



1



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Your Instructor For This Webcast

"G" Jerry Truglia

- **National Trainer, ASE World Class, Master Auto, Truck, School Bus, L1, L3, CNG and...**
- **ATTP Master Instructor, New York State, CT and New Jersey**
- **STS (Service Technician Society) 2003 President**
- **TST (Technicians Service Training) Founder and President**
- **Author / Co Author/ Technical adviser on 25 plus books including OBD II and Mode 6, and Understanding and Diagnosing Hybrid Vehicles**
- **Published articles for multiple newsletters, and magazines**
- **Picked as one of the Top Instructors in the country by EPA & SAE**
- **Numerous Radio, TV, Internet, and SAE Video appearances**
- **PTEN, MotorAge and TST Webcast Instructor**
- **Motor Magazine Top 20 award winner**
- **Provider of OBD II Training for 14 states, Ontario Canada and the US EPA**
- **Guest speaker at SAE Congress, IM Solutions and Clean Air Conference**

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What Will Be Covered:

- **The Steps To Taken To Diagnose Problem Vehicles**
- **Ford Alternator Problem**
- **P0420 DTC Issue**
- **GM Throttle Body DTC**
- **Chevy Network Problem**

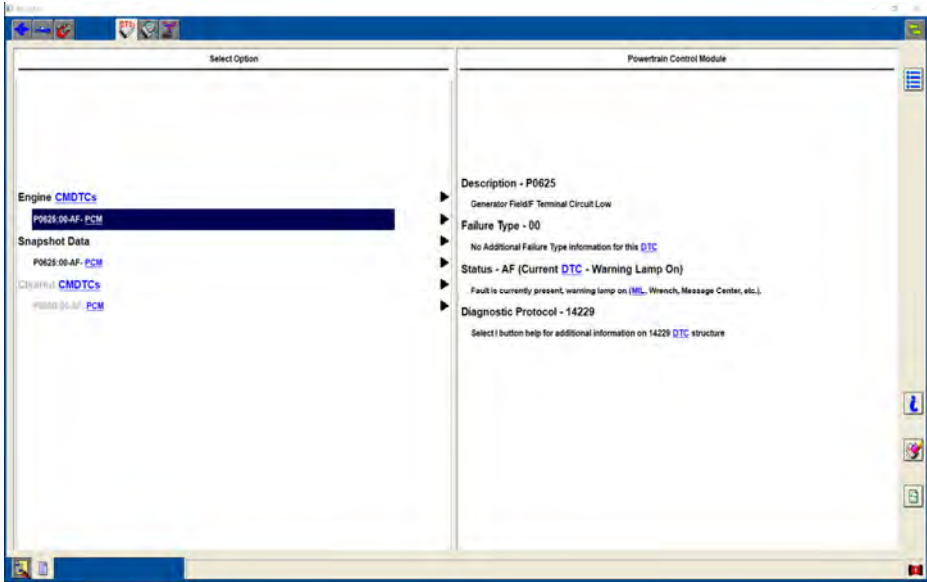
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Ford Alternator Problem Dash Light On



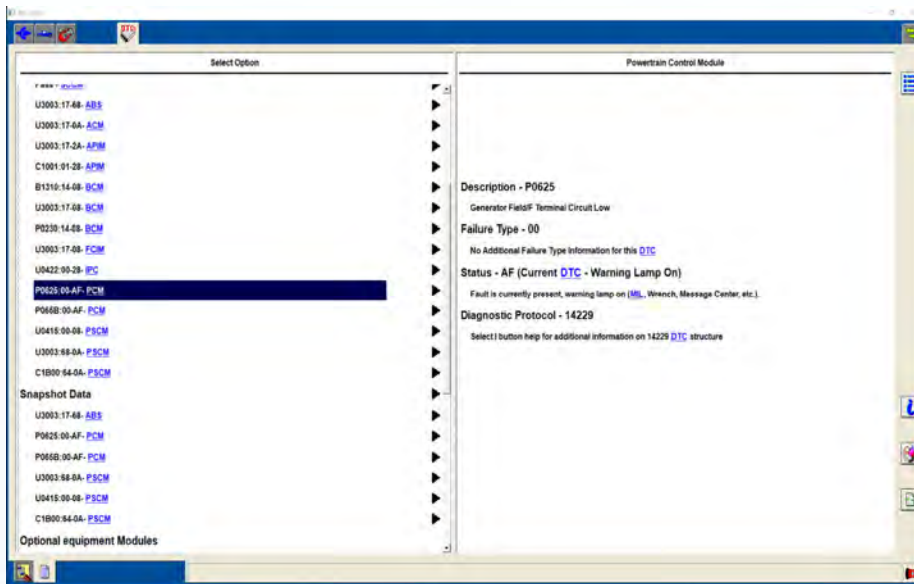
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Ford Alternator Problem Dash Light On



