

Engine and Emissions Driveability Diagnostics



G "Jerry" Truglia



Engine and Emissions Driveability Diagnostics, G. Truglia, ATTS, 2011, , . .

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G Jerry Truglia of Technicians Service Training is presenting this FREE 1.5 hour webcast covering PIDs, DTCs, graphing, bidirectional control, Mode 6, Direct Hit, and scope usage. We will be diagnosing real problems and live vehicles using OTCs new tool, the Pegisys. We assure you that youll learn some good diagnostic essentials!

This seminar is designed for techs who need to know how to set up their low amp / current probes on labsopes and use the Power Probe III. We demonstrate how to set up your amp / current probe on a labscope so you can measure current on injectors, fuel pumps and ignition coils. In the webcast we display sample waveforms so you can determine and interpret common DC current waveforms. We use the two most common low amp / current clamps, the Fluke 80i-110 and the PDI CA-60 along with the Modis labscope and the Fluke 196 (the Fluke 97 and 98 are very similar to the 196) labsopes.

Using Your Scan Tool with Mode 6 covers:After a brief ten minute overview of Mode 6, we use live demonstrations and interactive use of the ATS EScan, AutoEnginuity, OTC Genisys/ Nemisys, and Snap On Modis/Solus in order to walk you through each scan tool's different abilities and options. Don't let your expensive scan tools collect dust. Maximize their use, hone your diagnosis, and make more money! Instruction will last 1.5 hours, leaving 30 minutes for questions and answers.If you can, bring you PC-based scan tool! You can ask the instructor questions by typing or (speaking, this requires a headset). During Q and A, the instructor can take control of your PC base scan tool and teach you "hands on" via the computer.

TST video seminars are a valuable service provided to members and non-members; we assist technicians in their automotive training needs/wants. The staff of TST are not video production professionals, seminars are taped and edited to the best of our ability. Our objective is to provide a quality product while keeping the real feeling of the seminar. Please keep in mind, technical problems or slight imperfections may be part of our DVD seminars.

Missed the 2013 Big Event? John Thornton covers operation and diagnostics of Gasoline Direct Injection (GDI) systems. Low pressure, high pressure sides and more, David DeCoursey covers step by step diagnostic process including Relative Compression, Pressure Transducer and Labscope Testing. Pete Meier â€œkeynote Speakerâ€• on Technician Compensation & â€œGuest Speakerâ€• John Anello- No Start/No ECM Communication with a 2005 BMW 530i.

The three DVDs that constitute this package (Getting the Most Out of Your Labscope with G Truglia, Everyday Labscope with Pete Meier, and Advanced Use of the Oscilloscope with Bernie Thompson)

will help take a beginner who has no labscope experience get a firm background in what labscopes are available, what they do, exactly how to connect and use them, and ultimately how to interpret waveforms and use the labscope in advanced diagnostics. This package will save you about \$30.

Some of us don't like learning the theory...we want to see how vehicles are repaired by learning about real problem vehicles. This package includes John Anello's Drivability Case Studies and Diagnostic Soup, Dave Crippen's Driveability Case Studies, and Rich Peterson's Electrical Troubleshooting--Case Studies and High Voltage. Save about \$50 by purchasing this package!

There is A LOT of wasted diagnostic time due to having no real direction of the diagnostics. An example of this would be a crank, no start condition. The tech would have to do some general tests to determine if it is a fuel delivery, a loss of ignition, or an engine integrity problem. Once the general test shows the correct area, then pinpoint testing would drive down the funnel to eliminate the components that are working correctly.

Bernie Thompson of Automotive Test Solutions in this DVD covers how to diagnose vehicles with and without codes by being a pro with your labscope. There are many tricks covered as well such as how to deal with Nissan idling problems when an idle relearn, new throttle body, and PCM won't do the trick.

Rich/Lean and EGR DTCs can be real brain busters when you need to fix them to get that car to pass inspection. Doc Nall gives you a real world approach to quickly and effectively diagnosing these problems using ANY scan tool. Specifically, Doc covers uses of all nine OBD II modes (specifically reading codes, O2 sensor tests, and Mode 6 tests). Scope usage and waveform diagnostics, when required to follow-up on scan data, are also covered.

