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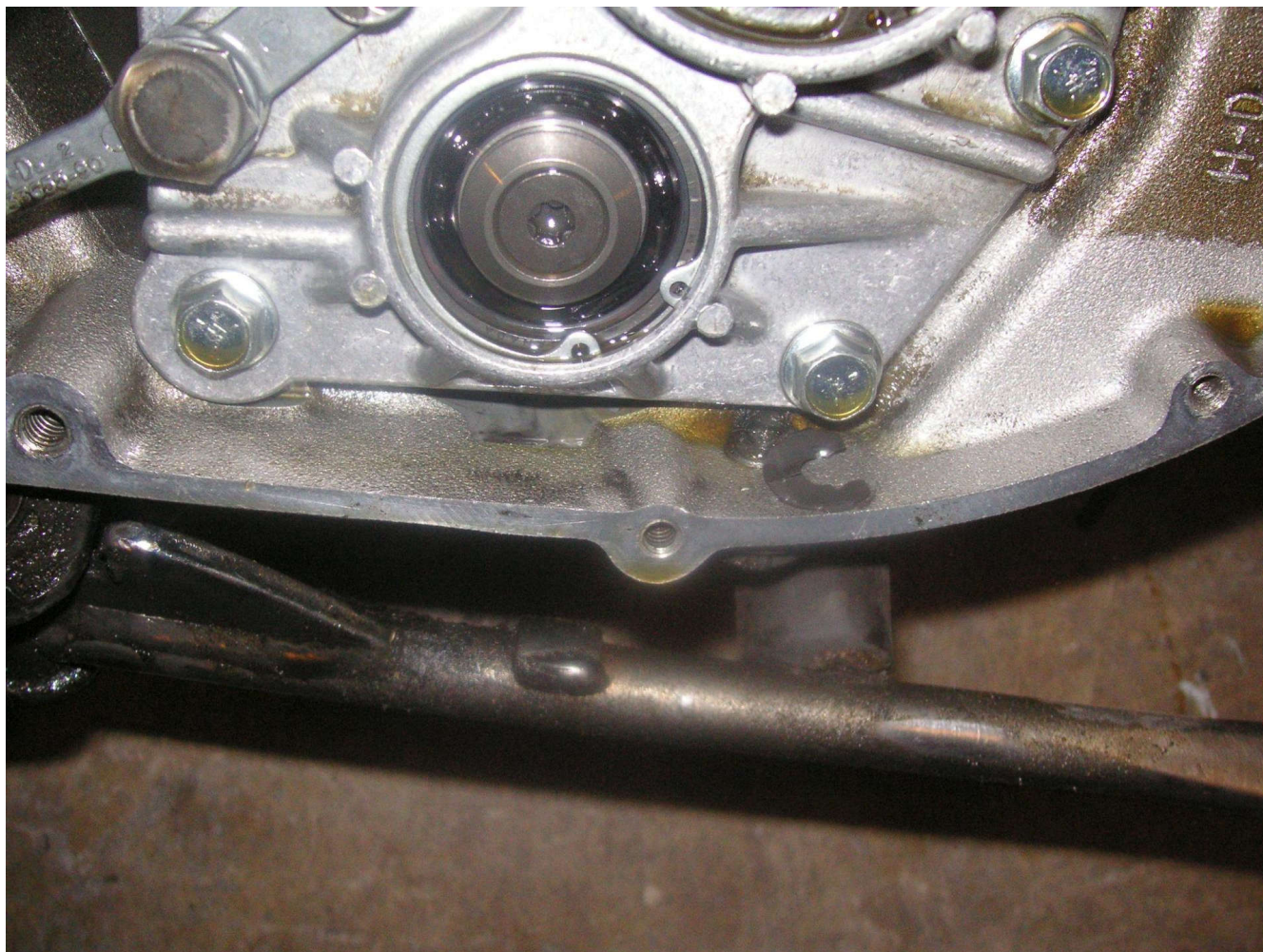
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Tuesday, May 27, 2014

← *RAKO STUDIOS* →

Leave Cali day 35

I find out what broke in the transmission of my 1996 Sportster. A 20-cent clip split in two.