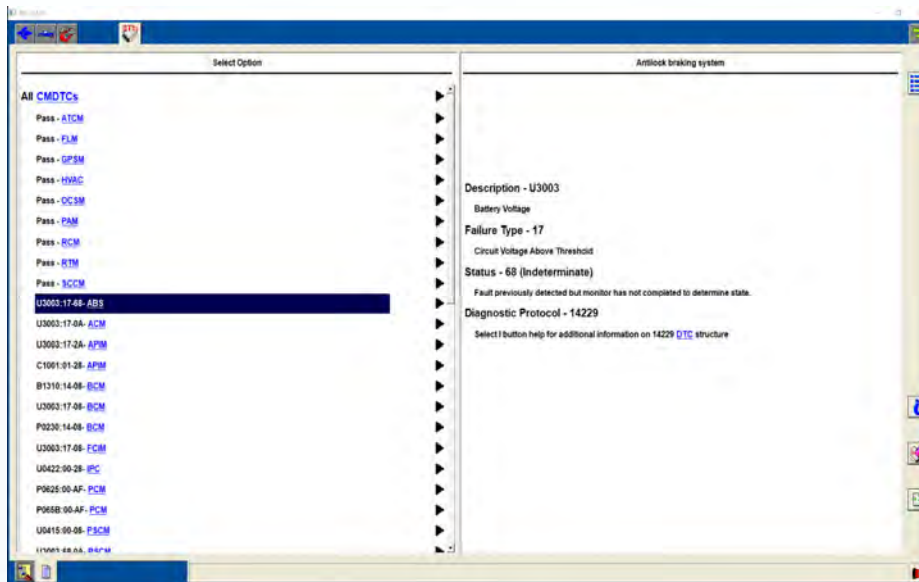
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Ford Alternator Problem Dash Light On



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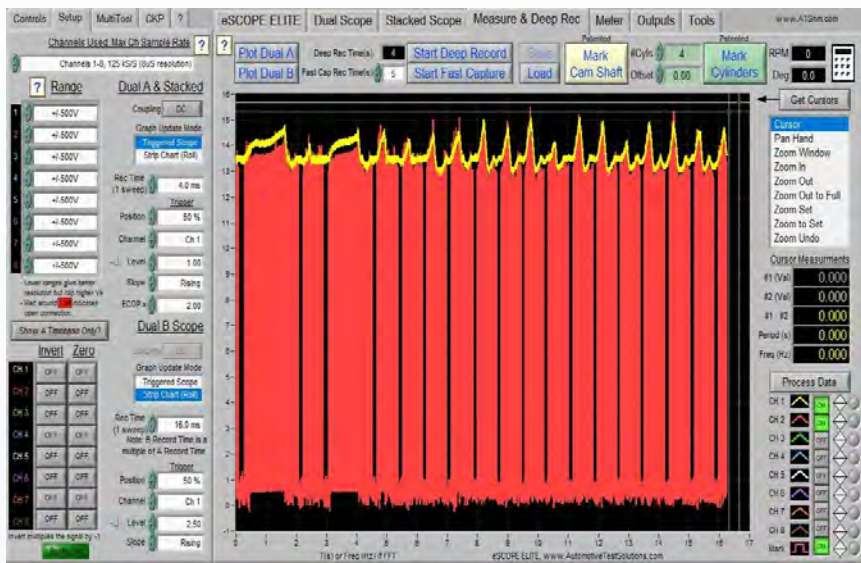
Ford Alternator Problem Dash Light On



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Ford Alternator Problem Dash Light On

Alternator Problem...
Yellow Charging Voltage
Red Control Circuit Duty Cycle



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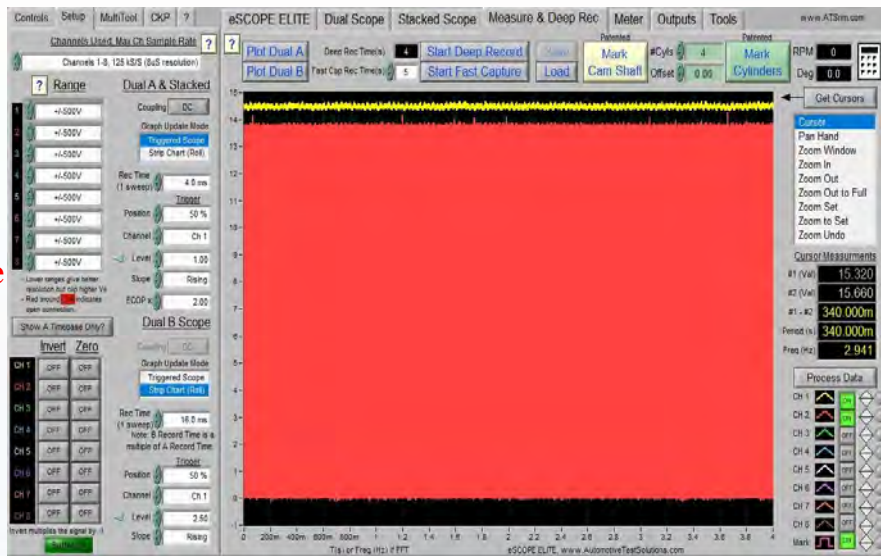
DORMAN

