

*The Brass Nuts* is published by the 5th of each month by the **NORTHERN CALIFORNIA REGIONAL GROUP OF THE HCCA**. Permission to reproduce articles appearing in this publication is granted provided credit is given to the original source. *Brass Nuts* subscriptions are available to non-members for \$15.00 per year.

The mission and purpose of the **Northern California Regional Group of the Horseless Carriage Club of America** is to bring together people interested in the preservation of antique and vintage vehicles and their accessories, to preserve and maintain antique and vintage vehicles, and to serve as an accurate and technical source of information concerning the vehicles for the benefit of the members and the general public. We value and enjoy sharing our cars and their history through public educational events.

#### **THE HORSELESS CARRIAGE CLUB OF AMERICA**

The Horseless Carriage Club of America is a nonprofit international association of people dedicated to the enjoyment, study and preservation of early automobiles manufactured prior to 1916.

The club was organized in 1937 by a group of horseless carriage enthusiasts who foresaw the need for an organization dedicated to the preservation of automotive history. From this beginning the Horseless Carriage Club of America has grown to include members from all parts of the United States, Canada, Europe and other parts of the world. [www.hcca.org](http://www.hcca.org)

**NCRG General Meetings will be held the third Thursday of each month (no meeting in December) at the Sacramento Sewer District Office Board Room, 5026 Don Julio Boulevard, Sacramento, California.**

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Jan Charprier, Mike Huff, Sandy Maye, Stephanie Mozell, and Diana Squire.

#### **NCRG 2020—2021 BOARD OF DIRECTORS:**

Bill Charprier, Raul Cornejo, Bob Hopkins, Jr., Gordon McGregor, and Roger Mitchell.

2020

**NCRG-HCCA**

**QUESTIONS? CONTACT**

**Web site address: [www.ncrghcca.com](http://www.ncrghcca.com)**

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Sue Hill, Editor Emeritus



#### **ATTENTION Mask Wearers!**

If your glasses fog when you're wearing your mask, you may be eligible for

Condensation!!!!





**President's Message:**

You may be asking yourself, when are we going to be able to have an in-person meeting again? Unfortunately, the latest news concerning the COVID-19 problems in

Sacramento, in California overall, and in many other states is not encouraging. As I'm writing this piece, *The Sacramento Bee* on-line announced "California's coronavirus positive rate is jumping." There are also reports that most California counties are seeing a surge in the coronavirus and health officials are struggling to keep up. The health officials report that the local increases are due mostly to small gatherings of families and friends. People, in their desire to get things back to normal, have let their guard down and are ignoring the advice of medical professionals. In response to our recent check with the County about our meeting room availability, they have advised us that the room is shuttered through July and it is listed as a "maybe" for August. Once the room is available, how many members are going to feel comfortable attending, especially those of us that are in the high risk category? In my opinion, in-person meetings are not going to happen for awhile. I would like to hear from members who have input on this situation.

With in-person meetings on hold for an unknown period, is there anything else we can do? Many businesses, clubs and organizations are turning to on-line meetings. They are using video communication platforms such as Zoom. People accessing the program can do so from their computer, smart phone or telephone (audio only). I plan to research these platforms and report back at a later date. If you have any experience with one or more of the platforms, I would appreciate your input.

As a reminder, our Editor needs your continued help supplying information to put in *The Brass Nuts*. Maybe you can share a story about a past tour, a humorous incident that you recall, a technical tip to share with other members or photographs of vintage clothes and vehicles.

Jan and I miss seeing you in person at events and meetings. Keep you and your family healthy and safe as we look forward to the end of this pandemic and being able to enjoy each other's company again.



Happy 4<sup>th</sup> of July!

*Bill*



**Editor's Message:**

We're into summer now and missing our touring days even more. As Bill says, the news isn't good for gathering together. Meetings have gone

online and those tours scheduled are being cancelled or postponed. We're hoping that in a few months we will be able to gather together again.

July 4th parades have been curtailed. However, you might decide to decorate your car and take a drive around the neighborhood, just to show-off your "American Independence" spirit. Perhaps I'll see you on the road.

I am grateful for the support of our members in keeping *The Brass Nuts* going. Members have found articles in other newsletters or took their time to find club history to share. One member has been sharing the fun experience (did I say fun?) of tearing down and rebuilding an engine. Our President has been sharing some of his favorite tools from his toolbox. I know many of you have a "favorite" tool as well. You may find some jokes to share, or share your memory of a special tour that brings a smile to your face as you recall those days on the road with your car and friends. Those days will come again. In the meantime I'm

Wishing You Good Health and Safe Travels—

*Diana*

**NEXT GENERAL MEETING**  
**Thursday, 7:00 P.M.**  
**July 16th, 2020**

Sacramento Sewer District Office  
 5026 Don Julio Boulevard  
 Sacramento CA

**CANCELLED**



### NCRG HCCA CALENDAR OF EVENTS

(NOTE: NCRG sponsored events are in bold print)

#### 2020

- July 16th **General Meeting Cancelled**
- August 5-9 **Ryan Ramble Cancelled**
- August 20 **NCRG General Meeting, 7PM**  
*Watch for Update*
- December 20 **Holiday Progressive Dinner**

#### Plan a tour

**Let's set a future date!!!!**

Contact Gordon McGregor, Tour and Safety Chairman, with your tour dates and information.

