California Automotive Teachers

Fall 2019

Issue #53

CAT NEWS

www.calautoteachers.com

Newsletter Highlights

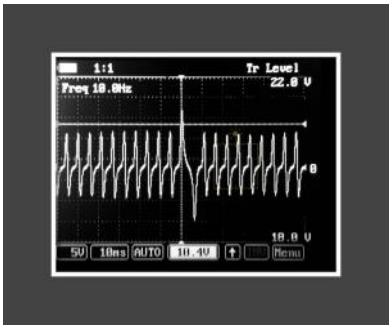
- Remembering Bob Barkhouse
- Cars for Schools
- Board Member Reports
- Conference Highlights

What's in this issue?

Teaching With an XY Voltmeter

Using an xy voltmeter (oscilloscope) to teach beginning automotive and diesel students will shorten the path required to the competent use of Kirchhoff's voltage laws to successfully troubleshoot electrical faults.

Removing the digital multimeter from first contact and concentrating the instructor's efforts to expose the student to the concept of voltage over time, will result in the understanding of key elements of troubleshooting DC systems in the markets we serve.



This runs counter to current practice where instructors have often followed a textbook written from the perspective of teaching Ohm's law first by starting with theory. I posit that this teaching method does not work well for many of our learners.

We need to be cognizant of the audience, remembering that we were once 15-25 years old, with many distractions in our lives. Is this how you best learned? We are not teaching matriculated physics or electrical engineering students. While they need much of the same knowledge, *and* may go on to be physicists, mathematicians or engineers, we need to recognize that they learn differently than your typical "math centric" or "theoretical" learner. These students are not stupid by any means; they're just different. So how do we accommodate those who learn differently?

Sometime in the early 2000's I started relating music, *the student's music*, to the measurement of voltage and current over time. The correlation in a student's mind of moving a large magnet (amp + subwoofer) to make the bass audible ***and***

(Continued on page 19)

The California Automotive Teachers will meet at Skyline College for the Spring Conference on April 24 & 25, 2020.

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President's Letter by Wendy Lucko

Greetings CAT Members! I am hopeful to bring your input into future conferences and help you improve your student programs. This is a growing and evolving industry as a norm, but during these last five years I feel like it's become a race! The automotive industry has always been on the forefront, and now we are expected to have experience in everything from custom-built cars to self-driving PODS! With legislation, ever-changing students' expectations, and high turnover of administrators, we have a challenge on our hands. Not to mention the lack of available qualified instructors! As educators, we need to have open discussion, be honest, and stay healthy to help this industry stay strong. I am here to help you any way I can, or to at least give some direction.

My personal goals are these: ask when I'm not sure, ask when I need help, and justify all my wants accordingly; basically, be rational. My experience came as an independent repair mechanic, and I understand what long hours and hard work means. Teaching was not my goal until I had a very interesting summer in 2011 when several people made it apparent that I had an untapped skill. My husband, Rudy, was the one who would push me and put the auto instructor applications in my e-mail! He saw something in me and has more confidence in me than I do. Not until strangers asked me if I thought about teaching did something click! I owe a huge "Thank You" to Gary Uyematsu of BMWNA, Earl Ortiz of Los Medanos CC, Marty Orozco and the faculty at Cypress College who gave me a shot.

No matter the size of your program, your goals should always be student-focused in producing ethical hard-working critical thinking technicians. This way, they can survive the changing tides coming their way, as the demands on our students are greater than they were for us. They need to have more than just a mechanical inclination, which came easy for us even 20 years ago. The expectations for their technical and mechanical skills are higher than they were for us at that place in life.

As teachers, you should not be afraid to ask for what you need if you justify it accordingly, doing this is not only on your campus for mere VPs and Deans, but also with industry partners, advisory members, and associations like ASCCA, SAE, car clubs and any local networks affiliated with community service and work. It "takes a village," as Rick Escalambre put into my head early and simply asked me to try. Phil Jelinek taught me to teach others and always remain curious. As John Overton stated in October 2009, "Consider becoming involved in the Facilities Committee, Curriculum Committee, Budget Committee, or even the School Site Council." This is key to getting programs noticed and understanding how YOUR job site functions, who the decision makers are, and HOW to justify what STUDENTS need. I got a lot more done by simply changing my vocabulary from "I need this to do that" to "the students need this to be assessed whether they can do that." The "I" became "we/they" and the "my" became "the students'." As Rick has stated many times, "Take a proactive approach and not a reactive approach" and this will get you far! I can prove it; it just takes some time, a lot of patience, and a practical approach.