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9

Ford Alternator Problem Dash Light On

New Ford Alternator Fixed...
Yellow Charging Voltage
Red Control Circuit Duty Cycle



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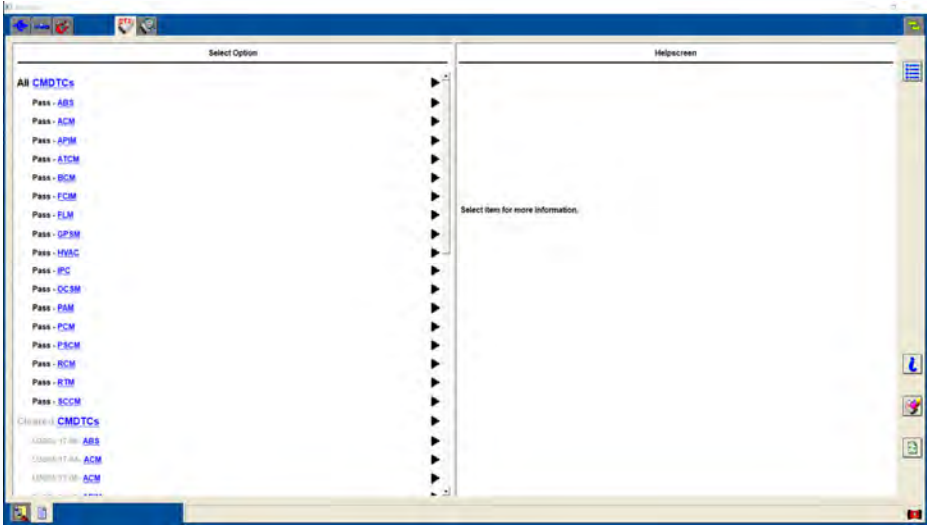
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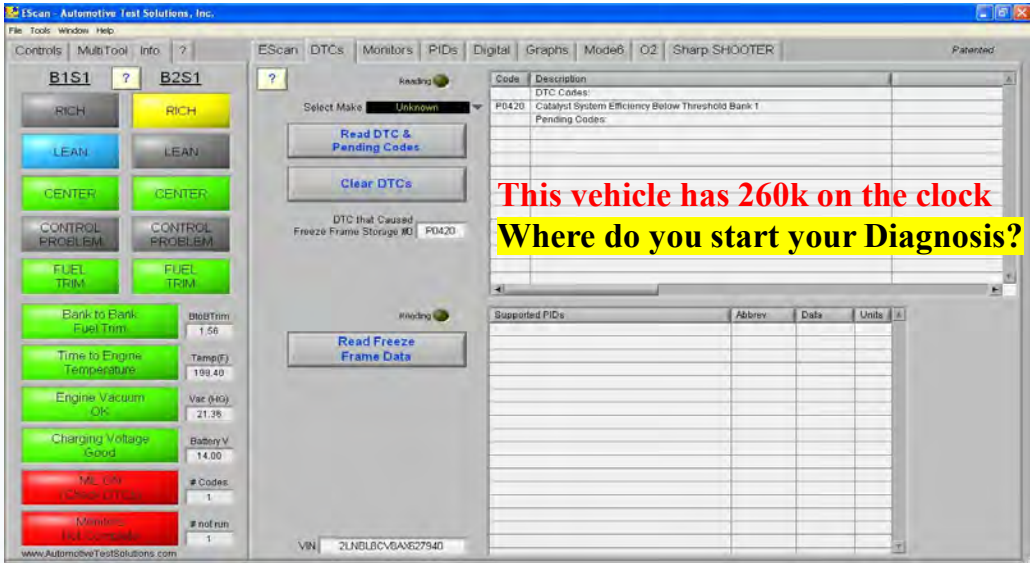
Ford Alternator Problem Dash Light On



