

THE 4-BANGER

VOICE OF THE NAPER A's

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**AFFILIATED
WITH THE
MODEL A
FORD CLUB
OF AMERICA**



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A single Model A appeared at the July 27th AACA car show held at Cantigny in Wheaton, owned by Rick Shaw, of the Silver Springs AACA Chapter.



COMMUNITY DAY/ DuPAGE AIRPORT
On July 25th, the Naper A's enjoyed a tour among historic aircraft including a B-24, a P-51, and a Stearman biplane. President Gene Egert planned the event and his family sent him aloft for a ride in the B-24 Liberator bomber! He's at left with a veteran B-24 navigator.



On August 3rd, the Naper A's toured to Union for a Car Show at the Illinois Railway Museum and rides on vintage trains.



MEMORY LANE: Naper A's lineup for George Pradel's Anniversary Party at the Naperville VFW on August 11, 2010.



COMING EVENTS:

2014 QUAD Meet (Cantigny Park, Wheaton).....September 7th
Model "A" Days (Gilmore Museum, Michigan).... September 20th-21st
Ehrenhofer Swap Meet (Gilmore Museum)..... September 20th-21st
Naper A's Christmas Dinner (Bohemian Crystal).....December 7th



Model A Spark Plug Voltage Polarity, Part Three

What It Is And Why It's Important

By Noel DeLessio

*In Part Two, we discussed:
Model A's and spark voltage polarity
Testing and fixing spark voltage polarity
High Voltage Polarity Test*



*This issue, we shall complete this series with
✓ Why negative polarity requires lower voltage
✓ Spark Plug With Negative Polarity Voltage Applied
✓ Supplementary Notes*

Why Negative Polarity Requires Lower Voltage

Air is a good electrical insulator. However, the millions of volts that are generated in the atmosphere during a thunderstorm overcome air's insulating properties and an electrical current can spark to ground. This lightning strike gives off heat and can start a fire.

Similarly, the fuel mixture in a combustion chamber is a good electrical insulator. However, the thousands of volts that the ignition system applies to the spark plug overcomes the mixture's insulating properties and generates a spark, giving off heat and causing the mixture to ignite. The lower the voltage that is required to generate the spark, the easier it becomes for the ignition system to ignite the mixture and the better the engine will run.

The electrical current in the spark really is the movement of negatively charged particles called electrons between the spark plug's electrodes. Overcoming the innate insulating properties of the fuel mixture means that the force on the electrons due to high voltage applied at the spark plug becomes sufficient to break electrons away from one spark plug electrode and move them to the other electrode.

If a negative polarity voltage is

applied to the center electrode, the electrons (which are negatively charged) tend to be repelled from the center electrode and attracted to the side electrode. This means that a negative spark voltage polarity moves electrons from the center electrode over to the side electrode.

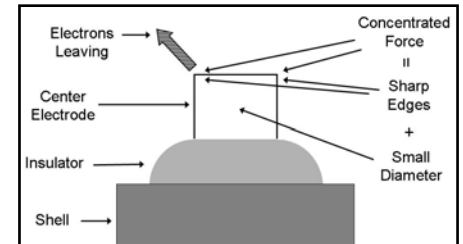
On the other hand, a positive spark voltage polarity would move electrons from the side electrode to the center electrode.

The voltage required to break electrons away from the center electrode is lower than the voltage required to break electrons away from the side electrode (see below.) This means that a negative spark voltage polarity requires a lower voltage to generate a spark than positive spark voltage polarity.

There are two reasons why electrons readily break free from the center electrode at a lower voltage than they break free from the side electrode. The first reason is that the force generated by the spark voltage becomes more concentrated at the small-diameter cylindrical center electrode than it is at the side electrode. The force is further concentrated at the sharp right-angled edge at the end of the center electrode.

The force-concentrating effects at the center electrode mean that a lower voltage is required to break the electrons away from the center electrode than it is from the side electrode. See "Supplementary Note 1" below and observe the "Spark Plug" illustration.

