FROM THE ARCHIVES

MOTIVE OPTIONS FOR THE MODERN MOTOR VEHICLE - (Written 2014)

By Neville Barlow

The modern-day car buyer now has a great range of motive power to select from to propel his new car. From the earliest documented car, the Benz "dog cart" in 1896, really the only thing in common over this time of 118 years ago is that we still have wheels.

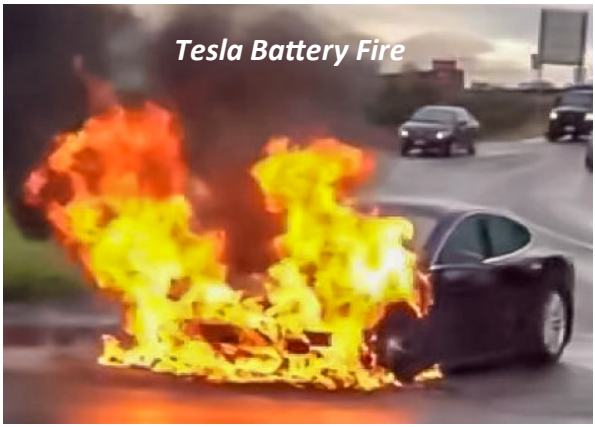
1886 Benz "Dog Cart"

In the last 5 years we have seen on our streets the Electric car.

Many motoring journalists are now saying – if you want to save the planet, do not buy an electric car.

The biggest problem is the Lithium battery, the production of which causes 3 to 4 times the carbon to escape into the atmosphere.

The most prominent electric car manufacturer is Tesla, in America. Problems have occurred with fires in cars similar to that which Boeing had with its Dreamliner aircraft.



Tesla Battery Fire

While promoter Elon Musk charges ahead with a US$5 billion battery factory in the U.S.A. it is said better batteries are being made in Japan.

These batteries, it would seem, need to be replaced every 8 years at a present cost of $10,000.

Recharging time is a minimum of 6 hours but can be quick charged but their life is reduced to about a third.

Many countries are offering large subsides to buyers of electric cars in order to, they say, reduce carbon emissions. I wonder where this money is coming from and do these subsidies also increase pollution. The Chinese Government has stated that electric vehicles must by 2016 make up 30% of all vehicle purchases. With most Chinese power coming from fossil fuel, it has been calculated that this will make the problem worse.

The hybrid or electric extended vehicle such as the Prius has its place. These vehicles are powered by batteries and have a petrol engine that charges the battery as they move along. Unfortunately, these petrol engines seem to have issues with fuel efficiency as similar diesel engines can now perform better. Formula One motor racing is at present using hybrid power and will advance this system of motion. Hybrids show the most potential as a present-day acceptable vehicle to fill the gap until something better comes along.

This may be in many people's opinion of the Hydrogen Fuel cell. The only emission is water vapour and refueling time is a matter of seconds. These cars are already on American roads and show a greater range than electric cars, however, refueling stations are limited. Elon Musk, the Tesla man, has claimed "electric good – hydrogen bad". He also claims that hydrogen can be expensive and dirty to produce. It depends on which side you are on.

Diesel vehicles are now coming under greater scrutiny. Boris Johnson, the Mayor of London, said, millions of people have been unfairly seduced into buying diesel vehicles, by being told they were greener. Some European figures show 3 out of every 5 vehicles purchased have been diesel. It now appears that older diesel vehicles have now been proven to be more polluting. Scientists believe diesel produces tiny particles of nitrogen oxide that damage human health. They also believe diesel causes the deaths of 7000 people in Britain every year. While electric vehicles are welcomed free of charge in central London, diesels will be charged £10 for each visit.

On the horizon is the autonomous vehicle, welcomed by some but feared by others. Many of these vehicles being experimented with at present are electric powered. An example is the much-hyped Google car.

Google Car

As reported before, these vehicles have clocked up over 800,000 ks in the U.S.A., apparently without causing major mayhem. Self-driving vehicles now require a permit to operate in California where Volkswagen, Mercedes and Lexus have a number of cars. Restrictions are now placed on the experimental "drivers" and companies trialing such cars.

The combination of computer control and electric power, whether one shudders or claps I think is something for the future.

Lastly, we come to the internal combustion engine. There has been many different fuel sources, such as, compressed natural gas, the coke burners during the Second World War, Kerosene, Methane gas and many others.

The overriding fuel source has been, of course, petrol. Every person who has driven a car will be familiar with petrol. It is a volatile liquid but has been managed safely and is now more available due to increasing methods of extraction.

It is interesting to note that the U.S.A. is now self-sufficient in supply of petrol. Massive improvements in fuel efficiency has occurred in petrol cars in the last few years as well as reduced carbon emissions. A great example of this is the upcoming new Jaguar XE. Here is a car of 2 litres engine capacity that will have a fuel consumption of 3.7 litres per 100ks and emissions of 99 grams of CO2.

Some of us will remember the Jaguar MK7 in the 1950's that struggled to make 16 mpg compared to today's XFR with a nearly 50% bigger engine and 3 times the power running at 26mpg.

2020 Jaguar XE

Many factors point to a continued long reign of the petrol engine.

We now have a long range and safe form of transport that is backed by easy access to refueling, greatly reducing emissions and hugely reducing needs for repairs. Jaguar, who have topped the JD power charts for several years continue to strive for greater improvements. I see petrol powered vehicles being dominant for at least 20 years.

Neville