

Classy Chassis

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Westerly-Pawcatuck Region AACA

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Laferriere Cars and Coffee Event

Sunday, September 20, 2020 was a beautiful day. It was especially nice in Greenville, RI where about 12 of our members brought their cars to participate in Tom Laferriere's Cars & Coffee event. Cars were parked around Tom's building, on the road, and in surrounding parking lots that were marked as valid parking sites. I would estimate that about 300 classic cars were on display. I saw three 1941 Buicks, an Avanti, a number of Packards, and lots more. There were also some really nice cars offered for sale. The Plymouth convertible was especially tempting and the price was right. There are plenty of [photos on our website](#) and on [Drop Box](#). Besides the cars our host had heaps of coffee and doughnuts available. It was a good time and hopefully it becomes a Rhode Island tradition.



How To Restore a 1901 Car while in a Pandemic (part 4) by George King III

(previously published elsewhere on 4/2020)

It is obvious that we are in the middle of the worst pandemic disease in a generation. It does not matter where in the world you live; most people are staying home alone. When I fell onto a concrete floor from a ladder in October, I found it was difficult to get anything done even when I was conscious. Fortunately, I received a lot of help from several nearby friends who are, of course, in the old car hobby.

In order to keep my mind focused on my future, I did the natural thing. . . I focused on my newly purchased 1901 Orient. But with the new challenge, how does one keep working on such an old project when required to stay at home alone?

Well, it is really pretty easy. I have been able to keep the same members of the Orient Express team working on the car. Charlie, Frank, Mark, and Greg each continue to complete work in its restoration. But, how can they do this if it is not safe to meet? Well, that too is simple.

If I have something that needs work by one of the guys, I bring it to their house and lay it in their yard. I leave without meeting them and call them to say that their delivery has arrived. When they get them done, they bring the parts here and leave them in my yard.

In the meantime, I work on the car in the shop and in the house. It keeps me from getting bored.

In Connecticut, we have been told not to meet with groups of more than five people. In early March, I would work with one of the guys here or at their home but now I am avoiding that. This month of April will be one we never forget.

Early in March, I brought the wooden body of the car to H&B Woodworking where Matt Malley and I built some parts to replace those that were missing. We made half of the floor board, a cover for the rear compartment, and a cross member that goes



New panels fitted to body

under the seat. The wood we chose was ash. I had read in the history of the Amesbury, Massachusetts company that built the Orient bodies that this was the material used for panels.

I showed you a photo in March of doing the work in Matt's shop. Here I will show you the installation of the wood to the body. One of the things I did since returning from the shop was to attach the wood that was original to the car to some of the parts we made. Of course, this resulted in dimension changes and refitting for the proper alignment.

Next week the days should be warmer and I will continue on the wood work by rounding the edges of the new panels and cutting a slot for the latch fitting of the rear cover. Then, I hope to do some paint preparation and fill in the nicks and holes.

Since my last note to you, I have sent the hubs and rims of the wheels to the auto shop for painting. In order to get this ready to paint, it required the efforts of both Charlie and Frank. We often ask Charlie to do the major lathe work because he has the largest lathe. I do a lot of lathe work at Frank's shop as he does a lot of precision machining on his high-end milling machine. Frank made the attachments of the hubs that Charlie has machined along with the core parts. Frank attached all parts together as I hand finished the square sockets that we will weld to the cores for the axle to wheel drive.



Progress on wheel

Both of these parts have been brought to the Fox Hollow restoration shop to be welded, primed, and painted. Then they are off to the next level shop for the final assembly of the wheels.

We are now facing a difficult spot in the project. A couple of months ago, I ordered white, smooth, clincher tires for the

Orient. They did not arrive from Vietnam with the March shipment. They now hope to have them on the June ship. I have little hope that this will happen due to the world condition. I am looking at options of using smooth black tires which are only \$580 for four which is less than one third of the price of white tires.

Expect more to come on this chapter.



Work on the flywheels

Charlie did a very nice job of changing the shape of the two engine flywheels. (photo 3, above) The four and a half horsepower, single cylinder had a very thin connecting rod between the piston and the crank pin. The thickness of the steel connecting rod was about 3/16"! One of the problems with the engine is the fact that this rod bent. Frank is going to make an aluminum "H" beam connecting rod to attach the piston to the crank pin. This will be about 1/2 inch wide. In order to gain clearance for the new rod between the flywheels, we found it necessary to make the rims of the flywheel, 1/4 inch narrower. This reduced the weight of the flywheels by 15%. This will be accommodated by the change of piston and rod from steel and iron to aluminum for both.



A new connecting rod will be milled

Frank is capable of making the connecting rod on his milling machine. To lay it out, he first made a drawing (expected) but to make his first model he used wood. (unexpected) . I don't know if he will make a plastic or aluminum model but I have seen two pieces of aluminum stock on the bench.



Crank pin

The crank pin had a .004" of wear in it. I took it to a professional surface grinding shop that I remember from when I worked in

the foundry in Hartford. They did a nice job for me with the old "friends and family" price rate. I have ordered a diamond file to adjust the threads. I have a tap and die for the crankpin parts. The size of the thread is M15 x 1.5mm. I must be careful in restoring it. I need to keep the male threads on the pin but I will make new nuts to hold the pin through both flywheels.

