



EUROTRAIN

TRAINING CONFERENCE

REGISTRATION BROCHURE

Schedule of Events

Tuesday, October 1, 2024

7:30 AM Group Departs Hotel
8:00 AM - 4:00 PM BMW Performance All Day Car Control Driving School

Wednesday, October 2, 2024

8:00 AM Group departs hotel for BMW Factory & Zentrum Museum
8:30 AM Arrive at Zentrum Museum and check in for tour
9:45 AM BMW Best Fit Body Shop/Glimpse Factory Tour (50-minutes) and then Museum Tour
12:00 PM Lunch at BMW Performance Center
1:30 PM - 4:30 PM BMW Half-Day Track Experience
1:30 PM - 4:30 PM Afternoon tours for BMW Factory & Zentrum Museum
4:00 PM - 6:30 PM Registration
4:00 PM - 5:30 PM Vendor Setup
5:30 PM - 7:00 PM Welcome Reception
7:00 PM - 9:00 PM State of the Industry Dinner (by invitation)

Thursday, October 3, 2024

7:00 AM - 8:00 AM Breakfast
8:00 AM - 12:00 PM Training Sessions
12:00 PM - 1:45 PM Lunch/Exhibits/Prizes
2:00 PM - 5:00 PM Training Sessions
5:00 PM - 7:00 PM Vendor Reception/Exhibits/Prizes

Friday, October 4, 2024

7:00 AM - 8:00 AM Breakfast
8:00 AM - 11:00 AM Training Sessions
11:00 AM - 2:00 PM Lunch/Exhibits/Prizes
2:00 PM - 5:30 PM Training Sessions

Saturday, October 5, 2024

7:00 AM - 8:00 AM Breakfast
8:00 AM - 12:00 PM Training Sessions
12:00 PM - 1:00 PM Lunch
1:00 PM - 5:00 PM Training Sessions

Sunday, October 6, 2024

7:00 AM - 8:00 AM Breakfast
8:00 AM - 11:00 AM Training Sessions

THURSDAY, OCTOBER 3

TRAINING SCHEDULE

Code	Course Title / Sponsor	Trainer	Session	Hours	Time
M1-A	Management General Session & Roundtable		Thursday AM	4 HRS	8:00am - 12:00pm
T1-A	Electrical Diagnostics Tips: Being Fast & Accurate	Keith Perkins	Thursday AM	4 HRS	8:00am - 12:00pm
T2-A	DME/CAS/FRM/EEPROM Recovery	Mike Christopherson	Thursday AM	4 HRS	8:00am - 12:00pm
T3-A	Pico Lab Scopes <i>Sponsored by ATI</i>	Jim Bennett	Thursday AM	4 HRS	8:00am - 12:00pm
T4-A	Surface Finish Mastery - From Basics to Precision Measurement <i>Sponsored by Elring</i>	Florian Kiziak	Thursday AM	4 HRS	8:00am - 12:00pm
T5-A	Variable Valve Lift Operation & Diagnostics <i>Sponsored by Worldpac</i>	John Thornton	Thursday AM	4 HRS	8:00am - 12:00pm
Code	Course Title / Sponsor	Trainer	Session	Hours	Time
M2-B	The Ultimate Guide to Building Your Marketing Strategy <i>Sponsored by Overdryve</i>	Mike Delacruz	Thursday PM	3 HRS	2:00pm - 5:00pm
M3-B	Objection Overruled! : Mastering Sales Objections in Any Economy <i>Sponsored by The Institute</i>	Mark Seawell	Thursday PM	3 HRS	2:00pm - 5:00pm
T6-B	Diagnostics: Beyond the Silver Bullet	Keith Perkins	Thursday PM	3 HRS	2:00pm - 5:00pm
T7-B	Lubrication Excellence: Unleashing Performance <i>Sponsored by Fuchs Lubricants</i>	Maxim Burgman	Thursday PM	3 HRS	2:00pm - 5:00pm
T8-B	Mercedes Chassis Control Systems <i>Sponsored by Worldpac</i>	Dennis Woll	Thursday PM	3 HRS	2:00pm - 5:00pm
T9-B	Understanding 3 Phase Controls <i>Sponsored by Worldpac</i>	Gary Smith	Thursday PM	3 HRS	2:00pm - 5:00pm

Schedule subject to change. Check website for latest schedule and availability as of 7/19/2024



