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Service Bulletin 006-91

Subject: Lancair 320 Fast-Build Nose Gear Tunnel

Date: 4-19-91

It has come to our attention that there may exist the possibility for a slight mislocation of two phenolic blocks within the nose gear tunnel sides on some fast-build kits. These blocks are easily located by visual inspection from the inner side. The blocks are used for the attachment of the nose gear drag link assembly, specifically where the 3/8 steel rod passes through the tunnel and attaches the GM27 weldment into the tunnel.

1. Make a visual inspection and measure to locate the position of the two 3" square phenolic blocks, refer to the drawing on page 154 of the manual which illustrates the nose gear tunnel. (Drawing included with this bulletin). Also see blueprint "P for reference.
2. The 3/8" steel attach rod for the GM27 weldment MUST index properly into these phenolic blocks. There must be at least 3/8" (minimum) edge distance from the 3/8" rod hole location to any edge of the phenolic blocks.
Also, the strut angle (angle of the nose gear oleo strut) must not be more than 8-1/2° fwd.
3. If you are unable to position the GM27 weldment with 3/8" steel rod such that both the strut angle is satisfactory and the minimum edge distance in the phenolic pads is maintained, then corrective action is required. This corrective step is not difficult but must be performed.
4. If the above discrepancy is found, then additional phenolic must be inserted into the nose gear tunnel sides such that with the proper strut angle established, the 3/8" steel rod will have sufficient indexing into the embedded phenolic pads in the nose gear tunnel. To achieve this:

a.) Using a dremel type cutter, cut through the inner sides of the nose gear tunnel in the necessary area which will likely be high and aft of the existing phenolic blocks. The inner sides are comprised of two layers of fiberglass so it is not particularly difficult to cut through this layout.

NOTE: In the event that the proper location of the 3/8" steel rod attach hole were to be precisely on the edge of the existing phenolic blocks, then a portion of the original blocks should also be removed so that the inserted additional phenolic block will index the complete hole.

b.) Remove the foam core in the required area and sand the area for preparation of insertion of additional phenolic. Clean the area in the usual manner with MC.

c.) Cut a piece of 1/4" phenolic to the required shape and using epoxy/foam, put these pieces into position. A good method of holding them tightly against the tunnel sides during cure is to cut two lengths of wood (1x2), spread them across the tunnel interior, pressing against the phenolic blocks, then clamp them together with a small C-clamp. This will allow them to hold pressure against the phenolic blocks while they cure.

d.) After cure, add a 3 BID patch over the area. Be sure to rough up the inner tunnel surface and clean with MC prior to applying the 3 BID patch. There must be NO VOIDS between phenolic pieces. Fill any such gaps with epoxy/foam. The 3 BID patch must extend at least 2-1/2" beyond the phenolic inserted pieces, overlapping onto the existing tunnel walls.

5. Also be sure to check the single additional phenolic block located on the right (passenger) side of the tunnel. This block must index the nose gear door retract cylinder. The actual position of the cylinder (in the fwd-aft location) is not particularly critical. The vertical position should be followed per plans. Be sure that the phenolic block for this cylinder attachment is also located properly. Once again, if necessary, the same corrective action could be used to reposition this block.