

SPOKANE



ATETM

AUTOMOTIVE TRAINING EXPO



SEPT. 13-14, 2024 • DOUBLETREE BY HILTON SPOKANE CITY CENTER

SPONSORED & PRODUCED BY



Hotel Reservations: 509-455-9600

Group Code: ATE

**Don't Miss This
AMAZING
Training Event!**

**Visit ATESpokane.com
for complete details.**

**EXP.
AUG 10**

**EXCLUSIVE Early Bird
NWACA Member Pricing:**

\$399

NWACA Member All-Inclusive Package **after August 31**..... **\$425**

Non-NWACA Member All-Inclusive Package..... **\$525**

Educators' Discount All-Inclusive Package..... **\$350**

Event Features:

- ★ Technical, Management & Service Advisor Courses by the Industry's Leading Instructors
- ★ Expo Event
- ★ Networking Lunches
- ★ Friday Night Sponsor Appreciation Reception
Complimentary Hors d'oeuvres & No-Host Bar

Register TODAY at ATESpokane.com

or call 253-676-9222



ATE Spokane Training Schedule | September 13-14, 2024

FRIDAY, September 13

	INSTRUCTOR	TIME (PST)
◆ AI & using it in your business	Dave Parkhurst	8:30am-11:30am
◆ Life-Work Balance	Steve Beck	8:30am-11:30am
◆ Unlock Your Shop's Potential: A Better Workflow Management and Scheduling System	Greg Marchand	8:30am-11:30am
● Automotive Electrical: From A to CAN	Guy Vesco	8:30am-11:30am
● German Cars: The Secrets to Diagnosis	Haakan Light	8:30am-11:30am
● Hybrid Vehicles Services & Diagnostic	TBD	8:30am-11:30am
● Targeted Mechanical Testing w/ Pressure – Part 1	Adam Robertson	
Friday Lunch: Special Guest Comedian – Laura Banning		11:45am-12:45pm
◆ Boosting Profits: Effective Upselling and Cross-Selling Techniques for Service Advisors	Greg Marchand	1:00pm-4:00pm
◆ Team Building – How to be the Best Shop in the State	Steve Beck	1:00pm-4:00pm
● Air-Fuel/Wide Range – O2 and Fuel Trim	Ken Zanders	1:00pm-4:00pm
● Audi and VW Diagnostics Diagnostic Strategies	Haakan Light	1:00pm-4:00pm
● Diagnosing Variable Valve Timing	TBD	1:00pm-4:00pm
● Gasoline Direct Injection – Operation & Diagnostics	Jake Sorernsen	1:00pm-4:00pm
● Targeted Mechanical Testing w/ Pressure – Part 2	Adam Robertson	1:00pm-4:00pm
Friday Sponsor Appreciation Night – Taco Bar & Expo – Everyone Welcome		4:30pm 7:00pm

SATURDAY, September 14

	INSTRUCTOR	TIME (PST)
Saturday Breakfast		7:00am-8:00am
◆ Creating the Ultimate Customer Experience	Tom Amero	8:30am-11:30am
■ Preparing for Each Customer	Dave Schedin	8:30am-11:30am
■ Solving the Diagnostic Sales Puzzle	Jeremy O'Neal	8:30am-11:30am
● Electronic Class	Ken Zanders	8:30am-11:30am
● European Diagnostic Case Studies	Hakkan Light	8:30am-11:30am
● Misfire	Eric Zeigler	8:30am-11:30am
● Tactical Diagnostic Series – Another Day in the Bay	Jake Sorensen	8:30am-11:30am
Saturday Lunch: Special Guest Comedian – Laura Banning		11:45am-12:45pm
◆ Increasing GP \$'s W-Proven Systems	Dave Schedin	1:00pm-4:00pm
◆ Sales Objection Success	Jeremy O'Neal	1:00pm-4:00pm
● ADAS	Eric Zeigler	1:00pm-4:00pm
● Advanced Alignment	TBD	1:00pm-4:00pm
● Noise, Vibration and Harshness Analysis – Shake Rattle and Roll	Adam Robertson	1:00pm-4:00pm
● Tesla Service Essentials	Guy Vesco	1:00pm-4:00pm
● The In's and Out's of R1234yf Air Conditioning Systems	Ken Zanders	1:00pm-4:00pm

FRIDAY, September 13, 2024

8:30am-11:30am PST

■◆ **AI & Using it in Your Business**

Presented by Dave Parkhurst • Sponsored by Greenhaven

AI has taken the world by storm! And it's developing at the speed of light. This next technology revolution is bigger than the computer and internet revolutions, according to Dave Parkhurst of GreenHaven Interactive.