EUROTRAIN

TRAINING CONFERENCE

the training conference for BMW & Euro service professionals

FRIDAY, OCTOBER 4

TRAINING SCHEDULE

Code	Course Title / Sponsor	Trainer	Session	Hours	Time
M4-C	Relationship-Based Sales Mastery: Moving from Transaction to Consultative Connection	Clint White	Friday AM	3 HRS	8:00am - 11:00am
M5-C	Winning Your Future - A Frank Discussion with Automotive Repair Shop Owners <i>Sponsored by The Institute</i>	Michael Smith	Friday AM	3 HRS	8:00am - 11:00am
T10-C	Installing Used Electronic Parts in European Vehicles	Mike Christopherson	Friday AM	3 HRS	8:00am - 11:00am
T11-C	Lubricants for Modern European Vehicles <i>Sponsored by Rowe</i>	Lutz Hinners	Friday AM	3 HRS	8:00am - 11:00am
T12-C	Mercedes Software <i>Sponsored by Worldpac</i>	Dennis Woll	Friday AM	3 HRS	8:00am - 11:00am
T13-C	Tesla Toolbox A-Z	Seth Thorson	Friday AM	3 HRS	8:00am - 11:00am
M6-D	Successful Scheduling & Workflow Management	Clint White	Friday PM	3.5 HRS	2:00pm - 5:30pm
M7-D	Talent Tactics: Interviewing & Hiring <i>Sponsored by Worldpac</i>	Sara Fraser	Friday PM	3.5 HRS	2:00pm - 5:30pm
T14-D	BMW Logical Diagnosis: Crash Course <i>Sponsored by Worldpac</i>	Brandon Mathews	Friday PM	3.5 HRS	2:00pm - 5:30pm
T15-D	BMW/MINI Sunroof Cassette Rebuilding <i>Sponsored by Worldpac</i>	Jason Maldonado	Friday PM	3.5 HRS	2:00pm - 5:30pm
T16-D	European Diagnostic Case Studies <i>Sponsored by Worldpac</i>	Haakan Light	Friday PM	3.5 HRS	2:00pm - 5:30pm
T17-D	European Steering, Suspension & ADAS <i>Sponsored by Meyle</i>	Wes Dickens	Friday PM	3.5 HRS	2:00pm - 5:30pm

Schedule subject to change. Check website for latest schedule and availability as of 7/19/2024



BMW Performance Driving School

Get ready to rev up your engines and dive into the ultimate BMW experience at BIMRS EuroTrain 2024 in Greenville, South Carolina! This year, we're offering an exclusive sneak peek into the thrilling world of BMW with a chance to conquer the BMW Performance Track, explore the storied halls of the BMW Zentrum Museum, and witness the precision of BMW's Body Shop. This is your ticket to an unforgettable adventure packed with high-speed fun and fascinating automotive insights.

The BMW Performance Track activities are held on October 1st and 2nd. **Limited spots are available!**

Private BIMRS Event

October 1-2, 2024

Special Event Pricing

Tuesday all-day driving program - \$949 (limit 22)

Wednesday AM Factory Tour, Lunch at BMW Performance Center, and Transportation - \$75 (limit 20)

Lunch at BMW Performance Center, Wednesday PM Factory Tour, and Transportation - \$75 (limit 20)

Wednesday AM Factory Tour, Lunch, 1/2 day driving program, and Transportation - \$375 (limit 60)

Participants must be registered for the EuroTrain Conference





SATURDAY, OCTOBER 5

TRAINING SCHEDULE

Code	Course Title / Sponsor	Trainer	Session	Hours	Time
M8-E	Ringin in Success: Advanced Phone Skills <i>Sponsored by The Institute</i>	Jimmy Lea	Saturday AM	4 HRS	8:00am - 12:00pm
T18-EF	BMW Diesel Engines & Emission Systems (all day) <i>Sponsored by Worldpac</i>	Brandon Mathews	Sat ALL DAY	8 HRS	8:00am - 5:00pm
T19-EF	BMW Hybrid Systems 1 (all day)	Justin Morgan	Sat ALL DAY	8 HRS	8:00am - 5:00pm
T20-EF	Comprehensive Introduction to BMW Diagnostics, Programming, and Module Control Masterclass + Hands On (all day) <i>Sponsored by VEPros</i>	Yaser Jafar	Sat ALL DAY	8 HRS	8:00am - 5:00pm
T21-E	3rd Gen MINI Vehicles <i>Sponsored by Worldpac</i>	Jason Maldonado	Saturday AM	4 HRS	8:00am - 12:00pm
T22-E	Targeted Mechanical Testing <i>Sponsored by Worldpac</i>	Adam Robertson	Saturday AM	4 HRS	8:00am - 12:00pm
Code	Course Title / Sponsor	Trainer	Session	Hours	Time
M9-F	Simplifying Diagnostics, Repairs & Maintenance for Customers <i>Sponsored by Worldpac</i>	Coralee Zueff	Saturday PM	4 HRS	1:00pm - 5:00pm
T23-F	Porsche Diagnostic Procedures	Tyler Eliason	Saturday PM	4 HRS	1:00pm - 5:00pm
T24-F	Understanding & Measuring Current in European Vehicles <i>Sponsored by Worldpac</i>	Adam Robertson	Saturday PM	4 HRS	1:00pm - 5:00pm
T25-F	VW / Audi VAG DSG Transmissions (Hand-On / Live Demo) <i>Sponsored by Worldpac</i>	Cameron Conover	Saturday PM	4 HRS	1:00pm - 5:00pm

