

ALERT SERVICE BULLETIN

TITLE: Servo-control system - Check of the connection between the upper ball bearing end and the main rotor servo-control

SB Type: Protective measure

APPLICABILITY

Model:	EC155
Helicopters affected:	B , B1
Component affected:	SC8037 and SC8037-1

COMPLIANCE: MANDATORY

Comply with this ALERT SERVICE BULLETIN not more than 110 flight hours or 6 months (the first limit you get to is applicable) after you received this ALERT SERVICE BULLETIN.

SUMMARY

The purpose of this ALERT SERVICE BULLETIN is to check the nut tightening torque of the upper ball bearing end of the main rotor servo-controls.

GENERAL EVALUATION

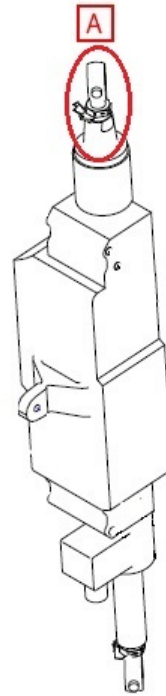
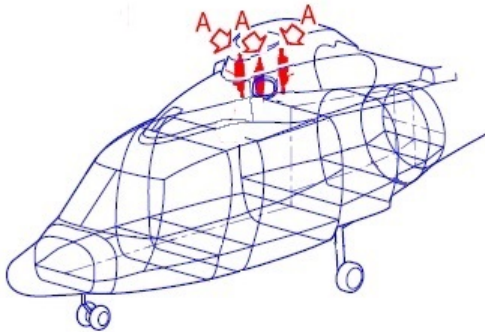
Evaluation table			
Perform once	YES	Recurring accomplishment	NO

Export Control:

US Export Control - No US content. This Item does not contain any U.S. origin ITAR or EAR content.

FR Export Control - Not Listed. This Item is not listed against the EC regulations in the EU/FR.

GENERAL ILLUSTRATION



PLANNING INFORMATION

1. REASON



Airbus Helicopters was informed of two cases of loss of tightening torque between an upper ball bearing end and a main rotor servo-control. One case led to the disconnection of these two parts. In this case, the crew detected a vibration and hardening of the collective pitch lever on the ground when the collective pitch was increased.

After investigation, it turns out that there is no requirement to monitor the tightening torque of the upper ball bearing end in service.

Consequently, the purpose of this ALERT SERVICE BULLETIN is to check the nut tightening torque of the upper ball bearing end of the main rotor servo-controls and to collect information regarding the fleet status.

2. DESCRIPTION

This ALERT SERVICE BULLETIN includes the work steps that follow for each main rotor servo-control:

- Check of the nut tightening torque of the upper ball bearing end
- Check condition of threads of the main rotor servo-control if the nut tightening torque of the upper ball bearing end is out of tolerance.

3. CONCURRENT REQUIREMENTS

Not applicable.

4. APPROVAL

The technical content of this document is approved under the authority of the Design Organization Approval ref. EASA. 21J.700.

5. MANPOWER

NOTE

The Purpose of Man Hours is to give Airbus Helicopters customers a guideline for maintenance scheduling. It is not a contractual information.

5.1. Manpower for the check of the nut tightening torque of the upper ball bearing end

Number of Persons	Qualification	Estimated Man Hours
1	Mechanical technician	1h

5.2. Manpower for the condition check of the threads of one main servo-control

Number of Persons	Qualification	Estimated Man Hours
1	Mechanical technician	1h

5.3. Manpower for set up and close up

Number of Persons	Qualification	Estimated Man Hours
1	Mechanical technician	0.5h

6. WEIGHT AND BALANCE

There is no change in weight and moment.

7. ELECTRICAL LOAD DATA

Not changed.

8. DOCUMENTATION AFFECTED

Not applicable.

9. MATERIAL INFORMATION

9.1. Price

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

9.2. Availability

Contact the Sales and Customer Relations Department to know the delivery lead times.

9.3. Procurement

Send an order for the necessary quantities to the Airbus Helicopters Network Sales Department:

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

In the purchase order, write the information that follows:

- The mode of transport
- The destination
- The serial numbers of the helicopters to change.

