LAND SPEED RACING PG 7 CAN BUS FOR EV PG 16 NEW JOB PATHWAYS PG 22

# NACATNEWSVOL 36DECEMBER 2022NO. 6



















ELECTUDE

















# In This Issue:

NACAT President's Update Tom Millard, Warren Tech Getting to Know...Steve Gibson, NACAT Board Chair...Part III Directory of New and Renewing NACAT Members since October 1, 2022 Cengage Jack Erjavec Innovative Instructor Scholarship Now Open: NACAT 2023 Course Submission Portal VISION Hi-Tech Training & Expo Discount Hybrid & Electric Vehicle Corner: CAN BUS for Electric Vehicles *Curt Ward, Professor at Joliet Junior College* A Taste of History Save the Date: NACAT 2023 Conference & Expo Member Spotlight: Jerry Clemons U.S. Department of Education Launches New Initiative...Pathways...

Heavy Duty Scholarship Central Portal

#### NACAT News is Published SIX Times per Year!

#### **DEADLINE DATES**

February 2023 issue - January 10, 2023 April 2023 issue - March 10, 2023 June 2023 issue - May 10, 2023 August 2023 issue - July 10, 2023 October 2023 issue - September 10, 2023 December 2023 issue - November 10, 2023

The latest advertising size and rate information can be found at <u>www.nacat.org</u>.

# **Officers**

# *President* 2021 - 2023

**Tom Millard** Warren Tech 13300 W 2<sup>nd</sup> PL, Auto Tech BLDG C Lakewood, CO 80228

#### *Vice President / President Elect* 2021 - 2023

**Drew Barnes** Vale School District 403 E Street West Vale, OR 97918

Secretary / Treasurer 2022 - 2023

**Steve Tucker** SUNY Delhi 2 Main Street Delhi, NY 13753

# **Appointments**

#### **Business Manager**

Heather Sebben 5950 North Oak Trafficway, Suite 201 Gladstone, MO 64118 Email: info@nacat.org Office Phone: 816.766.1515

#### **Business** Advisor

Sheri Hamilton 5950 North Oak Trafficway, Suite 201 Gladstone, MO 64118 Email: info@nacat.org Office Phone: 816.766.1515

#### NACAT News Editor

James Curry JasCor LLC 108 Carolinian Drive Summerville, SC 29485 Email: <u>nacatnews@nacat.org</u>

# www.nacat.org | 3



#### CONSULAB AND ALL EV BEGIN PARTNERSHIP TO DEVELOP ELECTRIC VEHICLE TRAINING AIDS

It's no secret that electrification is the future of the automotive industry. And there's still a great deal to learn regarding this emerging technology. That's why ConsuLab, the premier manufacturer of automotive training aids is partnering with All EV, a leader in electric vehicle products and education.

This partnership will allow ConsuLab to provide the industry's best electric vehicle training aids to schools throughout North America.

All EV is a subsidiary of the Steele Auto Group and is based in Halifax, Nova Scotia. With locations throughout Canada and the United States, All EV are experts in the field of electrification as it relates to the automotive industry. This partnership will allow ConsuLab to quickly get to market electric vehicle (EV) training aids to help develop the next generation of automotive technicians.

"The entire industry understands the importance of electric drive today and in the future. In order to facilitate the development of training equipment that is based upon these technologies it is important for ConsuLab to be working with a company that has lots of hands-on knowledge of industry issues touching EVs and we are happy to be working today with a leader in this industry like All EV," said Kevin Boden, ConsuLab President.

The first EV training aid will be based on a Tesla Model 3 and will likely hit the market next year (2023).



#### NEW PRODUCT HIGHLIGHT

HV-950-B6.7\_035101 CONSULINK ENGINE BENCH CUMMINS B6.7 EPA 2021 NEW



#### NACAT PRESIDENT'S UPDATE

TOM MILLARD

#### WARREN TECH

Greetings and Happy Holidays to all,

It is the busiest time of year for all of us between grading, reregistrations, and, the best part of all, Holidays. Our students benefit from schools proactively looking toward their future needs in these changing times which see HEV / EV vehicles continually being introduced into our automotive world. There are now so many new and changing manufacturers, models, and drive systems that keeping up as become another full-time activity.

There are so many quality educators out there and excellent classes being created, distributed, and shared that we all can breathe easier. The L-3 Hybrid / EV ASE test is a real challenge, and will benefit any educator who wants to improve his or her abilities and skill set. There is also a lot of funding available which can aid with a program being able to gain access to the latest materials, trainers, manuals, and eLearning materials if one is so inclined.