SUNDAY, OCTOBER 6

TRAINING SCHEDULE

Code	Course Title / Sponsor	Trainer	Session	Hours	Time
M10-G	How to Win Over the Price Shopping Customers <i>Sponsored by Worldpac</i>	Coralee Zueff	Sunday AM	3 HRS	8:00am - 11:00am
T26-G	Audi Forced Induction V Engines <i>Sponsored by Worldpac</i>	Cameron Conover	Sunday AM	3 HRS	8:00am - 11:00am
T27-G	BMW ISTA and AIR <i>Sponsored by Worldpac</i>	Brandon Mathews	Sunday AM	3 HRS	8:00am - 11:00am
T28-G	Get Your Freq On <i>Sponsored by Worldpac</i>	Gary Smith	Sunday AM	3 HRS	8:00am - 11:00am
T29-G	Service Requirements for Late Model Porsches	Tyler Eliason	Sunday AM	3 HRS	8:00am - 11:00am
T30-G	German Cars - Secrets to Success, Diagnostics, and Service <i>Sponsored by Worldpac</i>	Haakan Light	Sunday AM	3 HRS	8:00am - 11:00am

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Registration Packages

	Before July 31, 2024	After July 31, 2024
BIMRS Members	\$725	\$850
Non-Members	\$979	\$1,199

Includes Conference t-shirt, Wednesday welcome reception, Thursday breakfast and lunch, Thursday sessions, Thursday vendor reception, Friday breakfast and lunch, Friday sessions, Saturday breakfast and lunch, Saturday sessions, Sunday breakfast and Sunday sessions.

TRAINING COURSE SELECTION: Selections must be made in advance and are available on a first-come, first-served basis.

BIMRS Member Discounts: BIMRS Members receive an exclusive discount on registration packages. Visit bimrs.org to become a member or click the add-on option during your registration.

SPECIAL BIMRS RATE

Hotel

Hyatt Regency Greenville
220 N. Main Street,
Greenville, SC 29601

Single/Double
Occupancy: \$185/night
Triple/Quad
Occupancy: \$195/night

HOTEL CUT-OFF DATE
Sept 1st

<https://link.bimrs.org/2024hotel>

REGISTRATION & PAYMENT: To register, please complete the online registration form at www.bimrs.org. Registrations must be received no later than September 24, 2024. Registrations accepted ON-SITE ONLY after September 24, 2024. We cannot guarantee availability for late or on-site registrants. A confirmation letter and detailed conference information will be e-mailed in late-September.

CANCELLATION AND REFUND POLICY: Full refunds will be granted, less a \$30 processing fee, if cancellation is received in writing by September 1, 2024. No refunds will be granted after September 1, 2024. Name substitutions will be accepted.

Management Training

Management General Session & Roundtable (M1-A) *by* THURSDAY AM (4 HRS)

Description coming soon.

How to Win Over the Price Shopping Customers (M10-G) *by* Coralee Zueff SUNDAY AM (3 HRS)

Service advisors can get multiple calls per day from people requesting estimates. Most shops either ban giving out quotes or waste countless hours creating estimates and not getting the sale. In this session we will provide a blueprint to weed out "Tire kickers" from Serious prospects and fill your schedule.

sponsored by Worldpac

Objection Overruled! : Mastering Sales Objections in Any Economy (M3-B) *by* Mark Seawell

THURSDAY PM (3.5 HRS)

Led by expert instructor Mark Seawell, "Objection Overruled!" provides shop owners, managers, and service advisors in the automotive repair industry with invaluable strategies for confidently overcoming sales objections and closing deals. In this workshop, participants will learn the art of effectively addressing customer objections, understanding the underlying reasons behind resistance, and skillfully navigating objections to ultimately secure a successful sale.

- Overcoming Objections: Developing techniques to address common objections and guide customers towards a positive purchasing decision.
- Internal Obstacles: Identifying and overcoming internal barriers that may hinder sales success, such as doubts, fears, and misconceptions.
- Trust and Value: Building trust and demonstrating value to strengthen customer confidence and reduce objections.
- Understanding Buying Decisions: Exploring the psychology behind customer purchasing behavior and leveraging insights to overcome objections.
- Tangible and Intangible Objections: Differentiating between tangible objections (price, features) and intangible objections (trust, perception), and effectively addressing both.
- Managing "Head Trash" and "Arrows": Strategies for managing negative self-talk and external pressures to maintain focus and confidence during sales interactions.