Now why am I giving thanks and a history lesson? It's simply to get you to think about teaching, mentoring, and volunteering outside of your regular class times! YES, it is hard, but this is the only way to keep programs strong. They are not OUR programs; they are the STUDENTS' programs and we are the guardians. We all need Thomas Darell Deeters and Bob Barkhouses in our lives.

Lead by example, let students get it WRONG and let them understand FEAR…. all of these lead to focus and understanding. Another note, don't treat the females any different; they could even use a little tougher challenge than the boys…. expectations are a wonderful tool in education. This was taught to me by Dave Cantrell, may he rest in peace, and Thomas MacEntire, who to this day is mentoring my new instructors at age 83!

Executive Director's Report by George Hritz

EXECUTIVE DIRECTOR'S REPORT from GEORGE HRITZ

On your behalf, I attend and participate on Board of Directors meetings of the following professional organizations:

Automotive Service Councils of California

California Automotive Business Coalition

California Automotive Wholesalers Association

Bureau of Automotive Repair Advisory Group

The California Department of Education Transportation Sector Advisory Committee

The CAT Board of Directors is a group of your fellow teachers. They are professional and accomplish many positive outcomes on your behalf. I want to congratulate them on their accomplishments. Keep up the good work!

KUDOS

The Spring 2019 CAT Conference was hosted by Solano Community College in Vallejo. We were hosted by a host of individuals; led by Paul Hidy and assisted by Andrew McGee, Rick Marshall, Ritzdane Suriben, Samantha Osborn, Eileen Amick, Curt Johnston, Rei Leal, Galen Tom, Shannon McCormick, Rachel Kia and forty hard-working automotive students. The new facility is amazing, and I bet everyone wishes they could teach in a workplace like that. I heard nothing but praise for all aspects of the conference. Thanks for the great job!

Denise Cunningham with the Bureau of Automotive Repair for creating the Cars for Schools vehicle donation program. She put in much effort to make the program work. Thanks to Denise and the Bureau of Automotive Repair staff. There is a flyer in the newsletter that provides the program details of how your automotive mechanical and collision programs can have access to these training vehicles.

Tony Jewell for being a CAT member for more than Fifty Years!

FOR YOUR BENEFIT

CAWA (California Automotive Wholesalers Association) offers two programs that can help teachers succeed. One is the "The Motorcar Parts of America – Selwyn Joffe Scholarship Award Program – Awards for Automotive High School Teachers" which provides up to $1500.00 for high school instructors to use to improve and support their programs. The other program allows for CAT

(Continued on page 5)

(Continued from page 4 - Executive Director)

members to attend training offered by CAWA members at no cost. To learn more, go to cawa.org.

ASCCA (AUTOMOTIVE SERVICE COUNCILS OF CALIFORNIA) offers free educator-level membership to any individual who is an "educator/teacher" member of CAT. When you register for the CAT conference there is a link with an option to the ASCCA application. After you complete your conference registration, don't forget to complete the ASCCA application form the link on the registration confirmation page.

I strongly encourage you to take advantage of this opportunity to get involved with this professional organization partner. Please consider becoming part of their leadership group. Committing to a leadership position with any group is always a learning and rewarding experience.

IMPACT

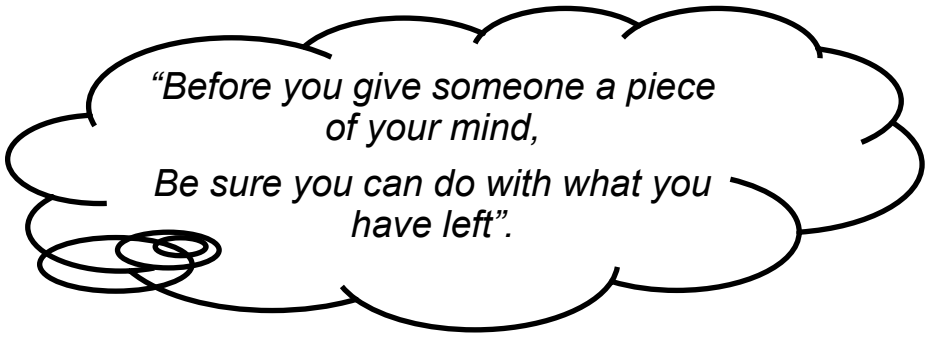
ASSEMBLY BILL 1303 CTE Incentive Grant. This bill would have provided ongoing funding of $450,000,000 per year for CTE. It died in committee. There are rumors that another version of the bill will be introduced next year. You need to keep your local legislators informed and aware of funding needs of your automotive programs.