You can order the consumables from the AirbusWorld Marketplace through e-ordering (IN No. 3481-I-00). If you cannot get access to e-ordering, please contact your Logistic Focal Point.

9.4. Mixability

This Service Bulletin has no effect on the mixability.

9.5. LIST OF NEW MATERIALS

For routine replacement parts, refer to the Tasks specified in this ALERT SERVICE BULLETIN and the list below:

Individual Spares List				
Item	Designation	Reference	MFC	QTY
1	Ball bearing end	1211351P	K5269	AR
4	Main rotor servo-control	SC8037-1	F0210	AR
9	Main rotor servo-control	SC8037	F0210	AR

For consumables, refer to the Tasks specified in this ALERT SERVICE BULLETIN and the list below:

Consumables, Materials and Expendables			
Designation	Reference	MFC	QTY
Sealing compound	CM6068	F0210	AR
Sealant	CM518	F0210	AR
Cleaning agent	CM208	F0210	AR
Lock-wire	CM776	F0210	AR

Special Tools				
Item	Designation	Reference	MFC	QTY
7	Flashlight	Commercial reference		1
8	Articulated mirror	Commercial reference		1

9.6. LIST OF EXISTING PARTS

Not applicable.

10. ACCOMPLISHMENT INSTRUCTION

Comply with the accomplishment procedure [67-30-0001, 933](#)

11. ADDITIONAL INFORMATION

Not applicable.

End of section

ACCOMPLISHMENT PROCEDURE 67-30-0001, 933

1. APPLICABILITY

Model:	EC155
Helicopters affected:	B , B1
Component affected:	SC8037 and SC8037-1

2. GENERAL INFOS

Acronym / Abbreviation List

AR - As Required

daN.m - deca Newton meter

FM - Fiche Matricule (Log card)

FOD - Foreign Object Damage

IN - Information Notice

lbf.in - pound force inch

AMM - Aircraft Maintenance Manual

MTC - Manuel des Techniques Courantes (Standard Practices Manual)

SPN - Safety Promotion Notice

3. PRELIMINARY REQUIREMENTS

3.1. Applicable Documents

- GENERAL - The Marketplace: an AirbusWorld eOrdering service IN 3481-I-00
- Introduction of the digital Service Bulletin reporting service SB Insight IN 3785-I-00
- GENERAL - Foreign Object Damage prevention SPN 3703-P-00
- Handling - Handling of helicopters in a hangar and in a prepared area [MTC 20-07-01-201](#)
- Drafting and updating the log card (FM) - General rules applicable to aircraft [MTC 20-08-05-101](#)

- General Safety Instructions - Flight Controls [AMM 67-00-00-911](#)
- Assembly by screws and nuts - Joining [MTC 20-02-05-404](#)
- Use of cleaning products on individual parts and on helicopters - Cleaning [MTC 20-04-01-102](#)
- Removal / Installation - Main rotor actuator - MGB POST 0763C88 [AMM 67-30-01-061A](#)
- Removal / Installation - Main rotor actuator [AMM 67-30-01-061B](#)
- Removal / Installation - MGB Cowlings [AMM 53-53-00-061](#)

3.2. Set up

- Park the helicopter in a hangar. Refer to Work Card Handling - Handling of helicopters in a hangar and in a prepared area [MTC 20-07-01-201](#)
- Disconnect all the electrical power supplies.
- Install the applicable access equipment.
- Remove the MGB cowlings. Refer to Work Card Removal / Installation - MGB Cowlings [AMM 53-53-00-061](#)

3.3. Special tools

Designation	Reference	QTY
Flashlight	Commercial reference	1
Articulated mirror	Commercial reference	1

3.4. Materials

Designation	Reference	MFC	QTY
Sealing compound	CM6068	F0210	AR
Sealant	CM518	F0210	AR
Cleaning agent	CM208	F0210	AR
Lock-wire	CM776	F0210	AR

3.5. Spares

Designation	Reference	MFC	QTY
Ball bearing end	1211351P	K5269	AR

Designation	Reference	MFC	QTY
Main rotor servo-control	SC8037-1	F0210	AR
Main rotor servo-control	SC8037	F0210	AR

