Under the Hood, January 2021

California has announced that as of 2035 you will no longer be able to buy a new gasoline powered car in the state. It seems we are constantly searching for an alternative to the standard gasoline engine auto. Just a few years ago, many (especially Europe) were climbing on the diesel bandwagon since diesels are more energy efficient. In fact, many Europeans looked down on us backward Americans because we had not fully embraced diesels as they had. The diesel movement had momentum until the VW dieselgate emissions cheating fiasco. Now we are banning diesels from downtown areas in many parts of the world. There was a time when auto manufacturers around the world were exploring gas turbines as alternatives. We often find new advances in technology happen at the racetrack, and gas turbines were no exception. Rover (England) had been developing a gas turbine in competition with Rolls Royce. RR won the competition, but Rover continued work on their turbine. Rover built some turbine powered road cars as development vehicles. Rover then joined forces with BRM (English race car builder) and entered a gas turbine car for LeMans in 1965. I have seen video of this car, and while it didn't have a lot of acceleration, once rolling the top speed was competitive. The car finished 10th overall that year. The Rover-BRM is on display at the Heritage Motor Center in Gaydon, England. You might remember the STP-Paxton gas turbine Indy 500 racer from 1967, which probably had the most success, and certainly the most publicity. Ken Wallis designed a unique shaped Indy race car that featured a Pratt & Whitney gas turbine and all-wheel drive. Wallis initially offered the car to Dan Gurney and then Carroll Shelby; but both declined. He then approached Andy Granatelli of STP, who immediately visualized the advertising value of the unique racer. The STP-Paxton 1967 car was driven by Parnelli Jones. Jones qualified sixth at 166 mph, about 3 mph slower than the faster car. However, Jones qualified the car in full race trim, while everyone else was running a "stripped" qualifying trim. Jones absolutely dominated the race, leading most of the laps, until a bearing failure with 3 laps to go allowed AJ Foyt to claim the win. Shelby was never one to ignore a smack across the head and approached Wallis about building two cars for the 1968 race. The Shelby cars were sponsored by Botany 500 (the clothing manufacturer) and Goodyear. After the STP car domination of the 67 race, USAC (Indy governing body) established an inlet size restriction for the turbine. The inlet restriction was similar to the NASCAR carburetor restrictor plates for NASCAR's faster tracks. By limiting the inlet air area, USAC was limiting the ability of the turbine engine to generate power. During practice, before official qualifying, the Shelby cars were even faster than the STP car, despite the inlet restrictions. Phil Remington was Shelby's chief engineer and Phil discovered that at speed the Wallis design allowed body work deflection that effectively increased the inlet area. Phil immediately resigned from the team. Goodyear, always concerned about bad publicity, withdrew support. Both Shelby cars were withdrawn, before Indy 500 qualification, and neither ever raced. The STP car returned for 1968, but a crash ended its race. After the 1968 race, USAC banned both gas turbine engines and all-wheel drive, ending the Wallis gas turbine venture. Among domestic auto manufacturers, Chrysler experimented the most with gas turbines. Chrysler had been working on gas turbine design since the late 1930s. Chrysler first installed a gas turbine in a 1954 Plymouth, then a 56, 59 and 61. All of these cars were sent on cross country trips and other demonstration projects which garnered much publicity. In 1964 Chrysler built 55 special turbine cars. The bodies were designed by Ghia in Italy and were very advanced looking. The first 5 cars were development prototypes, but then 50 road cars were produced. The cars were not sold, but a competition was held in which drivers could request to be considered to "borrow" a Chrysler turbine car. Ultimately about 200 drivers, from 130 cities, were given the chance over the next two years to drive the turbine cars. They accumulated over one million road miles. At the conclusion of the

test, Chrysler reclaimed all 50 cars, and destroyed most of them. Chrysler retained two cars, five are in major museums and two found their way into private collections. The experiment proved that the turbine cars were smooth in operation and durable. However, the downsides were a rather complicated starting procedure and poor fuel economy. At least for the 1960's, the Chrysler experiment ended gas turbine automobile development.

Three of my least favorite automotive trends. The first is subscription services. Yes, we know that Amazon, Apple, Netflix, and many others have got us hooked and have our credit card numbers to bill us monthly for subscription services. All of us GM buyers are familiar with Sirius, the monthly/annual music subscription service. First the automakers eliminated what I thought was the best ever music system, CDs, and then at the same time GM gives us a 3-6 months trial to Sirius hoping that you will become a life time member. Yes, you can use Apple Play, but of course you pay a continuous service fee to Apple as well. Now Cadillac has Super Cruise, which is Cadillac's version of autonomous driving. Not well publicized is that Super Cruise is a subscription service. Of course, these subscription services are a ready-made profit center, since it is often an automatic charge, not closely monitored by the consumer. The second dislike is the dashboard screen that looks like a glued-on tablet. I blame Tesla for this trend as Tesla went the big tablet route to appear to be techier than the other manufacturers. However, it didn't stop with Tesla. Now many of our current buying options have ever larger tablets/screens that are not integrated into the dash. Do you remember when auto stereo theft was such a problem, that many stereos, or at least the stereo faceplate, could be unplugged and removed from the vehicle? Perhaps our next automotive feature will be a removable tablet from the center of the dash, so that we can use it on the patio. Please manufacturers, you all have large interior design staffs; at least try to integrate these screens into the dashboard. The third dislike appears to be the demise of the sporty sedan or coupe. I realize that many buyers want a SUV or crossover type vehicle. However, the demand for SUVs is so high, that many of our domestic manufacturers are deleting many, or all, of what we used to call regular cars. Impala is no more. Ford no longer makes a large sedan. Lincoln Town Car is no more. I don't covet a Town Car, but I had anticipated that the Lincoln Town Car type vehicle would survive seemingly forever as our airport livery of choice. I cannot imagine how a Ford Explorer is a better police vehicle than a Crown Victoria or Caprice PPV. The only attribute of the Explorer as a police vehicle that I can understand is that it sits higher, so the officer can see over all the other SUVs on the highway. Everybody is entitled to buy a SUV if that is what they want. My regret is that it appears the manufacturers are deleting so many conventional cars that some of us cannot buy what is not available.

After a slow start the two C8R teams came roaring back to dominate the IMSA GTLM (Le Mans) class. Car #3 driven by Jordan Taylor and Antonio Garcia won the last event in October held at the rain drenched Charlotte Motor Speedway. This race was part road course and part oval. This last win cemented their 2020 championship in GTLM winning 6 or 11 races. Congratulations to the C8R teams. We will all watch to see what happens with Corvette in IMSA. Will Corvette move to the GTD (Daytona) class as some have speculated due to declining participation in GTLM? In other C8R news, former Porsche hot shoe Nick Tandy (Age 36) is replacing long time Corvette racer Oliver Gavin (Age 48) who says he is retiring. Really? Stay tuned.