

**Nightsun<sup>®</sup> XP Searchlight**  
**Safety and Service Bulletin # SL 0810-01**

Amendment # 3

Date:09/27/2010

**Subject: Gimbal Azimuth Top Hex Nut**

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**Affected Products:**

Nightsun<sup>®</sup> XP Gimbal Assemblies (See Exhibit A for specific part numbers) used on Nightsun<sup>®</sup> XP Systems, including In Flight Change Over (IFCO) equipped systems.

**WARNING: TO AVOID A POTENTIALLY DANGEROUS SITUATION WHICH COULD CAUSE PROPERTY DAMAGE, ENSURE THAT THE GIMBAL ASSEMBLY IS INSPECTED AND / OR REPLACED AS DESCRIBED IN THIS BULLETIN.**

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Dear Nightsun<sup>®</sup> XP Searchlight Product User:

Under certain conditions, the Gimbal's Azimuth Top Hex-Nut may become loose. The Gimbal's Azimuth Top Hex-Nut is located internal to the Gimbal under the top Shroud Cover in the dovetail mount location. A loose nut could cause; a gap between rubber edging of the top Shroud and the Gimbal frame; degradation of pointing accuracy and stability performance; and pose excessive vibration on the aircraft. If the nut were to entirely disengage, the Searchlight/Gimbal could potentially disconnect from the aircraft and remain attached solely by the internal cable harness.

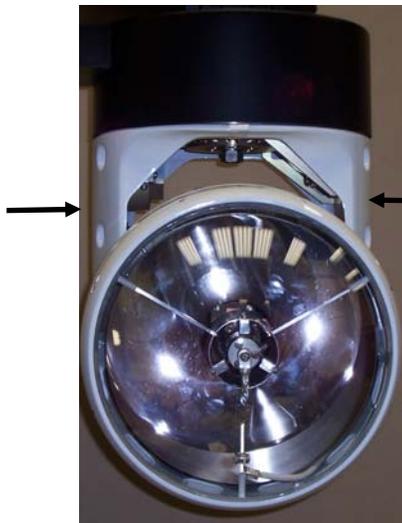
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**Amendment # 3 dated 09/27/10**

**What you should do:**

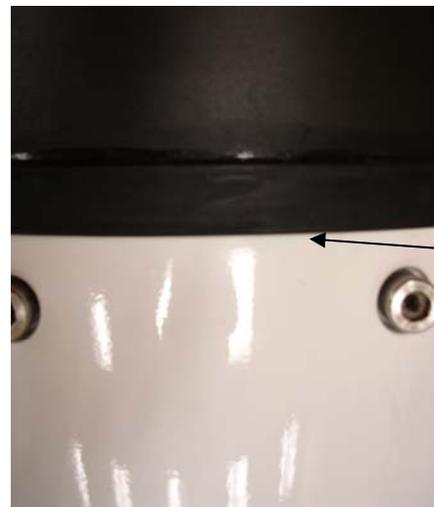
Perform the inspection procedure described in this letter daily.

1. Ensure the Searchlight/Gimbal is vertically mounted to a fixed location.
2. Visually inspect the Gimbal for a gap between the Top Shroud rubber edging (P/N 033381) and the Side Covers (P/N 033286). When the Gimbal's Azimuth Top Hex-Nut is properly fastened, the edging should be in physical contact with the Side Covers.
3. Try to move the Searchlight laterally (reference figure below). 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.
4. If a discrepancy is encountered, remove the system from the aircraft and contact Spectrolab (below) for retrofit options to comply with the Corrective Action section of this bulletin.
5. If a discrepancy is not encountered, please contact Spectrolab (below) for retrofit options to comply with the Corrective Action section of this bulletin.

Spectrolab, Inc. ILS Repair Station  
(818) 898-2807



Gap should not appear when pressure is applied on the Side Covers when trying to create side-to-side motion from either side.



Rubber edging should be making contact with Side Cover and a gap should not be present here

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**Corrective Action:**

To prevent the Gimbal azimuth top hex nut from coming loose a design change introduces two positive locking mechanisms. In addition to a torque value of 120-140 ft-lbs applied to the nut and Loctite® 262 applied to the threads of the shaft, the nut will have two locations for safety lock wire.

In order to track all Nightsun® XP gimbals that are in conformance the Gimbals modified, as described above, will be re-identified as either 033295-3 or 033295-4 (white light and IFCO light, respectively). A new revision will be assigned to the top level system part numbers, specified in Exhibit A, reflecting the modified and compliant Gimbal.

Exhibit A – Affected System Part Numbers

System P/N	Nomenclature	Affected Revisions
033338	Nightsun® XP Searchlight System	D and prior
033338-3	Nightsun® XP Searchlight System	D and prior
033338-4	Nightsun® XP Searchlight System	D and prior
033704	IFCO Nightsun® XP Searchlight System	C and prior
033704-1	IFCO Nightsun® XP Searchlight System	C and prior

For questions on this Service Bulletin, please call our Customer Service Department at 1-800-936-4888 for instructions and/or a Return Material Authorization (RMA) number.



Director of ILS Operations  
Spectrolab, Inc. (A Boeing Company)