



Braking News

Volume 3, Issue 4 / October - December, 2006

A WORD FROM THE PRESIDENT

The summer has flown by as Susan and I have spent most of our time on the road.

The Museum presented Magic of the Machine Day and I had a great time giving rides to visitors and demonstrating four of our unusual vehicles. The 1963 BMW 3200S seemed to be one of the favorite cars to ride in, although I will say people also enjoyed the Fiat Multipla (by lowering the two middle seats and raising the two back seats, the leg room is truly amazing). Guests were fascinated by the 1945 Mochet Velocar when we demonstrated how to pedal the car and then engage the 50cc motor to have a slightly assisted power supply. The car is certainly rudimentary by modern standards, but shows how innovation can flourish when times are tough.

I have had no time to start on the DKW Universal van that is in my restoration shop, but I have gathered up all the pieces and hope to put it together this fall. The IRL track car arrived in June (just in time to sit all summer) and when we tried to start it, the fuel pump was bad, so it needs to make a trip back to Indy so the IRL doctor can fix it. Maybe we will have it going for next year.

Susan and I took the Amphicar out to Nashville Shores for a day of demonstrating this unique amphibious vehicle to a water park full of people.

The BMW Vintage & Classic Car Club of America hosted their annual rally through Wisconsin and the Upper Peninsula of

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In This Issue:

Highlights - Magic of the Machine and Race Car Day events.

Nissan North America Heritage Collection race cars on display now through December 31, 2006.



Above: Richard Petty aka "The King" and Susan Lane at the 2006 Goodwood Festival of Speed.

Below: Jeff Lane in the Caldwell D-7 CAN-AM race car during Race Car Day at the Museum.



A WORD FROM THE CURATOR

We have had a fun-filled summer with many exciting car activities. In July, we accepted an invitation from the Earl of March to show the 1934 McQuay-Norris as part of the Cartier "Style et Luxe" at the 2006 Goodwood Festival of Speed. The "Style et Luxe" is a display to illustrate the history of exceptional automobile design. The McQuay-Norris was featured with other superb vehicles in the class "Modernism on the Move: Coachbuilt Fantasies of the Streamlined Age." The Goodwood crowd was fascinated to learn more about this unique American vehicle that had been driven across the U.S. in the late 1930s as a promotional vehicle and again in 2006 while rallying in the Great Race. Goodwood was celebrating 100 years of Grand Prix racing so when we weren't on the show field we were in the stands watching and listening to race cars ascend the hill—from a Motor Sport Pioneer 1886 Benz Tricar to a Formula One 1988 McLaren-Honda MP4/4.

We traveled to the Chicago area for the 15th National Meet of the Microcar & Mini Car Club. Since Microcars are small, we figured we would show a few—1930 American Austin (3/4 scale), 1934 Mochet Velocar, 1956 Zündapp Janus, 1965 Peel P50 and Trident. Two hundred microcars participated in the National Meet. Technical sessions were offered, as were impromptu rides in various microcars. The Peel P50 took an award for "Most Unusual" microcar.

Lane Motor Museum has been a part of the Keeneland Concours d'Elegance since its inaugural show three years ago.

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Left: 1932 Lancia DiLambda at Glenmoor Gathering of Significant Automobiles.

Middle: Susan and Jeff Lane with the 1936 Voisin C28 at the Keeneland Concours d'Elegance.

Top Right: Rallying a 1963 BMW 3200S during the BMW Vintage & Classic Car Club Annual Tour.

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Michigan. We took the 1963 BMW 3200S and enjoyed five days of wonderful weather and beautiful roads.

Race Car Day was a new event at the Museum and it was a big success. We were able to demonstrate four of our race cars in the back parking lot and I believe Sam Posey's Caldwell D-7 was the crowd favorite. Many guests took advantage of the opportunity to sit in our IRL single seat race car. James Green gave rides throughout the day and I believe the visitors enjoyed the Zündapp Janus the most with its rear-facing seating arrangement and back door.

