Design Basis

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I was brilliant whenever I "experimented" with Timothy Leary's legacy to the world. Yep, whenever I saw Lucy in the Sky with Diamonds I could design with great detail, in my mind, things like perpetual motion machines, time travel devices, and infinite power sources. But the next afternoon I could never recall all the details necessary to tool up and bring my innovations to market. If you've ever seen the girl with kaleidoscope eyes, you know what I'm talking about. I was an idiot when I was 18 and didn't know it, but I had fun from what they tell me.

Now I'm 46 years old and things haven't changed much; I'm still a dummy, but now I know it. In my life I've gained a respect for the compound effect of human endeavor over the last 10,000 years. Up until 100 years ago, a fella's day consisted of hunting, eating, drinking, and thinking about stuff; no re-runs of the Beverly Hillbillies or Pepsodent toothpaste commercials on TV for them. Cumulatively, that's a lot of ciphering over the last 100 centuries. Today's technology is the result of all that ciphering, too. Consequently, all machines and mechanisms, with few exceptions, from the last 100 years have a very solid design basis. I think the atom bomb was new in 1945, although even in '45 computers were not new. Some cat named Leibniz back in 1670 invented binary code, which is the basis for the function of all computers. Al Gore may lay claim to inventing the Internet but that doesn't matter here because I hate computers and I think the Internet will spawn the downfall of our civilization some day (maybe Al Gore and those Beverly Hillbillies re-runs will be the catalysts that lead to the fall of mankind). Besides, I'm not talking about electrical things here; I want to talk about machines and mechanisms and cool stuff that you can see with your eyeballs, regardless of what chemically induced state you may be in.

Harleys appeal to me because I can see the mechanical architecture with my eyeballs and follow the evolution of their design through history. The closest parallel I can think of is the Chevy V-8 as it evolved from a humble 265 into a 283, 302, 307, 327, 350, and a 400 over the years. The design continuity allowed people to mix and match heads and cranks to come up with all kinds of Frankenstein configurations. That, combined with a fanatical aftermarket, fanned the flames in the crucible to raise the Chevy V-8 to cult status. Strangely, though, I never got bit by the small-block bug because all its mechanical beauty gets tucked out of sight under the car's evil hood. Besides, an air-cooled dry sump engine always gave me more wood per square inch than a liquid-cooled wet sumper.

As such, I'm a big fan of The Motor Company and their accomplishments and milestones over the last 105 years. Without them our groovy American motorcycle culture would not exist. I respect the challenges that Harley-Davidson faces every time they make a significant change to the engine, transmission, or primary. They clearly recognize the value of design continuity and are careful to bring on generational improvements, while maintaining historical design ties to the past. It must be a really difficult high-wire balancing act, but that's just a fraction of their challenge as a corporation. On a day-to-day basis they need to deal with things like committees, governmental compliance, stockholders, manufacturing issues, changing demographics, union issues, supplier capabilities, and who has the keys to the executive restroom. It's a wonder that those poor bastards can build a single motorcycle with the way their hands are tied.

On the flipside of that, my wife Lisa and I run a little company called Baker Drivetrain and we are a small part of the fanatical American motorcycle aftermarket. We deal with less than 1% of the crap that large companies like Harley deal with. Our mission is simple; take the status quo and make it *gooder*, and make it in America. We developed our 6-speed overdrive transmission 11 years ago, using the factory 5-speed as a "design basis." We did that because that 5-speed packed 17 years of evolution in its cases and was a solid design. It just needed another gear. So we took the status quo and made it *gooderer*.

More recently the KKK (King Kong Klutch) was introduced as the *final solution* for clutches. My inspiration came when I noted that all clutches for Harleys do not utilize a very large diameter clutch plate. Torque capacity of a clutch is directly proportional to diameter of the clutch plates, so I found some big-ass clutch plates in a Cadillac 5-speed automatic and decided to make a Harley clutch out of them. So, in this case, existing clutches and a Caddy 5-speed served as my design basis.

Should the corporate execs in Milwaukee fear my progress? Probably not, although I have my own problems in terms of monitoring our executive restroom. I guess it's all part of the human design basis. Maybe it's time for humans to start ciphering on solutions to that problem, too. IW