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Kripli's Corner

CONDOLENCES ANDCARDONE



Joe Kripli

The APRA family wishes to express our condolences to the families of the four industry leaders, Don Bigler, Steven Haas, Bob McLaren, and Louis Wolf, who recently passed away. They all made a difference

and supported our association and the remanufacturing world throughout the years, but more importantly, they were just great people. Please see their obituaries on page 22-23 of this magazine.

By now most of you will have heard that First Brands Group, LLC has acquired Cardone Industries, Inc. on July 20th, 2023. Some of you may not be aware as I have not seen a formal press release anywhere in the papers or the internet, although there is an article in the Philadelphia Business Journal titled **"Cardone Industries acquired by Michigan firm and enacting layoffs, sources say."**

The article goes on to say that many of the sources are employees. An odd way for what was once the largest independent remanufacturing company in the world to be acquired and seemingly dismantled. My thanks and I think all of our thanks should go out to Michael Sr., Michael Jr., and Michael III, for what their family created over the years and what they did for the remanufacturing industry. At one point, they were the largest employer in Philadelphia (that's impressive). Maybe you were a supplier, a customer, or a competitor, but I think we all respected what they built over the years. The ripple effect of the acquisition will be felt throughout the supply chain and all the way to the core brokers. I visited the plant several times over the years, always

impressed that you needed to ride a golf cart to see the 6.6 million cores (at the time) that they had in their inventory. They articulated the "Right to Repair" early on going up against the OEMs' and then gaining the OEMs' respect and remanufacturing products for the OEMs'. Another thing sticks in my head from a visit in the early nineties, they didn't have conference rooms, their rooms were labeled "Decision Rooms". Again I felt they were ahead of the curve, getting outside the "box".

They remanufactured products at a time when people didn't think it could be done. OEMs scoffed at them when they heard they were remanufacturing their products that they thought could not be remanufactured. Their passion for the industry intertwined with their passion for God by having chapels on-site: it's something I have never experienced anywhere else in our industry.

I realize the family has been out of it for a few years, but my memories are when they were running it, especially in the 80s, 90s, and 2000s, without a doubt they were the benchmark for many years. So, as I write this, I don't know what will happen to the people, the buildings, or the brand, but I thank the Cardones for helping to build a great industry and their support of APRA over the years.

We will be having the BigR Symposium again in Las Vegas on October 30th, the day before the AAPEX Show. Please mark your calendars.

I always welcome response or rebuttal to my comments at kripli@apra.org and sometimes my editorials do not reflect the position of the APRA.

Respectfully,

Joe Kripli
APRA President

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INDUSTRY CALENDAR

PERA Convention

September 19-22, 2023
Houston, TX

BigR Symposium

October 30, 2023
Las Vegas, NV

AAPEX Show

October 31-November 2, 2023
Las Vegas, NV

SEMA

October 31-November 3, 2023
Las Vegas, NV

RIC-RIT World Remanufacturing Conference

November 7 – 9, 2023
Springfield, Missouri

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Arrivals

Time	Destination	Gate	Status
10:15	SEA ROUTE	C14	DELAYED
10:27	SEA ROUTE	B26	DELAYED
10:45	SEA ROUTE	C10	DELAYED
11:11	OEC GROUP	A17	ON TIME
11:14	SEA ROUTE	B12	DELAYED
11:18	SEA ROUTE	A7	DELAYED
11:45	SEA ROUTE	B4	DELAYED
12:00	SEA ROUTE	A11	DELAYED

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PACKAGES FROM CHINA ARE SURGING INTO US

Some say \$800 duty-free limit was a mistake.

KEVIN FREKING

Associated Press

WASHINGTON – Conservatives anxious to counter America's leading economic adversary have set their sights on a top trade priority for labor unions and progressives: cracking down on the deluge of duty-free packages coming in from China. The changing political dynamic could have major ramifications for e-commerce businesses and consumers importing products from China valued at less than \$800. It also could add to the growing tensions between the countries.

Under current U.S. law, most imports valued at less than \$800 enter duty-free into the United States as long as they are packaged and addressed to individual buyers. It's referred to as the de minimis rule. Efforts to lower the threshold amount or exclude certain countries altogether from duty-free treatment are set to become a major trade fight in this Congress.

"De minimis has become a proxy for all sorts of anxieties as it relates to China and other trade-related challenges," said John Drake, a vice president at the U.S. Chamber of Commerce, who argues that the current U.S. law should be preserved.

The rule speeds the pace of commerce and lowers costs for consumers. It also allows U.S. Customs and Border Protection to

focus its resources on the bigger-ticket items that generate more tariff revenue for the federal government.

The volume of products coming into the U.S. that benefit from the de minimis rule has soared in recent years. Congress raised the U.S. government's threshold for expedited, duty-free treatment from \$200 to \$800 in 2016.

The volume of such imports has since risen from about 220 million packages that year to 771 million in 2021 – with China accounting for about 60%, according to the government – and 685 million last year.

A former U.S. trade representative told a House panel last month. "Nobody dreamt this would ever happen. Now we have packages coming in, 2 million packages a day, almost all from China. We have no idea what's in them. We don't really know what the value is."

Congress is being urged to get rid of the de minimis rule altogether, or take it to a much lower amount, say \$50 or \$100. Foreign companies are taking advantage of the "loophole" and "putting people out of work in stores, they're putting people out of work in manufacturing."

Last year, House Democrats pushed to prohibit Chinese-made goods from benefiting from the special treatment for lower-cost goods. That move was part of a larger measure that boosted investments in semiconductor manufacturing and research.

In the rush to get a bill passed before the 2022 elections, Democratic leaders jettisoned provisions without bipartisan buy-in. The trade provision was opposed by important U.S. business groups and key Republican members of Congress, so it didn't make the final bill.

Fast forward just a few months and it's clear the political dynamic has shifted – and quickly.

In its first set of recommendations, a new House committee focused exclusively on China called for legislation that would reduce the threshold for duty-free shipments into the U.S. with a particular focus on "foreign adversaries, including the (People's Republic of China.)"

The Select Committee on the Chinese Communist Party said that exploiting the \$800 threshold may be a major avenue through which Chinese companies selling directly to American consumers can circumvent U.S. law designed to prevent the sale of goods made with forced labor. The committee also said Customs and Border Protection "could not reasonably scrutinize" goods sent under the \$800 threshold for forced labor concerns because of the sheer amount of products coming in.

The committee is most concerned about retailers Temu and Shein, which ship directly to consumers in the U.S. In a report released Thursday, it said the two companies alone are likely responsible for more than 30% of all de minimis shipments entering the U.S. each day, or nearly 600,000 a day last year.

