SAE International publishes standards for emergency personnel responding to hybrid, electric vehicle accidents

SAE International's Hybrid-EV Technical Committee has completed the technical standard "J2990: Hybrid and EV First and Second Responder Recommended Practice," which offers recommended practices for emergency personnel responding to incidents involving hybrid or electric vehicles.

As hybrid and electric vehicles become more prevalent on the roads and highways, emergency responders must be aware of the proper procedures for responding to accidents and emergency situations involving vehicles equipped with high voltage electrical systems. "As electric vehicles enter the marketplace in greater numbers, it's an appropriate time to recognize best practices that facilitate a safe response when these vehicles are in an accident," said SAE committee chairman Todd Mackintosh.

Among the recommended practices contained in the standard are:

- A procedure for OEM vehicle badging (labeling) placed at standardized, consistent locations on the exterior and/or interior of the vehicle identifying that a vehicle contains high voltage systems for first or second responders arriving at an incident. This guide would enable first-responders to quickly identify the involved vehicle powertrain type and determine if it if contains a high voltage electrical system. Parameters for the visual content of the badging are also defined in the standard.

- A quick reference guide. "Think of this as a cheat sheet for first-responders," said Mackintosh. "This will help emergency personnel identify the location of high-voltage components, high-strength steel, and high voltage and supplemental restraint system disabling procedures to ensure the safest response methods for both themselves and vehicle occupants."

- A recommendation that OEMs follow common standards for disabling

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Editorial Director: Jack Pokrzywa

Supplement to J2990 in progress

The SAE Fuel Cell Standards Committee began work in January on a recommended practice for emergency personnel responding to accidents involving hydrogen and fuel cell vehicles.

"J2990: Hybrid and EV First and Second Responder Recommended Practice."

The new document will address the potential consequences associated with hydrogen vehicle incidents and suggest common procedures to help protect emergency responders (and tow, recovery, storage, repair and salvage personnel) after an incident has occurred.

The increased use of hydrogen as an alternative fuel for vehicles creates additional procedures that are not already addressed in the parent document, J2990.

If you are interesting in contributing to the development of this new document, contact Pat Ebejer at pebejer@sae.org.
High-voltage circuits and that vehicle OEMs provide a minimum of two methods of initiating the disconnection and isolation of the high voltage system form the vehicle.

- OEM guidelines for the creation of second responder (i.e., low truck operators) safety instructions for the inspection and handling of damaged or inoperable hybrid or electric vehicles, with a focus on the high voltage systems. "We want to see OEMs create a set of steps to follow so second-responders use safe practices. The second responder community should be made aware of proper procedures when towing, handling and/or storing a damaged or inoperative electric vehicle," Mackintosh said.

The National Highway Safety Transportation Administration participated in discussions and raised concerns over post-accident response. "Safety is our top priority. The entire industry wants to ensure that first and second responders are prepared for accidents involving electric vehicles," Mackintosh said.

Two Hyundai engines receive SAE International Horsepower Certification

For the first time, SAE International has certified engines for passenger cars from non-U.S. automotive companies through the "SAE J1349": Engine Power Test Code - Spark Ignition and Compression Ignition - As Installed Net Power Rating" technical standard. Hyundai submitted two engines used in the Elantra and Genesis models. Both engines were certified and are now included in SAE International's database. That database now includes nearly 250 engines — including 210 from passenger cars and 37 from small utility vehicles.

Engine certification is based on a series of self-certification tests conducted by the manufacturer that are witnessed and verified by an SAE International-qualified observer. The procedure for certification is outlined in SAE International's standard J2723 ("Engine Power Test Code – Engine Power and Torque Certification"). The actual horsepower testing procedure is described in J1349.

Engine manufacturers are free to cite power and torque figures derived from testing conducted outside the scope of the SAE International standards, but in those cases they may not claim those figures are "SAE J1349 Certified Power."*

SAE International's Horsepower Certification Program was created in 2005. Small engines were added to be covered by the program in 2011 under the standard J1995, "Engine Power Test Code- Spark Ignition and Compression Ignition- Gross Power Rating."

The full list of certified engines can be accessed by visiting www.sae.org/certifiedpower.

Delivery options for SAE Technical Standards

The more than 10,000 standards in the SAE database now include historical standards, and can be accessed through one of the targeted solutions below:

- **SAE Digital Library** is the industry’s most comprehensive resource, encompassing 175,000+ technical papers, standards, and related publications from SAE and other renowned organizations. A customizable corporate solution!  
  digitallibrary.sae.org

- **SAE Subscriptions** are online portfolios of SAE standards or technical papers focused on targeted technologies and industries. subscriptions.sae.org

- **SAE JPaks** let you decide how many ground vehicle standards you need and when you need them. Choose from packages that provide up to 10, 15, 25, 35, or 50 downloads per year. sae.org/jpak

- **SAE Ground Vehicle Standards on DVD** provides convenient, portable access to more than 2,400 individual standards, recommended practices, and information reports. sae.org/gvcd

New viscosity grade to be included in new J300 revision

The publication of a revision to "SAE J300: Engine Oil Viscosity Classification" is imminent. This revision will introduce as new viscosity grade, SAE 1B.