In this Introduction to AI for Auto Shops, Dave will explore the new technology and it's implication for both your shop and your life. Additionally, we will explore various AI tools including the most recent versions of ChatGPT, Gemini/Astra, Apple Intelligence, Midjourney and others, based on what is currently available and useful. Participants are encouraged to sign up for one or more of the above systems and bring their device with them.

You're also encouraged to bring your most interesting AI uses and experiments, so we can all learn from each other in this ever changing digital landscape.

Finally, we'll examine the concerns about AI for both individuals and the world at large. Is they hype about AI taking over the world real? Is it just another technology or will it displace humans? We'll review some of the cautions and issues facing both the industry and humanity as we march towards smart machines, robots and human-embedded AI technology.

■◆ **Life-Work Balance**

Presented by Steve Beck • Sponsored by Beck Seminars

Are you constantly behind with no end in sight or is life just moving too fast these days?

If you're like most of us, life moves faster and is more complex now than just five years ago. E-mail, Tablets, and Cell Phones have blurred the lines between your work life and personal time by making you constantly accessible. Sadly, many people mistakenly believe that this is necessary to get more accomplished and advance their careers. Life/Work Balance is about learning how to structure your life to improve your attitude, mood, and performance both personally and professionally.

Topics covered:

- 12 action steps to 'create balance' in everyday life
- 10 tips to 'reduce stress' at home and at the office
- The top 3 reasons people don't get what they want
- 3 easy steps to create an ideal life so that you don't look back in 10 years and wonder where the time went
- The fundamental secrets of all successful people and how to apply them to your everyday life
- How to seek and create a mental/physical balance so you are more present in every moment of the day

Objectives:

- Have participant's leave with new ideas to create balance in their everyday life
- Reduce stress at home and at the hotel
- Apply fundamental secrets of all successful people and how to apply them to your everyday life
- Be more present in every moment of the day
- Increase focus

■◆ **Unlock Your Shop's Potential: A Better Workflow Management Scheduling System**

Presented by Greg Marchand • Sponsored by ShopPros

Unlock your shop's full potential in this dynamic 3-hour program. Think of it as 3 hours with a shop coach. Are you overwhelmed with appointments, struggling with parts sourcing, and failing to meet deadlines? Learn to set realistic customer expectations and schedule repairs more effectively – based on your shop's actual potential and production. Dive into understanding your production capacity and practical techniques to fill it. We'll cover financial goals, management practices, and strategies to meet your production targets. Engage in discussions, goal-setting, and mock coaching sessions to maximize performance. Gain invaluable insights and resources to optimize operations, increase profitability, and achieve long-term success.

FRIDAY, September 13, continued...

●● Automotive Electrical: From A to CAN

Presented by Guy Vesco • Sponsored by NAPA Autotech

You know the names of many electrical testing techniques. Do you know how to perform these tests, or analyze their results? We will teach you how to determine the proper electrical tests for these systems and shed light on the best practices of electrical diagnosis.

Recommended for A and B level Technicians

- Utilize high and low current probes
- Demystify scope coupling (AC/DC) and signal filtration
- Capture relative compression without disassembly
- Quickly break down ignition waveforms
- Learn how to use your power probe without damaging a control module
- Cure hard-to-fix electrical noise issues
- Discover fast and simple electrical short finding techniques
- Analyze Controller Area Networking (CAN) signal

✦ German Cars: The Secrets to Diagnosis

Presented by Haakan Light • Sponsored by WTI

This class is designed for Generalist Shops and Shops who find themselves struggling on solving European vehicle problems (specifically German cars). Section I: Survey and Comparison of OEM vs Aftermarket Service Information (what are you missing?), Identification of the Vehicle and Equipment. Section II: OEM Scan tools vs Aftermarket, Oscilloscopes and their necessity, Mechanical Tools. Section III: Diagnostic Process, Mapping your Data. Section IV: Fault Code Logic Introduction, Understanding What Fault Code Information IS Published & What is NOT, Understanding the Vital Role of Research, Mapping System Operation

