

<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>									
	<p><b>AD No.: 2010-0237R2</b></p> <p><b>Date: 14 December 2010</b></p> <p>Note: This 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</p>									
<p>This AD is issued in accordance with EC 1702/2003, Part 21A.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].</p>										
<p><b>Design Change Approval Holder :</b></p> <p>Agusta S.p.A. Keystone Helicopter Corporation Eurocopter UK Ltd</p>	<p><b>Type/Model designation(s) :</b></p> <p>AB139 and AW139 helicopters Sikorsky S-92A helicopters Eurocopter Deutschland MBB-BK117 C-2 and EC 135 helicopters</p>									
<p>TCDS Number : EASA.R.006</p> <p>STC Numbers : EASA.IM.R.S.01256 (validation of FAA STC SR02408NY-D) for S-92A EASA.R.S.01532 for EC 135 P2+ and T2+ EASA.10028851 for MBB-BK117 C-2 United Kingdom (UK) AAN 26529 incl. minor change MCH/A/135/787 for EC 135</p>										
Foreign AD :	None									
Revision:	This AD revises EASA AD 2010-0237R1 dated 22 November 2010; the original issue of this AD superseded EASA AD 2010-0183R1 dated 07 September 2010.									
<b>ATA 25</b>	<b>Equipment / Furnishings – Spectrolab Nightsun XP Searchlight – Inspection / Removal / Replacement</b>									
Manufacturer(s):	Agusta S.p.A., Agusta Aerospace Corporation, Sikorsky Aircraft Corporation, Eurocopter Deutschland GmbH									
Applicability:	<p>- Agusta S.p.A model AB139 and AW139 helicopters, and - Sikorsky Aircraft Corporation S-92A helicopters, and - Eurocopter Deutschland GmbH model MBB-BK117 C-2 and EC 135 series helicopters,</p> <p>if equipped with certain Gimbal Assemblies, used on Spectrolab Nightsun XP Searchlight Assemblies listed in Table 1 of this AD.</p> <p style="text-align: center;">Table 1</p> <table border="1"> <thead> <tr> <th>Gimbal Assembly P/N</th><th>Searchlight Assembly P/N (any suffix)</th><th>Modification Standard</th></tr> </thead> <tbody> <tr> <td>033295-1</td><td>033338</td><td>Revision D and lower</td></tr> <tr> <td>033295-2</td><td>033704</td><td>Revision C and lower</td></tr> </tbody> </table> <p>Note: The listed P/N identifications are those assigned by Spectrolab and might have been re-identified by the design change approval holder.</p>	Gimbal Assembly P/N	Searchlight Assembly P/N (any suffix)	Modification Standard	033295-1	033338	Revision D and lower	033295-2	033704	Revision C and lower
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033295-1	033338	Revision D and lower								
033295-2	033704	Revision C and lower								

Reason:	<p>An incident has been reported by a Maintenance Organisation of vibration associated with the Nightsun XP Searchlight. Investigation revealed that the Gimbal Azimuth Top Hex Nut was loose.</p> <p>This condition, if not detected and corrected, could lead to a gap between the rubber edging of the top shroud and the Gimbal frame, resulting in degradation of pointing accuracy and stability performance and pose excessive vibration. If the nut were to entirely disengage, the Searchlight/Gimbal could disconnect from the helicopter and remain attached solely by the internal cable harness or separate totally, possibly resulting in damage to the helicopter or injury to persons on the ground.</p> <p>EASA issued Emergency AD 2010-0183-E, later revised, as an interim measure to require repetitive inspections and, depending on findings, the removal of the searchlight from the helicopter.</p> <p>Spectrolab, the Searchlight manufacturer, has now developed a modification of the Searchlight installation that remedies the problem by replacing the Nightsun XP gimbal azimuth top hex nut with a dual-locking nut. This action includes re-identification of the gimbals as either P/N 033295-3 or P/N 033295-4 and assigns accordingly a new airworthy revision standard to the P/N of the modified Nightsun XP Searchlight Assembly.</p> <p>One of the affected approval holders, Eurocopter UK Ltd, subsequently developed the EASA-approved modifications which allow embodiment of the Spectrolab design changes on helicopters modified by Eurocopter UK STC.</p> <p>For the reasons described above, EASA AD 2010-0237 was issued, retaining the inspection requirements of AD 2010-0183R1, which was superseded, required removing the searchlight from the helicopter and allowed, for the affected Eurocopter Deutschland GmbH helicopters, modification of the searchlight installation by installing a modified searchlight assembly, having a higher revision standard and a new P/N Gimbal assembly.</p> <p>Since AD 2010-0237 was published, the other affected approval holders have developed their own modifications, which have been approved by EASA, to allow embodiment of the Spectrolab design change on Agusta AB139 and AW139 helicopters, and on Sikorsky S-92A helicopters modified by Keystone STC, respectively.</p> <p>Revision 1 of this AD was issued to include reference to Agusta Bollettino Tecnico (BT) 139-231 and Keystone Helicopter Corporation Service Bulletin (SB) 10-11 revision C, which provide the terminating action instructions for the AB139, AW139 and S-92A helicopters affected by this AD. In addition, this AD reduces the applicability to helicopters that have Gimbal Assembly P/N and Searchlight Assembly P/N as defined in Table 1 of the Applicability section of this AD.</p> <p>Revision 2 of this AD is issued to allow installation of a Searchlight Assembly with a higher Revision number than required by this AD, provided that the applicable (Supplemental) Type Certificate holder has certified the installation of a Searchlight Assembly with that Revision number.</p>
Effective Date:	<p>Revision 2: 14 December 2010</p> <p>Revision 1: 06 December 2010</p> <p>Original issue: 30 November 2010.</p>
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless previously accomplished:</p> <p>(1) Before the next flight after 31 August 2010 [the effective date of EASA AD 2010-0183-E], and thereafter before the first flight of each day, accomplish the following actions:</p> <p>(1.1) Visually check the searchlight installation Gimbal for a gap between the Top Shroud rubber edging (P/N 033381) and the side covers (P/N 033286). The edging should be in physical contact with the</p>

