

# ARIZONA DRIVER

THE ENTHUSIAST'S GUIDE TO LIFE BEHIND THE WHEEL

VOLUME 5 NUMBER 1  
JANUARY-FEBRUARY 2006

## Mazda MX-5

JINBA ITTAI—BEING AT ONE

plus... Chevrolet HHR - Ford Hybrid Patrol  
Jeep Grand Cherokee - Ford Fumes-to-Fuel  
Annual Vehicle Checkup ...and more



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Of the 'Big Three' Russo and Steele has what is the most approachable and manageable event!

- Hemmings Motor News

6TH ANNUAL COLLECTOR CAR AUCTION  
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**2005 MONZA SPYDER CONCEPT PROTOTYPE**

A showcase from the Apollo Design Company of Mr. Milt Brown, this one of a kind concept car blends the passion and flowing lines of late 1920's Alfa Romeo's with modern mechanical components. Multiple show accolades include first in class at the San Francisco Rod and Custom show and a Concorso Italiano Feature car in 2005. Powered by a 227 hp BMW 325i engine and weighing in at just 2300 pounds, this prototype Concept is fitted with a full leather interior, Carpathian Elm wood dash complemented by a machined aluminum shifter gate and knob. In addition several magazines have featured this outstanding custom including Sports Car International.



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1968 CAMARO RS/55 396



1967 FERRARI 330 GT



1968 SHELBY GT500KR



1970 PLYMOUTH CUDA 440/6



1966 FERRARI 365 GT



1967 SHELBY GT500 FASTBACK



1970 FORD TORINO SCJ 429



1965 CHEVELLE Z16 #1



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1969 CHEVELLE RS/55 396

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**ARIZONA DRIVER**

THE ENTHUSIAST'S GUIDE TO LIFE BEHIND THE WHEEL

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COVER: Mazda MX-5. Photo courtesy Ford Motor Company.



It's a new year, and there's a lot of new stuff cooking in the driving world. January of course will be a busy time in Arizona, as the Russo and Steele, Barrett-Jackson, RM Classic and a couple of other auctions take place, generating their annual excitement and crowds, while no doubt driving the entry price into the collector vehicle world higher than ever. But between visits to these events and other midwinter busy-ness, it's not a bad time to see what's new in the marketplace. And there's a pretty wide spectrum of that presented in these pages, not only in the Auto News Update and Briefs & Rumors sections, but with test drives (along with pricing and specifications) for the ever-popular benchmark Mazda Miata... er, Mazda MX-5 as they've oddly renamed this nouveau classic roadster (at least for this year)... as well as Chevrolet's new HHR, which is not quite the Suburban SUV it's styled after, not quite a small car, not quite a crossover and not quite... well, it is partly all those, and partly something all its own. We also drive the Jeep Grand Cherokee, which continues to be refined and revised and is now grander than ever. We also report on the Ford Hybrid Patrol tour, which visited Phoenix in November, en route to crowning one of the nation's police departments the lucky recipient of a brand new Mercury Mariner Hybrid SUV; and while Phoenix was not the ultimate winner, a fun and educational time was had by all—even, we hope, by those who were unexpectedly pulled over by the police, in a surprise goodwill gesture. Ford has been working hard to gain "green" credibility, and it goes well beyond their vehicle lineup; here is a report on how they've vastly mitigated industrial impact at one of their Michigan plants, in a move



sure to be widely adopted. And we present ten tips from Shell's engineers, on how to avoid a sudden roadside breakdown with a simple annual checkup. Enjoy the ride.

Joe Sage  
Publisher/Executive Editor

# ARIZONA DRIVER

MAGAZINE

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Joe Sage

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# ARIZONA DRIVER

THE ENTHUSIAST'S GUIDE TO LIFE BEHIND THE WHEEL



**Where the roads are dry and the cars are slick.**

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## QUIZ : CAR SMARTS



1. When was lead finally phased out of gasoline?  
 a. 1975                      b. 1980  
 c. 1985                      d. 1990
2. What material is Chevrolet using to build the floors of the new Corvette Z06?  
 a. aluminum                b. balsa wood  
 c. magnesium               d. titanium
3. Other than oxygen, what gas can be used to inflate tires?  
 a. hydrogen                 b. helium  
 c. nitrogen                  d. argon
4. What automaker is buying 20 percent of Volkswagen?  
 a. DaimlerChrysler  
 b. BMW  
 c. Porsche  
 d. Renault
5. Which automaker is the only one currently selling dual-clutch gearboxes in the US?  
 A. Ford  
 B. DaimlerChrysler  
 C. Volkswagen/Audi  
 D. General Motors
6. Which brand of cars has the largest percentage of women as part owners of the dealership?  
 a. Chrysler group        b. Mazda  
 c. Subaru                    d. Suzuki
7. When was a first turbocharged production car sold in the US?  
 a. 1957                      b. 1962  
 c. 1969                      d. 1976
8. Which new car has the industry's first Dual Depth Airbags, which deploy in either of two sizes to adapt to the severity of the crash?  
 a. Hyundai Azera  
 b. Chevrolet Impala  
 c. Lexus IS 350  
 d. Cadillac DTS
9. The new 2006 Honda Civic is being built in how many countries around the world?  
 a. 3 countries              b. 6 countries  
 c. 10 countries            d. 13 countries

10. The run-flat tire was first made available on the Chevrolet Corvette in what year?  
 a. 1988                      b. 1991  
 c. 1994                      d. 1997
11. What is the average time a customer spends in a car dealership purchasing a vehicle?  
 a. 93 minutes                b. 177 minutes  
 c. 215 minutes              d. 288 minutes
12. Women make up what percentage of the smaller size Hummer H3 buyers?  
 a. 18 percent                b. 29 percent  
 c. 42 percent                d. 51 percent
13. When did Porsche start as an engineering company?  
 a. 1931                      b. 1948  
 c. 1962                      d. 1991
14. What percentage of Toyota dealerships sell Toyotas exclusively?  
 a. 43 percent                b. 54 percent  
 c. 66 percent                d. 78 percent
15. Where did Cadillac DTS designers hide the XM Satellite Radio antenna?  
 a. In the windshield  
 b. In the rear bumper  
 c. In the side door pillar  
 d. In the outside side view mirrors
16. What year did Volkswagen sell the largest number of Beetles?  
 a. 1966                      b. 1970  
 c. 1974                      d. 1978
17. What is the price tag on the new Bugatti Veyron EB16.4?  
 a. \$400,000                 b. \$800,000  
 c. \$1.2 million              d. \$1.6 million
18. What is the combined fuel economy level a car must achieve to for the new car buyer to avoid having to pay a Gas Guzzler Tax?  
 a. 20.5 mpg                 b. 22.5 mpg  
 c. 24.5 mpg                 d. 26.5 mpg
19. Which vehicle was used by the Stanford Racing Team to win first place in the DARPA (Defense Advanced Research Projects Agency) robotically-controlled race in October in the desert near Las Vegas?  
 a. Hummer H1  
 b. Volkswagen Touareg  
 c. Ford Escape Hybrid  
 d. a military vehicle
20. What percentage of new vehicle buyers are buying because their vehicle needs replacing?  
 a. 17.6 percent              b. 27.6 percent  
 c. 37.6 percent              d. 47.6 percent

21. Which new car is touting in their advertising that it is the first to spot weld aluminum to steel?  
 a. Ford Focus  
 b. Pontiac Solstice  
 c. Mazda MX-5 (Miata)  
 d. Volkswagen Jetta
22. During 2004, how many automotive related fatalities were attributed to convertibles rolling over?  
 a. 94 fatalities                b. 269 fatalities  
 c. 517 fatalities              d. 746 fatalities
23. When moving at 60 mph how many feet does a vehicle travel in one second?  
 a. 8.8 feet                    b. 88 feet  
 c. 880 feet                  d. 5,280 feet
24. What percentage of the US automobile market share did the Big 3 automakers control in 1955?  
 a. 58.7 percent              b. 69.5 percent  
 c. 82.8 percent              d. 94.5 percent
25. What company provides the platform for the new 700-hp Lamborghini Miura?  
 a. Audi                        b. BMW  
 c. Lotus                        d. Ferrari
26. Which state has the most miles of interstate highways?  
 a. California  
 b. Illinois  
 c. Pennsylvania  
 d. Texas
27. What percentage of new vehicle buyers are buying because they find a new model compelling?  
 a. 25.7 percent              b. 41.9 percent  
 c. 63.4 percent              d. 81.2 percent
28. How many songs have featured the word Cadillac in the lyrics since the brand started in 1903?  
 a. 2,000 songs                b. 5,000 songs  
 c. 12,000 songs              d. 25,000 songs
29. How many consecutive years has silver been the most popular color for new vehicles?  
 a. 1 year                      b. 3 years  
 c. 5 years                      d. 7 years
30. What year was the Highway Revenue Act passed paving the way for a dedicated source of funding for the Interstate Highway System?  
 a. 1944                        b. 1956  
 c. 1962                        d. 1970
31. When did the first production car get an airbag?  
 a. 1970                        b. 1975  
 c. 1980                        d. 1985

ANSWERS ON PAGE 8 >>

>> ANSWERS (quiz on page 7) >>

1. Answer: d. The process of adding lead to gasoline to prevent knocking was finally phased out in 1990.
2. Answer: b. To save weight Chevrolet engineers developed a sandwich of balsa wood between layers of carbon fiber to create a floor in the new Corvette Z06. It weighs 4.4 pounds less than the normal steel floor. They also discovered that the sandwich is also stronger than steel or aluminum.
3. Answer: c. Nitrogen is a dry, inert gas often used to inflate airplane tires, off-road truck tires, military vehicle tires, and race car tires for improved performance. Nitrogen advocates claim it helps extend tire life by up to 20 percent.
4. Answer: c. Porsche is spending an estimated \$3.6 billion to buy a 20 percent share in Volkswagen. Porsche and Volkswagen have a strong working relationship and have developed products together. Under German law the 20 percent stake will prevent a hostile takeover — something that has been rumored to be in the works.
5. Answer: c. Volkswagen/Audi is the only manufacturer currently selling a dual clutch transmission in the U.S. The dual-clutch system allows drivers to shift a manual transmission in an automatic mode and produce better fuel economy and shift faster than conventional manual or automatic transmissions.
6. Answer: c. According to the manufacturer's information, Subaru has the largest percentage (26.3 percent) of women who are listed as owners or part owners of their dealerships. Mazda — 22.2 percent. Chrysler — 19.8 percent. Suzuki — 19.6 percent.