The Holiday season is meant as a time to regroup, refresh, restore your beliefs, and meet with friends and family. I, myself, will be participating in numerous events for families throughout the community. At my school, Warren Tech, we held a Thanksgiving feast for our students, Auto Collision students, and Fire Science students. We fed turkey, stuffing, mashed potatoes, corn, and pie to about 200 students. Some of them will not having a proper Thanksgiving meal, so we have found that this is a great team building activity.

Planning and advertising is still ongoing for the <u>2023 NACAT Conference & Expo</u> which will be held at **San Jacinto Community College** located near Houston Texas, **July 10<sup>th</sup> to the 13<sup>th</sup>, 2023**. If you are a new teacher, and have not attended one of our conferences, we provide a family friendly atmosphere and are adding a NACAT Family group to help organize the events that will be available for family members who join us.

Another great training activity is the <u>VISION Hi-Tech Training & Expo</u> which will be held March 2<sup>nd</sup> thru the 5<sup>th</sup>, 2023 in Kansas City. NACAT will have a presence at the event and <u>NACAT members can receive special registration pricing</u>.

The members of your NACAT Board are looking forward to future conferences and training opportunities, and look forward to seeing you in the near future. We will be presenting additional information about the 2023 NACAT Conference and Expo as it becomes available.

Good luck and best wishes to you, your families, and students. Have a happy and safe Holiday season.



#### **Board of Directors**

#### Chairman of the Board 2022 - 2023

**Steve Gibson** K&N Engineering 1455 Citrus Street Riverside, CA 92507

#### **Board Member** 2021 - 2024

Louie Longhi Mechanics Local 701 Training 450 Gunderson Drive Carol Stream, IL

#### **Board Member** 2022 - 2025

Martin Duvic Louisianna DOTD 7686 Tom Drive Baton Rouge, LA 70805

Ed Martin Pickens Technical College 500 Airport Blvd Aurora, CO 80011

#### **Ron Morris**

Guilford Technical Community College 6012 W Gate City Blvd Greensboro, NC 27302

#### Todd Richardson

Utah State University Eastern 451 East 400 North Price, UT 84501

# A lesson in how the inlet side of a hydraulic pump functions, and fails, that students

Oil level in the reservoir drops in real-time to demonstrate the harmful effects of neglecting the oil level.

will never forget!



See and hear, in real-time:

- Starvation
- Aeration
- Turbulence
- Vortex

We excel at making hydraulics rewarding to teach, and really easy to understand.





(Pump Cavitation Simulator)

CALL US to setup a demonstration of this, and other FPTI products, via an online/virtual meeting.

# TOLL-FREE: 1.888.222.3421



Getting To Know...

# ...Steve Gibson, NACAT Board Chair

#### LAND SPEED RACING III

After making my rookie run, I had earned my "D" competition license which allowed me to run speeds up to 175 mph. We went back in June and I ran 161.500 to earn my "C" license, and later on that season I ran 178.803 to earn my "B" license. I really wanted to crack the 180 mph mark, but that achievement wouldn't come until the following year. The Camaro didn't have enough horsepower to run close to the class record, but it was still a blast to strap into the seat and hit the gas and run consistent upper 170's no matter what the course conditions or weather were like.

 170's no matter what the course conditions or weather were like.

 After the close of my first season we ended up being #24 in points, which qualified us for a trophy at the SCTA banquet during the off season. The banquet was a black tie affair, where our awards are presented and

the points champion is celebrated. Being #1 in points earns the driver a

lifetime SCTA membership – no small achievement! But anyone who receives an award at the banquet has earned something very special, and I felt very special being there.

At the end of that year, I had run over to Charlie's house to drop off some parts for him, and he said I want to talk to you about something. How would you like to buy the Camaro?" I couldn't believe what I was hearing. Charlie had done everything he had ever wanted to do with the car, and he was ready to pass it on to someone else who would continue to run it and enjoy it. The only condition of the sale was that if I ever wanted to get rid of the car that I would extend the same opportunity to someone else. I spent a week or two contemplating the decision, and just after New Years I returned to Charlie's house with cash in hand (I was also not allowed to tell ANYONE the price and I still have never disclosed the amount after 22 years!) My parents weren't too thrilled with their son owning a race car, but that subsided after a bit when they saw the amount of work I was putting in to the car and they saw I was following my passion.

The following season came before I could blink, and it sure felt different competing with my own car! The Camaro was just as reliable, and continued to run its consistent upper 170's runs. I was also getting some driving tips from Mike, and by getting in the gas sooner and leaving the push truck earlier I was finally able to hit 180 mph! The consistency paid off in points again, and I finished the season #25 and earned another trophy at the banquet. I was sure enjoying myself racing, but as I would soon find out, life can sometimes get in the way of your good times.