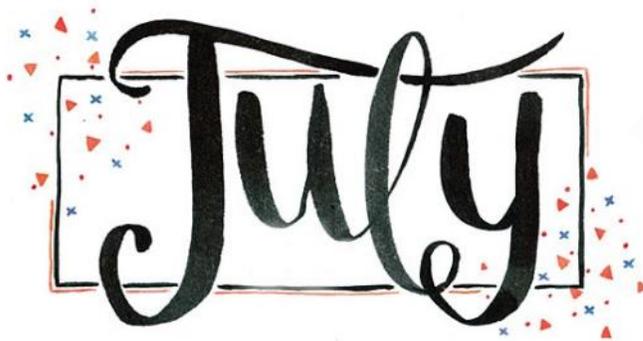


### SWAP MEETS, OTHER REGIONAL CLUB HAPPENINGS AND NATIONAL EVENTS:

#### 2020

July 11—*Knight Rider Car Show*, Jackson, CA. **Cancelled**  
Sponsored by Amador County Council 1849, Knights of Columbus.

*Please see your latest Horseless Carriage Gazette "Coming Events Section" for events coming your way or for any cancellations.*



### July 1st National US Postage Stamp Day



### July 10th National Collector Car Appreciation Day

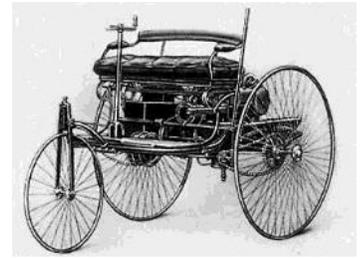


**Collector Car Appreciation Day** is an annual celebration to raise awareness of the role automotive restoration and collection plays in American society. The day was first recognized on July 9, 2010 due, in part, to U.S. Senate resolution S. Res 513, sponsored by Senators Jon Tester and Richard Burr.



## BERTA BENZ: LIFE IN THE FIRST LANE

From the November/December 1988 issue of, *Antique Automobile*,  
Courtesy of Mercedes-Benz of North American  
Photos from crsautomotive.com  
Thanks go to Ed Rose for submitting this article



Let us now pause and remember Berta Ringer Benz, the lady who first dared to take a motor vehicle out of the neighborhood.

It was 100\* years ago, in the wee hours of an August morning in 1888 in Mannheim, Germany, that Berta Benz, wife of automobile inventor, Karl Benz, literally stole away in the family three-wheeler with sons Richard and Eugen. It was neither a prank nor an early attempt at do-it-yourself divorce.

Quite the contrary, it was a way of demonstrating to father, ever the tinkerer, that his invention was indeed practical enough to sell.

By 1900 Benz would become the world's leading auto producer, and his company would merge in 1926 with that of rival Gottlieb Daimler to form Daimler-Benz AG, the maker of Mercedes-Benz cars, trucks, and engines. But it took his wife's get-up-and-go to get the project moving.

The destination for this first long-distance drive was the home of Berta's mother in Pforzheim, some 60 miles away. This was about 30 times as far as anyone had previously ventured in the numerous demonstrations of the 2.5 horsepower, single-cylinder machine and its predecessors. (It was actually the third version of the first automobile, the car that Benz had patented in 1886.)

To put things into perspective, there were no paved roads, no maps and definitely no service stations. And, the hill-climbing ability of the high, open machine that looked more like a sleigh than a car was, in brief, marginal. Thirteen-year-old Richard frequently found himself at the tiller as his mother and older brother pushed the chuffing 790-pound vehicle up inclines.

The fuel was a primitive form of gasoline called distillation benzene, in use as a cleaning fluid at the time and available only in small quantities from apothecaries.

The total onboard supply was carried in the one-

gallon carburetor reservoir, giving a range of about 24 miles between "fillups," although there was not enough fuel available at any stop enroute to completely refill it. More of a concern, however, was the coolant. The engine was cooled by water but had no radiator: the engine heat simply boiled it away, requiring about twice as many stops for water as fuel.

There were also a few mechanical problems, which the team handled with ingenuity. Berta's hatpin was used to clear a plugged fuel line and a garter proved adequate to mend the mechanism that controlled the machine's leather transmission belt. And every so often, the chain that drove the rear wheels would slip off its sprocket.

Despite the delays, they were able to reach their destination by dark (a good thing since their car had no lights), and a crowd quickly formed to welcome them and to ogle the strange device that brought them there.

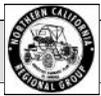
Berta, who had along the way sent a telegram to inform her husband of what she and the boys were up to, sent another telegram announcing their safe arrival

After a 5-day visit with her mother, during which the car was taken on short drives, it was time to head home. The only recorded problem, save for having to share the road with cattle, was the loss of the brake lining, a leather block that an obliging cobbler replaced.

Karl Benz's reaction to all of this, perhaps surprisingly, was pride. He also learned from his family's experiences on the hills that an additional, lower gear was needed in the transmission. Success eventually followed, and by the end of 1899, his company had built a total of 2000 cars—more than any other auto producers up to then.

So the next time your about to hop in the car to drive to the beach or the mountains or the desert or grandma's house, think of Berta Benz, the lady who started it all.

\* Note: The article was originally written in 1998.