CAT Fall 2019 Conference hosted by SADDLEBACK COLLEGE 28000 Marguerite Parkway, Mission Viejo, CA on October 18 & 19, 2019. The presenters and exhibitors scheduled for this conference will motivate you to attend. The link to the schedule is: http://www.calautoteachers.com/conferences.html

If you who have a colleague who has never attended a past CAT Conference, please encourage them to join us for this event. The workshops, trade show and tours will be remarkable. The registration link is: http://calautoteachers.com/reg_join.html

I hope to see you on October 18th and 19th at Saddleback College.

George



The American Dream … if one were to ask for an example there may be none better than Bob Barkhouse. Born of modest means on January 16, 1930, he left us very early on the morning of September 21, 2019.

Who did he leave behind? Gayle was his life companion, lover, greatest advocate and the one person who kept him in line. Brother Tom (wife Mary) always his best friend, who reminded Bob he would always be a farmer; daughter Lori (husband Mike) and granddaughter Olivia; son Larry (wife Amy) and grandson Justin.

He was preceded in death by his sister Marion Richardson.

He also leaves legions of friends, co-workers, students who were bettered, inspired and humbled by his Grace. There are administrators, bureaucrats and politicians who were charmed, pushed, and convinced that what Bob was advocating was what was needed. Once it was a bigger bridge over the Feather River or creating an entire educational curriculum for automotive service at the college level. Then he wrote the manual for that study. Along the way Bob was elected repeatedly to the highest levels of leadership. He was honored by classmates, educators, politicians and voters. Each group felt the impact of this humble but forceful man.

Who was Bob Barkhouse? He was the best friend one could have, especially if you liked pranks and bad jokes. He was a husband and builder of the family home, father, grandfather, brother, sailor, war veteran, student, teacher, counselor, author, board member, council member, mayor and American Hero.

We are all better for his life, but also wounded by his leaving. We already miss him.

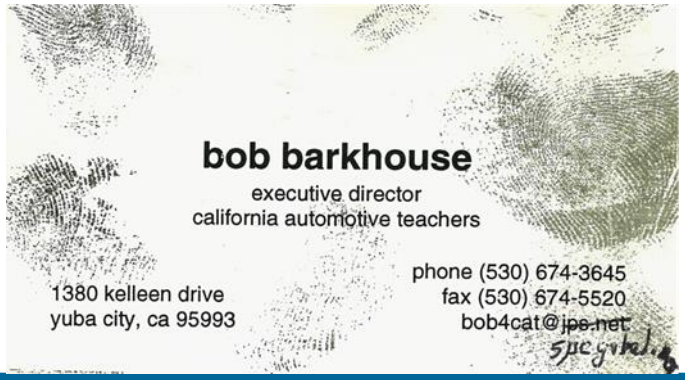
Services were held at 11AM Wednesday, October 2, 2019 at Ullrey Memorial Chapel, (817 Almond St Yuba City). Rev Chris Kersting officiated. Burial was private. The family requests in lieu of flowers, donations can be made to: Rideout Cancer Center of Adventist Health, 618 5th St., Marysville, CA 95901, 530-749-4400.

Bob's life was celebrated at Peach Tree Country Club on Wednesday, October 2, 2019 from 2PM to 4PM, 2043 Simpson Dantoni Rd., Marysville, CA 95901.

CAT remembers one of it founding fathers, Bob Barkhouse, during the Fall Conference at Saddleback College October 18-19, 2019.

IN MEMORY

BOB BARKHOUSE



CARS FOR SCHOOLS PROGRAM

VEHICLES RETIRED BY THE CONSUMER ASSISTANCE PROGRAM ARE AVAILABLE FOR INSTRUCTIONAL PURPOSES

SCHOOLS WILL NOT BE CHARGED FOR USE OF VEHICLES

- Transportation to the school and back to the dismantler must be arranged by the school at its own cost.
- Vehicles must be returned to the dismantler by May 30, 2022. However, they may be returned or exchanged earlier depending on availability.
- Schools must sign a memorandum of understanding with BAR.

