

# REMAN CONNECTION

*Prosper Mamane  
and Jacob Shaked*

## The Story Behind R&Y A/C Compressors

ALSO INSIDE THIS ISSUE:

Right to Repair Updates  
EV Trucks Towing Capacity  
Reman Day Celebrations

apra



# ARMEX™

## The Original Soda Blasting Abrasive



### **The first time that baking soda was used for abrasive blasting was during the 100-year restoration of the Statue of Liberty**

The challenge was to remove two layers of coal tar epoxy coatings without damaging Lady Liberty's delicate copper skin. The aggressive cleaning ability and surface preservation characteristics of baking soda is what made it the only choice. Church & Dwight, makers of ARM & HAMMER™ products since 1846, worked closely with the project engineers and donated 200,000 pounds of baking soda. Following this success Church & Dwight launched ARMEX, the first baking soda abrasive specifically formulated and manufactured for abrasive blasting in 1989.

**To learn more about ARMEX or to schedule a cleaning trial visit [www.armex.com](http://www.armex.com)**

### **BENEFITS OF SODA BLASTING**

- Aggressive cleaning ability
- Surface preservation
- Environmentally friendly
- Non-hazardous
- No free silica or toxic fumes
- Nonflammable & non-sparking
- Water soluble
- Used at low air pressures 40 - 80 PSI
- Can be used for wet or dry blasting



**THE SODA BLASTING EXPERTS**



ARMEX and ARM & HAMMER are trademarks of Church & Dwight Co., Inc.

# Kripli's Corner

## RESPECT BOTH CUSTOMERS AND SUPPLIERS!



Joe Kripli

**I**t seems that now that we have come out of Covid and are getting back to visiting customers and having suppliers visit us, we may have lost a little respect for each other. Some of it may be due to our attitudes about supply chain issues, some may be due to using Zoom and Teams, where we could turn the camera off and we didn't have to pay attention as much, we could multitask. When I started in the remanufacturing business, we didn't have cell phones and we didn't really have computers. We would call our customers and schedule a visit well in advance, perhaps four weeks prior to showing up. We would confirm that visit the week before we traveled. Once we were on the road, our only ways of communication with the customer or the office was using a pay phone (usually at McDonalds because theirs worked) or communicating via messages with the secretary in the office (I don't think anyone has a secretary anymore). The customer was thrilled to have someone from the "factory" stop by and we were thrilled to see our customers.

I recently had two incidents while visiting customers in the last month. The first one was a confirmed visit in which I had flown from Detroit to LA to visit them and the day before the meeting at 5pm I received an email (not a phone call) that the person I was meeting had an emergency at a different branch and had

to cancel the meeting. You can imagine that I had spent a lot of money to get there and meet this person. I managed to reschedule for the next morning, but of course that involved moving another meeting out and inconveniencing another customer. Very frustrating. In the old days they would have had another representative of the company meet with me, in order to keep the schedule and not inconvenience other customers by moving meetings. My second incident did not involve flying but I had to drive an hour and a half to meet the customer. I confirmed the visit the night before, drove to the customer's location, only to find out he wasn't there and no one knew where he was or when he would be back. I called him, but no answer, and I left a message. I thought that was extremely rude. I was actually worried that something had happened to him, but later found out he had something more important to do, again very rude. We are all trying to do our jobs, both customers and suppliers, let's give each other the common courtesy and respect we all deserve.

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

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

Respectfully,

Joe Kripli  
*APRA President*

## Contents

Attorney General Right to Repair.....	6
R&Y - Ultimate Niche Player .....	8
Reman Day Celebrations!.....	12
AutoAméricas .....	14
How Towing Affects Electric Pickups .....	16
Right to Repair Bill.....	18
Scope Testing.....	20

## Advertisers

Armex .....	2
INA/PAACE.....	4
OEC Group .....	5
REMATEC.....	7
Aurora Payments.....	11
Bayco.....	15
Part Ref.....	18
C&A Tools .....	19
Transtec .....	23
RAS .....	24

## INDUSTRY CALENDAR

### Rematec 2023

27-29 June 2023  
Amsterdam, Netherlands

### INA/PAACE Automechanika

12-14 July 2023  
Mexico City, Mexico

### 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

## The APRA REMAN Connection Volume 32, Number 1

### Office Contact:

Phone: (703) 968-2772  
FAX: (703) 968-2772

Email: [info@apra.org](mailto:info@apra.org)

### APRA President:

Joe Kripli - [kripli@apra.org](mailto:kripli@apra.org)

### APRA Chairman:

Rich Haas - [rhaas@advancedstarter.com](mailto:rhaas@advancedstarter.com)

### REMAN Connection Editor:

The Promo Corp - [thepromocorp.com](http://thepromocorp.com)

COPYRIGHT 2022/AUTOMOTIVE PARTS REMANUFACTURERS ASSOCIATION. The APRA Reman Connection is published as a membership service by the APRA. The opinions expressed in the articles in this publication are those of the author of the articles and not the publisher. While every reasonable attempt has been made to assure that the information in this publication is accurate, the publisher assumes no responsibility for any omissions or errors, nor for the application of any advice or suggestions in any particular situation. Due to space limitations, all items published are subject to abridgment. Unsolicited items will not be returned.



In partnership with



July 12 - 14, 2023

Centro Citibanamex, Mexico City

## ENTER NEW MARKETS.

Participate in Latin America's international tradeshow for the automotive aftermarket, OE manufacturing and service industry.

25th  
Anniversary  
Edition

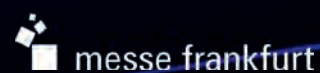
## THE FUTURE

**SHOW IT. 10+ PRODUCT CATEGORIES.** Covering every segment of the industry, showcase your range of tools, equipment and products

**TEACH IT. 75+ SEMINAR SESSIONS.** Share your business and technical knowledge in the Automechanika Academy taught by experts like you

**TRAIN ON IT. UNLIMITED OPPORTUNITIES.** From diagnostics to electric vehicles, offer hands-on training demonstrations in your booth or as a part of our demo areas to increase your brand expertise

**SELL IT. PRICELESS CONNECTIONS.** Reaching more than 15,000 qualified buyers, meet, build and strengthen relationships with distributors, shops, retailers and more ready to buy





# ACCELERATE YOUR ABILITY TO IMPORT AUTO PARTS

Our international network and established global presence will give your supply chain the tune-up it's been missing.

**OEC GROUP**

[www.oecgroup.com](http://www.oecgroup.com) | 630-625-7900







## DOZENS OF ATTORNEYS GENERAL CALL ON CONGRESS TO PASS RIGHT-TO-REPAIR LAWS FOR ELECTRONICS

Cole Rosengren Lead Editor-Wastedive.com

**A bipartisan group of officials asked committee leaders to “redouble” their efforts around enabling repair for automobiles, agricultural equipment and electronics.**

Mikhail Dmitriev via Getty Images

**A** group of 28 state and territorial attorneys general recently sent a joint letter to members of Congress asking them to “redouble” their efforts on passing right-to-repair legislation for “automobiles, agricultural equipment, and digital electronic equipment.”

Right-to-repair policy for consumer electronic equipment is of particular relevance for the recycling industry. Certain trade groups and companies have previously supported the concept as a way to enable greater recycling and reuse of devices, some of which can also present fire hazards in waste facilities due to their batteries.

The March 24 letter was addressed to Rep. Cathy McMorris Rodgers (R-Wash.), Rep. Frank Pallone (D-N.J.), Sen. Maria Cantwell (D-Wash.) and Sen. Ted Cruz (R-Texas); all of whom are the chairs or ranking members on relevant committees.

