

VCERTT NEWS



VCERTT: VERMONT CENTER FOR EMISSIONS
REPAIR AND TECHNICIAN TRAINING
A PARTNERSHIP OF VERMONT TECHNICAL
COLLEGE AND THE VT DEPARTMENT OF
ENVIRONMENTAL CONSERVATION TO
PROVIDE OBDII INFORMATION AND
TRAINING TO VERMONT TECHNICIANS

Fall, 2007
VOLUME 6 ISSUE 1

DON'T MISS THIS:

Special Training Opportunity !

- ◆ *Oxygen and Air Fuel Ratio Sensors, and Catalytic Converters*
- ◆ *Emission Control System Electrical Operation, Diagnosis and Repair*
- ◆ *Misfire*

CALL NOW to REGISTER:
802-238-3211

MEET THE TRAINERS:

Nationally renowned trainers from Weber State's Center for Automotive Science and Technology, in Utah

VCERTT CASE STUDY:

Metal on the Pedal means metal in three quarters!

TECH NEWS:

Variable Valve Timing - it's no longer a new and odd add-on.

LUNCH-TIME SPECIAL!

MISFIRE DIAGNOSIS & REPAIR

Take a long lunch on Wednesday and win back those hours when you diagnose and repair those numerous MISFIRE DTC vehicles. Chuck Gee and Joe Thomas will explain current misfire monitoring strategies, DTC and scan data information, and, as always, provide effective and efficient techniques for diagnosis and repair of common and unusual sources of misfire and their DTCs. Special LUNCH included; **Wednesday, October 17th, 10:00 am- 2:00pm at the Sheraton in Burlington for only \$25.**

WE'RE BACK...WITH A TREAT! **EXCELLENT TRAINING AT THE SHERATON** **IN BURLINGTON - OCTOBER 17th & 18th** **WITH A GREAT MEAL!**

Meet our friends and outstanding trainers from Weber State University's Center for Automotive Science and Technology in Utah: Chuck Gee and Joe Thomas. We are lucky to have them, and you'll see why. Read more about them on the last page, Meet Our Special Trainers. Read below for more detailed course descriptions, and feel free to call Betsy for more information. Please join us. **Call Betsy now at 802-238-3211 to register.**

Wednesday October 17th, 5:30- 10:00 OBDII OXYGEN SENSORS, AIR FUEL RATIO SENSORS, AND CATALYTIC CONVERTERS, plus a fine dinner, all for half price - \$25.

Thursday October 18th, 4:30- 10:00 OBD II VEHICLE EMISSION CONTROL SYSTEMS: ELECTRICAL OPERATION, DIAGNOSIS AND REPAIR, plus a delicious dinner, again for half price - \$25. The timing of this course was chosen to help you ace the upcoming ASE Tests!

OBDII OXYGEN SENSORS, AIR FUEL RATIO SENSORS, AND CATALYTIC CONVERTERS
Wednesday, October 17th, 5:30-10:00 at the Sheraton in Burlington, includes a delicious dinner
This workshop identifies the different types of Exhaust Oxygen Sensors (O2S) currently in use including the Critical Current and Ion Pump Air/Fuel Ratio Sensors as well as the typical Stoichiometric O2S. OBD regulations and vehicle OEM monitoring strategies for each type of O2S are detailed along with diagnostic and repair verification procedures. This course also covers Three-Way Catalyst (TWC) Monitors: operation and diagnosis/repair verification. We detail the various TWC monitoring requirements and strategies used by OEMs to determine TWC efficiency and practical ways for technicians to diagnose faults and verify repairs.

Course Focus: O2S, AFRS, & TWC Monitoring Requirements (Factors determining system advancements); Systems, Monitoring Strategies and Operation; Diagnostic Trouble Codes; Scan Tool Retrieval of Data using Service Modes \$01, \$02, \$03 & \$07, \$05 & \$06 (where available), and \$09 (In-Use Performance); and Diagnosis and Repair Verification.

OBDII VEHICLE EMISSION CONTROL SYSTEMS: ELECTRICAL OPERATION, DIAGNOSIS AND REPAIR

Thursday, October 18th, 4:30-10:00 at the Sheraton in Burlington, a fine dinner is included
This course covers both basic and advanced electrical and electronic circuit theory of operation, input signal and output control Frequency Modulation (FM) and Pulse Width Modulation (PWM) with emphasis on emission control systems and devices to enhance the diagnostic process of vehicles that have failed an OBD II inspection or proper drivability performance. Our teaching will increase diagnostic and repair effectiveness.