The PCD Saxon Hillclimber made its first test day in mid September. It performed fairly well with its usual new car problems. I believe after one more test day it will be back to the Museum. Greg Coston has been busy all summer tuning up cars for the shows we have attended. He has made great progress on the Martin Stationette, and we hope to have this unique wooden vehicle done by next summer.

Susan and I have had the chance to see many of you in the last few months at various car shows. I hope everyone had a great summer and hope to see you on the road soon.

***Jeff Lane
President***

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The event this year was held on the stunning grounds of what was then known as "Keeneland Stud Farm," now part of the Keeneland Race Course. Last year \$25,000 was raised for the Kentucky Children's Hospital. The 1936 Voisin C28 was presented in the "Pre-War Classic" class along with a stylish Bentley, Cord, and two Packards.

The Glenmoor Gathering of Significant Automobiles was held at the historic Glenmoor Country Club in Canton, Ohio. More than 200 outstanding and unique automobiles were featured this year. Lane Motor Museum showed the 1932 Lancia DiLambda as part of a fine grouping of foreign motorcars. For Jeff and I, the highlight of the Gathering is the Countryside Tour offered for car exhibitors. We traveled through beautiful Ohio countryside, stopping for lunch at the Atwood Lake Yacht Club.

Our first exhibit, "Innovation and Engineering Excellence: Behind the Iron Curtain" drew international attention. Guests learned of Czechoslovakian cars they were not familiar with—Aero, Jawa, Praga, Skoda, and Tatra. Czech television and radio sent reporters to do feature stories. We were surprised to receive newspaper articles from Czech friends about Lane Motor Museum!

Our next special exhibit opened September 23, 2006, and will feature race cars on loan from the Nissan North America Heritage Collection. Seven Nissan race cars will be on display and include a replica 1985 Nissan 300ZX Turbo – #33 Paul Newman/Sharp Trans Am, a replica 1990 Nissan 300ZX Turbo - #75 Steve Millen & Johnny O' Connell vehicle, a 1970 Datsun 510 - # 46 driven by John Morton, which was the 1971-72 2.5 Liter Trans Am Champion, and a replica 1983 Nissan GTP ZX Turbo, which won four consecutive driver's championships and three consecutive manufacturer's championships. Race over to Lane Motor Museum before the exhibit closes at the end of the year.

***Susan Lane
Curator***

Delivery Room - New Arrivals at Lane Motor Museum



1930 American Austin

Bill Minor of Columbia, Tennessee, was interested in making a micro version of an Austin. With his great fabrication abilities, he built this 3/4 scale version. This one-of-a-kind vehicle stands as a testimony to his talents.



1935 Adler Trumpf Junior

Prior to WWII, Adler was the third largest German auto maker. The Trumpf Junior offers front-wheel drive, all-round independent suspension, and an all-steel body. Approximately 100,000 were produced between 1934-41. Passenger car production for Adler virtually ended with WWII.



1939 Hanomag 1.3 Liter Saloon

This German company was producing cars as early as the 1920s. This Hanomag was introduced in 1939 as a modern, streamlined, economical middle-class family car. 10,000 were produced before the company turned to war production.



1951 Hotchkiss-Gregoire

Designed by J.A. Gregoire with less than 200 examples produced. This front-wheel drive car is powered by a horizontally opposed 2188cc, 4-cylinder engine mounted in the front.



1953 Rovin D4

After the Second World War, the French government encouraged the development of economy cars to get the nation moving again after the devastation of war. Low purchase price and cheap maintenance were essential. The D4 is powered with a 462cc, 2-cylinder, 4-stroke engine. Between 1950-53, approximately 1,200 were produced.



1958 Vespa 400

Vespa may be better known for scooters, but from 1957-61 it built about 34,000 microcars. The Vespa 400 was a well-finished car that competed with the Fiat 500. It has a rear-mounted, air-cooled, two-stroke engine that could achieve a top speed of 55 mph.