7. Answer: b. General Motors introduced the first turbocharged production car in 1962. It was the rear-engine Chevrolet Corvair.
8. Answer: d. The all-new full-size Cadillac DTS luxury sedan has the industry's first Duel Depth Airbags which deploy in one of two sizes depending on the severity of the crash, seat belt usage and occupant seat position. The new Buick Lucerne uses the same system.
9. Answer: d. The new Honda Civic is being built in 13 countries worldwide. They are Brazil, Canada, China, England, India, Japan, Malaysia, Pakistan, Philippines, Thailand, Turkey, United States and Vietnam.
10. Answer: c. The run-flat tire was first made available on the Chevrolet Corvette in 1994.
11. Answer: b. According to the J.D. Power and Associates Sales Satisfaction Index study, the average buyer spends 177 minutes in a dealership to purchase a vehicle.
12. Answer: c. 42 percent of the new Hummer H3 buyers are women.
13. Answer: a. Even though Porsche started building cars in 1948, they existed as an engineering company since 1931.
14. Answer: c. 801 (66 percent) of the 1,212 Toyota dealers are exclusive and sell only Toyota products, as opposed to handling other brands.
15. Answer: d. Designers of the new Cadillac DTS hid the XM Satellite Radio antenna in the outside side view mirrors.

16. Answer: b. In 1970, VW Beetle sales reached the highest level with 569,182 Beetles sold that year.
17. Answer: c. The 250-mph Bugatti Veyron EB16.4 has a retail price of \$1.2 million. Company owner, Volkswagen expects to sell 50 of the ultimate super cars a year for the next six years. It has an 8.0-liter W16 engine rated at 987 horsepower and does 0 to 60 in 2.5 seconds.
18. Answer: b. As long as a car gets an unadjusted (combined) fuel economy rating of at least 22.5 mpg there is no Gas Guzzler Tax. Any new car falling below that level is levied with a tax that starts at \$1,000 if the fuel economy is at least 21.5 but less than 22.5. The rate gets progressively higher the lower the fuel economy is up to \$7,700 for cars getting less than 12.5 mpg. Trucks and SUVs are currently exempt from the tax.
19. Answer: b. A group from Stanford University used a diesel-powered Volkswagen Touareg fitted with all types of electronic equipment to win the DARPA race. The 132-mile race through the desert near Las Vegas had to be run by a vehicle totally on its own with no human intervention. The VW completed the rugged course in six hours and 53 minutes to win a prize of \$2 million.
20. Answer: a. According to CNW Marketing Research of Bandon, Oregon, 17.6 percent of new vehicle buyers are replacing a worn out or broken vehicle. That compares with 84.1 percent in 1990. advanced and innovative SUVs ever, the no frills and extras Nissan
21. Answer: c. The new Mazda MX-5 Miata claims, in their advertising, to have the world's first aluminum to steel spot welding."
22. Answer: a. According to the National Highway Traffic Safety Administration only 94 automobile fatalities were attributed to convertibles rolling over in 2004.
23. Answer: b. At 60 mph a car will travel 88 feet in one second.
24. Answer: d. According to Automotive News Data Center, in 1955 the Big 3 automakers had 94.5 percent of the U.S. market share. In 2004, that number has slipped to 58.7 percent.
25. Answer: a. Parent company Audi (Volkswagen) will provide the mid-engine chassis for the upcoming Lamborghini Miura. The chassis is the same one that will be used on the upcoming Audi Le Mans coupe.
26. Answer: d. Texas has most miles of interstate highways: 3,233.45. California has 2,455.74 miles, Illinois 2,169.53 miles, Pennsylvania 1,759.34 miles.
27. Answer: c. According to a CNW Marketing Research, 63.4 percent of the new vehicle buyers are buying because they find a new model compelling. In 1990, only 11.2 percent purchased for that motivation.
28. Answer: d. According to Cadillac, it has been featured in more than 25,000 songs since 1903.
29. Answer: c. According to paint manufacturer PPG Industries, silver has been the most popular color for the last five years.
30. Answer: b. In 1956, under Dwight D. Eisenhower, the Highway Trust Fund was created to serve as a dedicated source for the Interstate Highway System.
31. Answer: c. The first production car to have an airbag was the 1980 Mercedes-Benz S-Class.

The Car Smarts quiz includes news and trivia from industry sources, trade journals and consumer magazines compiled for *Arizona Driver* by **BILL & BARBARA SCHAFFER** of *Auto Digest*.

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## PORSCHE CAYENNE HYBRID

Dr. Wendelin Wiedeking, Porsche president and CEO, announced at the recent Frankfurt Auto Show that Porsche will build a hybrid version of its popular Cayenne SUV. The full hybrid system will allow the Cayenne to operate either on gasoline power, electric motor or in combination. The hybrid is being developed jointly with Volkswagen, the company that already builds a majority of the Cayenne. Porsche made no announcement about the price or the release date of the new hybrid. ▼



Porsche Cayenne Turbo S

Nissan Versa Hatchback



Gas is up, and small is back. The Nissan Versa, available in hatchback (above) or sedan form, will tackle the Honda Fit, Toyota Yaris and others.

## NISSAN ADS VERSATILE SMALL CARS

▲ Nissan has announced that it will produce a new Versa hatchback and sedan for the 2007 model year. With prices starting near \$12,000 the Versa is an international design which is built around a roomy, versatile interior and cargo area. The exterior designs are said to be "dramatic." Power will come from a standard 120-hp 1.8-liter DOHC four-cylinder engine with a Continuously Variable Transmission (CVT), which together produce an estimated combined fuel economy in the 38 mpg range. Both cars will be offered in several trim levels with available features like Intelligent Key, Bluetooth® Hands-Free phone system, satellite radio and a Rockford Fosgate-powered subwoofer. The Versa will be built in Mexico and distributed in North America, Japan, China and other markets under the Versa name. Watch for the hatchback in early summer 2006 and the sedan later in the year.

## FORD SPORT TRAC ON AGAIN FOR '07

After skipping over the 2006 model, the next generation Ford Sport Trac will debut in the spring of 2006 as a 2007 model based on the four-door new Explorer platform. With a body more than 400 percent stiffer than the previous version, it will have four-wheel independent suspension and two engine choices. The

standard engine is the 4.0-liter, 210-hp V-6 with a five-speed automatic transmission, while the optional 4.6-liter, 292-hp V-8 gets a six-speed automatic. Standard safety equipment includes stability control, roll control and anti-lock brakes. Side curtain airbags and four-wheel drive are both optional.

## EUROPEANS FAVOR UREA FOR DIESEL

First Mercedes-Benz and now BMW are placing their bets on urea to help reduce emissions in diesel-powered cars. Urea is an ammonia-like liquid that is sprayed into diesel exhaust systems to eliminate NOx from emissions. The challenge is that the urea tank needs to be filled periodically to maintain pollution-free emissions, which means the urea needs to be easily available like motor oil or window washing fluid. Automakers must also develop a warning system that alerts the driver when the liquid is about to run out. The vehicle will run without urea, but it will not clean the exhaust. Under consideration are warning systems that will allow the vehicle to "limp home" when the reservoir is empty, then not operate until the fluid is replenished.

## SIEMENS REINVENTS BRAKES

German auto parts manufacturer Siemens has developed an electronic brake system that eliminates the need for

hydraulic lines, anti-lock control units and brake boosters, which in turn reduces weight and makes installation much simpler. The company refers to the new system as the electronic wedge brake. It uses two small electric motors to move a wedge-shaped piece of metal which holds the brake pad against the rotor. Most other electronic braking systems have required a 42-volt electrical system, but the Siemens unit is able to do the job with a standard 12-volt system. The company says the electronic brake wedge will stop faster than conventional anti-lock brakes. One automaker is already showing interest in using the new system, but don't look for it on cars for another three to five years.

## NEW GOVERNMENT REGULATIONS

New government auto regulations went into effect at the start of the new model year, which was officially October 1. This year the most significant change is the requirement that new cars and trucks up to 10,000 pounds gross vehicle weight must have a tire-pressure monitoring system. The first year 20 percent of a manufacturer's vehicles already must have the safety devices. By September 1, 2006 the number goes to 70 percent and by September 1, 2007 all vehicles must

KEEP RIGHT >>

## LEXUS ADDS FWD VERSION OF RX 400H

Lexus now offers a front-wheel drive RX 400h hybrid SUV. The original all-wheel drive (AWD) version was introduced in April of 2005. With a combined 268 horsepower, the FWD is capable of 0 to 60 mph runs of 7.5 seconds. The EPA rates fuel economy at 33 mpg for city driving and 28 mpg on the highway. It is priced at \$44,660. The navigation system with rear back-up camera is now offered as an option on both models; previously it was standard equipment on the AWD model. Because of the equipment change, the AWD price has been lowered by \$2,350 to \$46,060. ▼

Lexus RX 400h



Toyota RAV4



Toyota RAV4, the original "cute ute," sets out to prove bigger can be cuter, while not abandoning the small ute niche this vehicle occupies in their lineup.

>> AUTO NEWS UPDATE - cont'd

have a tire pressure monitoring system.

Other new regulations include a step up in light-truck fuel economy standards, a second phase of new tailpipe emissions standards and the final phase in advanced airbag rules. Advanced airbags are designed to deploy congruently with the severity of a collision.

### THE PAUL MCCARTNEY LEXUS

▼ Lexus has built a special edition of its RX 400h hybrid SUV to promote its sponsorship of former Beatle Paul McCartney's US concert tour. The hand-

The McCartney Lexus RX 400h will definitely stand out in a crowd.



Painted exterior features a graphic representation of McCartney's 1962 Hofner bass guitar and his signature. The gasoline/electric hybrid model has a console resembling the pick guard on his guitar, and the seat panels are the same diamond-patterned fabric as his Vox AC30 guitar amplifier. The one-of-a-kind Lexus will be making the rounds at auto shows and will appear at the McCartney concerts before being given away for a charity fundraiser.

### CAMLESS ENGINE ON THE HORIZON?

For years, engine builders have worked to develop an engine that used electronic valves rather than having the valves opened and closed by a mechanical camshaft. French automotive supplier Valco says it has overcome technical challenges and will have a system ready for market within 14 to 16 months. According to Valco, their new system greatly reduces internal friction because there are fewer moving parts. Fuel economy could be improved by up to 20 percent over conventional engines, plus horsepower

and torque are improved, all because the engine doesn't have to drive the camshaft. Since the system requires changing engine architecture it will probably first be used on low-volume engines. High fuel prices have accelerated camless engine research, with several companies working to overcome the inherent problems. No automakers have yet indicated they will use the new technology.

