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2842 Highway 231 North, Shelbyville, TN 37160

SERVICE BULLETIN	
Service Bulletin #	AASB-1-12-2012
Superseded Bulletin #	AASB-1-1-2011
Issue Date	12-31-2012
Effective Date	12-31-2012
Limitations for Completion	
Make & Model Affected	Lightning LS-1 SLSA and ELSA
	SN87-133
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1. Applicability: Lightning LS-1 SLSA or ELSA aircraft in the effected serial range of SN87 thru SN133.

2. Background: Cracking of the lower ½" tubes adjacent to the lower gear exit plates has been noted on some aircraft. **See Figures 1, 2, 3.** Those aircraft in most cases have been subject to higher than expected landing loads. Higher loads occurred during the noted operations: Hard landing, Flight over design gross, operation on extremely rough surfaces, severe main gear leg shimmy. The lower plate adjacent to the main gear leg exit has been re-designed to extend fully to the outboard portion of the spar box, **See figure 4.** This will eliminate any flexing of the tubes should the box be subjected to any of the above mentioned cases and exceed expected loads. See the provided photos below for reference.



Figure 1. Overview Right side spar box: Affected Box design.

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Figure 2. Forward tube at gear plate.



Figure 3. Rear tube at compression V tubes.

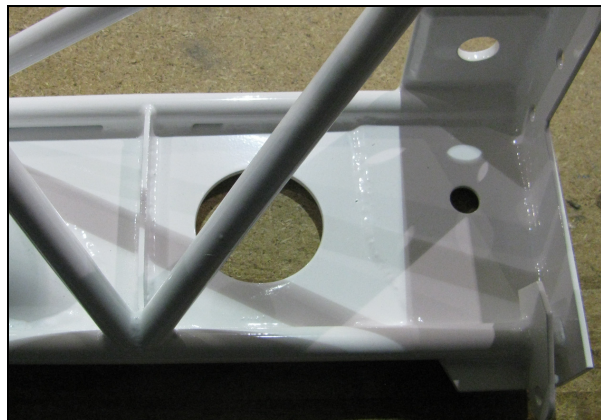


Figure 4. Fully plated section.



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3. Compliance with- Implementation Schedule.

An inspection of the main gear leg attach socket in the spar box must be completed within the next 25 hours of service or at the next scheduled service interval, i.e. oil change or head torque, whichever comes first. Additionally, if the aircraft has sustained a hard landing the spar box must be inspected in accordance with this SB. Refer to the descriptions below for each figure. It must be noted that aircraft fitted with the Current spar box design, shown in figure 4, are not affected.

Figure 1: Overall view right side of the spar box. Affected box designs have about a 4" open section between the gear leg tube plate and outboard attach plates. Areas prone to cracking are at the plate too tube intersections.

Figure 2: Close up view of the forward tube to plate intersection. Note crack at end plate in the paint.

Figure 3: Close up view of the rear tube at the plate intersection. Note crack at end plate in the paint.

Figure 4: Overall view of current designed box with closed in section, 1 piece lower plate. Aircraft fitted with this design are not affected by this SB.

4. Procedure:

If No cracks are noted in the affected areas no immediate action is needed. The aircraft should have the plates retrofitted however. This must be done with in the next 25hrs or Annual Condition inspection. Contact Arion Aircraft For the plates needed for the retrofit.

Arion Aircraft Must be Notified if Cracks are found. At that time, further instruction will be given as to the Procedures needed to comply with this SB. Authorization will be given to the qualified repair facility or persons performing the work if they meet the requirements of section 5.



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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.

6. Compliance to ASTM standards

Arion Aircraft certifies that the Service work required by this Service Bulletin will not change the aircraft conformance to the applicable sections of the ASTM standards under which it was certified