The revision of J300 was requested by a consortium of passenger car OEMs to provide a new viscosity grade lower than SAE 20.

"The main driving force for using lower viscosity oils is to lower hydrodynamic friction, thereby increasing fuel economy," according to Michael Covitch of Lubrizol, Chair of the SAE Engine Oil Viscosity Classification Task Force. "The new grade will be specified in the future by OEMs for cars specifically designed to use new low viscosity oils. It is not deemed to be suitable for use with older engines or newer vehicles not designed for such low viscosity oils."

Lower viscosity lubricants are expected to help OEMs meet Corporate Average Fuel Economy (CAFE) regulations, and help vehicle owners reduce costs.

SAE J300 is used world-wide to classify engine oils in terms of viscosity grade. OEMs recommend specific viscosity grades in the owners’ manuals to ensure that their engines will perform throughout the lifetime of the vehicle. Most engine oil standards set by organizations such as the American Petroleum Institute and individual OEMs include requirements for oils to meet the limits found in J300.

Battery labeling guidelines standard published

A new Recommended Practice that covers labeling guidelines for electrical storage devices was issued by the SAE International Battery Standards Labeling Committee in December 2012. 120936: SAE Electrical Energy Storage Device Labeling Recommended Practice," provides labeling guidelines at all levels of component, subsystem and system level architectures describing content, placement and durability of requirements of labels throughout the total product lifecycle. It addresses dimensional, positioning, and copy nomenclature, product description, voltage and manufacturing information, as well as end-of-life disposal, shipping and electrical connection data.

*SAE International’s Horsepower Certification Program was created in 2005. Small engines were added to be covered by the program in 2011 under the standard J1995, "Engine Power Test Code - Spark Ignition and Compression Ignition - As Installed Net Power Rating" technical standard.
Safety studies of R1234yf use in automobiles continue

Adapted from an article originally appearing in Automotive Engineering International Online, authored by Paul Weissler

The decision by Daimler to halt conversion to R1234yf—the low-global-warming-potential (GWP) but mildly flammable air-conditioning refrigerant—has led to a vigorous defense of the product’s safety by the joint-venture suppliers, Honeywell and DuPont. Where does the industry go from here?

The first step, a review and possible expansion of the existing refrigerant-use risk assessments by an SAE International Cooperative Research Program (CRP) of 13 OEM members, is under way. The SAE International Cooperative Research Project team (CRP1234-4), which was formed in 2012 to perform an updated engineering review of the R-1234yf refrigerant, met in early February.

The CRP continues its process of carefully reviewing the use of R-1234yf by using universally accepted engineering methods, including analysis of recent OEM testing from actual vehicle crash data, on-vehicle simulations, laboratory simulations, bench tests, and over 100 engine compartment refrigerant releases. Based on this testing the CRP has found that the refrigerant is highly unlikely to ignite and that ignition requires extremely idealized conditions.

German carmakers, Volkswagen in particular, had urged the close look at the Daimler data. But only Daimler actually faced a regulatory issue with the European Commission. Daimler’s decision to stop R-1234yf installations and retrofit cars already using the refrigerant back to R-134a reflected the manufacturer’s concern. Other (non-German) carmakers selling in Europe have made limited installations of R-1234yf.

General Motors is the only U.S. maker currently installing R-1234yf, and to date only in Cadillac XTS and ATS. The Honda Fit electric vehicle also is equipped. Only limited data has been released publicly on the Daimler test. It reportedly simulated a head-on collision, following a drive cycle in a small car, that got turbocharger and exhaust surfaces very hot. At some point the radiator fan had been turned off; simulating a fan failure and further raising of turbo/exhaust temperatures. A modified refrigerant line permitted engineers to simulate a puncture that allowed R-1234yf to be sprayed onto the turbo/exhaust. The R-1234yf, reportedly mixed with some oil, produced a refrigerant flame.

Daimler called the test a “real world” scenario, and cited formation during the flame of hydrogen fluoride (HF), which etched the windshield milky white. HF, a toxic, corrosive gas that can result from decomposition of fluorine-content gas, was evaluated in the CRP studies, and potential exposure was considered similar to or below other fire-related exposures more frequently encountered.

DuPont and Honeywell said tests similar to the Daimler one were done in risk assessments performed by laboratories working for SAE CRPs. Honeywell additionally has shown tests it performed at 600°F (112°C), which it said was the highest it encountered in an engine compartment, and the refrigerant did not burn.

The CRP assessments concluded the refrigerant was safe, in the same risk category as riding in an elevator.

The CRP continues to meet regularly to review and share test information completed since the close of the original CRP1234-3 in 2009. The original CRP1234-3 concluded that R-1234yf is a safe and acceptable alternative refrigerant for mobile air conditioning systems that can be used to meet new environmental standards and consumer needs. The CRP is targeting the second quarter of 2013 for the completion of its work and the publication of a final report.

