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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-0221; Directorate Identifier 2010-SW-082-AD; Amendment 39-17454; AD 2013-10-01]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Spectrolab Nightsun XP Searchlight**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for a certain Spectrolab Nightsun XP Searchlight Assembly (searchlight) installed on, but not limited to Agusta S.p.A. (Agusta) Model AB139 and Model AW139 helicopters, Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters, and Eurocopter Deutschland GmbH (Eurocopter) Model EC135 and Model MBB-BK 117 C-2 helicopters. This AD requires, before further flight, inserting information into the Normal Procedures section of the Rotorcraft Flight Manual (RFM), a daily check of the searchlight, and at a specified time interval or if certain conditions are found, modifying any affected searchlight gimbal assembly. This AD was prompted by a report of a searchlight vibrating and an investigation that revealed that the gimbal azimuth top nut was loose. A loose nut, if not detected and corrected, could result in a gap between the rubber edging of the top shroud and the gimbal frame, leading to degradation of pointing accuracy and stability performance of the searchlight and excessive vibration. If the nut were to entirely disengage, the searchlight could disconnect partially or totally from the helicopter, resulting in damage to the helicopter and injury to persons on the ground. The actions of this AD are intended to ensure that the searchlight remains firmly attached to the helicopter.

**DATES:** This AD is effective June 20, 2013.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of June 20, 2013.

**ADDRESSES:** For service information identified in this AD, contact Spectrolab, Inc. ATTN: Saul Vargas, 12500 Gladstone Ave., Sylmar, CA 91342, telephone (818) 365-4611, fax (818) 361-5102, or on the internet at <http://www.spectrolab.com>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Matt Fuller, Senior Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [matthew.fuller@faa.gov](mailto:matthew.fuller@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On March 8, 2012, at 77 FR 13993, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to certain Spectrolab Nightsun XP Searchlights. The NPRM proposed to require before further flight, inserting information into the Normal Procedures section of the RFM, a daily check of the searchlight, and at a specified time interval or if certain conditions are found, modifying any affected searchlight gimbal assembly. An owner/operator (pilot) holding at least a private pilot certificate may perform the visual check and must show compliance by updating the helicopter maintenance records in accordance with 14 CFR 43.9(a)(1)-(4) and 91.417(a)(2)(v). This visual check is authorized because it requires no special tools and can be performed equally well by a pilot or mechanic; this authorization is an exception to our standard maintenance regulations. The proposed requirements were intended to ensure the searchlight remains firmly attached to the helicopter after a report that the searchlight was vibrating.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD No. 2010-0237R2, dated December 14, 2010, to correct an unsafe condition for the Spectrolab Nightsun XP Searchlights installed on the following model helicopters: Agusta AB139 and AW139, Sikorsky S-92A, and Eurocopter MBB-BK 117 C2 and EC 135 series. EASA advises of a reported incident where vibration was associated with the Spectrolab Nightsun XP Searchlight, and states that an investigation revealed the Gimbal Azimuth Top Hex Nut was loose. EASA advises that 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 excessive vibration and degradation of pointing accuracy and stability performance. 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, resulting in damage to the helicopter or injury to persons on the ground.

### **Comments**

After our NPRM (77 FR 13993, March 8, 2012) was published, we received comments from one commenter.

### **Request**

One commenter requested that the NPRM (77 FR 13993, March 8, 2012) refer to the most recent amendment to Spectrolab's Nightsun XP Safety and Service Bulletin No. SL 0810-01, Amendment

No. 3, dated September 27, 2010 (Spectrolab service bulletin). We disagree that this change is necessary, because that amendment does not affect the proposed AD's requirements.

The commenter also stated that the NPRM (77 FR 13993, March 8, 2012) refers to EASA AD No. 2010-0183, which had been superseded, and requested that our AD instead refer to the EASA AD revision, EASA AD No. 2010-0237R2, dated December 14, 2010. We agree. Our NPRM referred to EASA AD No. 2010-0237R2 in our Discussion and Additional Information sections.

Finally, the commenter requested that the NPRM (77 FR 13993, March 8, 2012) include a statement that, for Agusta aircraft, compliance with the Agusta Westland Bollettino Tecnico 139-231 would be terminating action for this AD. We disagree. The Agusta service bulletin recommends contacting or sending parts to Spectrolab to meet requirements. Our AD refers to a Spectrolab document to meet the requirements for terminating action. Adding compliance with the Agusta service bulletin as terminating action would be repetitive.

### **FAA's Determination**

We have reviewed the relevant information, considered the comments received, and determined that an unsafe condition exists and is likely to exist or develop on other products of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

### **Differences Between This AD and the EASA AD**

The differences between this AD and the EASA AD are:

We require modifying and re-identifying the searchlight within 100 hours TIS, while the EASA AD imposes a calendar date for compliance.

The EASA AD requires contacting the design (change) approval holder if discrepancies are found during the inspection of the searchlight installation, and we do not require this action.