INSTRUCTORS CAN USE THESE VEHICLES TO

- Teach mechanical and auto body repair techniques.
- Design troubleshooting activities for students.
- Disassemble systems as needed to demonstrate principles of operation.

STUDENTS CAN GAIN HANDS-ON EXPERIENCE

- Assembling, disassembling, and troubleshooting vehicles as needed to complete assignments.

FOR MORE INFORMATION, PLEASE CONTACT:
DENISE CUNNINGHAM
BUREAU OF AUTOMOTIVE REPAIR
10949 N. MATHER BLVD.
RANCHO CORDOVA, CA 95670
PHONE: **(916) 403-8759**
EMAIL: **DENISE.CUNNINGHAM@DCA.CA.GOV**

BAR Bureau of Automotive Repair

STATE OF CALIFORNIA
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DEPARTMENT OF CONSUMER AFFAIRS

PDE_19-265

Cars for Schools
Background Information

Thousands of vehicles are retired each year through the Bureau of Automotive Repair (BAR) Consumer Assistance Program (CAP) and the Air Resources Board (ARB) Enhanced Fleet Modernization Program (EFMP). The primary objective of these programs is to reduce air pollution by permanently scrapping high polluting vehicles.

Last year BAR Advisory Group members suggested diverting some of these vehicles to automotive training institutions. As a result, BAR and ARB collaborated to create the Cars for Schools Program. This program will provide up to 350 vehicles annually to public high school and community college automotive programs throughout the state. The vehicles are intended to provide hands-on training opportunities for students. Instructors can use the vehicles as visual aids, disassembling systems as needed to demonstrate principles of operation or repair techniques.

In order to retain the pollution control benefits of the retirement programs, BAR has placed some restrictions on the use of these vehicles (e.g., they cannot be driven on public roads and must be returned to dismantlers for permanent destruction by May of 2022). Participating schools must sign a memorandum of understanding (MOU) with BAR agreeing to terms of usage.

After the MOU is signed, BAR will send the school an electronic form that can be used to request vehicles. The form will have sections for the year, make, models desired (schools may ask for a range of model years or a specific year). The form will also have sections to document other request details. BAR will notify the school when the requested vehicles have been retired at a local dismantler.

Vehicles will be provided to schools at no charge. However, schools will need to transport the vehicles from local dismantlers (and eventually back to the local dismantlers) at their own cost.

Schools can obtain further information regarding this program by contacting:

Denise Cunningham
Bureau of Automotive Repair
10949 North Mather Boulevard
Rancho Cordova, CA 95670

Phone: 916-403-8759

Email: denise.cunningham@dca.ca.gov

WEBMASTER Report by Tom Broxholm

If you have any website concerns or ideas please use the “Contact the Webmaster” link that can be found at the bottom of the homepage.

If you have a job opening send me the link. If you have had me post a job for you and it has filled please notify me so I can take your ad down.

Newsletter Editor Report by Donal Howell

Though I have been a CAT member less than five years, this organization has grown quite near and dear to me. The knowledge gained, ideas for the future, and camaraderie are all worth the price of admission. When given the opportunity to serve in the Newsletter Editor capacity, I gladly volunteered and would encourage all other members to find a way to give back.

Some may ask what qualifies me to serve in this way, and it remains to be seen how successful the publication will be under my editorship. I do know there is a great team of folks working behind the scenes to help and guide me, especially Rick Escalambre.

Here is a little about myself; I am a product of a California Community College Automotive Program, and while in college I decided I wanted to eventually become a teacher. Fast forward through fifteen years of GM and Toyota dealership experience, and the opportunity came to teach as an adjunct Automotive instructor. It took six years of working two jobs, but eventually I was able to move into a full time position; the only one currently at College of the Sequoias. Now in my fourth year, I face challenges each day, just like all of you do. These should only serve to strengthen us and prepare us for future opportunities.

My editorial experience all comes from the “other side”, as I have worked with editors to publish some of my own articles. My encouragement to the educators out there is to start writing down your ideas and methods for instruction. These can be developed into articles for use in publications such as this newsletter.

I would also welcome short notes or letters to the editor which might be included in future issues. You may even want to share a little about your program or auto-related hobbies, since we all can learn from what others do every day.

