INSTRUCTIONS ON HOW TO R & R YOUR Swingarm

• Upgrade Your Pre-2002 FL Or FXR Rear Fork & Get Rid Of The Crappy & Dangerous (Cleve Blocks) & Replace Them With A Stable System.
• R & R your Swing Arm, Belt Drive, Swing Arm Pivot Shaft, and Rear Wheel.

The paragraphs below are a photo journey into the replacement of a FL or FXR swing arm.

To upgrade the pre 2002 FL, here is a How-To on cheaply replacing the poor parts Harley stuck you with. Now - Let’s Get Er’ Done
• Pre- 2002 had weak swing arms and are known to fail. The cleve blocks are the cause of “Rear Steer” or “Rear Fork Deflection”. Harley came up with a patch in 2002, using bearings. Because the pre 2002 transmissions have a 5/8” mounting hole for the 5/8” swing arm pivot shaft, a conversion unit has been made. No transmission removal for boring is necessary. Under no circumstances, do I recommend drilling out the transmission case with a hand drill. The drill will “wander” (drift)!
• Solution: Go to either a trike shop/manufacturer, e-Bay, or shop and buy a new style swingarm. Harley made an additional upgrade in 2007, try and buy this type 2007 & above). If upgrading to a 2008, Harley use 25mm (smaller than 1”) axles & wheel bearings, you will have to use 25mm bearings. With that said, let’s get on with it.
• In the case of a 2007 swingarm; buy and do not pay over $40 for the swing arm and axle. You must use the corresponding axle as a ¾” axle set-up is different (along with wheel bearings & spacers). You positively can not use a pre -2002 HD stock wheel because the wheel bearing spacer will fit into the wheel. Buy 2002 & above style wheels as they (9 spoke) are cheep.
• You are going to have to either bore out your stock rear caliper bracket or better still, upgrade your whole rear brake to the new model & sell yours on e-Bay.
• I recommend doing the following before hand and have it ready for installation; Remove bearings et al. from the 2002 & later swing arm via press.
Bike Work:
• Jack up your bike using a center jack. Secure the bike so it will not fall over. You can also use a motorcycle jack. I use a motorcycle dolly
and a cherry picker crane. Than I use the crane to put the bike on a (Handy) table with the dolly strapped to the bike in place of a motorcycle jack. I than strap the dolly and the front end along with the rear of the bike to the (Handy) table. This helps greatly when using the Saws-All to remove the stubborn swingarm (should be your last option).

- **Remove** your rear wheel & set aside, make sure you use a brass drift pin for axle removal.

- **This is what** you have in your original swingarm (Cleve Blocks)
• **As per Harley manual;** remove, foot pegs, primary case, clutch, et al., inner primary. Should look like this. Remember to cut wedge 2X4 blocks and force them under the cross member & both sides of the transmission.

• **With the inner** primary removed, use a strap & ratchet to support the transmission.
• **Remove your** pivot shaft by removing the nuts off the shaft. This is a great time to inspect the threads as the nut should tighten fairly freely.
• **In the event** that your pivot shaft will not come out (frozen) use a Saws-All in the areas indicated & remove the swingarm. This is not a walk in the park, however, you will remember to use Anti Seize on your shaft & axle from now on.
In cases of really stuck pivot shafts, go from underneath with a sawz-all and cut shaft out here.

Use a 1/2 shaft to drive out the pivot shaft if it moves (after soaking).

Remember, install the belt before re-assembling as you will have to take it all back apart if you for get the belt.
• With both nuts off the pivot shaft, make sure your pivot shaft is straight by rolling it on a piece of glass. This is very important!

• **Put the belt back on** (make sure you do not forget this as you will be pissed & have to start all over) and put the new rear fork back into the bike. Replace the pivot shaft (Anti Seize) thru the rear fork and transmission. Put back the isolators while noticing relationship between the (in this case roll pins in the swingarm) mounting blocks (Pivot End Caps) location. You will also notice the “mounting holes” in the isolator do not share the same axis as the isolators mounting shoulder. This is very important.
• Replace the pivot pin nuts.
• **Make final adjustments** to the isolators before installing the swingarm mounting block in relationship to the (in this case) roll pins. If you are using my kit rotate the outer support bushing than install the swingarm mounting blocks to the frame.

• **Align the wheel** properly with a straight edge. Belt drive should be moved out of the way. The rear wheel should be installed and tightened with all spacers for operational use. NOTE* You find that In the picture it shows the pivot bolt and swingarm mounting blocks off, however, they must to be installed and tightened for operational use. (my mistake in not taking a photo @ this step).

• **Install** the belt drive back on the wheel pulley R & R axle & needed spacers and tighten axle, than button her up.

• You should be good to go. Vibrations will be more pronounced but will diminish in a short period of time. This fix is in the place of any type of Truest Trax's, Strided 88, or other band-aid (which are much better than doing nothing) fix.

• Make sure when installing your inner primary you:
o Apply a "ring" of good quality silicone around the 6 bolts that hold the primary onto the (4) motor & (2) transmission (4 inside of the primary & 2 on the front outside). Apply Locktite under this ring (on the threads). Make sure all metal tabs are good. Leaks suck!

o Replace the starter seal. It is cheap insurance & you will be pissed if it leaks & you have to do it all over again.

o Red Locktite the motor and transmission shaft nuts. Remember that the transmission shaft is left handed thread.

o I use a thin skim coating of ThreeBond 1194 or other locally available product such as (YamaBond 4–Discontinued By Yamaha), Honda 4, Kawasaki semi sealer and Suzuki sealant are all the same. This has replaced Three Bond TB-1104 with ThreeBond 1194. It is a semidrying liquid gasket whose major component is special synthetic rubber.

• This patch fix will work until I re-design “the wheel” and come out with my new Carbon Fiber swingarm that is mounted much differently (the way Harley should have done it) using no frame modifications and will contain the missing 3rd link for stability and control "Rear Steer".

The project is being worked on for your FL Bagger. This carbon fibered frame and swingarm is currently being tested at the track with a 200+ HP motor under real duress. Everything I do is developed and starts out at the track. Do you think this extreme testing will make for a great Harley product? As with all my products, we use them before you ever read about them. I do not use my customers for test subjects, we have highly paid professionals (my friends who love to ride & drink beer) for that.

A hint of things to come for your Bagger: Why, what is its purpose? Less un-sprung weight (smoother ride) and reducing the weight of
your bagger. We aim to make them handle. I see in the future a 600 lb. full dresser with over 150 hp that will convert right at the Hotel front door with removable body parts, and rise like a Phoenix into a fun "Canyon Carver" with the smooth touring characteristics masked with just the turn of a few knobs. A true "Un-Dresser".

My Front Superbike Suspension, Carbon Fiber Wheels, Metal Matrix Composite Rotors, Motorcycle Metal/Penske rear shocks, Carbon Fiber Rear Swingarm (Fork) and updated Aerodynamic Carbon Fiber Bodywork.