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Revision 1

NG-3B / NG-4B Installation

(NOTE: Only for use with EGP System)

Disclaimer:

My Liability Consultant (otherwise known as "wife") insisted that I put a waiver of responsibility in here to let everyone know that you're all responsible for yourselves (I'm sure your mothers all told you that at some point). As builders and pilots, you use this system and these instructions at your own risk. You should know that I explicitly designed both the parts and the instructions contained herein so that they would ensure your quick and certain demise should you make the mistake of using them, even as exactly directed. I hereby absolve myself of any responsibility for anything that happens either before or after you install these components into your aircraft.

She's happy now. Well, with respect to this, anyway.

Required Parts List:

1X	-	NG-3B Small Bracket
1X	-	NG-4B Large Bracket
1X	-	NG-17B Bracket Spacer
2X	-	AN960-516 Washers
1X	-	MS21042-5 nut
1X	-	AN5-16A bolt

Required Tools:

- ½" socket
- ⅜" socket
- Socket wrenches
- One small "C" clamp
- AN4-16A/17A bolt
- AN960-416 washers
- AN315/AN316-5 Nut

Introduction:

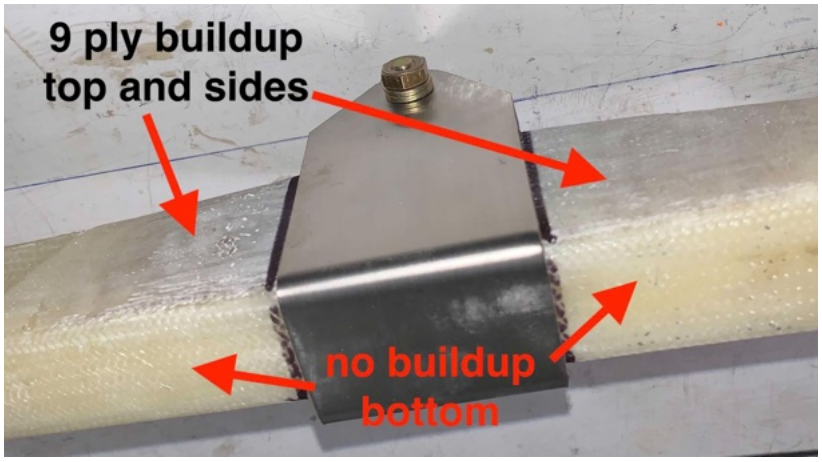
The new NG3B / NG-4B parts are CNC fabricated from 304SS sheet to ensure consistent fit, shape and mating with the NG1-L Nose Gear Strut. They are **ONLY** compatible with the new **EGP Nose Gear Extension/Retraction System** and **CANNOT** be used with the older EZNoselift or Wright Nose Gear Actuator Systems. Only install these if you are installing the **EGP Nose Gear Extension/Retraction System**.

These instructions assume that you already have completed the 2 BID torsional wrap of the Nose Gear Strut **and** have installed the <MK>NG-6B Pivot Housing. You may or may not have installed the <MK>NG-15<A><X> Fork Assemblies.

New Strut Installation Instructions (NOT a Retrofit):

1. Mark the NG1-L strut at a point 6.71” from the Pivot Housing rotation point, as shown in the plans. This will be the centerline of the NG-3B/4B installation area.

2. Sand / clean an area 3” on either side of the centerline mark made in step (1). This will be the thickness buildup area.



3. Layup a 9 ply top and sides (not bottom) BID buildup, dropping plies every ⅛” each side. The center width should be 2.25” and will be beneath the NG-3B and NG-4B. The total width of the layup including all ply drops will be ~6 ½”. The easiest way to accomplish this is to do the layup on 4-mil poly sheet, starting with a 2.25” wide strip, then increasing the width of each strip by ¼". Then wrap this layup on the strut, trim the ends so they don’t extend onto the bottom surface, and peel ply and let cure.