# *A Blast from the Past*

From Sue Hill

## GARAGE TOUR 1969

"Those Magnificent Men in Their Powerful Machines"

Story by Marianne Robertson

From *The Brass Nuts*, October 1969

The garage tour was a lot of fun. Although I didn't go to the first two stops, **Dave** reported that **Jim Brown** had a lot of interesting items to show. Especially his newly acquired airplane. The second stop was **Don Lines**, and he was surprised how far along **Don** was on his Model T. The third stop was **Bob Hopkins'** and then on to **Gary Cooper's**. That was a quick stop. As we traveled on to **Lee Hill's**, several missed a turn (even us and we should have known better). After inspection of **Lee's** garage we then went on to **Bill Podsedly's** garage.

The men sure had a good time putting their cars on the Dynamometer. In fact, they were having so much fun I think they could have stayed there all day.

Eight antique cars were run on **Bill Podsedly's** Amber Automotive Dynamometer. The horsepower readings of the cars are as follows:

**Ted Fox's** 1910 Buick—29 HP

**Don Lines'** 1914 Cadillac—24 HP

**Bob Hopkins'** 1915 Ford—23 HP

**Ernie Costa's** 1911 Cadillac—22 HP

**Bill Podsedly's** 1914 Cadillac—18 HP

**Dick Johnson's** 1912 Ford—13 HP

**Ed Duarte's** 1909 Moline—11 HP

**Odes Kilpatrick's** 1910 Hupp—9 HP

If the horsepower output looks low to you, it is because the chassis dyno used measures road horsepower and as in modern cars there is about 50% loss through the transmission, differential, wheel bearings, tires, fan, water pump, etc. To get approximate flywheel horsepower double the road HP reading. For comparison to modern cars, a VW will produce 22 HP and some of Detroit's hot stock cars will produce as high as 190 HP to the rear wheels. Those in attendance seemed to enjoy this activity, and **Bill Podsedly** extended an open invitation to use the equipment any Sunday the members would like to do it again.

We then went to a park and had lunch where we all had to laugh about the Super, Terrific Horsepower our cars have, "especially Dick Johnson's Model T!!!" Wow.

There was one breakdown and that was us. The clutch linkage on our pickup broke.

### Those who helped make the tour a success:

Don and Gertie Lines with daughter Irene and  
her children Larry and Laura  
Ernie and Josephine Costa with Mike and Percy  
Ted and Alice Fox  
Dick and Wanda Johnson with son Randy  
Bob and Anne Hopkins

Ed and Maxine Duarte with Laura and Julie  
Odes Kilpatrick  
Jack Ryan  
Tony Savio  
Dave and Marianne Robertson with Scott and  
Genevieve

## From the Toolbox

By Bill Charpier

One of my favorite “toys” from last Christmas is my endoscope (also called a borescope or an inspection camera). No, this is not for medical use, it is for the shop. The one that I have is a Depstech Model WF010. It is a wireless endoscope that can work with Android 5.0+ smart phones and iPhone iOS 9+ systems. So why have an endoscope? Because, with its 11½' long bendable, semi-rigid “snake cable” that can bend and hold its shape, I have access to a wide variety of confined spaces. Recently, while overhauling a Franklin carburetor (they manufactured their own for many years), I was able to see into various parts of the carburetor that couldn't be seen by the naked eye. I'm planning to use the endoscope to check the top of the cylinders in an engine that is frozen by removing the spark plugs and inserting the camera.



How does it work? To establish the Wi-Fi Connection you download and install the DEPSTECH App on your smart phone. You are then ready to start the App and begin inspecting and observing the results on a smart phone. The cable has 6 built-in, adjustable LED lights on the camera tip for improved visibility in dark and low-light areas. The light intensity can be adjusted by using the brightness control wheel on the control box. A person can capture video in AVI format and images in JPG format with adjustable resolutions. The camera is also waterproof which makes it suitable for various types of damp or wet areas. Also included are a mirror, a hook and a magnet that can be attached to the end of the cable. I wish I would have had the endoscope when I dropped a bolt into a flywheel housing and spent over an hour of time finding the bolt and then fishing it out!



There is a wide range of endoscopes on the market with varying capabilities and costs ranging from about \$15 to \$100 and much more. The one I have retails for around \$40. If you are interested in getting an endoscope, I suggest doing a little research to find a unit that meets your needs at a reasonable cost.

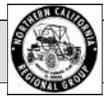
I would like to remind you that if you have a favorite tool and you would like to share the information with the members, send me a write up and I will include it in “From the Toolbox.” You can also call me with the information and I will write it up for you.

## Automotive History - JULY



**July 26th**—1903 Horatio Nelson Jackson, along with Sewall K. Cocker arrive in New York City, 63 days after leaving San Francisco. This was the first automobile trip across the continental USA. The trip began as a \$50 bet that he accepted. Someone bet him that he could not make a trip from San Francisco to New York City in less than 90 days.

He bought a used cherry-red, 20-horse power Winton touring car to make the journey. At that time there were less than 150 miles of paved roadway in the country. There were no signs, road numbers or gas stations. Cars were likely to breakdown, and his did. They got parts from blacksmiths, delivered by stagecoaches or railroads, and were towed by a horse when they broke down in the Oregon desert and again when stuck up to the floorboards in a quagmire. They moved boulders to be able to continue on their way. It took 19 days just to reach Idaho. There they added a new companion for the trip, a bull terrier named Bud. Even the dog had to wear protective goggles! As they made their journey eastward, they received more notice in the newspapers and more support. Folks in small towns saw their first automobile. They completed the trip in 63 days, 12 hours, and 30 minutes. The \$50 wager cost him \$8,000. In 1944 he donated the car to the Smithsonian. For more information visit [www.history.com/news/the-first-great-american-road-trip](http://www.history.com/news/the-first-great-american-road-trip).