Join us and discover how to overcome objections with finesse and close more sales with confidence in your repair facility!

sponsored by The Institute

Relationship-Based Sales Mastery: Moving from Transaction to Consultative Connection (M4-C) *by* Clint

White FRIDAY AM (3 HRS)

In this dynamic course taught by Clint White with CWI, Service Advisors and Shop Owners will explore a transformative approach to repair and service sales. We'll delve deep into the art of building strong, long-lasting customer relationships & long-term maintenance goals that not only empower you to WOW your clients with an outstanding experience on every visit, but also fuel profitable and sustainable revenue growth. The purpose of this class is to provide you and your team with the tools, strategies, and insights to shift from a transactional mindset to a customer-centric approach to sales, where every interaction is a valuable opportunity to create a positive and memorable experience. Join us on this journey to redefine success in your shop, one relationship at a time.

Ring in Success: Advanced Phone Skills (M8-E) *by* Jimmy Lea SATURDAY AM (4 HRS)

Service advisors can get multiple calls per day from people requesting estimates. Most shops either ban giving out quotes or waste countless hours creating estimates and not getting the sale. In this session we will provide a blueprint to weed out "Tire kickers" from serious prospects and fill your schedule.

sponsored by The Institute

Simplifying Diagnostics, Repairs & Maintenance for Customers (M9-F) *by* Coralee Zueff SATURDAY PM (4 HRS)

European vehicle systems are quite complex. Explaining the diagnostic process and repairs can leave both customer and advisors frustrated. Maintenance schedule can be confusing and not logical. When you can educate our customers and demystify their European vehicles, we earn customers for life. In this course we will discuss long maintenance intervals, life time fluids, brake fluid flushes, air & cabin filters AND MORE!

sponsored by Worldpac

Successful Scheduling & Workflow Management (M6-D) by *Clint White* FRIDAY PM (3 HRS)

Is your shop overwhelmed with appointments and with sold work? Are you struggling to source parts & complete repairs on-time? Are you constantly over-promising and under-delivering? For many in our industry this is the case and there seems to be no end in sight. In fact, it goes without saying that the world around us has changed drastically in the last few years however for many shops, the methodology regarding scheduling and workflow management remains the same. The purpose of this class is to educate Service Advisors and Shop Owners on how to properly set expectations with your customers and successfully schedule repairs and service in a way that is more practical, profitable and productive; resulting in fewer come-backs, on-time repairs, and an elevated customer experience. Don't pass up this opportunity to refine your process and move your business forward in today's "new normal".

Talent Tactics: Interviewing & Hiring (M7-D) by *Sara Fraser* FRIDAY PM (3 HRS)

In today's fast-changing job market, being flexible, excellent, and innovative is key to success. This course will help you not just keep up but stand out in your hiring efforts, taking your organization to new heights. By understanding what today's workers want and need, you'll have a leg up in finding and keeping the best people for your team in the competitive job market.

- Understanding Today's Workforce's Job Expectations:
- Gain insights into the diverse job expectations and preferences of today's workforce.
- Leverage this understanding to tailor your recruitment strategies effectively.
- Crafting Compelling Job Ads:
- Write job advertisements that resonate with candidates from today's diverse workforce.
- Learn techniques to highlight key aspects of your shop that appeal to your ideal candidates.
- Developing Effective Interviewing Skills:
- Develop proficiency in conducting strategic interviews that go beyond surface-level assessments.
- Acquire the skills to engage candidates from today's workforce effectively during the interview process.

Join Sara to learn everything you need to confidently handle the changing world of finding talent. Get the skills and know-how to find and retain the best people to keep your shop thriving.

sponsored by Worldpac

The Ultimate Guide to Building Your Marketing Strategy (M2-B) by *Mike DelaCruz* THURSDAY PM (3.5 HRS)

Effective marketing requires every piece of the puzzle. Every piece, big or small, matters! In this in-depth course, we teach you strategies for both acquiring new customers and getting customers to come back. We'll also take a deep dive into identifying key metrics, utilizing the marketing tools, building out a full 12-month marketing calendar, and measuring results for continuous improvement.

sponsored by Overdryve

Winning Your Future - A Frank Discussion with Automotive Repair Shop Owners (M5-C) by *Michael Smith* FRIDAY AM (3 HRS)

Our industry is changing permanently, and the pace of change is accelerating. Our historic business-as-usual approaches are sure to fail in the years to come. Owner-operators need to understand what's happening, what's coming next, and how to prepare now to thrive into your future. Owners who resist these trends, or those who just hold still, will fall quickly behind.