●● Hybrid Vehicle Service & Diagnostics

Presented by TBD

This clinic is designed to expand the technician's ability to diagnose Hybrid vehicle high voltage systems and batteries. It will also include information on the Hybrid motor/generator functions, including purpose and testing parameters. Inverter technology and operation principles will be discussed with an emphasis placed on using scan tool diagnostic PIDs best used to check for problems within. We will discuss Hybrid drive systems commonly being used today by various manufacturers, including the Type

1 (series), Type 2 (parallel) and Type 3 (series/parallel) systems with an emphasis placed on power flow and testing. Lastly, we discuss Hybrid vehicle maintenance, service, and safety considerations and what advancements in technology are headed into your service bays.

After completing this seminar, the student will have the knowledge to:

- Discuss Hybrid safety protocols within their service bays
- Properly service and diagnose the high-voltage battery systems
- Diagnose and test the Hybrid drive, motor/generator and Inverter on the vehicle
- Properly inspect and test the vehicle's brake system to see if the regeneration system is working
- Evaluate pertinent scan tool data and fault codes related to Hybrid vehicles

Don't Miss This AMAZING Training Event!

CLICK TO REGISTER TODAY!



FRIDAY, September 13, continued...

●● Targeted Mechanical Testing w/ Pressure – Part 1

Presented by Adam Robertson • Sponsored by CTI

As an instructor and technician, I have been studying/using this diagnostic process for over 20 years. Of all that I have learned, the most important part is that I still to this day find anomalies in these waveforms that are new to me. What I mean is that this topic is much deeper and has more information than most of us realize, and therefore continued study is priceless.

- Pressure can only do 3 things:
 - Go up, go down, or remain the same, pretty simple.
- If this is true, then we only need a few things to properly analyze it as it relates to engine operation and determine the issues BEFORE disassembly
 - Have the proper equipment and knowledge to measure the change(s)
- In-cylinder, intake, exhaust, crankcase, and hydraulic pressures
 - Have a way to determine and measure where the piston/valves/stroke and other
- Mechanical components within its rotation (typically 720 degrees)
 - Know what pressure change to expect
- What to do if the pressure changes aren't what we expect

This full day course, taught in two sessions, will utilize REAL DiagNation case studies to prove these invaluable testing methods and is suited for technicians of all skill levels, entry to expert.

11:45am - 12:45pm PST

LUNCH KEYNOTE: Special Guest Comedian – Laura Banning

1:00pm - 4:00pm PST

■◆ Boosting Profits: Effective Upselling & Cross-Selling Techniques for Service Advisors

Presented by Greg Marchand • Sponsored by ShopPros

Join us for a dynamic 3-hour live presentation designed specifically for service advisors who are looking to increase profitability. This session will focus on the art of upselling and cross-selling to maximize revenue from each customer visit. You'll learn practical techniques to identify and communicate additional services and products that meet your customers' needs. We'll explore strategies for training service advisors to confidently suggest upgrades and complementary services, enhancing customer satisfaction while boosting your bottom line. By the end of this session, service advisors will be equipped with actionable insights to drive sales and grow your business through effective, ethical, upselling and cross-selling.

CLICK TO REGISTER TODAY!



FRIDAY, September 13, continued...

◆ **Course Title: Team Building – How to be the Best Shop in the State**

Presented by Steve Beck • Sponsored by Beck Seminars

This seminar is about having participants discover that being part of a great team requires flexibility, accountability, and attention to detail to be the BEST Shop in the State.

This seminar gives participants the knowledge that they set the tone for every interaction, so they realize the importance of being a Team Player versus having silo thinking. We provide the insights, and methods, that will assist them in understanding their ability to make a positive difference on a daily basis with every interaction

Participants realize other departments and locations need a hand now and then and are supportive of that cause. They also realize for the shop (or organization) to be successful they have to do their best everyday so that problems don't come back and haunt them.