APRA Comment: This is how you can buy a Starter, Alternator, or Turbocharger from China, receive the unit in 4 days via DHL, and not pay the tariff. ■



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ALL IN THE FAMILY

BY NIELS V CHRISTIANSEN

Armed for success: The good times keep on rolling for Autoline Products Ltd in Winnipeg, one of the longest running success stories in the North American remanufacturing industry. After seven decades of organic growth based on a solid company culture, strong local roots, steady common sense leadership and a bit of luck, the outlook for the company is as good as ever.

What started in 1967 as a repair shop for carburetors, magnetos and distributors for the locals in Winnipeg was soon transformed by its founders into a supplier of remanufactured parts.

“The demand for service was greater than anybody had dreamed of. Somebody in the repair shop thought, “It would sure be nice if we had a replacement unit on the shelf and could provide the customer with a part with no turnaround time,” said current Autoline General Manager Greg Sulyma. “As luck would have it, this was exactly when the industry was ready for it. That was the beginning of Autoline as we know it today.”

It was also the beginning of an internal daily conversation that is still ongoing about what to do next. The carburetor line was huge for the fuel system offerings and set Autoline on its path to growth. Over time, as the local shop grew into a 50,000 square foot remanufacturing, warehousing and distribution center, other distribution warehouse locations were opened across Canada and the U.S.

Today, with a majority of its 70 employees churning out more than 100,000 high-quality parts per year at the Winnipeg remanufacturing plant, Autoline supplies some of the leading aftermarket chains with nine lines of parts, including carburetors, multi-port fuel injectors, racks, power steering pumps and

calipers, in the process keeping hundreds of tons of scrap out of landfills.

At its core, Autoline has always been family owned and run as a family business. Most of the employees in Winnipeg have been with Autoline for decades. Job openings are rarely advertised but filled by word of mouth, often with close relatives of existing employees. It's not unusual for employees to retire with more than 40 years of tenure. All employees are trained in-house, and management is promoted from within with few exceptions.

“We are proud of our longevity, we are proud of our culture and knowledge and you cannot teach experience. It all adds up to excellence and quality,” said Sulyma, who is himself a product of this process. “And most of all, we're proud of our family of employees.”

Sulyma celebrates his 40th anniversary with the company this year. He joined shortly after his high school graduation and like everyone else he started his hands-on training by taking apart cores for remanufacturing - in his case, water pumps.

“The original owners drilled home the message that still resonates: Never ask somebody to do something that you haven't done yourself,” he said. “We do have a hierarchy, but I'm as happy being with a new employee in the lunchroom as with upper management. It's how it's always been at Autoline. We talk like family. We look out for each other. We're all in this together. And we understand that nothing is more valuable than our employees.”

The longevity of the company, the unique staff retention and the organic growth over the generations are both the reasons and proof that Autoline is able to navigate the changing remanufacturing landscape. And these days, the daily



conversation in the organization is about how Autoline will fit into the remanufacturing industry and market of the future.

"It's always our focus to be strong at what we do today, but we're also always looking at what's next, what new line and new market to take on, what the future may bring and how we fit in," said Sulyma. "We sit here every day talking about how we take Autoline into the next generation, about how to be on top of the new technologies, whether EVs, hydrogen or something else."

It's a mixed picture these days.

"We've looked at the battery side and other EV parts, but we're not committed," Sulyma continued, referring to being cautious about the spread and staying power of EVs and the needed infrastructure, not least as evidenced in a huge country like Canada. "EVs may be the future for our industry and we'll be keeping a close eye on it," he added. "In the end the consumer holds the key."



Educating consumers about the value and importance of demanding remanufactured products is another crucial challenge for Autoline as it is for the entire remanufacturing industry.

Today, as Autoline and the reman industry are being asked to find their place in the circular economy of a sustainable global future, Autoline leadership is questioning why not enough is being done by government, the industry and industry organizations at all levels to prepare for the reman-revolution ahead and the circular economy they all want and work towards.

"We have people concerned about getting their coke cans in the right bins for aluminum can recycling everywhere - including right here in our own plant. It's been going on and incentivized for years, and rightfully so," said Sulyma. "But where are the incentives where it really counts these days - for remanufacturing and circular economy? Where is the education of the public and the end consumers about the value and importance of remanufactured products over wasteful and often inferior "new" parts and the old landfill mentality?"

"We all know that our remanufactured parts are as good as new OEM parts and often better because we have the luxury of knowing the failure points and soft spots and eliminate them

in our remanufacturing process. Yet, consumers still perceive the inferior new replacement parts that come pouring in from overseas as preferable."

Autoline management talk about these issues and many others in their continuous deliberations.

Yet, as Sulyma points out: "If Autoline learned one thing through it all, it is to never turn your back on "older" product lines. Distribution today is such that if you have the part anybody can know about it with a click of their mouse. Just google it and Autoline comes up."

It's a philosophy that has worked well for decades at Autoline, and it's sound advice in these times of

uncertainty about what's to come and reports that consumers everywhere are likely to hold on to their old vehicles longer than they used to.

Added Sulyma: "So don't give up on these older technologies, because they can be lucrative if you have them. It's a big part of our focus, to move forward while staying true to what we do." ■



IS HYDROGEN FOR HEAVY TRUCKS A FANTASY?

BY JIM PARK

All major truck OEMs have plans for FCEVs in their current product portfolios. They are all relying on heavy subsidies from various governments, but when the subsidies disappear, they will still cost three times as much to operate as a battery electric truck, says researcher, David Cebon.

Photo: Hyundai

While researching a previous story about hydrogen trucks, I came across several references to the work of Dr. David Cebon. He's a professor of mechanical engineering at Cambridge University in England and a fellow of the Royal Academy of Engineering. What further attracted me to David was his trucking background.

He is director of the Cambridge Vehicle Dynamics Consortium and the Centre for Sustainable Road Freight. He leads Cambridge University Engineering Department's Transport Research Group.

Further, he has authored or co-authored more than 150 peer-reviewed papers on dynamic loads of heavy vehicles, road and bridge response and damage, advanced suspension design for heavy vehicles, heavy vehicle safety and mobility, heavy vehicle fuel consumption and the micromechanics of asphalt deformation and fracture.

He earned his PhD in the early 1980s looking at road damage caused by trucks. He has studied many different aspects of heavy vehicle dynamics and performance, and for the past 15 years or so, he has been focused on fuel consumption, emissions, and productivity.

"I was always interested in productivity," he told HDT. "One of the things that I've worked on heavily over the years is long combination vehicles and high-capacity vehicles, which is one of the greatest ways to improve fuel consumption."

Unlike a lot of academics and researchers, he knows trucks like he knows the back of his hand.