I was struggling to get through my last year of college and had to repeat 2 classes – not because of racing, but because I had a professor that just didn't suit my learning style. Two F's in your senior year of college means you probably aren't going to graduate that spring – and I didn't. So sadly, racing took a back seat while I repeated two courses with a different professor. After graduating, I was trying to figure out what I wanted to do full time. I had been working part time in an auto repair shop since high school, but now that I wasn't in school I needed to find something else. I landed a position as a shipping and receiving clerk for the speed shop we have in town, so with my employment worries out of the way I was able to get

CONTINUED ON PAGE 9



SPEED! Steve Gibson's commitment to running even faster and earning advanced licensing on display.



the Camaro ready for the last meet of the year that November. It had been an entire year since I had been behind the wheel, but everything came back to me instantly. I ran a 176 mph pass, having done nothing to the car in a year except changing the oil and adjusting the valves. It felt good to go fast again, like seeing an old friend after being apart for a year. When it came time to load the car back on the trailer to go home, I jumped in and fired it up but something wasn't right. The engine was down a cylinder. How could that be? It just ran fine a few hours earlier when I went 176? There had been no signs of any engine trouble during my run. There wasn't anything I could do about it right then, so I towed it back home and began brainstorming what to do about the situation.



After a week or two, I decided to dive in to find out what happened to the engine. I ruled out all the simple things - a plug wire hadn't come off, all the spark plugs looked normal (indicating that it had in fact been running on all 8 cylinders during my run), and it wasn't a distributor issue. I pulled a valve cover, and ah-ha! One of the rocker arms was not sitting straight on top of the valve spring below it. I pulled the rocker arm off and found a bent pushrod underneath it. I had found the problem. Now, what was I going to do about it? I decided that although I had just freshened up the engine 2-1/2 years earlier, it had been many more years since the heads had been off. So the engine would come out, get torn down, and I would do a full rebuild. How many

more horsepower could be restored with a fully rebuilt engine? Could that get me up into the mid-180's? The potential rewards made the challenge worthwhile. Over the next several weeks I would pull the engine out, completely disassemble it, clean all the parts that would be reused - block, crank, rods and pistons, etc. and start making a parts list of what I would need to do the rebuild. Charlie volunteered to take the cylinder heads to a friend of his and have them gone through, and he also wanted to guide and mentor me through the rebuild process. As I would clean parts I would drop them off at Charlie's house. When I had gathered enough supplies, I would go over on a Saturday morning and we would tackle a task. First, I learned how to knock in freeze plugs, mask off the block, and paint it. A few Saturdays later Charlie showed me how to install cam bearings. Then after a couple more weeks we put the block on a stand and laid the crankshaft. I was buying the parts as I could afford them, not really concerned with how long the process would take, I was more interested in learning the processes from my mentor. After the crank was laid, I covered the engine block on the stand with 2-3 black trash bags, tied tightly closed with twist ties since Charlie's garage got a lot of dust and dirt inside from the wind, and pushed the engine stand to the back of the garage as far from the door as I could get it.

The engine sat in that same spot, untouched, for the next 8 years.

#### COMING FEBRUARY 2023:

LAND SPEED RACING, PART IV

May your home be blessed with joy, laughter, and celebration this holiday season!

# KEEP YOUR STUDENTS SAFE IN THE BAY

# WITH ALI'S EXCLUSIVE LIFTING IT RIGHT" ONLINE COURSE

Identifying common lift types

**STARTS WITH YOU!** 

 Preparing to lift
 Lifting and working under a raised vehicle
 Lowering a vehicle
 Maintaining the lift
 CAR LIFT SAFETY AL



La identificanión de los tipos comunes de elevadores La preparación para levanta Levantar y trabajar bajo un vehiculo elevado

lajar un vehiculo tantener el elevador SEGURIDAD DEL LEVADORES COMIENZ CONTIGO

"Levantandolo Correctamente"

Lifting It Right<sup>™</sup> is the world's best-selling lift safety training program. It's the industry standard on how to properly operate any vehicle lift and is the only program developed and backed by the technical experts at the lift safety watchdog Automotive Lift Institute (ALI) and leading lift manufacturers.

Millions of students, professional technicians, and at-home mechanics have learned from Lifting It Right how to lift a car, truck, or SUV without causing injury or property damage. The interactive course teaches how to spot, lift and lower a vehicle, maintain load stability, and more.

With an annual subscription, you can offer the interactive course to all your students. Most students complete it in about an hour and will receive a certificate of completion after passing the final exam.



SCAN HERE TO ORDER NOW!! OR CALL (607) 756-7775



<image>

NEW! Lifting It Right<sup>™</sup> safety manual second edition completely updated and expanded. Order today at autolift.org/store.