Fixed... No DTCs

11

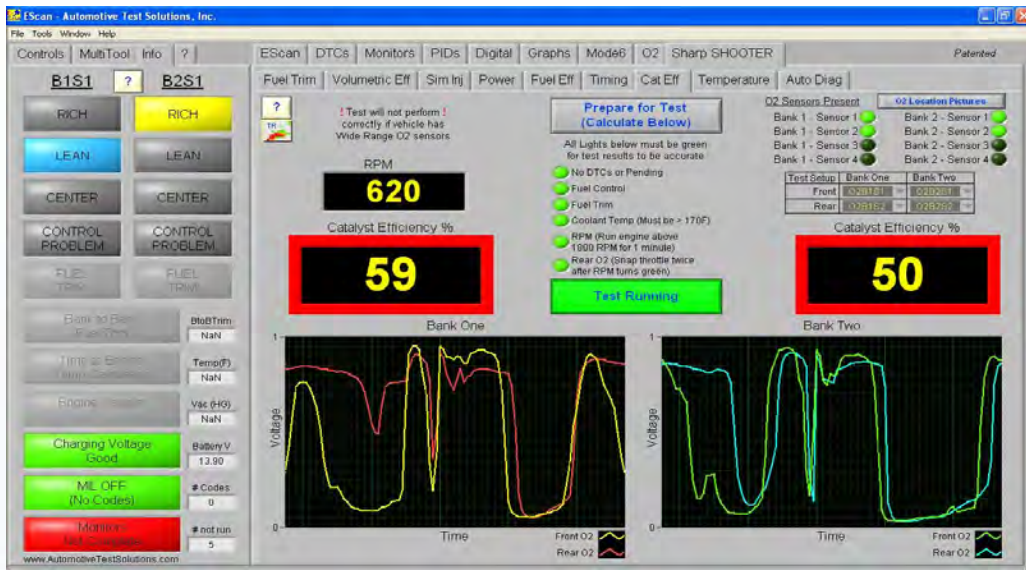
P0420 Cat Efficiency



**This vehicle has 260k on the clock
Where do you start your Diagnosis?**

12

P0420 Cat Efficiency



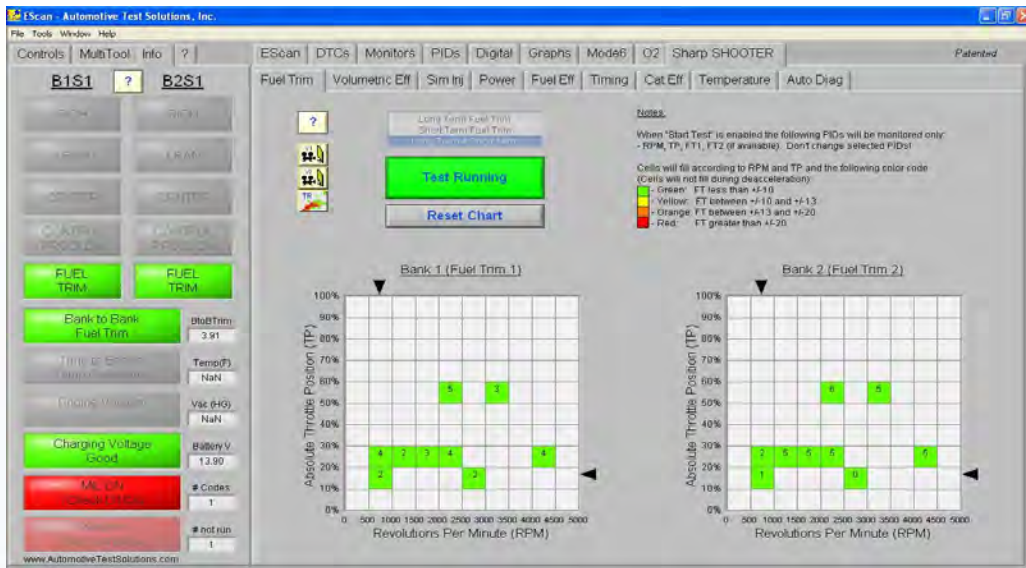
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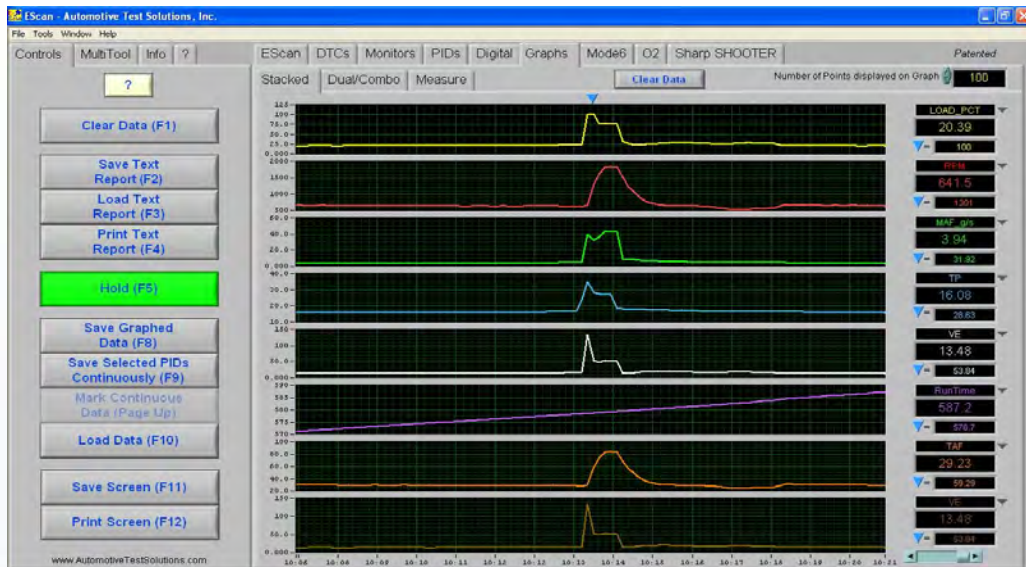
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P0420 Cat Efficiency