4. Remove the peel ply. Sand the sides parallel and straight for a slip fit of the NG-3B on the sides of the strut, being careful **not** to sand into the 2 BID torsional wrap. Keep sanding until the strut does not have to bend or deform at all in order to slip on. This will be a few thousandths of clearance with parallel sides.

5. Mark the NG1-L strut at 1” on either side of the 6.71” mark for alignment of the NG-3B fore and aft.

6. Test position the NG-3B and NG-4B to verify the alignment of NG-3B & NG-4B matching holes. If needed, Sand the top layup to achieve hole alignment, leaving a slight clearance space on top of NG1-L to account for flox buildup (0.010” - 0.015”). Ensure that the NG-3B and NG-4B holes are on the **top** of the strut, pointing toward the same side as the pivot axis of the <MK>NG-6B.

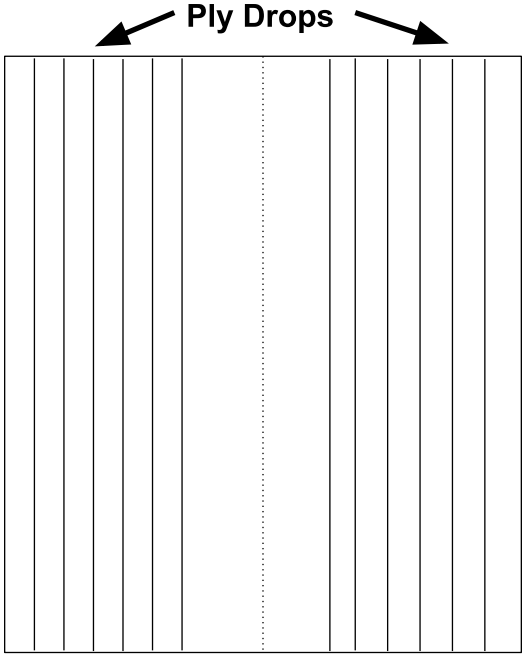
7. Remove NG-3B and NG-4B from the strut. Lightly sand and clean the interior surfaces of NG-3B and exterior bottom of NG-4B.

8. Flox the NG-3B, centered on 6.71” mark between 1” marks either side. Ensure that it’s flush with the bottom and parallel to sides of the NG1-L strut, with no cocking or misalignment. Ensure flox squeeze out all around. **Lightly** clamp NG-3B to NG1-L strut with a C-clamp if it slides around. It may be more secure without the clamp, after the next couple of steps.

9. Flox the NG-4B on top of the strut in between the sides of the NG-3B. Place the NG-17B in NG-4B, align with the holes and insert the AN4-16A/17A bolt through matching holes and NG-17B with washer under head. Add washers on the nut end as needed and snug up AN315/316-5 nut to ensure contact between NG-3B and NG-4B both sides, squeezing lightly on the NG-17B.

10. Remove/scrape all flox squeeze out around NG-3B and NG-4B. Let cure.

11. Layup a 7 ply BID buildup top, sides and bottom, dropping plies every ⅛”. The ½” wide 7 ply thickness should butt up against the edges of the NG-3B and NG-4B to lock them in place with no possibility of movement should the flox disbond. Most easily done by laying up on 4-mil poly sheet, then cutting on dotted line to but thickest (center) section of layup against metal parts. Peel ply and let cure.



12. Remove peel ply - sand layups flush to NG-3B surface, being careful **not** to sand into the 2 BID torsional wrap. Remove the AN4 hardware.

13. With the AN-17B spacer in place, drill out the ¼" holes in the NG-3B and NG-4B to 5/16". Remove the spacer until actuator installation.

Retrofit Installation Instructions:

1. Remove the existing NG-3/NG-4 attach bolt connecting the old nose lift extension shaft to the nose gear strut brackets.

2. If required, remove enough of the nose gear strut cover to allow for NG-¾ removal, and for 3" on either side of the NG-3/NG-4, to allow for the later locking wrap layup.

3. Remove the existing NG-3<A> and NG-4<A>.

4. Follow the "New Strut Installation Instructions", starting at step (2) and continuing to step (13).

Revision List:

Date	Revision	Description
2/19/2024	1	Initial Release