



DISCREPANCY REPORT

AIRCRAFT TYPE: A30E REG. NO: 9M-B0B DR. NO: 1397/B0B

SOURCE REFERENCE: BT'S

DATE RAISED: 21-2-14 CHECK TYPE: WORK ORDER (JCN): LB2014 B0B

DISCREPANCY

A/F HRS	2841.10	NO.1 ENG	2841.10	(TSN/TS0)	NO.2 ENG	524.40	(TSN/TS0)
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BT 109EP-133 DTD 13.02.14 (MANDATORY) - INSP. OF THE NUTS MS21043-4 ON THE ENGINE SHAFT ASSY P/N. 10T-0415-06-103 AND SUBSEQUENT REPLACEMENT WITH THE NUTS MS21043-4 TO BE COMPLETED ON PT II ONLY.

RAISED BY: ML SHARIZAN BIN HJ. MD SHARIF SIGN & STAMP:  P/C 77 ASB DATE: 21.02.14

DISPOSITION

TO CARRY OUT BT109EP-133 (MANDATORY) PART II REPLACEMENT OF NUTS ENGINE SHAFT ASSY NUTS. WORKS DONE IAW A109E MM 63-11-5.

SIGN: WE STAMP:  DATE: 21/2/14


MHP:	MHA:	CUST. APP. SIGNATURE:	MATERIAL COST:
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CORRECTIVE ACTION

BT 109 EP-133 PT II CARRIED OUT. FOUND SATIS.

MECH LAE/AH & DATE



WE 
21/2/14

COMPONENT/ PART CHANGE

PART NO.	DESCRIPTION	S/NO. ON	S/NO. OFF	QTY.	BATCH NO.
<u>MS21043-4</u>	<u>NUT</u>	<u>N/A</u>	<u>N/A</u>	<u>20</u>	<u>CC: IT20-2012</u> <u>J16339</u>

DUPLICATE / RII / CRITICAL TASK

N/A First Insp. Sign / Stamp / Date N/A Second Insp. Sign / Stamp / Date

The work recorded above has been carried out in accordance with the requirements of the MCA 2 for the time being in force and in that respect, the aircraft / equipment is considered fit for release to service.

TRANSLATION OF
N° 109EP-133
DATE February 13th, 2014
REV.

MANDATORY

Compliance with
this Bollettino is:

SUBJECT: INSPECTION OF THE NUTS MS21042L4 ON THE ENGINE SHAFT
ASSY P/N 109-0415-06-103 AND SUBSEQUENT REPLACEMENT
WITH THE NUTS MS21043-4.

REASON: Provide the necessary instructions to perform a visual inspection for
possible presence of cracks on nuts MS21042L4 installed on the engine
shaft assy P/N 109-0415-06-103 (PART I) and subsequent replacement
with nuts MS21043-4 (PART II).

HELICOPTERS AFFECTED:
All the Agusta A109E helicopters to S/N 11811 included except S/N
11796.

COMPLIANCE:

PART I:
Within and not later than 25 (twenty-five) flight hours after the receipt of
this Bollettino, and subsequently every 25 (twenty-five) flight hours until
compliance with PART II^a.

PART II:
Within and not later than 6 (six) months from the receipt of this Bollettino.

DESCRIPTION:

On four in service AW109 helicopters, during scheduled inspection on
the engine shaft assy P/N 109-0415-06-103, one nut MS21042L4 that
connect the Engine shaft coupling with the engine output shaft flange
was found cracked.
The performed investigations have revealed that the crack reported on
the nut is due to a production deficiency (causing hydrogen
embrittlement) from the standard nut supplier.
This Bollettino is issued in order to provide the necessary instructions to
perform a visual inspection to verify the presence of cracks on the n°10

An appropriate entry should be made in the aircraft log book upon accomplishment.
If ownership of aircraft has changed, please, forward to new owner.

B.T. 109EP-133

(ten) nuts MS21042L4 installed on the engine shaft assy P/N 109-0415-06-103 (PART I) and the necessary instructions to replace the nuts MS21042L4 with the nuts MS21043-4 (PART II).

REQUIRED MANPOWER:

PART I:
An estimated 2 manpower hours are required for compliance with this Part of this Bollettino.

