Powertrain Strategies for the 21st Century: Designing Global Powertrains

“Focus on the Future”
UM Automotive Research Conferences

WELCOME!

Presentations available at: www.umtri.umich.edu/ aad

Bruce M. Belzowski
Assistant Research Scientist
bbl@umich.edu
Automotive Analysis
University of Michigan
Transportation Research Institute

Funding

Affiliate Program
- Supporting Members
- Research Partners

Research
- Globalization
- Powertrains
- IT

Conferences
- 5 Annual Conferences

UMTRI
Automotive Analysis
# Automotive Analysis

University of Michigan Transportation Research Institute

## Affiliates Members and Research Partners

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Affiliates Members and Research Partners

**Suppliers**
- Chevron
- Visteon
- Denso
- Dana
- Delphi
- Peterson Spring
- Continental
- TRW
- Valeo

**Suppliers**
- Michelin
- Continental
- JCI
- BorgWarner
- Yazaki
- Eaton
- BASF
- Dow
- Bosch
Upcoming UMTRI-AA Conferences

• September 12, 2012 (Wednesday): The Business of IT: Transforming the Organization and the Vehicle. This 4th annual conference provides insight into how IT increasingly is being called upon to support its use in the vehicle as well as within the organization.

• November 7, 2012 (Wednesday): Inside China: Understanding the Current and Future Chinese Automotive Industry. Our 5th annual conference that brings to the audience the knowledge of people who truly know the Chinese auto industry.

Upcoming UMTRI-AA Conferences

- **April 17, 2013 (Wednesday): The Role of Government in the US Auto Industry.** Following the US election in November, 2012, we will discuss the current role the government will play in the US auto industry.

- **July 24, 2012 (Wednesday): Powertrain Strategies for the 21st Century.** Our 5th annual conference that provides insight into how manufacturers and suppliers are managing their resources to meet the needs of consumer needs and government requirements.
Panelists (AM Session)

• **Michael Omotoso**, Senior Manager-Global Powertrain, LMC Automotive-US

• **Chris Cowland**, Director of Advanced and SRT Powertrain, Chrysler Group

• **John Kirwan**, Chief Scientist for Gasoline Powertrains, Delphi Corporation
Panelists (PM Session)

- **Jason Schug**, Manager, Ricardo Strategic Consulting
- **Joe Capuano**, North American Business Unit Leader, Engine Controls, Bosch Corporation
- **John Hoard**, Associate Research Scientist, UM College of Engineering
- **Jason Martz**, Assistant Research Scientist, UM College of Engineering
Morning Schedule

• 9am
  – Bruce Belzowski
  – Michael Omotoso
  – Chris Cowland

• 10:35am-10:55am Break

• 10:55am
  – John Kirwan

• 11:20am Q&A

• Noon-1:30pm Lunch
Afternoon Schedule

• 1:30pm
  – Jason Schug
  – Joe Capuano

• 2:30pm-2:55pm Break

• 2:55pm
  – John Hoard
  – Jason Martz

• 3:40pm Q&A

• 4:15pm Adjourn
Vehicle Testing

Test Drives:
• Peugeot Diesel/Hybrid
• VW Passat Diesel

Vehicle View:
• Fiat 500 Abarth

• 10:35am-10:55am Break
• Noon-1:30pm Lunch
• 2:30pm-2:55pm Break
• 4:15pm Adjourn
Conference Questions

• What is the global distribution of powertrains?
• What seem to be the global powertrain strategies for some of the major manufacturers?
• What have been some of the challenges and opportunities presented to Chrysler and Fiat powertrain managers because of the merger?
Conference Questions

• How are manufacturers and suppliers organizing their powertrain R&D and product development globally?

• What global integration strategies are manufacturers and suppliers employing?

• How are global government and consumer requirements affecting powertrain strategies?
Conference Questions

- How are companies using outside expertise to support their powertrain development?
- What areas of powertrain development tend to be supported by powertrain consulting companies?
- How are the new manufacturers like the Chinese domestic OEMs using outside expertise for powertrain development?
Conference Questions

• How does engine control development differ globally?

• How has global powertrain development affected decision-making at the corporate level?

• Are there global differences related to how EGR and thermal and fluid issues are researched for powertrains?
Conference Questions

• How are advanced powertrains under development affected differently in terms of EGR and thermal and fluid science compared to typical ICE powertrains?

• What can we expect in 5-10 years from current research on engine controls, EGR, and thermal and fluid issues?

• What is the next level of organization of global powertrain development?
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