3.6. Safety conditions

WARNING

**BEFORE YOU START THE WORK, READ THE SAFETY AND
GENERAL MAINTENANCE INSTRUCTIONS OF TASK
GENERAL SAFETY INSTRUCTIONS - FLIGHT CONTROLS
[AMM 67-00-00-911](#)**

CAUTION

**MAKE SURE THAT YOU PREVENT ALL POSSIBLE FOD.
REFER TO SAFETY PROMOTION NOTICE No. 3703-P-00.**

4. PROCEDURE

- 4.1. Only the procedure for the left rear main rotor servo-control is given. Do the same procedure for the left front main rotor servo-control and the right front main rotor servo-control, unless differently specified.
- 4.2. Do a check of the nut (5) tightening torque of the Ball bearing end 1211351P (1) of the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9) (Figure 1). Refer to Work Card Assembly by screws and nuts - Joining [MTC 20-02-05-404](#).

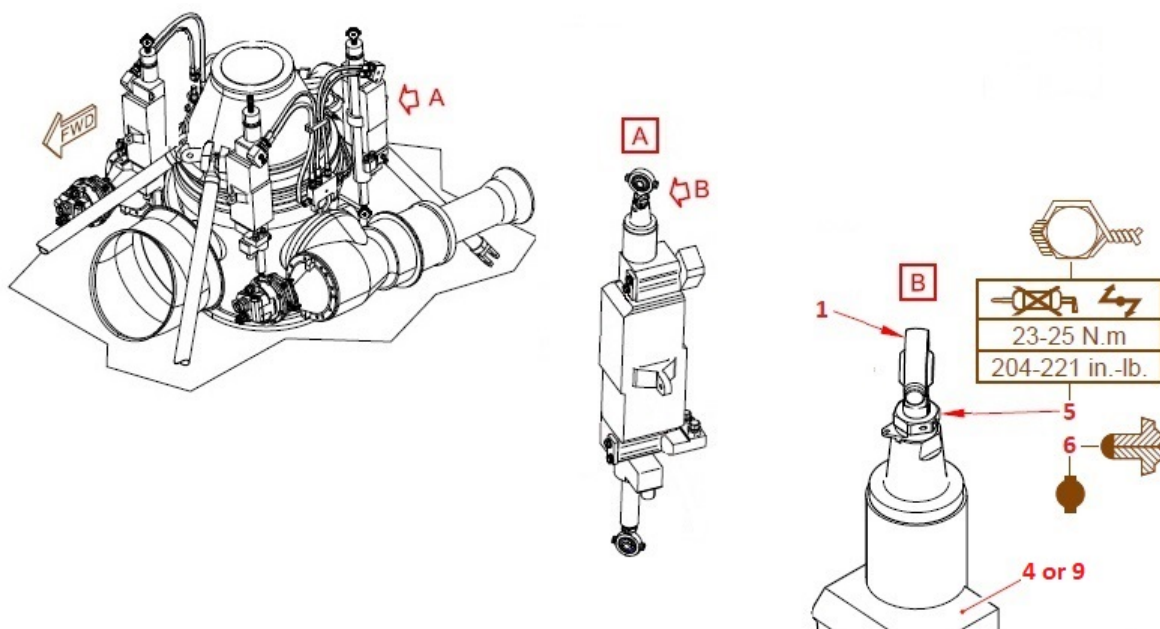


Figure 1

4.2.1. If you get to the minimum torque 2.3 daN.m (204 lbf.in) value before the marks align:

- Torque until the marks align but do not torque to more than the max torque value given in figure 1
- Use Lock-wire CM 776 to safety the nut (5) with the nut retainer (6).
- Apply a bead of Sealing compound CM 6068 to:
 - The upper end of the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9)
 - The nut (5)
 - The nut retainer (6)
 - The Lock-wire CM776.
- Comply with paragraph 4.5.

4.2.2. If the tightening torque value is more than or equal to 2 daN.m (177 lbf.in) and less than 2.3 daN.m (204 lbf.in) when you get to the alignment of the marks (corresponds to a loss of tightening torque less than 15% of the minimum torque value):

- Torque the nut (5) to the nominal values given in Figure 1.
- Use Lock-wire CM 776 to safety the nut (5) with the nut retainer (6).
- Apply a bead of Sealing compound CM 6068 to:
 - The upper end of the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9)
 - The nut (5)
 - The nut retainer (6)
 - The Lock-wire CM776.
- Comply with paragraph 4.5.

