

Under the Hood, April, 2008

Have you noticed all the auto/truck ads the past few months advertising “supplier pricing” (and GM sometimes advertising employee pricing). Costco pricing typically equals supplier pricing and often includes a cash card in addition. It used to be that supplier pricing, or the even more valuable employee pricing, were coveted items sure to lead to the best deals. Now it seems that supplier is the new normal. Are we replacing MSRP with supplier pricing as the starting point for negotiation? I remember just a few years ago when the automakers were telling us and their dealers that they were not going to get into this big discount arena again. Now auto sales are trending down, and it seems we are once again into big discounts as the manufacturers all try to cling to market share. It seems a non-win game, but then we have all been enjoying the low gas prices, as the oil producers have done the exact thing. During the past four years auto sales increased 45%, amid ever increasing loan terms. The average loan term is now 70 months. Nearly 4% of all car loans are 90 days or more overdue. I think the automakers saturated the market and that saturation combined with the long loan terms and loans in technical default will bring a period of stagnation in auto sales. Even Corvette has not been exempt from this trend. In the past 10 years, calendar year 2014 was the best year for Corvette sales, and sales for calendar year 2017 are expected to be down about 30% from that peak. Note in this Corvette discussion that I am citing calendar year sales, not model year sales. I suspect we might well find a difference based upon the period.

Tesla continues to amaze me. One of our son’s friends was verbally dreaming about the new Roadster that Tesla has announced will be ready for delivery in 2021 or 2022. Knowing Tesla’s past claims, I would expect that delivery to be at least 3 years later, if it happens at all. What he didn’t acknowledge was that Tesla is charging an advanced payment of \$50,000 for each Roadster, and a down payment of \$250,000 (yes, you read that right) for the more limited Founders Series Roadster, which is the first version to be delivered. It seems Tesla is no longer satisfied with the \$1,000 reservation deposit they required for the Model 3. Of course, when the company is hemorrhaging cash at the rate of \$480K/hour it takes an ever-increasing source of cash to keep the company afloat. So far Elon Musk has had a great time taunting the stock short sellers, as Tesla’s stock price is still in the stratosphere, but analysts are predicting that Tesla will need to raise at least \$2 Billion in fresh capital by mid 2018. Stay tuned to Tesla news.

Thinking of Tesla and electric vehicles. Many drivers of electric vehicles are inclined to add a bumper sticker implying zero energy. I remember last year I reported that Puget Sound Energy had released their 2015 fuel mix for their electrical generation. In 2015, fully 60% of the fuel was coal or natural gas. PSE has now released their 2016 report. The use of coal and natural gas has dropped to 59%. I did note in the latest report that wind power now accounts for 9% of PSE’s electricity. Even here in the Northwest we are a long way from being able to say that our electrical energy is from renewable sources. We are making progress, but that change in energy sources does not come overnight.

I have never understood why some Corvette owners will put down Mustangs and vice versa. I have owned three late model Mustangs and two Corvettes. I have liked every one of them. Yes, they are different; but isn’t that the point? I do note that the 2018 Mustang with the Coyote engine now rivals the LT1 in the C7. The Coyote is only a 5.0 liter, but is rated at 460 hp at 7,000 rpm. This compares to the 6.2 liter LT1 rated at 455-460 hp @ 6,000 rpm. The Coyote is a multiple overhead cam engine with a 7,500 rpm redline, while the LT1 is redlined at 6,500 rpm. If you remember the formula: Horsepower = torque X rpm/5250, you can see that if the torque curve doesn’t drop off faster than the rpm’s increase, a higher redline will result in a higher horsepower number. Think of Ferrari, and their screaming redlines. The Ford engine equals the LT1 in horsepower with 20% less engine displacement. The extra

LT1 displacement does help with torque as the LT1 has about 10% more torque than the Ford, which does help us in our stop and go driving. One reason for the increase in the Coyote hp numbers is the increase in compression ratio (CR) to an almost unheard of 12.0:1. The LT1 CR is 11.5:1. Remember that every 1.0 increase in CR will equal about 4% extra horsepower simply due to increased efficiency. The Ford engine utilizes both direct fuel injection and port fuel injection. There is some experience that has shown that direct injection can leave a buildup of carbon around the exhaust valves that will gradually reduce horsepower. The idea of using direct fuel injection to allow a higher compression ratio and then still having some fuel injected at the port is that the port injected fuel will "wash" the back side of the valves, keeping the valves cleaner. If you read the Corvette forum you will find some people that speak "doom and gloom" prophesies of the LT1 direct injection and valve carbon build up. My personal experience has been mixed. Our son has an Audi RS4 with a direct injection V8. The Audi now has 90K miles and has had two fairly major services to clean the exhaust valves. Personally, we have a direct injection turbo Mazda with 120K miles, and have never touched the engine. Although I cannot prove that there isn't a big carbon buildup on the valves, the Mazda's performance doesn't seem to have diminished. One last point about the Coyote V8 Mustang. Fully 60% of the buyers will order a manual transmission.