

## ***ATTS Classes 2021- 2022***

### ***Auto 001" ADAS" 2022***

This class/seminar provides information on the Advanced Driver Assistance Systems. The information provided is what every tech needs to know. Explained is ... The working knowledge of the systems, Dynamic Calibration, Static Calibration, special tools needed for ADAS calibration, Test drives, OE or aftermarket equipment, different sensors, steering, braking warning systems, your liability, and more.

### ***Auto 002 "Advanced Driveability Diagnostics"***

This class/seminar utilizes real-world strategies for effective diagnosis and repairs. There will be only ADVANCED procedures taught in this seminar. Technicians who attend should already have background in use of scan tools, labsopes, amp clamps, gas analyzers etc. Subjects covered are: Cranking AC voltage, Running compression with your scope, PCM Vref, No Start Diagnosis, Fuel Trim correction factor, Crankshaft Relearn, Ignition primary and secondary, Variable valve timing and so much more.

### ***Auto 003 "Advanced Automotive Labscope's"***

Are you ready to become a Labscope Power User? Learn how to connect, display, and interpret labscope readings on all major brands of labsopes. Topics covered include scope essentials, controls, connections, channels, coupling, time and voltage settings, transducers and major signal types.

### ***Auto 004 "Air-Fuel/Wide Range - O2 and Fuel Trim"***

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.

### ***Auto 005 "Automotive Electronics for Today's Vehicle"***

Topics covered include circuits and circuit testing, opens, shorts, voltage drops, relay testing, meter usage (DMM), labscope / graphing meter usage, sensor, actuators. Also covered are the starting, battery, alternator, sensors, computers, and more. This training will provide information on how to get the most out of your tools and equipment, so you can find and repair electrical problems on today's vehicles.

### ***Auto 006 "Asian Vehicle Driveability"***

This class/seminar concentrates on the most common Asian vehicles. The introductory for each of the vehicles being covered listing general tips and tests applicable to these and many other Asian makes. Also covered are fuel systems, ignition system, sensors including air fuel / wide range sensors, actuators, strategies. Misfires, resets, cam crank sync, module communication, reprogramming, case studies and more.

### ***Auto 007 "CAN BUS Communication" 2022***

This class/seminar explains the working of the control area network and what is needed to know and test. Provided is CAN BUS communication diagnosing and testing using scan tools, meters, BOB (break out box) and Labsopes. Also covered are the fundamentals of the CAN Protocol, pins 6 and 14, why CAN is used, twisted pairs, system topology, protocol speeds, diagnosis and more.

### ***Auto 008 Critical Thinking-Diagnostic Strategies "2022"***

This popular class/seminar has been updated from 2021. Success in diagnosing today's high-tech systems requires a high-tech approach. This class/seminar covers the tools you need to cope with these challenges. You'll learn to develop a diagnostic process and a diagnostic "Game Plan". How to use the tools the OEMs give you; ECM strategies, code setting criteria, PID analysis and how fuel trims can be used to point you in the right direction. This seminar also discusses batteries, including coding and reprogramming, parasitic draw, voltage drop, engine testing including relative compression, compression testing, cylinder leak down, gas analysis, fuel flow testing, fuel trim, current ramping, PCM testing, pressure transducers, reprogramming, a new way to test EVAP and much more. **This new class will provide the tools for success in diagnosing today's high-tech systems that requires a high-tech approach. Covered are the tools you need to cope with these challenges.**

### ***Auto 009 "Diagnosing and Repairing Vehicles Using Mode 6"***

This class/seminar is designed to help techs develop a better understanding of Mode 6, DTC Repairs and OBD II monitors. Covered subjects: What is Mode 6, How to use Mode 6, Converting the Mode 6 Data to Aid You in a Quicker Diagnosis, • What Good is Mode 6? • Interpreting Mode 6 Data • Using Mode 6 Test Results • Raw Data and Calculated Values • Mode 6 Info on the Internet • Sample Scan Tool Display • Repairing vehicles using Mode 6 and much more. All scan tools are covered including Snap-On, OTC, LAUNCH, AUTEL and others.