## I Think I Need Help With This Engine? Part 4

### By Wel Snibbod

Time to wander back to the ol' Gear Head's shop and see what kind of trouble Wel and The Kid are getting up to. That Chris Craft MBL flat head 6 is just a pile of clean and fresh parts. It just looks like the Hercules industrial engine that it came from. Now I'm a gear head from the sticks, see, and know my way around most old engines. But the differences between marine engines compared to car engines is giving me bad dreams at night! I have got to get this motor finished to put another notch on the ol' belt. So let's once again enter The Gear Head Zone! Not for the faint of heart and you will get your fingers dirty!

When we went to beer last time, we had cleaned everything again, measured main bearing clearances and end play for the crank. We installed the crank, cam, lifters (or tappets) and valves with an appropriate lube. And The Kid did a perfect job of adjusting the valve or tappet clearance. He figured out that it really needs to be done correctly now, as after the engine is all together, the exhaust and intake manifolds, carb, fuel pump, plumbing and breather are all in the way of the two tappet galley openings. Not to mention that you would need to remove the tappet galley covers and install new gaskets. And if it were installed in the boat, even harder to get access! Not enough room in a runabout to do anything on the engine.

It was time to set up the magnetic base dial indicator on the deck of the block to measure the valve travel. This is important in any engine that you are put'n together to make sure that when a valve opens, it does

not hit the combustion chamber of the head. I told him that you can also use the depth micrometer, which ever one might work best for him. The Kid asked why would we need to do this if it was good from the factory? I said that was a great question and proceeded to explain that most times when an engine is overhauled, either the surface of the head and/or the block need to be milled flat. This removes material and decreases the clearance between the top of the valve head to the inside of the head at the



**Measure Valve Height**



**Valve Pocket Clearance**

valve relief or pocket. If too much material is removed, the valve can hit the head, not a good thing. Sometimes when we have cam shafts reground, they (on request) may add a "mild torque improvement". This may increase the valve lift as well. Measure twice, build once! Once we measured and recorded the lift distance from the block deck to the top of the fully opened valves, we jotted down the numbers for later. We will get back to that when we go to install the head and head gasket.

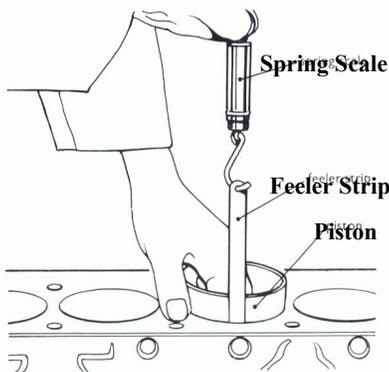
Valve train done, it is now time to install the piston/connecting rod assemblies. We laid out the 6 pistons and rods. Now the machine shop rebushed the top end of the rod, made sure they were straight, and reconditioned the big end and hung the new pistons that we provided. Dad, what does reconditioning the big end mean? I said, they grind a small amount of material off of the mating surfaces of the crank shaft end of the connecting rod first. Then they hone the now oblong hole back to the correct round diameter. After years of up and down, sometimes they can get out of the correct round shape. This way they will accept the rod bearings and provide a correct clearance with the crank.

We got out the rod bearings and the piston rings. In the old days, The Kid interrupted and said, you mean last week? Smart ass, must get that from his mother! And still today with high performance engines, we needed to check the ring gap. Best way to learn? Make him do it! Take the rings, and one by one place them in the cylinder bore near the top. Ensure that the ends are even with each other and then measure the gap or distance between the ends. Now let's get the specs out that came from that Lew guy and see what we should have. Spec says .015" to .020" gap. If they were too tight, we would file or grind the edges to increase the gap to meet the spec. If too loose, back to the parts store! Luckily rings are easy to get in most any size.

### *I Need Help.....Continued*

Not so with most of the other parts for these engines. That took him a while to check them all. Can I install them now? Nope, we still have more measurements to make. Really? What now?

Go get my fish weight scale. Huh? You heard me! And get a Nehi while you are at it. That took the argument out of him! Nehi, fishing scale AND beer in hand (...that's my boy!), I proceeded to



hook up a .005" feeler gauge to the scale. Now... see... here's the rub: we take the piston, hold it by the rod and stick it in the hole. As we put it in, we slide the feeler gauge right in alongside of the piston skirt. With the

piston stuck now due to the gauge, we pull the gauge out by the fishing scale and see how many pounds pull it takes to remove the gauge. The clearance with our new (original style) Zollner T-Slot pistons is supposed to be 5 to 5 and a half thou. If everything is machined correctly, the fishing scale should read between 4 and 6 pounds of pull IF we have the right clearance.