Course Focus: Electrical Circuit Operation and Diagnosis using: voltage drop, amperage, resistance, and waveforms; and
Input Sensors and Output Controls: including operation, signal characteristics, diagnosis and repair.
If you are taking the ASE tests in November, this course is just what you need to be ready!

ABOUT VCERTT NEWS:

The purpose of this newsletter is to provide specialized information to the front line: you, the technicians, service advisors and managers in the field handling repairs and customers. The OBD Inspection Program is now well established. While the OBD inspection itself is an easy addition to the VSI we know that repairing OBD II faults may not be as simple. The success of the OBD Inspection Program falls largely on your ability to perform effective repairs. VCERTT is committed to trying to help. We offer this newsletter to provide information and a forum for discussion. We ask you to call or email us with your questions or suggestions. When you have a troublesome vehicle repair related to OBDII, we'd like to hear about it. If you have problems with a particular vehicle or a scan tool, give us a call. We may be able to help and we can pass along relevant information. We're always looking for test vehicles for our Case Studies - let us take your problem vehicle and attempt a repair, no charge for our time, just help for everyone. ***NEWS!! We MAY be able to supply repair parts (under \$200) when the work meets our research standards!***

CALL US: 802-238-3211 OR EMAIL: elisdhoff@aol.com or OBDNEWS@vtc.edu

We are excited to announce the following changes for VCERTT beginning this Fall. We've been working hard over the summer to implement improvements, updates and changes!

**WE ARE FUNDED TO HELP YOU;
HELP US DO OUR JOB WELL!
PLEASE CONTACT US:**

Please email your replies to elisdhoff@aol.com, or OBDNEWS@vtc.edu or mail them to VCERTT, PO Box 74, Calais, VT 05648, or call Betsy @ 802-238-3211 or Tom @ 802-241-3819

WWW.VCERTT.ORG

- ◆ ALL VCERTT NEWSLETTERS, INCLUDING CASE STUDIES
- ◆ HELPFUL LINKS
- ◆ Have you checked out www.vcertt.org?
- ◆ How can we make it more useful to you?
- ◆ What would you like us to add to our website?
- ◆ Would you use an interactive format to ask questions and discuss problems?

NEW & REVISED COURSES COMING:

- FUEL TRIM DIAGNOSIS & REPAIR
P0171 SYSTEM LEAN IS THE #1 CODE NATIONALLY
- OBD II UPDATE: DIAGNOSTIC ASSISTANCE, DATA UPGRADES, AND HOW CAN COMMUNICATIONS CAN HELP YOU?

WANT THESE NEW COURSES OR SEMINARS?

- VARIABLE VALVE TIMING OPERATION AND DIAGNOSIS
- NO CODE DRIVABILITY
- INJECTOR FAILURES AND DIAGNOSIS

● OBD ELECTRONICS II

- ◆ What new OBD related courses or seminars would be useful for you?

Using a Scope Efficiently
Ignition System Operation & Diagnosis
Fuel Systems Operation and Diagnosis
Asian Systems and Drivability
European Systems and Drivability
On Board Networks
PCM Reprogramming
Hybrids: Safety, Operation, and Diagnosis
Information Resources
Getting the Most From Your Scan Tool
OBD Diagnostic Tools, Tips and Training
Tech Tips and Pattern Failures

- ◆ Are you thinking about OBD II diagnostic equipment?
- ◆ What new courses or seminars do you need?
- ◆ Do you have hot issues we could address in a brief seminar?
- ◆ Where would you like the courses held?

MORE LARGE TRAININGS:

- LOW PRICE QUALITY TRAINING
- TECHNICIAN INTERACTION
- CERTIFICATE AND A GREAT DINNER
- ◆ Where would you like these held?
- ◆ What courses do you want that are Power Points with live demonstrations, on and off vehicles?
- ◆ If you've used our manuals, how could we improve them for you? Are they important to provide for each course?

PLEASE SEE PAGE 4 FOR MORE UPDATES AND QUESTIONS...THEN CONTACT US!