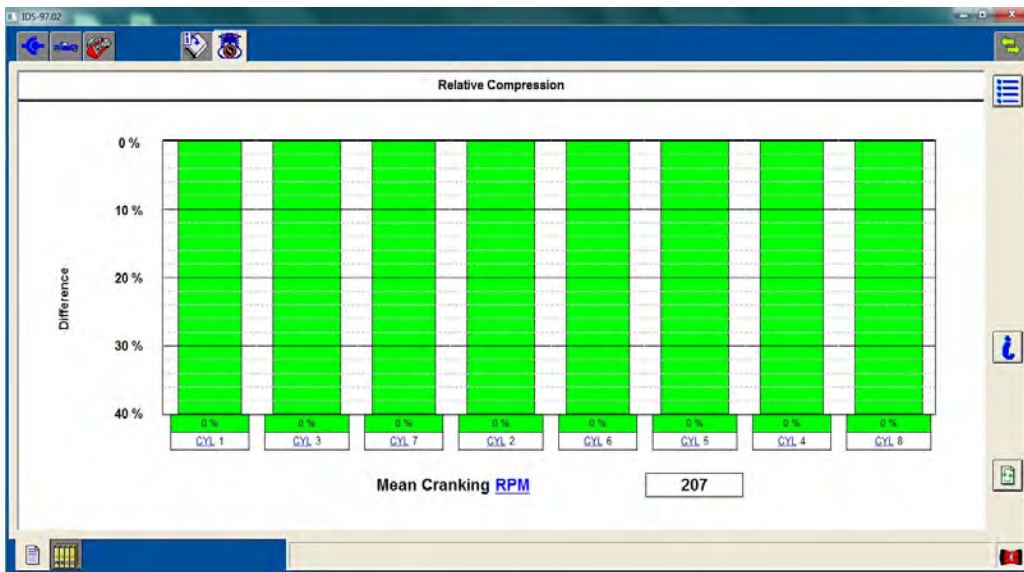
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P0420 Cat Efficiency



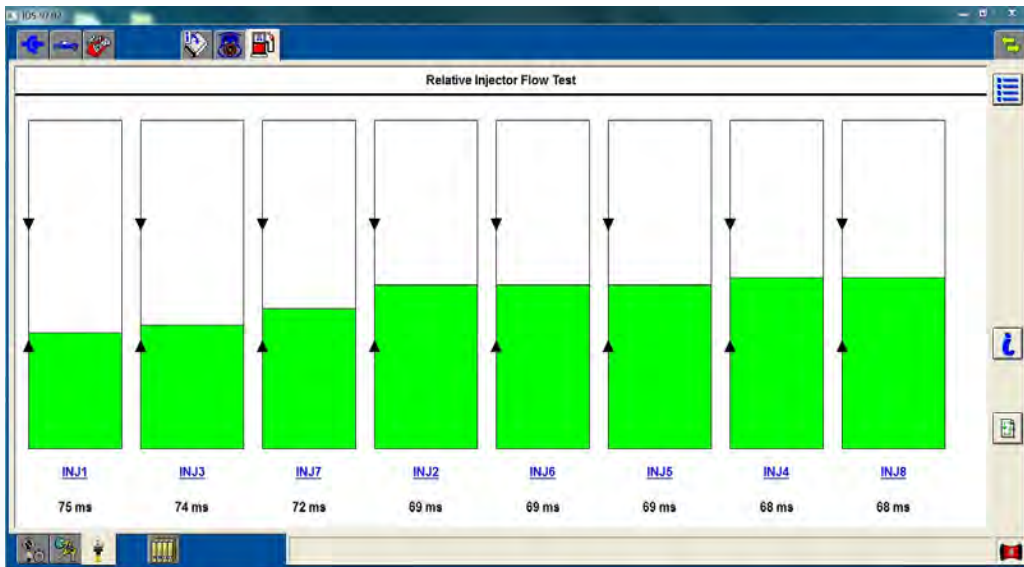
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P0420 Cat Efficiency