### YOUR SAFETY IS RIDING ON IT!...



Thank you to those who have either joined or renewed their membership since October 1, 2022.

Frank Brown Buchanan, MI

David Carter Cedar Lake, MI

Joe Foellmer Johnsburg, IL John Gendrich Cleveland, OH

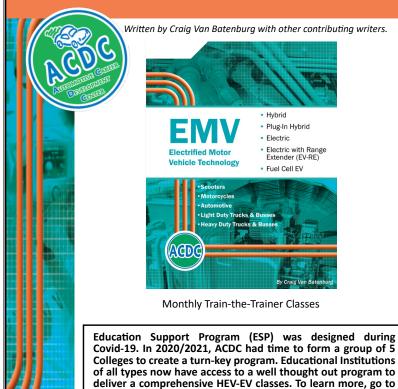
Erik Glass Grinnell, IA

Mike Patt Romeoville, IL

# For Automotive Teachers...

...<u>By</u> Automotive Teachers

### New HEV, EV, FC Textbook



Craig@fixhybrid.com 508.826.4546

www.FIXEV.com and click on ESP. This may be what you were looking for. The Book is included in ESP plus alot more!

#### www.fixhybrid.com



\$2500 scholarship funding a 1-year NACAT membership and attendance to the annual NACAT conference.

Application deadline: May 15, 2023 link.nacat.org/Innovative-Instructor

🛃 Cengage



Innovative Instructor Award

sponsored by



# **Electrical Skill Development** Troubleshooting

### Model 5810TT

Electrical Skill Development Troubleshooting (ESDTT) provides an in-depth, hands-on study of automotive electricity and electronics. Allows for troubleshooting skill development and competency testing. The internal fault board offers different computer-controlled hard faults. Both serial and parallel circuits can be configured to perform the activities in the ESDTT courseware.



#### **Features:**

ATechTraining.com

- ~ Optional submounts can be added to create customized circuits
- ~ Courseware included: Student Manual and Instructor Guide
- ~ Classroom Management Program (CMP) compatible
- ~ Network display and storage of student's performance
- ~ Fault insertion with keypad or ATech Lab System (ALS) 🗩



# NACAT2023 CONFERENCE & EXPO NORTH AMERICAN COUNCIL OF AUTOMOTIVE TEACHERS

# Course Submissions NOW OPEN!

# DEADLINE: December 15, 2022

link.nacat.org/2023coursesubmissions



(artist concept)

A table-top trainer that is exceptional for introducing students to the concept of transmitting power by pushing on a confined liquid.

If your company sponsors skills competitions, we can customize this trainer for your organization - a great marketing tool while helping your local high schools.

- Safe and clean operates at low pressure (max 60 PSI) with water.
- Makes hydraulics fun and exciting to learn students assemble this excavator, and install flexible lines, fill the reservoir with water, and see hydraulics in action.

CALL us to setup a demonstration of this, and other FPTI<sup>™</sup> products, via an online/virtual meeting.

### TOLL-FREE: 1.888.222.3421

- This fully-functional excavator lets students load pebbles on one side of a hopper and deposit them in the opposite side.
- A pressure gauge, and different cylinder sizes, lets students grasp fundamental hydraulics as it relates to force, pressure, and area.
- Perfect for mechatronics and STEM classes.
- Great for skills competitions.
- Water pump operates using 110 VAC.



140+ EXHIBITORS

100 + COURSES

۲

60,000+ SQ FT EXHIBIT HALL

40+ STATES 🔘

The event for automotive service professionals MARCH 2 - 5, 2023 kansas liti WWW.VISIONKC.COM **Hi-Tech Training & Expo** EDUCATOR THINK TANK COURSES Not a **ANNOUNCED COMING SOON!** member? Join NACAT NACAT members receive \$20 discount on weekend package or higher! Watch your email for details. Today! 60.000+ SQ FT EXHIBIT HALL 3.200+ ATTENDEES 🔘 40+ STATES 🔘 60,000+ SQ FT EXHIBIT HALL 🔘 100+ COURSES 140+ EXHIBITOR

60.000+ SO FT EXHIBIT HALL 🔘 100+ COURSES 🔘

140+ EXHIBITORS

60.000+ S0 FT EXHIBIT HALL

# UNIVERSITY OF THE AFTERMARKET FOUNDATION AWARDS 461 SCHOLARSHIPS FOR THE 2022-23 ACADEMIC YEAR

The University of the Aftermarket Foundation (UAF) has awarded 461 scholarships to students throughout the country, totaling a record-setting \$731,350 for the upcoming school year.