Thank you all for this organization and the opportunity serve as editor.

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Catch a Wave!

A Special Message from First Past President Ruben Parra

Hello fellow CAT members, and welcome to the mid-portion of our fall semester. I am writing this short and informal letter first of all to offer my greeting and wish you all the best with your school year, but secondly to let you know of some training that I attended over the summer and that is available to most college instructors as well.

This summer I attended the **Automated and Connected Vehicles** training offered at Sinclair College in Dayton Ohio. The training, as the title reads, has all to do about the systems we are encountering on newer vehicles. ADAS, or Advanced Driver Assist Systems are becoming more and more common place. These systems are here to stay and we all could use some training and ideas to incorporate them into our programs.

Training is provided on specific makes such as Subaru, GM, Honda, Mercedes, Generic technologies and even HD truck systems. The crew at Sinclair College, (Shout out to Justin Morgan, and Carrie Lair) does a fantastic job at providing excellent training and making you feel right at home. I highly recommend this free training with accommodations provided and eligibility for a stipend! What are you waiting for? Please see contact info, and have a great CAT conference.

Carrie Lair

Project Manager

Automated & Connected Vehicle Conference

Sinclair Community College

444 West Third Street, Room 20-244

Dayton, OH 45402

P: 937.512.3242 | F: 937.512.2279 | carrie.lair@sinclair.edu

Editor's Note

On behalf of the CAT Board and its membership, I would like to thank the newsletter advertisers, the conference exhibitors, presenters, and sponsors. Without your commitment to the organization and to education in general much what CAT does could not take place. We appreciate your support and willingness to contribute money or time to improving the educational environment for our members.

ASCEF SCHOLARSHIP AND DONATION OPPORTUNITIES

Every year, the Automotive Service Councils Educational Foundation (ASCEF) awards scholarships ranging from $500 - $1,000. These scholarships have been instrumental in helping recipients create rewarding careers in automotive technologies.

Accepting scholarship applications August - March.

To be eligible for these scholarships, an applicant must be a:

- **California high school senior who plans to enroll in post high school technical and academic training or**
- **California college under-graduate in the automotive service field.**

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To apply, visit automotivescholarships.com

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ASCCA — Automotive Service Councils of California — Professionals in Automotive Service ~ Since 1940

Cars 4 Careers — Supporting Careers In Automotive Technology

A Message from the Newsletter Editor!

We always need technical articles to share with our members.

If you have an article for the news-letter

(it is never too early) please email them to:

donalh@cos.edu

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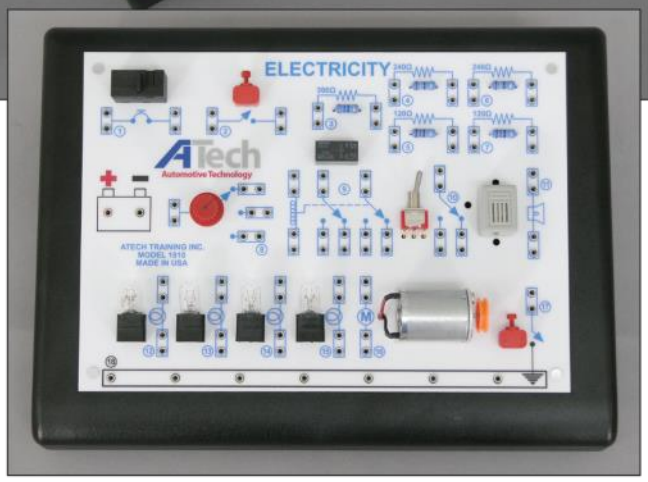