From participation in this class you will:

- Understand the expanding range of exit & succession options available to owners today
- Learn how to increase the value of your company for future sale, from an investor's perspective
- Discover how PE firms and REITs operate, make money, and make project decisions
- Discuss how to prepare your company, leaders and team to become the top-1% & lead our industry in the future
- Consider your own professional & company legacy, exit parameters and transition considerations

sponsored by The Institute

Technical Training

3rd Gen MINI Vehicles (T21-E) by *Jason Maldonado* SATURDAY AM (4 HRS)

B38/48 Review

- Diagnosing Common Failures and Repairs
- Special Tool Usage Life Cycle Impulse Changes
- Engine and Transmission Service Procedures
- Overview of B48tu2
- Looking Forward at What's to Come with the R66 MINI 4th Gen

sponsored by *Worldpac*

Audi Forced Induction V Engines (T26-G) by *Cameron Conover* SUNDAY AM (3 HRS)

Engine Layout & Geometry, HSI configuration

- Oil Consumption Issues
- Crankcase Ventilation & Oil Separator
- Secondary Air Injection System Maintenance
- Timing Chain Noise
- Supercharger Maintenance
- Special Tools & procedures
- Spark Plug Tube Oil Leaks
- Lifter Roller Failure
- Central Fuel Injectors
- Audi Valve Lift implementation
- Hot V Turbochargers, Integrated Exhaust manifold
- Vacuum Boost Control system
- Evap system, Venturi Suction-Jets
- New Gear Driven Engine Timing
- Thermal Management components & operation

sponsored by *Worldpac*

BMW Diesel Engines & Emission Systems (all day) (T18-EF) by *Brandon Mathews* SATURDAY AM (4 HRS)

The course will cover all BMW diesel engines released in the US market including the M57, N47, N57, and B57 variants. The primary focus will cover emissions systems such as exhaust gas recirculation, selective catalyst reduction, and particle filtering. Additionally, the diesel fuel systems and air management systems will be overviewed. System functional descriptions, common failures, and diagnostic strategy will be outlined for each engine version.

sponsored by *Worldpac*

BMW Hybrid Systems 1 (all day) (T19-EF) by *Justin Morgan* SATURDAY AM (4 HRS)

Elevate your automotive expertise in BMW Hybrid systems! Calling all automotive technicians who wish to immerse themselves in the cutting-edge realm of BMW hybrid vehicles. Join Justin Morgan for "BMW Hybrid Systems" Class. Our comprehensive class delves into the core components, ensuring you master BMW Hybrid battery types, electric machines, charging systems, inverters, and HV safety systems. This training offers a deep dive into the intricacies of BMW hybrid technology on generation 2, 3, & 4 vehicles. Stay ahead of the curve and enhance your skills to meet the demands of the evolving automotive landscape. Technicians attending are encouraged to have previously completed HV safety training/certification.

BMW ISTA and AIR (T27-G) by *Brandon Mathews* SUNDAY AM (3 HRS)

A complete overview of the BMW Integrated Service Technical Application (ISTA). The course will cover the software platform from all perspectives including web navigation, installation, diagnostic & programming use, & error troubleshooting. The technician should leave with a strong understanding of how to utilize the BMW software packages to successfully troubleshoot, repair, & program BMW, MINI, & Rolls Royce vehicles.

sponsored by [Worldpac](#)

BMW Logical Diagnosis: Crash Course (T14-D) by *Brandon Mathews* FRIDAY PM (3 HRS)

Master the art of diagnosing BMW vehicles with this focused course. Learn to efficiently utilize BMW-specific Service Information & Resources for effective troubleshooting. Develop a strategic Diagnostic Strategy tailored to BMWs, including in-depth Wiring Diagram & Circuit Analysis and Live Data Analysis techniques. Explore common Pattern Failures seen in BMWs through practical Case Studies, integrating diagnostic training directly into your skill set. By course completion, you'll be equipped with the practical know-how to confidently diagnose and address issues in BMW vehicles.

sponsored by [Worldpac](#)

BMW/MINI Sunroof Cassette Rebuilding (T15-D) by *Jason Maldonado* FRIDAY PM (3 HRS)

Description coming soon.

sponsored by [Worldpac](#)

Comprehensive Introduction to BMW Diagnostics, Programming, and Module Control Masterclass + Hands On (all day) (T20-EF) by *Yaser Jafar* SATURDAY AM (4 HRS)

Embark on a comprehensive 8-hour masterclass that integrates BMW diagnostics, programming, module control, and remote access techniques. Delve into programming BMW cars using ISTA, INPA, and ESYS, mastering module cloning, virginizing, and data modification. Explore the Immobilizer (EWS) system, decode FSC codes, and understand memory device variances essential for BMW systems. Learn to set up bench modules for diagnostics, flashing, recovery, coding, and repair, and discover techniques for remote diagnosis, flashing, coding, repair, and programming of BMW vehicles over the internet. Additionally, engage in hands-on exercises that simulate real-world challenges, providing practical experience and enhancing your problem-solving skills.