New Recommended Practice provides common approach to DRBFM methodology

*SAE J2886: Design Review Based on Failure Modes (DRBFM)*, developed by the Automotive Quality and Process Improvement Committee, was published in March.

This Recommended Practice explains the DRBFM process and its recommended steps. It includes examples of how to conduct the process and discusses how DRBFM can fit with activities such as product and process development, validation, production, and change management.

DRBFM has been adopted by both automotive and non-automotive companies. There is a growing demand for DRBFM information, as companies also expect their global supply base to utilize the process. As with FMEA, companies tend to use slight variations of the process which can cause complexity for suppliers that support multiple companies. Development of J2886, which provides a common approach to the implementation of the methodology, has been supported by users of DRBFM from both manufacturers and suppliers.

After serving the industry well for 25 years, airbag noise standard revised

A revised version of SAE J247 – the standard’s first revision since 1987 – was published in November 2012.

J247: Procedure and Instrumentation for Measuring Acoustic Impulses from Deployment of Automotive Inflatable Devices* provides guidelines for the selection of transducers, data acquisition systems, and other instrumentation (as well as analysis methods) to help ensure proper measurement and evaluation of acoustic impulses in automobiles. This recommended practice primarily focuses on automotive inflatable devices such as airbags.

"We were able to make revisions to bring the standard up to date," said Dr. Stephen Rouhana, Chairman of the Impulse Noise Task Force of the SAE Inflatable Restraints Standards Committee (which was responsible for issuing the standard). "With advances in computer programs and improvements in instrumentation, we were able to do more detailed analyses and better predict the risk of injuries."

Rouhana, Senior Technical Leader for Safety, and Group Leader, Biomechanics and Occupant Protection Passive Safety Research and Advanced Engineering at Ford Research and Advanced Engineering, personally spent 25 years working on this project as chair of this committee.

"I had an earlier experience in which I had hearing damage when an inflatable belt misfired during test preparations," he said. "This gave me an added personal interest in this issue."

The Task Force, which included participants from OEMs, airbag suppliers, testing equipment manufacturers, and universities, was able to use the U.S. Army’s mathematical model of a human ear, to better predict the risk of injury.

"Airbags can be designed so they have less chance of producing hearing loss," said Rouhana, who has also written numerous SAE papers on this subject over the last two decades. "This revised standard points out that we can preserve the function of the airbag and reduce hearing loss. Hopefully, this will make some people’s lives better. The group was dedicated to this."
New SAE committee chairs – thank you for your important volunteer efforts!

New SAE International Committees and Chairs

Lightweight Vehicle Design Materials & Assembly Technology Committee, Jwo Pan, University of Michigan—Chair; Yung Li Lee, Vice Chair; Chrysler—Vice Chairman

Fuel and Lubricants EOVC Sub-group (of the Fuel & Lubricants EOVC Task Force/F&L TC1 Engine Lubrication Committee), Mike Brown, SK Lubricants—Chair

Truck and Bus 12-24V Task Force (of the Truck and Bus Electrical Systems Committee), Steve Nadig, Daimler Trucks North America LLC—Chair

Scan Tool Interface Anomaly Task Force (of Vehicle EE System Diagnostic Standards Committee), Mark Zachos, DG Technologies—Chair

On-Road Automated Vehicle Safety Testing Working Group (of the On-Road Automated Vehicle Standards Committee), Steve Underwood, University of Michigan—Dearborn—Chair

On-Road Automated Vehicle Definitions Working Group (of the On-Road Automated Vehicle Standards Committee), Barb Wendling, Volkswagen Group of America—Chair

On-Road Automated Vehicle Planning Working Group (of the On-Road Automated Vehicle Standards Committee), Bryant Walker Smith, Stanford University—Chair

Truck and Bus J2547 Performance Requirements Task Force (of the Air Brake Tubing and Tube Fitting Committee), Jordan Kleiser, PACCAR Technical Center—Chair

J1828 Working Group (of the Collision Repair Committee), Frank Wassilak—Chair

Chassis Controls Committee (Crash Imminent Braking – Active Safety), Thomas Klingler, General Motors LLC—Chair

Truck and Bus J267 and Biaxial Testing Task Force (of the Truck and Bus Wheel Committee), Stephen Phillips, Accuride Corp.—Chair

Driver Assistance Systems Steering Committee, Dan Selke, Mercedes-Benz—Chair

Driver Perception Steering Committee, Paul Perrone (Perrone Robotics) and Michael Carpenter (General Motors LLC)—Co-chairs

Occupant Protection and Biomechanics Steering Committee, Dr. Annette Irwin (General Motors LLC) and Doug Stein (Autoliv)—Co-chairs

Truck Crashworthiness Advisory Task Force (of the Truck Crashworthiness Committee), Roger Lackore, Oskosh Corporation—Chair

Disc DTV Measurement Standard Task Force (of the Brake NVH Committee), Mark Riefe, General Motors LLC—Chair

New Chairs

Christopher Jones, SAE Systems Inc., J1939 Hybrid Communication Task Force

Chuck Trueman, PACCAR Technical Center, Truck and Bus Brake and Stability Control Systems Steering Committee