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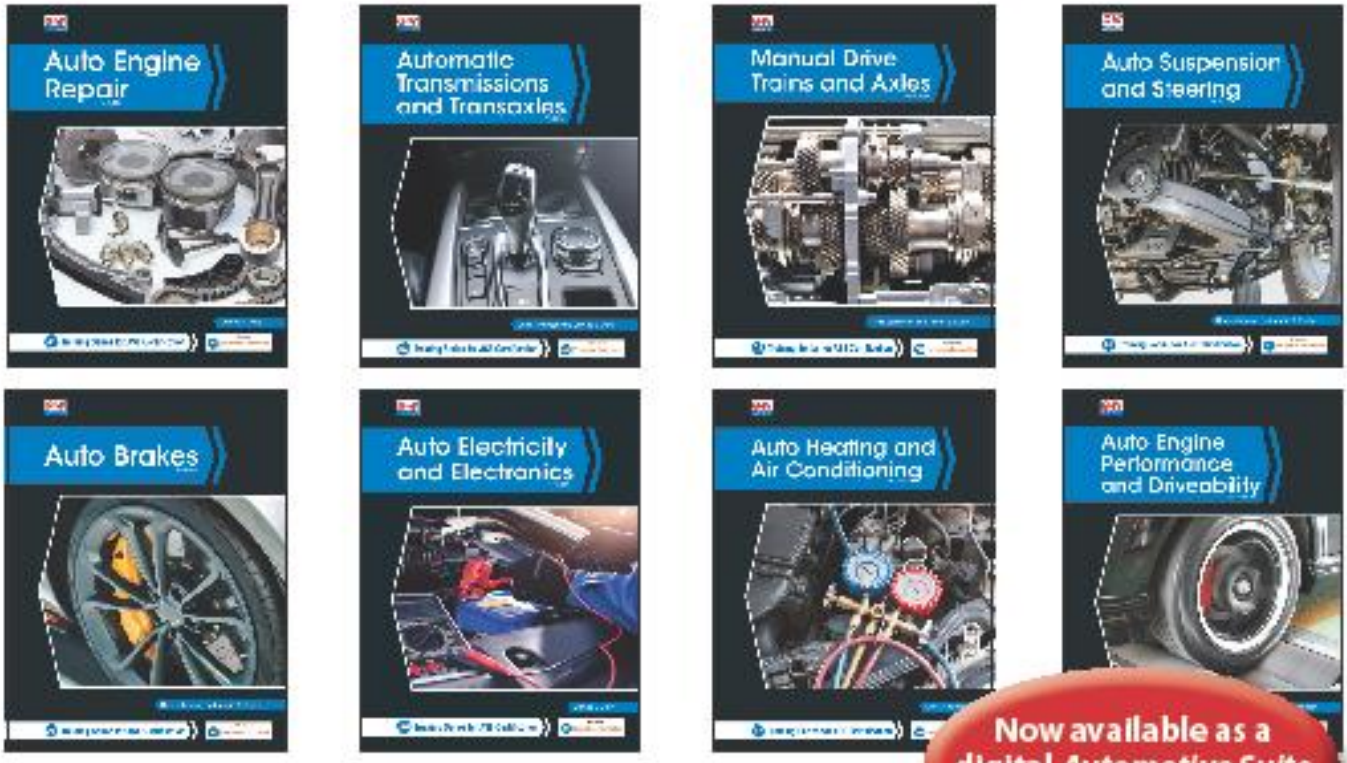

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Spring 2019 Conference at Solano Community College Photo credit: Moose Butler

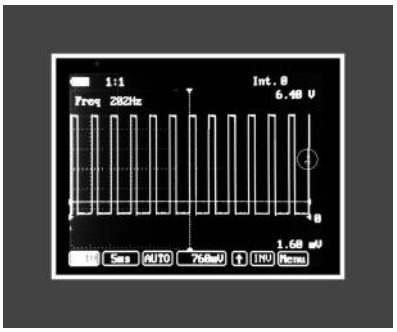
(Continued from page 1 - Teaching With an XY Voltmeter)

visible serves to start to build the understanding of how the relationships work; voltage and current flow in circuits. Adding the audible to the visual, correlated in real time on an oscilloscope screen is a priceless component for student learning.

In learning theory this follows the research of Lev Vygotsky and the "zone of proximal development", where the learner builds their own learning through the instructors' skillful use of "instructional scaffolding". *"This support is specifically tailored to each student; this instructional approach allows students to experience student-centered learning, which tends to facilitate more efficient learning than teacher-centered learning. This learning process promotes a deeper level of learning than many other common teaching strategies." (see:* https://en.wikipedia.org/wiki/Instructional_scaffolding)

This instructor has found great success with using this method to *"hook"* the learner into discovering their own learning. Using their own music, something that they are familiar with, as a hook saves time along the road to their understanding.

