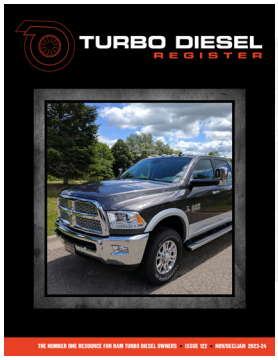

Nancy Newbies's Newfound Knowledge

Knowledge is of no value unless you put it into practice. — Anton Chekhov

One of the many things I like about Turbo Diesel Register is that it is full of knowledge that can easily be put into practice. After reading about synthetic oil and the ability to extend the time between oil changes by using it, I have put that into practice, thus saving me time and money—two of the stated goals of TDR. The editor says TDR's job is to "educate and entertain." After reading this recap of Issue 122, I think you'll agree TDR has succeeded again.

Always great to see the new year's **TDR calendar** come out. I can't wait to get mine! Congratulations to the owners of trucks featured in this year's calendar. I loved seeing the picture of the trucks owned by the Vansolkema family (page 5); they practically have a different generation Cummins Ram for every generation in their family.

In Backfire there was more discussion about drilling **brake rotors**. Despite Mike Miller's opinion in Rondel that "cross-drilled rotors do provide performance benefits," he adds, "there are drawbacks to them as well." This makes me return to Jim Pantas' statement in the NASA Newsletter, "The brake rotor takes the brunt of the forces that stop a vehicle. Why would you weaken it," and our editor's opinion, which seems solid to me (pun intended), "Stick with solid rotors and you'll always win." The editor also points you back to The Perfect Collection which, as with most topics of interest to our readers, holds the answers.

I was glad to see in "Your Story" that the numbers are much improved in Robert's latest oil analysis saga. Seeing Robert's comments on the **cup holder** reminded me of a conversation I had with a car dealer once who said, "Women buy a vehicle based on the cup holders." I do hope most women are more interested in the engineering and capability of a vehicle, but I must admit I do like my cup holders. LOL.

I was pleased to see Geno's Garage carries Covercraft seat covers that have received high ratings from customers. It is nice to know Geno's stocks products for every generation of truck. I'm gonna have to see if they would fit the seats of our ol' 1995 Chevy Silverado because the "leather" and foam seats are disintegrating. Guess that's to be expected from a truck that was a daily driver for 275,00 miles and is just about to hit 300,000 on the odometer.

A friend just changed the cabin filter on our Ford Flex and I got to see how dirty it was. Then, I see cabin filters mentioned in TDR. All I can say is replace your cabin filters and breathe easier; your lungs will thank you.

I had no idea what could "warp" rotors or that in 99% of the cases (according to "10 Back") they're not warped at all but rather have TV (thickness variation), which then causes the vibration felt in the steering wheel, brake pedal, or floorboard. For more information, read page 22, and then check out the Perfect Collection, Volumes 1 and 2.

In “10 Back” I learned enough about **Rudolf Diesel** to spark my interest and now I want to read more about the man who designed the Diesel engine, which ended up contributing to our family’s economic well-being for the 28 years my husband worked at Cummins, and which continues today through my quarterly work on this magazine. If you like a mystery, you’re sure to be intrigued by the information given on page 24 about Diesel’s disappearance at the age of 55.

Since I plan to travel more next year, I was excited to see that the editor and the fine folks at TDR have put together another book, **Ready to Travel**, full of travel suggestions that have been featured in TDR. Can’t wait to see the destinations recommended.

In “10 Back” I made note that consistent use of a battery charger can prolong the life of a battery. This was proven by John Holmes’ batteries from his 2002, 2003, and 2005 vehicles still going strong in 2013. And, I learned the editor now puts this in to practice.

In “Technical Topics” Tracy Martin covers ADAS—Advanced Driver Assist Systems—and how important it is to use the correct brake pads, as the ADAS calculates the amount of stopping power or brake torque based on OEM brake pads specifications. If OEM brake pads are replaced with aftermarket pads that have specifications different from the original ones, then braking might be compromised. It all has to do with coefficient of friction, which, as I learned from the article, is “the ratio of the frictional force between two surfaces (brake pads and rotors) and the force pushing them together (hydraulic pressure on the brake caliper pistons).” If there’s a significant difference in the coefficient of friction between the OEM and aftermarket brake pads it can cause problems with the stability control systems, which could lead to a dangerous understeer/oversteer situation. Read further in the article to learn the three factors that relate to the coefficient of friction, what the coding on the brake pads indicates, the three types of brake pad material, and how to determine which is best for your vehicle. Bottom line: Check the markings on the brake pads to make sure they have the same or similar friction characteristics to the originals, so you won’t have any issues with your ADAS.