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P0420 Cat Efficiency



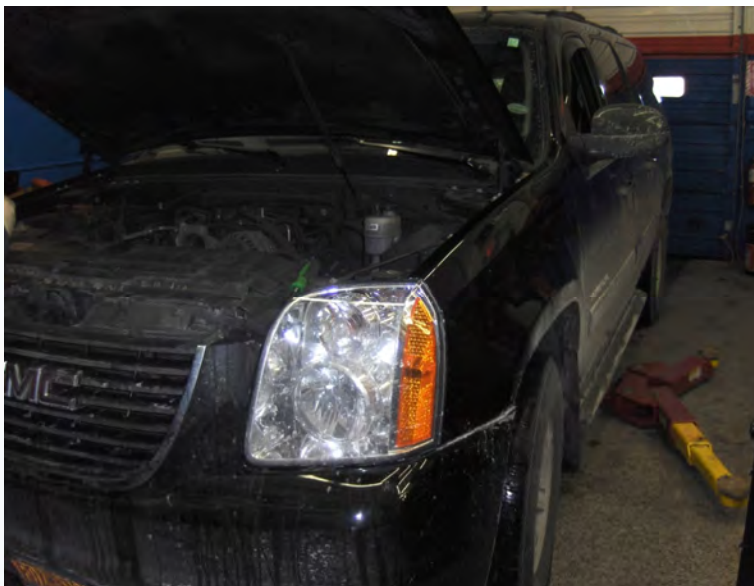
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P0420 Cat Efficiency



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GM Reprogramming P2135 Electronic Throttle



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GM Reprogramming P2135 Electronic Throttle

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Search Results

#11-06-04-007C: Diagnosis and Repair - Malfunction Indicator Lamp (MIL) Illuminated, Reduced Engine Power Message Displayed, **DTC P2135 Set** - (Nov 8, 2012)

Subject: Diagnosis and Repair - Malfunction Indicator Lamp (MIL) Illuminated, Reduced Engine Power Message Displayed, **DTC P2135 Set**

Models:


- 2008-2011 Cadillac Escalade Models
- 2009-2011 Cadillac Escalade Two-Mode Hybrid
- 2008-2009 Chevrolet TrailBlazer
- 2008-2011 Chevrolet Avalanche, Colorado, Express, Silverado, Suburban, Tahoe
- 2008-2011 Chevrolet Tahoe Two-Mode Hybrid
- 2009-2011 Chevrolet Silverado Two-Mode Hybrid
- 2008-2009 GMC Envoy
- 2008-2011 GMC Canyon, Savana, Sierra, Sierra Denali, Yukon Models
- 2008-2011 GMC Yukon Two-Mode Hybrid
- 2009-2011 GMC Sierra Two-Mode Hybrid
- 2008-2009 HUMMER H2
- 2008-2010 HUMMER H3

Equipped with Engine RPO LFA, LY2, LZ0, LMG, LCG, LH6, LMF, LMS, LHB, L76, LS2, LY5, LY6, L92, L96, LZ3, LM4 or L9H

Attention: If a vehicle is encountered with this condition, DO NOT replace the throttle body. Instead follow this procedure below. ALL Model Year 2008-2011 vehicles MUST have the engine control module (ECM) reprogrammed with the latest software calibration as indicated in Step 35 of the procedure AFTER the installation of the throttle position (TP) sensor cover. ALL 2011 Model Year vehicles will receive the enhanced oil life monitor (OLM) algorithm as part of the new ECM calibration. The enhanced OLM algorithm will provide a maximum mileage of 7,500 miles (12,000 km) between oil changes.