Topics covered:

- The Good and Bad of 'Silo Thinking'
- How playing 'Me and You' works better than 'Me versus You'
- Understand how to deal with different personalities
- Synergy and its importance
- What 'being on time' really means
- Discover the qualities of a great team
- Rate your shop's effectiveness in being a Great Team
- How important focus and listening are to Success
- How to deal with different personality types that are opposite of yours
- The effect one person can have on the whole team
- Two things that every team must provide to ensure Customer Loyalty
- Understand the importance of clear communication with customers & coworkers
- Demonstrate professional telephone procedures in a consistent manner
- Realize the importance of being your best everyday
- We're all in SALES!

● **Air-Fuel/Wide Range – O2& Fuel Trim**

Presented by Kenneth Zanders • Sponsored by Dorman Products

O2 (oxygen Sensors) and Air-Fuel/Wide Range sensors are the vehicle's personal emissions analyzer and are located upstream and downstream in the exhaust system. Working in a tandem, before and after the catalytic converter it compares the readings in order to analyze catalytic efficiency, and whether the vehicle is running rich or lean. These sensors have a profound effect of fuel delivery that is a direct result of Fuel Trim commands.

● **Audi and VW Diagnostics Diagnostic Strategies**

Presented by Haakan Light • Sponsored by WTI

Section I: focused on diagnostic process and testing process, service information navigation and resources available. **Section II:** focused on fault code logic, ECU control and feedback process, VW and Audi Training information and structure (how does a system work?), Fault Code Information, test plans in ODIS. **Section III:** Case Studies and Practical Application of the Concepts

CLICK TO REGISTER TODAY!



FRIDAY, September 13, continued...

●🌱 Diagnosing Variable Valve Timing

Presented by TBD

This clinic will focus on the different types of variable valve timing (VVT) systems used by vehicle manufacturers today. After multi-valve technology became standard in engine design, VVT became the next step to enhance engine output, increasing engine power and torque output along with reducing emissions. Without VVT technology, engineers previously had to choose the best compromise in valve/cam timing and ended up sacrificing one thing to gain in another area. VVT allows the best of both worlds – increased performance and economy and lower emissions. There are a multitude of Diagnostic Trouble Codes (DTCs) that can be set related to VVT faults stemming from oil contamination to inoperative cam actuators and oil control solenoids. We explain the variations of VVT systems used by manufacturers today and look at diagnostic tests that can be performed on this system using the scan tool and other diagnostic equipment to confidently diagnose these systems before the costly and labor-intensive engine teardown for service.

After completing this clinic, the student will have the knowledge to:

- Identify the VVT system types used by manufacturers
- Understand the VVT DTC stored in the Powertrain Control Module (PCM)
- Relate to the scan tool parameters used by various manufacturers to validate camshaft control and operation
- Realize the importance of lab scope testing to validate camshaft to crankshaft correlation
- Perform mechanical engine tests with a variety of test equipment to avoid timely engine teardowns for diagnostic purposes
- Utilize new scan tool information and techniques to reduce diagnostic time in the service bay for VVT related faults or symptoms

●● Gasoline Direct Injection – Operation & Diagnostics

Presented by Jake Sorensen • Sponsored by NAPA Autotech

The purpose of direct fuel injection is to improve fuel economy and reduce tailpipe emissions through a precisely metered fuel charge delivered directly to the combustion chamber. Direct injection can significantly increase horsepower and torque, reduce hydrocarbons, and improve fuel economy. This course provides students with the background to diagnose faults in direct injection fuel systems using service information and a variety of test equipment.

Recommended for all levels of Technicians

- Operation and purpose of direct fuel injection
- Low-pressure side: fuel pump, fuel pump control module, low-side fuel pressure control
- High-pressure side: high-pressure fuel pump
- Fuel injectors, fuel pressure sensor
- Engine misfire and valve deposit faults
- What issues arise with Direct Injection?
- Does my diagnosis differ versus MPFI?
- What features are related to this technology?

CLICK TO REGISTER TODAY!



SATURDAY, September 14, continued...

🔗 Targeted Mechanical Testing w/ Pressure – Part 2

Presented by Adam Robertson • Sponsored by CTI

As an instructor and technician, I have been studying/using this diagnostic process for over 20 years. Of all that I have learned, the most important part is that I still to this day find anomalies in these waveforms that are new to me. What I mean is that this topic is much deeper and has more information than most of us realize, and therefore continued study is priceless.

