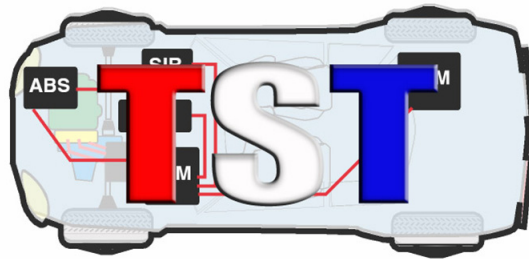


June 2010



Technicians Service Training

INSIDE THIS ISSUE:

ABS Confusion

P. 1 - 7

Review: Carman Scan and Launch X-431 Scan Tools

P. 7-11

Changes for the 2010-2011 School Year

P. 15

Upcoming Seminars:

Summer Break!

Editor

Jerry "G" Truglia

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ABS Confusion



his is a tale of two ABS controller failures... Sometimes when we enter a diagnostic situation we get confused and need to reboot our diagnostic process. Our first intuition might be right, but we might not believe it and follow the wrong diagnostic track.

I closed my shop almost two years ago, but I am still in contact with some of the "A" customers. An "A" customer emailed me with a plea for help.

The car, a '99 BMW 528i with 150,000 miles had been in the shop for three weeks with multiple codes and symptoms and they couldn't figure it out. They were "sure" that it was not the ABS control module. I agreed to look at the car.



The symptoms were ABS, Traction, Transmission and MIL lamp illumination coupled with intermittent loss of throttle response. When I scanned the vehicle the following codes were present:

- Instrument cluster (IKE)
- Code 6 = data collection to drive and running gear control modules (CAN bus)

(Con't on page 3)

Technicians Service Training

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Information contained in this newsletter is intended for use by professional auto repair technicians familiar with approved vehicle repair procedures. The authors are not responsible for physical injury or property damage resulting from the incorrect application of information or procedures outlined in this volume.

Currently there are **TST chapters in Connecticut, Massachusetts, New Jersey, New York** and membership continues to grow. For more information you can call

TST headquarters at:

(845) 628-6928



Technicians Service Training



www.TSTseminars.org

What is TST?

TST is a group of dedicated technicians and instructors committed to the continuing education of our fellow technicians. We provide once a month training seminars to technicians at a reasonable price. TST brings our members nationally known instructors and state of the art training.

Our Goal & Mission Statement

- ***Keep our fellow technicians up to date with the latest technology.***
- ***Provide training seminars for a reasonable price.***
- ***Deliver information that the technician can use now.***
- ***Keep technicians informed of information affecting our industry.***
- ***Increase consumer awareness of what a good technician is.***

Why join TST?

TST membership includes special pricing on once a month week-day night seminars and the occasional full Saturday seminar. With a \$75.00 yearly membership, the monthly seminars are only \$65.00. TST classes are NOT sales or product seminars. The instructors that TST brings in are all “hands-on” industry experts with up to date, cutting edge knowledge that you can use in your shop the next day. That’s 65 dollars for a seminar in which you are able to learn something useful, for fixing those tough jobs that we all see on a regular basis. Our instructors are masters at making the complex understandable. Membership also includes a Monthly Newsletter full of real world technical articles, diagnostic case studies, and solutions to the kinds of problems you see in your bays each week.

The following are some of TST’s regular instructors:

Bernie Thompson of ATS www.ATSnrm.com

John Thornton formerly of Team AVI

Wayne Colonna of ATSG www.ATSGmiami.com

Jorge Menchu the “Labscope Guru,” owner of AES

www.aeswave.com/aboutaes.htm

John Anello Auto Tech On Wheels www.autotechonwheels.com

Luis Ruiz Mechanic’s Education Association

www.meatraining.com

Jerry “G” Truglia National Instructor & owner of A.T.T.S. Inc.

www.attstraining.com

ABS Confusion (con't from p. 1)

- Code 11 = EGS signal disturbed or transmission limp home program
- Code 6 again
- Code 8 = tank sensor 1 (fuel pump side)
- Lamp Check Module (LCM) 20 faults – most bulbs in the car including rear fog lamps which aren't fitted in the car!
- Multi Information Display (MID) code for I Bus telephone which was not fitted in the car!
- ABS/ASC control unit
- Code 21 ABS/ASC control unit
- Digital Motor Electronics (DME)
- Code 130 = 82 signal, CAN ASC 1
- Code 217 = D9 EUIII/OBDII P0600 signal CAN EGS
- Transmission (EGS)
- Code 160 = A0 CAN ABS/ASC signal
- Code 150 = 96 CAN BUS monitoring
- Code 156 = 9C CAN timeout
- Code 111 = 6F convertor lock-up clutch / speed monitoring

The previous technicians were getting lost in all the codes. I figured the best way to start was to clear them all and see who came back first—he'd be my most likely culprit.