In short, unlike a lot of academics and researchers, he knows trucks like he knows the back of his hand.

He also has very strong opinions on the use of hydrogen as a heavy-truck energy source: he doesn't like the idea, and he's got strong and well-reasoned arguments against it. We are presenting only his side of the story here. We welcome opposing points of view. Please contact the author, or chime in the comments, if you'd like to share your thoughts on the matter.

Hydrogen: Not the Perfect Fuel for Trucks

There are several inherent problems with hydrogen, Cebon says. Each one could technically be a deal breaker without willfully ignoring the fundamental questions surrounding its use.

The first is efficiency. Cebon says the process of electrolyzing water to produce hydrogen, compressing and transporting it, running it through a fuel cell to produce electricity to drive to motors is only about 25% efficient.

He says, for example, if you start with 100 kWh of electricity for electrolysis, the energy contained in the hydrogen you have produced is only 75% of what you started with. When you

combine that with the roughly 50% efficiency of a fuel cell, you're now down to about 37.5% of the energy you started with. When you factor in the losses from compression, transportation, and the motors themselves, Cebon says the energy yield to the wheels is about 25% of the initial 100 kWh.

"You throw away 75% of the energy you start with as heat into the into the environment," he says. "From the 100 kilowatt hours you started with, you have only 25 kWh left to drive your truck."

That's physics. There's no arguing with that. Though you might gain few percentage points here or there allowing for advances in technology, you're still looking at huge losses in the conversion process.

It's one thing to talk about efficiency, but at the end of the day, somebody still has to pay for that 100 kWh of energy, even though you're only using 25% of what you're paying for.

"This means that your 25 kWh of electricity is actually costing you about four times more than it would have otherwise," he says.

In comparison, the energy conversion losses in a battery electric chain are much less. It's on the order of 70-75% efficient, wire-to-wheel, so to speak. The efficiency ratio between a battery powered truck and a hydrogen powered truck is about three to one (3:1).

"That means you'll need three times more electricity to start with for a hydrogen vehicle than an electric vehicle," Cebon claims. "So, the arithmetic is, to power your hydrogen truck per mile will cost you three times more than it will cost you to power an electric vehicle."

And that's just factoring the cost. The upstream implication is, by extension, we will need three times as much renewable generating capacity to make up for all the conversion losses. That's three times as many windmills or solar panels or hydroelectric generating capacity. You'll also need three times as much land for all those windmills and solar panels, three times the capital cost for all those turbines, three times the maintenance cost, etc.

"A factor of three is a lot," he notes. "Hydrogen trucks will cost up to three times as much to power as a battery truck."

Capital Costs of Fuel-Cell Trucks

The next significant barrier to fuel-cell trucks is the capital cost. He notes that BEVs and FCEVs are fundamentally the same: they both have electric motors, invertors, batteries (though the FCEV battery is considerably smaller), controllers, and such. With the FCEV, you also have the fuel cell, the hydrogen storage tanks, and a bunch of what he calls delicate and expensive equipment.

"Fuel cells are full of platinum," he points out. "And because hydrogen is such a difficult material to work with [owing to the tiny size of the molecule], the seals and the materials in the system have to be good enough to prevent leakage at extremely high pressures."

We all know these advanced trucks will be more expensive, but nobody is sure exactly how much more because much of the actual cost is hidden by subsidies at this point. And to be fair, we don't have really accurate predictions on how far the cost will come down once manufacturing scale is achieved. That said, Cebon and his research team at Cambridge University's Engineering Department recently put out tenders to buy a small fleet of BEV and FCEV trucks for field tests.



"That forced the OEMs to actually give us quotes for the price of vehicles," he says. "And that's important, because up till now, it's just been speculation what the price would be at the point where you say, we're actually going to buy it, you have to deliver it on a certain date. That's a different deal. Now we have to have a real price."

The price he was quoted by several European truck makers for a 600 kWh battery electric truck delivered in the UK was £250,000 to £300,000 (US \$310,000 to \$375,000). The quoted price of the fuel cell trucks was £600,000 (US \$745,000).

"If you wanted to buy a hydrogen truck today in the UK, it will cost you double what the battery electric truck would cost, and three times the energy costs to run it," he says.

Practical Applications

Clearly, based solely on price, most fleets wouldn't opt for a fuel cell truck if a battery truck will do the job.

Cebon and his team have concluded, based on analysis of "tens of thousands" of truck journeys around the UK, "there's really no logistics in the UK that you can't do with a battery electric vehicle charging when the opportunities present themselves during the day."

As he sees it, trucks will have charging opportunities during statutory driver rest stops (45 minutes off following 4.5 hours of driving), and at depots and warehouses when picking up or delivering loads.

Continued on page10

Is Hydrogen for Heavy Trucks a Fantasy? continued



“If you can fast charge on the dock while loading and unloading, you can get at least a half-way to a full charge in that period,” he estimates. “So, if you use those opportunities in the logistics day to fast-charge, you can run all UK logistics on a battery electric vehicle.”

Fuel cells, like diesel engines, are only about 50% efficient, meaning you get only half of the energy to the wheels that you paid to put in the storage tank.

Photo: Jim Park

Here’s where Cebon’s calculus gets a bit murky.

He readily acknowledges logistics in the UK is significantly different from the way we do trucking here in the United States. For one thing, at about 50,000 square miles England has roughly the same land mass as the state of Alabama — but 10 times the population density. That means more, but shorter trips are required to satisfy the logistics needs of that population.

Here, short-haul and regional service is a significant percentage of our trucking operations, but long-haul is a factor and it’s not going away. Hydrogen trucks are often positioned as the long-haul alternative to diesel.

That’s a whole other conversation. Sticking with the hydrogen theme for the time being, Cebon says there are still more concerns about hydrogen that make it a less than attractive option.

Hydrogen’s Carbon Footprint

Yes, you read that right. Certain sources of hydrogen production produce enormous quantities of CO₂ — the greenhouse gas we’re trying to eliminate by decarbonizing transportation. Hydrogen’s dirty little secret is that most of the hydrogen produced today comes from fossil sources.

According to the U.S. Department of energy, most hydrogen produced today in the United States is made via steam-methane reforming, a production process in which high-temperature steam (700 degrees Celsius to 1,000 degrees Celsius) is used to produce hydrogen from a methane source, such as natural gas. We refer to this as “gray hydrogen.”

SMR is a relatively inexpensive method of producing hydrogen, and per unit of energy input to the process, it’s among the most efficient we have at the moment. However, SMR yields almost 10 kg of CO₂ per 1 kg of pure hydrogen.