The scholarship recipients will be attending a two-year or four-year college or university or an accredited automotive vocational program. While the majority of the students are studying to become mechanical, collision or heavy-duty repair professionals, others are pursuing degrees in such fields as business, engineering and IT/cybersecurity that will lead to a career in the automotive aftermarket. In addition, many named scholarships were awarded on behalf of a variety of individuals and organizations. One such scholarship is NACAT's own Larry Cotten Memorial Scholarship.

"We are very proud of the growth of the UAF scholarship program," said Bob Egan, MAAP, chairman, University of the Aftermarket Foundation. "This year marks the most scholarship funds awarded by UAF and its collaborating partners in the foundation's history."

A complete list of recipients can be found at <u>AutomotiveScholarships.com/scholarship-alumni</u>.

"Awarding so many scholarships would not be possible without the generosity of those who donate their time and resources to UAF," said Egan. "Their support of UAF helps ensure that the aftermarket remains vibrant and strong through education."

To apply for a scholarship for the 2023-24 academic year, students should visit <u>AutomotiveScholarships.com</u> or <u>HeavyDutyScholarships.com</u> by March 31, 2023.



# **HYBRID & ELECTRIC VEHICLE CORNER** CURT WARD PROFESSOR AT JOLIET JUNIOR COLLEGE

#### **CAN BUS for Electric Vehicles**

Following my presentation at a recently completed conference this fall; I received several emails and phone calls asking about the chassis electrical system on an electric vehicle. Specifically, several wanted to know more about the operation of the CAN BUS. There is no question that CAN BUS, because of its universal communication capabilities, will play a critical role in the advancement of electric and ultimately autonomous vehicles and understanding its operation will be a crucial diagnostic tool. In this article I will highlight the testing of the CAN BUS that was recently performed on a 2011 Nissan Leaf. The goal of the testing was not to resolve a specific problem, but rather to understand the operation of the system.

The Nissan Leaf, like most other electric vehicles, uses the standard J1962 data link connector. The diagnostics we performed were through a breakout box that was connected to that connector. I strongly suggest the use of a breakout box, not only for the ease of connection, but more importantly, to preserve the integrity of the data link connector pins. Additionally, we used a high-speed, high-capacity oscilloscope and a class III rated multimeter. We did not use any insulated tools or high voltage gloves because none of our testing was conducted on a high voltage cable or component.

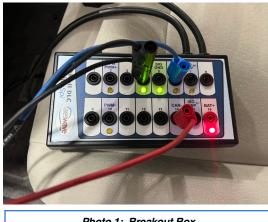


Photo 1: Breakout Box

The CAN BUS example shown in this article is the with the oscilloscope connected to pins 6 and 14 in the data link connector. (See photo 1) This would be the typical location for the high-speed CAN BUS in any vehicle since 2008. The measurements were made with the vehicle in the ready mode. The voltage on channel "A" of the scope shows the typical 2.5 volts to 3.5 volts digital pattern and channel "B" shows the typical 2.5 volts to 1.5 volts pattern. (See photo 2 on facing page)

With the key-off and the power removed, we measured the resistance between pins 6 and 14. (See photo 3 on facing page) The resistance was 61.4 ohms. This reading was within specifications and is typical of any high-speed CAN BUS. As part of understanding how the system operated, we shorted

the high-speed CAN Bus to ground with the key off. When we powered up the vehicle, it would not go into the ready mode. When the short was removed, the vehicle powered up normally and went into the ready mode. A network communication code was stored in history.

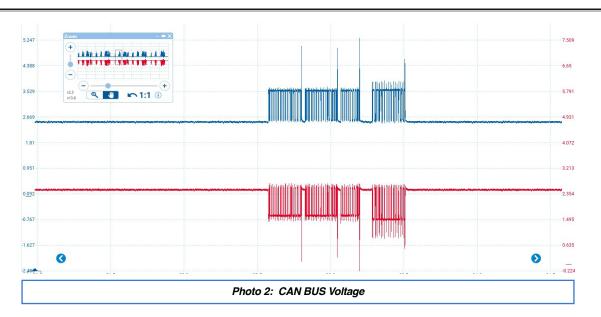
Although the photos in this article focus on the high-speed CAN BUS (Nissan refers to this network as the EV-CAN), it is not the only network on the Leaf. There is also medium speed body network, and the climate control system utilizes a UART network as well as a LIN BUS. The Leaf has a gateway module between the networks that is located in the VCM. Voltages on these networks were similar to the Nissan's with an internal combustion engine.

What did this exercise teach us? The manufactures of the electric vehicles are not completely reinventing the wheel. They are using successful legacy technology in the EVs. Different information is being transmitted

CONTINUED ON PAGE 17

# 16 | December '22 News

#### CONTINUED FROM PAGE 16



on the network; however, operation and the diagnostics are very similar to a legacy automobile. Once again, the basics that we teach in that Electrical I or Electrical II class will serve our students well when they decide to explore the world of electric vehicles. Maybe we will use this vehicle in our electrical class to generate a bit of excitement!