### POWERFUL & LARGER TOYOTA RAV4

▲ The next generation Toyota RAV4 has some impressive specs for those interested in performance. Toyota's smallest SUV will be built from a new platform and is expected to be longer and wider inside, with enough space for a third row of seats. It rides on four-wheel independent suspension with MacPherson struts in the front and double wishbones in the rear. Optional power comes from a new 3.5-liter V-6 engine producing 268-hp, while the standard engine is a 166-hp four-cylinder. Fuel economy is better than on the previous model. The RAV4 arrives at dealerships in late December.

### STAY TUNED FOR iRADIO

By the first quarter of 2006, specially equipped Motorola cell phones will offer an iRadio option that allows users to link

KEEP RIGHT >>



Mercedes-Benz F600 Hygenius concept

## MERCEDES-BENZ CONCEPT FUEL CELL CAR

Shown originally at the Tokyo motor show, the four-place Mercedes-Benz F600 Hygenius uses an electric motor powered by a hydrogen fuel cell. The research vehicle has a theoretical driving range of 250 miles from a tank of hydrogen. The compressed hydrogen combines with oxygen in the fuel cell to produce electricity, which in turn drives the 115-hp electric motor. Excess power is stored in a lithium-ion battery that also recharges from regenerative braking. Mercedes plans to start producing a fuel cell vehicle sometime between 2012 and 2015. ▼

GMC Yukon



The new GMC Yukon (shown), Denali and Yukon XL, Chevy Tahoe and Chevy Suburban enter the room... and who could help but take notice?

>> AUTO NEWS UPDATE - cont'd

consumer home computers with their car stereos. The iRadio option allows users to download streamed music, talk and "podcasts" from home computers to phones attached by USB cables. Then the audio is played through vehicle radios using Bluetooth connections. The systems will play MP3, AAC and WMA audio files. The consumer will be able to pause, resume, fast-forward and rewind the content using the vehicle audio system controls. iRadio has made a deal with Universal Music Group to add acts like U2, Kanye West, Bon Jovi, Sheryl Crow and many other big names. The service will cost an estimated \$5 to \$7 per month. iRadio phones will cost about \$200 and the Bluetooth adapter will be about \$65. The service will have daily updates over cellular networks, plus automated delivery of timely materials such as traffic updates, sports and breaking news.

### SUZUKI HAS BIG EXPANSION PLANS

Suzuki has plans to triple sales in the US over the next five years with a bevy of new products, starting with the recently introduced 2006 Grand Vitara. By mid-2007 the XL-7 will grow up a bit. It will still offer a choice of five- or 7 passenger capacity and will be built on the same platform as the Saturn Vue. Power will

come from a 3.6-liter Japanese V-6. The Verona sedan is due for a remodeling in 2008. The versatile Aerieo SX will be replaced by a new sport crossover. This will be a front-wheel drive with a 2.0-liter four-cylinder engine with styling done by Italdesign Giugiaro. Suzuki and Fiat will start selling versions of the crossover in Europe in 2006. A hybrid version is also expected by 2008. By 2009 there will be a new sport utility-style wagon with front- and all-wheel drive, powered by a 3.6-liter twin-cam V-6. It's expected to be the same size as the Audi A4 wagon, but at a much lower price.

### NEXT FULL-SIZE GM SUV READY TO GO

▲ The next generation Chevrolet Tahoe and GMC Yukon have a clean evolutionary design that is intended to seem smaller but is actually a bit larger. The most impressive feature is the beautiful interior and instrument panel. Outside the skin is more aerodynamic, with a steeply raked windshield, wraparound fascias and big air dam all helping to establish the lowest drag in the industry for big SUVs. There will be six engine choices ranging from a 4.8-liter 290-hp V-8 up to a 400-hp 6.2-liter V-8. The popular engine will probably be the 5.3-liter V-8 with fuel-saving Displacement On Demand technology. That engine will also be available with an optional flex-fuel

capability, which will allow it to run on a fuel mixture of up to 85 percent ethanol. The timing on the big GM SUVs has been moved forward to help sagging sales of the current model. Look for them in the dealerships early in 2006.

### LIKE SOME COLORED SMOKING TIRES?

If you're tired of seeing the standard black smoke coming from your tires during a burnout, then you might want to check out the new Kumho Ecsta MX-C tires. By adding a chemical compound to the rubber compound, they are able to have the tires produce red or blue smoke. A yellow version is also on the way. The tires were developed initially for the Kumho sponsored Enjuku Racing Team to set them apart from the competition during drifting competitions. But the ultra high-performance tires needed to be offered to the public in order to be homologated for the drift competition, so Kumho started selling the tires to the public for \$1,995 each. The standard Ecsta MX tire sells for \$144.

### DEALER ADDS ASSEMBLY LINE SERVICE

Rahal Honda of Mechanicsburg, Pa. has designed and built an assembly line for routine service operations like oil changes, tire rotations, spark plug

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changes, etc. The Rahal assembly line is 150 feet long and 22 feet wide and can accommodate up to five cars at one time. As vehicles move from station to station, staffed by seven workers, various tasks are performed quickly. A 30,000-mile check up can be done in about 28 minutes, and that includes 22 checks and repairs plus a car wash. The process used to take up to 3 hours. The system saves the dealership money and save customers time. It was designed to work with Honda products, but will work with all other cars and light trucks, except for Hummer. They have applied for a patent and plan to sell the system to other car dealers around the country.

### CAR AND DRIVER AT 50: THE BOOK

There's a certain arrogance that oozes from Martin Padgett's coffee table book celebrating the 50-year history of *Car and Driver* magazine. Padgett does a great job capturing the mood from the magazine's start as *Sports Car Illustrated* through an evolution of regimes. The book has articles written by a who's who of auto writers and other notable characters who portray America's love of the automobile. The journey is benchmarked by a corresponding history of the world as graphic footnotes. The book is filled with wonderful reviews of the most significant cars of their time along with notable magazine highlights and covers.

The book talks about how *Car and Driver* at one time was unofficially considered to be the best magazine in the United States — that just happens to be about cars. While that comment may reflect the ego of the staff, a highly regarded journalism professor was known to say the same thing to his class some 30 years ago. The \$50 book is published by Filipacchi Publishing.

### HYUNDAI MINIVAN: ON-AGAIN

Since the beginning of the year Hyundai has announced the minivan, canceled the minivan and has now again decided to build a minivan for the US market. As early as June the fast-growing Korean automaker will launch the Entourage minivan. The company confirmed the final decision at a dealers' meeting late in October. The original plan was scrapped when planners determined they could not differentiate it enough from its sister

Kia Sedona. Hyundai officials explained they need a minivan to help reach aggressive sales goals. The Entourage will be a rebadged version of the Sedona, but with new front and rear fascias, instrument panel and instrument cluster. The Entourage, which will only be offered in a long-wheelbase version, will get a higher level of standard equipment, and probably a higher price, than the Sedona.

At the same dealer meeting Hyundai also confirmed they will build a stretched version of the Santa Fe SUV that will seat seven, powered by the same new 3.8-liter V-6 being used in the Entourage and in the new full-size Azera sedan.

### LINCOLN ZEPHYR AIMS HIGHER

Of the trio of Ford-branded mid-size sedans derived from Mazda6 underpinnings, the Lincoln Zephyr is shooting for a much higher-level market than its siblings the Ford Focus and Mercury Milan. While the Zephyr is based on the same platform and gets its front-wheel-drive power from the same 3.0-liter 221-hp V-6, Lincoln planners are counting on a unique luxury interior, suspension upgrades and sheet metal changes to justify an estimated \$8,300 premium charge. Targeted to compete with cars like the Cadillac CTS and Lexus ES 330, the Zephyr is expected to get a 3.5-liter V-6 engine at an undefined future date. An all-wheel drive option is planned for 2007, and a hybrid is rumored.

### SAAB LEFT OUT AS GM DUMPS FUJI

With General Motors selling off its share of Fuji Heavy Industries (makers of Subaru), Saab will be shortchanged on a new model. Saab was scheduled to get a version of the Subaru Tribeca crossover, but with the ownership change Saab will have to look elsewhere. The most likely donor is GM's European Opel Antara concept. That vehicle is targeted to provide a strong influence for the next generation Saturn Vue, so it could also be adapted for the Saab.

### GM IS WORKING ON THE HUMMER H4

With each new Hummer model being more successful than the last, General Motors officials aren't likely to stop expanding the brand soon. Plans are under way for the H4, which is expected to be a strong competitor for Jeep's off-

MazdaSpeed6



The MazdaSpeed6 offers a combination of performance, style, handling and price that should turn a few heads away from the familiar higher end.

road icon, the Wrangler. H4 plans call for a smaller hard-core off-roader. At present GM has not identified which GM chassis will be the donor or which engine will get the call, but the five-cylinder from the H3 is a likely candidate.

Robert Lutz, the vice president in charge of products, is rumored to be a strong supporter of the new H4. Lutz is the former head of Jeep, so he should know how to compete.

Further down the road there will likely be a softer side of Hummer for buyers who don't want to climb a mountain but are more comfortable just scaling a parking ramp at the mall.

### BMW FINALLY LETS OUT THE Z4 M

BMW will soon offer an M version of the Z4 roadster. Watch for a debut at the North American International Auto Show in Detroit, with arrival at dealerships by April. The Z4 M will get its extra 78 hp (over the existing 3.0 model) from the same 3.2-liter in-line six-cylinder used in the fourth generation M3. The 343-hp engine, with its six-speed manual transmission, should power the M Roadster from 0 to 60 mph in less than 5.0 seconds and to an electronically limited top speed of 155 mph. The roadster will also get a whole battery of enhancements to the suspension, brakes and steering to handle the extra power.

### FORD'S NEW V-6 WITH 6-SPEED AUTO

Ford recently introduced a powerful, economical new 3.5-liter V-6 engine. Initially rated at 250-hp, the engine will be attached to a new six-speed automatic transmission for use in at least five new Ford products, including the new Ford Edge and Lincoln Aviator crossover utility vehicles (CUVs) which debut this year. The new engine was designed to be adapted to different technologies including a hybrid drivetrain, direct-injection and direct-injection with turbocharging. Engine features include a high-pressure die-cast aluminum cylinder block with a forged-steel counterweighted crankshaft and variable cam timing. The base engine gets a Partial Zero Emissions Vehicle rating.