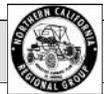
We are not done with the feeler gauges yet. We are going to measure the ring side clearance for each of the three ring grooves. Huh? Are the rings thick enough for the ring slot cut into the pistons? As the metal grows from heat, we need to ensure that there is enough clearance between the ring and the piston groove. Get the rings out of the boxes and lay them out as if you are going to install them on each piston. See how they are marked for top, middle and bottom grooves? And that there is a top and bottom of the compression rings, marked by a dot or beveled edge. Can't throw the instructions out until you know which end is up! Now we can slide the ring



into a groove with the appropriate feeler gauge to verify the spec. And for our MBL with Zollner pistons, the top ring should have between 4.5 to 6 thousandths of an inch clearance, the middle ring and the bottom or oil ring three piece set should both have 2 to 3.5 thou. If we are good, go ahead and install the rings. The latest replacement Zollners come with rings already installed. This actually makes it easier to measure the clearance as the piston is holding the ring for you. The down side is that unless you remove the ring, it is virtually impossible to measure the ring end gap. And you take the risk of breaking the rings trying to remove them.

I showed my son the correct way to install the piston rings onto the pistons to ensure that the end gaps are not the same from ring to ring. They need to be spaced out around the piston from one another. Thus making it harder for combustion to get by all of the rings. He did a great job once he realized the top and bottom issue and how the 3 piece oil rings assemble. Can we install the pistons into the block now? Sure! But which way do they go in? What is the bearing clearance? How do you get the rings to compress to slide into the cylinder? Aaa, I... didn't think quite that far? What do you mean by which way do they go in? Exactly! See, most pistons are not perfectly concentric. The piston pin or wrist pin is further to one side of the piston than the other. I thought it looked a little off center, why? Good eye, I told The Kid. This might take a while and another beer. I know....Nehi time.

We sat down, Nehi in hand and we're set! See, for over a hundred years, the "propeller-heads" have said it does two things. The first is that it helps to eliminate piston slap or noise as the piston changes directions from going up to down at top dead center. When the crank shaft goes from one side, over top dead center and down the other side, the connecting rod has a tendency to try to pull the piston slightly sideways on its trip. This is where the slap can happen. Now these engines are not exactly quiet, and I have heard some that sound like a Stradivarius going through a garbage disposal. But with our long skirt Zollner T-Slot pistons, this is minimized compared to a piston that is not as



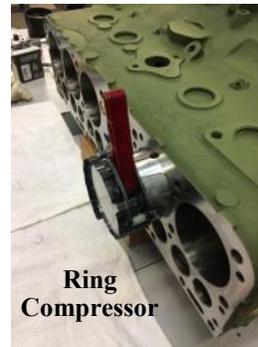
### *I Need Help.....Continued*

tall or has a short skirt. The Kid laughed at short skirt, plumb caught him off guard and choked on that Nehi. The second reason and more important is called minimizing rod angularity at the point of highest combustion pressure. I know, a two-bit name, but it does make a difference. The combustion explosion starts just before the piston is at the top of the stroke. The flame front continues to grow as the piston starts to go over TDC and just starts to travel down the cylinder. The pressure is the highest at that point. It's kinda like if your knee is really bent and your leg is not straight under you, moving heavy objects can be harder. But if your leg is straight, it is supporting all of the weight much better. Same thing with the connecting rod and transferring power from the piston to the crank shaft as it rotates. When the power or down force is the greatest, the rod would be at an angle and not just pushing down but pushing slightly sideways. But when the piston pin is offset to that power rotation side a little bit, it is more vertical during that highest pressure time. Then it transfers more force down instead of slightly to the side. As my buddy Tim Allen said: More Power!

So when we took this engine apart, I wrote down which side the stamped numbering on the side of the rods faced. If there was a notch in the piston top, did it face the engine front or back? Piston manufacturers usually put a notch or arrow on the piston that is supposed to face the front of the engine. That way the pin offset is always installed correctly (for normal crank rotation). But wait... there's more! In these Chris Craft flat head marine engines, what is the front? That's easy Pop, the snout of the crank shaft is the front, drives the transmission and the flywheel is the rear on these engines. That is true as long as we are thinking about the way the industrial engine was built and parts stamped. Remember, that in the boat, the engine is flywheel forward and the cylinder closest to the flywheel is #1. And as long as it is standard marine rotation, we are good. But if it is an opposite rotation engine, in a two engine boat, then the arrow or notch is going to face the other end. So our new pistons will have the T-Slot in the skirt face away from the cam shaft. (Here is a photo of a Small Block Chevy piston and a Chris Craft Zollner

piston. The Chevy piston has both a notch and the letter "F" for front on each side of the piston pin noting front.

Notch  
F for Front



Ring  
Compressor

Now, you can install the pistons into the cylinders. Get the ring compressor, bearing lube and the Plastigage out and make sure everything is clean. We will install the rod bearings after the piston is in the cylinder. We do not want to knock the bearing out as we tap the piston into place. Take some

30 weight oil and squirt a little around the rings and wipe onto the piston skirt to help with the installation. Shoot me with that oil can and no more Nehi! With the compressor firmly holding the rings to the same diameter as the piston, he tapped the piston into the cylinder. As it travels further into the



Install Bearing

cylinder, it is getting closer to the crank that we have positioned at bottom dead center. Place the bearing half into the rod now and gently press the piston to seat the bearing against the crank rod journal. We still need to measure the rod bearing clearance, so no lube yet. Same drill with the Plastigage as we did with the main bearings a

couple days ago. I sat down to watch as I was confident he knew what to do. Tear a piece and place it across the rod journal, put the other half of the bearing into the rod cap and install and torque to the correct 56 foot/pounds. Do not turn the crank or the Plastigage will be destroyed. Remove the cap and measure. Perfect! Right into the range of one to three thousandths. The Kid cleaned the gauge material from the bearing and the crank journal and backed the rod off the journal. Ensuring that

*I Need Help.....Continued*

everything was still clean, using a brush, he added a thin layer of moly grease to both halves of the bearing and reinstalled and torqued. One last little point that is easy to forget: install, bend and cut the cotter key or split pin key as they are sometimes called into the castellated connecting rod nut. Perfect I said, only five more to go! I sat down on my shop chair and felt something wet, sure enough....30 weight. I chased him out of the shop! Damn that kid is fast!