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Search Results



- Install the remaining TP sensor cover clips in the sequence shown
- Install a nylon throttle body gasket to the intake manifold
- Install the throttle body, bolts and nuts. DO NOT tighten the fasteners yet.
- Connect the electrical connector to the throttle body.
- Turn ON the ignition. Clear the DTC with a scan tool
- Observe the scan tool TP Sensor 1 and 2 Agree/Disagree parameter while slowly depressing the accelerator pedal to WOT and then slowly returning the pedal to closed throttle. Repeat the procedure several times. Rapidly depress the accelerator pedal from the rest position to the wide open throttle position (WOT) and release pedal. Repeat the procedure several times. The TP Sensor 1 and 2 Agree/Disagree parameter should display Agree.
- If TP Sensor 1 and 2 Agree/Disagree parameter displays Agree, proceed to Step 29.
- If TP Sensor 1 and 2 Agree/Disagree parameter displays Disagree, replace the throttle body assembly.
- Observe the ECM module DTC information. Are DTC P1516, P2101 and/or P2176 set?
 - If DTC P1516, P2101 and/or P2176 are set, replace the throttle body
 - If DTC P1516, P2101 and/or P2176 are not set, proceed to Step 30.
- Tighten the throttle body fasteners.
 - Tighten the fasteners to 10 Nm (8 ft.lbs.)
 - Install any remaining components that were removed during this procedure.

Reprogramming: When performing the battery voltage must be maintained within the proper range of 12-15 volts. Connect the approved Midtronics® PISC 500 Battery Maintainer (SPS Programming Support Tool SL-49642) to the vehicle.

- If the above recommended tool is not available, DO NOT connect a battery charger to the vehicle. Connect a fully charged 12V jumper or booster pack that is disconnected from the AC voltage supply.
- Use a Tech 2® or a multiple diagnostic interface (MDI) module for reprogramming. Ensure that either device is updated with the latest available software version before performing the reprogramming event. **Notice:** Customers that own 2011 Model Year vehicles should be advised of the enhanced OLM algorithm that has a maximum of 7,500 miles (12,000 km) between oil changes.
- Reprogram the ECM using the Service Programming System (SPS) with the latest calibration available on TDSWEB. Refer to the SPS procedures in SI.
- Perform the Throttle Learn Reset Procedure. Refer to Throttle Learn - Throttle Learn - Reset Procedure in SI.

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GM Reprogramming Software List Of Updates For P2135

Service Programming System

Summary

Controller	ID	Current #	Selected #	Description
ECM	1	12638835	12638835	New software for start of production
	2	12639959	12656716	New calibration to enhance the operation of the engine oil life monitor to more accurately identify the required oil change interval
	3	12639704	12650880	New calibration with diagnostic enhancements for DTC P2135
	4	12631610	12631610	Speedometer
	5	12637643	12637643	New calibration to ensure proper misfire detection at 4500 to 5000 rpm
	6	12640533	12656697	New calibration with diagnostic enhancements for DTC P2135
	7	12625892	12625892	New software for start of production
	8	12620583	12620683	Engine

Vehicle Data

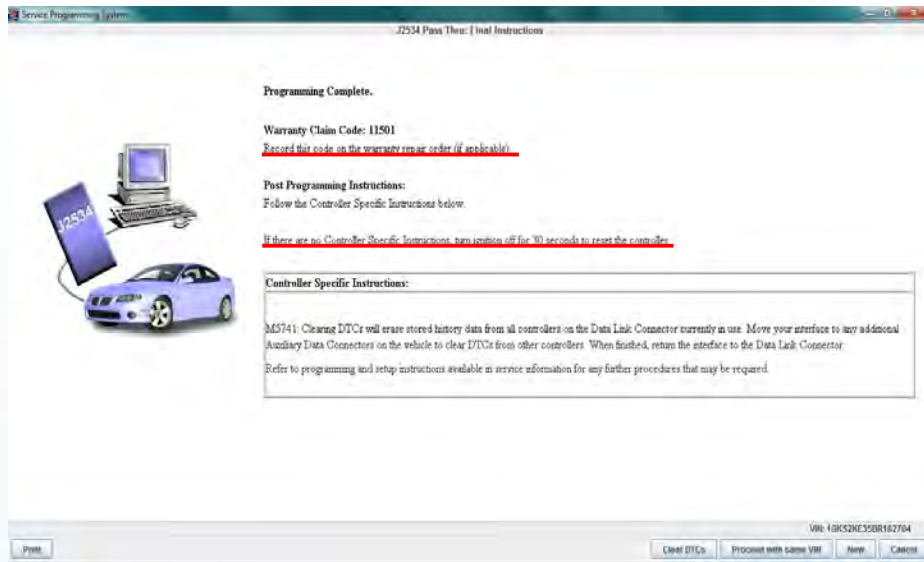
Attribute	Value

VIN: 1GK5ZNE35BR182704

Print

85% available (plugged in, charging)

GM Reprogramming Complete Message



2012 Chevy Colorado 2.9L Network DTC

Complaint: Stabilitrac and ABS message displayed on dash.