A related question: Does every electric vehicle use CAN BUS? No, Tesla uses newer electrical architecture and infrastructure of control units. Unlike the cars from other carmakers, it doesn't use CAN BUS, instead Tesla uses an Ethernet based networks for most of the communication. Tesla is not the only manufacturer to uses an Ethernet based network. Others have used it for entertainment and telematics communication. I am sure that its use will continue to expand, but that is an article for a different day.



Photo 3: CAN BUS Resistance

I will finish this article with the same offer I make after each of my presentations. If you are interested in getting started and want more information, please feel free to <u>reach out</u>. I am more than willing to sit down in-person or online and share my experiences. Are you looking for a classroom textbook? <u>Reach out to</u> <u>Pearson</u> and ask for a review copy of the all-new <u>Electric and Hybrid Electric Vehicle</u> text that Jim Halderman and I co-authored. It is a comprehensive text covering all the latest information on the subject.

Watching others, listening to their advice, and reading about people are three of the best things I ever did. Sir Alex Ferguson ofHistory

**A** Taste

As you may know, NACAT was incorporated in Vincennes, Indiana in 1974. As we prepare for another year of NACAT providing outstanding service to automotive educators, I want to present a recipe from the Frostop restaurant that was a staple in the southwest Indiana small town from the early 1950s through the late 1990s. The recipe has been shared by the late owner's family on social media and is said to have originated in 1954. It is likely that George Whitehouse and many of the original NACAT members and directors enjoyed this specialty while meeting. I can't guarantee they did, but it would be difficult to find someone who went to Vincennes in the era who did not.

#### Frostop Coney Sauce

Ingredients

3.5 pounds ground chuck

1 - 28 ounce can of tomato puree

1 - small (15 ounce) can of plain tomato sauce

- 3 Tablespoons chili powder
- 2 Tablespoons yellow mustard

Tablespoon worcestershire sauce
 medium onion, finely chopped
 Tablespoon salt
 Tablespoons black pepper

#### Process

- 1. Place all ingredients in a large pot and MIX BY HAND until well blended.
- 2. <u>DO NOT</u> cook meat in advance. Allow it to cook with other ingredients.
- 3. Cook on stovetop on medium heat.
- 4. Use wooden spoon to keep mixing and stirring so the mixture does not stick to the bottom of the pot.
- 5. Keep turning up the bottom of the mixture and stirring until the color has changed and all meat has turned brownish.
- 6. Once the meat is brown, turn the stove to LOW, stir FREQUENTLY, and continue to cook the mixture for 3 hours (the meat crumbles while the magic happens).









# NACAT.org

# STEM HOLIDAY GIFT IDEAS

30

Blvd

It is very well known that there is presently an automotive technician shortage, one that has been ongoing for quite some time and looks to continue well into the future. How can we help inspire the next generation of boys and girls who will be the men and women maintaining and advancing the trade? How can we increase their interest in transportation technology and engineering? I want to share a couple ideas which I believe would have many actively involved in "making" their future. The items go one step beyond the traditional Lego, Cobi, Meccano / Erector, and model sets. I hope you find them interesting (no paid placement is involved).



Infento. Infento is similar to Lego or Meccano building toys except the sets are large scale. They can make many projects and be utilized throughout childhood (ages 1 - 14). The pieces are made from recyclable aluminum and glass fiber reinforced plastic. Their "Legend Kit" is comprised of 975 parts (including the lithium battery) which can be used to build any of 54 rides (many electric options). They also have the following kits: Explorer (age 0-9), Pioneer (age 6-14), Smart (age 0-14), Genius (age 0-14) and Skiblocks (ages 8+).



Wrench - Motorsports Mechanic Simulator. While it was released a couple of years ago, Wrench is available as an early release on a traditional desktop mouse/keyboard set up or as virtual reality for Oculus. A game designed as a mechanic simulator, players begin by opening their own shop and taking on customer cars so that they may prepare and maintain race cars. Users must also problem solve to diagnose and correct problems with the virtual

vehicles while successfully operating their shop. The parts in Wrench are extremely detailed and great attention was paid to each component, including fasteners which are accurate to the thread pitch and install torque.