I cleared the codes and the first code to return was the ABS code 21 for a faulty control unit immediately followed by the MID code and the two rear fog lamp codes. I'm sure that all the other codes would have returned if I had driven the car as the other shop had done...and maybe I would have also been confused.

Instead, knowing the history, I decided to test the first code that appeared, the ABS control unit code. If all signals were good, then I would condemn the control unit.



(Con't on page 7)

CV BOOT INSTALLER




- The CV Boot Installer makes CV boot installation easier and quicker.
- Designed to increase profits
- Replacing CV boots just got as easy as putting on your slippers.
- Installers have a new tool for preventive maintenance.

The CV Boot Installer is utilized by placing a universal CV Flexx Boot over the Installer's retractable aluminum arms. Then, using compressed air, the boot is spread open wide enough to be passed over the axle shaft, without having to remove the axle.

CV BOOT INSTALLER





CV Solution

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FB4000: Universal GOMEX CLAMPS, 2 sizes fit all applications. Can be used on CV, hood applications and radiator hoses. (Small clamps FB-5003 & large clamps FB-5004)




FB4000: Universal RACK & PINION BOOT covers 100% of automotive applications.



FB3001: Universal FLEXX BOOT covers almost 100% of utility, 4x4 & car applications.






Flexx Boot System:

In these difficult economic times finding new profit opportunities, leveraging your brand, operational excellence and people, will be the key to your ongoing success. We have a powerful new product that will deliver significant new profit to your organization while capitalizing on your current fixed costs and talent base.

CV Boot Replacement as a repair or a preventative maintenance service will produce the following benefits for your operation:

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- Easy repair
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- 2 SKU'S cover 98 % of vehicles in operation
- One tool
- Profit capture

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- J-2534 Kit

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Trade in coupon – trade in an old scan tool and receive the Euro Starter Kit & additional 6 month Domestic/Asian software subscription



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PC Version –
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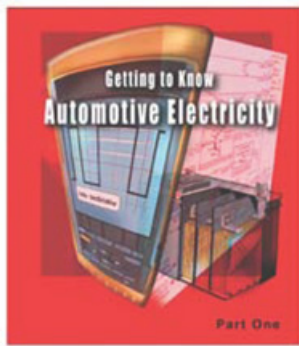
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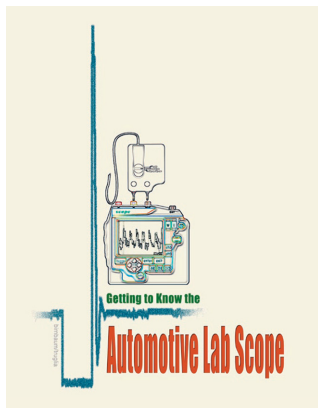
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ABS Confusion (con't from p. 3)

I tested all the control unit powers, grounds and signals KOEO and running with a DMM and a scope. Voltages were within .1V (100mV) of system voltage and all grounds were within 15mV of 0V.

All signals were correct so I condemned the control unit. I replaced the control unit which corrected all the codes in other control units, except the rear fog lamp and I-Bus telephone code, which are false codes in all of these 528i's, and the tank sensor code which was a faulty right tank sensor.

The moral of this story is: "When you get caught in a diagnostic trap, stop, take a break and start from the beginning." Also, ask for help or brainstorm with other techs. Most of all, don't be too sure that it isn't the component that the DTCs and logic dictates it is. Always take an intelligent diagnostic approach, start from the basics and work your way up.

Article by Pierre Respaut, Vice President of TST

Review: Carman Scan and X431 Scan Tools

IMPORTANT NOTES BEFORE WE BEGIN:

1. The new buzzword these days is that everything is OEM-level. We are realists and realize nothing in the aftermarket will ever be OEM-level. So, whenever we compare and contrast an aftermarket scan tool with a factory scan tool it is not meant to detract from the overall ability of the aftermarket scan tool.

2. This is not a paid endorsement for Carman or Launch. We love other scan tools. AutoEnginuity is great for tough problems on Domestics, the first scan tool we usually pull out is an OTC Genisys, we use the Launch on C.E.L.'s because it prints—we love other tools.

(Con't on p. 9)

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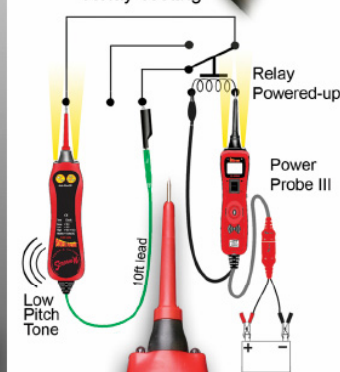
the "Smart" ECT2000



#PPECT2000

The "SMART" receiver indicates the direction to the short circuit eliminating the guesswork.