### ***Auto 0010 "Diesel Info For The Non Diesel Tech" 2022***

This class/seminar provides what is needed and what you need to know on the diesel engine, fuel system and air induction. Diesel engine fundamentals of operation, diagnosis and repair will be explained along with all the various components that make the engine operate. Scan tool diagnosis, filters, low and high pressure fuel system, air induction from the filter minder to the intake, turbo, EGR coolers and more.

### ***Auto 0011 "Electronic Class"***

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.

### ***Auto 0012 "Engine and Emission Class"***

You'll use meters, scan tools, relative compression testing, compression and cylinder leak-down gauges, smoke machine, pressure transducers, new state of the art EVAP detection tools, video scopes, various labsopes and a 5-gas analyzer to build solid skills in today's engine and emissions diagnosis and repair. You'll learn how essential emissions control systems and equipment relate to engine performance and drivability problems. We'll also cover emission related DTCs and continue on build up your electrical diagnostic skills and much, more.

### ***Auto 0013 "EVAP Systems"***

Take the next step and become an EVAP Top Tech. You'll leave knowing EVAP systems, from the basic through the advanced OBD II EVAP System. You'll be instructed on DTC Codes, how to connect meters and scopes, EVAP smoke machines, gas analyzer and amp clamps. This seminar is designed to familiarize technicians with the EVAP systems components, functions and repairs.

### ***Auto 0014 "Ford 6.7 Power Stroke Diesel Info – Tips – Repairs"***

Is it the best diesel engine made today?

This Ford engine package came out in 2011. There are many that needed maintenance and services. Vehicle owners would like you to help them keep their truck running and properly maintained. This webinars will look at the following items and systems on the 6.7 Power Stroke.

- Differences in Gen 1 through current engines
- Fuel systems changes through the years
- Turbo changes through the years
- EGR system changes
- Diagnostic changes and tips
- No start diagnostics and tips
- Tools that help service these engines
- Common issues and solutions

### ***Auto 0015 "Fuel Pump Testing with a Low Amps Probe"***

This class/seminar is designed for techs who have some familiarity with scopes and low amp probes. Instructions on amp probe setup and current measurement techniques for testing modern automotive electrical fuel pumps. Also displayed in this course are common DC and AC current waveforms that help a tech interpret and evaluate fuel pump motor condition.

### ***Auto 0016 "Gasoline Direct Injection – GDI Driveability and Diagnosis"***

This class/seminar will cover: GDI – What Is It? - Primary Fuel Pump Secondary - Direct Injection Fuel Pump - What To Look For In Scan Data - Fuel Trim Cell - Labscope connection to the GDI injector – Tools to use – How to remove injectors - Injector seal replacement and installation – What cause the High pressure pump failure including the cam follower – Carbon build up – PCV and Breather system issues - Problem Areas and Case Studies.

### ***Auto 0017 "Getting to Know Asian Imports"***

This class/seminar concentrates on Toyota and Honda vehicles. The introductory for each of the vehicles being covered listing general tips and tests applicable to these and many other Asian makes. Also covered are fuel systems, ignition system, sensors including air fuel / wide range sensors, actuators, strategies.

### ***Auto 0018 "Getting to Know Automotive Computers"***

This course is useful for entry level to the advanced technicians. This class/seminar provides an overview of the vehicles computer system operation. It also covers Computer Relationships, Component Descriptions, and Scan Tool Troubleshooting Tips, Updates on Newer Advanced Technologies such as CAN, Vehicle Networking Strategies, Data Protocols, and an overview of OBD II Mode 6 that includes sample screens and PID values.