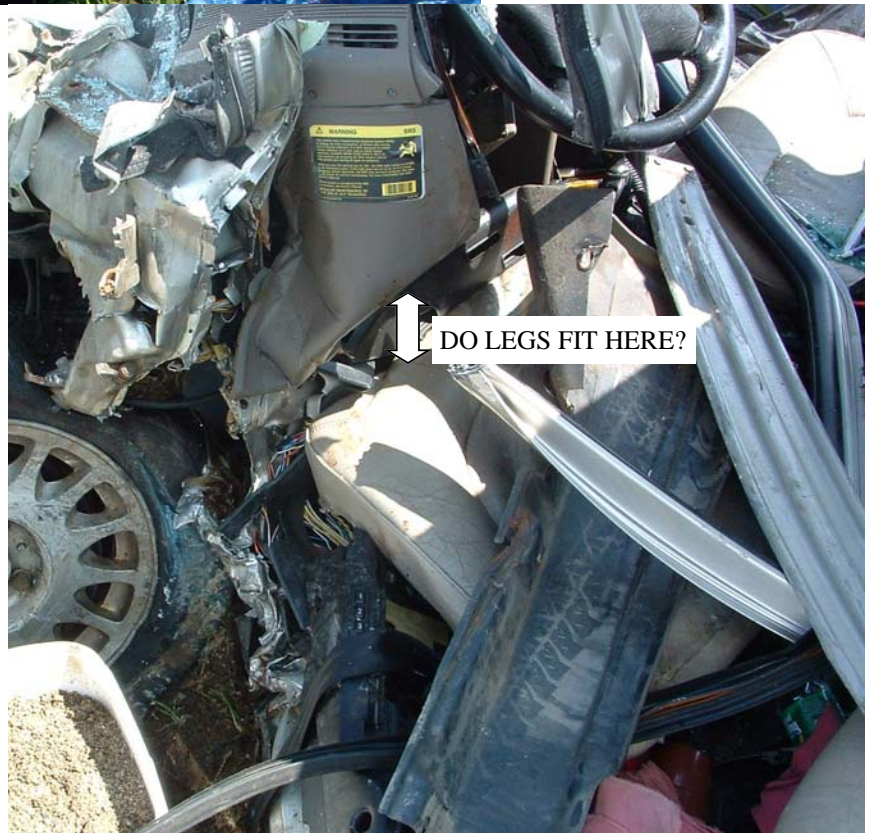
VCERTT CASE STUDY WHAT HAPPENED TO VCERTT?



DID THIS DRIVER SURVIVE?

Don't you always wonder that when a badly crashed car comes in on the hook? Did they live? Can they talk? Walk? I wonder which has more metal installed, the car or the customer... Betsy Dorries, your VCERTT Director, has been recovering...for a long time...from this BAD crash in August 2006. I fell asleep on my way to work at Vermont Technical College after a weekend in Massachusetts. I hit a stationary construction truck just off the lane. It stayed stationary! Twenty four broken bones! Eleven days in an induced coma. Thirty one days of hospital food... not that I remember them. And then you look inside the passenger compartment... WHERE did I put my legs?! And yes, it's true, I can walk, and talk, and write, and think... L U C K Y

And, maybe it would be safer and speedier to use the form of transportation they chose for me after the crash? But I'm a car geek too. I need to keep learning about our cars that we all drive. And, YES! I'm back to work, for real, full time, at VCERTT and at Vermont Tech. And I (and we) have some catch up work to do, and some time to do it in...so it really would help if you emailed, mailed, or called to help out by offering suggestions, questions, articles... If it were your dream to run VCERTT - what would you do? We WANT to hear from you. And yes, it's true, you'll be hearing from me again too! Thanks, Betsy



DO LEGS FIT HERE?



MEET THE TRAINERS!

VCERTT: VERMONT CENTER FOR EMISSIONS REPAIR AND TECHNICIAN TRAINING

MAIL:
VCERTT
PO BOX 74
CALAIS, VT 05648

PHONE: 802-238-3211
FAX: 802-728-1010

EMAIL: elisdhoff@aol.com

INTERNET: www.vcertt.org

Chuck Gee and Joe Thomas are nationally known and highly respected automotive trainers from Weber State University's Center for Automotive Science and Technology.

