

Section Web Site: www.sae-arizona.org - Sign up for your newsletter on our website.

HIGHLIGHTS...

- The New Packard
- Coffee Talk: 1929 Packard
- Message from the Chair
- Summer Board Activities
- The Hydrogen Infrastructure
- Nissan Hybrid and Fuel Cell Vehicles
- Electronic Newsletter

Dinner Presentation...

The New Packard

Presented by
Roy Gullickson

The Packard name has been synonymous with fine automobiles for over 100 years. In the glory days of the American automobile industry, Packards became the choice of people who demanded, and could afford, the finest, in terms of luxury, style and reliability. Packards were sometimes referred to as the American Rolls Royce, but were considered superior in many ways. They became the chosen conveyance of Presidents of the United States, the Royal Families of Japan and other countries, of judges and movie stars, and successful people all over the world. For many years the least expensive Packards were dearer than the most expensive Cadillacs and yet they outsold Cadillac until 1950.



Roy Gullickson stands beside the New Packard Prototype that will be on display at the September meeting.

A better name than Packard could not have been chosen for a modern ultra-luxury American automobile. The name Packard still has an aura and mystique which brings to mind classic styling, brilliant engineering, top performance, and the era when American cars were the best in the world.

Packard Motor Car Company was incorporated in Arizona to create, develop, produce and market a modern Packard automobile - at a profit. It is our objective to produce an automobile which reflects the best of the Classic Packards; state-of-the-art technology, materials and engineering, that

they perform superbly with power and sensitivity.

It is critical that it look like a Packard

At the Packard Motor Car Company office, we have received hundreds of faxes, e-mails, phone calls, and letters from all over the world, requesting information and asking about ordering The New Packard. There is a great deal of excitement and anticipation for having Packard Automobiles available. People remember the Classic Packards and want to see Packards on the road again!



September CoffeeTalk... 1929 Packard Limousine by William W. Spragins

The Coffee Talk speaker for the September meeting will be William W. Spragins. Bill is a retired engineer with AlliedSignal Aerospace Corp (now Honeywell). He owns a 1929, Model 633, 7 passenger Packard Limousine, which has been meticulously restored. It is powered by a straight eight engine. Bill will speak on the restoration process, and will have the car on display.



DATE	TIME	LOCATION	COST	With Dinner	Presentation Only
September 16	Social	- 6:00 pm	Holiday Inn (Phx Airport)	Members - \$20	\$10
	Dinner	- 7:00 pm	44th St. & Washington	Guests - \$25	\$10
	Presentation	- 8:00 pm	602-273-7778	Students - \$10	no charge

RSVP by 2:00 pm Monday Sept 13. Call Bob Riley: 623-872-3475

Message from the Chair

Welcome to the beginning of another great season for the SAE Arizona-Nevada Section. Your Governing Board has been working hard this summer to put together another exciting schedule of programs for this year that should have something for everyone.



Kevin Willson in Dodge Viper.

The strength of the Arizona-Nevada section continues to grow, building on the momentum of the past two years and relying on the successful history this section has in Arizona and Nevada. We are fortunate to have on our Board two of the founding members of the Arizona-Nevada section and appreciate all that they do for the section. If you get a chance to meet them at a dinner meeting, please give a 'Thank You' to Howard Daudet and John Lester for their dedication and commitment to this section.

This year we start off with an introduction of the rebirth of the Packard automobile and the vision of Roy Gullickson, the man working to make it happen. This should be an exciting presentation with a good look at Roy's prototype for this endeavor, which from what I here is already production worthy. Along with the new Packard, we were able to convince long time supporter of the section Bill Spragins to bring out his 1929, Model 633, 7 passenger Packard Limousine. Bill has meticulously restored this fine automobile and enjoys showing it off when he can. I hear it has been used in a few weddings in the area.