# **One trainer . . . endless possibilities!** Adapt any of these Plug-and-Play modules to the side of your trainer

MF100-EHCM MF100-ACC **Electro-Hydraulic** Accumulator and MF100-LE-TS **Control Module Unloading Valve** Logic Element MF100-MDCV **Mobile Directional** Control Valve MF100-SVM MF100-OSV Stacked Valve Orbitrol Steering Valve Model MF102D-H-TSE The MF102D-H-TSE CALL US to setup a demonstration of these, and other FPTI products, can also operate in any via an online/virtual meeting. of the following pump environment options: **TOLL-FREE:** • Fixed displacement pump TRAINING INSTIT Pressure-compensated pump www.fpti.org

1.888.222.3421

• Load sensing pump (optional)

# NACAT MEMBER SPOTLIGHT JERRY CLEMONS

### ELIZABETHTOWN COMMUNITY & TECHNICAL COLLEGE



Jerry Clemons, ECTC Automotive and Diesel Programs Coordinator, was selected to serve on the national panel for the Automotive Service Excellence (ASE) Education Foundation to update the standard for diesel technology programs in October.

"For eight years now, I've served as an evaluation team leader for ASE, which means I go into schools, community colleges and universities to help certify their programs with the foundation," said Clemons.

The ASE Education Foundation is a non-profit organization that evaluates and accredits entry level automotive and diesel education programs to bridge the gap between employers' needs and how students are trained.

"The automotive and diesel industries are dynamic with constantly changing technologies," said Clemons. "As school systems, we must be moving our curriculum forward to align with those changes or our students won't be prepared and productive members of the workforce." Clemons served five years ago on the national panel to update the standard for Automotive education. Then, he was the only community college educator on the panel.

"I'm honored to be invited to the panel to get to be part of something at a national level to provide input and value and it gives me a sense that the work we've done here is being recognized," said Clemons. "I've just been a member of a good team for a long time. People before me were doing it right and taught me how to do it right, and now I'm leading that team full of good people who care about our students."

Clemons said new standards of automotive and diesel education add value to employers in the region because of the training students receive. Those employers are then invited to speak to students about the industry and recruit top hires from the program.

"ASE is why we have equipment and technology that meets industry standards; they want our students to be able to be productive employees quickly as soon as they get hired," said Clemons.

"The students that make it through our program have valuable skills and have been challenged to be life-long learners and growers."

As an educator and evaluator, Clemons has a unique perspective of automotive and diesel education.

"I'm on the receiving end, helping run this program making sure we have the right professional development, tools, testers and diagnostic machines in order to work on these intricate cars and trucks," said Clemons. "It's both challenging and rewarding to keep learning, growing and evolving."

ECTC's diesel program and others like it across the country will benefit from the service that Clemons and others on the panel will provide to keep standards up to date.

"I try to only speak when I have something to add that has value," said Clemons. "I think that's what a committee like this needs, someone who can process information and see how value can be added to move the topic along. I'm humbled and thankful to get to do that on this panel."

### NACAT CONGRATULATES JERRY AND APPRECIATES ALL OF HIS EFFORTS IN SUPPORT OF THE AUTOMOTIVE INDUSTRY!

#### U.S. DEPARTMENT OF EDUCATION LAUNCHES NEW INITIATIVE TO SUPPORT CAREER-CONNECTED LEARNING AND INCREASE JOB PATHWAYS FOR YOUNG AMERICANS

Raise the Bar: Unlocking Career Success Initiative is a joint-effort supported by the Departments of Commerce and Labor to increase high-quality pathways that lead to in-demand jobs

November 14, 2022

Today, the U.S. Department of Education (Department) announced the launch of *Raise the Bar: Unlocking Career Success*, a new Biden-Harris Administration initiative supported by the Departments of Commerce and Labor to increase and expand access to high-quality training programs to help young Americans pursue jobs in today's in-demand fields, and be prepared for careers of the future.

This new effort unites key agencies of the Biden-Harris Administration to strengthen the connection between K-12 education, postsecondary education, and workforce programs. With the support of the \$120 billion dollars dedicated to K-12 education in the American Rescue Plan (ARP) and <u>Perkins funding</u>, the Administration is ensuring the next generation is building the skills necessary to fill high-paying jobs like those created by the <u>Bipartisan Infrastructure</u> Law and <u>CHIPS and Science Act</u>. This includes expanding access to skills-based learning and training pathways, like Registered Apprenticeships in key industries such as advanced manufacturing, automotive, and cybersecurity.

As part of today's launch, the Department is announcing \$5.6 million dollars in Perkins funding for a new program to expand work-based learning opportunities for students and this morning will issue <u>new guidance</u> on how federal funds can be used to develop and expand career pathway programs, including Registered Apprenticeships. As part of this new initiative, the Department will host regional summits with students, educators, employers, and other stakeholders to learn about practices that have led to success and challenges that must be addressed.