In this masterclass, you will:

- Deepen your understanding of BMW diagnostics and programming, including troubleshooting module crashes and restoration techniques.
- Master advanced techniques for programming used modules and gain insights into memory devices crucial for BMW system functionality.
- Familiarize yourself with essential terminologies in the BMW world, facilitating effective communication and navigation in diagnostics and programming landscapes.
- Learn how to set up bench modules for diagnosing, flashing, recovering, coding, and repairing BMW modules with precision and efficiency.
- Explore remote access techniques, enabling you to diagnose, flash, code, repair, and program BMW vehicles from any location with internet connectivity.
- Engage in hands-on exercises that present real-world challenges, allowing you to apply theoretical knowledge to practical scenarios and hone your problem-solving skills.

Whether you're an automotive technician, BMW enthusiast, or professional seeking to elevate your expertise, this masterclass offers an immersive learning experience. Join us as we unravel the complexities of BMW technology and equip you with the skills and knowledge to excel in BMW diagnostics, programming, module control, remote access, and real-world challenges.

sponsored by [Vehicle Electronic Professionals](#)

Diagnostics: Beyond the Silver Bullet (T6-B) by *Keith Perkins* THURSDAY PM (3.5 HRS)

We have all been told we must have a process; this class outlines a process used to approach all facets of customer concerns as well as providing resources to aid in creating and sticking to the process. Every level of technician, service advisor and manager will leave with their own "golden nugget" of knowledge out of this class.

DME/CAS/FRM/EEPROM Recovery (T2-A) by *Mike Christopherson* THURSDAY AM (4 HRS)

This lecture-style class is an overview of what EEPROM and Advanced programming is from the board level.

We will discuss the EEPROM devices and Microcontrollers.

We will discuss different methods of reading the EEPROM and Microcontroller chips.

We will discuss the tools needed to get working with EEPROM and Microcontrollers.

We will discuss soldering, lifting, and replacing EEPROM and Microcontrollers.

If time permits, we will do some EEPROM demonstrations.

Electrical Diagnostics Tips: Being Fast & Accurate (T1-A) by *Keith Perkins* THURSDAY AM (4 HRS)

This class is designed for all levels of technicians by providing a quick refresher to bring the new to electrical diagnosis technicians up to speed, as well as solidifying the foundations for all the advanced level technicians. We cover leveraging wiring diagrams for ALL diagnosis. The class then dives into advanced tooling uses, as well as testing methods to increase your efficiency and accuracy as a diagnostician.

European Diagnostic Case Studies (T16-D) by *Haakan Light* FRIDAY PM (3 HRS)

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

sponsored by Worldpac

European Steering, Suspension & ADAS (T17-D) by *Wes Dickens* FRIDAY PM (3 HRS)

Are you ready to elevate your expertise in European vehicles steering and suspension? As with many automotive systems, the steering and suspension systems on vehicles are constantly evolving. European automakers have been at the forefront of automotive technology, including the evolution of steering and suspension. For technicians, having a proper understanding of how these systems have changed and how they operate is critical, especially where complexity has risen even further over the years. Dive into these complexities of steering, suspension, and ADAS systems with MEYLE as this course will impart great information for beginner, intermediate, and advanced technicians!.

This course will cover technologies in both steering and suspension to give technicians a better understanding of common failures, diagnostics, tips and tricks, and best practices for repair on modern systems. It will also cover design features commonly found on European vehicles, and a guide to aligning ADAS sensors and cameras.

The participant can expect to learn:

- Advantages of Four Link Suspension systems
- Effects of “bump steer” on alignment
- Best practices for checking suspension systems
- Proper installation techniques
- Modern suspension technologies that improve ride quality
- How Electric Power Steering works, and how it is similar to hydraulic steering systems
- Tips on when to replace electric rack and pinions and how they interact with other automotive systems
- ADAS operation and benefits
- ADAS calibration practices

sponsored by Meyle

German Cars – Secrets to Success, Diagnostics, and Service (T30-G) by *Haakan Light* SUNDAY AM (3 HRS)

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

sponsored by Worldpac

Get Your Freq On (T28-G) by *Gary Smith* SUNDAY AM (3 HRS)

There are MANY automotive RF systems in use today. Yet there is no training on how to understand, measure and quantify the presence of RF signals across the vehicle platform. In this class, you will learn some basic RF fundamentals, and learn different tooling and cool testing methods we can use to test for RF and isolate faults. Wi-Fi, Bluetooth, TPMS, Door Lock RFA systems, GPS, Immobilizer and more are covered!

- Fundamentals of RF, what is it and How Does It Work?
- Frequency, Bandwidth Allocations for Automotive RF Systems
- Testing RF, How to Capture the Signal Out of the Air
- Testing Methods and Tooling, from Creative to Commercial Tools
- Techniques, Tips and Tricks for RF Testing

sponsored by [Worldpac](#)

Installing Used Electronic Parts in European Vehicles (T10-C) by [Mike Christopherson](#) FRIDAY AM (3 HRS)

This is an overview of workarounds when working with the restrictions implemented by the OEM Manufactures. This class covers how to use second hand parts.

