



2nd Quarter, 2008

Welcome to the Intertek Automotive Update newsletter. The Update is a forum for news, happenings and information in the world of Automotive Testing and Engineering. We welcome our readers' input and participation in this forum. If you have questions to be addressed in a future issue, or article suggestions, please send inquiries to icenter@intertek.com.

VOC Testing Trends

That "new car smell" may be a thing of the past. The North American automotive industry is following the lead of its European and Japanese counterparts by cleaning up and greening up its automotive interiors. The issue – volatile organic compounds (VOCs) that are emitted from vehicle interiors.

Intertek has supported its OEM and tier one customers in attacking the VOC issue with industry leading expertise in evaporative emission (SHED) testing and analytical emissions. The combination has allowed Intertek to proactively work with the automotive industry in both enhancement of established VOC test protocol and development of new procedures.

Regarding established procedures, Intertek utilizes procedures sponsored by BMW, Daimler Benz, Volkswagon, Toyota, Nissan, Mazda, Honda, and JEITA. "Although each of these procedures is unique, there is a bit of commonality between them," remarks Randy Gay, one of Intertek's Senior Engineers in the VOC testing area. "In general, a test piece is placed in a holding container of some sort such as a tedlar bag or steel vessel. From there, it is aged at a specific temperature usually ranging from 40C – 65C for a specified period of time before the emissions sample is captured by drawing through two different cartridges. The two cartridges are Tenax cartridges, used for capturing aliphatic/aromatic hydrocarbons, and DNPH cartridges, used for capturing aldehydes and ketones. The emissions samples in the Tenax cartridges are analyzed using GCMS, and the emissions samples in the DNPH cartridges are analyzed using HPLC."

Intertek has tested a variety of automotive interior cabin parts ranging from review mirrors, carpeting, kick panels, cargo trays, speakers, cushion foam, and various plastics.

Why do customers prefer Intertek for their VOC test needs? "Because of our history, knowledge, required equipment, willingness to work with the customer, and participation in industry VOC

Attend the Grand Rapids Lab Open House

Intertek's Grand Rapids test lab recently moved into a new 90,000 sq. ft. facility located at 4700 Broadmoor, SE. An Open House will be held on Thursday, September 25th featuring tours, presentations & refreshments.

Testing capabilities include performance, durability, materials, lighting/photometrics, furniture and accelerated stress testing (AST). Major equipment includes a HALT chamber, multi-axis vibration machines, walk-in environmental chambers, salt spray cabinets, an ozone chamber and a lighting tunnel.

The Grand Rapids lab serves a wide range of industries, including aerospace, automotive, appliances, consumer goods, furniture, lighting and more. To register to attend, [click here](#).

New Intertek Webinars!

Intertek offers free webinars on Automotive-related topics throughout the year. These webinars are accessible online, and last 45 - 60 minutes. Our testing and engineering experts will present information on the

committees," says Gay. Intertek is a leader in independent VOC testing in North America, with the knowledge required to develop the test plan, conduct testing and interpret the results for our clients.



Gas Chromatograph with fully integrated Mass Spectrometer detection system and thermal desorption sample station

For more information on VOC testing needs, contact Randy Gay at 210-523-4656 or randy.gay@intertek.com.

ISO/TS 16949 Updates

The International Automotive Task Force (IATF) is currently drafting a new edition of ISO/TS 16949:2002 - Rules for achieving IATF recognition. This document specifies the rules that Certification Bodies (CBs) must follow when assessing organizations to ISO/TS 16949.

The IATF is looking to CBs such as Intertek for input before the new rules are released in the 4th quarter of 2008. Intertek has reviewed this draft for the IATF and provided feedback.

The proposed revision will give CBs better guidance when planning and scheduling audits. Some of the changes that may impact our clients include:

- More clearly defined requirements for the audit cycle.
- Some changes to audit planning – the items requested by the CB prior to the audit for audit-planning purposes.
- Specific timelines for the decertification process.
- IATF-recognized auditors will be subject to a new training and evaluation process.

Visit www.intertek-sc.com to learn more about certification to ISO/TS 16949.

Green Services for the Automotive Industry

If you're looking to "green" your automotive components, products and systems, Intertek has several services that can assist you in the process, including:

- California Proposition 65 compliance
- REACH Regulation (EC 1907/2006) compliance
- REACH SVHC Declaration for European Automotive Industry
- ELV (End-of-Life Vehicle) Directive (2000/53/EC) compliance
- Carbon footprint of automotive products and facilities
- VOC Testing (volatile organic compounds)

Please [click here](#) for more information on green automotive services.

following topics:

- **Designing Out Warranty at the Feasibility/ Concept Stage**

June 24 at 10a & 2p EST.

Learn how Intertek's unique approach to warranty can reduce or even eliminate issues in the earliest stages of development. [Click to register](#)

- **Multi-Continent Validation Plans**

August 26 at 10a & 2p

Learn how to develop cross-continent validation plans. Please email linda.hall@intertek.com to register.

