

SAE 2009 On-Board Diagnostics Symposium

Technical Session Schedule

As of 09/28/2009 07:40 pm

Tuesday, September 22

Day 1 - Legislation and Heavy Duty OBD Experiences

Session Code: **OBD1**

Room **Ballroom E**

Session Time: **ALL DAY**

Organizers - Paul Algis Baltusis, Ford Motor Co.; Bernard J. Challen, Shoreham Services; Patrick Leteinturier, Infineon; Kenneth Marko, ETAS; John Van Gilder, General Motors Company; Hal Zatorski, Chrysler Group LLC; Benjamin J. Zwissler, Cummins Inc.

| Time | Paper No. | Title |
|-------------|------------------|---|
| 9:00 a.m. | ORAL ONLY | Heavy-Duty OBD Regulation Status Michael J. McCarthy, California Air Resources Board |
| 10:30 a.m. | ORAL ONLY | Global OBD Legislation Update David H. Ferris, General Motors Corp. |
| 11:00 a.m. | ORAL ONLY | Heavy Duty OBD J-1939 Communications Mark R. Stepper, Cummins Inc. |
| 11:30 a.m. | ORAL ONLY | Design Systems for OBD Diagnostics Michiel Van Nieuwstadt, Ford Motor Co. |
| 1:30 p.m. | ORAL ONLY | Design Vehicle Integration Issues Jeffrey P. Seger, Cummins Inc. |
| 2:00 p.m. | ORAL ONLY | Alternative Pathways for Threshold HD-OBD Monitoring Marek Tatur, FEV Inc. |
| 2:30 p.m. | ORAL ONLY | Post Production Vehicle Evaluation Justin Owen, Cummins Engine Co., Ltd. |
| 3:30 p.m. | ORAL ONLY | Calibrating Low-EGR Failures: How Low Is Too Low? Theodore Kostek, Southwest Research Institute |
| 4:00 p.m. | Panel | Panel Discussion: Meeting 2013 Challenges Moderators - Benjamin J. Zwissler, Cummins Inc. Panelists - Mike Read, Navistar Inc.; Cheryl Jeanette Stark, General Motors Corp.; Michiel Van Nieuwstadt, Ford Motor Co.; Joan Wills, Cummins Inc.; |

Tuesday, September 22

Keynote - Challenges of OBD in the HD Market

Session Code: **OBDK2**

Room **Ballroom E**

Session Time: **8:30 a.m.**

Presenters - Mark G. Thomas, Daimler Trucks North America LLC

Wednesday, September 23

Day 2 - Heavy Duty and Light Duty OBD Experiences

Session Code: OBD2

Room Ballroom E

Session Time: ALL DAY

Organizers - Paul Algis Baltusis, Ford Motor Co.; Bernard J. Challen, Shoreham Services; Patrick Leteinturier, Infineon; Kenneth Marko, ETAS; John Van Gilder, General Motors Company; Hal Zatorski, Chrysler Group LLC; Benjamin J. Zwissler, Cummins Inc.

| Time | Paper No. | Title |
|------------|-----------|--|
| 9:00 a.m. | ORAL ONLY | Updated SAE Standards (J2012, J1979, J1930, J1699) Paul Algis Baltusis, Ford Motor Co. |
| 9:45 a.m. | ORAL ONLY | A Comparison of J1939 and ISO15031 Jeffrey Craig, Vector CANtech Inc. |
| 10:45 a.m. | ORAL ONLY | The Roles Virtual Sensors Can Play in OBD Kenneth A. Marko, Global Defense Inc. |
| 11:15 a.m. | Panel | Panel: General Service Issues for OBD Moderators - Paul Algis Baltusis, Ford Motor Co.; Hal Zatorski, Chrysler Panelists - LLC; Benjamin J. Zwissler, Cummins Inc. Michael J. Erny, Ivy Tech. Community College of Indiana; James E. Preusz, Cummins Inc.; |
| 1:30 p.m. | Panel | Hybrids - Breakout Session <i>This session will discuss possible approaches to OBD for different hybrid architecture emissions certifications standards. The participants will be invited to share their insight of the existing regulatory language surrounding hybrid OBD and possible coming changes the next light duty regulation. A scribe will be selected to help write a critical points of discussion in order to facilitate a summary of the discussion and main points to be shared with the entire OBD Symposium attendees.</i> Moderators - Andrew Zettel, General Motors Corp. |
| 1:30 p.m. | Panel | SCR Systems - Breakout Session <i>The use of Selective Catalyst Reduction Systems for the reduction of NOx and / or NH3 has given rise to new diagnostics requirements and to corresponding diagnostics method issues and challenges.</i> Moderators - Hal Zatorski, Chrysler LLC |
| 1:30 p.m. | Panel | Sensor Technology (NOX,PM,) - Breakout Session <i>This session will discuss the design requirements for new sensor technology driven by emissions and OBD regulatory requirements. There will be an open exchange of information and it will not follow a preset agenda. The participants will be invited to discuss what is in new sensor technology and what they anticipate getting. . A scribe will be selected to write a critical points of the discussion in order to facilitate a summary of the discussion main points to be shared with the entire OBD Symposium attendees.</i> Moderators - John Van Gilder, General Motors Corp. |
| 1:30 p.m. | Panel | Communications - Breakout Session <i>As OBD communication requirements increase in complexity, many questions come up regarding to interpreting the multitude of SAE and ISO communication standards used for communication in these vehicles. This breakout session is intended to discuss and resolve new requirements in order to share the issues, challenges and lessons learned.</i> Moderators - Paul Algis Baltusis, Ford Motor Co. |

3:30 p.m. Panel

Summary Reports and Discussions on Breakout Sessions

Panelists - Paul Algis Baltusis, Ford Motor Co.; John Van Gilder, General Motors Corp.; Hal Zatorski, Chrysler LLC; Andrew Zettel, General Motors Corp.;

Wednesday, September 23

Keynote: Legislative Requirements and the Overall Clarity of the Engineering Process

Session Code: OBDK3

Room Ballroom E

Session Time: 8:30 a.m.