Greg Dvorchak, Hendrickson, Truck and Bus Brake Systems Committee

Dan Pridemore, Afton Chemical Corp., Fuels and Lubricants Council (Chair)

Don Smolenski, Evonik OI Additives, Fuels and Lubricants Council (Vice Chair)

Ed Heck, Retired, Common Tests Technical Steering Committee

Jeremy Harms, Bobcat, Co., Machine Technical Steering Committee

Donald Guthbert, Goodyear Tire & Rubber Co., Tire and Rim Committee

Larry Revelino, AI-Ko Kober Corp, Trailer Braking Standard Task Force

J2534 gains acceptance for automotive reprogramming and diagnostics

Adapted from an article which previously appeared in Automotive Engineering International Online

The SAE International standard J2534, which enables communication between a computer and the onboard electronic data buses, got a boost last November, when Massachusetts voters endorsed the nation's first "right to repair" (R2R) law, which specifically named J2534 as a protocol to enable independent garages to reprogram and diagnose problems in motor vehicle computers. J2534 is used not only for reprogramming modules throughout the vehicle but also for an increasing amount of OE advanced diagnostics.

The impetus for J2534 ("Recommended Practice for Pass-Thru Vehicle Programming") came from the U.S. EPA and CARB (California Air Resources Board), which sought an affordable way for independent garages to reprogram onboard computers. The overall goal was improved vehicle emissions compliance. Prior to J2534 (issued by the SAE Vehicle EE System Diagnostic Standards Committee), each automaker had its own programming system and device. Thus, it was costly for independent garages to own all—or even most—devices.

With J2534, an OE application is loaded into a Windows PC, which enables the revised OE vehicle software to "Pass-Thru" from the PC. It continues through the J2534 device, and finally through the under-dash OBD II connector to the appropriate vehicle modules, which for emissions typically are the engine and transmission computers. With J2534, the Pass-Thru route for vehicle software also protects an automaker’s intellectual property.

Issued in 2002, J2534 now has three sections. J2534-1, consisting of the emissions-related reprogramming protocols, is referenced in EPA regulations. All cars and light trucks sold in the U.S. are J2534-compatible for reprogramming, and emissions-software compliance (access to the software) is covered in federal regulations imposed on automakers.

J2534-2 is a "living document," subject to new OE features, hardware, and software, prepared with instructions on introducing them in a way that fits the requirements of the standard. So updating devices is not a reverse-engineering project. With the new Massachusetts law, most device makers are likely to update coverage in J2534-2.

J2534-3 is a compliance test for a J2534-1 device, to ensure it is likely to work with an OE application.

When it comes to diagnostics, the primary alternative to an OE scan tool has been the "generic" OBD II tools, which display emissions-related trouble codes and data items, such as sensor readings. Many "professional" tools add some OE "enhanced" trouble codes and data items, but because they provide multiple-makes diagnostics, coverage is spotty.

However, automakers also have been developing their latest diagnostics to run through a PC and J2534 device. Toyota and Volvo diagnostics already do. BMW/MINI is close (except for security systems) and GM’s latest (Global Diagnostic System) is compliant. Other makers, particularly Ford and Honda, reportedly are close.

It is predicted that J2534 gradually will become the primary approach for OE diagnostics. And if the current Toyota and GM two-day subscription rates ($55) for diagnostic or reprogramming access are typical, independent garages will find the price is right.

The SAE J2534 device cable plugs into PC and under-dash OBD II connector.
Standards Committee

US DOT webinar highlights work of SAE Fuel Cell Standards Committee

The U.S. Department of Energy (DOE) conducted a live webinar on February 22 on “Hydrogen Refueling Protocols.” The webinar focused on the SAE Technical Information Report J2601, developed by the Fuel Cell Standards Committee, and published in 2010. The webinar, developed by the DOE’s Office of Energy Efficiency and Renewable Energy (Fuel Cell Technologies Office), highlighted fuel cell electric vehicle hydrogen refueling protocols, which allow for a fast and safe fill at hydrogen refueling stations. J2601 standardizes hydrogen refueling protocols, allowing for safe fueling of all vehicles. The webinar covered how the document’s guidelines, developed using OEM hydrogen storage systems and third-party laboratory testing, establish a table-based approach that allows all OEMs to safely fuel vehicles within a few minutes.

SAE TIR J2601 establishes safety limits and performance requirements for gaseous hydrogen fuel dispensers. The criteria include maximum fuel temperature at the dispenser nozzle, the maximum fuel flow rate, the maximum rate of pressure increase and other performance criteria based on the cooling capability of the station’s dispenser. The document establishes fueling guidelines for “non-communication fueling” in the absence of vehicle communication and guidelines for “communication fueling” when specified information is transmitted from the vehicle and verified at the dispenser. The process by which fueling is optimized using vehicle-transmitted information is specified. The document also provides details of the communication data transmission protocol.