The webinars are also available to any organization who has a group of ten or more attendees on the date of their choice. More topics/dates will be announced soon. For more information or to schedule a webinar session for a group, please contact iCenter@intertek.com or call 1-800-WORLDFAB.

Shanghai Automotive Expansion

Shanghai Automotive Services has completed its Phase 2 expansion to just over 43,000 feet in combined lab and office space. The additional layout allows improvements for operational capacity, housing increased staff as well as better workflow and client confidentiality. "We work closely with our customers to consider their needs in allowing for the expansion" said General Manager King Lin. The extra floor space now allows for capacity growth in vibration with temperature and humidity. Intertek's experience in this area is very strong, with customers such as Honeywell selecting Intertek as its only provider for specialized services.

Polymer Characterization by Dynamic Mechanical Analysis (DMA)

DMA is a universal tool used to characterize the viscoelastic behavior of thermoplastic and thermoset polymers over a wide range of temperatures. This is one of the many valuable resources for polymer characterization provided by Intertek PTL. Advantages of DMA include:

- Compared to DSC, DMA can be 10 to 1000 times more sensitive to the changes occurring at the T_g.
- DMA is able to pick up subtle transitions, other than T_g, such as side chain movements which can be indicative of a materials ability to absorb impact.
- Compared to a static, single point test like tensile modulus which can take days, DMA can generate data over a wide temperature range in a matter of hours.
- It provides material characterizations such as storage, loss and complex modulus.

Contact Intertek Plastics Technology Laboratories at iptl@intertek.com today to discuss how DMA and other tests can provide valuable polymer information for your application. To learn more about DMA, including a video of testing in progress, click [here](#).

2010 Diesel Engine Emission Regulations - Driving the Need for Testing

The need for engine testing is increasing as the new 2010 diesel engine emission regulations draw near. Engine OEMs and suppliers are running out of space internally, mandating the need to find external test cell space. Intertek Automotive Research has responded to the need by adding test cell capacity, equipment, and staff.

“Performance testing is not what it used to be,” comments Stacy Bond, Senior Engineer at Intertek. “In the past, engines, test cycles, data acquisition, etc., were pretty straightforward. These days, the testing is much more complex with heavily instrumented engines and emission related equipment working with the engine such as cooled EGR and aftertreatment systems. It makes test engineering more challenging.” David Horstman, Principal Engineer at Intertek, agrees with Stacy. “Conducting a series of FTP transient cycle tests on a 500 horsepower diesel engine that has all the latest engine emission hardware bells and whistles is challenging, but very intriguing and rewarding. Ensuring that the engine is doing what it is supposed to be doing while verifying all of our test equipment (emission benches, particulate sampling, smoke and opacity metering, etc.) are in harmony and functioning properly is quite a feat, but our job.”

“We have great customers,” says Dean Schoppe, Sr. Engineer at Intertek. “They understand that their engine systems have become increasingly more complex over time, and because of this, they have done a great job of providing us information up-front to prepare for their test needs.”

A third phase with the finalization of a new materials test lab is targeted for completion by Q2 2008, expanding the facility to 48,500 feet.

Free Downloadable Technical Papers Now Available

Intertek is offering free downloadable whitepapers on topics pertinent to the automotive industry. Click the titles below to download:

[Fail to Improve? Using Failure Analysis to Improve Product Quality](#)

You'll learn about what failure analysis is and when it should be utilized, different types of failures (primary vs. secondary process problems, end-use failures, etc.) and common causes of failures. Unusual failures found during Accelerated Stress Testing (AST) are also presented.

[Cutting Validation Time & Material by 50%](#)

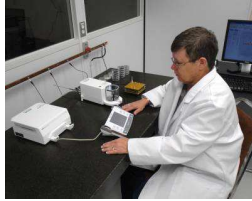
This whitepaper examines methods for using the DFMEA and Accelerated Stress Testing (AST) to determine which validation tests are required, which ones may be redundant, and how you can reduce your overall validation time and materials by half.

[Get Answers to Your Materials Questions](#)

Do I have the right plastic? Did I get the material I paid for? My paint isn't sticking, why? Get answers to these common materials questions and more.

[Why Worry about Vibration?](#)

Vibration is everywhere and affects all products during service. Consider an industrial battery charger weighing 50 lbs and intended to sit on a bench in a mechanic's repair shop. Why be concerned about vibration in this situation? Get answers here.



For engine testing inquiries, please contact dean.schoppe@intertek.com or call 210-523-4605.

Intertek's particulate weight/clean room – EPA 1065 compliant and 0.1 microgram accuracy

About Intertek

Intertek Group plc (FTSE: ITRK) is a leading international provider of quality and safety services to a wide range of global and local industries. Partnership with Intertek brings increased value to customers' products and processes, ultimately supporting their success in the global market place. Intertek has the experience, expertise, resources and global reach to support its customers through their network of over 1000 laboratories and offices, 21,000 people in over 110 countries around the world.

Intertek Automotive Website: www.automotive.intertek.com

Email: icenter@intertek.com or testingservices@intertek.com