EASA	EMERGENCY AIRWORTHINESS DIRECTIVE
	AD No.: 2014-0113-E **Date: 07 May 2014** Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Design Approval Holder Names:	**Type/Model designation(s):**
AGUSTAWESTLAND S.p.A.	AB 212, AB 412, and AB 412EP helicopters

TCDS Numbers:	ENAC Italy A 157
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA Emergency AD 2013-0300-E dated 16 December 2013.

ATA 63	**Main Rotor Drive – Engine-to-Transmission Drive Shaft Line Nuts – Inspection / Replacement**
Manufacturer(s):	AgustaWestland S.p.A. (formerly Agusta S.p.A)
Applicability:	AgustaWestland AB 212, AB 412 and AB 412EP helicopters, all serial numbers (s/n)
Reason:	An occurrence was reported on one in-service AB 412EP helicopter, where during scheduled inspection on the engine-to-transmission drive shaft line, two nuts Part Number (P/N) MS21042L4 that connect a flexible coupling with the coupling adapter were found cracked. The subsequent technical investigation identified that the reported cracks of the nuts are the result of a production deficiency (causing hydrogen embrittlement) at the nut supplier. Nut P/N MS21042L5 may also be affected. This condition, if not detected and corrected, could lead to the disconnection of the engine from the transmission with the consequent complete loss of power to the main rotor, resulting in reduced control of the helicopter. To address this unsafe condition, AgustaWestland issued Bollettino Tecnico (BT) 412-138 and EASA issued Emergency AD 2013-0300-E to require repetitive inspections of each nut P/N MS21042L4 or P/N MS21042L5 installed on the engine-to-transmission drive shaft line of AB 412 and AB 412EP helicopters, as well as replacement of each affected nut with a serviceable part having a different P/N. After that AD was issued, it was determined that AgustaWestland model AB 212 helicopters have the same engine-to-transmission drive shaft line installation as AB 412 and AB 412EP helicopters.

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<tr><td></td><td>For the reasons described above, this AD retains the requirements of EASA Emergency AD 2013-0300-E, which is superseded, and expands the Applicability to AgustaWestland model AB 212 helicopters.</td></tr>
<tr><td>Effective Date:</td><td>09 May 2014</td></tr>
<tr><td>Required Action(s) and Compliance Time(s):</td><td>Required as indicated, unless accomplished previously:
(1) Within the compliance time defined in Table 1 of this AD, as applicable depending on helicopter model, and, thereafter, at intervals not to exceed 25 flight hours (FH), inspect each nut P/N MS21042L5 or P/N MS21042L4, as applicable depending on helicopter model and/or s/n, for cracks in accordance with the instructions of AgustaWestland BT 212-205 or BT 412-138, as applicable to helicopter model.
Table 1 – Initial Inspection<table><tr><th>Helicopter Model</th><th>Compliance Time</th></tr><tr><td>AB 412 and AB 412EP</td><td>Within 10 FH after 18 December 2013 [the effective date of EASA AD 2013-0300-E]</td></tr><tr><td>AB 212</td><td>Within 10 FH after the effective date of this AD</td></tr></table>(2) If, during any inspection as required by paragraph (1) of this AD, a nut is found cracked, before next flight, replace each nut with a serviceable part having a different P/N in accordance with the instructions of AgustaWestland BT 212-205 or BT 412-138, as applicable to helicopter model.
(3) Unless each nut P/N MS21042L4 or P/N MS21042L5 was replaced with a serviceable nut as required by paragraph (2) of this AD, within the compliance time defined in Table 2 of this AD, replace each nut P/N MS21042L4 or P/N MS21042L5 with a serviceable nut having a different P/N in accordance with the instructions of AgustaWestland BT 212-205 or BT 412-138, as applicable to helicopter model.
Table 2 – Nut Replacement<table><tr><th>Helicopter Model</th><th>Compliance Time</th></tr><tr><td>AB 412 and AB 412EP</td><td>Within 3 months after 18 December 2013 [the effective date of EASA AD 2013-0300-E]</td></tr><tr><td>AB 212</td><td>Within 3 months after the effective date of this AD</td></tr></table>(4) Replacement of each affected nut as required by paragraph (2) or (3) of this AD, as applicable, constitutes terminating action for the repetitive inspections required by paragraph (1) of this AD.
(5) Do not install a nut having a P/N MS21042L5 or P/N MS21042L4 on an engine-to-transmission drive shaft line on a helicopter as required by paragraph (5.1) or (5.2) of this AD, as applicable.
(5.1) For AB 412 and AB 412EP helicopters: From 18 December 2013 [the effective date of EASA AD 2013-0300-E].
(5.2) For AB 212 helicopters: From the effective date of this AD.</td></tr>
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Ref. Publications:	AgustaWestland BT 212-205 original issue dated 28 April 2014. AgustaWestland BT 412-138 original issue dated 13 December 2013. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks:	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The results of the safety assessment have indicated the need for immediate publication and notification, without the full public consultation process. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: AgustaWestland S.p.A, Customer Support & Services – Italy, Product Support Engineering Dpt., Via del Gregge, 100, 21015 Lonate Pozzolo (VA) – ITALY Tel.: +39 0331 664905, Fax: +39 0331 664684. E-mail: absereng@agustawestland.com.