Nominate a deserving individual for an SAE award

As our most valued resource, those engaged in SAE’s mission are best qualified to identify outstanding achievements made by their peers. Look closely at those with whom you work. Honor their excellence and celebrate their dedication and consider nominating them for an SAE award related to the work of the SAE Standards Development process. Submit nominations at www.sae.org/awards. Need assistance with an award nomination? Contact the SAE Awards staff at awards@sae.org, 1-877-606-7323 (U.S. and Canada only) or 1-724-776-4970 (outside U.S. and Canada).

Arch T. Colwell Cooperative Engineering Medal
Nomination Deadline: July 1
This award recognizes a unique and outstanding contribution over a period of time to the work of the technical committees under the SAE Technical Standards Board in developing standards, specifications, technical reports, and data through cooperative research.

SAE Foundation’s Stefan Pischinger Young Industry Leadership Award
Nomination Deadline: March 31

Cliff Garrett Turbomachinery Engineering Award
Nomination Deadline: March 31

Max Bentele Award for Engine Technology Innovation
Nomination Deadline: July 1

J. Cordell Breed Award for Women Leaders
Nomination deadline: July 31

SAE Ground Vehicle Standards “On the Road”

A re-cap of recent and upcoming events at which SAE will participate

Keith Wilson, Ground Vehicle Standards Technical Project Manager, presented a synopsis of standard development activities within the 19 SAE battery committees and an overview of the Rechargeable Energy Storage System Cooperative Research Project for development of lithium ion battery safety standards at the National Alliance for Advanced Technology Batteries on January 17, 2013 in Austin, Texas. He did the same at the Advanced Automotive Battery Conference on February 4-8 in Pasadena, California.

Peter Byk and Keith Wilson, Ground Vehicle Standards Technical Project Managers, attended the SAE Government/Industry meeting in Washington D.C., January 30 - February 1, to discuss SAE standards development activities and technical projects with both government and industry representatives.

Jesse Schneider, Chair of the SAE Wireless Charging (J2954) Committee, presented an overview of the SAE standard development activities pertaining to wireless EV/Hybrid vehicle charging at the Conference on Electric Roads and Vehicles in Park City, Utah on February 4-5.

Gary Pollak, Ground Vehicle Standards staff member, attended the annual Mobile Air Conditioning Society Worldwide Conference in Orlando, Florida, February 5-8, and spoke at their Automotive Aftermarket Board panel session, presenting the SAE MAC Database Conformance Program. He also participated in the SAE R1234yf CRP meetings and presented SAE patent conditioning and MACdby Program details to the members at the SAE ICCSC Standards Group meeting (both of which were held in conjunction with the MACS Worldwide Conference).

Robert Galyen, Chairman of the SAE Vehicle Battery Standards Steering committee will discuss committee activities at Lithium Battery International Summit in Shenzhen, China on April 11.

Gary Pollak will attend the SAE Lighting Forum in Savannah, Georgia, April 30 – May 1, and present the paper “SAE Ground Vehicle Conformance Programs – Framework and Overview.”


Keith Wilson will attend the NHTSA Enhanced Safety of Vehicles Conference, May 27-30, in Seoul, Korea. He will discuss SAE advanced safety standards development activities and technical projects with both government and industry representatives.

An economical pathway for joint venture research: the Cooperative Research Program of SAE

Cooperative research ventures serve to bring more minds to the challenges and issues faced by industry. The result is a more robust project than each participating organization could complete independently. The pooling of financial resources also affords each participant more efficient use of their research budgets and eliminates duplication of efforts. Whether moving forward on the development of fuel cell standards…researching alternative refrigerants…or developing a database of human body measurements to foster ergonomic designs, SAE’s Cooperative Research Program can assist your company in its collaborative research needs.

To learn more contact Gary Pollak, Program Manager +1-724-772-7196; gary@sae.org

Upcoming Standards Technical Committee Meetings
A current schedule can be found on the SAE website.
http://www.sae.org/standards/
Thank you ... for your corporate contributions to the 2012 SAE Ground Vehicle Standards Development Program

SAE International acknowledges the following organizations that have funded the standards program this past year—supporters who acknowledge the benefits common engineering requirements bring to industry and their business.

General Motors LLC
Chrysler Group LLC
American Honda Motor Co. Inc.
Delphi Corp.
BMW of North America LLC
Toyota Motor Corp.
Nissan
DENSO International America Inc.
Navistar Inc.
East Penn Mfg. Co. Inc.
Curt Manufacturing
Elite Electronic Engineering Inc.
Eaton Corp.
Electric Power Research Institute
Sew Eurodrive

Cequent
Yamaha Motor Corp. USA
Coleman Cable Inc.
AM General LLC
Transportation Safety Tech Inc.
Association of Equipment Manufacturers
L E Jones Co.
Grote Industries LLC
Ford Motor Co.
BorgWarner Inc.
TARDEC
Bendix Commercial Vehicle Systems LLC
Electronics Inc.

Contact mdoyle@sae.org

SAE standards and papers no longer “locked down” by DRM security

Effective Feb. 14, customers purchasing SAE International technical papers, standards and some eBooks, no longer will need to have the Digital Rights Management (DRM) FileOpen plug-in to access the documents.