### MAZDASPEED6 TAKES ON 3 SERIES

▲ The MazdaSpeed6 is Mazda's attempt to offer a competitor for the BMW 3 Series at thousands of dollars less. A turbocharged 2.3-liter direct injection four-cylinder engine powers the Mazda through a six-speed manual transmission. Rated at 274-hp, the engine produces 0 to 60 mph acceleration in 6.2 seconds, while offering EPA fuel economy ratings of 20 mpg for city driving and 26 mpg on the highway. The four-door sedan is structurally reinforced to increase torsional rigidity by 50 percent. It uses an all-wheel-drive system with "active torque split"

which transfers power to all wheels at all times rather than being a front wheel drive that transfers power when needed to rear wheels. The MazdaSpeed6 has a base price of \$28,555, including shipping, for the Sport version and \$30,485 for the Grand Touring. A dealer-installed navigation system is also available.

### FORD AND MICROSOFT MOBILE OFFICE

Ford and Microsoft have jointly developed a rugged computer option for Ford F-series trucks starting in 2006. The computer provides office-like functions for contractors and others who use their truck as an office. The computer, built by Stargate Mobile, has voice activation, navigation, Internet access, the ability to receive credit card transactions and play MP3 discs through the truck's audio system. It runs on Microsoft XP software and can send and receive wireless messages using a Bluetooth connection. Input is done by a touch screen rather than through a conventional keyboard. At about \$3,000, the price may seem high, but with features like navigation (which is normally \$1,200 or more), the price is not out of line. ■

Auto News Update includes a summary of auto news from industry sources, trade journals and consumer magazines compiled for *Arizona Driver* by **BILL & BARBARA SCHAFFER** of *Auto Digest*.

# PULL OVER AND CHECK THIS OUT

On October 18, in Cleveland, Ford kicked off a 10-city tour to bring fuel-saving driving tips to communities nationwide, partnering with local police departments to challenge consumers to drive more efficiently. The Ford Hybrid Patrol tour will be touring the country informing people about hybrid technology and giving out valuable fuel economy tips. The tour came to metro Phoenix on November 15 and wrapped up on December 10 in Miami.

In most cities, including Phoenix, Ford teamed up with the local police department and give its officers a fuel economy clinic. The officers also participated in a 5-mile challenge, with the officer who received the best MPG nationwide winning a Mercury Mariner Hybrid for their department. Ford brought along a Fuel Economy engineer to answer all hybrid-related questions. The purpose of the tour was to dispel any myths about hybrids and to give people tips on how to get better fuel economy in their vehicles.

The Ford Hybrid Patrol program included both education and competition on fuel economy techniques. Local police officers—who often have high fuel-consumption rates themselves—patrolled the streets that day in new Mercury Mariner Hybrids. Joined by Ford's hybrid and fuel economy experts, their mission was to catch local drivers "in the act" of demonstrating fuel-saving practices with their vehicles, hybrid or otherwise.

At the sight of flashing lights and the sound of police sirens, the average driver's heart begins to race. But being stopped by a specially marked Hybrid Patrol vehicle was good news. Officers—along with Ford hybrid engineers—looked for drivers who avoid quick accelerations and decelerations, and travel at posted speeds, actions that help reduce fuel consumption. The "citation" issued was a BP gas card worth \$25, along with fuel-saving driving tips. Carpooling, driving a hybrid vehicle or displaying eco-friendly bumper stickers could also earn motorists a gas card.

A fuel-economy clinic also took place for the police officials in each community and included a "best-mileage competition" among officers. The officer earning the best fuel economy from each city had his department entered into a random drawing to win a 2006 Mercury Mariner Hybrid for their department. Officer Saladin Sudberry from the Cleveland Division of Police qualified his police force by earning 53.9 mpg. Cleveland, in turn, was randomly selected as the winner of the drawing. They received the keys to their new premium hybrid SUV on opening day of the 2006 Greater Cleveland International Auto Show. The vehicle will be used in their investigative transportation unit where hybrid benefits are most needed.

Ford also is donating \$2,500 to each local Police Athletic League to fund programs to keep children off the streets and out of trouble. ■



## HYBRIDS, SUSTAINABILITY AND ALT FUELS

Communities included in the Ford Hybrid Patrol effort included:

Cleveland .....	October 18
Chicago .....	October 20
Washington DC.....	October 24
Boston.....	October 27
New York .....	November 1
Dallas .....	November 10
Phoenix .....	November 15
Los Angeles .....	November 17
San Francisco.....	November 22
Miami.....	December 1

On November 10, the first of 81 Escape Hybrid taxis hit the streets of New York City. Ford's hybrid and fuel-cell vehicles—as well as its Sustainability Lab in Dearborn—appeared in a Fox Network one-hour documentary about global warming that aired on November 13. Ford and VeraSun Energy Corporation announced a joint initiative in October, to promote ethanol infrastructure in up to three markets. The project will convert gasoline fuel pumps at current retail locations to E85 fuel, a key step toward development of more efficient, clean and renewable biofuels that can provide energy security as well as environmental benefits. The federal government has recently approved incentives to increase the use of ethanol in the United States.

"Hybrids are going to be hugely important to the company in the next 10 to 20 years, and I don't think it's inconceivable that every vehicle at some point will have some type of hybrid technology in it," said Nancy Gioia, head of Ford's Hybrid Vehicle Programs. "The work we're doing in hydrogen fuel cell, internal combustion engines, diesel and advance gas are all going to be part of the solution to getting away from fossil fuel-based transportation."

Programs such as the Hybrid Patrol are part of Ford's ongoing effort to reduce gasoline consumption. To that end, Ford has developed MyDrive, an interactive fuel economy game at [mercuryvehicles.com](http://mercuryvehicles.com), to help motorists save money at the pump. The company recently announced plans to offer hybrids on half its vehicle lineup—or 250,000 hybrids annually—by 2010. ■



## Arizona

### ATTRACTIONS & EVENTS

#### Chiricahua State Park

HCR 2, Box 6500 • Willcox AZ 85643  
520-824-3560

#### Grand Canyon National Park

PO Box 129 • Grand Canyon AZ 86023  
923-638-7888 Visitor Info Recorded Message

#### Lake Havasu State Park

699 London Bridge Dr. • Lake Havasu AZ 86403  
928-855-2784

#### Organ Pipe Cactus National Monument

10 Organ Pipe Drive • Ajo AZ 85321-9626  
520-387-6849 Visitor Information

#### Petrified Forest National Park

PO Box 2217  
Petrified Forest National Park AZ 86028  
928-524-66228 Visitor Information

#### Saguaro National Park

3693 South Old Spanish Trail  
520-733-5153 Visitor Info Rincon Mtn District

#### Sport Compact Drag Racing

Every thursday at Firebird Raceway  
www.dragracing.com/phx

#### Wupatki National Monument

Flagstaff Area National Monuments  
6400 N. Hwy 89 • Flagstaff AZ 86004  
928-679-2365 Visitor Information  
928-526-1157 Visitor Information, HQ

## California

### ATTRACTIONS & EVENTS

#### Palm Desert Visitor Information Center

72-990 Highway 111 • Palm Desert CA 92260  
800-873-2428 • www.palm-desert.org

### MOTOR MUSEUMS

#### Petersen Automotive Museum

6060 Wilshire Blvd. (at Fairfax) • LA CA 90036  
323-930-CARS • www.petersen.org

## Colorado

### ATTRACTIONS & EVENTS

#### Colorado Activity Centers, Inc.

737 N. Tenmile Drive - Suite 35  
PO Box 129 • Frisco CO 80443  
800-777-8642 - www.coloradoinfo.com

### MOTOR MUSEUMS

#### Shelby American Collection

5020 Chaparral Court  
PO Box 19228 • Boulder CO 80308-2228  
www.shelbyamericancollection.org  
303-516-9565

## Nevada

### ATTRACTIONS & EVENTS

#### Las Vegas Tourism Bureau

6120 W. Tropicana Ave. • Las Vegas NV  
www.lasvegastourism.com

### MOTOR MUSEUMS

#### Imperial Palace Auto Collections

Fifth floor parking facility of Imperial Palace.  
702-794-3174  
www.imperialpalace.com/auto.html

#### National Automobile Museum

The Harrah Collection  
10 Lake Street South • Reno NV 89501  
775-333-9300 • www.automuseum.org

## New Mexico

### ATTRACTIONS & EVENTS

#### New Mexico Department of Tourism

800-733-6396 x 0643 • www.newmexico.org

#### Santa Fe Chamber of Commerce

PO Box 1928 • Santa Fe NM 87504  
8380 Cerrillos Rd. Suite 302 • Santa Fe NM 87507  
505-983-7317 • www.santafechamber.com

### RESORTS / LODGING

#### Inn on La Loma Plaza

315 Ranchitos Road • Box 4159 • Taos NM 87571  
800-530-3040 • www.VacationTaos.com

#### Inn on the Alameda

303 East Alameda • Santa Fe NM 87501  
505-984-21221 • www.innonthealameda.com

## Utah

### ATTRACTIONS & EVENTS

#### San Juan County Tourism

117 S. Main Street • Monticello UT 84535  
800-574-4386 • www.southeastutah.org

#### Southern Utah Scenic Tours

PO Box 1113 • Cedar City UT 84720  
888-404-8687 • www.utahscenicstours.com

### RESORTS / LODGING

#### Desert Rose Inn & Cabins

701 W. Highway 191 • Bluff UT 84512  
888-475-7673 • www.DesertRoseInn.com

## Mexico

### RESORTS / LODGING

#### Puerto Peñasco Mexico Online

Beachfront home rentals in Rocky Point.  
623-935-0507 • www.puerto-penasco.com

### ATTRACTIONS & EVENTS

#### Baja California State Tourism Office

Blvd. Diaz Ordaz s/n  
Edificio Plaza Patria Nivel 3  
CP 22400 Tijuana BC  
(66) 81-9492

#### Chihuahua State Tourism Office

Calle Libertad No. 1300  
Edificio Agustin Melgar, 1er Piso  
CP 31000 Chihuahua, Chihuahua  
(14) 29-3421

#### Sinaloa State Tourism Office

Av. Camarón Sabalo esq. Tiburon  
Edificio Banrural 4 Piso  
CP 82100 Mazatlán, Sinaloa  
(69) 16-5160

#### Sonora State Tourism Office

Centro de Gobierno  
Edificio Estatal Norte 3er Nivel  
Comonfort y Paseo Río  
CP 83280 Hermosillo, Sonora  
(62) 17-0076

## Of national interest

### MOTOR MUSEUMS

#### Henry Ford Museum & Greenfield Village

20900 Oakwood Blvd. • Dearborn MI 48124  
www.hfmgv.com • 313-271-1620

#### Imperial Palace Auto Collections

(see Nevada listings)

#### Motorcycle Hall of Fame Museum

Pickerington OH 43147  
www.motorcyclemuseum.org • 614-856-2222

#### National Automobile Museum

(see Nevada listings)

#### National Corvette Museum

350 Corvette Drive • Bowling Green KY 42101  
www.corvettemuseum.com • 800-53VETTE

#### Petersen Automotive Museum

(see California listings)

#### Shelby American Collection

(see Colorado listings)

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# Versatility and style

By Barbara and Bill Schaffer

The versatile new five-passenger Chevrolet HHR wagon has a cargo capacity up to 55.6 cubic feet with the rear seat folded down or 63.1 cubic feet with the rear seat removed. The front passenger seat can also be folded flat to expand the cargo area all the way to the dash.