Let's get the bottom end buttoned up today after a snack break AND after I change my shorts! It has been a lot of work for one day and we have really accomplished something. Are we ready to put the pan on Dad? Close, we need to install the oil pump and internal plumbing first. Put some moly on the pump drive gear as it engages with the cam shaft. And then we will use some gasket goo on the pump and block to seal both sides of the new gasket and bolt'er in. (The output of the pump feeds the block

**K Oil Pump & Rod Keys**

directly, this pic is of a K series that uses a pipe to get the pressure to a fitting in the base of the block.

Also note the cotter keys on the rod

nuts.)

**Rod Cotter Key**

Remember how hard it was when we tore everything down, to disconnect the oil pick up from the pump? As I recall, it was easier to pull the two quarter-twenty bolts that held the oil strainer to the pan. Now we have to do it in reverse! The Kid said that at least it was cleaner and dry! Yep and much easier!

**Oil Pan & Pick Up****Installing Lubed Bearing Cap**

Your choice as to if you wish to connect the pick up to the pump and then bolt it to the pan after it is installed or the other way around. Whatever you choose, it is often easier to not install the gaskets and the goo until after. I'll show you a little trick to help with get'n tools and hands inside the pan. Just gives a little more clearance and room. Place some bolts and dowels into the pan bolt holes in the block. The dowels align the pan and will really help when we put the gaskets in place. The bolt heads will hold the pan a couple inches up off the block for that added room. If you are going to bolt it all together and then connect the oil pick-up hose to the pump, a crow's foot wrench may help.

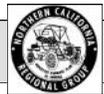
**More Room**

With the oil pan gaskets well slathered in gasket goo and the pan now in place, we can add the rear gear case, pan inspection cover and the front flywheel housing, each with their own gaskets and more goo. If you did not get enough sealant on the pan rail gaskets and it leaks oil, it is a pain to fix! The gear case and flywheel housing BOTH bolt into the pan. In other words, it all has to come off again in order to take the oil pan off. More gasket sealant is often better and can be cleaned up with lacquer thinner.

The flywheel housing does not have a seal to mate with the crank but does have a gasket to seal against the block and oil pan. The use of blind dowels or headless bolts is advised to help with the alignment. This

housing has to be perfectly aligned as there is a small amount of clearance to the crank slinger. This helps to keep oil inside the engine as it tends to throw or sling the oil back inside the engine and not let it out. There are two special shouldered bolts required for this mounting that ensure exact

**Flywheel Housing**



*I Need Help.....Continued*

bolts required for this mounting that ensure exact alignment.

While the gear housing has a couple of alignment dowels, it is still a good idea to use some blind or headless bolts to help align the assembly and to hold the gasket during the mating process. The accessory drive idler gear needs to be lubed and installed into the bushing in the block prior to bolting the housing in place. Once the gear case was installed, we can't forget to set the cam and idler gear end play spec of .002" to .004". After the reverse gear is installed to the gear case, you no longer have access for a feeler gauge. The adjusters are a headless bolt with a screw slot cut into the end. A lock nut is used to hold it in place once set. Place the feeler gauge between the ball or rounded end of the adjuster and the center nub of the cam and idler gears. Tighten the adjuster so you can still barely move the feeler gauge and tighten the lock nut. A time or two is needed as the lock nut changes the position of the adjuster.

I'm pooped! And if we keep going we might make some mistakes. This is a good time to clean any lube off the engine and do some touchup paint and let dry overnight. Good timing as I could smell vittals a-cook'n and knew RJ, that's my wife, would be calling to us soon. The detail parts and pieces go on tomorrow. Takes a while as all need to be either rebuilt or at least cleaned and painted prior to installation. And we still have the head and manifolds to go too! So we will pick this up in our next chapter as we wrap up our Chris Craft MBL for the 19' Racing Runabout. So stay tuned, same time, same channel for more from the Gear Head Zone. And wash your hands.....



**Gear Housing**

**Accessory Drive Idler Gear**



**End Play Adjustment**

*Chapter 5 in this series to follow.*



If Kathy Ryan can make it to the top of Pikes Peak we know she can recover from hip surgery.

Keep on going up that new mountain, Kathy!



We all wish you a speedy recovery.



# NCRG Members Making Their Fashion Statements

From *The Brass Nuts*—2015, 2016 and 2017



Jim and Carole Snow  
September 2017



Jim and Kathy Ryan  
September 2017

2017  
Celebrating  
Roseville High School's  
100th Anniversary  
NCRG members brought their  
cars so the Queen's Court  
could ride in style.



Our Favorite  
Keystone Kop,  
Ed Rose  
September 2017



October 2017  
Ladies Tea  
Period Dress or Hat  
And  
Men's Drive  
2017 Casual Fashion



← Don't miss the fancy footwear!