“This is a natural progression in SAE International’s digital information strategy,” Michael Thompson, Manager of Electronic Publishing for SAE International, said. “SAE International offers a tremendous amount of useful and relevant technical information for mobility engineering professionals, and we want to make it more easily accessible.”

All electronic document purchases can be downloaded directly from the SAE website without the need to install FileOpen Plugin. As an additional benefit, SAE will retain copies of your purchased document in a personalized MyLibrary account, available via our website. This will enable customers to recover any documents lost due to hardware replacements or files being corrupted.

Available documents include: SAE Technical Papers – 1906-present; all current SAE Ground Vehicle Standards (SAE J-Reports); all current Aerospace Material Specifications (SAE AMS); and all current Aerospace Standards. The next step in this process will be the launch of SAE International’s “MyLibrary Mobile Apps” which should be available in the March/April timeframe. The new app will offer a new delivery channel for customers to access products and services via mobile-friendly technology.

SAE standards harmonization projects discussed at transatlantic roundtable

The event brought together technical experts from industry, government, and other stakeholders to discuss standardization priorities for electric vehicles (EVs). The cooperative efforts among groups such as SAE International, the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO), and Underwriters Laboratories, Inc. (UL) were discussed.

SAE International acknowledges the following organizations that have funded the standards and harmonization projects covered at the meeting included the SAE J1772™ combo coupler for AC and DC charging, a common standard supported by most global automakers, which involves close cooperation between SAE, ISO, and IEC. Work that is underway to harmonize relevant IEC and SAE standards on vehicle to grid communications was also covered.

SAE: A Global Partner in Standards Development

In addition to the maintenance and development of its family of technical standards, SAE International is also an active partner with other standards development organizations, government agencies, and regulatory bodies to support the newest, most robust, and comprehensive standards products for a changing global marketplace.

• US Department of Transportation
• Society of Automotive Engineers of Japan (JSAE)
• German Electrical and Electronic Manufacturers Association (ZVEI)
• US Federal Highway Administration
• China Automotive Technology & Research Center (CATARC)
• National Highway Traffic Safety Administration
• Korean Agency for Technology and Standards (KATS)
• US Department of Energy
• Japan Automobile Research Institute (JARI)
• US Environmental Protection Agency
• Brazilian National Standards Organization (ABNT)
• American National Standards Institute (ANSI)
• Automotive Electronics Council (AEC)
• International Organization for Standardization (ISO); US representative

Standards Consortium Administration

With over a century of experience providing the common engineering requirements for new mobility vehicles, SAE can be a key component in developing any consortium-based activity, providing the expertise and worldwide technological and human resources to help you turn your vision into a successful operating reality.

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Contact mdoyle@sae.org
Support standards. Enabling industry to produce vehicles with optimal quality, safety and efficiency.
Volunteer recognition: document sponsors (Jan 1 – Mar 1, 2013)

These following individuals have served as active committee members and have dedicated their time and talent in guiding the development of standards documents from the preparation of all drafts through balloting and publication.

Thank you.

Carlos Agudelo, Link Engineering Company
Dave Archer, Archtype Joint LLC
Joe Badger, JBI Corp
Brent Bailey, Eaton Corp
Jeffrey Bauer, John Deere Dubuque Works
Michael Beebe, Humanetics Innovative Solutions Inc
Colman Byrne, Kestal Ireland GmbH
Vern Caron, Caron Engineering Inc
Jack Champagne, Electronics Inc
Paul Clark, TSE Brakes Inc
William Collins, UTC
Alien Comfort, US Army TACOM
Oscar Cordo, Atlas Material Testing Technology LLC
Timothy Duncan, Link Engineering Company
Donald Floyd, General Motors LLC
John Fragnoli, General Fasteners Co
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Lee Lackey, Noregon Systems Inc
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John Lenkeit, Dynamic Research Inc
James Lewis
Robert Mackey, Main Manufacturing Products
Todd Mackintosh, General Motors
Joseph McNally, Magna Powertrain USA Inc
Mark Mcgory, Jamac Inc
Anthony Moore, Damier Trucks North America LLC
Luis Moreiras
Steve Neva, Bobcat Company
Timothy Neveaux, Continental Automotive Systems
US Inc
James O’Brien, NRG Dynamix
Kevin Peascoc
David Poirier, TI Automotive
Galien Ressler, General Motors LLC
Monique Richard, Toyota Motor Engineering & Mfg NA Inc
James Rose, ARC Automotive Inc
Stephen Routhan, Ford Motor Corp
Robert Schade, Thru-Line Manufacturing Co
Richard Scholer, Chrysler LLC
Donald Smolenzki, Evonik Oil Additives
Ronald Strong, Doerken AG
Mark Swanson, Walbro Engine Management
James Szudy, Bendix Commercial Vehicle System LLC
Angelo Tsagali, Johnson Controls Inc
Steven Ulrich, Lear Corporation
Jim Vizanko, Yamaha Motor Corp USA
George Waterman, G Waterman Consulting LLC
Rumcy Weires, John Deere C&P
Daniel Williams
Scott Willis, Ford Motor Co
Lee Yaoco Yang, Oshkosh Corporation
Garold Yurko, TE Connectivity
Mark Zchos, DG Technologies

SAE standards development committees seek members

The Truck and Bus Active Safety Systems Committee of the Truck and Bus Council is looking for suppliers of lane departure systems for heavy vehicles, members of academia related to advanced/active safety systems, and those in the motor coach/ highway coach, urban transit, city bus) area to become members of the committee.