Voisin

Since the day it arrived, there has been confusion on just how to pronounce its name, confusion that I believe I'm the only one still dealing with. I've heard the name spoken, and have spoken it myself in so many different ways that now I can't remember which way is proper. And it seems no amount of correction can now straighten it out in my head. Voisin, like Voyson, or Veeson, or Vison with a long -i-, or Vwoson. So, for simplicity, I've decided to name the car Chuck.

The French-built 1936 Voisin C28 Ambassade, now known as Chuck, arrived a little over a year ago in one of those large innocuous shipping containers you see frequently on the roadways. The dark and heavy air inside the container enhanced the massive gothic appearance of the machine. Once out of the container, the dashboard packed full of instruments and knobs sparked my curiosity as to what kind of mechanical treasures were shrouded beneath the hood. It was not until recently when Chuck came to visit me that I fully appreciated just how mechanically interesting this machine is.

One of the first things I noticed was the odd gear selector that at first appears to be for a straightforward standard transmission. As it turns out, Chuck has a Cotal electro-mechanical transmission. The gear selector places the transmission in forward, neutral, or reverse, and the clutch is used only when starting or stopping the car. The remaining three gears are activated by a set of two switches mounted on the steering column and do not require the use of the clutch. At first the gear selector seemed a little awkward to me, but with a little practice I became comfortable with it and it seemed a lot like manually shifting an automatic transmission.

Chucks' power plant is a 3969cc sleeve-valve straight-six. The sleeve-valve engine was designed by Charles Knight in the early part of the 19th century. The appeal to a car builder like Gabriel Voisin was the elimination of the complex and noisy valve train. In the sleeve-valve engine, the piston is placed inside of two sleeves; the sleeves being driven by an auxiliary shaft are individually timed so that their movement within the cylinder open and close ports on the side of the sleeves thus allowing intake and exhaust, as well as sealing during the compression and power strokes. When the piston moves down on the intake stroke, the ports on the intake side of the cylinder line up to allow the fuel/air mixture into the cylinder; then as the piston moves up on the compression stroke, the sleeves seal the chamber, remaining closed during ignition and the power stroke; once the piston has reached the bottom of the power stroke, the sleeves begin to expose the ports on the exhaust side and the combustion gases are expelled as the piston moves upward.

The drawback to this design is that there are six wear surfaces in each cylinder, and problems with lubrication and sealing combustion gases are endemic with this engine design. Because of these problems, with most sleeve valve engines, the exhaust contains a good amount of smoke. Chuck is no exception; with a plume of smoke following wherever it goes. So, when Chuck came to see me several weeks ago to find out why it lacked power I had to fight the urge to simply condemn the engine. But I fought to no avail, I spent the day seeing to it that all was working properly, and finally becoming content with the conclusion that the sleeves had worn to the point that they could no longer seal adequately. In time I will remove the engine for inspection and rebuilding. I'm sure that what I find will be worth another entry here. So stay tuned to find out whether Chuck remains the innocent, slightly clumsy, Charlie Brown type, or if it turns into the possessed Chucky type.

Greg Coston
Museum Restorer



Left: 1936 Voisin C28 at Keeneland Concours d'Elegance.

Right: The 1936 Voisin C28 on the Museum exhibit hall floor.



Down History Lane

When the first horses started running around on this earth 45 million years ago, they were the size of dogs and were timid, weak creatures. They had no idea how much power they would one day yield in the development of humanity and society. Civilization has been forever changed by the horse and some say it came from “the horse’s mouth” that “history was written on the backs of horses”.

Most of us today know the term horsepower and its impact on our vehicles’ performance but few of us understand where the word horsepower came from, or why we use the term at all. It could’ve easily been ox power as oxen were the primary creatures of labor and strength in the early days of the Western Hemisphere. It was only 30,000 to 40,000 years ago that the horse actually came to the West and began duties of endeavor that enabled society to alter itself and personify the horses’ strength through their societal strength. HORSEPOWER was changing the world but the word didn’t exist yet!