Helen and Bob Hopkins,  
Heritage Day  
February, 2016



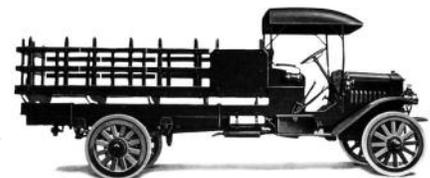
Touring fashion for Leta  
Nichols and  
Cindy Pharis  
Model T Ford Club of  
America  
National Tour 2015



## Automotive History - JULY

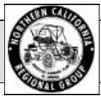


**July 2nd**—1908 The Velie Motor Vehicle Company was incorporated. It was founded and named after William Lamb Velie, the maternal grandson of farm implement manufacturer John Deere. Velie automobiles were produced between 1909-1928.



Their truck line was manufactured between 1911-1923.

**July 24th**—1915 The Velie, a Los Angeles Post Office, is established and named by the local postmaster, Charles M. Hutchinson, for his Velie automobile. However, there is no longer a Velie Post Office listed in Los Angeles.



**Northern California Regional Group of  
the Horseless  
Carriage Club of America  
General Meeting Minutes  
Stephanie Mozell, Secretary  
No Minutes June meeting Cancelled**

The **June** meeting was **Cancelled** in accordance with governmental requests to limit meeting sizes due to the possibility of infection by the Coronavirus.

The **JULY Meeting** has been **CANCELLED**

**Treasurer's Report—Update from Jan Charpier:**

Since last reported in the June issue of "The Brass Nuts," 22¢ of Interest was deposited to the Checking Account, and \$12.89 of Interest was deposited to all other accounts. The Club is solvent. As always, feel free to contact me if you have questions.

**The JULY 2020 General Meeting has been CANCELLED**

**Exercise for Seniors**

Thanks to Frank Squire for sharing this exercise routine.

While we are all sitting around waiting for the virus to go away, here is some good advice for people 55 and over:

Begin by standing on a level surface, where you have plenty of room on each side. With a 5-lb potato bag in each hand, extend your arm straight out from your sides and hold them there as long as you can. Try to reach a full minute and relax.

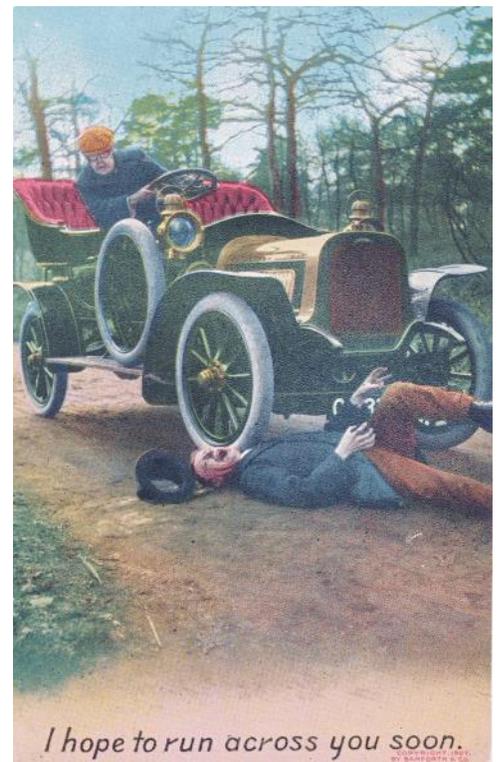
Each day you'll find that you can hold this position for just a bit longer. After a couple of weeks, move up to 10-lb potato bags. Then try 50-lb potato bags and eventually try to get to where you can lift a 50-lb potato bag in each hand and hold your arms straight for more than a full minute. (I'm now at this level.)



When you feel confident at that level, put a potato in each bag.

**POSTCARD**

Here's a copy of a 1907 postcard from a collection of postcards owned by Jim Ryan's paternal grandmother. Know what model car this is?????



Answer on  
Page 16.



# HCCA NATIONAL NEWS

Re: Hershey Region AACA - Hershey 2020 Cancelled; HCCA 2020 Committee Assignments; ....  
Issue: 2020-06-01 #07

- **Hershey 2020 Update** – “It is with great regret that the AACA Hershey Region Executive Board informs you that the 2020 Hershey Fall Meet has been cancelled. This decision was not arrived at lightly. Our Club prides itself on producing a world-class event that thousands of people anticipate every year, so we felt the heaviest of burdens when faced with this decision.

While making the difficult choice to cancel, the Board took many obstacles into account, including but not limited to: the health and welfare of our volunteers, vendors, partners, and visitors; the unknown restrictions and/or guidelines that may be in place at the time of our show; and the volunteer-only workforce we rely on to prepare for a show of our magnitude.

“Please know that we continue to explore ideas to benefit the hobby and are working toward the possibility of still hosting our usual car show on Saturday in October. While this may not be doable, AACA and the Hershey Region along with other constituencies are working hard to make this possible. Please visit our [website](#) and [social media](#) as often as possible for the latest news.