The attorneys general specifically touted three bills introduced in the last session of Congress: the Fair Repair Act, the Saving Money on Auto Repair Transportation (SMART) Act and the Right to Equitable and Professional Auto Industry Repair (REPAIR) Act. The REPAIR Act was also reintroduced in February.

The attorneys general described the concept as a bipartisan issue that can reduce consumer costs amid inflation, noting how equipment manufacturers “often control access to these electronics parts, creating unfair restraint of trade and a monopoly on repair.”

The letter went on to note that common tactics “include using adhesives that make parts difficult to replace, limiting the availability of parts and tools, or making diagnostic software unavailable.” It also pointed to prior support for this concept from the Federal Trade Commission and Biden administration.

The letter was signed by officials from Alaska, Arizona, California, Connecticut, Delaware, District of Columbia, Guam, Hawaii, Idaho, Illinois, Indiana, Louisiana, Maine, Maryland, Michigan, Minnesota, Nevada, New Mexico, Northern Mariana Islands, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Washington and Wisconsin.

At the state level, New York became the first to pass a repair law focused on electronics in December. Nathan Proctor, senior campaign director for this issue at PIRG, said in a statement that “this incredible, bipartisan display of support shows, people from all across America support making it the law of the land.” ■

**REMATEC**  
27-29 JUNE 2023  
AMSTERDAM



**Visit the leading trade event for remanufacturing  
REGISTER YOUR FREE ENTRY!**





## R&Y - ULTIMATE NICHE PLAYER

By Niels V. Christiansen

For more than three decades, R&Y A/C Compressors in North Miami Beach has been on the cutting edge of rebuilding, remanufacturing and marketing A/C compressors and parts for cars and trucks. Locally at first, then as e-commerce pioneers reaching a national parts retail audience. Today, while the ever growing and evolving family operation is adding new e-commerce retail markets in the Caribbean and Latin America, the three men behind the company are setting their sights on new frontiers.

They want to be suppliers to other reman A/C compressor distributors, and they want to lead the way for independent remanufacturers in the newfangled world of A/C compressors for Hybrids and EV cars and trucks.

Roy Shaked, the owner, found his niche even before he co-founded R&Y in 1989. Two years earlier, he had opened his AAA Radiator and Auto Air Conditioning shop just around the corner and built his business on the simple fact that robust and functioning compressors are a must in the heat of Miami.

Three decades later, car and truck A/C compressors are evolving from 'very important' to 'crucial', as more complex and delicate compressors cool not just the air to keep drivers and passengers comfortable in their cars and trucks but also the battery packs in hybrids and EVs.

As Shaked's son, Jacob, and nephew, Prosper Mamame, point out: Whereas you can still drive a traditional vehicle when the A/C compressor fails, most hybrids or EVs with a failing A/C compressor cannot operate at all.

This bodes well for the future of a company that always prides itself on blazing its own trail as a leader among independent A/C compressor rebuilders, remanufacturers and retailers.

The foundation for it all was laid early on when AAA Radiator and Auto Air Conditioning became known as a go-to shop for A/C compressor service in Southern Florida. The company did brisk business in the hot climate.





R&Y A/C Compressors was started as a natural twin extension to provide a steady and timely supply of rebuilt and remanufactured parts to match the specific vehicles the customers brought in. It soon became clear that the bigger part of the combined business was in the rebuilding and remanufacturing of the parts as R&Y also became a supplier to other shops in the area.

Jacob Shaker to Jacob Shaked hung around the AAA shop as kids and got their taste for the business early in life. And while Roy Shaked is the man with all of the industry knowledge and connections, Prosper Mamane became a hands-on product expert in his uncle's shop and moved over to R&Y in 2014. Jacob Shaker joined R&Y a couple of years later after a detour into practicing law before he decided to apply his practical and business acumen to the family business instead.

With their combined skillsets and spanning two generations, the family triumvirate has created a nimble operation with each company as the perfect complement to the other and with efficient decision making to navigate a market with great challenges and even greater opportunities and growth as far as the eye can see.

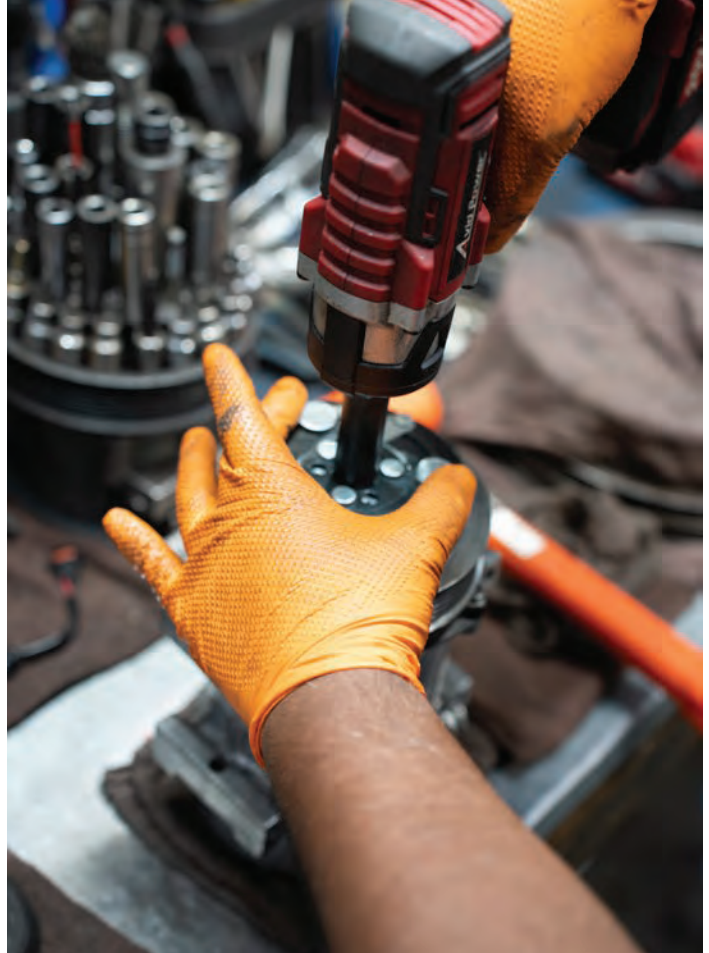
"Roy is the owner and Jacob and I are the operators of R&Y," explains Prosper Mamane. "We are a small business operating like a medium or large company. But because our deliberations continue when we are together as family, we make major decisions in days where a larger organization might take weeks."

The Miami location is another key to their business success. The volume of cars of all brands, from the smallest and most common to the biggest and most exotic coming in for compressor service at AAA in the hot climate is so large that it makes the service shop with its 15 busy bays an ideal source of knowledge and expertise. Roy Shaked and his technicians see just about every conceivable A/C compressor related problem in every vehicle brand and model.