Relay Testing



Power Probe Lead Set



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The Perfect Compliment to the Power Probe III

Review: Carman Scan and X431 Scan Tools (con't from page 7)

Carman Scan

Carman is the manufacturer of Hyundai and Kia's Factory scan tool, so when they released their Euro-Asian tool it naturally caught our attention. Is it the real deal?

On Hyundais and Kias, which are now one of the most popular cars in the northeast, the tool *is* factory level. So, when you are purchase even the cheapest Carman for about \$2400 you get for all intents and purposes the Hyundai-Kia factory scan tool.

So, what else does it do? It is great on Honda and Toyota (almost factory level), and has performed better on Nissans than other scan tools we have. It has proved to be decent on Subarus, getting good data but lacking bi-directionals. It has not impressed us on the few Suzukis we had. We have not had the opportunity to plug it into any Mazdas or Mitsubishiis, so we do not know its abilities on other makes.



On some European cars it has impressed us. It is extremely good on Volkswagens so it is a good alternative if you don't have the Ross Tech scan tool (which is cheap and factory level by the way). It gets a lot of good information out of BMWs (even though it certainly falls short of the tests and bi-directional controls offered by factory equipment). We have yet to plug the Carman into a Mercedes or Volvo. The Carman does not do Saabs whatsoever and was weak on Jaguar.

So, the Carman is of course not perfect but it has a nifty TPMS feature, does not cost much, and has strong Euro-Asian capabilities for an aftermarket scan tool. If you feel covered on American (because it presently will not help you much in this department), you can't go wrong with this tool.

As a side note: As we were writing this article, we were troubleshooting a 2001 Toyota Prius and with the Techstream and Mastertech we were only able to read generic. Yet, the Carman was able to pickup a P3000 code for a dead HV and all the HV battery cell PIDs. Carman continues to impress us. ***(Continued on p. 11)***

9 of the Top 10* "Check Engine" DTCs can be diagnosed with a Smoke Wizard.

Maybe it should be called the "Smoke Wizard" Light

Use with shop air or any inert gas (like nitrogen) for safety

Pressure and vacuum decay tests

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Questions:

1. Do you want seminars to continue in your area?

2. Do you find the seminars useful?

Please ask a fellow technician to come and check-out our seminars so we can continue to bring you the best available information each month.

We need your support:

Thank you, G Truglia

Review: Carman Scan and X431 Scan Tools (con't from page 9)

Launch X-431 Diagon/Master

The Launch is another solid tool. In fact, the reason we use it the most is because it has an easy print function on the X-431 Master. What we found in the past using the most up-to-date X-431s was that it was great on Toyotas, Hondas, and Volkswagens; and much more useful than many other scan tools on other European and Asian manufacturers.

To be brutally honest, in the limited amount of use which we have had with the Carman and X-431, the Carman is better on Hyundais and Kias (for obvious reasons) and a little more versatile on Nissans. On other Asian and European vehicles, it is a roll of the dice which one is better for a given vehicle. So, being that both are amongst the best Euro-Asian aftermarket scan tools, you can't go wrong with either though the Carman for some manufacturers is clearly stronger.

However, the Launch X-431 has a very valuable strength of its own: it is updated at a radically fast pace. For reasons I will not bother speculating about, one day the Launch is mediocre on Chryslers & GM, and now after the recent update available on a demo tool we have it is phenomenal. The Launch's abilities grows at an exponential rate.

The newest Launch X-431 Diagon has been updated with extremely impressive abilities on Chryslers, GM and even Suzukis. In fact, we had a Suzuki where the ABS code was picked up only by the X-431, and not the Carman or Bosch VCI. We're not quite sure how Launch plans to market an Euro-Asian-Chrysler-GM-Suzuki tool, but we really don't care. If you have a solid aftermarket scan tool that is not great on Chryslers/GM and on foreign vehicles, then the Launch X-431 can certainly be the piece missing from your diagnostic puzzle.

So, in this cash conscious industry we're in where not everyone can afford a bunch of factory scan tools, we give two thumbs up to the Carman Scan and Launch X-431. Quite frankly, we couldn't operate our shop well without them.



