. COMPLIANCE

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

Not applicable.

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1.E.2. Compliance in service

Helicopters/installed equipment or parts:

The work must be performed on the helicopter by the operator.

Comply with paragraph [3.B.](#) of this Service Bulletin.

Non-installed equipment or parts:

The build-up of stocks for compliance with this Service Bulletin is left to the operator's initiative.

1.F. APPROVAL

Approval of modifications:



The information or instructions relate to modification 0722B81 revision 3, which was approved on May 21, 2021 by the EASA for civil version helicopters subject to an Airworthiness Certificate.

Approval of this document:

The technical information contained in this Service Bulletin Revision 0 was approved on July 15, 2021 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

1.G. MANPOWER



For compliance with this Service Bulletin, Airbus Helicopters recommends the following staff qualification:

Qualification: 1 Mechanical Technician.



The Estimated Man-hours are indicated for reference purposes only and based on a standard helicopter configuration.

Estimated Man-hours: 8 hours for the Mechanical Technician for replacing all the SEMA.



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

Helicopter downtime is estimated at 1 day.

1.H. WEIGHT AND BALANCE



Weight: + 0.20 kg

Moment:

Longitudinal: + 0.74 m.kg

Lateral: - 0.02 m.kg

After work completion, record new weight and moment in your dedicated document.

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1.I. POWER CONSUMPTION

Not applicable.

1.J. SOFTWARE UPGRADES/UPDATES

Not applicable.

1.K. REFERENCES

The following documents are required for compliance with this Service Bulletin.

Aircraft Maintenance Manual

AMM: 22-10-00-725: Functional Tests - Autopilot System After You Replace a Smart Electro-Mechanical Actuator (SEMA)

AMM: 24-00-00-911: General Safety Instructions - Electrical Power

AMM: 60-00-00-911: Power Transmission Systems

AMM: 67-00-00-911: General Safety Instructions - Flight Controls

AMM: 67-11-01-061: Removal/Installation - Main Rotor Actuator

AMM: 67-20-02-063: Removal/Installation - Tail Rotor Series Actuator

Standard Practices Manual

MTC: 20-02-05-404: Assembly by screws and nuts - Joining

MTC: 20-07-02-201: Helicopter parked in a repair shop - Safety instructions

MTC: 20-07-03-408: Appearance checks on an aircraft after an inspection or repair - Technical instructions

MTC: 20-08-05-101: DRAFTING AND UPDATING THE LOG CARD (FM) - General rules applicable to aircraft

Information Notice

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

IN: 3643-I-00: Introduction of the digital Service Bulletin reporting R-TeX

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1.L. OTHER AFFECTED PUBLICATIONS



CAUTION

TO COMPLY WITH THIS SERVICE BULLETIN, THE OPERATOR MUST MAKE SURE THAT ALL THE MAINTENANCE DOCUMENTS REQUIRED FOR THE MAINTENANCE OF THIS INSTALLATION ARE AVAILABLE. IF NOT, IT IS THE OPERATOR'S RESPONSIBILITY TO OBTAIN THE DOCUMENTS FROM THE USUAL AIRBUS HELICOPTERS CONTACT.

Publications to be updated:

Revision of the Aircraft Maintenance Manual (AMM), the Component Maintenance Manual (CMM) and the Illustrated Parts Catalogue (IPC) will be updated on the customer's order.

1.M. PART INTERCHANGEABILITY OR MIXABILITY

Interchangeability:

PRE MOD and POST MOD SEMA are not interchangeable.

Mixability:

Mixing between PRE MOD and POST MOD SEMA is authorized.

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2. EQUIPMENT OR PARTS INFORMATION

2.A. EQUIPMENT OR PARTS: PRICE - AVAILABILITY - PROCUREMENT

Price

For any information on the price of modification kits and/or components or for assistance, contact the Airbus Helicopters Network Sales and Customer Relations Department.

Availability

Delivery lead times will be indicated by the Sales and Customer Relations Department on the operator's request.