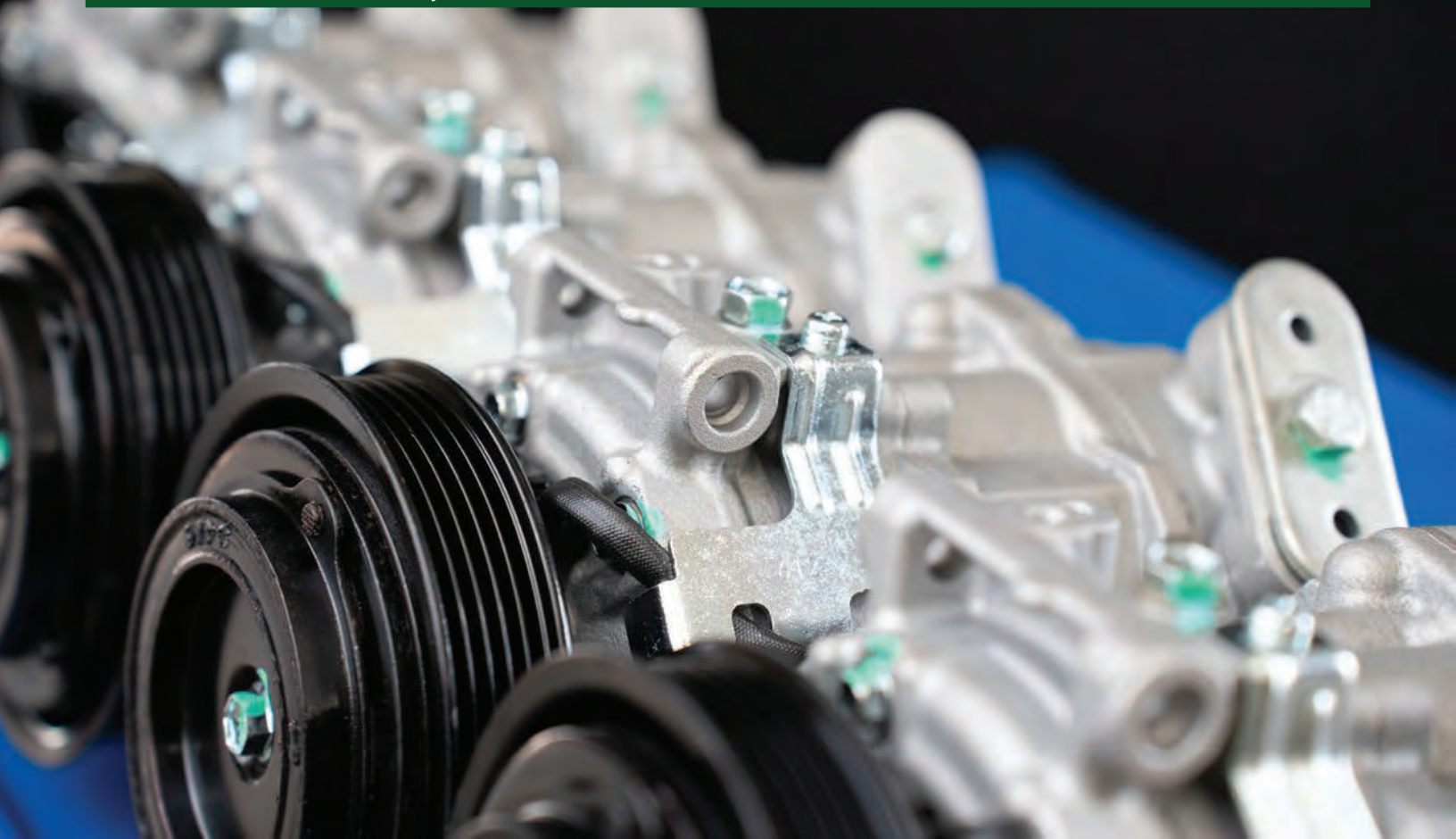
This is a goldmine of information for R&Y. Jacob Shaked, who took on the task of organizing and creating the all-important catalog and parts database, explains that R&Y meticulously updates the data day to day, sku by sku. Detailed fitment data is recorded and documented in words and multiple images for every single installation.

"We know exactly which compressor fits which model of any car or truck," he explained. "It cuts down on errors when we sell and ship to our online customers. It also helps us identify failure points in the compressors that we can eliminate in our remanufacturing process, guaranteeing that our fully remanufactured and tested parts are good as new and often better than new. I believe this comprehensive database is one of several features unique to R&Y."

As young as they are, Prosper Mamane at age 33 and Jacob Shaked at age 31 have hung around and worked in the business for a generation, yet they are also children of the internet age. And so, it is no coincidence that R&Y was among the very first remanufacturers, if not THE first, to put auto parts on eBay as early as 2002. The company was also among the very first independent sellers on the eBay Motors section, Walmart's e-commerce platform and Amazon. Under Mamane's direction it refined its own RYcompressors.com website into another sophisticated e-commerce platform.



*Continued on page 10*



Their e-commerce sales, mostly to do-it-yourselfers, of A/C compressors have grown exponentially since 2010, along with clutches, saved from scrapped compressors and remanufactured.

Whereas Mamane and Shaked stress that they always aim to educate their clientele about the benefits of remanufactured original parts in terms of quality, sustainability and cost savings, they offer new built Chinese replacement compressors to customers who still harbor doubts about rebuilt and remanufactured parts.

R&Y operates an 8,000 square foot rebuilding and remanufacturing facility with 35 employees and a further two distribution warehouses totaling 22,000 square foot.

Current annual output and sales is about 100,000 A/C compressors and parts, about 75% of which are remanufactured and 25% new.

As demand has outstripped their own reman capacity, they have partnered with a large remanufacturer in Malaysia that remanufactures and tests to the same quality standards but at much bigger scale.

“We pride ourselves in offering and stocking remanufactured compressors and parts from the newest models along with the

full spectrum of carmakers, models and years and put a huge emphasis on being on top of the demand for hybrid and EV car and truck A/C compressors, as well,” said Jacob Shaked. “We can supply just about any A/C compressor or part without delay.”

For rare and exotic car parts that cannot be stocked, R&Y offers a fast turnaround service, remanufacturing and return shipping of malfunctioning A/C compressors from any vehicle.

While their e-commerce operation is increasing its marketing effort in the Caribbean and Latin American, Shaked and Mamane are preparing for the company’s new ambition to scale up further and become a supplier to other distributors. They are sourcing cores for their reman operation at a higher rate than ever and claim to be fully armed for success.

“We can deliver remanufactured A/C compressors for all popular cars driven in the US market, including for late models that distributors have difficulty finding elsewhere,” says Jacob Shaked. “We will be operating with a cushion of inventory. As long as the cores are out there, we have the capacity to meet the demand.” ■





## Salvage your earnings

**Reduce or completely eliminate your processing fees when you switch to Aurora Payments, APRA's endorsed credit card processing partner.**

We are proud to have recently joined APRA to help members save money. Break free from credit card fees with Rise Free, Aurora's free processing program. The proprietary cash discount software offers technology to support and streamline the payment process.

Reach out to an APRA endorsed representative to join other members who have made the switch. If you'd like to get started immediately, click below, or contact your industry expert directly:

**Sean Broderick**

Email: [sean.broderick@risewithaurora.com](mailto:sean.broderick@risewithaurora.com)

Phone: (443) 866-1786

**[risewithaurora.com](https://risewithaurora.com)**



**AURORA**  
PAYMENTS



# REMAN DAY CELEBRATIONS!

**R**eman Day is an annual event that celebrates all the remanufacturing industries, including those in the healthcare, automotive, heavy equipment, and imaging supplies sectors. Remanufacturers host students, teachers, parents, job seekers and other local community members at open houses, plant tours and presentations designed to showcase the economic and environmental benefits of remanufacturing.

For the past few years, imaging supplies dealers have attended events at automotive and heavy equipment remanufacturing plants. This year, an imaging supplies remanufacturer hosted the head of the Automotive Parts Remanufacturing Association (APRA), President Joe Kripli.

Planet Green, and its owner Sean Levi, opened his facility and provided an in-depth look at his remanufacturing operation.

Established in 2000, Planet Green, located in Chatsworth California, is one of the largest remaining printer cartridge remanufacturers in the U.S. Its certified state-of-the-art 30,000 square foot facility exemplifies streamlined production and remanufacturing excellence, while keeping the environment in mind. The business is based on diverting used printer cartridges from landfills and remanufacturing them for resale as an environmentally friendly and economical alternative.

To the delight of all in attendance, Levi introduced his extensive line of innovative disassembly, cleaning, and filling equipment that he has designed. Some of these machines are repurposed household tools and appliances, making Levi a true remanufacturer on several levels.