### ***Auto 0019 "Getting to Know Labscope "***

This course is useful for entry level to the advanced labscope technicians. The class/seminar will cover; How to Connect, Display, and Interpret Labscope Readings on all major brands of Labscopes, Scope Essentials, Controls, Connections, Channels, Coupling, Time and Voltage Settings, Transducers and Major Signal Types. **All labscopes are covered including EScope, Fluke, OTC, Pico, Snap-On and Tektronix.**

### ***Auto 0020 "Getting to Know Mode 6"***

This class/seminar is designed to help techs develop a better understanding of Mode 6, DTC Repairs and OBD II monitors. Covered subjects: What is Mode 6, How to use Mode 6, Converting the Mode 6 Data to Aid You in a Quicker Diagnosis, • What Good is Mode 6? • Interpreting Mode 6 Data • Using Mode 6 Test Results • Raw Data and Calculated Values • Mode 6 Info on the Internet • Sample Scan Tool Display • Repairing vehicles using Mode 6 and much more. All scan tools are covered including *Snap-On,, OTC, LAUNCH, AUTEL and others.*

### ***Auto 0021 "Getting to Know OBD II"***

This class/seminar is essential for understanding and working on today's OBD II vehicles. The following is covered: OBD II and the effect on emissions, CEL, SES, MIL, DTCs, Freeze Frame, PIDS, Functionality test Rationality test, Enabling Criteria, Readiness Status, Passive, Active and Intrusive test, code history, drive cycle's, crankshaft relearn, reprogramming, etc.

### ***Auto 0022 "Hybrid Vehicle DTCs"***

This class/seminar covers the most common DTCs that show up on hybrid vehicles. Tools, equipment, hybrid components, batteries, are all covered along with examples of what and how, are covered. This seminar will provide helpful information for the novice to experienced technician.

### ***Auto 0023 "Misfire Diagnosis"***

Misfires can be caused by many different components on today's high tech engines that can cause the MIL/Check Engine Light to illuminate, the engine to run rough, loss of mileage, transmission shifting problems, limp mode problems and more. This class/seminar will provide information and test techniques you need to diagnosis and repair misfire problems correctly the first time. Chasing down P0300 DTCs will be addressed resolving problems associated with this DTC. The tools that you can use in nailing down misfire problems are covered in this seminar. Use of different tools will be presented from the standard testers you already own, to OE scan tools, labscopes and on to advanced pressure transducers.

### ***Auto 0024 "OBD II Diagnosis, Monitors and Repairs"***

What's in the class/seminar? This course provides a thorough understanding of onboard diagnostic strategies used to ensure vehicle emission compliance. It gives technicians at all levels of experience an overview of the OBD II System, explains concepts of OBD II testing, and provides an explanation of current automotive technology used to monitor vehicle emission performance. Topics Include: • OBD Monitoring Strategies • Diagnostic Trouble Code Storage and Retrieval • Clearing Diagnostic Trouble Codes • Monitors • Freeze Frame Data • Trips, Drive Cycles and Warm Ups • Monitor Readiness Status • Malfunction Indicator Lamp Control • Mode 6 • Generic OBD II Inspection Procedures

### ***Auto 0025 "OBD II Monitors"***

This course concentrates on diagnosing and repairing DTCs and MIL-illuminating faults efficiently, to properly prepare failed vehicles for a retest. Reiterates the conditions needed to pass the scan tool emissions test. Emphasis on MIL operation and diagnosis; monitor types; subtleties of monitor operation; monitor disablers, the effect of erasing DTCs on monitor status; and the relationship between drive cycles and monitors.

### ***Auto 0026 "OBD II Monitors and Mode 6"***

This course is designed to help technicians develop a better understanding of OBD II and Mode 6. Covered subjects: What is Mode 6, How to use Mode 6, Where and when to use Mode 6 in diagnosing a problem, Mode 6 Exercises, Case Studies and more.

### ***Auto 0027 "OBD II Diagnostic Strategies"***

This class/seminar narrows the gap between theory and practice. It concentrates on systems based repairs using common test equipment, available to the largest number of technicians. Topic areas include: OBD II Vehicle Emissions Test, Diagnostic First Steps, Scan Tool Diagnostics, Fuel Systems, Common Tests, Useful Testers, Quick Hitters (Tips and techniques centered on common problems, typical systems, and predictable pattern failures.) and Tech Tips.