	<p>side covers.</p> <p>(1.2) Try to move the Searchlight laterally. No gap should appear between the Top Shroud rubber edging (P/N 033381) and the side covers (P/N 033286) and no play should be felt.</p> <p>Appendix 1 of this AD shows the area(s) to be checked.</p> <p>(2) If, during any of the checks as required by paragraph (1) of this AD discrepancies are detected, before next flight, remove the searchlight assembly from the helicopter and contact the design (change) approval holder, as applicable to the installation.</p> <p>(3) Within 30 days after 30 November 2010 [the effective date of the original issue of this AD], irrespective of findings, remove the searchlight assembly from the helicopter, as applicable to the installation, or,</p> <p>(3.1) For Eurocopter Deutschland GmbH helicopters, install a P/N 033338 Revision F Searchlight Assembly, in accordance with the instructions of Eurocopter UK Ltd Service Bulletin (SB) 135787-467, SB 1351151-472, or SB 1451167-473, as applicable to helicopter Model.</p> <p>(3.2) For Agusta helicopters, install a P/N 033338 Revision F Searchlight Assembly, in accordance with the instructions of Agusta BT 139-231.</p> <p>(3.3) For Sikorsky helicopters, install a P/N 033338-3 Revision E Searchlight Assembly or a P/N 033704 Revision D Searchlight Assembly, as applicable to the installation, in accordance with the instructions of Keystone Helicopter Corporation SB 10-11 rev. C.</p> <p>(3.4) For all helicopters, installation of a Searchlight Assembly with a higher Revision number than those required by paragraphs (3.1), (3.2), or (3.3) of this AD, as applicable to type design (change), is allowed, provided that the applicable (Supplemental) Type Certificate holder has certified the installation of a Searchlight Assembly with that Revision number.</p> <p>(4) Modification of a helicopter as required by paragraph (3) of this AD constitutes terminating action for the repetitive inspection requirements of this AD.</p> <p>(5) From the effective date of this AD:</p> <p>(5.1) Do not install a Spectrolab Nightsun XP Gimbal Assembly P/N 033295-1 or P/N 033295-2 on any helicopter as a replacement unit.</p> <p>(5.2) Do not modify a helicopter by installing a Spectrolab Nightsun XP Searchlight Assembly affected by this AD, unless in compliance with paragraph (3.1), (3.2), (3.3) or (3.4) of this AD, as applicable to helicopter type.</p>
Ref. Publications:	<p>For EC 135 P2+ and T2+ helicopters modified by STC EASA.R.S.01532: Eurocopter UK Ltd SB 1351151-472, Issue A, dated 10 November 2010.</p> <p>For MBB-BK117 C-2 helicopters modified by EASA STC 10028851: Eurocopter UK Ltd SB 1451167-473, Issue A, dated 10 November 2010.</p> <p>For EC 135 helicopters modified by UK AAN 26529 (including minor change MCH/A/135/787): Eurocopter UK Ltd SB 135787-467, Issue A, dated 10 November 2010.</p> <p>Agusta BT 139-231 dated 18 November 2010.</p> <p>Keystone Helicopter SB 10-11 revision C dated 22 October 2010.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks :	<p>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</p>

2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication.
3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. For any questions concerning the technical content of the requirements in this AD, please contact, as applicable:

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Appendix 1 – Photo showing location to be checked