The automobile wasn’t yet conceived when the term horsepower was coined by Scottish inventor James Watt in 1782. Nor was the internal combustion engine in existence, but there was a steam engine in use called the Newcomen engine which was used mostly for pumping water out of mines. The Newcomen steam engine had been in use for 50 years without significant changes to improve its capabilities to pull and pump water and “run like a horse” so to speak.

James Watt (for whom the electrical unit of measurement, the “watt” is named) had re-engineered the Newcomen engine to produce four times the power. He decided that in order to market his engine, he needed a term to describe its power. The horse by that time had become the principal source of power in agriculture and industry and did a lot of pulling in the tasks of labor that man had to accomplish. Watt decided to use the horse to relate and equate to customers how many horses would NOT be needed if you used his newly designed steam engine to perform those tasks. He decided on the word HORSEPOWER as most everyone understood the power and necessity of horses.

His new engine had the power to replace the horse in many ways and the term horsepower made a lot of “horse sense” to the entire world. Watt’s study of how a horse can pull brought about an equation to explain power that hadn’t been used before. People could relate to horses in a big way and “watt” an idea it was. Watt was “riding high in the saddle” with the most important idea and innovation since man had begun industrializing. It is said that Watt was the father of the industrial revolution because of his inventions. He began the changes that brought the world from a 90% rural basis to a 90% urban basis.

Here we are today, 200+ years later, and we’re still using his term horsepower to describe the power of machines from lawnmowers to vacuum cleaners, and there is no end in sight. I guess you could say that Watt got us “off and running” and now we have horsepower ratings that might have Watt himself “chomping at the bit” trying to understand it all.

Mechanical horsepower is the most common definition for internal combustion engines, stating that one horsepower equals 33,000 foot-pounds of force per minute. Watt had determined that a sawmill horse could lift 33,000 pounds the distance of one foot in one minute. From that original definition, we now have Metric hp for European and Asian applications; Boiler hp for power plant boilers; Electrical hp for electric motors; Drawbar hp for railway locomotives and agricultural tractors; RAC hp or taxable hp instituted by the Royal Automobile Club in Britain for taxation purposes as some cars are named after their taxable hp such as the Austin Seven, the Riley Nine, or in France, the Citroën 2CV as examples. (CV abbreviates cheval-vapeur or steam horses); Indicated hp (ihp) normally used for steam engines; SAE gross hp to rate engines running on a stand without accessories, mufflers or emission devices; Brake hp (bhp) to rate engines without the loss in power caused by the gearbox, generator, differential, water pump, and other auxiliaries; Effective hp (ehp) also known as wheel hp or the actual power turned into forward motion; SAE-certified hp, which is the new test procedure instituted in 2005 by the Society of Automotive Engineers; DIN hp which measures power at the flywheel; ECE hp which measures net hp; and Shaft hp (shp) to measure power delivered to the propeller shaft of a ship or turboprop aircraft.

If that isn’t enough to confuse you, we now have computer hp to relate the speed of a computer. Watt had a lot of great ideas but he had no idea when he coined the term horsepower, that one day, down history lane, the world would place such emphasis on a term that originated from an animal at work and use it to describe the power of a machine known still today as “the horseless carriage”.

REFERENCES: www.answers.com—www.ideafinder.com/history/inventors/watt

Jimmy Carter
Gift Shop Manager

The Lane Motor Museum gift shop offers unique gifts for the holiday season. And remember, all members receive a 10% discount off of purchases!

Marketing Update

We are having a great year at the Museum and wish to thank all of our members and visitors for stopping by! We are delighted that more and more people are finding out about Lane Motor Museum, especially local Nashvillians. Thank you for telling everyone about us!

We have had several fun events this past quarter such as *Magic of the Machine* and *Race Car Day*, both of which drew hundreds of visitors who had a great time taking vintage vehicle rides, and watching Jeff Lane drive some of the unusual vehicles around the Museum grounds. Guests were even able to have a seat in an Indy Racing League race car!

