

## *Robin Industries is leading the “CHARGE” with molded components for electric vehicles*

Electric and hybrid vehicles today are increasingly making their way into the lineup of every automotive OEM. Known for their environmental friendliness and fuel-efficient characteristics, these vehicles are becoming more accepted and they promise to change the way we drive in the future.

The addition of ever developing autonomous vehicles has resulted in the need for more and more electronics and electrical components on modern vehicle platforms. Robin Industries has been on the cutting edge of these developments, working with major vehicle manufacturers for the design and implementation of molded components in support of increasing vehicle electrification.

We have been working with traditional OEM's (such as Ford, GM and FCA), as well as newer companies (such as Rivian, Tesla and Karma) on both hybrid electric and full electric vehicle platforms.

While grommets, seals and other molded components for electric vehicles have many similarities to those of the traditional gas combustion vehicles, there are some distinct requirements that must be considered. These include the need for low carbon content materials to help reduce potential conductivity, as well as specialized materials developed to withstand higher temperature environments. Different sizes and shapes of components are also sometimes required to accommodate larger battery cables, etc.

As always, Robin works closely with OEM design engineers to tailor specific solutions that will best serve customer needs and meet all specialized vehicle requirements. Our experience with the rapidly expanding hybrid and electric vehicle segments allows us to be a key supplier integral to the success of these programs.

We are proud to contribute our expertise for new vehicle technologies that will lead to a better environment for all!

### wise words

“Try not to become a man of success. Rather become a man of value.”

—Albert Einstein

## Looking Back

### Guess the Year...

- Hurricane Andrew devastates the Florida shore and causes roughly \$27 billion in damages to Southern Florida and \$250 million in the Bahamas.
- The comedy-drama film, “A League Of Their Own” is released.
- Don’t Copy That Floppy was a popular anti-copyright infringement campaign run by the Software Publishers Association (SPA).
- The Summer Olympic Games, were held in Barcelona, Catalonia, Spain.
- Nintendo releases Super Mario Kart for the Super Nintendo Entertainment System.
- Bill Clinton wins the presidential election to become the 42nd President of the United States.
- The LA Riots occur following the acquittal of the police officers involved in the beating of Rodney King the previous year. According to the LA Times, more than 60 people died over five days as the city was looted and set on fire.
- The Washington Redskins win the Super Bowl XXVI, beating the Buffalo Bills, 37-24.

## {terrific trivia}

- What African country was officially known as Zaire between 1971 and 1997?
- A blunderbuss is an obsolete type of what?
- What is the highest number found on a standard roulette wheel?
- Which fast food restaurant chain once tested bubble gum broccoli as a children's menu item?

4) McDonalds  
1) The Democratic Republic of the Congo (2) Firearm (3) 36

## {top 10} list

### 2019 New Year's Resolutions

- Diet or eat healthier (71 percent)
- Exercise more (65 percent)
- Lose weight (54 percent)
- Save more and spend less (32 percent)
- Learn a new skill or hobby (26 percent)
- Quit smoking (21 percent)
- Read more (17 percent)
- Find another job (16 percent)
- Drink less alcohol (15 percent)
- Spend more time with family and friends (13 percent)

Source:  
Inc.com

## Did You Know?

- The term "brand name" originated with whiskey producers who branded their names on the barrels they shipped out.
- Fire escapes, windshield wipers, and bulletproof vests were all invented by women.
- Pieces of bread were used to erase lead pencil marks before rubber came into use.
- "Yahoo" is an acronym for "Yet Another Hierarchical Officious Oracle."

## Electric Vehicle Benefits and Considerations



Hybrid and plug-in electric vehicles can help increase energy security, improve fuel economy, lower fuel costs, and reduce emissions.

Because transportation accounts for nearly three-fourths of total U.S. petroleum consumption, using more energy efficient vehicles like hybrid and plug-in electric vehicles can have a direct impact. This not only supports the U.S. economy but helps diversify the U.S. transportation fleet and reduce the impact of international supply disruptions. All of this adds to our nation's energy security.

Hybrid electric vehicles (HEVs) typically use less fuel than similar conventional vehicles, because they employ electric-drive technologies to boost efficiency. For example, the 2018 Honda Accord Hybrid has an EPA combined city-and-highway fuel economy estimate of 47 miles per gallon, while the estimate for the conventional 2018 Accord (four cylinder, automatic) is 33 miles per gallon. Plug-in hybrid electric vehicles (PHEVs) and all-electric vehicles (EVs) are both capable of being powered solely by electricity, which is produced in the U.S. from natural gas, domestic coal, nuclear energy, and renewable resources. Hybrid

and plug-in electric vehicles can have significant emissions benefits over conventional vehicles. HEV emissions benefits vary by vehicle model and type of hybrid power system. EVs produce zero tailpipe emissions, and PHEVs produce no tailpipe emissions when in all-electric mode.

The life cycle emissions of an EV or PHEV depend on the sources of electricity used to charge it, which vary by region. In geographic areas that use relatively low-polluting energy sources for electricity production, plug-in vehicles typically have a life cycle emissions advantage over similar conventional vehicles running on gasoline or diesel. In regions that depend heavily on conventional fossil fuels for electricity generation, PHEVs and EVs may not demonstrate a strong life cycle emissions benefit.

Although fuel costs for hybrid and plug-in electric vehicles are generally lower than for similar conventional vehicles, purchase prices can be significantly higher. However, prices are likely to decrease as production volumes increase and battery technologies continue to mature.

## Upcoming Events

**MD&M West at**  
**Anaheim Convention Center**  
February 5 - 7, 2019 • Booth #2039  
Anaheim, CA  
[www.mdmwest.com](http://www.mdmwest.com)



**MD&M East at**  
**Javits Convention Center**  
June 11 - 13, 2019 • Booth #1721  
New York, NY  
[www.mdmeast.com](http://www.mdmeast.com)



*See you at the shows!*