If you like the look of the PT Cruiser, you will love the look of Chevrolet's new HHR. It reminds us of what a PT Cruiser would look like if they had applied more of a sport utility vehicle styling.

Our son-in-law laughed at it when it arrived for our week of test driving; however, his son thought it was extremely cool and couldn't wait to go for a ride. So—judging from them—we would say it's all about personal choice, maybe age, just like everything else.

The HHR had us scratching our heads a

little at first. We weren't sure if we liked it or thought it was weird. Spending a week in the little wagon made us converts. We're definitely now in the "like" column on this one. First, it's fun to drive, providing a nice balance with all the agility and nimbleness of a small car, but with a smooth solid ride and comfort we would expect from something a little larger.

Chevrolet doesn't call it anything other than the HHR, but originally when the concept debuted it was referred to as the Heritage High Roof—meaning it had a

retro styling similar to the original 1949 Chevrolet Suburban, and it has a bit higher stance and interior height than typical crossovers or wagons. Obviously the HHR name is simpler.

The HHR grille is similar to the one on the Chevy SSR roadster/truck, and it has large wide windows giving everyone in the vehicle great visibility.

The dashboard is a little retro-looking and offers easy access to all controls. We loved the power window controls just above the center console, similar to those

in the MINI Cooper. All seats (except for the driver's) fold flat for expanded cargo capacity. There are two deep covered bins built into the floor behind the second row, for added storage.

We used the HHR while we were moving some things from place to place and we were amazed at just how much "stuff" we could get into it.

The internal basis and drivetrain for the HHR are derived from the Chevrolet Cobalt sedan, with the front wheels being driven by one of two Ecotec four-cylinder en-

gines. The basic engine on the LS and the 1LT model is a 2.2-liter rated at 143 hp, while the upper level 2LT has a standard 2.4-liter version rated at 172 hp. Both engines have a dual overhead cam, twin balance shafts, electronic throttle control and other features that provide smooth powerful operations. A precise five-speed Getrag manual transmission is standard with both engines and on all models, with an optional four-speed automatic which includes a remote start feature.

There are three models to choose from,

including the base LS (\$15,990), the 1LT (\$16,990) and the 2LT we tested for \$16,425. All prices include destination charges. The 2LT comes well-equipped with all the power amenities, cruise control, air conditioning, leather-wrapped steering wheel and shift knobs, and so much more.

Our test HHR 2LT package added \$1,800 for the high output engine and cosmetic upgrades. It also came equipped with

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## Chevrolet HHR 2LT

### STANDARD EQUIPMENT

Air conditioning; Power driver's seat; tilt wheel; Rear defog; Power windows & locks; Keyless entry, etc.

Base Price: ..... \$16,425

Options:

2LT Equip group (2.4-liter engine, Anti-lock brakes, Fog lamps, Leather wrapped wheel and shift knobs, Redundant radio controls, Auto dim mirrors with compass) .....

.....\$1,800

4-spd. auto trans w/ remote start.....1,000

Power sunroof .....\$725

Side curtain airbags.....\$395

17-Inch polished wheels.....\$395

XM radio.....\$325

AM/FM/CD changer with MP3.....\$295

Roof luggage roof rails.....\$150

Running boards (dealer installed).....\$445

Premium mats .....\$105

**Total Options .....\$5,635**

Freight.....\$565

**Price as Tested.....\$22,625**

### DIMENSIONS

EPA Size .....Spec. Purp

Weight.....3,208 lb.

Wheelbase .....103.5 in.

Length.....176.2 in.

Width.....69.2 in.

Height .....65.2 in.

Fuel Capacity .....16.2 gal.

Cargo Capacity.....max. 63.1 cu. ft.

### MECHANICAL

Engine .....2.4L DOHC 4-Cyl

Horsepower .....172@6200

Torque .....162@5000

Transmission .....4-Spd. Auto

Drive .....Front wheel

Brakes .....Disc/Drum ABS

Tires .....215/50R17

### PERFORMANCE

0 to 60 mph.....9.5 sec.

EPA economy rating .....23/30 mpg

Our actual fuel economy .....27.5 mpg

### COMPETITORS

PT Cruiser, Ford Focus wagon, Honda Element, Mazda3, Pontiac Vibe, Subaru Impreza wagon, Toyota Matrix



optional automatic transmission with remote start (\$1,000), power sunroof with express close (\$725), XM satellite radio (\$325), side curtain airbags (\$395), six-disc CD changer with MP3 player, 17-inch high polished alloy wheels (\$395), stereo with 6-disc CD changer (\$295), luggage roof rails (\$150), premium carpeted floor mats (\$150). With dealer-installed running boards the total price came to \$22,625.

The HHR rides on MacPherson struts in the front and a semi-independent torsion beam rear suspension in the rear. Brakes are disc and drum with optional anti-lock brakes. The rack-and-pinion steering which is electric powered, rather than a traditional belt powered hydraulic unit, provides good feed

back and precision adding to the is HHR agility. The two lower level models have a softer suspension with 16-inch wheels, while the 2LS has a stiffer, sportier feel, 17-inch wheels and special shocks for better ride control and handling.

The HHR comes standard with many safety features like dual-stage front airbags, theft deterrent system, LATCH child seat system and more. Also available is a side head curtain airbag for \$395.

The HHR is no hot rod, but it has plenty of power to make a 0 to 60 mph run in 9.5 seconds. We recorded 69 mph in our informal acceleration test which we run from where we pull onto the highway and accelerate to the first mailbox (about one-eighth mile).

Fuel economy is reasonable, too. The EPA rates the HHR's larger engine at 23 mpg for city and 30 mpg highway. We averaged 27.5 during our week behind the wheel.

This is such a cute vehicle. It draws so much attention from all ages but mostly with the younger set. It turned heads everywhere we went, and we're sure they weren't looking at us.

The HHR should be a big hit for Chevrolet. Even though it's a small car, it's remarkable roomy and comfortable. It has a good solid quality feel and the versatility of the large cargo area and folding back seats makes it appealing. Personally we fell in love with the versatility, drivability and overall quality of this small wagon. ■

# TEEN CREATES HIS OWN TV AD STRESSING TEENAGE SEATBELT SAFETY AND WINS NATIONAL CONTEST

**Wins a \$10,000 US Savings Bond from Volkswagen of America, Inc.**

**D**aniel Zhao, a 2005 graduate of Glen A. Wilson High School in Hacienda Heights, California, is accomplishing what high-priced Madison Avenue ad agencies may find too daunting: convincing teens to save their own lives by reversing a tragic trend that sees nearly 5,500 young people die in car crashes every year, most of whom could be saved by the use of safety belts.

As part of a contest sponsored by Volkswagen of America, Inc., high school students from across the nation were challenged to create and produce 30-second television public service announcements (PSAs) to convince their peers to buckle up. Zhao's PSA was chosen by a national Web vote as the overall winner from what started as hundreds of contest entries. Zhao was announced as the winner during the Daily Download on Fuse-TV.

Playing off the saying "Life flashes before your eyes," Zhao's short film reminds drivers of all they have to lose if they fail to buckle up, through a series of flashbacks, as a young driver travels down a dark, slick street.

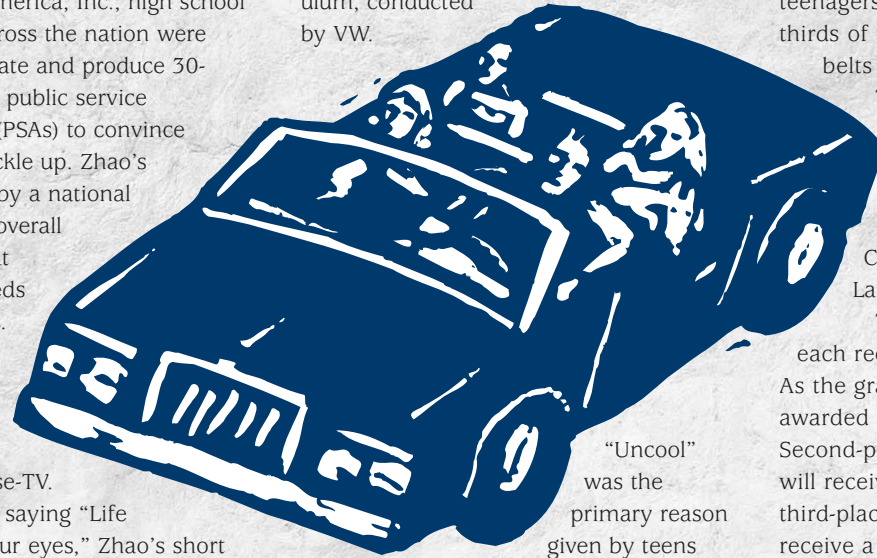
"Daniel's film is particularly compelling because he knows what other teens would miss if their lives were ended tragically short." Said Steve Keyes, VW of America's director of corporate communications.

As one of three finalists, Zhao's PSA aired nationally on Fuse-TV's Daily Download on Friday, November 18. Viewers voted for the most compelling ad through November 25 at [www.vw.com/seatbelt](http://www.vw.com/seatbelt).

Volkswagen and Scholastic worked together for the third consecutive year to produce and distribute curriculum kits to some 14,000 teachers in 20

major U.S. cities. The kits provided teachers with the tools needed to create informative lessons for their students who were then asked to create the TV public service announcements. The goal is to use positive peer pressure, a proven persuader, to convince teens to buckle up.

The power of peer pressure was underscored by the findings of an informal 2003 survey of high school students participating in the seat belt safety curriculum, conducted by VW.



"Uncool" was the primary reason given by teens for not buckling up more often.