Recently I’ve dealt with some companies who have atrocious customer service. (If you can even call it service—i.e., five hours on the phone with a certain internet provider to attempt to solve what should have been a simple billing issue. But, I digress, kind of like the editor dude.) I was pleased to see Geno’s Garage still believes in and practices good customer service—i.e., finding out about a customer’s truck and then suggesting he/she buys the less expensive product because it will work just as well on their vehicle as the higher priced one.

The ”Fourth Generation” column, pages 42-49, had some problems that serve as a reminder to first check for loose connections and dirty sensors for possible quick and inexpensive fixes. And, as always, I’m impressed by the knowledge of the TDR crowd and their willingness to share their wisdom at problem solving. As PacificNorthwestRVers noted, “As usual, the TDR folks were spot on.”

In “Blowin’ in the Wind” I learned **Indy cars** have not been fueled by gasoline since 1964, which makes the copy from Automotive News, which states, “One of the top events in motorsports is going green,” a bit behind the times. Of course, the editor calls it like he sees it and suggests it is “some great corporate-speak and fantastic public relations.”

I see the push to go "green" with Electric Vehicles is going strong with Jeep Wrangler 4xe sales increasing 72% in the first quarter of 2023 and Stellantis making the decision to no longer stock gasoline vehicles in 14 states [when the Jeep 4xe option is available]. I also learned a new word: bifurcated — divided into two branches or parts, which is exactly what Stellantis did with its vehicle allocation practices among its 2,600 US dealerships, "refusing to ship non-electrified vehicles without a customer order to 14 states following emissions guidelines set by CARB." For more info, turn to pages 50-51.

"Four Whaling" was filled with interesting, yet educational, anecdotes. I was shocked to learn that some electric vehicles may not illuminate their brake lights when they are stopped. Say what?! I hope that design flaw is fixed soon. I also learned that size does matter as evidenced in "What's in a Number" and "More 'Dimensions.'"

I appreciate the wisdom shared by **Mark Barnes, Ph.D.**, in "Motor Minded" about stress and abstract dangers that can play havoc with our nervous system and mental and physical well-being. He offers some great suggestions on breathing techniques and muscle tensing and releasing exercises that can help us cope and restore balance to our lives. The editor even added the note: "Try the 'deliberate breathing' technique in between reading paragraphs of the TDR." Mark closes his article by suggesting that "Regularly employed practices will also yield more powerful effects when used to mitigate unscheduled stress," and adding that "our lives in and out of our vehicles will benefit greatly."

I was intrigued by the story in "Ranch Dressing" about the French slowing down the Nazis by slyly sabotaging the vehicles they were building. You'll have to refer back to page 58 to see what they did. Editor's note: I'll save you from the research. Recall, they moved the notch on the oil dipstick a bit lower on T45 trucks they were forced to build for the Germans. Thus, the oil level looked full/acceptable when it was actually too low. There's also a great quote from Benjamin Franklin on page 58 that I wish manufacturers and consumers alike would understand: "The bitterness of poor quality remains long after the sweetness of low price is forgotten."

It's noted that America might not be ready for the EV takeover because we don't have the infrastructure in place yet, especially when it comes to charging stations, metals to power the cars, and other supply chain issues. Another topic discussed is "range reality" when it comes to EVs and the mileage they can get before having to stop to charge up. And, just like there might be some less than accurate range numbers, it appears there might be some guess work when it comes to vehicle emission reduction numbers, too.

"Polly's Pickup" features Xtreme Outfitters, pros at outfitting vehicles and even modifying them to perform special functions. The owner of the shop says, "If you can dream it, then we can Xtreme it," which was proven in the duplicate build of the General Lee from "Dukes of Hazard." I also like Polly's idea about having a first aid kit in the car, and she details the different ones available depending on your needs.

"Have Ram, Will Travel," Joe lets us know that "the lifespan for DEF is temperature dependent,' noting that DEF's estimated useful life is 1 week in 140-degree temperatures, 11 years at 68 degrees, and indefinite at 32 degrees. Joe writes about a new air horn that's available and recaps tire mileage from three sets of tires he's had on his 2013 Ram 3500 truck.