I first tore into my 1996 Sportster on [Leave Cali day 30](#). Since I was too stupid to read the manual, I thought I needed a clutch compressor tool to get the primary out of the bike, to fix what was wrong with the transmission. Turns out, the whole clutch basket will slide out without taking the clutch itself apart. Live and learn. So the tool came this day, and I get the primary out.

The picture above shows the little broken clip that came off the shift drum. This might have started when I dropped the bike at 60 mph a few months earlier. The guy in front of me missed the bush that fell of the gardeners trailer. I didn't. Broke a finger and cracked my elbow, but minimal damage. I healed up, the bike decided to break on the way to work. No shifter, I limped seven miles home in one gear.



I usually would wash everything, this was a quick job, I just covered the tranny up.



I remove a snap ring from the clutch basket. I wished the shift drum used one as good.



This is the 60-dollar clutch compressor I really didn't need. I sold it a few years later on eBay.



The inch-1/8 shallow socket did not clear the sprocket shaft.



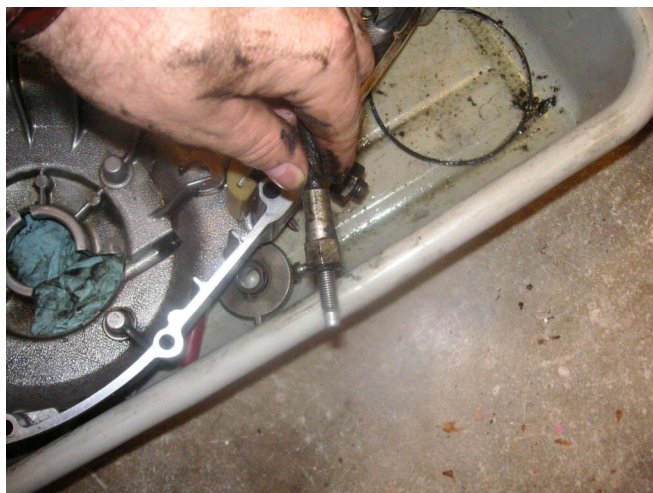
I buy bifocal reader safety glasses on Amazon. Safety glasses with impact wrenches and clips.



This adjuster nut comes out of the clutch basket.



It's an inch-3/16 socket to get the clutch basket off.



I decided to take the clutch cable out of the primary so I could reassemble it easier.



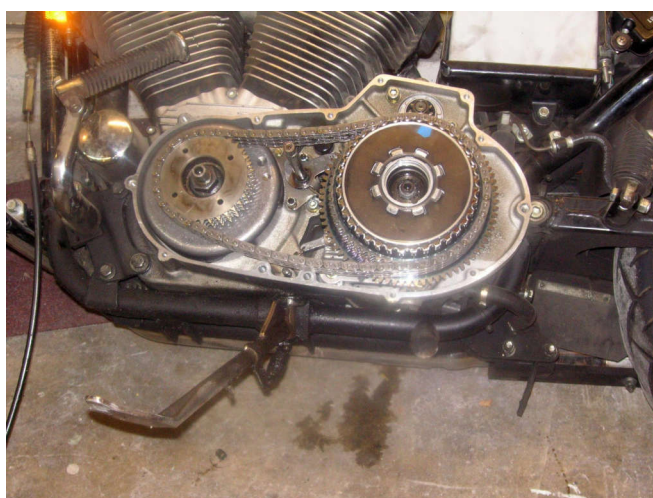
The deep-well 1-1/8 socket gets past the sprocket shaft and pulls the nut up front.



Leaned over, it's a lot easier to work on with the primary leaned up towards you.



This is the detent drum that holds the bike in any given gear. It fell off with the clip.



Ready to spin off the engine sprocket nut and pull the primary as a unit.



I have an old DeWalt corded impact wrench that gets the nuts off no problem.