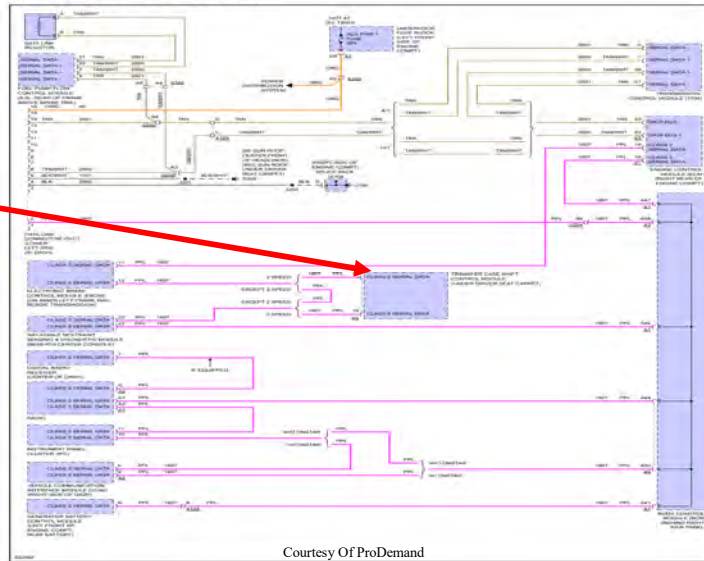
Code: U1000 - Class 2 Data BUS Code ABS and Instrument Cluster & voltage codes in BCM and TPMS

Researching the system showed that the BCM monitors voltage over multiple modules and is also the common "HUB" for most modules on the Class 2 BUS. Tested Powers and grounds at BCM checked out OK.



2012 Chevy Colorado 2.9L Network DTC

Fig 1: Computer Data Lines Circuit

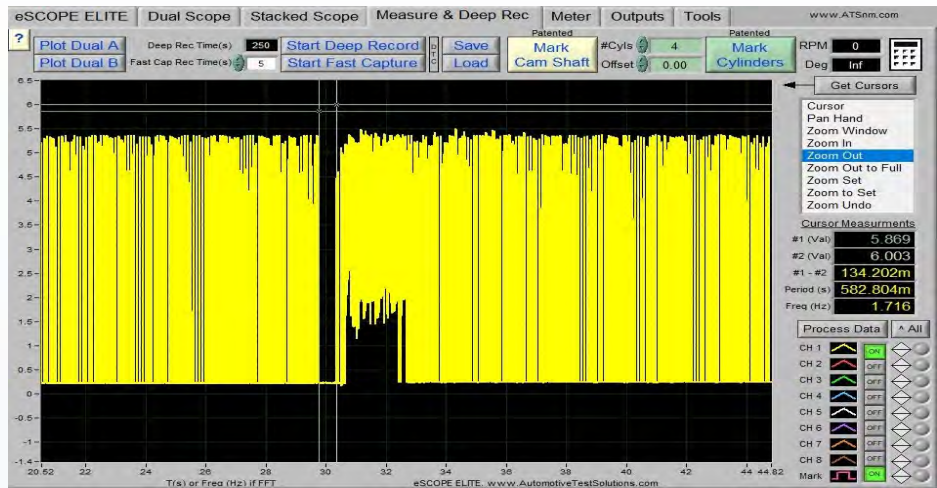


Traced wires with voltage out of range back to Transfer Case control module.

Courtesy Of ProDemand

2012 Chevy Colorado 2.9L Network DTC

Connected a labscope at DLC to check waveform on Class 2 data BUS and found 0 - 5v waveform. The voltage needs to be 7 volts - something is pulling it down. Went to next easiest module (ABS) and scoped both Class 2 wires at the module.



Found a break in the data along with two different voltage ranges at the wires.

2012 Chevy Colorado 2.9L Network DTC



Problem: Transfer Case module under driver's seat submerged in water.

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As an appreciation for attending the Dorman Training Sessions we are offering you a **SPECIAL PRICE** to attend:

2022 TST 19th Annual In-Person Big Event & Trade Show

Saturday, March 19th, 2022

8:00am to 6:30pm

At the Westchester Marriott in Tarrytown, NY

Sign up for **ONLY \$155.00**

Reg. \$230.00

Use the special pricing code (password) for the discount: **DORTST22**

TST

TST Big Event Saturday March 19th LIVE in Person

- 1. Peter L. Orlando - CTI "Effective Electrical Troubleshooting 2022"**
- 2. George Lesniak - Autel "ADAS Performing Proper Calibrations"**
- 3. Ken Zanders – KZ "GM Infotainment and MOST System"**

More information on the www.tstseminars.org

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by engineering exclusive, labor-saving
and cost-effective repair solutions.

Thank You !