“We continue to create our own manufacturing techniques and production equipment,” Levi said. “Utilizing leading edge technology with top-quality supplies enables us to uphold our high standards of quality. The passion for continuous research, development and innovation keeps us among the best of the best in the ink cartridge remanufacturing industry.”

As a leader in high-quality U.S. remanufactured cartridges, Planet Green offers a cost-effective solution for customers looking for a sustainable, American made print consumable product at a great value. “We offer an alternative to OEM cartridges by extending their lifecycle and closing the loop on their production,” Levi said.

Consumers can recycle and buy high-quality U.S. remanufactured ink and toner from Planet Green’s DoorStepInk brand at [www.doorstepink.com](http://www.doorstepink.com)

Planet Green recognizes that business has a direct and indirect impact on the environment. “Our goal is to achieve sustainability through calculated decisions, measurable results and direct impact,” Levi said. “Planet Green environmental policy is imbedded in the company’s mission. Our future generation is relying on our implementation of such simple acts, and we feel strongly about your support for aftermarket products. We appreciate your efforts in working with Planet Green today for a greener tomorrow.”



Joe Kripli commented “it’s amazing the synergies in remanufacturing all types of products and ink jet cartridges are no different. As in the Automotive remanufacturing industry, they have cores, they are disassembled, inspected, parts replaced, reassembled, and 100% tested. A very rigorous process.”

The tour led to a lively discussion about the state of remanufacturing in both industries, which are both burdened by similar challenges and opportunities. Levi and Kripli parted ways with a new commitment to find ways to work together further to address mutual challenges to remanufacturing and to promote each other’s products and environmental commitment.

## Goldfarb & Associates Celebrate Reman Day



Pictured are: Eric Sherman, Sean Levi, Tricia Judge and Joe Kripli.



Started in 1986 by Bill and Michael Kitching, GB Remanufacturing, Inc. remanufactures and distributes premium gasoline and diesel fuel system related products to its customers around the world.

Today, the company has grown to over 150 employees, more than 1,400 products and has become the market leader in providing premium remanufactured gasoline and diesel fuel injectors, diesel electronics and components to the automotive aftermarket. ■



There were many Reman Day Celebrations around the globe on April 13, 2023. I was fortunate enough to be able to share Reman Day at GB Remanufacturing with Mike Kitching and Joe Evert.

## CORE IS NOT A FOUR LETTER WORD

By Paul D'Adamo

**T**here is no question that COVID has reshaped the labor pool in some not-so-business-friendly ways. Attracting and retaining qualified employees has become Job #1 for many recyclers, taking precious time away from acquiring quality vehicle inventory and running the business at peak efficiency.

Somehow, through this timeframe, some recyclers have seen “cores” as an extra function of the business versus part of the dismantling process. However, It is the only process that allows recyclers to trim overstocked parts right at the dismantling bay, as well as old stock on the shelves taking up scarce space on our shelves.

### DISMANTLING:

There is no better time to profit on cores than in the dismantling bay. Our YMS tells us our QOH (quantity on hand) and DOH (days on hand) for any given part on any vehicle. Granted, the vehicle is coming into the dismantling bay for a sale on the engine or transmission but think of the access to other parts at that moment. IT'S A BONANZA. We must re-tune our habits to identify and harvest core parts while selling off the big stuff. Do you want to put small parts on the shelf knowing you already have duplicates. . . and sometimes triplicates??

### LOOSE PARTS ON THE SHELF:

Overstock: The fact is that 99% of recyclers are overstocked. It is a matter of degree as to how much overstocked they are. I am constantly pulling recycler data, which gives me “agita” to see multiples of parts sitting for not days, not months, but years. If you are buying extremely late-model vehicles, you might stretch the days on hand for maximum return, but you must balance out how many you already have as well.

There is a cost of having parts in stock for too long:

1. Failure Rates Increase - Internal parts can dry up and fail when installed on a vehicle, driving up return rates.
2. Unfulfilled Customer Orders - Overfilled shelves make it difficult to find the part you are looking for, creating inflated parts that are MIA.
3. Safety issues - motors and transmissions stored between racks create a hazardous
4. situation when employees have to manhandle parts.

### CORES ARE MERCHANDISE FOR SALE:

As mentioned in a previous article, we are in the sales business. I used to joke that I would sell the paint off the walls to make payroll. Very simply: We Dismantle Vehicles, and We Sell Parts. While we are living through trying times, let's re-tool and use our scarce resources to sell every widget we can in a timely manner for the right price based on market conditions. Let's work smarter, not harder.

I am NOT a Core Expert, but a Recycler working at a Core Company. This has advantages because I have become the Recycler's “Inside Guy”. Let's put a laser focus on your inventory in 2023. ■

### How Can You Improve Your Core Program?

Contact me at [pdadamo@coresupply.com](mailto:pdadamo@coresupply.com) or call my cell # 401-458-9080. Let's make change together.

# AUTOAMÉRICAS CONCLUDED ITS FIRST EDITION SURPASSING EXPECTATIONS FOR NEW BUSINESS AND CONTACTS



**M**iami, March 2023. – The first edition of **AutoAméricas Show**, on March 24-25, 2023 at the Miami Airport Convention Center - MACC, ended with a positive balance for both exhibitors and attendees, who connected with **more than 30 brands** including manufacturers and distributors of **aftermarket** parts, to establish new businesses and expand their markets in Latin America and the Caribbean.

In addition to the trade show, the **Academic Congress** was also held, a program of specialized academic conferences of interest to those involved in the industry, covering a variety of topics, such as support programs and export promotion in the United States, new business opportunities in the production and marketing of motorcycles, as well as remanufacturing for the automotive aftermarket, in addition to strategies on how to start a business in chip-tuning and cloning of electronic modules, and women's leadership in the aftermarket industry.

The more than 600 attendees to the event found a wide range of solutions among parts and consumables, including compressors for automotive air conditioning, refrigerants, antifreeze, lubricants and engine additives, mechanical parts for suspension, brake pads, clutches, timing kits, among many others.

Finally, the space to relax and share drinks and food with colleagues was at the **Fiesta Alegria in Little Havana** where attendees enjoyed a Latin night with singer Paola Fernandez, food truck, drinks and dancing.

## Renewed interest to join the future editions of AutoAméricas

The exhibitors were very satisfied with the results they obtained at the expo, who described positively the traffic of quality visitors, in addition to “connecting with people from markets we have not reached before, such as the Caribbean,” as pointed out by Carlos Rodriguez, representative of SSF Imported Auto Parts and Miguel Angel Arjona, commercial director of Distribuidora de Autoindustrias.

Also, Jose Orlando Giraldo, representative of TVA Automotive, highlighted that “AutoAméricas was a phenomenal experience, we are very grateful for the invitation and we hope to continue joining the expo in the coming years.”

As for the Supporting Show Sponsors of AutoAméricas, Tom Jackson, former president of the Automotive Parts Remanufacturers Association - APRA, commented that “we had a great time and a lot of fun, we met quite a few people from different countries and that’s what we’ve been looking for: people who are willing to export parts from the United States into Latin America, and people from other industries that may open new paths for the association,” while Carlos Andrés Pineda, president of the Association of the Automotive Sector and its Parts - ASOPARTES, agreed with this statement and said he was “very happy to have participated in the first edition, to meet new companies and sectors associated with the automotive sector, and to obtain very good contacts for the Association.”





Andres Caballero, Project Manager of AutoAméricas, expressed his gratitude to all the attendees and exhibitors “for having joined us in this event with enthusiasm and confidence in the positive results,” and emphasized that with “efficient teamwork we achieved an excellent first edition, with companies doing business with our win-win policy, which gives us the certainty to continue successfully with this project,” he said.