The National Highway Traffic Safety Administration (NHTSA) reports that safety belts save over 11,000 lives a year. Through *Fasten Your Seat Belt...Go Far!*, VW hopes to significantly add to this number while educating teens on driving safety.

The commitment from Volkswagen to high schools is a fitting initiative. In a 2002 survey of 3,300 teens conducted by CNW Marketing, Volkswagen was rated as having the best youth image among all automakers.

"Volkswagen is a very popular brand with teenagers, and we wanted to use our connection with them to help create awareness and, ultimately, help save lives," said Keyes.

The US Department of Transportation (US DOT) recently released new data showing 2003 as having the lowest fatality rate in 30 years. US DOT Secretary Mineta pointed to efforts by NHTSA and other organizations, such as Volkswagen and Scholastic, that encourage safety belt use. Still, there is much to be done: 56 percent of those killed in auto crashes are not wearing safety belts. Even more alarming is that auto crashes are the number one killer of teenagers in this country – and two-thirds of those are not wearing seat belts at the time of the crash.

The two other finalist ads were produced by Jessica Reynolds, Carson Valley Middle School in Gardnerville, Nev., and Kimberly Pang, Clements High School, Sugar Land, Texas.

The trio of student finalists will each receive a digital video camera. As the grand prizewinner, Zhao will be awarded a \$10,000 savings bond. Second-place winner Jessica Reynolds will receive a \$3,000 savings bond, and third-place winner Kimberly Pang will receive a \$1,500 savings bond. Teachers of the three finalists will receive a \$3,000 Apple G5 computer with flat screen display and Final Cut Pro Express software for classroom use and a \$100 Scholastic gift certificate. ■



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# Being at one

By Barbara and Bill Schaffer



*"Jinba Ittai"—in western terms that means "Rider and horse as one," and that's how Mazda describes the development of the third generation Miata (MX-5) sports car. Any time the process of developing the new Miata came to a crossroads, "Jinba Ittai" was the guiding principle.*

**W**e've always heard that good things come in small packages, and that is certainly true of the Mazda Miata. (Note: Mazda now wants us to call it the MX-5.) Even though the new version is a little larger than the previous generation, it's still a small package and one of the best value sports cars on the market.

The universe of sports cars is made up of legendary sporting names like Corvette, Porsche and Ferrari, but the car that has touched more people (literally) is the Mazda Miata. In 2000, the *Guinness Book of World Records* recognized the Miata as the best-selling two-seat convertible sports car in history. And for 2006, the third generation builds on 17 years of achievement to become the best ever.

Since the Mazda Miata first came on the scene in 1989, it has captured the hearts of car enthusiasts including young, old and the young at heart. The new third generation Miata builds on the familiar look with great

character lines that feature strong fender arches, a shorter and rounder hood and a rounded grille.

Inside is a simplistic arrangement of instruments, along with comfortable seating. The small diameter steering wheel has three metal-accented spokes and—for the first time—audio and cruise-control switches are mounted on the spokes.

Developed from the zoom-zoom philosophy, the new Miata is trimmer, more rigid and safer than its predecessors. Weight reduction was paramount for the new model, with a concerted effort to drop every gram possible from the street-ready vehicle. The result is a svelte 2,498-pound roadster with near-perfect 50/50 weight distribution.

The development process started with an all-new, advanced front-mid-ship layout and improvements to the Miata's already impressive suspension, steering and brakes.

The new MX-5 comes in five trim levels, but they are almost impossible to define. The



five levels include the Club Spec, MX-5, Touring, Sport and Grand Touring. The interior is available in three distinct levels. The entry-level interior is a monotone package with black fabric seats and silver-finished accents. The black leather interior is a little more elegant with a high-tech look and prominent stitching on the seats. The third interior has saddle-tan leather with a designer luggage look. All interiors feature a console trim that has a ribbed surface finish that is contemporary looking and provides great durability.

The new 2.0-liter four-cylinder engine derived from the Mazda 3, 5 and 6 is rated at 170 hp. A crisp exhaust note flows from a new dual exhaust system. A five-speed manual transmission is standard, but a new six-speed manual is optional. It has a shift pattern so tight that shifts are made with a flick of the wrist instead of an arm movement. Those preferring to drive without a clutch can have their Miata with a new six-speed automatic transmission with paddles mounted on the steering wheel in case the driver still wants to shift.

The MX-5 (Miata) that we tested for a week was the Sport (the next-to-top level). It came equipped with standard features and conveniences that include air conditioning, leather wrapped steering wheel and shift knob, AM/FM audio system with CD player, cruise control, power windows and door locks along with floor mats for the base price of \$23,495 including destination charges. The

entry-level model starts at \$20,995 while a loaded special limited edition called 3rd Generation is priced at \$26,700.

Few drivers will complain about the performance of the new MX-5, which produces 0 to 60 mph times of 7 seconds and a top speed estimated to reach 130 mph. We hit 77 mph in our unofficial acceleration test which we run from where we pull onto the road and accelerate about one-eighth mile.

The EPA estimates fuel economy at 24 mpg for city driving and 30 mpg highway. We averaged 27.5 during our driving time.

As with most convertibles, rear visibility is a constant challenge with the cloth top up. The manually-operating top is released by one center-mounted lever, before making a Z-fold to end up behind the seats, with a section of the top forming a hard tonneau cover. Wind is diverted from the cabin when the top is down by small quarter windows behind the A-pillars and an aero board mounted between the seat back safety hoops.

We're a little confused as to why Mazda has decided to change the Miata name to MX-5. Miata is a good name with lots of recognition; and you know what they say about old dogs and new tricks. To us it will always be the Miata.

The Miata engineering team deserves kudos for not taking a good thing and ruining it. This third generation Miata is superlative—everything we could hope that it would be and even a little more. ■

## Mazda MX-5 (Miata) Sport

### STANDARD EQUIPMENT

Standard Equipment:  
Air conditioning; Cruise control; AM/FM stereo; Antilock brakes; Power locks & windows; Keyless entry; Six-speed manual transmission.

Base Price: ..... \$22,935

Options:

Run flat tires and tire pressure monitoring .....\$515

Suspension package .....\$500

**Total Options .....\$1,015**

Freight .....\$560

**Price as Tested.....\$24,510**

### DIMENSIONS

EPA Size .....Two-seater

Weight.....2,498 lb.

Wheelbase .....91.7 in.

Length..... 157.3 in.

Width.....67.7 in.

Height .....49.0 in.

Fuel Capacity .....12.7 gal.

Cargo Capacity.....5.3 cu. ft.

### MECHANICAL

Engine .....2.0L DOHC 4-Cyl.

Horsepower .....170@6700

Torque .....140@5000

Transmission .....6-spd. man.

Drive .....Rear wheel

Brakes .....Disc ABS

Tires .....205/45R17

### PERFORMANCE

0 to 60 mph.....7.0 sec.

Top speed .....130 mph

EPA economy rating .....24/30 mpg

Our actual fuel economy .....27.5 mpg

### COMPETITORS

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**GREEN INDUSTRY : FORD "FUMES-TO-FUEL"****Ford turns paint fumes into electricity to help power truck plant**

**F**ord's Fumes-to-Fuel system at the Michigan Truck Plant generates 55 kilowatt-hours of electric power every hour—enough for an average city block. Ultimately, the system could power one-third of the plant's paint shop. The technology works by pulling volatile organic compounds (VOCs) from the paint air emissions by using fluidized carbon beads. The cleansed air emissions are then sent back into the environment. The scrubbed VOCs are sent to a generator where they are transformed into electricity.

For years, Ford, like other automakers, had been siphoning off the fumes from its paint booths and incinerating them in natural gas-fired furnaces at temperatures of up to 1400 degrees Fahrenheit. Incinerators, which cost millions of dollars to build and install, consume an enormous amount of energy—about 350 kilowatt-hours per hour.

The Fumes-to-Fuel system costs less to install and maintain than existing furnaces, it virtually eliminates carbon dioxide emissions and it enables the use of higher-quality, solvent-based paint. Fumes-to-Fuel technology could be used by any business that produces light hydrocarbon emissions, such as furniture and electronics industries.

Mark Wherrett, one of the designers of Fumes-to-Fuel technology, has spent his entire Ford career helping assembly plants meet environmental regulations. "I have worked on other Ford projects where the team helped change legislation in other countries that benefited the environment," said Wherrett. "However, to take something that used to be considered waste and turn it into fuel that makes electricity and really moves the environmental needle, that is extremely rewarding."

The Fumes-to-Fuel technology, developed in conjunction with DTE Energy, won an Environmental Protection Agency "Clean Air Excellence Award" in 2004. Fumes-to-Fuel technology will be implemented in other plants as equipment is updated and replaced. ■



Fumes-to-Fuel could save one-third to one-half the cost of traditional incineration of volatile organic compounds (VOCs).



Fumes-to-Fuel technology is available for licensing by other industries.





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## MAINTENANCE : ANNUAL VEHICLE CHECKLIST

# Preventing an unwanted adventure

By Mark Ferner  
ASE Master Automobile Technician  
Shell Global Solutions (US) Inc.



Just about everyone is familiar with Steppenwolf's 1969 hit song in which the band urges you to get your motor running, head out on the highway, and look for adventure. But the last adventure anyone wants to experience is a major breakdown on the side of the road. To start the new year off right and reduce the need for costly car repairs, plan ahead and give your vehicle an annual check-up. Answer the following 10 questions before hitting the highway, and learn how to help keep major repairs and expenses at bay.

### **When was the last oil change?**

If you drive in stop-and-go traffic, your engine may require more frequent oil changes. Other common conditions possibly requiring more frequent oil changes include driving in extreme temperatures, hauling heavy loads, or driving in muddy or mountainous terrain. To protect your vehicle's engine, be sure to read your owner's manual and change the oil based on the manufacturer's recommendations.

### **Are there oil spots in the garage?**

To check if your car is leaking fluids—whether it's brake, transmission or power steering fluid—leave a newspaper on the ground overnight where you park the car. If you find spots or stains on the paper, you should have a certified automotive technician inspect the car immediately for fluid leaks. Even if you don't notice a leak, check engine fluid levels on a regular basis.

### **What kind of gas do I fill up with?**

Most people don't realize that all gasolines are not the same. Look for a high-quality fuel with added cleaning power—like those identified as TOP TIER Detergent Gasoline. For example, all Shell gasolines are certified

as TOP TIER and have more cleaning power than required by government standards. Added cleaning power can help keep your car's engine free of carbon deposit build-up known to negatively affect an engine's performance.