Procurement

Order the required quantity from the Airbus Helicopters Network Sales and Customer Relations Department:

Airbus Helicopters
Etablissement de Marignane
Direction Ventes et Relations Client
13725 MARGNANE CEDEX
FRANCE

NOTE

On the purchase order, please specify the mode of transport, the destination and the serial numbers of the helicopters to modify.

2.B. LOGISTIC INFORMATION

Not applicable.

2.C. EQUIPMENT OR PARTS REQUIRED PER HELICOPTER/COMPONENT

Equipment or parts to be indicated separately for one actuator:

| Key Word | Qty | New P/N | Item | Old P/N → | Instruction |
|---------------|-----|----------------|------|----------------|-------------|
| SEMA ACTUATOR | 1 | 261087183-8002 | 1 | 418-00876-800 | Store |
| NG2 8MM | | (U221A10A1003) | | (704A47135068) | |
| Screw | 4 | 22220BC050024L | 2 | 22220BC050014L | Store |
| Washer, flat | 4 | 23111AG050LE | 3 | 23111AG050LE | Store |

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Consumables to be ordered separately:

As per Work Cards and/or Tasks mentioned in this Service Bulletin.

You can order the consumables from the AirbusWorld Marketplace through e-ordering (IN No. 3481-I-00).

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

Special tools:

As per Work Cards and/or Tasks mentioned in this Service Bulletin.

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.

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3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

- Refer to Task 24-00-00-911 (AMM), read and comply with the general electrical instructions for power supplied on the ground.
- Refer to Work Card 20-02-05-404 (MTC), read and comply with the general instructions for joining by screws and nuts.
- Refer to Work Card 20-07-02-201 (MTC), read and comply with the safety and general instructions for helicopters parked in a repair shop.

3.B. WORK STEPS

3.B.1. Preliminary steps

- Park the helicopter in a hangar.
- Install the appropriate access equipment.
- Disconnect all the electrical power supplies.
- Remove and/or open all cowlings, panels, doors and all equipment items to enable appropriate access to the various work areas.

3.B.2. Procedure



CAUTION

BEFORE STARTING ANY WORK ON THE MECHANICAL ASSEMBLIES, READ THE TASK 60-00-00-911 (AMM).



CAUTION

BEFORE STARTING ANY WORK ON THE FLIGHT CONTROLS, READ THE TASK 67-00-00-911 (AMM).

As per [Figure 1](#)

- Remove the SEMA (a):
 - . refer to Task 67-11-01-061 (AMM) for the main rotor rod assemblies,
 - . refer to Task 67-20-02-063 (AMM) for the tail rotor rod assembly.
- Store the SEMA (a) with their screws (b) and washers (c).
- Install the new SEMA (1) with the new screws (2) and the new washers (3):
 - . refer to Task 67-11-01-061 (AMM) for the main rotor rod assemblies,
 - . refer to Task 67-20-02-063 (AMM) for the tail rotor rod assembly.
- Do a functional check as per Task 22-10-00-725 (AMM).

3.B.3. Final steps

- Clean and restore the work areas and the helicopter as per Work Card 20-07-03-408 (MTC).
- Install and/or close all cowlings, panels, doors and all equipment items removed during the preliminary steps (paragraph 3.B.1.).
- Connect again all the electrical power supplies.
- Remove the access equipment.

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3.C. RECORD OF COMPLIANCE

Compliance with this document:

- Record full compliance with this Service Bulletin, with the revision number, in the helicopter documents.
- Record compliance with this ALERT SERVICE BULLETIN (see IN 3643-I-00 for instructions):
QR-Code or hypertext link



NOTE

The recording of compliance with Service Bulletins in the R-Text tool does not replace the recording in the helicopter documents.