Hershey Region AACA”

- **HCCA 2020 Committee Assignments** – Function Groups and Committee Assignments - -- Don Plumb

## Activities – Jan Kendrick - Chair

National/International Tours – Jan Kendrick, Mike Reid, Chris Paulsen

Hershey Tent – Bob Ladd, Jerry Chase\*

2020 National Convention – Keene Brewer

Merchandising – Jan Kendrick - Chair

East – Jon Rising, Matt Rising

West – Keene Brewer, Christine Brewer\*

## Finance – Mike Reid – Chair

Ways and Means –Mike Reid, George Dorris

Investments –George Dorris, Rob Williams

## Governance – Russell Holden - Chair

By Laws/Director’s Handbook - Russell Holden, Steve Cook, Bob Ladd

Parliamentarian – Russell Holden

Insurance - Herb Singe, George Dorris

Office Oversight – Don Plumb, Keene Brewer, Mike Reid

2021 Board Nominations – Bob Ladd, Jan Kendrick, Chris Paulsen

Historian – Herb Singe

International Issues – Russell Holden, Mike Reid

## Regional Groups & Registries – George Dorris - Chair

Membership Development – Mike Reid, Chris Paulsen, Matt Goist\*, Tracy Leshar\*

Regional Group Publications – George Dorris, Jon Rising

Regional Group Communications – George Dorris, Doug Tomb

Awards – Andy Wallace, Jon Rising, Alex Huppe\*, Gil Klecan \*

## Education - Matt Rising - Chair

Public Education – Matt Rising, Rob Williams, Jan Kendrick

HCEI Liaison – Matt Rising

HC Foundation Library Liaison – Matt Rising

Strategic Planning – Bob Ladd - Chair  
Steve Cook, Don Plumb, Keene Brewer

## Communication – Doug Tomb - Chair

Horseless Carriage Gazette – Doug Tomb, Chris Paulson, Bill Carpenter\*, Sharon Gooding\*, Michael Sullivan\*, Howard Hodson\*, Bruce Spainhower\*, Eadi Popick\*, Bill Ottemann\*, Anne Ottemann\*, Gil Fitzhugh (elder)\*

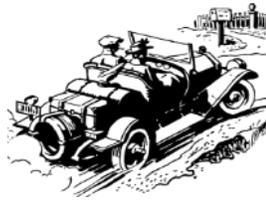
Publicity & Advertising – Doug Tomb, Herb Singe, Russell Holden

Internet/Website – Russell Holden, Steve Cook, Mike Reid, Doug Tomb

(\*) designates board associate

*Doug Tomb* / Douglas.tomb@verizon.net

Board Member – HCCA NN Editor ...



Traveling down the road for another year...

**JULY BIRTHDAYS**

- 03 Jerry Catchot
- 09 Julie Gordon Celidote
- 12 Ralph Brown
- 14 Taylor McGregor
- 15 Roberta Comejo
- 19 Joe Ticer
- 21 Adam Day
- 22 Jennifer Roberts
- 24 Rosemary Lawrence
- 28 Felicity Davis



**AUGUST BIRTHDAYS**

- 15 Jacob Cedilote
- 16 Blanche Gordon
- 27 Paulette Snyders and Debra Dobbins
- 28 Jim Ryan



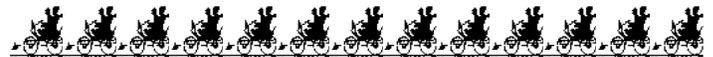
**JULY ANNIVERSERIES**

- 05 Jerry and Joan Catchot
- 06 Warren and Donna Berg
- 10 Thomas and Cathleen Roush
- 12 Gordon and Carolyn McGregor
- 17 George and Diane Sherman



**AUGUST ANNIVERSERIES**

- 03 Matt and Maya Ryan
- 14 Ralph and Beckie Brown
- 20 Bill and Jan Charpier, Jr.



**REMINDERS...**

**July 16, 2020, Thursday 7:00 pm**  
Next General Meeting  
**Cancelled**

Tour to Jackson CA **Postponed**

Tour "Mine and Wine" Tour Placerville Area  
**Postponed**

Pava's Multi-Club Old Car Tour has been  
**Postponed**

Ryan Ramble (2020) **Cancelled**

**July 24th** - Last Day to Submit Information  
for August 2020 Issue of *The Brass Nuts*



Answer to What model is this? (on the postcard),  
(page 14) 1907 Tourist Model K-7 touring.  
The Tourist was manufactured by the Auto Vehicle  
Company in Los Angeles from 1902 to 1909.



What adventures await  
beyond this curve?

**1936 Morris Roadster**

With very nice smooth-running rebuilt  
engine. New radiator and upholstery.  
Sale includes five extra spoke wheels.  
Car is one of seven in North America.

**SOLD**



**CONGRATULATIONS AND  
BEST WISHES  
FROM ALL OF US IN THE  
NCRG-HCCA**



9-30-2020

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 Ed@CaliforniaAccounting.com www.CaliforniaAccounting.com

12-31-2020



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4-30-2020

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Admission to the California Automobile Museum (CAM)

NCRG has a group of free admission tickets for the CAM.

As you plan your outings in 2020, keep in mind that they are available to NCRG members. Contact Jan Charpier to obtain tickets.



## Buy - Sell Donate - Consign



VehicleSales@CalAutoMuseum.org 916-442-6802  
2200 Front St, Sacramento www.CalAutoMuseum.org

Business card size advertisements accepted for this newsletter...  
 \$25.00 per year. Send business card information to the Editor of the **Brass Nuts**.

Club members can advertise for sale and wanted items for free. Send your information to the Editor of the **Brass Nuts**.

NCRG Members Celebrating on July 4, 2015  
From the August 2015 issue of *The Brass Nuts*



Frank Squire with Veterans  
in 4th of July Parade  
1924 Dodge Brothers



Uncle Sam sitting in the back of  
Bob and Helen Hopkins'  
1915 Hudson



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## THE BRASS NUTS

First Class Mail