### **Is there light knocking when accelerating?**

It's probably "engine knock," which is uncontrolled combustion associated with using gasoline with too little octane. Occasional, light knocking is acceptable, but heavy or persistent knocking could damage the engine. If you hear these sounds, try switching to mid-grade or premium gasoline. If knocking persists, ask a professional technician to check your car.

### **When was the last brake inspection?**

If the brake pedal feels spongy, or you hear a grinding noise, or the car pulls to either side when braking, it could signal a problem with the brake system. If you think you have a problem, have the brakes checked by a technician. Brakes are a key safety feature and should be inspected at least once a year.

### **Have I checked the tires recently?**

Tire inflation should be checked and adjusted on a monthly basis when the tires are cold. The recommended tire pressure will be listed in your vehicle's owner's manual or on a placard in the glove box, door jamb or trunk lid. Rotating tires regularly, typically every 5,000 to 7,500 miles, is essential to help them wear evenly and last longer.

### **How do belts and hoses under the hood look?**

With the engine off and cool, inspect the belts and hoses for cracks, swelling or brittleness, which could indicate that it's time for a change. Even if they look good, replace belts and hoses based on the schedule recommended in your vehicle's owner's manual.

### **Does the car's battery appear corroded?**

The battery is the primary power supply for starting your car and helps power most of the car's electronic components. The battery cable terminals should be tight and relatively free of corrosion. If the battery appears to be corroded, an automotive technician can service it easily. It's best to have the battery and starting system inspected by a technician annually.

### **Does the tailpipe blow excessive smoke?**

White smoke could indicate that your vehicle may be burning antifreeze or water. Blue or black smoke means the vehicle may be burning oil or excessive fuel, which may lead to major repairs unless diagnosed quickly. It's best to consult an automotive technician as soon as possible.

### **Is the "CHECK ENGINE" light on?**

The cause may be as simple as a loose gas cap, or it may mean the car needs urgent attention. Take your vehicle to a repair facility where they can read the codes from the engine's onboard computer. If the CHECK ENGINE light flashes on and off while you drive, it's even more important that you seek professional attention immediately.

So, whether you're born to be wild or like to play it safe, keep in mind that a little preventive maintenance may help avoid major car repairs and an unwanted adventure in the coming year. ■

MARK FERNER is certified as an ASE master automobile technician by the National Institute for Automotive Service Excellence. Ferner currently leads an automotive and transport lubricants team at Shell Global Solutions (US) Inc. Shell Global Solutions is a network of independent technology companies in the Shell Group.

# Grand Cherokee

By Barbara and Bill Schaffer



The Jeep Grand Cherokee first hit the roads back in 1992, and the new vehicle market hasn't been the same since. Jeep has traditionally been to off-roading what Kleenex has been to a runny nose, and the 2006 model carries on the heritage. However, the new Jeep Grand Cherokee is not just about off-roading—it's also about on-road performance, comfort and luxury.

The Jeep Grand Cherokee is somewhat like the sports car of sport utility vehicles. A little smaller than the rest of the mid-size SUVs, the Jeep has an agile feeling thanks to its tight turning radius, shorter length and wide, low stance. It also has the advantage of weighing several hundred pounds less than its competitors.

Even with the smaller size, the Grand Cherokee has interior specs very close to the competition in all areas except the rear. Back there, the Cherokee will hold about one suitcase or two small passengers fewer than its competitors. Towing capacity is 2,000 to 3,500 pounds less, too.

Since the Grand Cherokee was all new

from the ground up for 2005, there are a few subtle design changes for the 2006 model. But under the hood there are a few powerful surprises, starting with the 5.7-liter Hemi V-8 engine and the 4.7 V-8. In addition, for those who don't care about so much power as they do economy, there is the 3.7-liter V-6 engine, even though the V-6 only gets about two more miles per gallon than the V-8.

The Grand Cherokee is one of the best off-roaders on the trail. With the traditional Jeep short/long independent front suspension and rear live axle, it climbs rocks, flies over washboards and digs through the mud with some of the best. It's what Jeep has always been known for and what it does best.

We were impressed with how well it did on the roads, too. The 330-hp Hemi with five-speed automatic transmission has excellent acceleration, and it handles quite well for something that sits up higher. It's not at the same level as some of the high-powered German SUVs, with their sophisticated four-wheel indepen-

dent suspension, but combined with its electronic stability control, electronic limited-slip differential and Quadra-Drive II—a sophisticated active full-time four-wheel drive system—the Jeep is impressive.

The Grand Cherokee is available in three models, including the entry-level Laredo, the Limited and the most luxurious of them all, the Overland.

Coming standard on the Limited that we tested are the Hemi engine, dual-zone air conditioning, power adjustable pedals, power windows/doors/locks/mirrors and speed control. It also has remote keyless entry, theft deterrent system, security alarm, stereo radio with in-dash six-disc CD changer, garage door opener, power front seats with memory for pedals/driver seat/mirrors/radio and that's just to name a few. The base price of the Limited with 4-wheel-drive system is \$34,470.

Our test Limited also came equipped with an abundance of desirable options like heated seats, navigation system, rear entertainment package, satellite radio

and much more. Just about anything a person could want is available for a price. The Jeep Grand Cherokee Laredo starts under \$27,000.

The Jeep rides on a unique new steel uniframe with a welded steel unit body with underlying front and rear modules. The frame system is much more rigid than the previous Grand Cherokee and translates into a more solid ride and body structure.

The Grand Cherokee is loaded with great technology like a stability system, advanced DVD navigation system, Sirius Satellite Radio, SmartBeam™ automatic dimming headlights, UConnect hands-free communications system and several other great gadgets.

Standard safety features on the Grand Cherokee Limited include multi-stage front seat airbags, LATCH child seat system, enhanced accident response system, traction control, tire pressure monitor. Front and rear side-curtain air bags are a \$1,495 option.

The Hemi engine produces a 0-to-60

mph time of 6.9 seconds. We hit a speed of 79 mph in our informal acceleration test, where we pull onto the highway and accelerate about one-eighth mile.

Considering the performance, our fuel economy was a respectable 17.5 mpg. The EPA rates it at 14 mpg for city driving and 19 mpg for the highway.

Jeep heritage goes back to WWII; perhaps that explains Americans' love for it. Whatever the reason, Jeep will probably be around for another 65 years or more. (It almost doesn't seem fair for a vehicle to outlive its buyers.)

It's been a couple of years since we've driven the Grand Cherokee, and this new one is a major improvement. It feels like it's a much higher quality in fit and finish, and the Hemi performance is fabulous.

For those wanting still more, the SRT-8 version is arriving at Jeep dealerships about now. With its 6.1-liter 415-hp Hemi it will meet or beat the acceleration of the awesome Porsche Cayenne Turbo (0 to 60 mph in less than 5 seconds) for less than half the price (\$39,995). WOW! ■

## Jeep Grand Cherokee Limited

### STANDARD EQUIPMENT

Leather seating; 4-wheel traction control; rain-sensitive wipers; dual zone climate control; adjustable pedals with memory; keyless entry; alarm; AM/FM stereo with in-dash 6-disc CD changer; universal garage door opener; power heated & folding outside mirrors; and much more.

Base Price: ..... \$34,470

### Options:

Pearl paint ..... \$150  
 Preferred package (stability control, heated front seats, SmartBeam™ headlights, UConnect hands-free communications system, sunroof) ..... \$1,925  
 Electronic infotainment system ..... \$1,200  
 Off road and towing package ..... \$590  
 Side airbags ..... \$490  
 Hemi engine with electric limited slip differential, limited slip front axle and Quadra-Drive 4WD ..... \$1,495  
 Navigation ..... \$1,200  
 Sirius Satellite Radio ..... \$195  
 Backup system ..... \$255  
 Tire pressure monitoring ..... \$85  
**Total Options ..... \$7,585**  
 Freight ..... \$695  
**Price as Tested ..... \$42,750**

### DIMENSIONS

EPA Size ..... Spec. Purp  
 Weight ..... 3,994 lb.  
 Wheelbase ..... 109.5 in.  
 Length ..... 186.6 in.  
 Width ..... 73.3 in.  
 Height ..... 67.7 in.  
 Fuel Capacity ..... 20.8 gal.  
 Cargo Capacity ..... 34.5 to 67.4 cu. ft.

### MECHANICAL

Engine ..... 5.7L Hemi V-8  
 Horsepower ..... 330@5000  
 Torque ..... 375@4000  
 Transmission ..... 5-Spd. Auto  
 Drive ..... Four wheel  
 Brakes ..... Disc ABS  
 Tires ..... 245/65R17

### PERFORMANCE

0 to 60 mph ..... 6.9 sec.  
 EPA economy rating ..... 14/19 mpg  
 Our actual fuel economy ..... 17.5 mpg

### COMPETITORS

Buick Rendezvous, Chevrolet TrailBlazer; Dodge Dakota, Ford Explorer, GMC Envoy, Hummer H3, Mercury Mountaineer, Nissan Pathfinder, Saab 9-7X, Subaru Tribeca, Toyota 4Runner, Volkswagen Touareg, Volvo XC90

# THE INSIDE TRACK: BRIEFS & RUMORS

■ The new **Audi A3** will debut a cabriolet version in two more years at the 2007 Frankfurt Auto Show and should reach



Audi A3

dealerships for 2008. It will have the same dimensions as the A3 Sportback, but will get a new body styling. Engine choices will include a 2.0-liter turbo four-cylinder and 3.2-liter V-6.

■ **Toyota** and transmission manufacturer Aisin are developing automatic transmissions with more than seven speeds to improve economy and performance. So far, there is no indication of when or in what vehicles the transmissions would be used.

■ **Chevrolet's** new Impala has an all new interior with flip-and-fold rear seats. For expanded cargo capacity, the rear seat cushion flips forward to reveal a hidden storage area. The area has hooks to hang plastic grocery bags and the floor surface is plastic for easy cleanup. The rear seat can then be folded flat to create a large pass-through to the trunk.



Chevrolet Impala

■ **Nissan** has a goal of cutting their product development time for a redesign from the current 20 months to just 10 months. In that 10 month period they plan to take the finished design, develop a virtual test vehicle, then move on to the start of production. Currently they do three virtual test vehicles, but that process would be cut to only one in an effort to save time and money. The process of designing and building a vehicle from scratch will still take four to five years.

■ **Honda** has developed an airbag for use on their Gold Wing touring motorcycle. The system is made up of an electronic control unit, crash sensors and the airbag module. It goes on sale in the spring on the Gold Wing, which is powered by a 1.8-liter boxer (flat) six-cylinder engine.