This committee is responsible for developing, reviewing, and approving Recommended Practices, Standards, Draft Technical Reports, Technical Data Reports and Information Reports related to all types of active safety systems with their interfacing with operators and other vehicle systems. Active safety systems include vehicle/operator warning systems (such as lane departure, collision warning, pedestrian/object recognition systems) and proactive safety systems (such as adaptive cruise control, pre-crash system actuation, collision mitigation systems, and automatic system control systems). The initial committee focus will be on vehicle/operator collision warning systems, collision mitigation and the collision intervention systems.

If you are interested in participating in this committee, or for more information, contact Jana Wright at giysta@saev.org.

Also looking for experts involved in Vehicle Connectivity; Electric Vehicles; Automated Vehicles; and Safety/Human Factors (i.e., Driver Vehicle Interface, HMI, Cybersecurity, Collision Avoidance). For specific opportunities related to these areas contact SAE at http://www.sae.org/standardsdev/participationreqs.htm

Volunteer spotlight: SAE Awards – Congratulations!

2012 Arch T. Colwell Cooperative Engineering Medal
Dr. David A. Lamb, US Army TARDEC

This award recognizes a unique and outstanding contribution over a period of time to the work of the technical committees under the SAE Technical Standards Board in developing standards, specifications, technical reports, and data through cooperative research. Dr. Lamb has or is serving on the following SAE standards committees: Quality, Reliability and Robust Design Committee; Materials, Processes and Parts Council; Ground Vehicle Reliability Committee (Chair); Terrain Modeling Task Force (Liaison); Condition Based Management Subcommittee (Liaison); On-road Automated Vehicle Standards Committee; and G-11 Reliability, Maintainability, Supportability and Probabilistic Methods. He will be presented the award at the 2013 SAE International World Congress in April.

CONAGG Council Certificates of Appreciation
John Koutsy, Sears Mfg Co, HFTC4, Operator Seating and Ride Committee
Chuck Crowell, Caterpillar, Inc, Human Factors Technical Advisory Group
Walter Ross, Retired, Construction Agricultural and Off-road Machinery Council and Committees
Leland Warren, Cambric Corporation, Construction Agricultural and Off-road Machinery Council and Committees

Engineering Aids from SAE

SAE provides products that support testing procedures set forth in SAE standards, Recommended Practices, Information Reports, and other SAE documents including the OSCAR H-Point Machine, which is used in the design of seating and interior packages and in conjunction with SAE J 826 (rev. 1996), FMVSS regulations, and ISO standards—making it the required design and auditing tool for current production.

Also available is the newly designed HPM II H-Point Machine, which includes enhancements over the OSCAR H-Point machine for use in advance design applications.

Available at http://store.sae.org/ea/
### New, revised & stabilized SAE standards (Dec – Mar 1, 2013)

