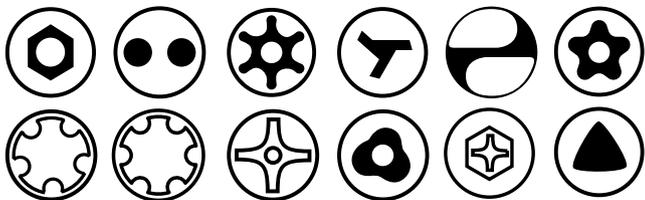


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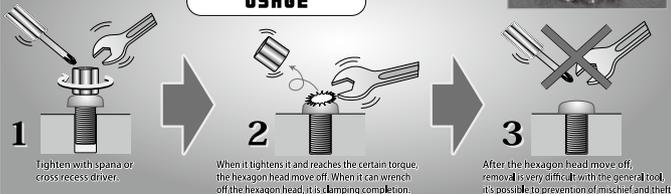


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Opportunity or Challenge ?

The Emerging Electric Cars Market for Fastener Manufacturers

by Shervin Shahidi Hamedani

The concept of lightweight materials and design in various industries such as aviation and automobile has been always playing an essential role in product design. In recent years, global trends toward CO² reduction has considerably increased the importance of this topic.

In the automotive industry, the Electric Vehicle (EV) market has received special attention in recent years. This market is growing fast supported by its environmental friendly and resource efficiency features. As this sector is developing and growing, its supply chain is improving fast in order to keep up with the pace, technically, financially and in many other aspects.

The growth of the EV market brings new opportunities for the part manufacturers, as it is a new revenue stream for them, while they may face various challenges. In this scenario, those manufacturers who are able to seamlessly transform their production lines and processes to support production of required parts for electric vehicles gain more benefits compared with those old-fashioned manufacturers.

If we look at body style and exterior design of electric or gasoline vehicles, they look alike, maybe the only difference could be the tail pipe in gasoline vehicles. However, internally, they have very different components and mechanism. In some cases, only 30% of electric vehicle's components parts may be the same as those of gasoline vehicle. There are several unique functionalities in electric vehicles which require new and purpose-built components. Those components cannot be supplied by those auto part manufacturers who only produce parts for petrol fuel vehicles.

As reported by Bloomberg NEF (New Energy Finance), in 2018, more than 2 million units of electric vehicles were sold globally. This is obviously a big jump if we look at the statistics in 2010, when only a few thousands of units of electric vehicles were sold in the market. In other words, traditional petrol vehicles are already at their peak and they may never recover with the current situation, unless major investment happens in this market. Otherwise, the sales in electric vehicles continue the healthy growth and are expected to reach 10 million in 2025 and reach about USD 567.3 billion, growing at a CAGR of 22.3% from 2018 to 2025. It is also projected that, by 2040, electric vehicles register more than half of the total passenger vehicles sales.

Emission regulations are getting tighter and government are getting more serious about it. As a very good and recent example, in last Sept, UN Secretary-General, called on all leaders from all around the world to come up with concrete realistic plans to enhance their contributions and to net zero emissions by 2050. This draws a very bright future for electric vehicles production and manufacturers who can provide electric vehicles parts and components. However, what is highlighted here is about new vehicles and not about existing vehicle on the road which currently counted for more than one billion units of vehicles. In this situation, the percentage of total electric vehicles compared with the global vehicle fleet, is not even one percent! This explains that, auto part and fastener manufacturers can leverage on their existing clients while venturing into the new electric vehicle market, but if they want to be dominant players, the transformation process must be done faster and smarter.



The main attention in the electric vehicle market is currently paid to passenger cars, but technology advancement, more specifically battery technology, enables more models to be built and expanded into other transport segments. For the EV market to develop and expand at a faster pace with a more sustainable and profitable rate, significant investment must be made into expanding and enhancing the required charging infrastructure for electric vehicles as well as battery development and exploring different options in battery types, materials and durability.



Overall, the expansion of electric vehicles brings more opportunities for fastener manufacturers than challenges. Embracing new technologies, strategic partnership, creative design, and innovative process and achieving gains in light weighting could drastically reduce the risk of business failure in this fast growing market and improve business success. ■

The good news for those manufacturers and exporters to the Chinese automotive market, is that China is the market leader in electric vehicles in all segments and it is projected to continue its leadership at least for the next 20 years. Electric vehicle segments include buses, commercial vehicles and passenger cars. All these vehicles require millions or maybe billions of fasteners. Fastener manufacturers should grab this opportunity and get ready to produce and ship their fasteners into this rapidly growing market. Some of the relevant example of fasteners in this market could be battery retention bolts, lightweight non-magnetic fasteners, and fasteners with electrically isolating coatings. In general, fastener manufacturers who are able to complement electric vehicle manufacturing distinctions, such as replacing steel fasteners with lighter aluminium ones, will benefit from this market.

The European electric vehicles market takes the lead in a competition with the US, while Asia Pacific and emerging economies go electric much slower than those market leaders. Two and three-wheeled vehicles are more attractive for electrification within south east Asian countries as well as India. On the other hand, Japan, Korea, and Australia are embracing the technology fast and aggressively expanding their electric vehicle markets. For sure, government policies and technology innovations are the major drivers in this market and increase the adoption of electric vehicle usage.

The key driver of growth in this market is the substantial expansion of the technology, regarding the vehicles themselves and also the infrastructure and accessories required to support the market. It is very obvious that fasteners play essential roles in EV manufacturing but more interestingly fasteners are also necessary components in charging units, battery casings and general infrastructure equipment which all need to have high quality fasteners in order to provide reliable and secure settings for this market.

The rapid growing consumer demand for electric vehicles, together with the technological advancement have direct effects on international supply chains in the automotive market, such as the fastener industry. It is a real opportunity for every single fastener manufacturer to be involved in such a cutting edge field by delivering high quality products and services in this market.

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