**The second edition of AutoAméricas has been confirmed for March 7 & 8, 2024, again at the Miami Airport Convention Center - MACC.** Stay updated with AutoAméricas news, please visit [www.autoamericas.show](http://www.autoamericas.show).

#### About Latin Press Inc.

Latin Press Inc. is a firm based in Miami, Colombia and Brazil, with more than 25 years of experience in publishing specialized publications and organizing B2B events, trade shows and international technical congresses in Mexico, Colombia, Brazil, Panama, Costa Rica, the United States and Puerto Rico, for the automotive aftermarket, multimedia, broadcast and radio systems, HVAC/R and building automation, professional cleaning, Facility Management industries, among others. ■

More information at: [www.latinpressinc.com/en/corporate-events/trade-shows-and-congresses.html](http://www.latinpressinc.com/en/corporate-events/trade-shows-and-congresses.html)



#### Contact for media:

Ana María Mejía

Marketing Manager Latin Press Inc.

[marketing@latinpressinc.com](mailto:marketing@latinpressinc.com)

+1 (305) 285 3133 Ext. 63

WhatsApp: +57 302 563 4105

An advertisement for Green Cleaning Bayco Solutions. The background is a photograph of a large industrial oven with its doors open, revealing a metal rack inside. The oven is green and yellow. Overlaid on the right side of the image is the company logo and text. The logo consists of the words "GREEN CLEANING" in a bold, sans-serif font, followed by "BAYCO" in a large, stylized, green font with a registered trademark symbol, and "SOLUTIONS" in a smaller, bold, sans-serif font below it. Below the logo is the tagline "... BECAUSE WE'VE GOT THE CURE." in a bold, sans-serif font. At the bottom right, there is a call to action: "VISIT US ONLINE TODAY FOR INFO ON OUR CURING LINEUP!" followed by the website address [www.baycoovens.com](http://www.baycoovens.com) in a bold, sans-serif font.





# TESTED: HOW TOWING AFFECTS ELECTRIC PICKUPS—HUMMER EV, RIVIAN R1T, AND FORD F-150 LIGHTNING

Towing a trailer with an EV pickup might be easy, but it kills range fast.



BY DAVE VANDERWERP, PUBLISHED: AUG 18, 2022

**From the September 2022 issue of *Car and Driver*.**

Last year, at our inaugural EV of the Year event, there wasn't a single vehicle that could tow more than 5000 pounds. There are now three such entries: the GMC Hummer EV (7500-pound towing capacity), Ford F-150 Lightning (10,000-pound max), and Rivian R1T (11,000 pounds). To evaluate this emerging electric-towing phenomenon, we hitched each to the same load, a 29-foot camper that weighs 6100

pounds, the sort of trailer a family of four might take on the quintessential summer getaway.

We ran all three trucks on the same 85-degree summer day on the same flat highway loop at 70 mph. Other than the slightly lower speed, which is prudent when piloting between 13,000 and 16,000 pounds of truck and trailer, we conducted this the same way we run our 75-mph highway-range tests, with the automatic climate control set to 72 degrees and running as many miles as we dared before the battery's state of charge became dire.



These new electric pickups are wonderful towing companions, aided by massive horsepower and torque that allow for easy merging with the flow of interstate traffic, and their heavy curb weights (between 6855 pounds for the F-150 and 9640 pounds for the Hummer) lend an impressive stability when lugging a three-ton trailer. But you won't want to be going far, as a full battery will take you a mere 100 miles in the Lightning, 110 miles in the R1T, and 140 miles in the Hummer. Although the Hummer consumes electricity at the highest rate of the three, its considerably larger battery pack more than makes up for the difference.

The Rivian's higher level of regenerative braking is helpful in slowing a trailer, while the Lightning disables one-pedal drive mode when towing. Selecting Tow mode in the R1T instantly slices its predicted range roughly in half, then adjusts from there based on real-time consumption; the Lightning made a giant downward leap between the first five and 10 miles, from 288 miles predicted to 96; the Hummer's range-prediction algorithm did the equivalent of putting its fingers in its ears and yelling "na-na-na," refusing to adjust downward despite dropping an average of 12 miles of predicted range for every five traveled.

The range for all three trucks when towing was less than half as far as when cruising lightly loaded at 75 mph. But the Hummer fared best, we suspect due to its punching the largest hole in the air to begin with—and the Rivian, which fared worst, the smallest—and therefore being relatively less affected by the blocky trailer.

The physics aren't different from towing with an internal-combustion pickup; in both cases the range will be sliced roughly in half. But in the case of these EVs, that reduced figure can be barely three digits. And low-battery warnings start in at roughly 50 miles to empty, when the battery pack is still nearly half full. Even if you're accepting of the lengthy recharging stops—which will be even longer due to the need to charge the battery further than when traveling unladen—most highway-adjacent charging doesn't allow pull-through access. And disconnecting a trailer—especially one like this with a weight-distributing hitch—every couple of hours is a major hassle. ■





# FLORIDA REPUBLICAN INTRODUCES FEDERAL RIGHT TO REPAIR BILL

## Aftermarket trade groups applauded the legislation.

By Counterman Staff

**On Feb. 9, U.S. Rep. Neal Dunn re-introduced federal Right to Repair legislation.**

### Related Articles

- eBay Launches 'Guaranteed Fit' Purchase Protection Program
- Counterman On Holiday
- Vehicle Care RockStars Unveiled At AAPEX 2022

**H**R 906, as introduced in Congress, aims to “ensure consumers have access to data relating to their motor vehicles, critical repair information and tools, and to provide them choices for the maintenance, service and repair of their motor vehicles, and for other purposes.”

“When it comes to repairing their automobiles, consumers deserve options,” said Dunn, a Florida Republican. “The REPAIR Act would give owners, including the rural communities in my

district, secure access to critical data so their chosen service center can replace parts and repair their vehicles. I am proud to support competition in the vehicle repair industry.”

Dunn is a member of the House Energy and Commerce Committee, which has responsibility for consumer protection, among several other topics. The bill was referred to the committee on Feb. 9.

The bipartisan bill has three co-sponsors: Reps. Brendan Boyle (Pennsylvania) and Marie Gluesenkamp Perez (Washington), both Democrats, and Rep. Warren Davidson, a Republican (Ohio).

“There are hundreds of neighborhood mechanics in Philadelphia,” Boyle said in a news release. “The last thing those small business owners need is to be boxed out of making a living. This legislation would not only protect the business relationships between automobile owners and their mechanics, but it also ensures consumers continue to have more options on where to go for repairs.”

Aftermarket trade groups applauded the legislation. In a news release on behalf of MEMA Aftermarket, the CAR (Consumer Access to Repair) Coalition and SEMA, the Auto Care Association said:

“The legislation will ensure the preservation of consumer choice, a fair marketplace and the continued safe operation of the nation’s 292 million registered passenger and commercial motor vehicles, 70% of which are maintained by independent repair facilities.”

According to the Auto Care Association, the Right to Equitable and Professional Auto Industry Repair (REPAIR) Act will accomplish this by:

- Preserving consumer access to high-quality and affordable vehicle repair by ensuring that vehicle owners and their repairers of choice have access to necessary repair and maintenance tools and data as vehicles continue to become more advanced.
- Ensuring access to critical repair tools and information. All tools and equipment; wireless transmission of repair and diagnostic data; and access to onboard diagnostic and telematic systems needed to repair a vehicle must be made available to the independent repair industry.
- Ensuring cybersecurity by allowing vehicle manufacturers to secure vehicle-generated data and requiring NHTSA to develop standards for how vehicle generated data necessary for repair can be accessed securely.
- Providing transparency for consumers by requiring vehicle owners be informed that they can choose where and how to get their vehicle repaired.