Article by Craig Truglia and Kevin Quinlan

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Another Mystery Solved
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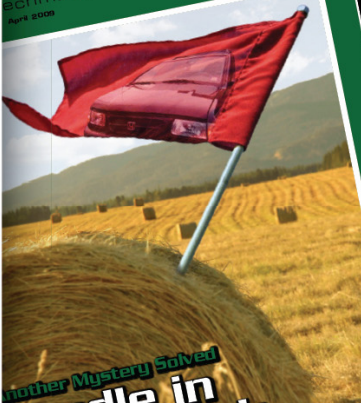


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April 2009



Another Mystery Solved
Needle in a Haystack

Business INSIDER

Inside the Insider

Five Ways to Limit Liability
By stepping out into the business world, every shop has exposure. While you cannot stop people from suing you can insulate your business, personal assets and wallet from most liability if you take some steps to protect yourself.
(Turn to page 1)

Human Potential
The mind is a strange and powerful tool. Psychologists tell us some very interesting things about its function. First, 90% of its activity is subconscious.
(Turn to page 1)

In Times Like These
Small business is the backbone of our economy. Businesses like ours
(Turn to page 3)

Sole Proprietorship
If you are getting started in a new business or a twenty year business ventures this question comes up on a regular basis. My answer to this dilemma has always been the same, it depends.
(Turn to page 6)

MT Business Insider Pricing Matrix
Businesses are based on percentages, but consumers look at prices. How do you reconcile your business' need to make a decent profit margin on parts with your customer's need to pay a fair price?
(Turn to page 8)

E Certification: The Competitive Advantage
Of the most powerful influences coming to a repair facility is word-of-mouth referrals. From family, friends, neighbors, business customers and even the Internet, business customers are being influenced by word-of-mouth.
(Turn to page 10)

Five Ways to Limit Liability For Business Owners
By stepping out into the business world, every shop has exposure. While you cannot stop people from suing you can insulate your business, personal assets and wallet from most liability if you take some steps to protect yourself.
First, incorporate or form a limited liability company (LLC). This requires that you file articles of incorporation with the Secretary of State, or whatever the governing body is in your state. Once you incorporate, you hold your business out to the public as a corporation.
(Turn to page 1)

Human Potential Using What You've Got
The mind is a strange and powerful tool. Some very interesting things about its activity are subconscious. Let's define "below" and "conscious" as in an individual's mind. -- If -- you are 100% in control during your work, then you are capable of achieving it still only 10%.
It's generally agreed that a human's learning ability is physical. Remember that a scrap of brain tissue no larger than a grain of rice contains more information than a computer the size of a Honda. Now consider that an average person's brain weighs about three pounds. How many ounces of yours do you actually use?
(Turn to page 1)

Changes for the 2010-2011 School Year

In order to provide quality training at competitive pricing TST is making a few changes, including:

- The Big Event will be more of a professional nation-leading convention, open earlier for an extended breakfast and later for extended seminars, dinner, and more interaction with instructors and vendors.
- Due to the importance of commitment in training, because we all know that when work and life throws us a hectic day event the best of us will forgo the training we really need, pricing has been adjusted to encourage early registration and attendance.

-Buying seminars in bulk guarantees not only the maximum amount of training, but the cheapest prices: Year packages without the Big Event are only \$495 (for nine nights of training) and with the Big Event \$680.

-Online registration allows members to sign up for seminars at a \$15 discount. However, online registration for a class closes one month before it begins. By the time you receive a card or phone call, you will need to register by calling us at (845) 628-6928.

- Next year's school year (mark the dates):
 - September 13th (MA), 14th (CT), 15th (NJ), 16th (NY)
 - Doc Nall: Top DTCs including P0171, P0172, and P0401
 - October 4th (MA), 5th (CT), 6th (NJ), 7th (NY)
 - Ken Zanders: Communication Protocol Testing for OBDII Failures
 - November 8th (MA), 9th (CT), 10th (NJ), 11th (NY)
 - John Anello: Scan Tool Tips & Tricks
 - December 6th (MA), 7th (CT), 8th (NJ), 9th (NY)
 - John Thompson: Fuel System Analysis for Driveability Problems
 - January 10th (MA), 11th (CT), 12th (NJ), 13th (NY)
 - Dave Hobbs: Electronic Suspension Diagnosis & Repair
 - February 7th (MA), 8th (CT), 9th (NJ), 10th (NY)
 - Dave DeCoursey: Interactive Airbag Case Studies
 - March 26th (Big Event)
 - John Thornton, Scott Manna, & Pierre Respaut
 - April 5th (MA), 6th (CT), 7th (NJ), 8th (NY)
 - Bob Pattengale: EVAP from A to Z
 - May 2nd (MA), 3rd (CT), 4th (NJ), 5th (NY)
 - Dave Crippen: Diagnostic Case Studies
 - June 6th (MA), 7th (CT), 8th (NJ), 9th (NY)
 - Tony Martin: Real-World Diesel Diagnosis & Repair



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