Lubricants for Modern European Vehicles (T11-C) by [Lutz Hinners](#) FRIDAY AM (3 HRS)

Within this training would cover topics ranging from:

- Lubricant Fundamentals
- Modern Engine Oils
- Modern Driveline Lubricants (ATF's Gear Oils, DCTF)
- Specifications/Manufacturer Approvals – the right oil for the right application
- Future Trends regarding Automotive Lubricants

sponsored by [Rowe](#)

Lubrication Excellence: Unleashing Performance (T7-B) by [Maxim Burgman](#) THURSDAY PM (3.5 HRS)

Join us for a deep dive session as we delve into the world of automotive lubricants. From engine oils to specialized greases, we'll explore how FUCHS products enhance performance, longevity, and efficiency in European vehicles. Discover the science behind our cutting-edge formulations and learn practical tips from our technical team. Whether you're a seasoned technician or a shop owner, this seminar aims to position FUCHS as your trusted technical resource.

sponsored by [Fuchs Lubricants](#)

Mercedes Chassis Control Systems (T8-B) by [Dennis Woll](#) THURSDAY PM (3.5 HRS)

A comprehensive overview of Mercedes-Benz suspension systems and their failure, diagnosis, and repair.

- Level sensing troubleshooting & calibration
- Damping & electronic controls
- Leak diagnostics
- Common failures & repairs
- Troubleshooting tips & tricks

sponsored by [Worldpac](#)

Mercedes Software (T12-C) by [Dennis Woll](#) FRIDAY AM (3 HRS)

A comprehensive overview of Mercedes-Benz diagnostic tooling and techniques, starting from the late 80s and continuing to present day innovations.

- Service information resources
- Xentry software navigation & controls
- Drive Authorization Systems & software
- Blink code diagnosis
- Hand Held Tester overview & usage

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Pico Lab Scopes (T3-A) by *Jim Bennett* THURSDAY AM (4 HRS)

- * PC integrated 4 channel Lab-Scope.
- * Guided and un-guided component test.
- * Features, Uses, Pros & Cons.

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Porsche Diagnostic Procedures (T23-F) by *Tyler Eliason* SATURDAY PM (4 HRS)

- Cover Group Numbers and navigation in PCSS and PIWIS
- Use of Guided fault finding in PCSS and in PIWIS
- Checking TSB's for related issues in PCSS
- Use of PIWIS in Diagnostics (ie live data, coding, programming, vehicle handovers, use of VAL's, generally cover how much can be gained by use of PIWIS)
- Use of wiring Diagrams in PCSS and PIWIS
- Marking circuits in PCSS
- Looking up by part/function/system
- Water ingress at various points (ie sunroof drains, AC drain, Convertible Top)
- Oil leaks vs oil seeps
- Common oil leaks (ie Macan, panamera, cayenne V6 and V8 timing covers)
- Basics of Porsche High Voltage and special tools

Service Requirements for Late Model Porsches (T29-G) by *Tyler Eliason* SUNDAY AM (3 HRS)

- PCSS
 - How to make sense of Group numbers
 - How to look up instructions/factory warranty times
 - Hourly login time or subscription for a year
- PIWIS tester
 - Use in services and allude to diagnostic uses
- Maintenance Booklet (use and info)
- Standard Service Intervals (what's included some vehicles I.E. oil, brake fluid and moisture content, pollen/pre filters)
- Lifting positions and air suspension, front axle lift
- Service procedure (specifically oil setting method for all vehicles)
 - 356/914/912/early 911
 - 911 (from base 964 to 991.2 GT3RS/Cayman GT4RS)
 - Cayman/Boxster 986-982
 - Cayenne (diesel, VR6, V6 turbo, V8, V8 Turbo, Dipstick adjustable and fixed)
 - Panamera (all iterations)
 - Macan (I4-V6 turbo, first and second gen)
- Brake service (pads, rotors, and sensors, parking brake Macan's)
- Removing and installing wheels (torque spec, Center Lock Wheels)
- Spark Plugs on 9X6-9X1.2 (differences between Turbo models and others and frequency of replacement)

Surface Finish Mastery - From Basics to precision Measurement (T4-A) by *Florian Kiziak* THURSDAY AM (4 HRS)

In this course you will learn how to prepare surfaces for leak-free mating. During a water pump replacement, have you wondered which solvent to use for the removal of old gasket material? How about abrasives to use, when to use a scraper, and when to use something more aggressive. This class will go over tools and best practices to prepare cast iron mating surfaces as well as aluminum. You will have an understanding of measuring surface roughness so you can create a great surface finish. These important steps will reduce the risk of a "comeback" and increase your productivity.

sponsored by Elring

Targeted Mechanical Testing (T22-E) by *Adam Robertson* SATURDAY AM (4 HRS)

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 720-degree rotation
- Know what pressure change to expect
 - What to do if the pressure changes aren't what we expect

This class will utilize REAL DiagNation case studies to prove these invaluable testing methods and is suited for technicians of all skill levels, entry to expert.