ECUs work in concert to control multiple vehicle systems. Simply scanning only one computer does not always yield the necessary information to make a diagnosis. In this seminar, we discuss the importance of interrogating the entire vehicle network to gather information from interrelated systems. In this course we cover actual vehicle drivability case studies including Emission related problems, Air Fuel Sensors, and CAN networking Systems. Live data captures using scan tool and lab scope diagnostics will be covered.

A previously "lost" TST seminar from November 2006, Jerry Truglia covers the following: 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 in this course including EScope, Fluke, OTC, Pico, Snap-On, and Tektronix..

A previously "lost" TST seminar from October 2007, Jerry Truglia covers all the hybrid basics including safety, batteries, and maintenance. The seminar is a good starter for technicians that have the ability to repair standard vehicles and need to transfer over their skill set to the growing amount of hybrid vehicles.

Make room in your test equipment chest for a magnehelic differential pressure gauge. "A what?" you might ask, as I did at a day-long training seminar on "Domestic Enhanced Evap Diagnostics." As the day progressed I learned more about evap diagnostics than I have since I first got into OBD II. I learned that I'm also going to have to buy some Schrader service adapters, an evap system leak tester, an OBD II fuel cap tester and a smoke machine.

John Thornton, a working technician and co-owner of Pro-Tech Auto Repair in Chicago, was the trainer. Thornton specializes in driveability diagnostics and is an ASE-certified Master Technician with L-1 certification. His PowerPoint presentation is made up of monitor scans and photos he has taken in his own shop.

Thornton's 128-page workbook forces seminar attendees to get involved. Rather than simply page after page of information, there are blanks left open on each page. To fill in the blanks correctly, you

have to pay attention during the seminar or you're going to have a workbook with a lot of blanks. For example, the workbook states: The canister purge valve is normally _____ and the canister vent valve is normally _____. As Thornton reviews the evap system components, he gives the information you need to fill in the blanks. If you're daydreaming, you'll miss it when he tells you that the canister purge valve is normally closed and the canister vent valve is normally open.

The kinds of vacuum and pressure readings we're used to dealing with in repairing passenger cars are not suited to working with evap systems. That's where the magnehelic gauge comes in. Knowing the pressure in the tank when the purge and vent valves are closed, unfortunately, is not enough. There are other concerns that can change the in./H₂O reading and mislead you about a leak.

Generally, there are two kinds of leaks: A large leak exists when the system is unable to attain a target value, usually 7 to 11 in./H₂O. A small leak exists when the system is unable to maintain the target vacuum for 10 to 20 seconds. These, of course, assume everything is static. But where in an auto repair shop is everything like it is in a lab?

Thornton is quick to point out that he doesn't sell or endorse any equipment at his seminars. The scan tool monitor is perhaps his greatest source of information, and during his presentation he spends a great deal of time explaining how the trace for the vent valve venting, purge valve venting and fuel tank pressure sensor (FTP) interact and how watching how they work can provide invaluable diagnostic information. He does point out that in some cases a smoke machine is the best way to find a leak. Thornton also occasionally relies on an evap system leak tester and an OBD II fuel cap tester.

The "Domestic Enhanced Evap Diagnostics" seminar I've been describing was sponsored by Technicians Service Training. TST is a group of dedicated and serious-minded technicians and instructors who believe in updating and educating technicians. Its president, Jerry "G" Truglia, is a nationally known instructor and the owner of Automotive Technicians Training Service (A.T.T.S., www.attstraining.com). "G" travels around the country training technicians. He knows the value of good training at reasonable cost and has invested a great deal of his own time and effort in creating an organization made up of the best technicians in the New York/New Jersey/Connecticut tri-state area. Membership in TST is \$50 a year, and monthly classes are priced at just \$40-significantly less than the \$150 to \$300 typically charged for training of this caliber. At those prices, any technician can afford to attend the kind of training that will keep him up-to-date.

TST has ambitious plans for the future. In addition to the seminars, the TST website-www.TSTseminars.com-will have a chat room, live seminars for those techs who are unable to attend classes, information about past seminars, online testing in preparation for various ASE tests and a feedback forum so members can inform the board members of the information and activities they desire.

Grass-roots efforts by people like Jerry "G" Truglia and his fellow board members at TST are probably the best hope for our industry. Bringing skilled instructors like John Thornton to technicians normally would not be practical for most individual shops because of the cost involved. But bringing him in to teach 150 TST members and nonmembers at a day-long seminar is a practical way of providing excellent training at a very affordable price.

<http://eduln.org/2608.pdf>

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