According to author and chemical engineer, Robert Rapier, writing in *Forbes* in June 2020, “... the carbon dioxide produced from the natural gas reactions becomes 19.3 metric tons of carbon dioxide produced per million SCF of hydrogen. However, the Praxair paper noted that this is the theoretical minimum. Due to heat losses and inefficiencies, the actual number in practice in a large hydrogen plant is 21.9 metric tons.

“This converts to 9.3 kilograms (kg) of CO₂ produced per kg of hydrogen production. One kilogram of hydrogen is the energy equivalent of one gallon of gasoline, which produces 9.1 kg of CO₂ when combusted.”

According to Cebon, “Every kilogram of hydrogen you make, you get 10 kilograms of CO₂, or more.”

How much further ahead are we really when you consider the CO₂ produced by industrial hydrogen production is nearly the same as gasoline or diesel?

Some believe the answer to that problem is carbon capture and sequestration (CCS), where CO₂ is captured from industrial processes and stored underground. Only about a third to half of the CO₂ is currently captured using today’s best practices. ■

Nikola has already launched its FCEV version of the Tre in Europe. It plans to launch the fuel cell version of the truck here later this year.
Photo: Jim Park

David Cebon is a professor of mechanical engineering at the University of Cambridge, England.



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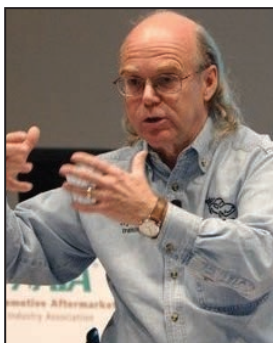


AURORA
PAYMENTS



TESLAS WEAR OUT AND BREAK DOWN

BY CRAIG VAN BATENBURG



Craig Van Batenburg

For years I have been asked to do Tesla training. I put on a class at AAPEX in Las Vegas years ago, as I remember it was 2016, and it was a full house. It may have been the first aftermarket Tesla class ever. ACDC bought some Tesla parts along the way to examine. It was very interesting to see what Tesla was doing, as the battery pack modules were unique (Model S days started in M/Y 2012). I answered many questions and kept studying along the way. One question

I was asked often was “Where can I buy Tesla parts?” At that time Tesla had closed out the aftermarket and getting new parts was hit and miss. Used parts were hard to find and ACDC stayed away from any deep involvement with Tesla training. There were two bootleg scanners that I knew of, one sold in England (source unknown to me) and another from Eastern Europe. We have a qualified shop in the Netherlands and the shop owner, Mark, does a lot of EV work as the population of EVs in percentage of ICE vehicles is large there. Mark came to see us and took our “Up Your Voltage” class a few years ago. After he added EVs to his shops work, he had many Tesla owners ask for service. Mark would borrow an aftermarket Tesla scan tool from the local body shop. The body shop used it for ADAS calibrations. Mark was OK with the tool. I was skeptical, as I normally am, with bootleg tools. That seems like a long time ago.

ACDC has been telling our customers that ACDC will get into Tesla training when Tesla sells a factory scan tool. That is the case now, so in June of 2022, ACDC bought a used 2020 Tesla Model 3 extended range AWD. It sold new for about \$70,000 and with

the inflated used car market then, we paid over \$56,000. Why did ACDC do this? To gain the experience needed to add Tesla to the other brands we offer training and tech support to. Aiden Neary, a smart ACDC tech, was assigned that job. Tough duty. Aiden now has an ACDC Tesla, a factory scan tool, service information, our training center, many more parts, an older Model S, and time. Aiden has been digging into this OEM for over a year now.

Is there an opportunity for the rebuilders?

Elon sold over 1.3 million Teslas last year. In 2019 Tesla sold 367,500. The next year 499,550 units. In 2021 it was 936,950 and in 2022 they reached 1,313,581. So far in 2023 they are on track to sell 1.8 million. These numbers are total worldwide sales. They currently sell two SUVs, the Y and X and two sedans, the 3 and S. Service information is free (for now) from Tesla (They took a lesson from Hyundai as their service info was free a decade ago. It no longer is). Tesla parts are sold to shops from their warehouses as they have no dealerships as we know them.

What is Wearing Out?

The suspension on many models are known for early wear (50,000 miles). There are new aftermarket suspension parts out there that are also adjustable. The EV drive motors are complete assemblies with gear box and inverter built in. Older model S are failing in many areas as are the older model 3s. Tesla uses both permanent magnet (PM) and induction motors (IM). The center screens crack and older ones turn yellow. Model S and X have door handle issues. For a real challenge, take up the work of making a replacement HV battery pack for Teslas that have reached 200,000 miles (there are many). The aftermarket repair shops are training with us and Tesla training is our most requested class.

New Parts

If an independent shop wants to order parts they must register with Tesla and include pictures of their shop, along with other information. Once approved, they order online and wait until it is shipped to them. No discounts and some parts are not available to the aftermarket. No one to call as it is all done on the internet.

Summary

If you keep track of EV sales it is amazing how the uptake is moving so quickly. Shops here and internationally that we support are looking for good remanufactured parts to help



them repair Teslas and other EVs in a reasonable amount of time. Cost is not always a factor. EV sales are growing every year, so is this the time to get involved?

One of the electric vehicle service industry's foremost experts, Craig Van Batenburg, will be at the APRA meeting in Las Vegas this year. ■

A 50-year automotive service veteran, Van Batenburg is the CEO of Van Batenburg's Garage Inc., dba Automotive Career Development Center (ACDC), which is based in Worcester, Massachusetts. ACDC provides training for APRA members that want to know more about EVs and hybrids. Contact Craig at Craig@fixhybrid.com. Web site is www.FIXHYBRID.com.

10 FUN FACTS ABOUT TESLA

1. Tesla Motors was founded in **2003** by **Martin Eberhard** and **Mark Tarpenning**. **Elon Musk** took over Tesla a few years later.
2. In **2008** Tesla began production of its first electric car, the **Roadster**.
3. The Model S came out in M/Y **2012**.
4. Tesla's first SUV, the **Model X**, was sold as a M/Y 2016.
5. In 2019, Tesla introduced the **"Dog Mode"**. It kept your dog comfortable and allowed people to see the cabin temperature on the center screen.
6. **Model Y crossover** released in M/Y **2021**. It is their best-selling model.
7. The release of the **Tesla Cybertruck** is planned for **2023**.
8. Tesla's builds their EVs in **North America, Asia, and Europe**.
9. Tesla has its own electric vehicle charging stations called **Superchargers**.
10. Tesla's **Model S, Model 3, Model X, and Model Y** reflect Elon's idea that they are "SEXY".