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Tesla Toolbox A-Z (T13-C) by *Seth Thorson* FRIDAY AM (3 HRS)

Working on Tesla vehicles requires proper diagnostic abilities. This course will cover access to SI and scan tool features available in Tesla Tool Box 3. Students will get a crash course in setup and configuration of Toolbox 3, necessary networking and cables for access to the vehicle, and in person demonstration of Tesla service functions. Students will get a live demonstration on a Tesla car that will allow them to see and become familiar with accessing the car with Tool Box scan tool as well as activating service mode on the car to have full diagnostic and programming capability.

Understanding & Measuring Current in European Vehicles (T24-F) by *Adam Robertson* SATURDAY PM (4 HRS)

In electrical system diagnostics there are several parts, pieces and laws that dictate how the electrons will function. The measurement of current can tell an incredible story about the integrity and operation of circuits and components. If done correctly, it is usually a simple non-intrusive "quick test". In my classes I commonly state "if you want to win the electrical diagnostic game, it is all about properly measuring and understanding current flow". With the use of "current probes" and lab scopes we can use current flow measurements to increase our diagnostic efficiency and accuracy. Topics of this class will include: • Description and operation of inductors (solenoids) • Description and operation of motors • Proper scope and probe set-up • Small discussion on electrical laws like Lenz, Kirchoff, Ohm and others ◦ How they relate to the scope captures and how they help us diagnostically • How to use "current ramping" and lab scope patterns for circuit diagnostics including ◦ Injectors, solenoids, coils, fuel pumps, starting/charging, data networks and more • Using current to diagnose common component failures like power windows and other accessories PRIOR to disassembly • This class is suitable and recommended for technicians of all skill levels that want to enhance their diagnostic accuracy and efficiency

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Understanding 3 Phase Controls (T9-B) by *Gary Smith* THURSDAY PM (3.5 HRS)

In this class, we will discuss Pulse Width Modulation (PWM) theory and specifically how it applies to various European Vehicle Control Systems, for both low voltage vehicles and high-voltage motor control circuits. The class will flow theory to scanner and scope analysis during diagnosis of several recent case studies.

- What is Pulse Width Modulation: How does it work? Concepts and Theory
- Understand the use and applications of PWM in power, control and sensing circuits in
- BMW and other European vehicle platforms.
- Checking electric motors and DME output driver circuits: good or bad?
- Introduction to Valvetronic DME driver analysis.
- Introduction to 3-Phase AC/DC (Non-ground) fuel pumps and controls in 2015+ vehicles

AC voltage and current is in play in multiple modern automotive sub-systems and of course is the main motivator behind hybrid and EV platforms. See how AC current is managed in a DC digital world and how it affects your diagnostics!

Who should attend? Anyone seeking a deeper understanding of the concepts of PWM motor control, AC current flow and motor controls from DC drivers for low and high-voltage control applications in the automotive platforms. Also, those who seek to understand their scanner and scope data in these systems beyond just viewing the analog signals.

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Variable Valve Lift Operation & Diagnostics (T5-A) by *John Thornton* THURSDAY AM (4 HRS)

VVL systems are common on modern day engine management systems. Many times, VVL works with Variable Cam Timing systems to increase engine performance and efficiency.

Three systems will be covered in detail:

- Chrysler Pentastar 3.6L two step hydraulically controlled VVL
- VW/Audi 4-cylinder turbo two step electro-mechanically controlled VVL
- GM Turbo 2.7L engine two step electro-mechanically controlled VVL

System diagnostics will include scan tool driven tests as well as manual driven tests. Scan data interpretation and scope usage will be highlighted throughout this session.

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VW / Audi VAG DSG Transmissions (Hand-On / Live Demo) (T25-F) by *Cameron Conover*

SATURDAY PM (4 HRS)

Transmissions Covered: 6 Speed Transverse 02E & 7 speed AWD 05B

- Direct Shift Gearbox/Dual Clutch Transmission
- Design & function - Dual clutch mechanism & operation
- Mechatronics unit common faults
- Adaptations
- Fluid Service & filling tips & tricks to save time
- High Mileage service
- Restoring performance
- Hands on with an 02E
- Disassembly, Inspection, & Testing
- 02E Transmission Fluid Pump case study & failure mode
- Installing Limited Slip Differentials in the 02E
- Shift Fork Piston Replacement
- Audi 05B 7 speed transmission
- Common Failures, Disassembly, Special Tools
- Speed Sensor Replacement
- Re-Seal
- Mechatronics Wiring Harness & TCU

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