- Pressure can only do 3 things:
 - Go up, go down, or remain the same, pretty simple.
- If this is true, then we only need a few things to properly analyze it as it relates to engine operation and determine the issues BEFORE disassembly
 - Have the proper equipment and knowledge to measure the change(s)
- In-cylinder, intake, exhaust, crankcase, and hydraulic pressures
 - Have a way to determine and measure where the piston/valves/stroke and other
- Mechanical components within its rotation (typically 720 degrees)
 - Know what pressure change to expect
- What to do if the pressure changes aren't what we expect

This full day course, taught in two sessions, will utilize REAL DiagNation case studies to prove these invaluable testing methods and is suited for technicians of all skill levels, entry to expert.

4:30pm-8:00pm PST

Friday Sponsor Appreciation Night – Everyone Welcome

SATURDAY, September 14, 2024

Breakfast: 7:00am-8:00am PST

8:30am-11:30am PST

◆ Creating the Ultimate Customer Experience

Presented by Tom Amero • Sponsored by Elite Worldwide

Is Customer Experience (also known as CX) more important than price? This age-old question still shows up in the mainstream. According to a 3rd party survey, 54% of consumers make decisions based on customer experience, with 19% considering it the most important deciding factor. If more than half of consumers will decide on where to do business based on service, improving your CX will allow you to improve profit margins on services, spend less on advertising, create happier customers, retain and grow your customer base, and serve your community well. Join Tom Amero from Elite Worldwide as we discuss strategic approaches to improve your Customer Experience (CX). In his role at Elite, Tom has worked with hundreds of shops and owners to help create successful business-to-customer interactions and has seen first-hand the impact it can have on shops when executed well. Let's elevate the industry together and create the Ultimate Customer Experience!

CLICK TO REGISTER TODAY!



SATURDAY, September 14, continued...

◆ Preparing for Each Customer

Presented by Dave Schedin • Sponsored by Service Intel

Raising sales through Customer Service at Level 10 1-3 hours presentation. (Tailored to the group setting)
Getting pre-authorization that will raise tech efficiency by 15-20% and raise Hours per RO by .5-1.0

- Prepping RO's using the tried and proven C.D.F.M. CompuTrek Method.
 - Captive Sale
 - Deferred work
 - Factory PM Requirements
 - Maintenance plan to get to 250k to 300K+
 - Intelligent tools to find what needs to be presented in less than 15 seconds
- Systemizing Preapproval for PM services BEFORE the vehicle arrives for service. Getting your CRM to preapprove PM Services.
- Systemizing Preauthorization at time of drop off.
- How today's visit is best set up from the prior visit.

◆ Solving the diagnostic Sales Puzzle

Presented by Jeremy O'Neal • Sponsored by WTI

While most auto repair consumers don't want to pay for diagnostic services, they will if presented with a solid Diagnostic sales presentation. The diagnostic services shops perform are the costliest and carry the most risk for the shop. The Service Advisor holds the key to solving this puzzle, from the initial contact, to initial write up and then into selling the solution, how the Service Advisor describes the diagnostic service package and subsequent pricing plays a critical role in the approval process. On top of this is the information the Service Advisor needs to harvest to ensure we create a 5-star repair experience for the customer and the shop. Put this all together and you have a winning formula that solves this puzzle for your shop.

●● Electronic Class

Presented by Kenneth Zanders • Sponsored by Dorman Products

Topics covered include circuits and circuit testing, opens, shorts, voltage drops, relay testing, meter usage (DMM), labscope / graphing meter usage, sensor, actuators, and hands-on testing to use on an array of applications such as starting, batteries, fuel delivery, ignition, sensors, computers, and more. Through this training, you'll learn how to get the most out of your tools and equipment to find and repair electrical problems on today's vehicles instead of watching those expensive tools collect dust.

●● European Diagnostic Case Studies

Presented by Haakan Light • Sponsored by WTI

In this class we will cover a variety of vehicles including Audi/VW, Jaguar/Land Rover, Mercedes and BMW. A guided approach to how to solve problems inherent in the sometimes weak service information world of European vehicles will be discussed. Numerous case studies and interaction with the students on how to best get through these difficult diagnoses. Scope techniques and scantool data acquisition will be heavily featured throughout the class.