#### Committee | Doc | Title | Status | Pub Date
--- | --- | --- | --- | ---
**CONSTRUCTION, AGRICULTURAL AND OFF-ROAD MACHINERY COUNCIL**
Hydraulic Systems
- J1227_201302 Assessing Cleanliness of Hydraulic Fluid Power Components and Systems Revised 02/11/13
- J744_201302 Hydraulic Pump and Motor Mounting and Drive Dimensions Revised 02/04/13
Electrical Components and Systems
- J1399_201302 Electrical Protection Control - Off-Road Dumpers STABILIZED 02/21/13
- J1377_201302 Electrical Protection Rotating Equipment - Off-Road Dumper STABILIZED 02/21/13
- J181_201301 Power Cable Terminals STABILIZED 01/18/13
- J1006_201302 Electrical Grounding Practice STABILIZED 02/21/13
Machine Displays and Symbols
- J115_201211 Safety Signs for Off-Road Work Machines Revised 11/09/12
Machine Technical Steering Committee
- J1116_201301 Categories of Off-Road Self-Propelled Work Machines Revised 01/02/13
Loaders, Crawlers, Scrapers and Mounted Attachments
- J295_201211 Nomenclature - Hydraulic Hoses Revised 11/01/11
Frostays and Logging Equipment
- J1924_201302 Specification Definitions - Chain Bunk Skidder STABILIZED 02/11/13
Telescoping and Horizontal Earthborning Machines
- J2520_201301 Classification, Nomenclature, and Specification Definitions for Directional Drilling Tracking Equipment Revised 02/02/13
- J2583_201302 Directional Drilling Planning and Mapping Nomenclature Revised 02/13/13
**FUELS AND LUBRICANTS COUNCIL**
Fuel and Lubricants TC2 Industrial Lubricants
- MS1010_201302 Lubricants, Industrial Oils, and Related Products - Classification Revised 02/11/13
- MS1010_201212 Lubricants, Industrial Oils, and Related Products Type T Turbine Oils - Specification Revised 12/18/12
**MATERIALS, PROCESSS, AND PARTS COUNCIL**
Surface Enhancement Committee
- J442_201302 Test, Shop, Hold, and Gage for Shot Peening Revised 02/18/13
Fasteners Committee
- J199_201302 Mechanical and Material Requirements for Metric Externally Threaded Steel Fasteners STABILIZED 02/19/13
- J476_201302 Drawn Pipe Threads STABILIZED 02/01/13
- J493_201302 Rod Ends and Clevis Pins STABILIZED 02/25/13
- J502_201301 Mechanical and Quality Requirements for Machine Screws Revised 01/09/13
- J503_201301 Mechanical and Quality Requirements for Tapping Screws Revised 02/25/13
Hydraulic Hose and Hose Fittings Committee
- J1417_201302 Clip Fastener Fitting Revised 02/13/13
- J187_201302 Hydraulic Hose STABILIZED 02/08/13
- J1817_201301 Hydraulic Flanged Tubing, Pipe, and Hose Connections, 4 Screw Flange Connection Part 1: 335 MPa to 25 MPa (Code 61) Issued 01/02/13
- J1816/2_201301 Hydraulic Flanged Tubing, Pipe, and Hose Connections, 4 Screw Flange Connection Part 2: 42 MPa (Code 62) Issued 01/02/13
Metallic Tubing Committee
- J2561-1_201302 Recommended Practices for Fluid/Conductor Cabon, Alloy and High Strength Low Alloy Steel Tubing Applications - Part 1: Design and Fabrication Revised 02/21/13
- J2561-2_201302 Recommended Practices for Fluid/Conductor Cabon, Alloy and High Strength Low Alloy Steel Tubing Applications - Part 2: Several Specifications and Performance Requirements Revised 02/21/13
- J2561-3_201302 Recommended Practices for Fluid/Conductor Cabon, Alloy and High Strength Low Alloy Steel Tubing Applications - Part 3: Procurement Revised 02/21/13

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**NEW, REVISED & STABILIZED SAE STANDARDS (DEC – MAR 1, 2013)**

**SAE**

http://www.sae.org/standards/

A current schedule can be found on the SAE website.

**Upcoming Standards Technical Committee Meetings**

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<td>Handbook for Robustness Validation of Automotive Electrical/Electronic Modules</td>
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<td>Rated Performance Test - Capacitor Performance - Multi-Purpose Vehicle and Light-Duty Trucks</td>
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<td>PEV Communicating as a Distributed Energy Resource Hybrid and EV First and Second-Responder Recommended Practice</td>
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<td>SAE Electrical Energy Storage Device Labeling Recommended Practice</td>
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<td>Measurement of Exhaust Sound/Pressure Levels of Stationary On-Highway Motorcycles</td>
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Gain a competitive advantage. Impact your bottom line. Invest in standards.

Standards. The workhorse documents that harmonize practices, processes, and products throughout the ground vehicle industry are also paramount to the advancement of technology. Standards documents are more than the practices of today. They account for history and anticipate the future of technology, regulation, and business. The direct benefits of standards are simple in concept but extraordinary in their global impact toward ever-safer, cleaner, more efficient worldwide transportation.

Technical standards enable and enhance:
- consistent and clear expectations for product performance and reliability
- regulatory compliance
- consistent product quality
- compatibility and interoperability
- more efficient procurement

Standardization also:
- lowers trade barriers
- lowers purchasing costs
- decreases design time
- promotes innovation
- increases new technology speed to market

Because industry can rely on standards for globally harmonized solutions to common issues, individual companies can devote more time and resources to advance their proprietary technology. In this way, standards help foster competition, which advances the collective technology of industry and in turn, creates the need for new and revised standards. This has been the cycle for ground vehicle standards solutions.

And, at the heart of those solutions is SAE International, the recognized leader in mobility engineering for over 100 years. It plays the central role in developing North American automotive standards and a key role in bringing US documents to the global standards table, working hand-in-hand with the global community to advance industry.

While participation in the standards development process helps the advancement of the industry it can also contribute to the advancement of your company and personal career.

Corporate Benefits
- Input into the direction of the standards
- Competitive intelligence through advance knowledge of standard direction
- Advance warning of pending regulations and influence over the technical basis of the regulation
- Insight into the competitive environment
- Product liability protections
- Strong relationships with customers and suppliers
- Association with the leading society for advancing mobility technology

Individual Benefits
- Professional development from continuous working contact with peers
- Peer recognition for advancing your industry’s sectors technologies
- Excellent networking and learning opportunities from product developers/users around the world
- Discover emerging technologies
- Contribute to the industry’s body of technical knowledge

To learn more about SAE Technical Standards Development—and for a schedule of Technical Committee meetings—visit us on the web at http://www.sae.org/standards/

Become a better you. Volunteer for an SAE Standards Development Committee.