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INA/PAACE AUTOMECHANIKA MEXICO CELEBRATED 25 YEARS AT FULL SPEED

18 July 2023



Mexico. The 25th edition of INA PAACE Automechanika Mexico, organized by the National Auto Parts Industry (INA) in collaboration with Messe Frankfurt, took place from July 12 to 14 at the Citibanamex Center in Mexico City.

According to the organizers, the meeting broke attendance records and received a “spectacular” response from exhibitors and attendees. Likewise, they invited to be part of the next edition that will be held between July 10 and 12 next year.

The opening ceremony brought together important representatives of the national and international automotive and auto parts industry. Among those present were Paul McCarthy, President and CEO of MEMA Aftermarket; Joe Kripli, President of the Automotive Parts Remanufacturers Association (APRA) and Jason Moseley, Director General of the International Body Shop Industry Symposium (IBIS).

Along with them were Constantin von Vieregge, CEO of Messe Frankfurt North America and Francisco González Díaz, executive president of the National Auto Parts Industry (INA), as well as leaders of the most important automotive and auto parts associations in the country: AMIA, AMDA, ANPACT and ARIDRA, among others.

The event consisted of an exhibition floor that exceeded 20,000 square meters, in which more than 500 brands from 29 countries were presented. It also featured five international pavilions: Germany, Brazil, China, the United States and Turkey, where the latest trends and innovations in the industry were showcased with training programs and live demonstrations.

During the opening, Francisco González highlighted the strategic role of the automotive industry and its components as a pillar of growth and economic development in Mexico.



Joe Kripli and Tom Jackson (RAS) at the APRA booth in Mexico City

In addition, González stressed that there are still opportunities to explore in the aftermarket, which has a current value of more than 30,000 million dollars and is expected to continue growing in the coming years, driven by electromobility, digitalization and electronic commerce, priority issues on the agenda of this meeting.

The event, which celebrated 25 years, also featured “The Future Forum”, the executive training program for senior managers, which in this edition presented the “Pink Engineering” course, which seeks to redefine inclusive spaces for women in mechanical workshops.

It also had the new “Delivery Competence” section, a space that connects companies with buyers looking for parts and equipment for motorcycles, vans and small delivery vehicles to strengthen this sector focused on the last mile. ■



FEDERICO DUARTE
EDITOR EN LATIN PRESS, INC.

Comunicador social y periodista con experiencia de más de 15 años en medios de comunicación. Apasionado por hacer de la vida una historia para contar. fduarte@latinpressinc.com

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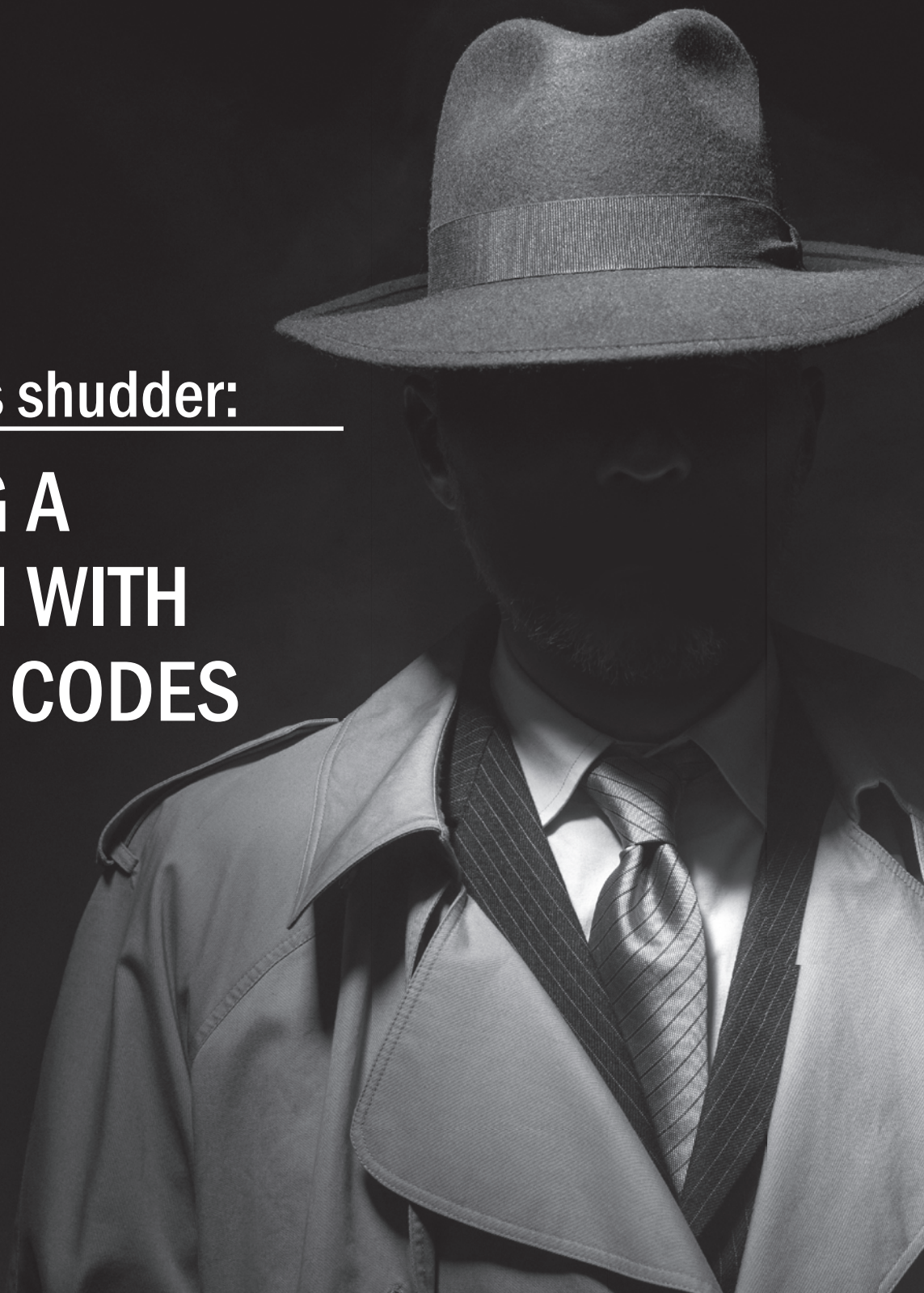




Bob Sorensen
Certified Transmission

A mysterious shudder:

LOCATING A PROBLEM WITH NO FAULT CODES

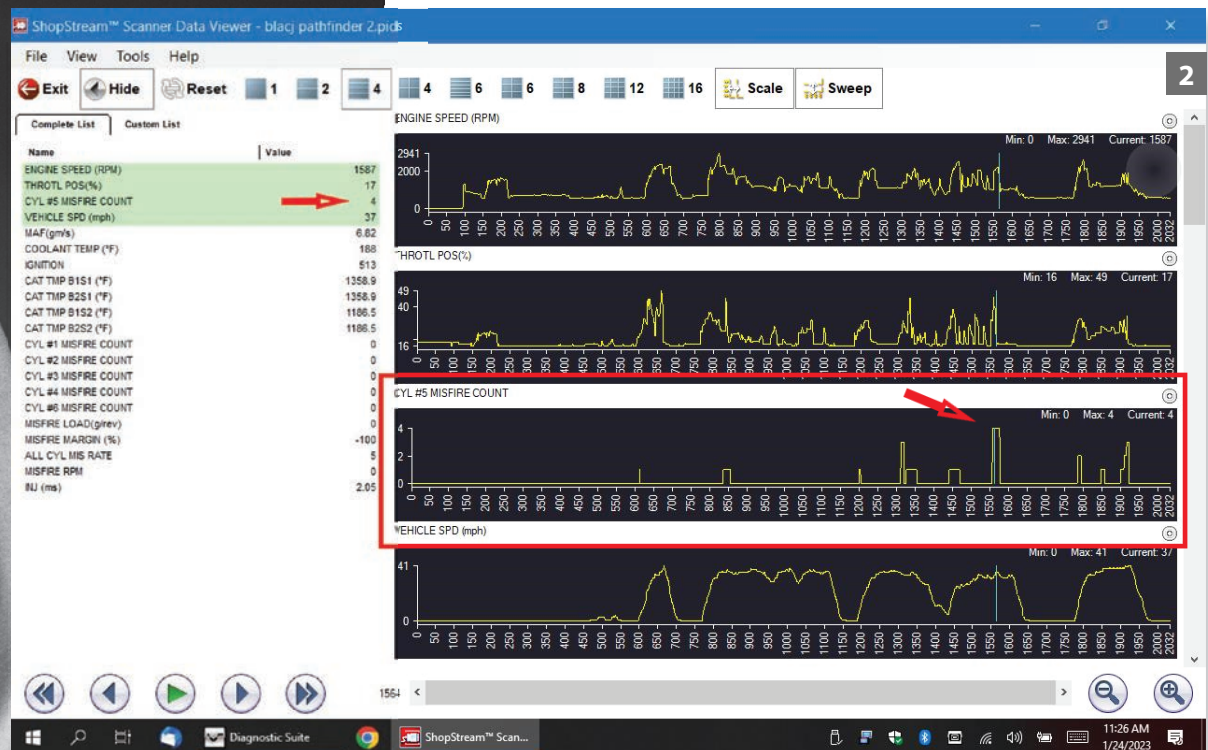
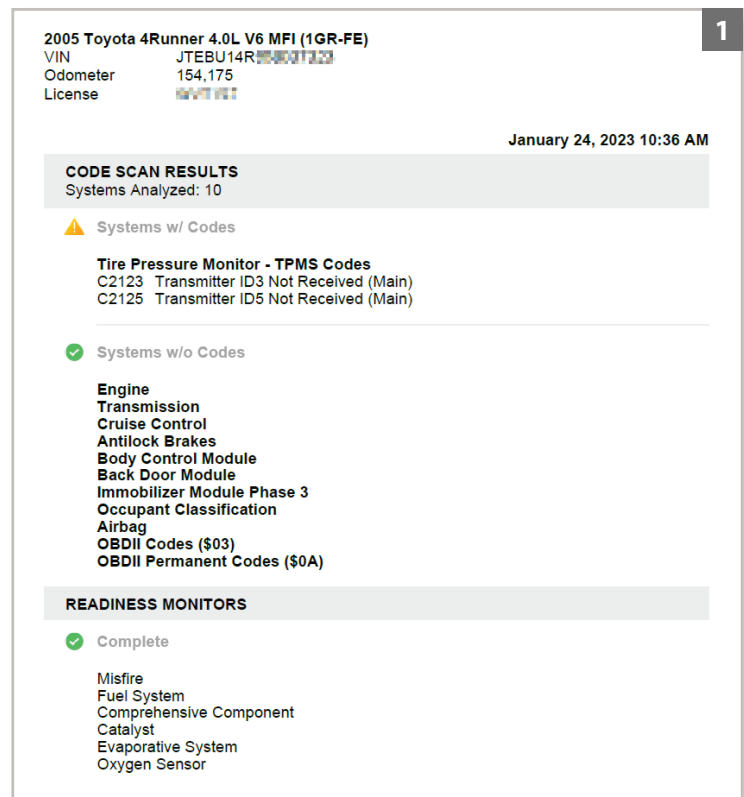


It was a dark stormy night... well, not really; it was just an ordinary Tuesday. On that ordinary Tuesday, a customer came into our store very distraught. He had been to several shops with concern of feeling a shudder while driving his vehicle uphill. None of the other shops or the Toyota dealership could give him a definite answer to the cause of his concern. They all said it was possibly the torque converter, but they were not 100% sure.

His vehicle is a 2005 Toyota 4Runner with the standard A750

transmission. The vehicle has a dealer-installed lift kit, it has oversize tires (LT285/70R17), and the OEM tire size is P265/65R17. No other modifications had been made to this truck. The customer complaint was a brief shudder ("stutter" was the word he used) while accelerating up a hill.

I took the vehicle for a road test and was able to verify his concern; I felt the shudder in the seat and floor of vehicle. The shudder did not feel like an engine misfire or typical torque



converter clutch shudder; however, something was there. I performed a vehicle scan and found no codes associated with the customer's concern. There were a couple of TPMS codes present, but on a vehicle of this age I could not see them having any effect with this issue. I verified that all readiness monitors had been completed. (See **Figure 1**).

