

SERVICE BULLETIN 29

SUBJECT: FITTING OF EARLY MODEL LANDING GEAR BOXES

APPLICATION: Glasair III aircraft; S/N 3003 thru 3008, 3013, 3015 thru 3017,
3021, 3022

Description:

The early model landing gear boxes were fabricated with both upper and lower flanges. We have since found that the inside depth of the wing cross section can vary up to 0.060", which makes achieving a good fit with this double flanged landing gear box difficult.

To simplify the installation of later model landing gear boxes, the lower flange has been deleted and raised scribe lines which mark the box for initial trimming have been added.

Solution:

STEP 1: Identify which model landing gear boxes you have. The early style landing gear boxes have both upper and lower flanges. The later style box has only a single (upper) flange and incorporates 2 scribe lines on the inside of the box to mark it for rough trimmming.

STEP 2: If you have the later style landing gear boxes, install them according to the instructions in alphabetical division W, on pages C-115 and following, of the Glasair III Instruction Manuals. If you have the early style landing gear boxes, check the fit of your landing gear boxes using FIGURES (C-83) and (C-84) on pages C-116 and C-117 of the Instruction Manuals as a guide. Three possible conditions will exist:

Condition 1: The vertical dimension of the landing gear box is too great and will not allow the upper wing panel to come down all the way.

Condition 2: The landing gear box has exactly the right vertical dimension.

Condition 3. The vertical dimension of the landing gear box is too small and a gap exists between the box and the inner skin of the upper wing panel.

Condition 1 will be covered in Solution A. Conditions 2 and 3 will be discussed in Solution B.



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SOLUTION A (for Condition 1)

1. Cut off the lower flange of the landing gear box (the flange that is angled toward the inside of the box) flush with the side, as shown by Flag #1 in FIGURE (1).

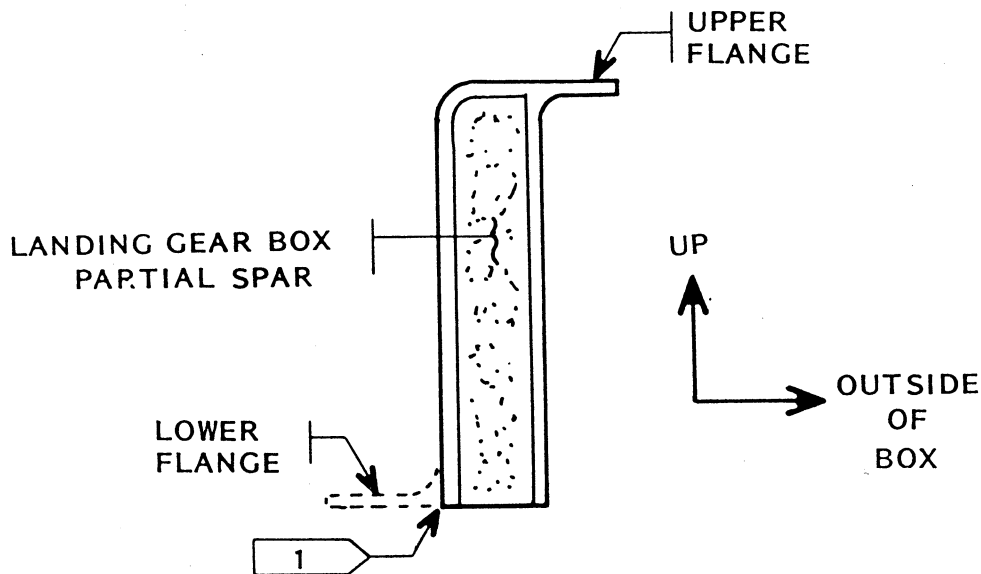


FIGURE (1)

2. Return to alphabetical division W (pages C-115 and following) of the Glasair III Instruction Manuals, and install the landing gear box per the instructions.

