

SX-16 Searchlight Cooling Enhancements Safety and Service Bulletin # SL 0214

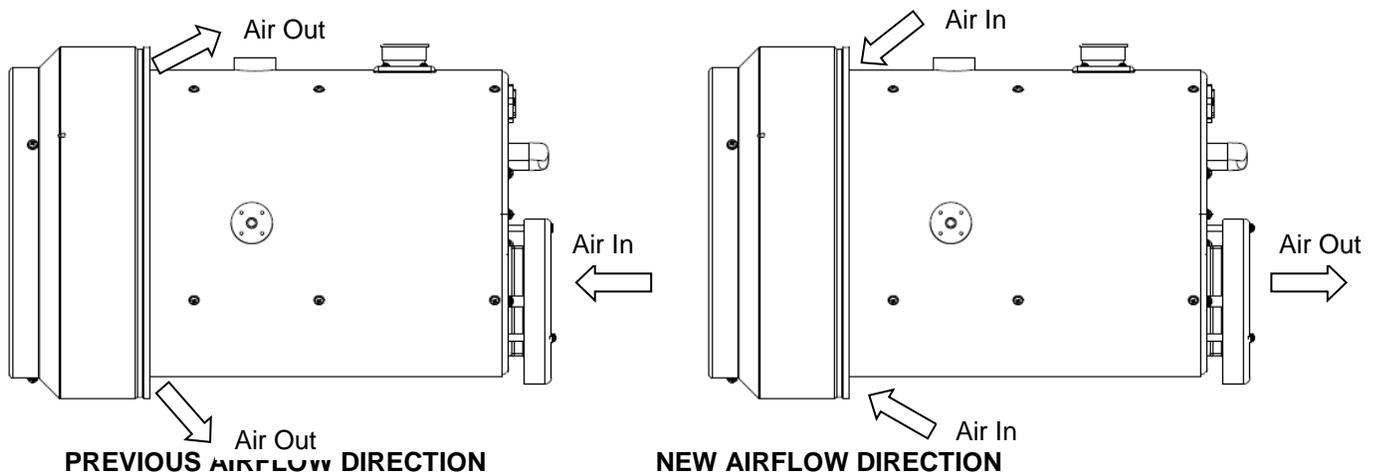
Date: 12/15/14

Subject: SX-16 Searchlight Cooling Enhancements**Affected Products:****All SX-16 Nightsun® Searchlights with existing rubber baffling on the Front Window and standard Cooling Blower airflow direction**

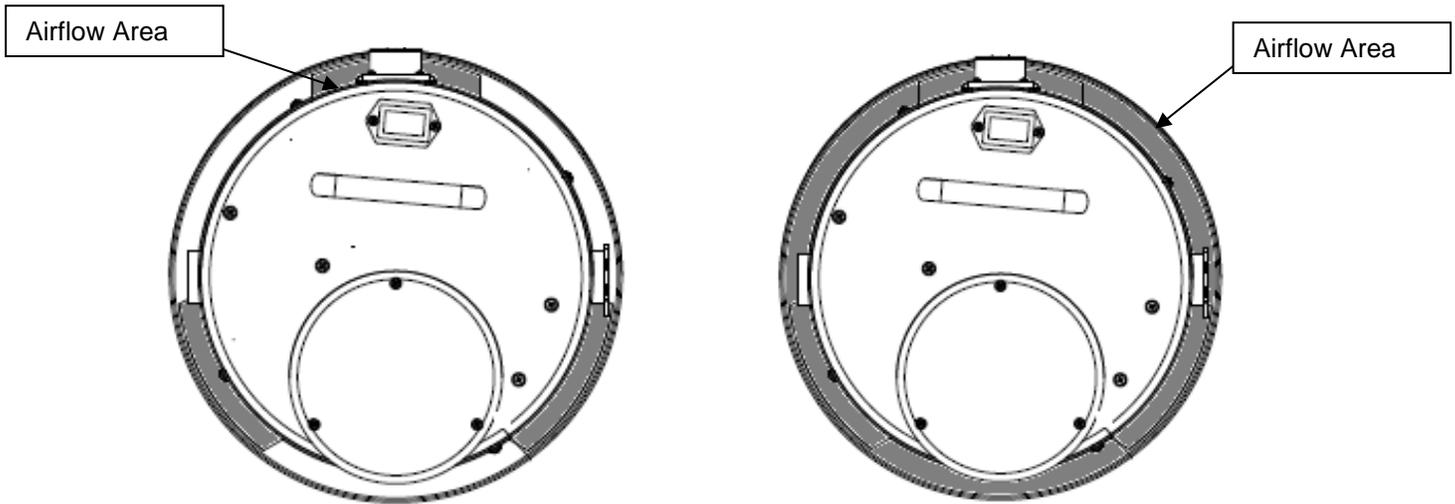
Dear Valued Nightsun® Searchlight Product User:

After several hours of field testing, there have been favorable results to prevent premature Lamp failure by decreasing the Lamp operating temperature. To contribute to operating temperature reduction, the improvements identified in this service bulletin will be incorporated in to all new standard SX-16 Nightsun® Searchlights.