4.2.3. If the tightening torque value is less than 2 daN.m (177 lbf.in) when you get to the alignment of the marks (corresponds to a loss of tightening torque more than 15% of the minimum torque value):

- Comply with paragraph 4.3.

4.3. Condition check of the threads of the main rotor servo-control

4.3.1. Disconnect the Ball bearing end 1211351P (1) from the swashplate (not shown). Refer to Task Removal / Installation - Main rotor actuator - MGB POST 0763C88 [AMM 67-30-01-061A](#) or Removal / Installation - Main rotor actuator [AMM 67-30-01-061B](#)

4.3.2. Remove the Ball bearing end 1211351P (1) from the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9). Refer to Task Removal /

Installation - Main rotor actuator - MGB POST 0763C88 [AMM 67-30-01-061A](#) or
Removal / Installation - Main rotor actuator [AMM 67-30-01-061B](#)

4.3.3. Do a detailed visual inspection of threads of the Ball bearing end 1211351P (1) (Figure 2).

4.3.3.1. If there is no dirt, no corrosion and no damaged threads (Figure 2, Detail B):

- Clean the Ball bearing end 1211351P (1) with Cleaning agent CM 208. Refer to Work Card Use of cleaning products on individual parts and on helicopters - Cleaning [MTC 20-04-01-102](#) Cleaning agent
- Keep the removed Ball bearing end 1211351P (1).

4.3.3.2. If there is dirt (Figure 2, Detail A), corrosion or damaged threads:

- Do photos of the threads
- Discard the Ball bearing end 1211351P (1).

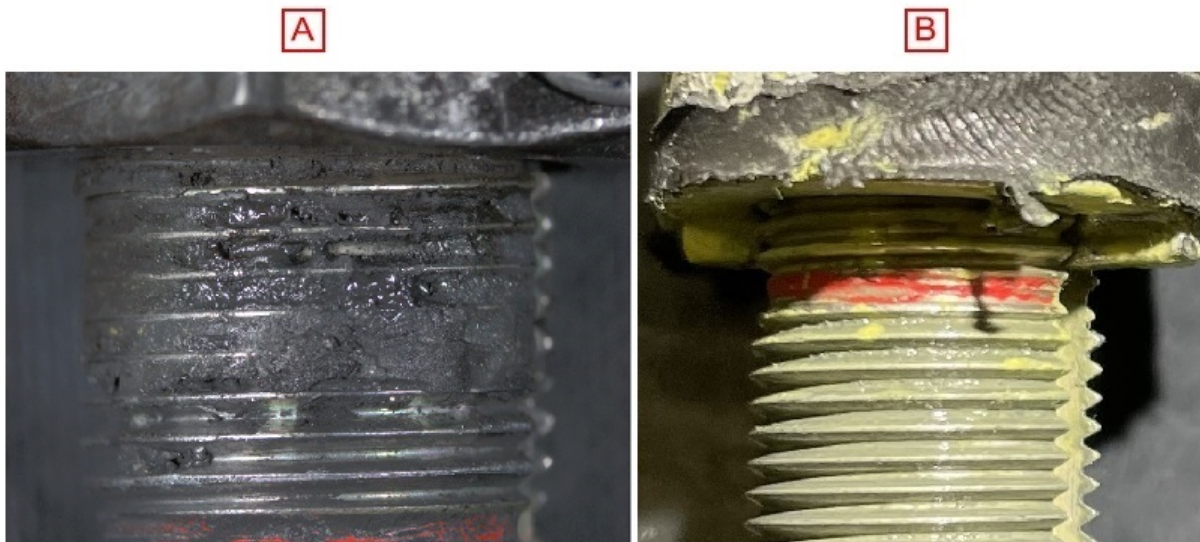


Figure 2

- 4.3.4. Do a detailed visual inspection of the threads on the inner surface of the upper end fitting of the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9) with the Flashlight (7) (not shown) and the Articulated mirror (8) (not shown):
- Do photos of the threads
 - Clean the threads on the inner surface of the upper end fitting of the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9) with Cleaning agent CM 208. Refer to Work Card Use of cleaning products on individual parts and on helicopters - Cleaning [MTC 20-04-01-102](#)
 - Do photos of the threads after cleaning.
- 4.3.4.1. If there is oxidation, corrosion or damaged threads (Figure 3, Detail B), comply with paragraph 4.4.
- 4.3.4.2. If there is no oxidation, no corrosion and no damaged threads (Figure 3, Detail A), comply with paragraph 4.3.5.