### ***Auto 0028 P0420 & P0430 "Keeping The Light Off"***

The P0420/P0430 DTCs related to catalytic converter efficiency are among the Top 10 DTCs we deal with on a regular basis. It's easy to assume by the description that the converter itself has failed – and it just may have – but more often than not there is another culprit hiding in the wings that either caused the death of the converter or the code itself. In this seminar, we'll share testing methods and tips to help you successfully correct the problem the first time around.

### ***Auto 0029 "Reprogramming with J2534"***

Today there are two to three options for programming or reprogramming modules on vehicles. In the aftermarket most shops and technicians cannot afford to purchase all the dealer tools or even an AutoLogic for European vehicle. There is an alternative the Drew Tech/ Launch/Snap-On/ Bosch J2534 reprogramming box. This class will focus on using the J2534 box to reprogram vehicles in the aftermarket. The class will provide all the necessary steps to follow, some simple and some not so simple. With so many different OE websites and different procedures any step that is not followed will waste time and cost you money. The class/seminar will cover: OE websites, what software to have and NOT have on your laptop, how to sign up to obtain a user name and password, installing Tool Box from Drew Tech, how to update your J2534 software, updating the firmware, finding the correct computer information, what battery maintainer to use, how to look up information, how to prevent module/computer failure, when to program and much more. This class/seminar will provide you with information on what you need to know about J2534 programming in order to keep you out of trouble.

### ***Auto 0030 "The In's And Out's Of R1234yf Air Conditioning Systems"***

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 R1234yr 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.

### ***Auto 0031 "Troubleshooting Modern Ignition Systems"***

In this course are descriptions of common ignition system problems along with a complete explanation of the ignition system. There are also tech tips and examples of good and bad waveforms, ignition current ramping, voltage waveforms and waveform analysis.

### ***Auto 0032 "Understanding and Diagnosing Air Conditioning"***

This course goes beyond minimum requirements for recovery, evacuating, recharging, and recycling by offering real world examples in diagnosing and repairing A/C electrical, computer / BCMs, Climate control and electronic components. Most of today's vehicles come equipped with electronically controlled A/C systems. Auto AC systems have become more difficult to diagnose using the repair strategies learned from years of servicing R12 and R134a systems. This class will cover operation and service of today's and tomorrow's air conditioning systems including R1234yf.

### ***Auto 0033 "Understanding and Diagnosing Electric Hybrid Vehicles"***

This Hybrid class focuses on the proper techniques necessary to diagnose, repair, service and make money on Hybrid vehicles.

Class consists of:

- Safety training
- DVOM usage (CAT III certified)
- Megohmmeter usage
- Hybrid diagnosis using scan tools
- Scan tool shootout (Enhanced and OEM)
- Labscope measurements on Hybrids
- Using low and high amperage clamps on Hybrid systems
- Testing high voltage batteries
- Regenerative braking system
- AC to DC inverters and DC to DC converters
- Electric assist steering
- Common service procedures; oil changes, cooling systems, tires, brakes etc.
- Internet and OEM websites
- Real world testing

### ***Auto 0034 "Understanding & Diagnosing Fuel Systems"***

Fuel Pressure Diagnostics - Fuel Volume - Injector Voltage - Injector Internal Construction  
Injector Spray Patterns - Injector O Rings And Leaking Injectors - Scope Patterns And Actual  
Case Studies To Point You In The Right Direction - Specifics On What To Watch Out For On  
Certain Vehicles - See The Entire Fuel Delivery System And How That Can Streamline Your  
Diagnostics - Many Scope Pattern Tips And What To Look For In The Patterns - Short Trim -  
Long Trim - Short Trim & O2 diagnosis Learn How To Check The Current and the Voltage Of  
Injectors - Determine When To Clean, Repair or Replace Use Your Tools: Meters, Scan Tools,  
Power Probes, AMP Probes, 5-Gas Analyzers And Labscopes

### ***Auto 0035 "Unlocking The Potential Of Your Scan Tool"***

This class/seminar will cover: ways to maximize your scan tool proficiency- How to use scan  
data to direct your diagnostics - scan data PIDS - bi-directional control - Fuel Trim - Mode 6 -  
Calculated Load - Air Fuel Ratio - O2 Sensor - Freeze Frame - Time to Temperature - Generic  
OBD II and Enhanced Data. Utilizing your scan tool - scope and meter for a better diagnostic  
result. Snap-On, OTC, Launch, EScan among others will be used.

