

## **Under the Hood, July 2020**

Since we are a club of auto enthusiasts, I suspect many of you went to see the movie "Ford v Ferrari". Probably a smaller percentage of you also viewed "The Art of Racing in the Rain". There is an odd tie in between the two movies that initially caused confusion to me. I want to start with a bit of history of John Horsman. John graduated from Cambridge Univ in 1958 with a Master's degree in Mechanical Engineering. In England, many engineers started their careers as apprentices to more experienced engineers. John apprenticed with David Brown, of Aston Martin. Even today many Aston Martins have DB in their names. Visualize James Bond driving the Aston Martin DB5 in Goldfinger. In 1964 Horsman, along with John Wyer, moved to Ford Advanced Vehicles working on the Ford GT40 program. In the movie Carroll Shelby gets most the credit but Horsman was the engineer behind much of the GT40 program. After Ford accomplished their racing goals and the Ford program ended, J.W. Engineering was created. This organization then went on to support the Gulf Oil blue & orange GT40 and Porsche 917 programs which dominated much of racing in the late 1960's and early 1970's. Even with the last two generations of Ford GT cars, the blue and orange tribute color scheme remained popular. By the mid 1980's John had moved to Arizona and was the service manager for Gran Prix Motors, the first BMW dealership in the USA. Gran Prix Motors was active in all forms of auto competition. Finally, about 2006, John slowed down enough to write his memoir which he called "Racing in the Rain". This is where I got confused. We have a local author, Garth Stein, who is also a relatively well known racer. Garth wrote a fictional account of a local racer which was written from the viewpoint of his dog, Enzo. That book, which ultimately became a best seller and was made into a movie, was "The Art of Racing in the Rain". Of course, "Ford v Ferrari" prominently featured Enzo Ferrari, and then we find Enzo as the name of the dog in a different story. Of course, Enzo is in both books, but the book titles are so similar that I initially got confused when I read an article about John Horsman which concluded mentioning his book "The Art of Racing in the Rain". I had met Garth Stein, had read his book years ago, and went to see the movie as soon as it was released. Thus, my confusion, until I determined that there were two books with very similar titles. Now you know a bit more of the background of the Ford racing effort to beat Ferrari, and a key participant in the engineering efforts behind much of our racing history.

Porsche 959 and the Northwest connection. At the time it was introduced the Porsche 959 was probably the most technologically advanced sports car of the time. Sequential, adjustable vane, twin turbos supplied smoother power delivery from the 444 hp, 2.8 liter flat six. The car featured constantly adjustable all-wheel drive with the computer determining front to rear power split. The body was made of aluminum and Kevlar composite panels and featured many aerodynamic tweaks. The combination of all these features provided a top speed of 197 mph, an unbelievable velocity at the time. The initial 959 was a race car, and street versions were built in 1987-88 and sold for about \$225,000, supposedly half of what it cost Porsche to build each car. A total of 337 cars were built, including the prototypes. Later in 1992-93 another version was built for a selling price closer to \$400,000, but only 8 cars were built. When introduced the 959 was not street legal in the USA. The car had not been crash tested, nor did it meet pollution standards. Although not legal, where there is enough money, there is a way. There were rumors that there were three 959's in the Seattle area. Two were reportedly owned by the founders of a prominent software company and the third by the then owner of a Seattle sports team. Although I knew the rumors, I had not seen one of the cars in person until one afternoon about 1989. I was in my daily driver, a 1985 Mustang GT with the torquey (but only 205 hp) 5.0 liter V8. I was on Highway 520, climbing the hill from downtown Redmond to Overlake, when I looked in my rear-view

mirror and saw the guided missile bearing down on me. A quick move to the right allowed the 959 to whiz by me at somewhat over legal speeds. I knew what it was, and frankly was looking at the car so hard (and fruitlessly trying to catch up) that I didn't even bother to try to see who was driving. A year or so later, Bill Gates was importing a 959 (his second?) when US Customs discovered the car and impounded the car in California. Again, it helps to have money and Gates started lobbying to change the law. Gates is the main reason that in 1999 Congress passed the "Show or Display" law that allowed gray/black market cars that did not meet all our restrictions to enter the country with the premise that they were being used for show and display purposes only. After passage of this law the confiscated 959 was returned to Gates. Many other cars have been imported since the passing of this law, although they were required to be modified to meet our emission standards. I understand that the Gates' "homestead" has parking for 23 vehicles, which includes several very collectable Porsches. Of course, today we also have the 25-year-old rule that allows us to import vehicles at least 25 years old, even if they don't meet US standards. This 25-year-old rule is the reason we are seeing so many Japanese "tuner" cars and even the Japanese "Micro" cars now appearing at car shows and occasionally seen on the street. The imported Japanese cars are easy to spot as they are right hand drive. Last couple of discussion points on the 959. Initially, the 959 was listed as having a 5-speed manual transmission, with the added feature of a separate, lower, "terrain gear" implying that you might need a lower gear for fording the stream, or other off-road excursions. Drive by noise standards were officially tested with the 959 in second gear to meet the noise standards. Of course, the test was really done in third gear, which would typically result in lower rpms and lower sound pressure, which allowed the 959 to pass the noise test. Today, any 959 for sale is listed as having a 6-speed transmission, the silliness of the "terrain gear" long forgotten. I have found a couple of 959s for sale with listed prices ranging from \$1.25 to \$1.35 million. In one of the sales descriptions, I read notes indicating the power steering had been rebuilt for a cost of \$17,000 several years before, and recent servicing costing \$40,000. Ouch!

Truck manufacturer PACCAR continues to innovate in their tractor offerings. The Peterbilt division has built a dozen fully electric tractors that are being tested by several trucking companies. One of the applications has been in Napa Valley where Biagi Bros is using the truck to shuttle wine. This local delivery tends not to add a lot of daily miles, so the electrics are showing promise. The truck runs 4-5 daily round trips in a 10-hour period. When you think of the potential energy of an 80,000 lb. truck traveling at 45 mph, there is a lot of energy that can be captured by regenerative braking. After about 110 miles the truck needs a 4-hour recharge. Since this is a fixed route, the ultimate goal is to have short charging sessions whenever the truck is stopped for loading or unloading. The plan is to run this truck for two 10-hour shifts/day. Peterbilt engineers are also mentoring SAE students at the high school and college level. Locally, I think of the Western Washington Univ student group that has built so many solar racers and the smaller SAE formula cars that are sometimes seen at local autocrosses. Of course, Peterbilt has an ulterior motive. About 20 percent of the engineers employed at Peterbilt were involved in SAE teams during their education.

2020 and even 2021 are looking bleak for auto makers & dealers. Toyota has projected a reduction of North America production of 30% through October and will not predict when production will return to normal. Renault has announced long term reductions in production of 20% and has announced 15,000 job cuts. One might argue that since Renault does not sell cars in the US, they don't matter, but remember that Renault is closely tied to both Nissan and Mitsubishi. The overall forecast for the US car market in 2020 has been revised downward by about 20%. Used car sales are even worse, as I have

seen statistics showing sales down 29%. I suspect there are a lot of reasons for the declines, but certainly concern about our jobs is one of them. I also imagine that with all the people working from home, out of work, or not attending school that our commuting miles have been slashed, reducing the need for a replacement vehicle. One needs only to look at our freeways and highways to see that huge reduction in travel. If you have the means and inclination, now would be an excellent time to consider a new or used car purchase. I expect discounts will be widely available, but you will also be helping the manufacturers and dealers survive until the market improves.