Presenters - Jeff Pohl, Caterpillar

Thursday, September 24

Day 3 - Light Duty OBD Experiences

Session Code: OBD3

Room Ballroom E

Session Time: ALL DAY

Organizers - Paul Algis Baltusis, Ford Motor Co.; Bernard J. Challen, Shoreham Services; Patrick Leteinturier, Infineon; Kenneth Marko, ETAS; John Van Gilder, General Motors Company; Hal Zatorski, Chrysler Group LLC; Benjamin J. Zwissler, Cummins Inc.

| Time | Paper No. | Title |
|-------------|------------------|---|
| 8:45 a.m. | ORAL ONLY | Updated on California OBD II Requirements Michael J. McCarthy, California Air Resources Board |
| 9:30 a.m. | ORAL ONLY | Smart Sensors and Diagnostic Critical Electronic Control Units: Design Update John Van Gilder, General Motors Corp. |
| 10:30 a.m. | ORAL ONLY | Challenges & Solutions for HEV & PHEV Diagnosis Patrick Leteinturier, Infineon |
| 11:00 a.m. | ORAL ONLY | OBD Experiences: A Ford Perspective Paul Algis Baltusis, Ford Motor Co. |
| 11:30 a.m. | ORAL ONLY | OBD Experience: A Chrysler Perspective On Air-Fuel Ratio Cylinder Imbalance Diagnostics Hal Zatorski, Chrysler LLC |
| 1:30 p.m. | ORAL ONLY | A Short Story of On Board Diagnostics Volker Lantzsch, Volkswagen AG; Robert Gruszczynski, Audi of America Inc. |
| 2:00 p.m. | ORAL ONLY | Model Based Diagnostics - A Real Opportunity for Efficient Vehicles Management Attilio Brighenti, Sate Srl |
| 3:00 p.m. | ORAL ONLY | Diagnostics and EPA Driver Warning System for SCR Technology Cheryl Jeanette Stark, General Motors Company |
| 3:30 p.m. | Panel | Wrap-up Q & A Moderators - Bernard J. Challen, Shoreham Services |

Thursday, September 24

Keynote OBD: Balancing a Consumer's Needs Risk Aversion, Simplification and Entertainment

Session Code: OBDK1

Room Ballroom E

Session Time: 8:15 a.m.

Decisions we make today regarding what information we provide to the automotive driver in tomorrow's vehicles must take into account four consumer trends that are in various stages of their emergence. The good news is that these trends are fairly global, so most decisions we make for one market should be applicable to the next. The bad news is that the trends are not necessarily complementary, meaning that there is much work to do in assessing the degree to which each trend will impact consumer preferences.

Perhaps the trend of which we all are most aware and one that is driving our pursuit of delivering more advanced levels of On Board Diagnostics is the consumer's desire for connectivity. With the exception of when we are on an airplane, we consumers have grown to expect, and even depend on being connected to virtually every aspect of our lives. Not only does this mean that we expect to be connected to all of these life elements while we are in our vehicle, but this expectation also leads us to want to be more connected to what is going on in and around the vehicles themselves. With the World Wide Web, Google and Wikipedia, e-mail and texting, CNN and CNBC, we have grown dependent upon feeling like we know everything there is to know about what is going on around us.

This ability to be connected has helped create a sense of empowerment surrounding risk mitigation. With increased information comes the awareness of how dangerous the world can be: from natural disasters to political and corruption to our life savings disappearing in a flash due to unexplained market turns or corporate greed and demagoguery. At the same time, the fact that we have greater visibility of the threats that lie amongst us also gives us the sense that we can act to mitigate our risks and exposures. This same pursuit for connectivity drives a pursuit of risk mitigation. And risk mitigation is never more personal than when we are in our vehicles. Many consumers have never looked under the hood or even changed a tire. We fear dark places late at night and the semi closing in on us in our rear view mirror. More complete, accurate and timely data from within and around our vehicles plays to this same emotion: giving us greater control over the world around us, thereby mitigating the risks to which we are exposed.

But before we go off and try and make every piece of information available to the driver somewhere on the IP, we need to be mindful that despite our desire to be connected, we as consumers also realize we are absolutely overloaded with information. While technology can bring us more data, making us feel more connected and in control, an even greater role of technology is to simplify and perhaps even to filter the information available. If we think about our own lives: do we really read every e-mail sent to us, or every news article that we should read, how about corporate communications about our health plans, our 401K's, or even the notes that our children's schools send home to us about parent teacher conferences, field trips, band concerts or soccer games? It's just too much. So driver's who are trying to get from point A to point B while staying connected with their families and their jobs do not want to be distracted with superfluous data about their cars. They expect the vehicles to filter and communicate what they as drivers want and need to know. This doesn't mean going back to the "idiot lights" of the 70's and 80's. Those were rejected flat out because they provided too little information too late. Instead, simplification means the customization or even personalization of the data that each driver feels he needs, but from an exhaustive bank of data about the vehicle and world around it.

Presenters - Scott Miller, Synovate Motoresearch