**50,000 Rotating Electrical Units**



**Online Catalog Featuring:**

<b>Search by:</b>	<b>Search Includes:</b>
• Vehicle Application	• Product Photos
• Part Number	• Bills of Material
• or Attribute	• Specs & more

Offered FREE to APRA members accessed through [apra.org](http://apra.org)  
Non-Members who want access, please use contact info below



**(866) 285-1292 • [dennis@youtechgroup.com](mailto:dennis@youtechgroup.com)**



- Creating a stakeholder advisory committee and providing them with the statutory authority to provide recommendations to the FTC on how to address emerging barriers to vehicle repair and maintenance.
- Providing ongoing enforcement by establishing a process for consumers and independent repair facilities to file complaints with the FTC regarding alleged violations of the requirements in the bill and a requirement that the FTC act within five months of a claim.

“As vehicle technology continues to advance, new barriers to a competitive auto repair market are emerging,” Auto Care said. “These barriers limit consumer choice in where to repair their motor vehicles and increase the cost to repair and maintain vehicles. The REPAIR Act will reduce these barriers, putting consumers’ interests first.”

## Momentum for Right to Repair

### Momentum has been building for Right to Repair in recent years.

In November 2020, Massachusetts voters overwhelmingly voiced their support for Ballot Question 1 (also known as Right to Repair) with 75% of the vote, which preserves their right as

vehicle owners to have access to and control of their vehicle’s mechanical data necessary for service and repair at the shops of their choice.

In May 2021, the Federal Trade Commission released its “Nixing the Fix” report, which highlighted barriers that vehicle manufacturers have instituted to squash a consumer’s right to repair. The FTC has said it strongly supports expanding consumer repair options and found “scant evidence” for repair restrictions imposed by OEMs.

In July 2021, President Biden issued the “Promoting Competition in the American Economy” executive order, which encouraged the FTC to address anti-competitive repair restrictions. In December 2022, the Digital Fair Repair Act was signed into law by New York Gov. Kathy Hochul, and in January 2023, John Deere signed an MOU with the American Farm Bureau Federation.

The REPAIR Act is the only bill that addresses vehicle maintenance and repair restrictions, including heavy-duty vehicles the U.S. economy depends on for freight transport.

Automotive aftermarket companies can urge legislators in their district to also co-sponsor the bill by visiting [repairact.com](http://repairact.com). ■

## PRECISION. ON SPEC. ON BUDGET. ON TIME.

For more than five decades, customers have trusted C&A Tool as their go-to partner for industrial manufacturing, and with good reason.

We have the experience, expertise and equipment to handle the most challenging and complex projects—from rapid prototyping, tooling and engineering, to full production runs at any scale.

From automotive, to energy and fuel systems, to trucking, construction and marine, to *alternative* energy, our team delivers on-time, on-budget precision like no one else.

- ▶ Armature Assembly
- ▶ Spool
- ▶ Inlet Body
- ▶ Poppet Valves

- ▶ Dual-Fuel Nozzle Assembly
- ▶ Housings
- ▶ Deep Hole
- ▶ Mold Components

- ▶ Fuel Valve Assemblies
- ▶ Racing
- ▶ Pump Shafts
- ▶ Ball Valves

### PROVEN PROCESSES

No matter your industry, your specifications or your challenge, our experienced and skilled engineering and production team is ready to tackle and solve it—from concept design to final delivery and every step between.

#### TURNING

- ▶ 70+ Lathes Onsite
- ▶ Multi-Axis with Live Tooling Capable

#### GRINDING

- ▶ 40+ Grinding Machines Onsite
- ▶ Curvic, OD/ID, Centerless, Out of Round, Vertical

#### MILLING

- ▶ 60+ Mills Onsite
- ▶ Full 5-Axis Capable

#### ADDITIVE

- ▶ 10 Additive Printers Onsite
- ▶ Titanium Ti64ELI
- ▶ 17-4 Stainless Steel
- ▶ Nickel Alloy 718/625
- ▶ Titanium TiCP

#### ELECTRICAL DISCHARGE MILLING (EDM)

- ▶ 12 EDM Machines Onsite

#### METROLOGY

- ▶ 16 Zeiss CMMs Onsite
- ▶ Roundness & Concentricity Analysis
- ▶ True 5-Axis Measurement
- ▶ 3D Laser & Light-based Interferometry

#### C&A TOOL:

**750K**  
SQ. FT.  
MANUFACTURING SPACE

**3**  
LOCATIONS

**650+**  
EMPLOYEES

**\$100M+**  
ANNUAL REVENUE

# SCOPE TESTING

## the Ford 10R80



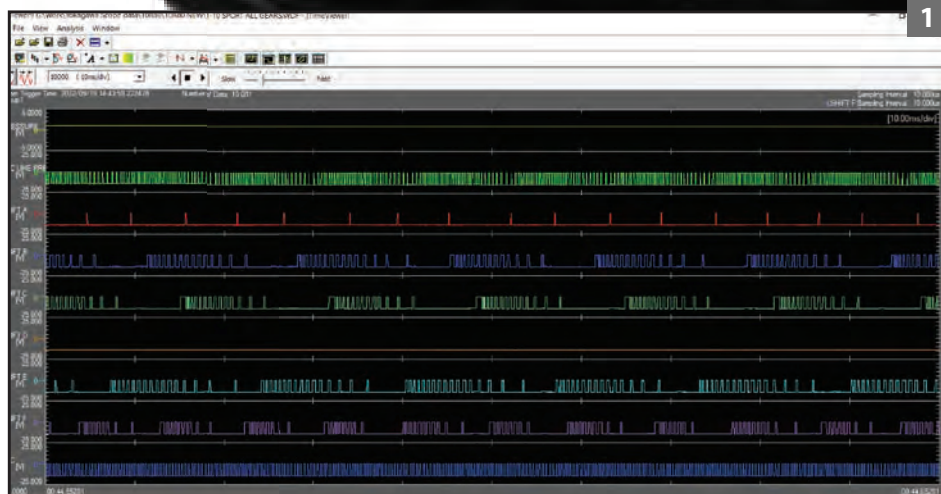
**Chris Adams**  
Certified Transmission

**R**ecently, we at Certified Transmission had a chance to do some work with the Ford 10R80. We have easy access to test vehicles since our owner also owns a used car dealership. For our R&D testing we used a 2019 F-150 equipped with a 5.0L engine and the 10R80 transmission.

I got to play around and do some scope testing on it. I'm so happy that both Ford and GM had decided to move the transmission control back outside of the unit. It sure makes this kind of testing easier to accomplish.

I am sure most of you have seen the articles and tech bulletins about this unit: it utilizes six shift solenoids, a N.H. (normally high) LPC solenoid and a N.L. (normally low) TCC solenoid. The shift solenoids are what Ford refers to as CIDAS (Casting Integrated Direct Acting Solenoid), which basically means that there is no fluid flowing through them so the pintle movement acts directly on a valve. The scope captures referenced below are at a sample rate of 10us (micro seconds).

I had a Yokogawa scope connected to all eight solenoids and a 0-500 PSI Pico pressure transducer connected to the line pressure service port. What I ended up with was PWM (pulse width modulation) solenoid control I have never seen before. Neither the duty cycle nor the frequency remained consistent. We have all seen normal square wave patterns with variable PWM control, but I had never seen what a 10R80 pattern looks like. Obviously, I am not an electrical engineer, just a transmission guy, so the best way I could describe it is if you had a rolling TCC surge on a 4L60E and the duty cycle kept changing to try to accommodate for the slip.