Spark Plug With Negative Polarity Voltage Applied



The second reason why we find electrons breaking free readily from the center electrode at a lower voltage than they break free from the side electrode is simple: electrons will leave from a hotter surface more easily than from a colder one.

The center electrode of a spark plug runs hotter than does the side electrode, thereby enabling its electrons to break free from it at a lower voltage. This property of electrons leaving more easily at higher temperatures is similar to water in a pot on a hot stove evaporating more quickly than water in a pot on a cold stove.

Supplementary Notes

1. The notion of small diameters and sharp edges concentrating electrical and mechanical forces shows up in many places. For example, the sharp edge of an ax blade will concentrate the mechanical force against the wood fibers and enable the blade to cut easily. When that edge becomes rounded and dull, the force becomes less concentrated and the blade cuts poorly. Similarly, since we want lightning to strike our

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- lightning rod rather than the roof of our barn, we design the rod with a small diameter and a sharp point at the tip. This concentrates electrical forces at the rod's tip and encourages the lightning to form there, rather than at the barn's roof.
- The sharp edge of the center electrode erodes and rounds off with ordinary use. This reduces force concentration and requires increased voltage for a spark. When this erosion happens, the spark plug should either be replaced or renewed. Renewal is done by filing the center electrode flat and regaining the sharp edge. This is equivalent to sharpening the edge of the dull ax blade discussed above.
 - Making the center electrode's diameter even smaller would further enhance concentration of force and make the required spark voltage even lower. But this also would hasten edge erosion unacceptably. Some modern spark plugs do have electrodes made using such materials as platinum to allow the use of a smaller center electrode diameter while at the same time resisting erosion.
 - In a modern car, where up to 40,000 volts can be available from the ignition system and perhaps only 10,000 volts may be required to ignite the fuel mixture, it doesn't make much difference which polarity the spark voltage has. More than enough voltage is available to ignite the mixture with either polarity. Many modern cars with distributorless ignition systems have half of their spark plugs running with negative polarity and half running with positive polarity, with no ill effects. In fact, they often have platinum center electrodes on the spark plugs receiving the negative polarity voltage and platinum side electrodes on spark plugs receiving positive polarity voltage. This way, only the electrode from which the electrons are leaving has the expensive platinum electrode to resist erosion.

Now you definitely know more than you ever wanted to about this subject!

Please refer to Parts One & Two of this series for reference when reading Part Three. Many thanks to Model A News Editor Helen Ehrenhofer, who originally published this article.

MAFFI Membership Supports Model A Museum

For just \$25 a year, Model A lovers in both MARC and MAFCA local chapters can help support MAFFI (The Model A Ford Foundation, Inc.) and the great new Model A Museum at the Gilmore complex in Michigan. Plus, they'll send you this nifty embroidered jacket patch and a free museum admission card.

MAFFI is dedicated to the preserving historical information and memorabilia from the Model A era. Your membership donation is income tax deductible under the Internal Revenue Service rule 501 (c)3 and will support many projects, such as the Ford Parts Project.



Insulating Your "A"

By Rich Volkmer

Finding your "A" a little noisy and drafty on the road these days? The best cure might just be to retrofit a modern sound and thermal insulation kit, such as the one marketed through our Model A vendors by Quiet Ride Solutions. The materials will be completely invisible inside the doors and under your upholstery and floor coverings, and will give your car something akin to the quiet and comfort we all take for granted in our modern cars.

The kits aren't exactly cheap, but the results can be amazing... especially on metal-bodied cars like the coupes and Tudors. Wood-framed Fordor models and open cars can also benefit greatly. Your best starting point is visiting the Acousti-Shield web site at www.quietride.com for briefing videos and instruction sheets to get a feel for the process and materials involved. They are very helpful by phone, too. It's easiest to do this work with a totally gutted interior, during the restoration process.