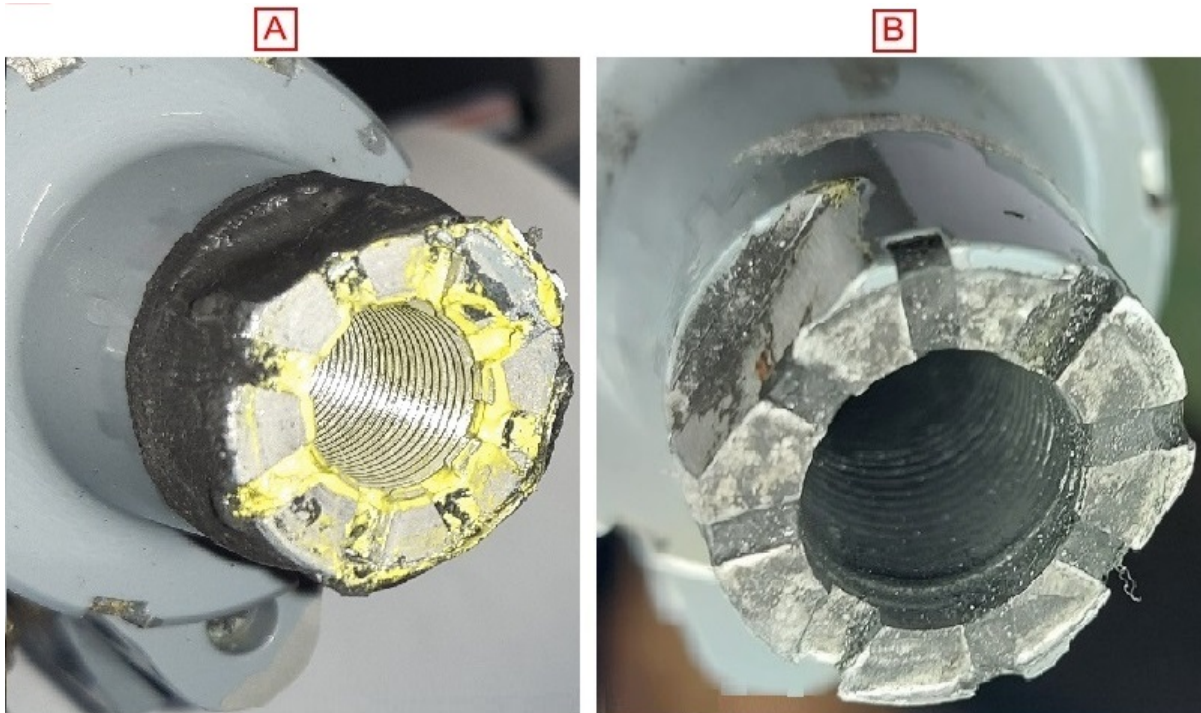


Figure 3

- 4.3.5. Turn a serviceable (new one or removed one if the threads were clean) Ball bearing end 1211351P (1) until its threads are almost fully in the upper end fitting of the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9):
- If there is a hard point, comply with paragraph 4.4.
 - If there is no hard point, comply with paragraph 4.3.6.
- 4.3.6. Install a serviceable Ball bearing end 1211351P (1) on the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9). Refer to Task Removal / Installation - Main rotor actuator - MGB POST 0763C88 [AMM 67-30-01-061A](#) or Removal / Installation - Main rotor actuator [AMM 67-30-01-061B](#)
- 4.3.7. Connect the Ball bearing end 1211351P (1) to the swashplate (not shown). Refer to Task Removal / Installation - Main rotor actuator - MGB POST 0763C88 [AMM 67-30-01-061A](#) or Removal / Installation - Main rotor actuator [AMM 67-30-01-061B](#)
- 4.3.8. Comply with paragraph 4.5.
- 4.4. Replacement of the main rotor servo-control
- 4.4.1. Contact Airbus Helicopters through a Technical Event in the technical request management tool, to which you can get access through the Keycopter portal. Write the text that follows in the topic field of the Technical Event: ALERT SERVICE BULLETIN No. 67-30-0001 and send photos.
- 4.4.2. Remove the Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9). Refer to Task Removal / Installation - Main rotor actuator - MGB POST 0763C88 [AMM 67-30-01-061A](#) or Removal / Installation - Main rotor actuator [AMM 67-30-01-061B](#)
- 4.4.3. Install a serviceable Main rotor servo-control SC8037-1 (4) or Main rotor servo-control SC8037 (9). Refer to Task Removal / Installation - Main rotor actuator - MGB POST 0763C88 [AMM 67-30-01-061A](#) or Removal / Installation - Main rotor actuator [AMM 67-30-01-061B](#)
- 4.4.4. Comply with paragraph 4.5.

4.5. Complete the Response form in digital version or in paper version no later than one week after you comply with this ALERT SERVICE BULLETIN.

4.5.1. To complete the digital version of the Response form:

- Flash the QR code or follow the hypertext link in sub-paragraph 5.5. of paragraph 5. CLOSE UP.
 - Fill the Response form online.
- Or,

4.5.2. To complete the paper version of the Response form:

- Print the Response form (Figure 4 and Figure 5).
- Fill the Response form.
- Send the Response form to: customersupport.helicopters@airbus.com In the email title, please write: ALERT SERVICE BULLETIN reference - ALERT SERVICE BULLETIN title - Retex.