The Museum also demonstrated the Amphicar at Nashville Shores, displayed vehicles at Mini Takes the States at Centennial Park, and this year, participated in the Mayor's First Day Festival at the GEC.

We are preparing for our Toys for Tots promotion in which we will offer one free adult admission to any guest who brings in a new, unwrapped toy to benefit the Marine Corps Toys For Tots foundation. This promotion will kick off on Friday, November 24 and will run through Thursday, December 14, 2006, culminating with our car parade delivering the toys to the Toys For Tots warehouse on the morning of Friday, December 15, 2006. This is the second year we are collecting toys for this foundation and we hope you will all come out and support this worthy charity.

During the holiday season, guests will also be able to view vehicles on loan from the Nissan North America Heritage Collection. We are very excited to have partnered with Nissan and are glad to be able to let guests view their historical vehicles. The first display will include Nissan Heritage Collection race cars and will run now through December 31, 2006. And don't forget the Members Holiday Reception scheduled for Saturday, December 9, 2006. We hope you will be able to make it to our special day celebrating members!

We hope you all have a wonderful and safe holiday season!



Above: Guest seated in an Indy Racing League car during Race Car Day.



Left: Museum cars filled with toys collected during the 2005 Toys For Tots campaign.



Right: Open hoods during the Magic of the Machine event at the Museum.

**Joan Williams
Marketing Manager**

Calendar of Events October – December, 2006

Now through Dec. 31, 2006	Nissan North America Heritage Collection race cars on display. View seven different Nissan race cars including a replica 1985 Nissan 300 ZX Turbo - #33 Paul Newman/Sharp Trans Am; a replica 1990 Nissan 300 ZX Turbo - #75 Steve Millen & Johnny O'Connell GTS race car; a 1970 Datsun 510 - #46 driven by John Morton; and a 2005 Nissan Frontier #8 CORR series race truck.
Wednesday, Oct. 18	Lane Motor Museum Third Anniversary! Guests are welcome to stop by the Museum on Saturday, October 21, 2006, for refreshments.
Saturday, Nov. 11	Free Admission for Veterans and Active Military!
Friday, Nov. 24 to	Toys For Tots Drive II. Bring in one new, unwrapped toy and receive one free adult admission during the Marine Corp Toys For Tots foundation drive. The Museum will collect toys for the foundation and deliver them to the Marines in Lane Motor Museum vehicles on Dec. 15, 2006.
Sat., Dec. 9, 2006	Member Holiday Reception. Refreshments provided. Bring a guest and enjoy viewing new vehicles in the collection.

In Search Of...

So what does the person with the greatest job in the world do on his day off? Go for a drive of course - looking for that perfect road. I never tire of exercising the fleet and the need to do a good job extends beyond my grueling three day work schedule. I also love finding new challenging roads, so on a recent seemingly beautiful day I figured it was time to check out a route that was listed in *Automobile's 20th Anniversary edition* (April 2006) as one of the 20 greatest drives in the U.S. It just so happens that the drive is only an hour and a half from Nashville and there is good barbecue to be had in that hour and a half. I chose something English without a top and set off to find some peace and tranquility.

We all know about the Dragon (US 129 on the TN/NC border) in east Tennessee. It is a magnificent road with a devoted following. All sorts of car and bike clubs hold annual gatherings to drive that particular stretch of macadam. The Dragon has been the slayer of many expensive R compound tires and carbon fiber cladding on crotch rockets. The Dragon is magnificent and legendary. There are 318 curves in 11 miles. That is 29 turns per mile or a turn every 200 feet. I drove it on New Year's Eve several years back and it was completely desolate in the middle of the afternoon. I had to stop twice to battle nausea. That was a first. The curves are well banked and the asphalt was smooth and grippy. I don't mind paying taxes for roads like this. But, alas, the Dragon has become too popular and the Dragon wasn't listed as one of the 20 greatest drives. What, no Dragon? But there is a drive listed for Tennessee? There is a better road in Tennessee than the Dragon?