Previously, the air to cool the Lamp entered the rear of the Searchlight and exhausted the heat generated by the Lamp and other internal components through the Front Window Baffle (left below). This was achieved by the original rotation direction of the Cooling Blower. By reversing the air flow direction, the air now enters through the Searchlight Front Window Baffle and the heat is exhausted through the Cooling Blower Cover on the Rear Cover of the Searchlight (right below). This update as well as the Front Window Baffle material change described in the next paragraph, contributes to improved cooling.



The standard Baffle bonded to the Front Window is made of heavy rubber which allows air to flow through three openings. This Baffle is recommended to be changed to a filter foam type Baffle to allow air to flow uniformly throughout the entire perimeter of the Front Window. The illustration below compares the rubber Baffle (left) to the filter foam type Baffle (right) looking at the rear of the Searchlight with the shaded areas where air can flow. The figure on the right shows that air will flow evenly around the Searchlight as opposed to three vent areas.



In addition to allowing more airflow, another feature of the foam baffle is that it prevents particles such as dirt, sand, insects and other types of debris from entering the Searchlight.

AFFECTED SEARCHLIGHT ASSEMBLIES:

Verify your Searchlight matches the affected revisions or earlier to be eligible to be updated with the items in this Service Bulletin. When the updates are complete, it is important to affix a new identification nameplate to reflect the updated revision for traceability.

PART NUMBER	NOMENCLATURE	AFFECTED REVISIONS	UPDATED REVISION
017500-11	SX-16 - TOP CONNECTOR	NC-E1	G2
017500-111	SX-16 - TOP CONNECTOR, NOISE SUPPRESION	NC-NC2	NC3
017500-141	SX-16 - REAR CONNECTOR, NOISE SUPPRESION	NC-NC3	NC4
017500-211	SX-16 - ENHANCED	NC-F	F1
032400	SX-16 - GOLD COLLECTOR	NC-C	C1
032400-111	SX-16 - GOLD COLLECTOR, NOISE SUPPRESION	NC-A1	A2
032400-141	SX-16 - REAR CONNECTOR, GOLD COLLECTOR, NOISE SUPPRESION	N/A	NC
032400-211		NC-NC1	NC2
*017500-181	SX-16 - GOLD COLLECTOR	NC	NC1
*025000-131	SX-16 - GOLD COLLECTOR, NOISE SUPPRESION	NC-A1	A2

*-Denotes only Cooling Blower modification is applicable

What to do:

Modifications to the Searchlight may be performed by using the included procedure, sending the unit to Spectrolab or an authorized service center.

Required Tools and Supplies:

#2 Phillips Head Screw Driver

Razor Blade or Scraper

Alcohol

Foam Baffle – Part Number 034678

Cooling Blower Mounting Plate – Part Number 017487

Lamp Explosion Hazard

The Lamp contains pressurized Xenon gas and may explode without warning, especially when it is hot. If the Lamp explodes, it may project quartz particles in all directions.

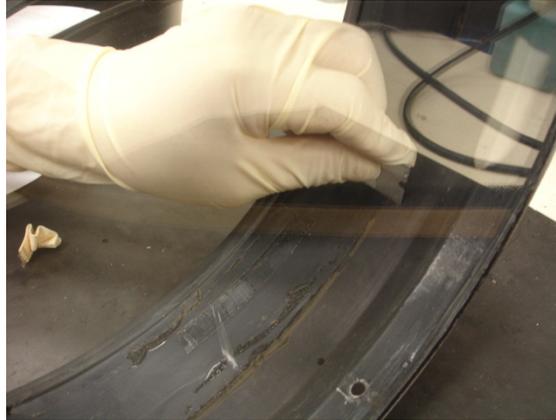
- Always handle the Searchlight and Lamp with caution, and ensure the safety of others.
- Always wear protective gear that includes; safety glasses, face shield, long-sleeve heavy (leather) jacket, and leather gloves when the Front Window or Back Cover removed.
- Never operate the Searchlight with the Front Window or with the Back Cover removed.
- Before working on the Searchlight, allow unit to cool to ambient temperature.
- Never leave an exposed Lamp unattended.

1. Remove the Searchlight Front Window:
 - Remove the three pan-head screws that fasten the Front Window to the Searchlight housing.
 - Remove the Front Window by pulling it straight off the housing which may require moderate force to overcome the resistance caused by the stickiness or friction of the rubber baffle. Pull on one spot first to break the seal, and then rock the window back and forth to remove it.
 - If the Lamp remains in the Searchlight with the Front Window removed, gently place the Searchlight face down on a bench top to prevent the Lamp from being exposed.
2. Remove the rubber baffle:
 - Grab firmly on the rubber baffle and pull it entirely off the Front Window.