The schedule continues to fill up with presentations on: Hydrogen refueling stations, from Pinnacle West; the Ford Hybrid Escape SUV, from Ford Motor Company; Tire Technology, presented by Michelin; the new Chrysler 300C; the new Boeing 7E7; and a presentation from Harley-Davidson motorcycles. In the works is also a tour of the Caterpillar Proving grounds outside of Tucson where the 2005 Mini-Baja 100 will be held. The board is still looking for more activities to add to the schedule. If you have any ideas or interests that you would like covered, please give us a call.

Thanks to all of you who have helped out during the summer and attended board meetings to give input and help plan this year's events. I look forward to seeing many of you at the September meeting. It promises to be a great beginning to another successful SAE season.

Kevin Willson

Summer Governing Board Activities

Your SAE Governing Board, under the leadership of our new Chairman, Kevin Willson, has been meeting regularly over the summer months in preparation for the 2004-2005 Section year. We have several new members of the Board, and, as always, we welcome input and participation from all members. If you have ideas and/or contacts for future meetings, please contact any member of the board.

We have a good lineup of meeting planned for the year, including at least one field trip. This Newsletter highlights the September kickoff meeting, which appears to be an outstanding program. We hope that you are making plans to attend the Packard meeting, featuring the New and the Old!

Our treasurer has expressed some concern about our finances the upcoming year. Please understand that we are in good financial shape, with a very adequate reserve, but we want to stay that way. It has been suggested that we take a critical look at our total financial picture, including meal pricing, so that we can adequately fund our total program, including support of SAE student programs, A World in Motion (AWIM) project, and the work of the International SAE Foundation. In that light, we had extensive discussions on establishing a pricing structure for the coming program year.

We feel that the prices charged for the meeting should cover not only the meal cost, but the ancillary costs in providing the program itself. So the "value for your buck" gives you not only the meal, but valuable and interesting technical input from the presenter; plus the fine fellowship and networking with like-minded SAE members and guests.

Based on the above rationale, we have decided to implement the following pricing structure, based on the increased meal cost, and the program benefits outlined above:

For the dinner and technical meeting:

Member, Spouse - \$20

Non Member Guests - \$25

Student Member - \$10

For the technical meeting only:

Member, Spouse - \$10

Non Member Guest - \$10

Student Member - No Charge

Of course, we encourage our non-member guests to join us as members. This is a given. But if you choose not to become a member, the added \$5 in your cost is still a great value, in that over the course of our eight meetings, the added cost is only about half of what your dues would be. There are added benefits of membership, of course, including the SAE Automotive or Aerospace magazines, free registration at national or international congresses, and networking with industry members throughout the world. Membership gives you all these added benefits, plus saves you the \$5 added

charge for each of our section meetings. To support our future members, we are keeping the student member price at \$10.

Also, members, non-members, and students alike, keep in mind that once you make a reservation for dinner, and we make that guarantee to the hotel, we pay for that dinner. We don't like to buy meals that no one eats, so please call in a cancellation if you find that you cannot attend.

We think that you will enjoy and benefit from our programs this year. We hope that you put the dates on your calendar and plan to attend.

For the Governing Board
Kevin Willson, Chairman
John Lester, Treasurer

October Program... The Hydrogen Infrastructure

In October, Ray Hobbs of Pinnacle West will give us a presentation on options for a hydrogen infrastructure. Pinnacle West is a leader in the field of energy generation and supply, and they are also involved in developing technologies and plans for supplying hydrogen for transportation.

Pinnacle West Energy is the wholesale generating subsidiary of Pinnacle West Capital Corporation (NYSE: PNW), a Phoenix-based company with consolidated assets of approximately \$7 billion. Through its subsidiaries, the company generates, sells and delivers electricity and sells energy-related products and services to retail and wholesale customers in the western United States. It also develops residential, commercial and industrial real estate projects. In October, we'll get the latest on how a hydrogen supply infrastructure is likely to take shape.

The Coffee Talk session for October, arranged by Derek Logan, will include a look at Nissan's new hydrogen fueled vehicle.

