



www.flylightning.net email: info@flylightning.net phone: 931-680-1781
2842 Highway 231 North, Shelbyville, TN 37160

SERVICE BULLETIN	
Service Bulletin #	AASB-1-6-2012
Superseded Bulletin #	N/A
Issue Date	June 10 th 2012
Effective Date	June 10 th 2012
Limitations for Completion	Before next flight
Make & Model Affected	Lightning LS-1 SLSA and ELSA
	Serial # 78 through 153
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1. Applicability: Arion Aircraft Produced LS-1 SLSA and ELSA aircraft.

2. Background: All aircraft in the serial number range are certified for Day and Night VFR operations if properly equipped per FAR91.205. However it has been determined that the cockpit lighting is not adequate. Although most EFIS systems produce enough light for cockpit operations, and radio and transponders are backlit, some switches and breakers may not be visible.

3. Compliance with- Implementation Schedule. Before the next flight the aircraft must be placarded against night operations. A placard that is clearly visible must be made and installed where both occupants can read it. Arion Aircraft will be sending finished placards to all registered owners.

For those wanting to remove the Night Flight restrictions from their LS-1 the following Night Flood lighting kit may be installed. That kit can be obtained from Arion Aircraft, or all of the components obtained that are listed in the parts drawing.

4. Procedure:

1. Remove the upper cowl.
2. Disconnect the battery from the system.
3. Remove the seat cushions, seat pans, and baggage floors.
4. Remove the EFIS from the panel, clearly label the pitot and static lines before removal.
5. The flood light switch should be placed above the EFIS screen for both GRT panels and Dynon panels.
6. Measure from the right side of the screen to the left side of the screen 2". This will be the hole position horizontally.

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7. Next measure the space between the edge of the panel to the top of the EFIS screen. Split the difference vertically. This will be the position of the switch.
8. Use the photo below as a reference.



Figure 1. Switch Placement.

9. Once the switch position is located, drill a 15/32" hole. This is easily accomplished with a unibit or step drill.

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10. Next move to the baggage area to locate the Flood Light position.
11. Carefully pull back the carpet on the back side of the roll over structure. Do this from the canopy latch block around to the seat back. Do not pull it back on the ceiling. This will be to hide the wires for the light. See picture for area of reference.



Figure 2. Carpet behind roll over Structure.

12. The flood light is an assembly if you have ordered the kit from Arion aircraft.
13. That assembly must be located to the co-pilots side of canopy latch block on the roll over structure. See picture for reference.

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Figure 3. Flood Light Placement.

14. Place the Flood Light assembly against the latch block.
15. Move the light vertically until the adjustment collar becomes flush with the bottom of the roll over structure.
16. Back drill the 2 mounting holes thru the fuselage with a #27 drill bit or 9/64".
17. Bolt the Flood Light assembly to the roll over structure using the #6 countersunk screws and #6 elastic stop nuts. The screw must have a tinnerman washer under the head.

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18. Locate the 2 butt splices from the wiring kit and 2 lengths of 15 foot 22gauge wire. One length is red and the other is Black



Figure 4. Butt Splices

19. Strip one end of the red and black wires back 3/16" or as required by standard wire practices. See figure below.



Figure 5. Wire stripper and wires

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20. Strip the wires back on the leads coming out of the Light assembly.
21. Using the butt splices and a wire crimper, splice the wire from the assembly to the length of wire provided. Match the colors correctly when doing so.
22. The wires will be held in place around the roll over structure by gluing the carpet back in place. Tape the wires into the corner of the roll over while finishing the installation.
23. The wire must be routed down the fuselage side at the seat back joint. Then follow the wire bundle running along the co-pilots floor thru the spar box and up behind the panel.
24. The black wire is the ground. This must be attached to the Ground buss located behind the panel.



Figure 6. Ground Buss.

25. Cut the wire to the proper length to reach the ground buss. Strip the black wire back as described earlier. Crimp a female spade terminal to the end of the wire

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Figure 7. Female Spade Connectors

26. Slide the spade connector from the ground wire onto the ground buss.
27. The red wire is power. Run this wire to the Flood Light switch location. Cut to the proper length.
28. Strip back the wire and crimp on a female spade terminal. Slide this spade connector onto one of the switch terminals.



Figure 8. Flood Light switch PN12-100

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29. Take the remaining red wire to make a jumper from the power buss to the flood light switch.
30. Strip one end of the red wire and crimp on the ring terminal.
31. The ring terminal will be attached to the switched side of the "NAV Light" switch. This is the side that does not have the copper buss bar attached. Should be the top tab. The NAV light switch is a 3 amp breaker type and has enough load protection for this application.



Figure 9. Power Buss.

32. Unscrew the terminal from the top side of the nav switch. Install the existing power wire for the nav lights with the power for the flood light on the same screw terminal.
33. Run the flood light red wire to the Flood light switch location.
34. Cut the wire to the proper length.
35. Strip the end of the power wire and install a female spade terminal with a wire crimper. Slide this spade on to the other switch terminal.



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36. Place the switch into the mounting hole. Do not tighten the nut, the switch orientation must be verified.
37. Re-connect the battery.
38. Turn the master switch on, than the nav lights. The flood light should turn on with the switch up. Adjust the orientation of the switch to match this.
39. After checking that all works, clean up the wires with zip ties or wax lacing cord.
40. Install the EFIS screen.
41. Using contact cement, glue the carpet back in place where it was removed earlier.
42. Install the baggage floors.
43. Install the cowling.

5. Level of certification required for SLSA Lightning LS-1.

Any work called for by this letter must be carried out by personnel holding a Light Sport Repairman / Maintenance rating or a licensed A&P mechanic. On completion of the work, the authorized repairman must note the completion of the actions required by this letter in the aircraft's maintenance logbook. This note should specify what work was carried out, reference this Notification, indicate the date of the work and the identity (including license number where appropriate) of the person carrying out the work.