

RNFBL – DIY Flybarless for the P6

Note: in the below photos, the eagle-eyed amongst you will note we're show an RNFBL with a modified washout base slitted through a 2 mm guide pin slot on one side of AUD0004 to clamp to the main shaft. Our purpose was experimenting with advancing (or retarding) the timing of the inner star of the swashplate.



- Unnecessary clamp-on modification of the washout base - follow instructions instead

But as it turned out, the alignment of the washout base is perfect, which means this clamp-on mod was unnecessary. These instructions reflect a bolt-on method of accomplishing the RNFBL (Red Neck Flybarless) conversion using 25 mm long M2 bolts.



- Washout arm mod before and after shortening on each side, repositioning link, and flipping the arm.

Introduction

With the stock flybar setup, the washout hub assembly slides up and down guided by the pair of 2mm pins on the rotor head adapter. Of course, the washout arms are what drives the inner star of the swashplate. In removing the flybar assembly and replacing it with an FBL controller (electronics replacing mechanical components), we still need to

drive the inner star of the swashplate. We accomplish this by modifying the P6's AUD1015-2 washout arms, inverting the washout base, and bolting it to the bottom of the rotor hub adapter with a pair of M2x25 Allen Head bolts (replacing the 2 mm guide pins). The end result is a very sano FBL set up, which flies great and by virtue of the fact we're modifying stock parts, cost virtually nothing. It's an easy and fun mod, which takes less than 30 minutes from start to finish.



- Clean and simple, this RNFBL is easy to do, flies fantastic, and costs nearly nothing.

Step 1 - modifying the washout arms

Begin by resizing the second hole in the washout arm with a 5/64" drill bit so the washout links can be attached using the stock washout link pins.

Next, either leave the short side of the washout arm alone, or trim it off - your druthers. On the long side, either trim off the 3rd hole (about 4-5 mm from the end of the AUD1015-2 Washout Arm), or just purchase P50 washout arm AUD1015 (which ends at the 2nd hole) to avoid having to remove the material that extends for the 3rd hole (removing it because it interferes with the movement of the washout link).

Finally, dress the end of the arm to your aesthetic standards with a Dremel and a sanding drum (use the slowest speed).



- Resize the 2nd hole with a 5/64" drill bit, trim off the 3rd hole (with ball installed), and dress the edge.

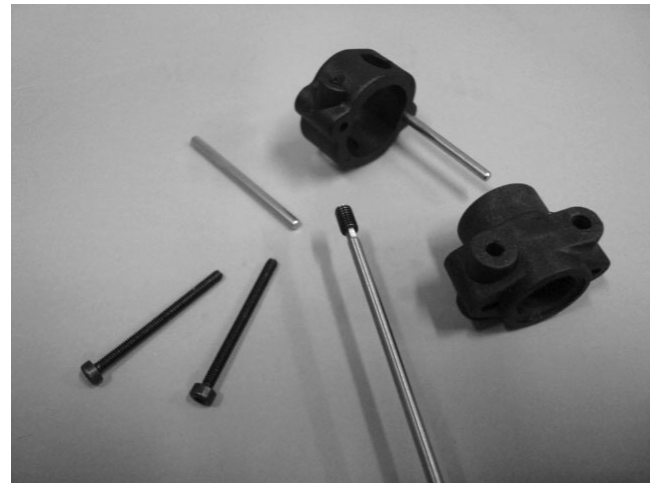
The reconfigured washout arm - with washout link re-attached – it looks like this after trimming away the second hole (or just begin from AUD1015).



- The reconfigured washout arm after trimming and moving the link ready to be bolted back on.

Step 2 - reconfiguring the washout base

Next, we're going to reconfigure the washout base by flipping it upside down. Then we'll attach it to the rotor hub adapter with a pair of 25 mm long M2 bolts.



- AUD2025AH substitute for smooth M2 guide pins through inverted AUD0004-2, then snug set screws.

First, undo the set screws, which secure the 2 mm guide pins within the AUD0054 Rotor Hub Adapter and remove the pins. Next, using a pair of AUD2025AH bolts secure the washout base to the bottom of the rotor hub adapter. Remember, for correct vertical alignment, we'll be inverting the washout base. Finally, instead of CA or threadlocker, snug the set screws to lock the M2 bolts within the rotor hub adapter (as if they were the guide pins).

Step 3 - installation and linkages

Next, attach the AUD0055-2 Seesaw arms (using threadlocker) into the threaded holes in the AUD0005 Center Hub as shown below.



- Leave about 2.5 mm showing between the short links of the pushrod

Note the orientation of the washout hub, washout arms, and washout links in the photo below. Leave about 20 mm showing between the ball link ends

for the pushrod connecting the inner star of the swashplate and the long side of the seesaw arms.



- Reinstall the washout link on the long side of the washout arm - leave about 20 mm of rod showing between the links.



- Full positive pitch moves the swashplate downward, as usual.



- A tad of positive delta delivers great Pantera handling - no need to extend the ball on the grip.

RNFBL stands for *Red-Neck-FlyBar-Less*, thus christened by a wit (whose name escapes me) the instant he saw the prototype. We weren't offended . . . and the name stuck! Anyway, the end results is a superb FBL conversion, which flies great. By the way, while I am sure someone, somewhere, will look down their nose at this nifty little FBL-conversion, we believe it flies every bit as good as any aftermarket FBL rotor head available (regardless of price), which means you only feel a difference in your wallet, not in the air.

This is an easy roll-your-own flybarless conversion. If you can't readily source the long M2 bolts, and/or prefer to begin with the 2-hole P50 versus 3-hole P6 washout arms, then here are the links for ordering;

AUD2025AH Allen Head Bolt (2-pack) <https://www.audacitymodels.com/AUD2025AH>

AUD1015 Washout Arms (2-pack) <https://www.audacitymodels.com/AUD1015>