**2**

LINE PRESSURE SPECIFICATION CHART				
	Line Pressure - kPa (psi)		Commanded Line Pressure - kPa (psi)	
Gear	Idle	WOT	Idle	WOT
P/N	619 (90)	————	94 (14)	————
Reverse	619 (90)	1,675 (240)	94 (14)	410 (60)
Drive	619 (90)	1,600 (230)	94 (14)	375 (55)
3	619 (90)	1,230 (180)	94 (14)	275 (40)
2	619 (90)	1,675 (240)	94 (14)	410 (60)
1	619 (90)	1,600 (230)	94 (14)	375 (55)



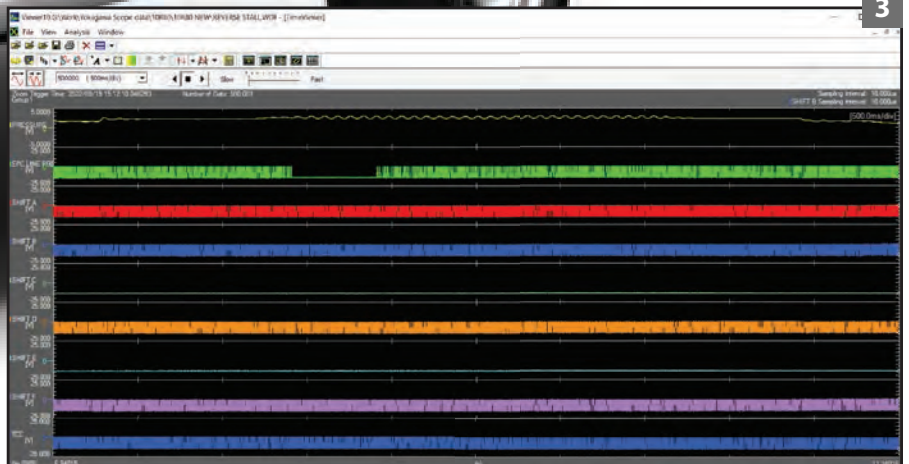
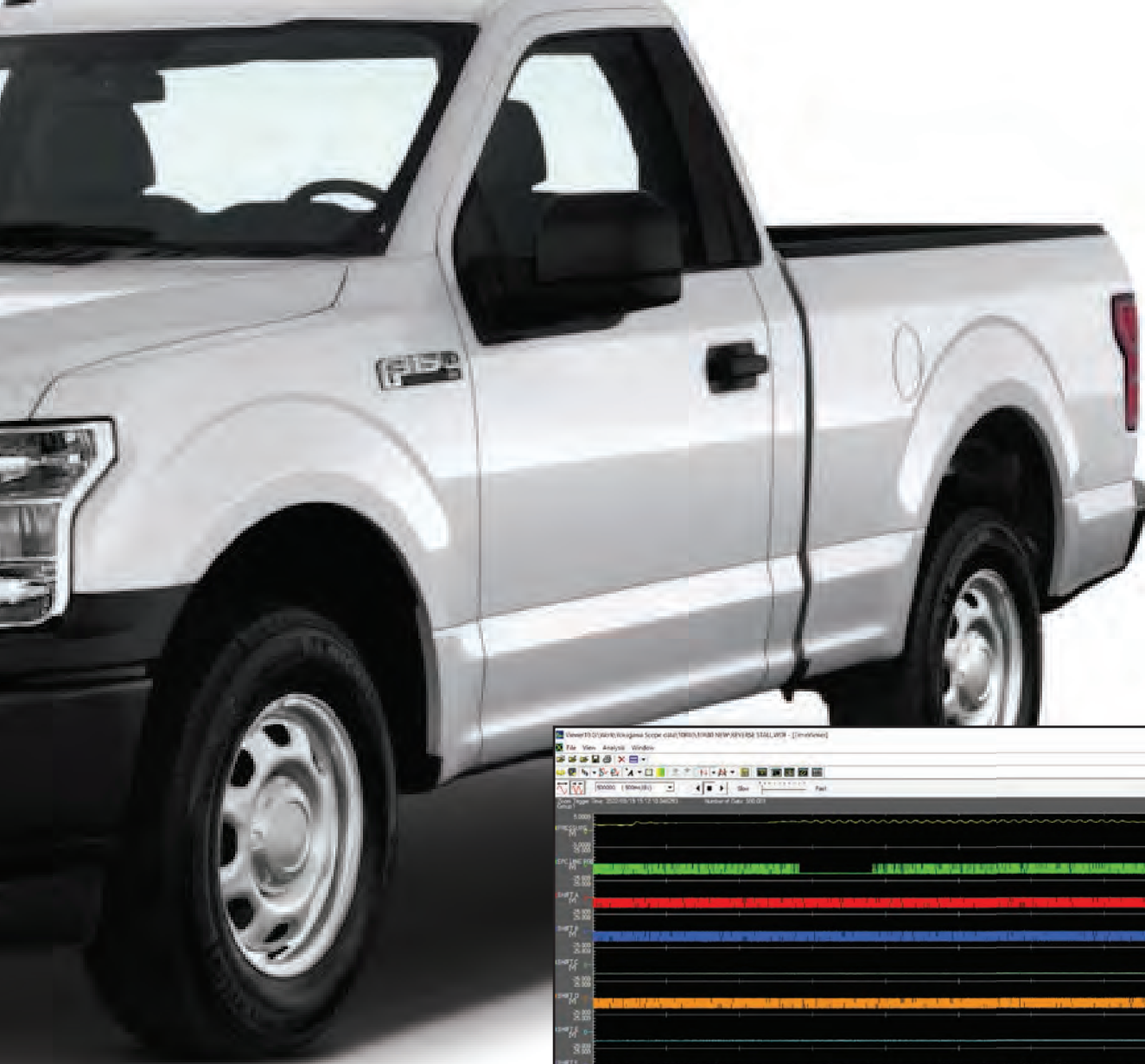


Figure 1 shows a good example of shift solenoid operation in ninth gear. SSA and SSD are clearly off (although SSA has a high spike about every 5ms), while SSB, SSC, SSE and SSF are all on but not in a manner we are used to seeing. Focusing on SSB, we see that the duty cycle does change a bit, but looking at the Hz is where you can see the big difference.

The scope software has a very good math function which is the only way you can see frequency. At different points on the screen, the Hz change from about 625Hz to 7150Hz; the higher Hz occurs right after the longer initial turn-on. All the data on the screen is scaled at 100ms. The TCC solenoid operation is the most consistent, probably because it is more like a traditional solenoid we are used to seeing. Cruising with light load, duty

Continued on page 10

SOLENOID OPERATION CHART								
Selector Lever Position	TCM Commanded Gear	SSA 1-2-3-5-6- M1-M2-R	SSB 2-8-9-10- M1-M2-R	SSC 2-3-4-5-7- 9-10-M2	SSD 2-3-4-6-7- 8-10-M2-R	SSE 1-3-5-6-7- 8-9-M1	SSF 4-5-6-7- 8-9-10-R	TCC Solenoid
Park	P	On	On	Off	On	Off	Off	Off
Reverse	R	On	On	Off	On	Off	On	Off
Neutral	N	On	On	Off	On	Off	Off	Off
"D"-1st	1	On	Off	Off	*	On	Off	Off
"D"-2nd	2	On	Off	On	On	Off	Off	On/Off
"D"-3rd	3	On	Off	On	On	On	Off	On/Off
"D"-4th	4	On	Off	On	On	Off	On	On/Off
"D"-5th	5	On	Off	On	Off	On	On	On/Off
"D"-6th	6	On	Off	Off	On	On	On	On/Off
"D"-7th	7	Off	Off	On	On	On	On	On/Off
"D"-8th	8	Off	On	Off	On	On	On	On/Off
"D"-9th	9	Off	On	On	Off	On	On	On/Off
"D"-10th	10	Off	On	On	On	Off	On	On/Off
"M"-1st	1	On	On	Off	*	On	Off	Off
"M"-2nd	2	On	On	On	On	Off	Off	Off

\*Applied to reduce frictional losses from a released clutch, but does not contribute to powerflow.

cycle varies between 35 and 45% and Hz between 2.6KHz and 3.5KHz. I was hoping to provide some line pressure to duty cycle specs, but even at a steady line pressure reading the Hz, duty cycles change so much it is difficult to put into a format that would make any sense. However, I do want to bring up some discrepancies I see with service information that is out there. (See Figure 2).