### ***Auto 0036 "Upping Your Diagnostic Skills"***

This class/seminar will provide building a "Game Plan" on how to diagnosis DTCs and no code  
driveability issues. Learn how to sharpen your diagnostic skills, knowing where to find first  
place to start, setting up a diagnostic "Game Plan", using strategy based diagnostics and  
diagnostic routines, using PCM strategies and Enabling Criteria. This class/seminar will include  
the use of meters, labscopes and other diagnostic tools and equipment. Batteries including coding  
and reprogramming, parasitic draw, voltage drop, engine testing including relative compression,  
gas analysis, fuel flow testing, fuel trim, current ramping, PCM testing, pressure transducers,  
reprogramming, new way to test EVAP and much more. An explanation on the usage of the tools  
and equipment on problem vehicle's that are used in the seminar case studies.

## ***"Heavy Duty"***

### ***HD 001 Air Disc Brakes***

This is a stand-alone module from the two-day brake (HABS) course. This module provides knowledge of the air disc brake systems and components used in today's trucks. It also covers the repair and maintenance aspects and real-world issues with these systems. Every year more and more trucks are being equipped with disc brakes. It is imperative to stay on top of this area to prevent issues and violation.

### ***HD 002 Appendix G and Annual Inspections***

This class is meant to clarify and have a better understanding of the steps and regulations needed to meet the requirements of annual inspections. This is a real-world guide to inspections.

### ***HD 003 Electric Class For the HD Technician***

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 hands-on training, you'll learn how to get the most out of your tools and equipment to find and repair electrical problems on HD vehicles instead of watching those expensive tools collect dust.

### ***HD 004 Heavy Advanced Braking Systems (HABS)***

This course is intended to meet the needs of the in-service heavy vehicle technician to service, repair, maintain and diagnose various types of heavy vehicle brake systems. The course includes an ABS module and covers regulations, brake system theory and operation, components and how they function, the impact of friction material, and how to maintain a balanced braking system. Emphasis is placed on the importance of proper repairs and inspections to meet all of today's regulations pertaining to the brake system.

### ***HD 005 HD Brakes Systems***

This class covers the following: Air Brakes, Hydraulic brakes, Compressors, Air Dryers, Valves, Disc and Drum Brakes, ABS, Vehicle Stability, Brake Electronics, wet tank, slack adjusters, S cams and more.

### ***HD 006 Lights, Hoses & Associated Regulations***

This class ensures that all entities in the trucking industry are up to date on the changing regulations related to safety and maintenance. Emphasis is placed on regulations related to lights and hoses.

### ***HD 007 Preventive Maintenance/CSA***

This class is designed to show the importance of a good preventative maintenance program and its impact on a company's CSA scores. Included in the class is familiarization with CSA and the severity of various violations, what to expect at roadside inspections, and how to equip technicians and drivers with good preventative maintenance skills so problem areas are addressed before they become violations at roadside inspections.



***HD 008 Steering, Suspensions & Tires***

This class teaches technicians to recognize the relationship between steering, suspension, and tire maintenance as it pertains to inspections, repairs, and the consequences of improper maintenance.

***HD 009 You: The inspector (Roadside and Annual Inspections)***

Participants are walked through various parts of the regulations and roadside inspection violations. You will be challenged to take on the role of an inspector, via slides and videos showing defects and issues with systems, components and areas that are actual/potential violations. By taking on the role of an inspector you will develop the skills to understand and stay in compliance with the numerous regulations impacting commercial motor vehicles, drivers, and carriers.