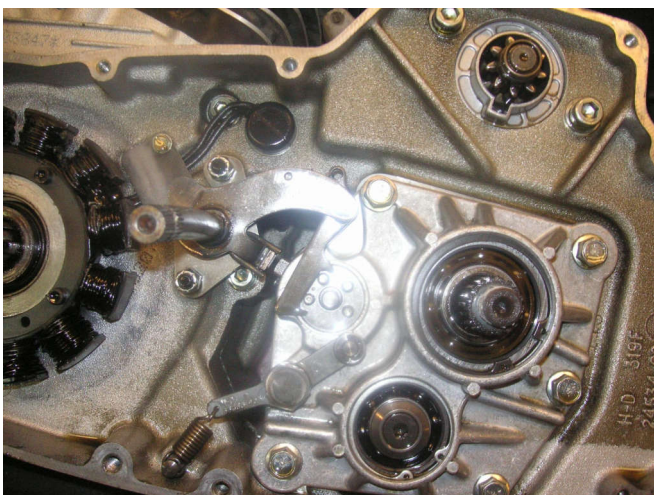
This is the 20-cent clip that broke off. Though as a Harley part, it probably was three bucks.



Here is the primary off the bike. Magnetism resists the alternator rotor coming off.



Just touching it and it broke into two.



I shine a light where the shifter drum had that clip and detent wheel come off.



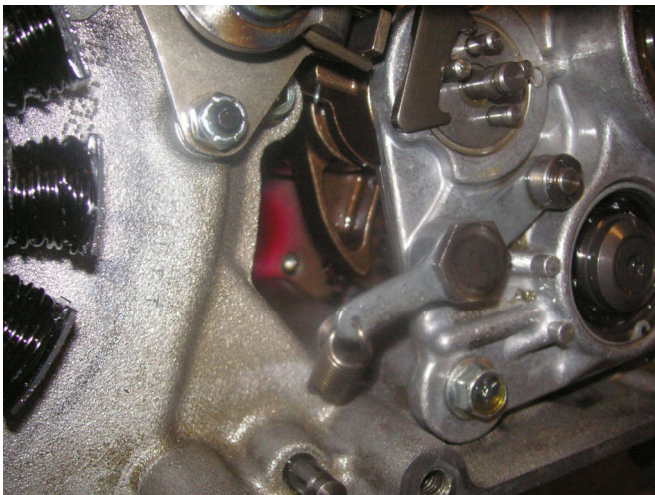
I was worried the loose detent drum had torn up the back of the clutch basket. Lucky me, the clutch basket was OK, no collateral damage.



When the clip and drum popped off the shift drum, the spring came off the case mount.



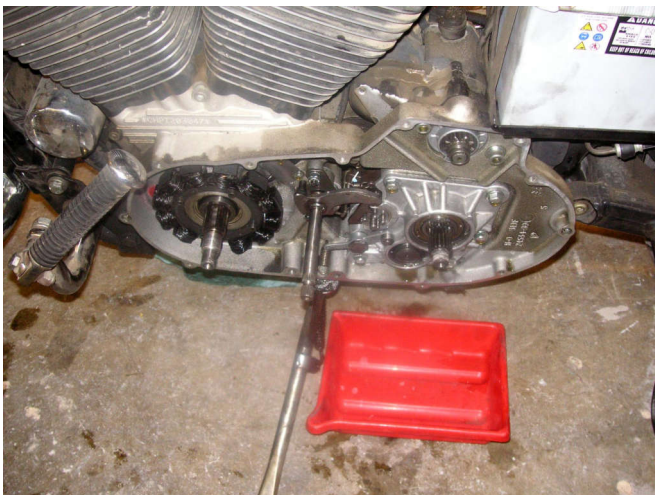
Since the toolbox was in the other room, and I couldn't roll it over, I kept a tool tray.



The inside of the tranny looked OK. No need to pull the trap door.



Parts and tools mixed together in this tray..



I was in a hurry, but I stayed organized with tool and parts trays like this.



Here is the shifter detent drum, a little torn up from rubbing on the back of the clutch basket. Tomorrow I put it back together.