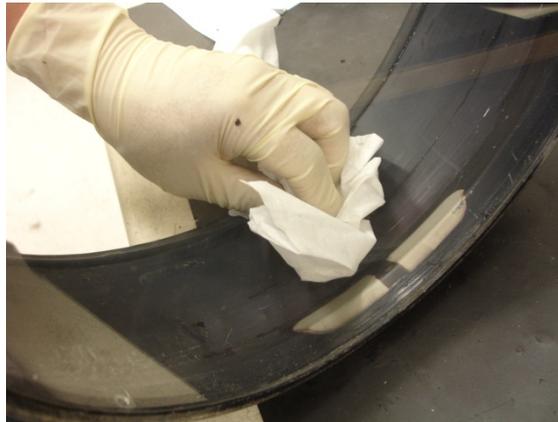


Rubber Baffle

- Using a razor or scraper, remove any residual tape and adhesive from the Front Window Frame.



- Thoroughly clean the surface with alcohol.



3. Apply foam baffle (P/N 034678) to the Front Window:
 - Remove paper strip to expose the adhesive side of foam baffle.



- Apply adhesive side of foam baffle around the inside of the Front Window directly under lip edge.

Foam Baffle applied to Front Window Lip Edge



4. Reverse the Cooling Blower:

- Remove the rear cover assembly by loosening the pan screws that fasten the Back Cover to the Searchlight housing. Once all the screws are removed, pull the handle to remove the Back Cover.

Back Cover

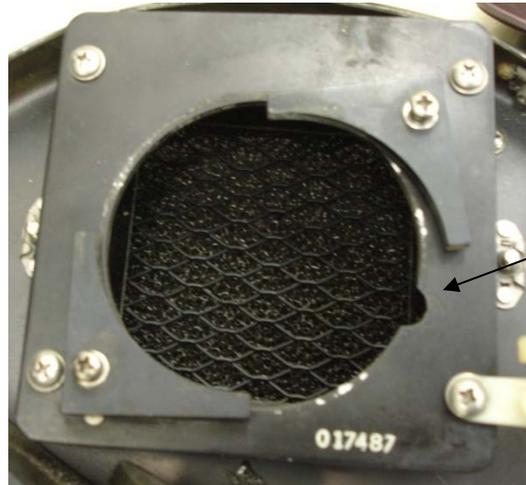


- Loosen the Cooling Blower brackets to release the Cooling Blower.

Cooling Blower Bracket 2x

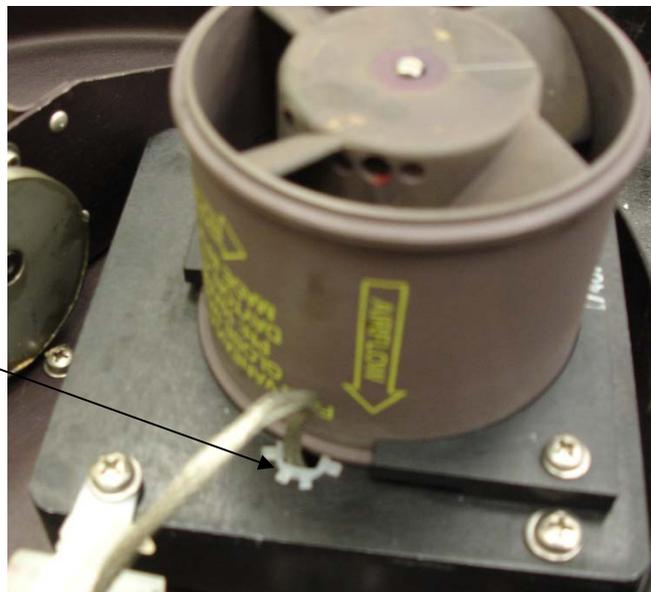


- The Cooling Blower Mounting Plate (P/N 017487) needs to be replaced with a revised part that has a notch to allow for the harness to pass through when the Cooling Blower is remounted in the reversed direction.



Cooling Blower Mounting Plate with Notch

- Install the Cooling Blower in the opposite direction of the original orientation with the harness passing through the notch in the Cooling Blower Mounting Plate. Verify the notch is aligned with the plastic grommet then tighten mounting brackets to secure the Cooling Blower firmly to the Mounting Plate.



Harness through notch with grommet

- Reinstall the Back Cover to the Searchlight housing.

When the Searchlight is updated with all items in this service letter, affix the new identification nameplate to ensure traceability of the hardware. The identification nameplate should state "Modified per SL0214" in the comments field. Please have the Searchlight serial number and part number ready when ordering replacement parts and ask the Customer Service representative to include the identification tag with your order.

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)