■ **General Motors** insiders say the company is considering a diesel option for some of its next generation full-size SUVs. Also available soon for the bigger SUVs will be a flex-fuel option capable of burning regular gasoline or E85 (up to 85 percent ethanol and 15 percent gasoline). Flex-fuel vehicles will get a yellow fuel cap to distinguish fuel needs. More than 1.3 million flex-fuel vehicles have been sold to date, and the company plans to build about 400,000 of the multi-fuel vehicles this year.

■ A **Honda** concept vehicle shown at the Tokyo auto show in October included an innovative dog-friendly compartment built into the lower dash area. The compartment folds into the floor when not in use. This tall Honda concept wagon is called W.O.W. (for the Wonderful Openhearted Wagon). Honda also showed a special seat belt for larger dogs.

■ **Ford** insiders indicate they are seriously considering a Mustang-based Lincoln, as early as 2009. The rear-drive coupe would ride on the same platform as the popular Ford Mustang, but with a completely new exterior, interior and possibly a different engine. The last time Lincoln had a rear-wheel drive coupe was 1998 Mark VIII.

■ The latest estimates on the balance of the **BMW 3 Series** rollouts have the wagon arriving at dealerships sometime



Honda Gold Wing airbag

in 2006. The new convertible should be here in the summer or fall of 2007 and the V-8-powered M3 sometime in 2008. The new convertible will be a new three-piece hardtop system. It is expected to debut at the Paris auto show in September 2006.



Dodge Nitro

■ **Dodge** will add a smaller SUV to showrooms early in 2007. The Nitro, which started as a concept at the 2005 Chicago auto show, is based on the Jeep Liberty chassis and will have a 210-hp 3.7-liter V-6 engine with a five-speed automatic transmission.

■ The **Lexus GS 450h** hybrid luxury sport sedan is due next with power coming from a 3.5-liter gasoline V-6 together with an electric motor which combine to produce 340-hp along with significantly better fuel economy. The big plus is 0 to 62 mph times of less than six seconds. Look for it to have more features to justify the higher price when it arrives in the spring of 2006.

■ **Volkswagen** may be finishing work on a coupe developed from the same chassis as the Jetta. This spiritual successor to the highly regarded Scirocco from some twenty-five years ago will likely be available with three engine choices



Volkswagen IROC concept

including a new 1.4-liter Twincharger four-cylinder, a turbocharged 2.0-liter four cylinder or a 247-hp V-6. Transmissions will probably be a six-speed manual with an optional six-speed DSG automatic shifting manual transmission. Insiders say the 2 + 2 coupe may be called Rivo.

■ Rumors persist of a **Porsche** SUV smaller than the Cayenne, to compete with other premium SUVs like the BMW X3. According to sources, the five-seat concept is awaiting a production green light. If it gets approval, don't look for it at dealerships until 2010.

■ **Chrysler** is selling its Arizona proving grounds to developers for a price estimated to be more than \$400 million. The 5,500 acre site will be the largest land sale in the state's history. An unidentified Chrysler spokesman said that as the area is developed, "our ability to test vehicles becomes more difficult." Chrysler will be leasing back the property to continue operations at the location until late 2007.

■ **Nissan** unveiled the most comprehensive concept of the long awaited GT-R super-high performance coupe at the Tokyo show. The futuristic looking coupe should finally arrive in the US as a 2008 model, but we still don't know if it will be a Nissan or an Infiniti. Power is still up in the air, too, but Nissan says it will be "the world's most powerful touring car." That's a mouthful when you consider cars like the 552-hp Bentley Continental GT.



Nissan GT-R concept

■ The new generation **Mercedes-Benz S-Class** has a night vision system that extends driver visibility to nearly 500 feet. The system illuminates the road with infrared light from two projectors mounted in the headlight assemblies. An infrared camera then receives reflected infrared light and displays a monotone image in a display centered on the instrument panel.

■ **Hyundai** is building a pair of rear-wheel drive V-6- and V-8-powered sport sedans to compete with Cadillac, BMW and other mid to full-size sport sedans. First to arrive in 2007, as a 2008 model, will be the Dynasty that would take on cars like the BMW 5 Series and Infiniti G35. One year later we should get the Equus, which is closer to the size of



Audi Q7

the BMW 7 Series. V-6 power will be from a 3.8-liter engine producing about 270-hp, while the V-8 will probably be a 4.5-liter developed jointly with Mitsubishi.

■ The engine in the new **Chevrolet Corvette Z06** may actually be more powerful than the 505-hp rating indicates. According to published sources, the engine produces a rumored 550 horses, which would explain its astonishing performance recorded at the Nürburgring racetrack in Germany.

■ The next version of the **Audi A3** arrives at dealerships by December in the form of the 3.2 quattro S-line. The premium compact will be powered by a 250-hp 3.2-liter V-6 with a six-speed Direct-Shift Gearbox transmission capable of 0-60 mph acceleration in 5.9 seconds. The top level A3 also gets larger air intakes, a new lip spoiler and 17-inch (optional 18-inch) wheels, plus a long list of cosmetic and convenience upgrades, with a base price of \$33,980.

■ The **Mazda MX-5 (Miata)** will get an optional three-piece folding retractable hardtop by September 2006. Few other changes will be made to the "hardtop" version. The price is expected to be in the \$25,000 to \$26,000 range.

■ In addition to the hybrid version of the **Audi Q7** planned for 2008, the company is also considering a diesel powered model for the US market. In its initial offering in Europe, engine choices will include the 4.2-liter V-8 and a V-6 diesel, but no timetable for a US diesel was indicated. ■

Briefs & Rumors is a summary of auto news from industry sources, trade journals and consumer magazines compiled for *Arizona Driver Magazine* by **BILL & BARBARA SCHAFFER** of *Auto Digest*.

## UPCOMING FEATURES

### Hyundai Sonata



The Koreans entered the US market intent on taking market share from stalwarts Honda and Toyota. This time around, they just might have the goods to make a serious dent.

### The Bionic Gloves Veggie Power Ballpark Tour



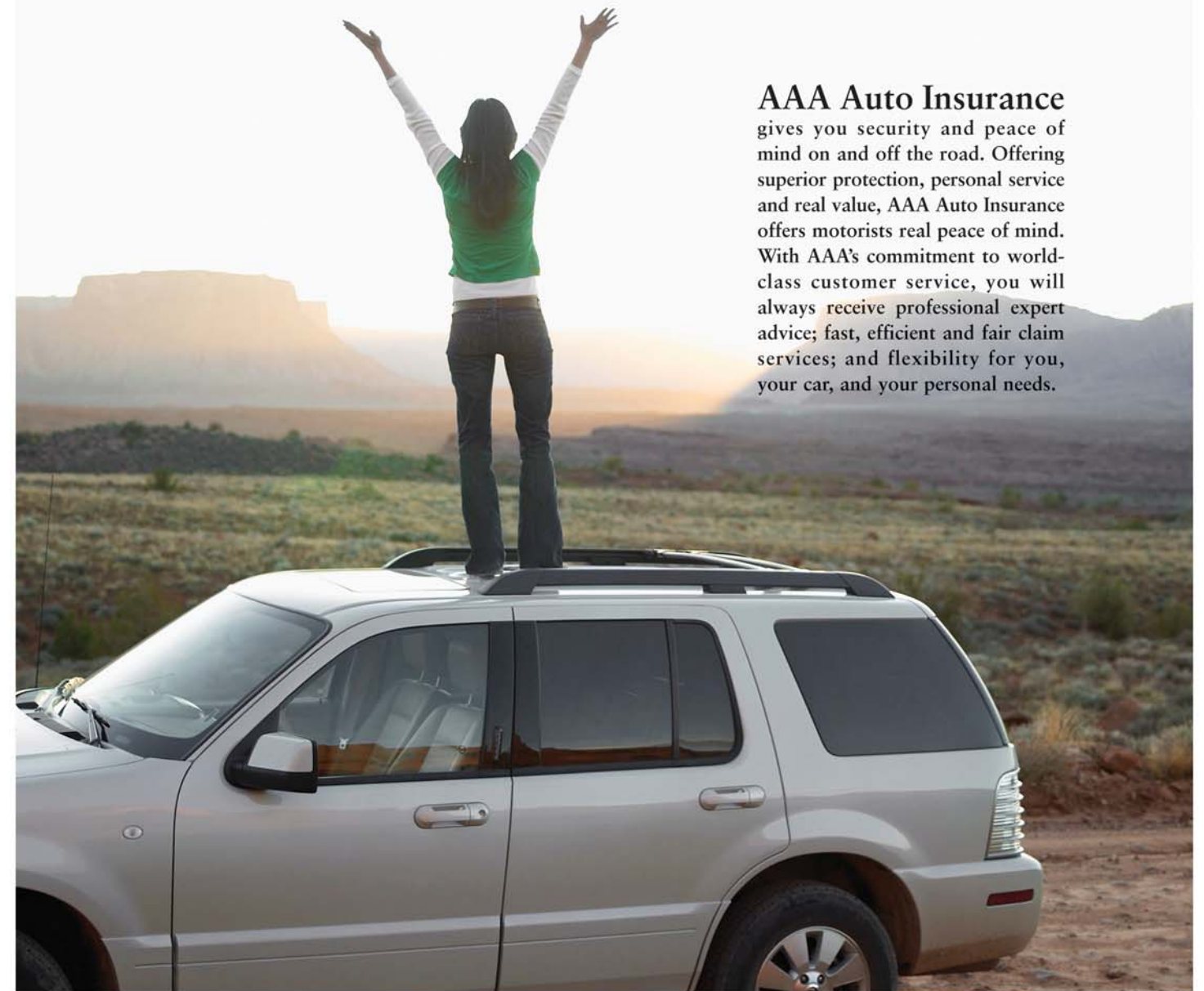
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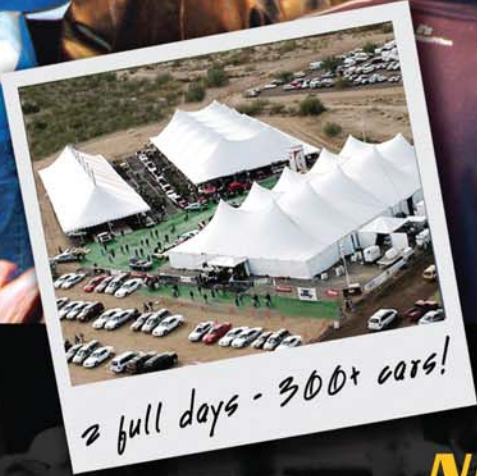
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