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**SERVICE BULLETIN**

**SB050-0999**

Subject: Lancair Main Gear Reinforcement (Lancair 200,235,320,360)  
Date: 5 September, 1999  
Ref: Construction manual, chapters 3 & 5 standard, chapter 2 fast build  
Pages: 2  
Status: Mandatory

**Background:** On several occasions the secondary main gear attach block (GM13) has broken loose from the lower spar cap. On at least one occasion the 6 BID over the GM13 delaminated as well, transferring all side loads to the GM4 (GM004L & GM004-R) brackets. The GM4 bracket cracked from excessive strain and broke at the inboard lightening hole (later versions don't have the lightening hole) causing the gear to partially collapse.

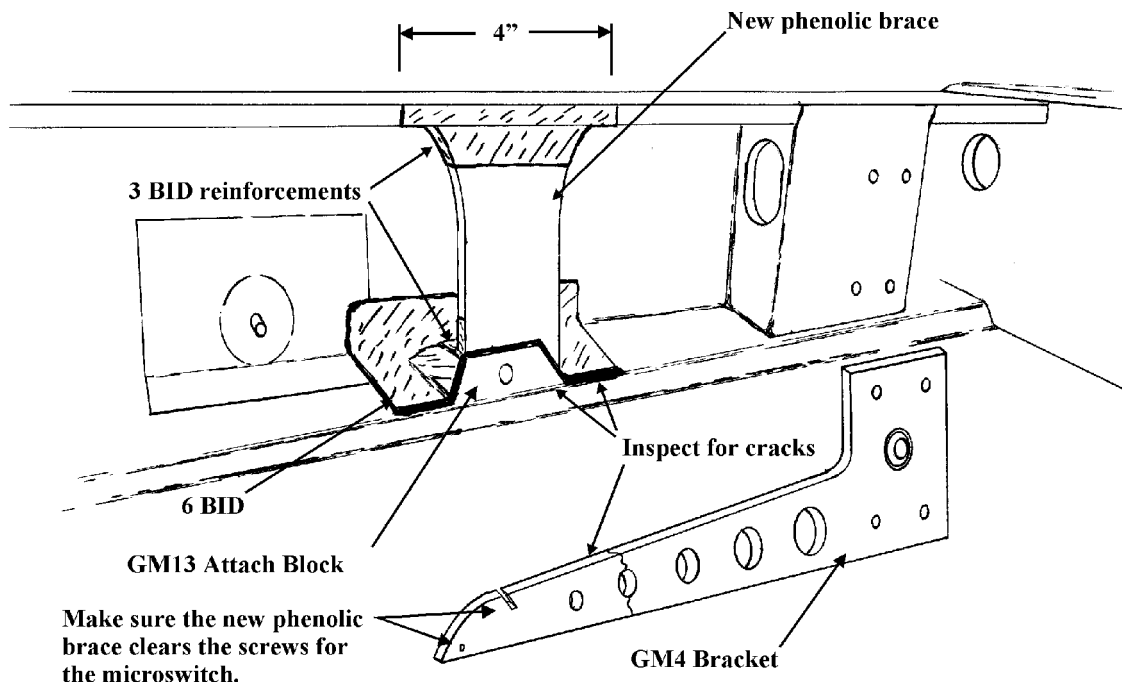
**Action:** Before your next flight, inspect the GM13 attach blocks and the 6 BID covering the blocks for delamination at the bottom spar cap. Also inspect the GM4 brackets for cracks or breaks.

Procedure:

1. Support the airplane on jack stands, and apply a side load to the main gear legs by pushing the gear inboard when it is down and locked.
2. Look for separation between the GM13 attach block and the bottom spar cap. Also look for cracks in the GM4 brackets, especially near the inboard lightening hole.
3. If the GM4 bracket is cracked or broken, replace it before your next flight. It may be necessary to remove the wings to access the bracket.
4. If both the GM13 attach block and the 6 BID have delaminated from the lower spar cap, remove them and discard the 6 BID. Careful use of a heat gun will assist in removal of the old material. Prepare the GM13 attach block and the lower spar cap for bonding. Bond the GM13 attach block to the lower spar cap with Hysol/flox using the GM4 as a guide. Install the 3/8" bolt to help locate the GM13. Follow up with a new 6 BID layup over the attach block.
5. Install a 1/4" thick phenolic brace with Hysol/flox. Make sure the screws for the microswitch will clear. Place a 3 BID at the top and bottom of the brace and let cure. See figure 1. Re-assemble the main gear.
6. If there is only delamination between the GM13 and the lower spar cap, apply a side load to the main gear leg and (after cleaning) push some Hysol/flox into the crack under the GM13 attach bracket. Release the side load and look for good squeezeout. Install the 1/4" phenolic brace (see figure 1). Re-assemble the main gear.

7. We consider the added ¼" phenolic brace as mandatory in all cases within the next 20 hours. Flight during this time period is acceptable provided close inspections are made after landing.

Figure 1



NOTE: Apply the lower 3 BID reinforcement to the backside of the support.