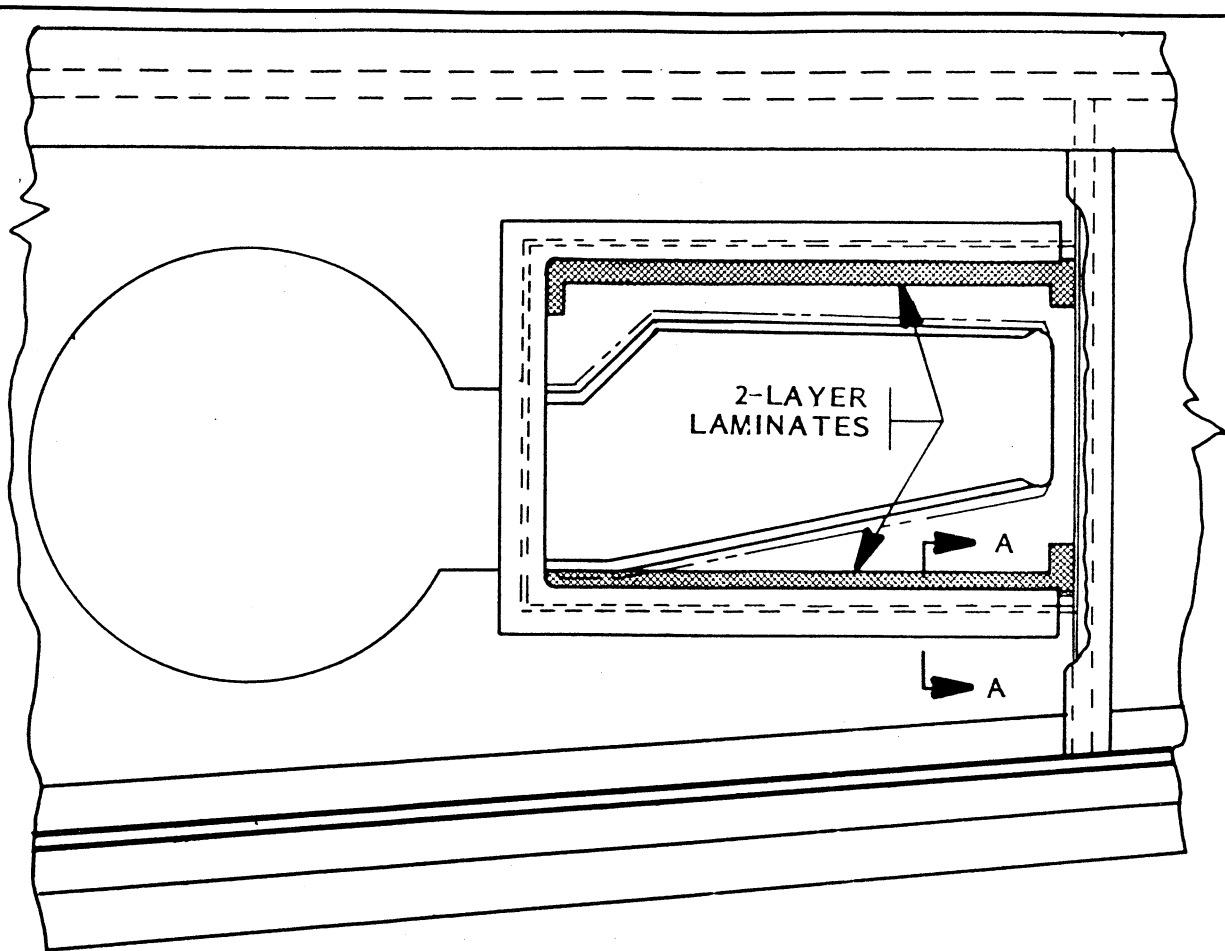
NOTE: The old style landing gear boxes do not have scribe lines for initial trimming, so trimming to the correct vertical dimension will require more time.

SOLUTION B: (for Conditions 2 and 3)

1. If the landing gear box is not high enough, build up the low areas. This is done by shimming the low areas of the box with layers of mat cloth placed between the landing gear box lower flange and the lower wing panel. When the correct height is achieved, proceed with Step 2, on page 4 of this Service Bulletin.

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NOTE: ALL LAMINATES TO EXTEND 1" ONTO LOWER WING PANEL.
 ALL LAMINATES CUT ON A 45° BIAS.

PLAN VIEW-BOTTOM WING PANEL

(RIGHT SIDE SHOWN)

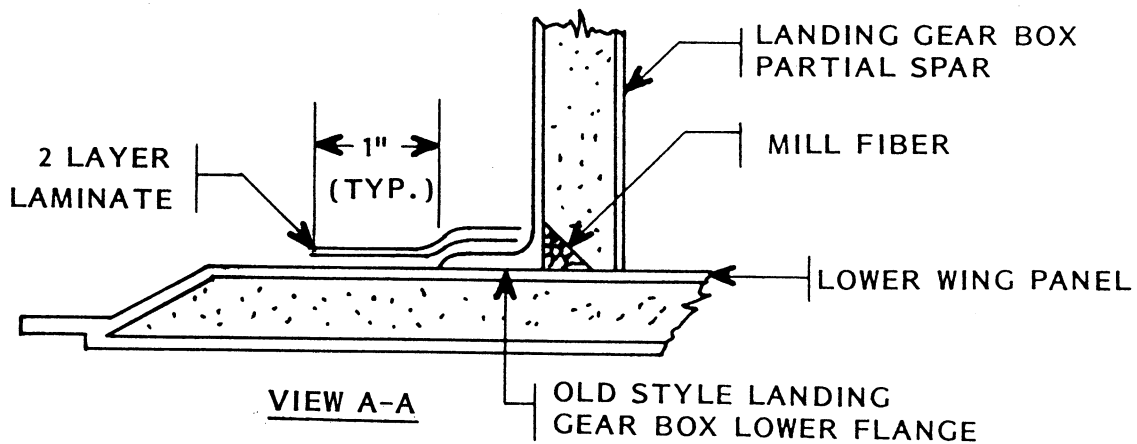


FIGURE (2)

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2. Apply the two layer laminates shown in FIGURE (2) of this Service Bulletin. The remainder of the installation of the old style landing gear box is the same as described in the Instruction Manuals with the following exceptions:

A. The (2) layer laminates attaching the lower wing panel to the landing gear box partial spars need only extend onto the lower flange, as shown in FIGURE (2), rather than continue all the way up the sides of the partial spar.

NOTE: The landing gear box lower flange will require trimming to clear the landing gear cutout in the lower wing panel. Where this occurs, wrap the laminates up onto the sides of the landing gear box.

B. A Q-cell radius is no longer required on the inside lower corner of the landing gear box because the existing flange is already faired into the landing gear box partial spar.

C. The (4) layer laminate in the forward inboard corners of the landing gear box are not required, since these were factory installed when the old style box was fabricated.

D. The (2) layer laminate in the aft inboard corners of the landing gear box are not required, since these also were factory installed during the fabrication of the old style box.



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