Basically, there are two phases involved. The first is applying sections of "Dynamat" sound-deadening material. It comes in trimmable strips. Quiet Ride Solutions provides diagrams to locate this adhesive-backed tar-like product, which has a foil face. It is imperative to install noise dampening pads exactly as directed for maximum prevention of sheet metal drumming. It is designed to prevent harmonic vibrations in selected critical areas.

The second phase is thermal insulation, which is accomplished with pre-cut batting material that is also foil-covered. This is affixed inside the exposed body panels and over the floor pans using a provided contact cement spray adhesive. Seams are bridged using foil tape.

Below are some pictures taken recently when we commenced the insulation project on our '29 Fordor. With the body back on the frame, but the interior still wide open, it was the ideal moment to install an insulation package.



Inside the right front door.

You just cut the long strips of Dynamat material into 2"x3" squares, then peel off the backing and stick them in place in a checkerboard pattern, using a wallpaper roller for pressure adhesion. Next issue, we'll show installing Dynamat pads inside body panels and begin with the thermal insulation.

DREAM ON A CAR NAMED JOE...

A Parable By Ron Olsen

Not long ago, there was an old gentleman who owned a 1930 Model A Ford. He named his car "Joe" and took good care of it. It was all black and shined like a jewel. Joe was happy at the place he lived. Joe appreciated his owner and tried to please him whenever he was called upon to deliver the owner as needed and when returning to his clean garage he whispered to himself, "You took care of me, so I'll take care of you." Joe was kept in great shape and all his requirements were regularly supplied. He was a joyful old car and said to himself over and over, "Life is Good."

One day, the owner came in the side door to the garage with a large man. The two of them were talking but Joe noticed right away that the big man left a lot of mud from his shoes on the clean floor. Suddenly it became clear to Joe that his owner had some money problems due to doctor and hospital bills and he was going to be sold to the big man. The owner didn't receive

What he wanted for Joe since the big man cut the price down claiming Joe was old and not in demand any more. Joe left his happy home and was excited to be in a new place with nice surroundings. Bbut when Joe got to that new home, the man left him outside and that night it rained.

Next morning, the man started Joe and went to the store. Despite all the water marks on his paint,

Joe performed beautifully, however, he wasn't kept in the garage.

Eventually, Joe needed a tune-up and some other things but the man denied the service and complained when Joe wouldn't start right away. One day, Joe was required to take the big man and his wife to the mother-in-laws house, about two hours away. Joe felt sick but with some hesitation finally got started and away he went chugging along. He whispered to himself "If you don't take care of me I won't take care of you."

Returning home, his lower radiator hose had developed a crack and lots of water ran out with a burst of steam. The big man was furious and began kicking Joe's tires. A passerby stopped to help and immediately also noticed the right rear tire going flat. The passerby stopped the hose leak with electrical tape, changed the flat tire with the spare and then followed Joe to be sure he got home safely.

The passerby liked Joe and the next day showed up at the house with an offer to buy him. The big man was eager to get rid of Joe but demanded more money than he had originally paid. The man paid the money, so away went Joe on a flatbed tow truck to a new home. Joe was afraid, but the new owner took him into a spotless garage and then fixed all of Joe's problems. Life was good once more. Joe was so happy and glad to be in good hands again that he said to himself...

"If he takes care of me I'll take care of him."



MODEL "T" vs. MODEL "A"

Perhaps nothing quite portrays the Model A Ford as modern and advanced quite like parking aside a Model T Ford. Three-speed sliding gear transmission with conventional clutch vs. three-pedal planetary drive . . . 40 HP vs. 20 HP . . . 21" tires vs. 30" tires . . . 4-wheel brakes vs. 2-wheel brakes . . . distributor ignition and one coil vs. magneto and 4-coil setup . . . rainbow of colors vs. black . . . plus many extras not found on a Model T, such as an emergency brake, a water pump, and shock absorbers. Basically, 1928 vs. 1908.