"It's time we bridge the divide between our K-12 systems and our college, career, and industry preparation programs, which leave too many students behind and perpetuate inequities in our most diverse, underserved, and rural communities," said **U.S. Secretary of Education Miguel Cardona**. "An education system reimagined for the 21st century engages youth of all ages in the power of career-connected learning and provides every student with the opportunity to gain real-life work experience, earn college credits, and make progress towards an industry credential before they graduate high school. Today, the Biden-Harris team is raising the bar with new investments and resources to support intentional collaboration between schools, colleges, workforce development agencies and industry partners and build clearer pathways for students to rewarding careers and lifelong success."

In support of today's launch, the First Lady Jill Biden, Secretary Miguel Cardona, U.S. Secretary of Commerce Gina Raimondo, and U.S. Secretary of Labor Marty Walsh will travel to northwest suburban Chicago, Illinois to meet with students enrolled in a career-connected learning program at Rolling Meadows High School. The Secretaries and the First Lady will also visit Aon's Chicago facility hosted by the Chicago Apprenticeship Network to highlight the value of Registered Apprenticeship, particularly in non-traditional industries and corporate careers with a focus on underrepresented populations and communities in key sectors of technology, finance, insurance, and banking. The visits coincide with the first day of National Apprenticeship Week, marking the 85th Anniversary of the National Apprenticeship Act.

"America is home to some of the world's brightest and most ambitious students, and we owe it to them to set them up for success," said **U.S. Secretary of Commerce Gina Raimondo**. "Career-connected education programs are essential to the success of the American economy and will spur a new generation of researchers, engineers, and manufacturers in critical industries. In launching this initiative, these programs and their graduates will enable us to continue outcompeting and out-innovating the rest of the world."

"During National Apprenticeship Week, the Biden-Harris administration is highlighting Registered Apprenticeship as a proven and industry-driven training model to address some of our nation's most pressing workforce challenges,"

CONTINUED ON PAGE 13

# 22 | December '22 News

### CONTINUED FROM PAGE 22

said **U.S. Secretary of Labor Marty Walsh**. "The federal initiative announced today will further support private-public partnerships that help youth across the country access a college education, good-paying jobs, and strong pathways to the middle class."

The announcements include:

#### Investing \$5.6 million in Perkins funding for schools to expand work-based learning opportunities

The Department announced that it will launch the "Career Z Challenge: Expanding Work-Based Learning Opportunities" competition in Spring 2023. The competition will foster multi-sector partnerships and expand work-based learning opportunities for students. Semi-finalists and finalists will be eligible to receive targeted technical assistance including professional development support, webinars and training, as well as a portion of a prize pool.

# Providing new guidance to schools on using American Rescue Plan funds to expand career pathways for students to pursue in-demand jobs and support Registered Apprenticeships

The Department will publish a <u>Dear Colleague Letter</u> that provides information on how schools can use ARP funds to develop and expand career pathway programs and help more students pursue careers in in-demand fields.

This initiative builds on <u>President Biden's FY 2023</u> Budget proposal, which invests \$200 million in Career-Connected High Schools and supports competitive grants to grow and build models of this bold vision. Funding would also support partnerships between local educational agencies, institutions of higher education—including community colleges—and employers, to encourage earning college credit while in high school through dual enrollment in core content and career and technical coursework; work-based learning opportunities; and academic and career counseling. President Biden's FY 2023 Budget proposal also includes \$1.4 billion for Career and Technical Education (CTE) programs. This includes an increase of \$20 million for CTE state grants that would expand access to career-connected programs for more students.

For more information on work the Department is doing to strengthen college and career pathways sign up for the Department's newsletter here.

#### UNIVERSITY OF THE AFTERMARKET FOUNDATION LAUNCHES HEAVY DUTY SCHOLARSHIPS WEBSITE

In early 2022, the University of the Aftermarket Foundation (UAF) launched a website in conjunction with Heavy Duty Aftermarket Week (HDAW). <u>HeavyDutyScholarships.com</u> is focused on heavy duty/diesel industry scholarships.

The Heavy Duty Scholarship Central portal offers scholarships for students studying diesel and commercial heavy duty technology and considering careers in the business of servicing or supplying parts and vehicle maintenance. The easy-to-navigate site features a simplified online application process and allows students to continue to update their applications until the March 31 deadline.

By completing a single application online, students will be considered for multiple scholarships for which they are eligible. A complete list of scholarships offered by UAF and affiliated industry organizations includes links to information outlining each organization's scholarship details, eligibility requirements and awards. To be considered for as many scholarships as possible, UAF urges applicants to read the individual pages thoroughly to ensure they include the proper information required by each organization on their application.



Follow

S

Click here to sign up for the NACAT eNewsletter

STAY IN THE KNOW

NEWSLETTER









FOR AUTOMOTIVE TEACHERS BY AUTOMOTIVE TEACHERS

nacat.org