●● Misfire

Presented by Eric Ziegler • Sponsored by WTI

Misfires can be caused by three things: Ignition, fuel, or mechanical issues. This course covers the diagnostic techniques required to rapidly narrow the offender to one of these three possibilities. Emphasis is placed on a logical approach and effective use of appropriate testing techniques. Scan tools and scopes will be the main focus of this class. However, other tools will be used as well.

SATURDAY, September 14, continued...

●● Tactical Diagnostic Series - Another Day in the Bay

Presented by Jake Sorensen • Sponsored by NAPA Autotech

New case studies and techniques are highlighted in this class. Keep your skills sharp with an accurate depiction of another “Day in the Bay”. From seemingly simple repairs to all-out challenges, you need to prepare yourself to tackle these issues with the proper mindset. This course is the second in a series of case-study-based diagnostics, told from the technician’s viewpoint. Real-world case studies are utilized showing the importance of following a proven approach for success.

Recommended for all levels of Technician

- Balancing efficiency of our time, while remaining accurate in our diagnosis
- Incorporating scan tools, oscilloscopes, multi-meters, service information and all the resources available to the modern technician
- Following customer concerns through completion of repair
- What does an effective diagnostic plan look like?
- How do you correlate relevant data to the vehicle and customer concerns?
- How can I be better prepared for tomorrow in my bay?

11:45am-12:45pm

LUNCH KEYNOTE: Special Guest Comedian – Laura Banning

1:00pm-4:00pm PST

◆ Increasing GP \$'s with Proven Systems

Presented by Dave Schedin • Sponsored by Service Intel

The major systems needed in a shop to turn on cash flow and increase GP dollars even in a down economy. With categorized systems into

- Production System
- Selling System
- Management System
- Tools to facilitate key systems in an automotive environment.

These key critical systems will be presented that support turning on cash flow and turning it on fairly quickly! There are 30+ basic sub systems that once implemented fully will not only turn on cash flow but allow for easier duplication for expanding as well as making it easier to train new employees. Shops with 3+ techs using these systems turn on around \$200,000 in new GP \$'s in a 12 month period

◆ Sales Objection Success

Presented by Jeremy O'Neal • Sponsored by WTI

No from a customer rarely means the end of the sale if handled strategically. Service advisors frequently forfeit revenue by failing to overcome initial objections and roadblocks. This class imparts the essential skills to transform knee-jerk “no’s” into meaningful sales conversations towards “yes!”

Attendees will gain access to the specific objection turn-around frameworks employed by the industry’s highest producers. Training centers on crafting permission-based questions that reopen dialog while uncovering and addressing hidden barriers customers erect.

With the proven techniques provided to navigate common “I need to think about it” stalls to “that’s more than I wanted to pay” pricing pushback, learners will confidently guide discussions forward rather than accept abrupt losses. Roleplaying exercises allow participants to apply question-based objection responses to ingrain natural habits.

Upon completing this highly interactive training, advisors will have acquired the resilience and skills to convert even difficult customers. By learning to reframe objections as simply obstacles to guide customers through, attendees will save sales others too quickly abandon.

SATURDAY, September 14, continued...

●● ADAS

Presented by: Eric Ziegler • Sponsored by: WTI

ADAS or Advanced Driver Assistance Systems are a hot topic emerging in the collision and auto repair industries for the past few years and they are most certainly here to stay. This class will discuss many of these systems, their operation, as well as the challenges and opportunities they present to the modern technician. Discussion will include but not limited to; Adaptive Cruise Control (ACC), Blind Spot Monitoring (BSM) Lane Keep Assistance System (LKAS), Lane Departure Warning (LDW) and other camera-based systems. This is a no-nonsense investigation of these mission critical safety systems, how they work, their interactions with one another, their advantages and disadvantages, why manufacturers are using them and most importantly what service opportunities they present for the modern repair facility. Some servicing and calibrations can be done with tools the shop already may own. Many real-world examples and insights included.