PART II:
An estimated 6 manpower hours are required for compliance with this Part of this Bollettino

WARRANTY:

Within the calendar terms mentioned at point "Compliance", the parts required to apply the present Bollettino shall be supplied on a free of charge basis by AgustaWestland S.p.A. upon Customer's request; all the parts required after the "Compliance date" will be dispatched on charge basis for the Customer.

Upon application of this Bollettino, destroy locally the removed parts.

REQUIRED MATERIALS:

The following material may be required to apply this Bollettino:

P/N	DENOMINATION	Q.TY
MS21043-4	Nut	20

SPECIAL TOOLS:

N.A.

WEIGHT AND BALANCE CHANGES:

N.A.

REFERENCES:

A109E Maintenance Manual
A109E Illustrated Parts Catalog up to S/N 11600
A109E Illustrated Parts Catalog S/N 11601 & Subs

PUBLICATIONS AFFECTED:

A109E Illustrated Parts Catalog up to S/N 11600
A109E Illustrated Parts Catalog S/N 11601 & Subs

COMPLIANCE INSTRUCTIONS:

(See figure 1+2)

PART I:

1. Prepare the helicopter on ground for a safe maintenance, disconnect any power supply, in accordance with the instructions given in the A109E Maintenance Manual.

2. Gain access to the right engine shaft assy and the left engine shaft assy, in accordance with the instructions given in the A109E Maintenance Manual.

3. Inspect the 10 (ten) nuts connecting the right engine shaft assy with the engine output shaft flange and the freewheel flange for cracks.

NOTE

The use of a light source and a mirror is necessary for the 5 (five) nuts on the freewheel flange side.

4. Inspect the 10 (ten) nuts connecting the left engine shaft assy with the engine output shaft flange and the freewheel flange for cracks.

NOTE

The use of a light source and a mirror is necessary for the 5 (five) nuts on the freewheel flange side.

5. If any crack is found, replace all the nuts MS21042L4 with the new MS21043-4 nuts in accordance with the PART II of this Bollettino.

6. If no cracks are found proceed with the following steps.

7. Remove all the tools and other items from the work area. Make sure that the work area is clean.

8. Install all the access panels and close all the access doors removed/opened during point 2 in accordance with the instructions given in the A109E Maintenance Manual.

9. Return the helicopter to a ready to flight condition.

10. Record compliance with the PART I of this Bollettino in the helicopter log book.

PART II:

1. Prepare the helicopter on ground for a safe maintenance, disconnect any power supply, in accordance with the instructions given in the A109E Maintenance Manual.

2. Gain access to the right engine shaft assy and the left engine shaft assy, opening all the necessary access doors and removing all the necessary access panel, in accordance with the instructions given in the A109E Maintenance Manual.

3. Disconnect to the Engine the Wire Rope assy P/N 109-0630-71-105/-107 or Control assy P/N 109-0630-65-105/-

107 in accordance with the instructions given in the A109E Maintenance Manual.

4. Remove the Forward Firewall left and right cover in accordance with the instructions given in the A109E Maintenance Manual (Ref Figure 1).

5. Remove the Exhaust duct assy P/N 109-0455-04-109/-110 (installed on the oil cooler fan P/N 109-0455-01-101) in accordance with the instructions given in the A109E Maintenance Manual.

6. Remove the n°1 and n°2 Drive belt in accordance with the instructions given in the A109E Maintenance Manual.

7. Remove the Engine starter generator n°1 and n°2 in accordance with the instructions given in the A109E Maintenance Manual.

8. In accordance with A109E Maintenance Manual and the figure 1 remove the n°10 (ten) nuts MS21042L4 of the n°1 Engine shaft assy and the n°10 (ten) nuts MS21042L4 of the n°2 Engine shaft assy and replace them with nuts MS21043-4. Torque the nuts MS21043-4 to 10.6 thru 11.7 Nm.

NOTE

To avoid the disassembling of the engine shaft, assy is recommended to replace the nuts interested one at a time

9. Reinstall all the component previously removed.

10. Remove all the tools and other items from the work area. Make sure that the work area is clean.

11. Install the access panel and close the access doors previously removed/opened in accordance with the instructions given in the A109E Maintenance Manual

12. Return the helicopter to a ready to flight condition.

13. Record compliance with the PART II of this Bollettino in the helicopter log book.

14. Send the attached compliance form to the following email box: Aw109.mbx@agustawestland.com.