2014 SAFETY CHECK

VOEGTLE'S GARAGE, WARRENVILLE o MAY 10, 2014

MANY
THANKS TO
GENE
EGERT
AND
VOEGTLE'S
GARAGE
FOR
ORGANIZING
AND
HOSTING
THE
NAPER A's
2014
SAFETY
CHECK
ON
MAY 10th.





**An Afternoon of Model A's
and Memories**
Sunday, September 7th, 2014
The 2014 QUAD Meet at Cantigny Park
Celebrating the Era with Fashion,
Food, Fun and Friends!
TOMMY'S Deli and Food Emporium






A Word From Gene Egert...

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THE PREZ SAYS...

Lots has happened since drafting my last column, as it has really been a busy year for the Naper A's. Best of all, there's more to come!

Our outing to Reuben Taylor's garage on the west side of Chicago was really a thrill on May 4th. There was a mockup of a lunar rover made up by a 3D printer which will be displayed at the Museum of Science and Industry. He had about a dozen classic cars to see, including old Lincolns, a collection really worth seeing and historically important. The historic neighborhood itself is quite interesting, and the old brownstone building. Steve Paul drove his 1928 Phaeton all the way downtown and home, with the top down. Many thanks to Tom Roche for coordinating the event.

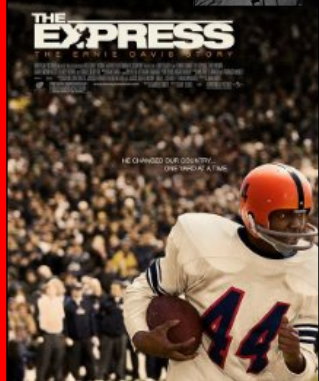
On May 10th, I helped organize a Safety Check event at Voegtler's Garage in Warrenville, thanks to cooperation and generosity from Chuck and Joe Voegtler, Jr. We ran five cars through the process of checking out the brakes, lights, charging systems, wheel bearings, and steering assemblies. Now I'm trying to convince Chuck to get himself a Model A. It's a work in progress.... The Safety Check worked, as June 1st found us touring nine cars to Sharon, Wisconsin, for Model A Day and all made the 160-mile round trip with no incidents.

Community Day at DuPage Airport on July 25th brought out six cars, but the most exciting part for me was having my wife and kids chip together to buy me a ticket for a ride on the B-24 bomber. One of my fellow passengers was a 91-year-old former B-24 navigator. One of our guys strayed onto a live taxiway (missed an exit) being used by the Stearman biplane, which added to everyone's excitement.

The Union Car Show at the Illinois Railway Museum on August 3rd drew five Naper A's cars and 10 members, who enjoyed a ride on the steam train for its first run in years and on the Chicago, Aurora & Elgin electric inter-urban car.

Finally, we just participated in the 2014 Quad Meet held at Cantigny on September 7th, hosted by the Illinois Region. The Fox Valley, Salt Creek, Joliet Region, and Naper A's Clubs were all well represented as well. Over 40 cars were on display and it was a great family event featuring a beautiful park setting, good food, nice music, fun raffles, and great company.

Stu's Movie Moment



Stu Carstens, Danny Molina, and Tom Roche rented cars to the making of "The Express" in 2008. The movie-makers hired over 20 cars during production, shooting the film in Aurora.

MAKING OF THE EXPRESS (2008)

Ernest "Ernie" Davis (1939-1963) was a football running back, the first African-American athlete to win the Heisman Trophy.

Wearing number 44, Davis played in college for Syracuse University before becoming drafted by the Washington Redskins. Immediately, he was traded to the Cleveland Browns in December

1961, where he was issued number 45.

However, he never played a professional game. Sadly, he was diagnosed with leukemia in 1962. His life story is portrayed in the 2008 Universal Pictures movie biography *The Express*, based on a biography entitled *Ernie Davis: The Elmira Express*, by Robert C. Gallagher.



Jean Campbell in period dress; vintage bus comes to Greyhound Depot; Stu window shops between takes behind Tom Roach's LaSalle; and check the prices in that window!