[SB EC155-67-015](#)

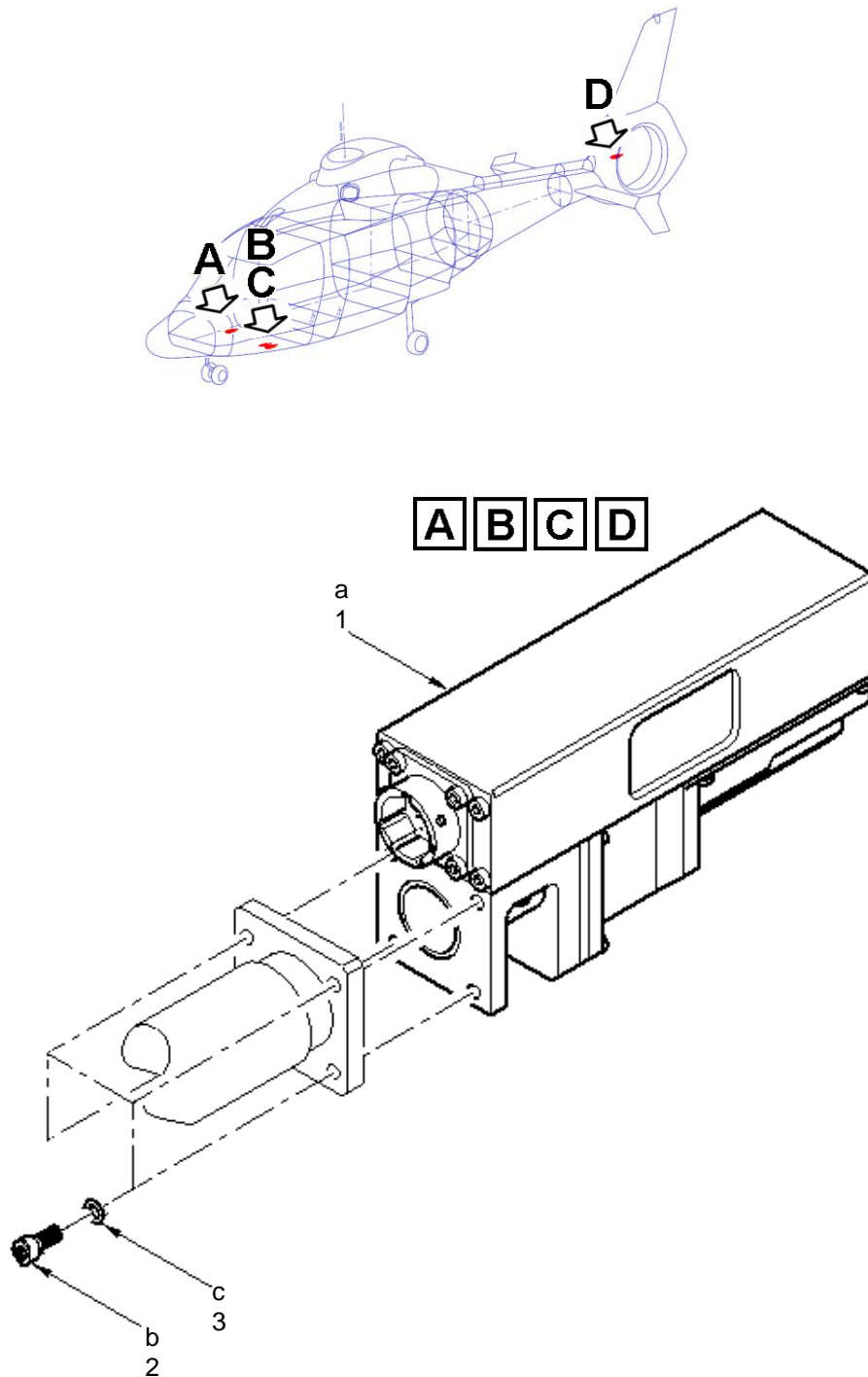
Tracking of modifications in the documentation:

- Record the full compliance with this Service Bulletin only when the all SEMA actuator systems were modified. Record this full compliance, together with the revision number, in the helicopter documents.
- If only one of the SEMA actuator was modified, record the information that follows in the helicopter document:
 - . The compliance with this Service Bulletin with the revision number
 - . Which part was modified.
- Record the removal of the actuator SEMA MP/N 418-00876-800 in its Follow-up Sheet (FS).
Refer to Work Card 20-08-05-101 (MTC).
- Record the installation of the actuator SEMA MP/N 261087183-8002 in its Log Card (FM).
Refer to Work Card 20-08-05-101 (MTC).

3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Not applicable.

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Return to paragraph [3.B.2.](#)

Figure 1