Nissan Hybrid and Fuel Cell Vehicles

The Nissan X-Trail FCV is a high-pressured hydrogen-powered vehicle that delivers clean power, without noxious emissions. It employs elements of a variety of technologies, including electric vehicle (EV), hybrid electric vehicle (HEV), and compressed natural gas vehicle (CNGV) technology. It is equipped with a compact, high-performance lithium-ion battery pack, already being used on the Nissan Hypermini electric vehicle and other alternative fuel vehicles, powering a Super Motor.

At the core of the X-Trail FCV is the Nissan-exclu-

sive Super Motor. The innovative Super Motor can achieve dramatic improvements in compactness and efficiency compared with the use of two motors. Additionally, it controls the power of each shaft separately, making it possible to drive right and left independently, enhancing dynamic performance and stability. One motor package also incorporates the dual functions of a motor and a generator.

The Super Motor can be utilized in a wide variety of applications, including on fuel cell vehicles and hybrid vehicles, which benefit from the use of its generator function.

Like any proper SUV, the X-Trail boasts all-wheel drive. An outgrowth of Nissan hybrid car research applied in the March and Cube, the e-4WD is a compact, lightweight four-wheel drive system. Sensors perceive the amount of slip in the front wheels, applying electricity as needed to an electric motor driving the rear wheels. It provides the increased fuel economy of on-demand 4WD and eliminates the heavy propeller shaft and transfer case normally needed to supply power to the rear wheels.

New Production-Oriented Hybrid

Nissan recently unveiled a prototype of the 2007 Altima Hybrid, a hybrid vehicle based on the Altima mid-size sedan. The car is scheduled to be launched in 2006 for the US market.

Featuring the unique combination of Nissan's four-cylinder gasoline engine and new hybrid system components supplied by Toyota Motor Corporation, the Altima Hybrid is a new generation hybrid vehicle, which achieves the acceleration performance of V6 engines with fuel efficiency higher than compact cars.

Hybrid vehicles available today are mostly equipped with rather small motors focused on environmental performance. However, the Altima Hybrid is a breakthrough model, which provides new feeling of driving pleasure to customers with its dynamic acceleration performance, while minimizing the impact to the environment at the same time.



Nissan Altima Hybrid planned for introduction in 2006 (left) and X-Trail Fuel Cell Vehicle (right).

THE UNIVERSITY OF ARIZONA
Announces
THE 42nd ANNUAL
RELIABILITY ENGINEERING AND
MANAGEMENT INSTITUTE
November 15-18, 2004
In Tucson, Arizona

INSTITUTE OBJECTIVES

To provide all engineers, and particularly Reliability Managers and Engineers, and Product assurance Managers and Engineers in government and Industry, with a working knowledge of Reliability Engineering Theory and Practice; Mechanical Reliability Prediction; Reliability Testing and Demonstration; Accelerated Testing; Failure Analysis Techniques; Complete Industry Product Assurance; Maintainability; Quality Management; Concurrent Reliability; World Class Manufacturing Techniques; Variability Reduction; Customer Satisfaction Strategies plus many more! Numerous practical applications of these methodologies will be presented. This Institute will also prepare and help participants with their ASQ CRE Examination.

STAFF

Dr. Dimitri B. Kececioglu, Professor of Aerospace and Mechanical Engineering, Professor-In-Charge Reliability Engineering Option, The University of Arizona, Fulbright Scholar, Internationally Renowned Educator, Reliability and Maintainability Consultant, and the Director of this Institute, plus 10 speakers from 15 sponsoring industries will take part in expertly covering the subject matter of this Institute.

For Detail and Technical Information, Please Write To:

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Meeting Schedule

October 21	- The Hydrogen Infrastructure
November 18	- The New Chrysler 300C
December	- No Meeting
January 20	- Ford Escape Hybrid
February 17	- Automotive Tire Technology & Testing
March 17	- Harley David Motorcycle
April 21	- The Boeing 7E7
May 19	- Product Liability Issues

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