In informal canvasing of automotive and diesel shops across the U.S. this instructor is confident that more than 85% of so called "journeymen technicians" do not know how to utilize Kirchhoff's voltage and current laws to efficiently troubleshoot circuits on a vehicle or piece of equipment. The same learners are now trying to learn CAN Bus digital systems without understanding DC troubleshooting essentials. The base of knowledge or "zone of proximal development" is a critical step, or *scaffold*, in their learning process and needs to be addressed.



Another key factor in student learning is *repetition*. We need ways to introduce repetition into our training boards to develop the "muscle memory" of the technician so that they know where to test and to project their test results before they even connect their test leads. They need to think and project what would be an acceptable reading for each, *and every*, test. And repeat that time and again.

This repetition is more than "rote learning" or memorization. It involves the use of what is *known and can do,* at the center of their proximal development to push their boundaries further to diminish the zone of *"the students cannot complete tasks unaided but can complete them with guidance".*

In Summary

At ConsuLab we organize our pedagogy in "user stories" to convey what we want to help other achieve as instructors. On this subject my user story for this is: "As an instructor of transportation and heavy equipment students I want the tools to utilize more of the student's senses so that I can engage the learner earlier in the key foundational skills of electrical troubleshooting."

Please join me across North America as we work to continue to develop not only new training equipment, but also to build student-centered learning opportunities for your technical programs.

Jeff Curtis

www.consulab.com

A Hex on these DTCs! Seven Digit DTCs and "Guess-iagnosis"

We are all so familiar with DTCs that given a code and a car, we can often "guess-iagnose" the cause based on system knowledge and pattern failures. If a P0101 appears after an air filter replacement, plug the MAF sensor back in. If a P030x appears and the engine runs rough, swap coils and plugs to find the culprit, and so on. DTCs have remained fairly consistent since 1996, when OBDII first defined the 5-digit codes in SAE J1979 standard, and many technicians are "fluent" in this basic DTC language.

SAE made three major changes to OBDII DTCs in the J2012 standards.

First, because of the increased number of monitored systems, more DTCs were needed. Changing characters 2-5 from Decimal to Hexadecimal meant that letters A through F could now appear in code positions where only numbers lived before. The Decimal system uses numbers 0 through 9, and so each place has ten possible values. The Hexadecimal system uses numbers 0 through 9 ***and*** letters A through F, so each digit could represent one of sixteen values. It boils down to a way that an engineer can put more DTCs in the system without using more spaces.

The Hexadecimal system uses numbers 0 through 9 *and* letters A through F, so each digit could represent one of sixteen values.

Second, DTCs, which have always been tied to a single frame of freeze frame data, were allowed to have multiple pre- and post-event freeze frames recorded.

Third, the SAE changed DTCs in one more way. SAE allowed carmakers to add two more digits to provide a little more information to help diagnose the fault. When a system supports the extra digits, they are in the 6th and 7th positions, such as P0101xx or P1CADxx. These x digits are named the *Fault Type Byte*, or FTB. The additional digits, along with the base of five digits, are all defined by SAE in the document J2012. If you look it up online, be sure to get the latest iteration as it has been updated several times. If you decide to download the entire SAE definition spreadsheet, bring your wallet as it costs about $450. Fortunately, information for specific vehicles is available from the manufacturer or from aftermarket service information resources. Manufacturers are ramping up their use of FTBs, particularly in high-tech systems. It provides data for repair as well as data for engineering feedback. General Motors has been adding characters 6 and 7 to DTCs for a while now. In GM, the sixth digit represents a "category" of fault, such as a programming or bus failure error, and the seventh is a "subcategory" such as a short to ground or short to battery error.

If you decide to download the entire SAE definition spreadsheet, bring your wallet as it costs about $450.

(Continued on page 21)

(Continued from page 20 - A Hex on these DTCs!)

Let's take a simple example. A customer states that their 2018 vehicle (we will use a Lexus as an example) displays a MIL during driving. Starting the engine verifies that the MIL remains illuminated. A scan test for DTCs reveals a P0115 Engine Coolant Temperature (ECT) Circuit Fault. An experienced technician goes to the data list to see that the current input value of the ECT is a believable 95 degrees C (about 203 degrees F). In this case, since the problem does not currently exist, we can use the FTB and enhanced freeze frame data for help. Storing the freeze frame data, clearing all DTCs, and running the ECT monitor without a MIL will verify that the problem does not currently exist. Since the sensor input value is correct at this time, we need more information to lead us to the fix. With an enhanced scanner, you can retrieve the entire code, which is a P011511. The "11" at the end is defined as "sensor or circuit shorted to ground." A quick review of freeze frame data will show the temperature changing from 95C just before the DTC was set to 175C the moment the DTC set. Since the engine temperature could not have changed this quickly, there must be an intermittent short to ground causing a false indication. The FTB has told us, and freeze frame data confirms, that this is not a mechanical engine problem but an electrical short circuit. A thorough physical inspection of the wiring should reveal the fault.

