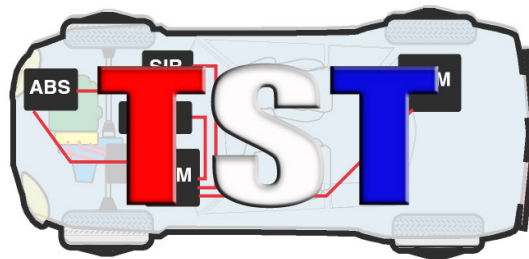


April 2009



Technicians Service Training

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Upcoming Seminars:

May 4th - 7th

Diagnostic Essentials

Mark Warren

June 1st - 4th

TBA

Jorge Menchu

Webcasts are ongoing @

TSTseminars.webex.com

Editor

Jerry "G" Truglia

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Stalling 1998 Dodge Intrepid

I was called to look at a 1998 Dodge Intrepid with a 2.7L en-



gine. The customer's complaint was that the vehicle would stall out while driving. Another complaint was that the vehicle would not start at times. Understandably, the customer didn't feel comfortable driving the vehicle with this problem anymore until the problem was rectified.

Even though the shop had it for a week, they could not get the problem to occur. When I was called, the vehicle was being towed back the shop.

Naturally the vehicle started up and ran fine after the tow truck dropped it off. I performed a visual inspection and then connected my scan tool to see if the PCM stored any DTCs. None were stored in memory.

I knew beforehand that these **Chryslers with SBEC III engine modules are prone to cam and crankshaft sensor failures** creating stalling and no-start conditions.

(Con't on page 3)

*Technicians Service Training***11 Lupi Plaza****Mahopac, NY 10541****Phone:** (845) 628-6928**Fax:** (845) 628-1909**Email:****Info@tstseminars.org**

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

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Technicians Service Training



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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.***

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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 of Team AVI and Pro-Tec Auto

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

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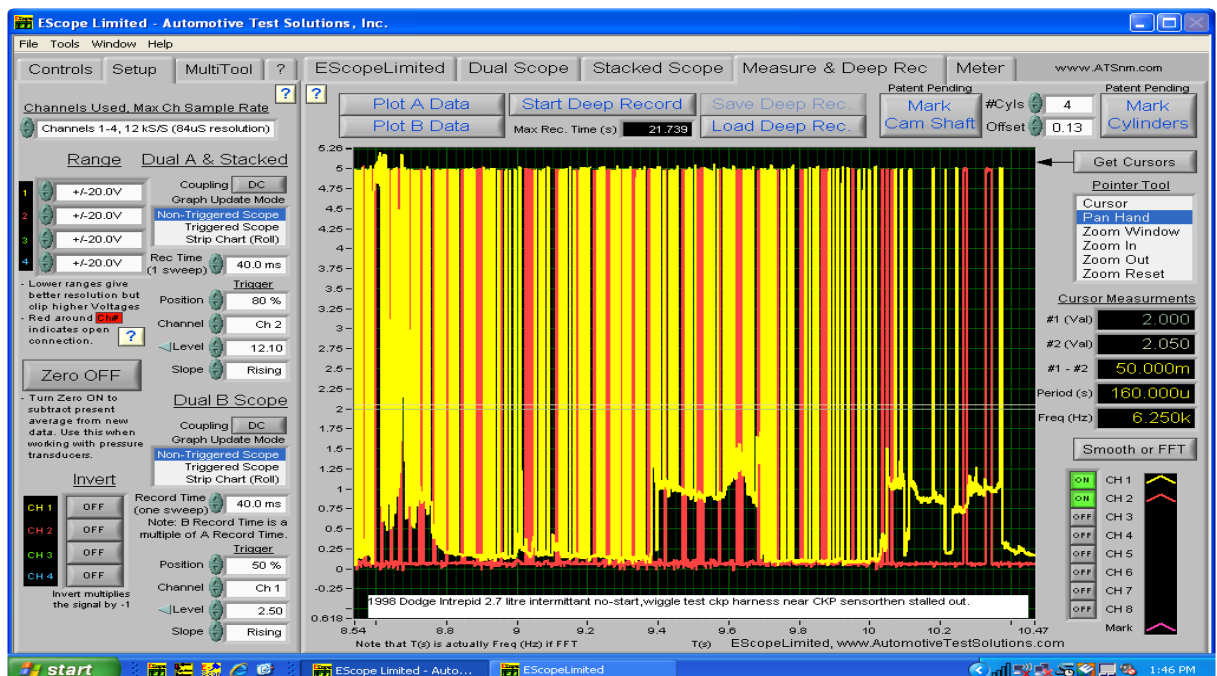
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Stalling 1998 Dodge Intrepid (con't from p. 1)

Furthermore, the NGC engine modules on these vehicles are pretty fault tolerant, so if the cam sensor fails the engine will still run. This information helped narrow down what to look for.

I put my labscope on the cam and crankshaft circuits and then proceeded with a wiggle test on the engine harnesses right up to the actual sensor connectors. Yet, I found no problem with the cam circuit wiring. When I wiggle tested the crank sensor connector, the engine would stumble. Good, I'm getting somewhere!