I had to find out for myself and the particular stretch of asphalt that was my destination is in east Tennessee, where elevation changes over a short distance make for spectacular driver's roads. Head east from Nashville to Cookeville on I-40. It's a boring drive but once there, stop at Bobby Q's for some delicious barbecue. I'd recommend the ribs and bbq beans with a big iced tea. After lunch head north to Livingston on Highway 111, and be sure to take your time because every time I've traveled this road I've seen speed traps. There's not much to do in this sleepy little town so continue on until 111 splits with Highway 52. Highway 52 winds gently through some lovely countryside to the wide spot in the road known as Alpine. There may be a store here, but I don't slow down enough to notice. Hwy. 52 will split soon so pay attention because auto nirvana is close.

Highway 85 spurs off to the right of 52. You'll wonder why you've driven all this way because for the first couple of miles, it doesn't seem much different than 52. But after a few ups and downs and some blind turns you drive out of a canopy of trees and blast into a beautiful valley that has some glorious high speed turns that are not blind. There are nice sweepers that can be lined up and smoothly executed without the worry of an oncoming car occupying your apex. The fast turns go by quickly and you are faced with a climb up Bear Knob to the unincorporated town of Twinton. The climb has nine insanely tight switchbacks. There is a bit of loose gravel so temper your enthusiasm a bit and if you get caught behind a dawdling local pull off and enjoy the scenery for a moment. At the top of the hill stay on 85. The road becomes amazing through this section. Through one series of undulating rights I expected the road to cross back over itself, but it snapped back to the left in a beautiful increasing radius turn. On a brief straight section, you'll find a dilapidated home with a geodesic dome roof. Passing through Twinton you'll find a nice set of dips and rises, much like a roller coaster, except you decide on how fast the coaster is going.

After the coaster ride is over there are faster sweepers, but you should be careful because there is a very tight left lying at the bottom of a drop. It is a dangerous curve and is marked as such, but if it is your first time down the road you'll enter too fast...you've been warned. After this snake in the bushes, Wilder is straight ahead. Wilder, like Twinton and Alpine, has nothing to offer but nice asphalt. 85 clutches to the side of a bluff as it winds down to a bridge crossing Laurel Creek and then the fun begins again. There is another climb with several switchbacks and some nice opening right-handers thrown in just for grins. From here the road straightens and the speed limit rises to 55. 85 soon tee's into Highway 127, where refreshments and necessary facilities can be found going in either direction. Now turn around and try the route backward and remember the dangerous left is now a dangerous uphill right.

The day started so beautifully and I had found an amazing road, but it turned dark near Cookeville with giant thunderheads building to the west. I made it as far as Baxter on I-40 and that is where I got soaked and took refuge under an interstate bridge for half an hour. The rain eased and I drove back roads home where the sun came out again just as I pulled into the drive. I was still wet and mentally and physically drained but I was blissful and giddy from a great day of driving. I'm not certain of the criteria used to define a great drive, but there are 19 more out there I just have to see for myself. Maybe on my next day off.

James Green
Automotive Preparation Manager



Photos on this page: Nissan Heritage Collection vehicles at Lane Motor Museum. Collection will be on display now through December 31, 2006 and includes a replica 1985 Nissan 300 ZX Turbo - #33 Paul Newman/ Sharp Trans Am; a replica 1990 Nissan 300 ZX GTS Turbo - #75 Steve Millen & Johnny O'Connell race car; a 1970 Datsun 510 - #46 driven by John Morton; and a replica 1983 Nissan GTP ZX Turbo.



Lane Motor Museum is proud to announce that the 3rd Anniversary of the Museum takes place in October. Please stop by the Museum on Saturday, October 21, 2006, and enjoy some refreshments!



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*In the next issue:
2007 Special Event Information and
New Vehicle Arrivals!*