### **Related Service Information**

Spectrolab has issued Nightsun XP Searchlight Safety and Service Bulletin No. SL 0810-01, Amendment No. 2, dated September 24, 2010 (SB), which describes a design change that incorporates two positive locking mechanisms: A torque value and safety wire applied to the nut. These locking mechanisms prevent the gimbal azimuth top nut from loosening and allowing the center shaft to rotate out. Spectrolab has also issued Nightsun XP Searchlight System Kit and Procedure to Incorporate EASA AD 2010-0183 Conformance, 034374 Revision NC, approved September 28, 2010 (Kit and Procedure). Once modified in accordance with the Kit and Procedure, the Nightsun XP gimbals are re-identified with a new nameplate and overlay from a P/N 033295-1 to 033295-3, or P/N 033295-2 to 033295-4.

EASA classified this modification as mandatory and issued EASA AD No. 2010-0237R2, dated December 14, 2010, to ensure the continued airworthiness of helicopters with the affected system installed.

### **Costs of Compliance**

We estimate that this AD affects 6 helicopters of U.S. registry. We also estimate that it will take minimal time to insert the service bulletin into the RFM, and about 3 work hours per helicopter to modify the searchlight. At an average labor rate of \$85 per work hour, this amounts to \$255 per helicopter. Required parts will cost about \$1,000 per helicopter. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$1,255 per helicopter, or \$7,530 for the fleet.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

## **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):



**2013-10-01 Spectrolab Nightsun XP Searchlight:** Amendment 39-17454; Docket No. FAA-2012-0221; Directorate Identifier 2010-SW-082-AD.

**(a) Applicability**

This AD applies to Spectrolab Nightsun XP Searchlight Assembly Systems with gimbal assembly part number (P/N) 033295-1 or 033295-2, installed on, but not limited to, Agusta S.p.A. Model AB139 and Model AW139 helicopters, Sikorsky Aircraft Corporation Model S-92A helicopters, and Eurocopter Deutschland GmbH Model EC135 and Model MBB-BK 117 C-2 helicopters, certificated in any category. The searchlight assembly system P/Ns and revision level using one of the two affected gimbal assembly P/Ns are listed in Table 1 to Paragraph (a) of this AD.

**Table 1 to Paragraph (a)–Affected Systems and P/N**

System P/N	Nomenclature	Affected revisions
033338	Nightsun XP Searchlight System	A through D.
033338-3	Nightsun XP Searchlight System	A through D.
033338-4	Nightsun XP Searchlight System	A through D.
033704	IFCO Nightsun XP Searchlight System	A through C.
033704-1	IFCO Nightsun XP Searchlight System	A through C.

**(b) Unsafe Condition**

This AD defines the unsafe condition as the Searchlight/Gimbal disconnecting from the helicopter and remaining attached solely by the internal cable harness, or separating totally. This condition could result in damage to the helicopter and injury to persons on the ground.

**(c) Effective Date**

This AD becomes effective June 20, 2013.

**(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions**

(1) Before further flight, insert a copy of Nightsun XP Searchlight Safety and Service Bulletin No. SL 0810-01, Amendment No. 2, dated September 24, 2010, into the Normal Procedures section of the Rotorcraft Flight Manual.

(2) Before the first flight of each day, visually check the searchlight installation for a gap between the top shroud rubber edging, P/N 033381, and the side covers, P/N 033286, with slight

pressure applied to either side of the searchlight. The edging must remain in physical contact with the side covers when slight pressure is applied to the searchlight.

(3) The actions required by paragraph (e)(2) of this AD may be performed by the owner/operator (pilot) holding at least a Private Pilot Certificate, and must be entered into the helicopter maintenance records in accordance with 14 CFR 43.9(a)(1)-(4) and 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439.

(4) If the edging does not remain in physical contact with the side cover when slight pressure is applied to the searchlight in accordance with the requirements of paragraph (e)(2) of this AD, before further flight, with an affected Spectrolab Nightsun XP Searchlight assembly system installed, modify and re-identify the gimbal assembly in accordance with paragraph (e)(5) of this AD.

(5) Within 100 hours time-in-service, modify and re-identify the gimbal assembly in accordance with Nightsun XP Searchlight System Kit and Procedure to Incorporate EASA AD 2010-0183 Conformance, 034374 Revision NC, approved September 28, 2010, steps 1 through 13.

(6) Accomplishing paragraph (e)(5) of this AD is terminating action for the requirements of this AD.

#### **(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Matt Fuller, Senior Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email matthew.fuller@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

#### **(g) Additional Information**

The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2010-0237R2, dated December 14, 2010.

#### **(h) Subject**

Joint Aircraft Service Component (JASC) Code: 3340, Exterior lighting.

#### **(i) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Nightsun XP Searchlight Safety and Service Bulletin No. SL 0810-01, Amendment No. 2, dated September 24, 2010.

(ii) Nightsun XP Searchlight System Kit and Procedure to Incorporate EASA AD 2010-0183 Conformance, 034374 Revision NC, dated September 28, 2010. The date of this document is identified only in the Change Record on page 2 of this service information.

(3) For Spectrolab Nightsun XP Searchlight service information identified in this AD, contact Spectrolab, Inc. ATTN: Saul Vargas, 12500 Gladstone Ave., Sylmar, CA 91342, telephone (818) 365-4611, fax (818) 361-5102, or on the internet at <http://www.spectrolab.com>.

(4) You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(5) You may also review a copy of this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on April 26, 2013.

Kim Smith,  
Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.