I wiggle it a few more times and the engine would then stall each time I did it.



Above is the waveform I captured. What do you see happening?

The ability to interpret waveforms is very important. As we can see in the above, the ground level voltage (yellow trace) is being elevated each time I wiggle the connector. **This tells me that something has to be wrong with an associated circuit.**

This crankshaft sensor has 3 circuits:

- Power feed
- Reference ground
- Signal Circuit

(Con't on page 4)

Stalling 1998 Dodge Intrepid (con't from p. 3)

When I disconnected the crankshaft sensor, the ground circuit terminal of the connector and mating terminal of the sensor were corroded. I checked the other terminals and confirmed that these were the only two corroded terminals.

So, I had the shop order an OEM crankshaft sensor and a harness repair kit. The vehicle has been running good ever since.

Article courtesy of David Decourcey (Mobile Technician, Instructor, and ASE Master Certified L1, TST Associate)

2005 VW Jetta Without Working Instruments



I was called to a body shop to look at a 2005 VW Jetta with a customer complaint that the instrument cluster was not working properly after the vehicle was involved in an accident. The body shop was surprised that after such a slight impact (headlamp and bumper cover replacement) to the vehicle that there would be any problems.

I performed a visual inspection of the vehicle, but I didn't see any notable damage. Yet, as I confirmed, none of the gauges worked on the dash. Only the warning LEDs and the display for the outside temperature were working properly.

I try to keep my diagnosis process as simple as possible, so I went to the coolant sensor and tested the circuit. After this, I had a technician remove the rear seat assembly, so I could gain access to the fuel tank module. Subsequently, I tested the fuel tank level sensor circuits.

What I was finding out was that there was no sensor return to the instrument cluster. No wonder the gauges did not indicate any measured values!

(Con't on page 6)

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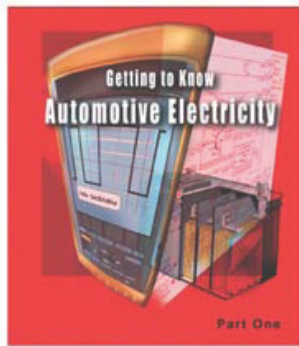
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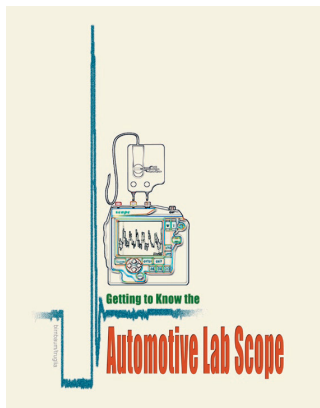
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Jetta Without Working Instruments (con't from p. 4)

The technician removed the dashboard trim and instrument cluster so I could gain access to the wiring circuits. I load tested all the power and ground circuits to the cluster, but they tested good. Yet, there was no connection between the sensor return circuits, the internal cluster ground circuitry, and the cluster external ground circuits.

Here's what I couldn't figure out: where was the ground to complete the warning LEDs? Where was the outside temperature sensor display coming from?

I tested the LED circuits and what I found was the coolant level sensor circuit was providing the ground. Upon further inspection, I found that the engine coolant itself was providing the ground path back to the battery. If I raised the coolant level sensor out of the coolant, the LED's would no longer illuminate and the ground was gone. The coolant sensor was completing the ground for that circuit allowing the LEDs to illuminate, but the complete problem. So, the bodyshop ordered a new replacement instrument cluster from the local VW dealer. Don't be fooled by a partial ground being completed by a coolant circuit.

NOTE: Just a reminder; if the voltage level in the coolant reaches 0.500mv it will need to be flushed.

Article courtesy of David Decourcey (Mobile Technician, Instructor, TST Associate, and ASE Master Certified L1, TST Associate)



TST WEBCASTS



Upcoming Webcast: April 29th *EVAP* with Jerry "G" Truglia @ 7PM

Price: \$19.99 for general admission, \$14.99 TST members.

Where do I sign up? TSTseminars.webex.com

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2. Do you find the seminars useful?

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Thank you, G Truglia

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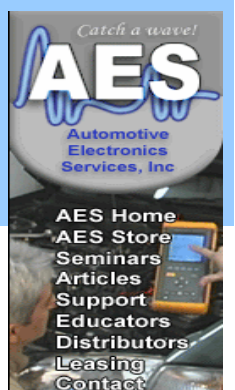
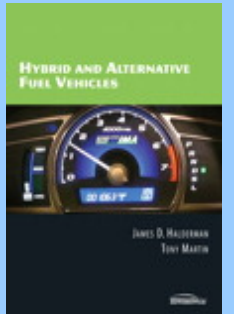
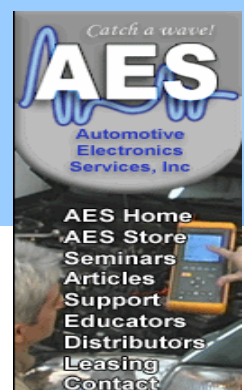
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