In "Still Plays with Trucks" **James Langan** highlights his truck reaching 100,000 miles and talks about idling, exhaust gas temperature (EGT), and diesel particulate filter (DPF). He always lets the turbocharger cool and the EGT drop before he shuts off his vehicle. My husband always did the same after the engine had run for several hours.

James also suggests that minimal idling and making sure the powertrain is loaded as intended is best for Diesel engines. As he says, "Work trucks like to be loaded," which I had learned from my Cummins engineer husband years ago. James adds that the DPF might need more frequent active regeneration cycles, too. I see that "some engineers call DEF horsepower juice." Interesting. He also highlights some minor repairs to his truck, which might provide you with some needed information if you're facing the same repairs.

Moses Ludel covers valve adjustment schedules for different engines and then walks you through the process step-by-step with pictures for added clarification. He says when done properly "valve adjustment protects the valves and provides vital insight into the condition of your Cummins engine." He adds, "The takeaway from this service procedure is peace of mind." And don't we all need that?

> ***"To insert the timing pin, you'll need the patience of Job, the finger dexterity of a 10-year-old, the thumb to forefinger strength of Samson, and the callused hands of a brick layer."***

In "The Shade Tree" the editor also covers a step-by-step valve adjustment, using a bit different technique than the one Moses details, and includes "valve overlap." Just a reminder that often there's more than one way to skin a cat. I love this line: "To insert the timing pin, you'll need the patience of Job, the finger dexterity of a 10-year-old, the thumb to forefinger strength of Samson, and the callused hands of a brick layer." The procedure in the "Shade Tree" allows you to forego the use of the timing pin when doing a valve adjustment.

From Stan Gozzi's article I learned that the Editor-dude was right about coolant filter kits being "a waste of money and a solution to a problem that does not exist." I also see that supply chain issues continue, thus keeping some trucks off the road—sometimes for months—because necessary parts are not in stock and, therefore, unavailable to repair the trucks.

In "From the Shop Floor" I learned that "exhaust leaks can cause low power complaints due to insufficient exhaust drive pressure at the turbo." Evidently the 5.9 engine is infamous for leaks at the manifold and the 6.7 for leaks from EGR components. I also learned not to use sub-par filters from a chain store because they are not robust like the Mopar filters. As Andy says, "These low-cost filters can and do cause costly engine damage due to unfiltered air. The Mopar filter is expensive, but effective."

I was intrigued by the "Exhaust Note" article about taking a road trip in an electric vehicle (EV), mostly because of the push being made for EVs and the fact that my friend had just purchased a BMW iX xDrive 50. During his stay, it became apparent that he would have to find a quick charging station to be able to make it back home successfully, since the hotel's chargers were not operational yet and the hour of charging "on the Square in Hope, Indiana," only raised the charge level by 5%. This meant a 30-minute drive north, 30 minutes to charge at a Supercharger, and a 30-minute drive back to Columbus. Not the best of traveling if you have to go out of your way and stop to charge every 300 miles or less to make sure you can continue traveling and not get stranded on the road. He did make the comment that he wished the charging stations had carports on them to shield him from rain when hooking up and unhooking everything. I had my friend snap a picture of me next to his EV while it was charging. Some features I did appreciate about the BMW iX xDrive 50 were the display on the windshield, the lane changing and parking assist features, and the massaging seats.

In “Exhaust Note” the opposite weather conditions were noted and I had to chuckle at the line, ***“It’s 112. And we are in a glass fishbowl, so… drink some water or something. And try not to die.”*** Great line, but not funny when you’re living it in real life. Sounds like Jack Baruth’s road trip from Tucson to Vegas was long and miserable. Unfortunately, if the government and the EV auto makers get their way, we might all be in similar situations before we know it.

I loved learning about Jim Pantas’ solar panel installation, as I have vaguely considered it in the past on my own house. His article has inspired me to investigate it further, especially as utility prices continue to rise. I thought his idea of powering an EV with the power from his solar panels was fairly brilliant, and it sounds like it has worked well, especially with using the EV for town driving only and not for long road trips. I don’t know about you, but the cost of electric energy calculations sure sound good when you drive a gas guzzler like I do. The problem is, I like big, comfortable vehicles, and I make several longer road trips a year, which, at this point seems impractical in an EV. I do, however, drive a lot in town, so an EV might be the thing to drive one of these days.

Until next issue, keep reading the TDR and telling your friends about it!

Connie Kiviniemi-Baylor
TDR Writer

From the Turbo Diesel Register, Issue #122