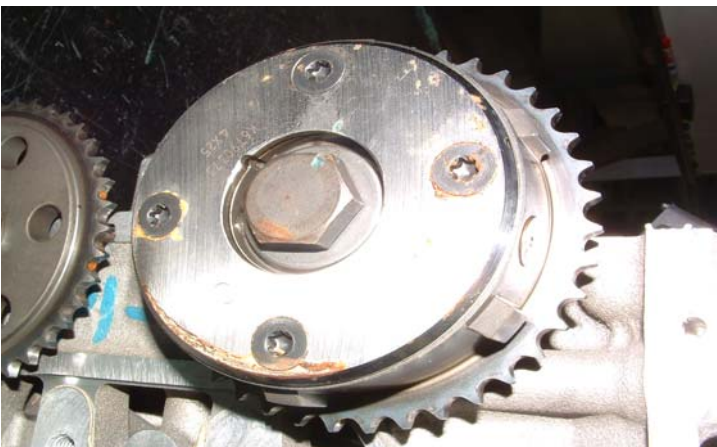
Chuck Gee is the Lead Trainer and Course Developer for Weber State University's Center for Automotive Science and Technology. He has co-developed OBDII and Fuel & Emissions Training Curriculum for American Honda Motors, provided national OBD training for U.S. E.P.A., and has served as General Motor's program developer and lead instructor for GM's OBDII courses.

Joe Thomas is the Director of Weber State University's Center for Automotive Science and Technology. He has helped develop the Center's nationally respected programs and partnerships. Joe has 24 years experience in the air pollution control field and has worked with numerous manufacturers, SAE, and the U.S. E.P.A. Chuck and Joe's list of achievements is greater than our space, but VCERTT's trainers have been fortunate to have days of Chuck and Joe's trainings in Vermont. We say: "they're excellent, stimulating, challenging, prepared, and we're very happy to welcome them back to Vermont. Join us; you'll learn a lot!"

VARIABLE VALVE TIMING (VVT)

Variable valve timing is becoming very common. It is no longer saved for high end luxury sedans or speedy race demons...so many manufacturers are expanding their use of VVT. GM plans to use VVT on all its passenger cars by 2008. VVT can be used to increase higher speed performance, and to improve fuel economy. Eliminating or minimizing the need for a distinct EGR system can be achieved with VVT by increasing the amount of exhaust gas allowed to stay in the combustion chamber by increasing valve overlap (when all valves are open at the same time). Big BONUS! Different systems have varied purposes and methods. Some manufacturers change the valve timing of only the intake or exhaust valves while others modify both camshafts. Some systems just have two positions for the camshaft(s), one for lower engine rpm and one for higher engine rpm. There is a manufacturer out there, a four letter word, that uses this high potential system solely to reduce emissions, no waste of resources on added power or fuel economy! And the system(s) you are familiar with? We'd love to receive a few articles on how the system works, what it's designed to accomplish, how it "feels" when it's activating, what, if anything, goes wrong with it. Yes, guest articles from you experts! That'll help us all. And, get ready and learn more about VVT; contact us to request a seminar or full class.

VVT SEALED HYDRAULIC MODULE



VCERTT UPDATES & QUESTIONS (cont.)

THREE ANNUAL NEWSLETTERS:

- ◆ UP-TO-DATE TRAINING SCHEDULES
- ◆ ARTICLES ON PROBLEMS OR ISSUES YOU RAISE
- ◆ What do you like/dislike about the newsletter?
- ◆ What changes to the newsletter would be helpful?
- ◆ Do you have an idea about a section or highlight to add?
- ◆ Would you like a question and answer format?
- ◆ How about writing an article for us?
- ◆ Want to hear what other states do for OBD training and certification?

VT MASTER OBDII SYSTEMS TECHNICIAN:

- ◆ OBDII UPDATE
- ◆ OBD II ELECTRONICS
- ◆ EGR
- ◆ O2S & AFRS
- ◆ FUEL TRIM
- ◆ EVAP
- ◆ MISFIRE

- ◆ Do you want to take all of our core courses and receive a MASTER certificate of training?
- ◆ Would you like to be identified and advertised as an OBD II and emissions repair specialist?

PLEASE CONTACT US:

Please:

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MAIL: us at VCERTT, PO Box 74, Calais, VT 05648

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CALL: Tom @ 802-241-3819.