I suspected a possible concern with the torque converter clutch operation due to the tire size being incorrect. My theory was that

the torque converter clutch was being commanded on and off to maintain power on uphill acceleration, and this might be a "new normal condition" after the vehicle modifications were made. I road-tested the vehicle with the scanner attached and monitored torque converter clutch operation to prove or disprove that theory. I verified that the torque converter clutch was being commanded

Continued on page18

3

Non-Cont. Monitoring Test Results

Mis-Fire Cyl 1 Data
 Misfire mon. ready: Yes
 Misfire mon. cycle enabled: Yes
 Misfire mon. cycle completed: Yes

Avg. Misfires Last 10 Drive Cycles
 ECU ID: \$E8 OBDMID: \$A2
 Test ID: \$0B (counts) Value: 0
 Min: 0 Max: 65535
 Result: Passed

Misfires Current Drive Cycle
 ECU ID: \$E8 OBDMID: \$A2
 Test ID: \$0C (counts) Value: 0
 Min: 0 Max: 65535
 Result: Passed

Return

4

Non-Cont. Monitoring Test Results

Mis-Fire Cyl 5 Data
 Misfire mon. ready: Yes
 Misfire mon. cycle enabled: Yes
 Misfire mon. cycle completed: Yes

Avg. Misfires Last 10 Drive Cycles
 ECU ID: \$E8 OBDMID: \$A6
 Test ID: \$0B (counts) Value: 2
 Min: 0 Max: 65535
 Result: Passed

Misfires Current Drive Cycle
 ECU ID: \$E8 OBDMID: \$A6
 Test ID: \$0C (counts) Value: 27
 Min: 0 Max: 65535
 Result: Passed

Return

on at the correct speed and I also used the GPS app on my phone to verify that the speedometer was reading correctly. I noted that I did not see any engine RPM fluctuation per the scanner PID nor the truck's tachometer. While on the road test, I was able to detect that the shudder also occurred while driving on a at road under light acceleration, just not as noticeably as when driving uphill. I also discovered that when the TCC was applied, if I lightly tapped the brake pedal to disengage the TCC, the torque converter clutch did release but shudder was still present.

I went back to the shop and re-scanned the vehicle. There were still no DTCs, and all monitors were completed. I now decided it was time to put on my detective hat and start digging for the clues to this mystery.

While being a little perplexed by this vehicle and after consulting all my other sources of information, I remembered the first rule of transmission diagnosis: "The automatic transmission cannot operate normally if the engine does not operate properly."

I turned my attention to the engine operation. While monitoring the engine data in the stall, I found no evidence of mis re or incorrect operation of any sensors. The throttle position sensor and engine RPM were all reading as normal throughout the throttle sweep. I drove the vehicle again with the scanner attached and monitored the engine operation. All operation seemed normal, but the shudder was still present. I monitored the vehicle speed sensor looking for any erratic readings; all operations were normal. I re-checked for codes and there were none. I then road-tested vehicle once again with the scanner and watched for completion of the mis re monitor.

While driving and performing the misfire monitor roadtest, I discovered a slight engine misfire from the number five cylinder, and all the other cylinders showed no misfires occurring. The number five misfire was occurring at the same time as the shudder. (See **Figure 2**).

This begged the question: Why did the vehicle scan and monitors show no concerns?

I went to the generic engine test section of the scanner, and I checked the seldom-viewed MODE6 data and examined all six cylinders' misfire data. Cylinder one data was typical of all cylinders except number five. (See **Figure 3**). Number five showed a misfire count of 27 misfires. (See **Figure 4**.)

So now the question was, why no check engine light or diagnostic codes? I did more research and found that my definition of the number five misfire does not fit the criteria for a misfire A, B or C. Therefore, remember that when diagnosing a concern, while scan tools and PID data are great diagnostic pieces, sometimes good old-fashioned, "seat of your pants" diagnosing helps get to the bottom of things.

We told the customer the results of our diagnosis and recommended a possible tune up. We referred him to a local shop we work with which is known for very good drivability technicians. The customer took the vehicle to them and got new spark plugs and the injectors serviced, and the concern was gone. He called us about a week later to thank us for not just replacing the torque converter like two other shops had recommended to him. The truck is running smoothly, and the customer was pleased with our service. ■

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THE EVOLVING LANDSCAPE OF FREIGHT SHIPPING



The transportation industry is in a constant state of flux, with various factors shaping its dynamics and impacting specific sectors. For those involved in moving auto parts, staying abreast of the latest developments is crucial for adapting to changes, optimizing operations, and maintaining a competitive edge. In this article, we will explore the key trends and happenings in transportation today that are particularly relevant to the movement of auto parts.

1. E-Commerce Boom and Last-Mile Delivery:

The rise of e-commerce has transformed consumer behavior and significantly impacted the transportation industry. With the surge in online auto parts purchases, efficient last-mile delivery solutions have become paramount. Freight brokers need to collaborate with logistics providers who specialize in agile and reliable last-mile delivery to ensure timely and accurate distribution of auto parts to end customers.

2. Green Initiatives and Sustainable Transportation:

Environmental concerns and sustainability have taken center stage in recent years. As a response, transportation companies are increasingly adopting greener practices. Auto parts movers should explore options such as electric or hybrid vehicles, optimizing routes to reduce mileage, and employing advanced routing technologies to minimize their carbon footprint. Embracing sustainability not only benefits the environment but also aligns with the preferences of eco-conscious consumers.

3. Technological Advancements:

Technological advancements are revolutionizing the transportation landscape, offering opportunities for enhanced efficiency, and streamlined operations. Auto parts movers can leverage technologies such as Internet of Things (IoT) devices for real-time tracking and monitoring of shipments, automation and robotics for warehouse operations, and data analytics for optimizing supply chain management. Embracing these advancements can lead to improved visibility, reduced costs, and increased customer satisfaction.

4. Capacity Challenges and Supply Chain Disruptions:

The transportation industry is grappling with capacity challenges, with truck driver shortages and infrastructure constraints impacting the movement of goods. Auto parts movers must adapt by establishing strong relationships with reliable carriers, employing effective load planning strategies, and leveraging technology platforms that facilitate load matching and improve operational efficiency. Furthermore, being prepared for unforeseen disruptions through robust contingency plans is vital to ensure continuity in the supply chain.

5. Regulatory Changes and Compliance:

The regulatory landscape surrounding transportation is constantly evolving, and auto parts movers must stay informed to remain compliant. Changes in regulations related to hours-of-service rules, driver qualifications, and safety protocols can have a direct impact on operations. Maintaining open lines of communication with industry associations, regularly monitoring regulatory updates, and ensuring proper training and education for drivers and staff are essential to navigate these changes effectively.

6. Global Trade and Cross-Border Operations:

The auto parts industry relies heavily on global trade, necessitating efficient cross-border operations. Freight brokers involved in moving auto parts must navigate complex customs procedures, adhere to trade agreements, and stay updated on changing international trade policies. Building strong partnerships with customs brokers, understanding local regulations, and utilizing technology solutions for seamless cross-border documentation can facilitate smoother operations and reduce potential delays.

In conclusion, in the ever-evolving transportation landscape, freight brokers engaged in moving auto parts must be proactive in understanding and adapting to the current trends and developments. By embracing e-commerce trends, adopting sustainable practices, leveraging technological advancements,

addressing capacity challenges, ensuring regulatory compliance, and optimizing cross-border operations, auto parts movers can stay ahead of the curve and provide efficient, reliable services to their customers. Staying informed and proactive in an industry experiencing rapid change will be the key to success in today's transportation landscape. ■

ABOUT THE AUTHOR

Tom Burke serves as Founding Partner for Freight Partners Group. Tom has forty years' experience within the transportation and logistics arena.