Reverse WOT stall spec is 240. When at full stall in R the EPC shuts off and the pressure looks like a sine wave between 239 and 305 PSI, even when the solenoid turns on again. This surge continues until you start to lift off the throttle. This being said, your pressure gauge is going to be “spiky.” (See Figure 3).

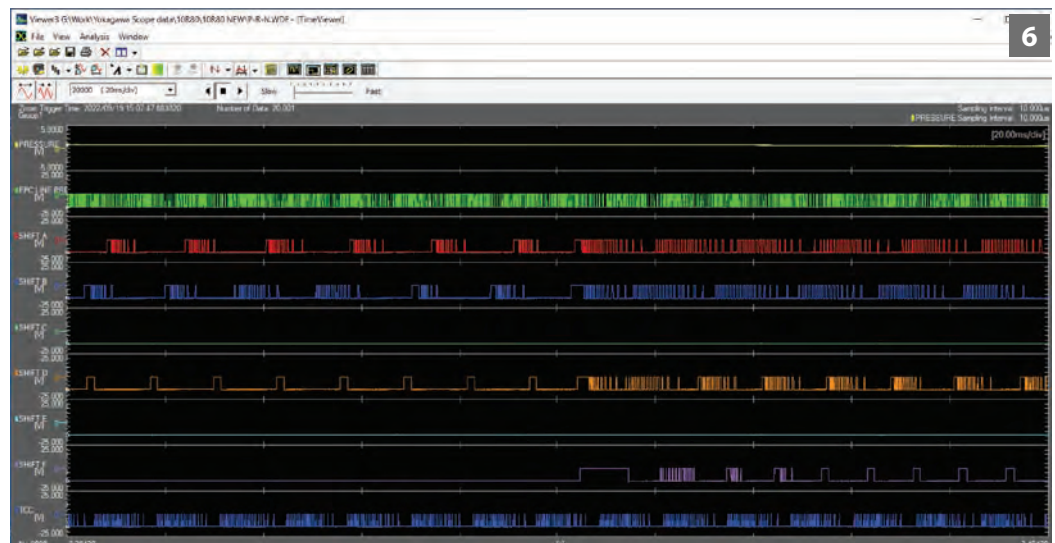
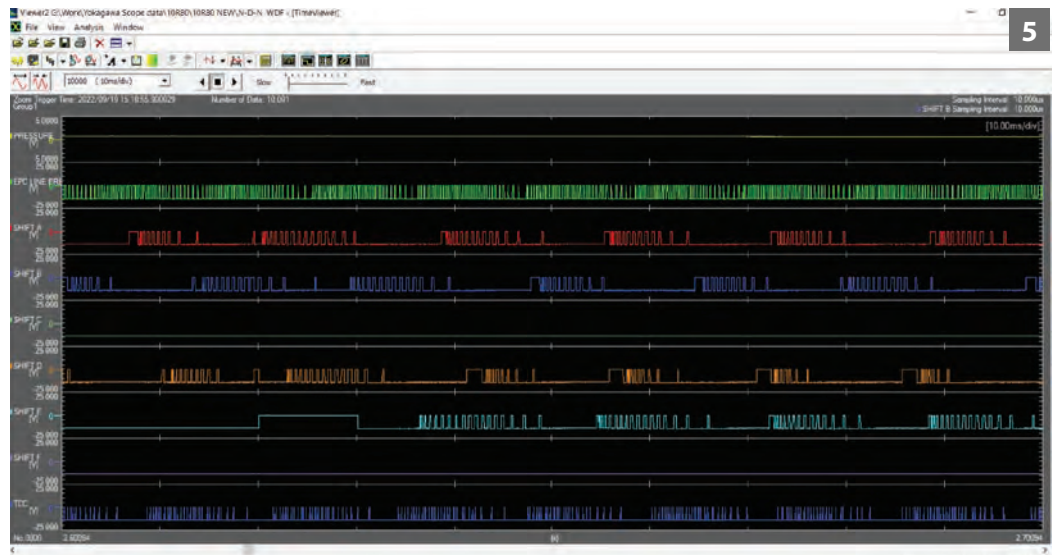
I am going to say this is normal as it exhibited this behavior with both a used and brand-new valve body. On the other end the charts I have seen all specs showing 90 PSI at idle in all ranges, but what I saw in reality was 72-75 at idle in all ranges.

On the Park to Drive garage shift we have some conflicting info from the solenoid application chart.

The chart in Figure 4 shows SSB is on in Neutral and turns off when D1 is commanded. I don't really see that on the scope capture in Figure 5.

SSE turns on with a long pulse “high,” and then starts regulating. Park to Reverse operates similarly when SSF is turning on. The difference that I see with this one is with SSD. (See Figure 6).

Where the chart shows that SSD is on in both Park and Reverse, actual monitoring shows it changing from a slow 77Hz/12% positive duty cycle to a fast 2.272KHz/50% duty cycle. It is not just as simple as an on/off solenoid chart, and I think these charts can be a bit deceiving at first glance. This is especially true



when diagnosing with a DVOM. You think the solenoid is off according to the chart, but you still see voltage on your meter. This could lead you down the wrong path if you are looking at solenoid activity. On any of these newer units, you must use a scope for this testing.

One last thing I found quite interesting: during every up-shift event (except for 3-4), line pressure went to max command in forward ranges at 240 PSI. The scope shows a first through tenth 0 to 75 MPH run that took 50 seconds. The channel legend is included in Figure 7 in case it isn't clear in the image. ■



# TRANstec®

YOU'VE TRUSTED OUR POWER STEERING  
KITS & SOLUTIONS FOR YEARS...



...BUT DID YOU KNOW

## WE REPAIR & RETURN ELECTRONIC POWER STEERING MODULES

IT'S TIME FOR YOU TO MAKE THE TRANSITION FROM HYDRAULIC POWER STEERING  
TO ELECTRONIC POWER STEERING, AND WE'RE HERE TO HELP.

1

### CONTACT US

Scan the QR code below or  
call 877-601-0517 to request  
a return number so we  
can track your return through  
the entire process.

2

### SEND THE MODULE

You rebuild the racks (as always).  
Once you've removed the  
electronic module, send it to  
us to be repaired and  
reprogrammed.

3

### WE REPAIR, TEST & RETURN

Our TransTec team performs the  
repair, updates the software  
and tests the module before  
it is returned to be re-installed  
on the rebuilt rack.

OUR MODULES ARE BACKED BY A 12-MONTH AND 12,000 MILE LIMITED WARRANTY.



@TransTec\_brand



@TransTecBrand

CONTACT US TO GET STARTED

P. 877-601-0517

Darren.Whitefield@fnst.com

SEND US  
YOUR MODULES





# **REBUILDERS AUTOMOTIVE SUPPLY**

**#1 Supplier**  
to the  
**Largest  
Rebuilders  
Worldwide**



## **YOUR CORE PARTNER**

Our patented web-based systems eliminate backorders through an individualized core sourcing network.

Recalls  
Catalytic Converters  
RASCATS APP

CorePro  
CorePro Mobile  
RASBid

CoreConnect  
URG  
Metals Recycling

1-800-633-0162 | [www.coresupply.com](http://www.coresupply.com)