FTB stands for Fault Type Byte - the extra two digits being added to our familiar DTCS

SAE added the FTB to our arsenal of troubleshooting tools, which already include freeze frame data, enhanced freeze frame data, and system operational data. With systems becoming more and more complex, this allows the onboard software to make many of the diagnostic decisions previously left to technicians, or to "guess-iagnostics".

Rick Donia spent 22 years wrenching in Michigan, and fifteen years working for OE companies in California helping with automotive training. He retired from full-time teaching in 2017 and is now adjunct at Cypress College.

Introducing the Pico Club
by Donal Howell

The featured article in this newsletter from Jeff Curtis is all about using oscilloscopes to open students' minds to the way electricity works. More and more people in our industry are recognizing the power of these tools, and one of the most powerful examples is the PicoScope.

With that in mind, Warren Parr of Complete Car Care in Fresno, along with Dennis Schlundt of Dennis' Auto Repair, started the Central California Pico Club. In an interview, which can be found on YouTube by searching for Central California Pico Club, Warren shares how he came to the realization that the automotive industry is not competing with itself. Automotive shops are not competing with other shops for their customers but are competing with other industries for high-quality technicians. This led him to look for ways of increasing the profitability of his business, making it possible for his employees to earn more. One key way to do this is by decreasing diagnostic time.

A reduction in diagnostic time, and resulting satisfaction of the customer, does not come about by an increase in guesswork. Guesswork only serves to cost more time and money when components are replaced unnecessarily. The practice of installing a "known good part" does not serve the best interests of the shop, technician, or customer. An increase in technician knowledge helps, however no technician is going to know the exact answer to every issue on every single vehicle. Therefore, the increased knowledge needs to come in the form of technology and a better understanding of it.

Yours truly had the opportunity to attend one of the monthly meetings of the Central California Pico Club on October 12th. It was hosted by Andy Daniels, an avid supporter of automotive education, at Frank's Automotive in Tulare. Shop owners, technicians, and educators drove about an hour from Fresno to bring this group closer to the local shops in Tulare and Visalia. Students from one of the local high schools, as well as one of my students from College of the Sequoias, were able to hear and learn about this powerful tool as well as gain insight from shop owners about what they are looking for in future technicians.

One of the highlights of the day was a former employee of Warren Parr named Scott Andresen, who is now working for AESWave. Surely, having such a revolutionary business in their back yard led these automotive professionals to increase their reliance on this available technology. The knowledge Scott gained in the shop is now being put to good use in this business, which develops new interface devices for a multitude of diagnostic purposes.

Though less than a year old, the Central California Pico Club is growing rapidly, supporting current and future technicians with their monthly meetings at shops and schools. They run a private Facebook group on which members share their experience, screenshots of scope traces, and tips for repairs. I could have found other things to do on a Saturday morning, but attending this meeting was worthwhile for many reasons. Hopefully, similar groups can be developed in other locales and ideally they would share the attitude this group has toward educators as well as their so-called competition.

Late Breaking News

The Pico Club idea has spread to Southern California! The Southern California Pico Club meets the first Saturday of every month from 9 AM-12 PM at Pro Shop Automotive in Colton, CA. For more information, contact Drew Hernandez at (909) 583-4133 or Drewzauto@gmail.com.

Pico Club meeting photos courtesy

Carlos Menchu

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The CAT Newsletter is always looking for technical articles and advertisements! The deadline for submitting articles and ads is March 25th for the spring issue and October 1st for the fall issue. Articles should be submitted in Word. It is preferred that ads be submitted in JPEG or EPS formats, PDF will work but sometimes the text is distorted once it is placed into the newsletter. The cost and sizes for advertisements can be found on our Website.

For additional information about the California Automotive Teachers' organization, future conferences, job announcements, training opportunities, and much more:

visit our WEBSITE at

www.calautoteachers.com

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