●🌱 Advanced Alignment

Presented by TBD

This clinic enhances the skills of the professional undercar technician in the area of advanced wheel alignment. It covers suspension and steering diagnosis due to bent parts from accidents and road hazards, vehicle modifications, tire/wheel resizing and height issues. A review of basic alignment angles followed by thorough explanation of steering axis inclination (SAI), included angle (IA), scrub radius and toe out on turns (TOOT) will assist the alignment technician in utilizing the aligner as a diagnostic tool. Related electronic systems are also covered in this course. Vehicle component inspection and customer communication skills are necessary traits for any successful alignment tech and the importance of these skills are stressed in this class.

After completing this seminar, the student will have the knowledge to:

- Utilize the alignment machine as a diagnostic tool for the alignment and repair of vehicles involved in road hazard incidents and vehicle collisions
- Identify root causes for uneven or erratic tire wear and handling problems. Effectively communicate the results to the vehicle owner
- Identify how vehicle modifications and tire/wheel changes affect alignment and dynamic operation
- Analyze related electronic systems that interact with the chassis system in need of recalibration or adjustment after the alignment procedure

●🌱 Noise, Vibration and Harshness Analysis – Shake Rattle and Roll

Presented by Adam Robertson • Sponsored by CTI

Noises/vibrations, they are all the same. What we mean is that whether we “feel” or “hear” the noise, it is the same, a vibration. BTW, that is why everyone of us can hear, whether music or speech. Weird huh? So, what does this mean to us? Does that mean that a “wheel bearing growl” is actually the same as a “brake squeal” or “rattle” in the dash”? That is why you should attend this course. There are some basic approaches to this conundrum in understanding vibration frequency. The key to all of this is:

Measure the vibration/noise with the proper equipment to

- Direction
 - Lateral
 - Vertical
 - Fore-aft
- Speed
 - How many “shakes per second” or hertz
- Determine what component is spinning at the same frequency/speed/direction
- Measure closer to the component to determine location
 - Or what we refer to as “time domain” measurement

With the proper measurement and interpretation, we can figure out where the noise/vibration is coming from. It all sounded like “voodoo” to me until I truly understood it. Think about diagnosing something as simple as an intermittent “rattle” in the bay without driving it, I know that sounds insane but can truly be done. This class is suitable for technicians of all skill levels that want to learn these techniques.

SATURDAY, September 14, continued...

●●★ Tesla Service Essentials

Presented by Guy Vesco • Sponsored by NAPA Autotech

A Tesla may be an EV with some peculiar differences from the other vehicles we work on every day, but there are quite a few similarities as well. It still has hydraulic brakes, rubber tires, and a 12-volt system that does virtually everything that doesn't provide the electrical power to propel the vehicle.

In a word, if you're already servicing hybrids and other EVs, Teslas aren't much different; that being said, there are some things that technicians need to learn if they are going to perform essential services on these vehicles. There will be over 2.5 million Teslas on the road as of late 2021; if your shop isn't ready to handle them, now is the time to turn this issue into an opportunity. Recommended for all levels of technicians.

- Safety practices
 - Electrical procedures
 - High voltage disconnects
 - Service mode
 - Proper lifting procedures
 - Tesla service information & diagnostic software
 - Cooling the battery and powertrain
 - Service reminders
 - 12V battery replacement
 - Can your shop service Teslas?
 - What services can your shop perform?
 - What specialty tools will you need?
- Tesla differences with:
 - Brakes
 - Tires
 - Steering and suspension
 - Alignment
 - Headlights
 - Climate control

●● The In's and Out's of R1234yf Air Conditioning Systems

Presented by: Kenneth Zanders • Sponsored by: Dorman Products

This class/seminar will cover all the components of the R1234yf air conditioning system along with step by step instructions of how to test, recover, evacuate, recharge and add oil/dye to the system. We will have a R1234yf machine connected to a vehicle and provide you with the dos and don'ts when performing system service and repair. At over \$70.00 a pound you don't want to guess but rather test and get the job don't right the first time. Upon the completion of this class you will have a better understanding of the refrigerant, system, testing, equipment use and getting the system back to its normal state. Today's vehicles are more involved so it's important to use a proper diagnostic approach.

Don't Miss This AMAZING Training Event!

CLICK TO REGISTER TODAY!