NOTE

More details about Airbus Helicopters Technical Support organization and how to raise Technical Event are available in IN 3041-I-00.

SB ID Card

Title

Servo-control system - Check of the connection between the upper ball bearing end and the main rotor servo-control

Description

The purpose of this ALERT SERVICE BULLETIN is to check the nut tightening torque of the upper ball bearing end of the main rotor servo-controls.

Compliance information

Applied on:

On aircraft

AC S/N:

TTSN:

Questionnaire

Could you please upload the photos taken during compliance with this ALERT SERVICE BULLETIN? *

Did you find a loss of tightening torque? *

- No.
- Yes, the tightening torque was between 2 to 2.3 daN.m.
- Yes, the tightening torque was less than 2 daN.m.

What was the torque value of the main rotor servo-control(s) that had a loss of tightening torque? *

- Torque value of the left rear servo-control: _____ daN.m or lbf.in
- Torque value of the left front servo-control: _____ daN.m or lbf.in
- Torque value of the right front servo-control: _____ daN.m or lbf.in

If you found a loss of tightening torque, did you replace the main rotor servo-control(s)? *

- Yes No

Identify the reference(s) of the main rotor servo-control(s) that had a loss of tightening torque: *

- SC8037
- SC8037-1

Figure 4

How many flight hours were recorded on the main rotor servo-control(s) that had a loss of tightening torque since last installation on the helicopter? *

- Left rear servo-control _____ FH (flight hours)
- Left front servo-control _____ FH (flight hours)
- Right front servo-control _____ FH (flight hours)

Upload a copy of the log card (FM) of the main rotor servo-control that had a loss of tightening torque. *

Figure 5

5. CLOSE UP

- 5.1. Remove all tools, the materials and the equipment from your work area.
- 5.2. Install the MGB cowlings. Refer to Task AMM 53-53-00-061 Removal / Installation - MGB Cowlings.
- 5.3. Remove the access equipment.
- 5.4. Connect all the electrical power supplies.
- 5.5. Record the full compliance with this ALERT SERVICE BULLETIN in the helicopter documents and in the log card of the main rotor servo-control. Refer to Drafting and updating the log card (FM) - General rules applicable to aircraft MTC 20-08-05-101.
- 5.6. Record compliance with this ALERT SERVICE BULLETIN (see IN 3785-I-00 for instructions): QR code or hypertext link.



[ASB EC155-67-30-0001](#)

End of service bulletin