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APRA in Memoriam

APRA mourns the loss of four industry leaders who represented, promoted, and were impactful to the remanufacturing industry over their careers. Our condolences go out to their families.



BBB Industries Announces the Passing of Founder, Donald G. Bigler

DAPHNE, ALA. – June 19, 2023 - BBB Industries, LLC (BBB), a sustainable manufacturer and leader in the automotive aftermarket, announced today the passing of its Founder and Chairman Emeritus Donald (Don) G. Bigler. Bigler was a resident of Mobile, Alabama.

Don Bigler died, peacefully, surrounded by family on Friday, June 16. He was 91 years old.

“On behalf of BBB Industries, our board, and our management team, I offer our deepest condolences to the Bigler family,” said Duncan Gillis, CEO of BBB Industries. “Don was not just one of BBB’s founders, he was a friend, mentor, and an inspiration to many within the company. I already miss his friendship.”

Don founded BBB alongside his sons, Jeff and Bruce Bigler, who live in the Mobile area. Together, they grew the company from a small, regional remanufacturer of rotating electrical parts into one of the largest and most successful sustainable manufacturers in the world.

Founding and building BBB Industries was Don’s “second act” following a highly impactful career in the aerospace industry where he led top secret programs to ensure the security of the United States, as well as Teledyne Continental Motors (now Continental Aerospace Technologies), the largest manufacturer of engines for the general aviation market.



Robert McLaren - founder of Genco Auto Electric Inc.

Robert McLaren died June 19, 2023. He was 81. McLaren worked in the industry for 40 years and was passionate about remanufacturing. He was active with the Automotive Parts Rebuilders Association (APRA), now called the Automotive Parts Remanufacturers Association, including serving as the group’s chairman.

“Our family has really enjoyed all the kind memories shared by the aftermarket community via LinkedIn,” said daughter Kim Nolan, who is senior vice president of sales – traditional market at BBB Industries, LLC. “He would be happy to know that so many regarded him as a pioneer and industry icon. Bob will be missed by his three daughters: Kim, Cindy and Candyce; his three sons-in-law, Bob, Jeff and John; and his five grandchildren, Kiley, Samantha, Tyler, Sophia and Olivia.”

BBB acquired Genco in 2006. At the time, Kim Nolan was the president of Genco. She and her management team remained with Genco/BBB after the acquisition to help grow the business.



Louis Wolf

Louis Marc Wolf, 72, passed away June 7, 2023, beloved husband and best friend of Judy nee Rosenberg for 49 wonderful years; loving father of Joni (Scott) Sobel, Jill Wolf, Samantha (David) Pelerin; cherished Papa of Asher, and Skyla Sobel and Chloe, and Liv Pelerin; treasured brother of Roger and Norman Wolf; caring brother-in-law of Karen Rosenberg, Gail and Mike Niksic; devoted son of the late Raphael and Estelle; dear uncle, cousin, friend, and mentor of many. Louis began life in Chicago living in Rogers Park. He attended Stone Elementary and Senn High School. He also attended University of Illinois and graduated with a degree in Communications. He met his wife Judy at the U of I. For two years after graduation, he worked in advertising.

After two years in advertising, he decided to work for his Uncle Herby at American Auto Parts. This was where Louis became the “King of Cores.” He loved his job, especially all the people he met and worked with. He was a humble person and was adored by all. His greatest accomplishments were captain of his tennis team, President of his Alpha Epsilon Pi fraternity at U of I, being a loving husband, father, and grandfather. He was also a big music aficionado with a large collection of vinyl and CDs. He and Judy traveled all over the world and documented all his travels with beautiful photos. He will be sadly missed. Chapel service 2:30 PM Friday at Shalom Memorial Funeral Home, 1700 W. Rand Road, Arlington Heights. Interment Shalom Memorial Park. In lieu of flowers, donations may be made to the Jewish United Fund of Metropolitan Chicago (juf.org). To leave condolences and for information, including link to view service: www.shalommemorial.org or 847-255-3520.

Steven Patrick Haas



Steve Haas, beloved son of William and Julie Haas, unexpectedly passed away in Las Vegas on May 30, 2023. He was born in Ames, Iowa on February 21, 1961.

Steve's educational journey took him through St. Cecilia grade school, Central Jr. High School and Ames High, where he graduated in 1979. During his time at Ames High, he excelled in wrestling and track, even earning the opportunity to compete in the 1978 Iowa State High School Wrestling Tournament. Despite a knee injury in the semi-final round, which prevented him from advancing to the championship, he ended up in 4th place.

After completing high school, Steve worked as a meat cutter at Save-U-More grocery store in Ames while also running his own tanning business on Main Street. Later, he relocated to Salida, Colorado, where he and his wife operated a small restaurant. Following a debilitating brain abscess, Steve underwent successful corrective surgery at the University of Iowa Hospitals. Subsequently, he moved to the Minneapolis-St. Paul area, where he made a remarkable recovery with the support of Minnesota's State assistance programs and his education at St. Thomas University. There Steve completed an Accelerated Mini MBA in Non-Profit Development in 1996 and a short course in Electronic Commerce in 2002. Throughout the years, his lifelong friend Elsom Eldridge provided invaluable guidance and mentorship.

Steve embarked on a flourishing career in the shipping industry that spanned over 25 years. He poured his heart and soul into his work, investing countless hours to build strong relationships with colleagues, coworkers, and clients. For Steve, merely having a roster of clients wasn't enough; he cultivated deep connections and associations with hundreds of clients.

Whenever Steve visited, he brought with him fabulous food, and his generosity extended to thoughtful and generous gift-giving. He had a genuine interest in listening and providing solutions to others. Steve thoroughly enjoyed engaging college students in conversations about e-commerce and the transportation and logistics industry. Making friends came naturally to Steve, whether it was a bellhop at a casino or a vast radio audience. He held a deep affection for his clients and the industry he served.

Steve had a remarkable talent for storytelling, captivating his audience with his animated and engaging narratives that transported listeners into the heart of the tale. Most of his stories were laced with humor, always aiming to bring laughter to those around him. Steve had a light-hearted and fun-loving nature, particularly enjoying the thrill of shooting off fireworks. His nieces and nephews affectionately referred to him as their "funcle." He delighted in sharing jokes, orchestrating endearing pranks, and had an impressive collection of awful Christmas sweaters. Furthermore, he was known to rally people together for various causes that united them in a common purpose.

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