The owner of B&M Machining, the shop that did most of my Model T and Model A machine work, informs me that the engine should be done in the machine shop next week. Once I get it, we will be able to fit the connecting rod to the piston and the crank pin, the cylinder, and the upper and lower half of the crank case.

I will ask Frank to work on the internal parts while I prepare the external parts. No matter how we approach the engine parts there will be a lot of action.

I would like to get the chassis put together to be moved into the trailer. I need to get the wheels finished and up to Massachusetts for refitting. [I wonder how I will drop them off.] I need to finish restoring the differential to install it. And then, there is the question of tires. Well, like any good theater serial there will be more to come with the next progress report.

As we know the use of lubricants in our early vehicles can lead to confusion. In order to sift through some of this confusion, I thought I would put together information regarding the similarities, differences, and compatibility of oil and lubricants available on today's market. Note, engine oil and use of synthetic oils and engine oil additives is not discussed here but hopefully will be discussed in a future article.

Let's start with Manual Transmission lubricants.

Today vehicles (not counting trucks) with manual transmissions (if you can find one) mainly use automatic transmission fluids as a lubricant or require specialized proprietary lubricants.

Generally, many of our older vehicles used a heavy weight non-corrosive fluid for lubrication. This was due to most early transmissions having very soft bronze and brass bearing sleeves, shift synchronizers and surfaces guides. Further, some 1930 to through 1950s vehicles had overdrive units with planetary gears systems. In many cases all calling for a different lighter lubricant. If you have checked the owner and repair manuals you will see what I mean.

Here is some discussion regarding the fluids used in our older transmissions.

Manual Transmission Lubricants

600W Gear/Transmission Fluid

This is a sticky, high cling lubricant also called Steam Engine Oil. This lubricant was generally used in both non-synchromesh transmissions and some early synchromesh units. This fluid is still available today and is fully compatible with soft metals like brass and copper. On the engine oil viscosity scale this fluid has the viscosity of approximately 250W motor oil. Model A and T Fords and many early 1920s and 1930s cars call for this oil and it is still available through vintage Chevrolet and Ford parts vendors.

Gear Oil 1 (GL-1) Transmission Fluid

This lubricant has mineral based oil and is for light duty use. It was used in early over-drive transmissions. Now it is mainly used in hydraulic systems in industrial and farm applications. This oil has about the same viscosity as 50w motor oil. In fact, some transmission manufactures like Borg-Warner suggest using 50W motor oil as an alternative if GL-1 lube was not available. NAPA carries GL-1 lube in 1-gallon containers and it is also available at some farm equipment vendors.

GL-3 and GL-4 and GL-5 (Hypoid Gear Oil)

Of the gear oils named in the title above, GL-3 is no longer manufactured. GL-4 is available but is sometimes difficult to find in today's market. Both GL-3 and GL-4 have no impact on soft metal.

Today GL-5 is the most available lube and used in modern cars. With the various friction modifiers added to some GL-5 its chemistry is **sometimes** has an aversion to older brass and copper metal depending on lubricant brand and hence sometimes is incompatible with early transmissions. The American Society for Testing and Materials (ASTM) has a simple Copper Corrosion test called the D130 test. This test determines a fluid's effect on soft metals- namely Copper (CU). It then rates the corrosive impact on a scale of 1 to 4 with an Alpha suffix within each scale to further refine the effect. In the results scale a 1A has the least corrosive impact and 4D the most. One note: be cautious of GL-4/GL-5 combination oils as the GL-5 component may contain chemistry that can harm soft metals

For clarity I have included a chart below with the results of the D-130 Test run several years ago by ASTM.

M/T FLUID & GEAR OIL	Wt.	API	Classification D130 Test Results	M/T FLUID & GEAR OIL	Wt.	API	Classification D130 Test Results
Amsoil Long Life FGR	75W-90	GL5	1B Dark Orange	Mobil 1 Synthetic	75W-90	GL5	1B Dark Orange
Amsoil Severe Gr SVG	75W-90	GL5	1B Dark Orange	Mobil 1 Synthetic	75W-90	GL5	1B Dark Orange
Amsoil M/T Fluid MTF	5W-30	None	1A Light Orange	Pennzoil Gearplus	80W-90	GL5	1B Dark Orange
Amsoil MT & Gear MTG	75W-90	GL4	1B Dark Orange	Pennzoil Synthetic	75W-90	GL5	1B Dark Orange
Castrol Hypoy C	80W-90	GL5	1B Dark Orange	Red Line MT-90	75W-90	GL4	1A Light Orange
Castrol SYNTEC	75W-90	GL5	1B Dark Orange	Red Line NS Gear Oil	75W-90	GL5	1B Dark Orange
Citgo Citgear Std XD	75W-90	GL4	1B Dark Orange	Red Line 75W90	75W-90	GL-5	1B Dark Orange
Delo Gear Lubric ESI	80W-90	GL5	2A Claret Red	Royal Purple Max-Gear	75W-90	GL5	4A Trans Black
Delo Trans Fluid ESI	50W	None	2A Claret Red	Torco SGO Synthetic w/Torco Type G LS add	75W-90	GL5	1B Dark Orange
GM Synthetic Axle	75W-90	GL5	1B Dark Orange	Valvoline High Perf	80W-90	GL5	1B Dark Orange
Lucas 75/90 Synthetic	75W-90	GL5	4B Graphite Blk	Valvoline SynPower	75W-90	GL5	1B Dark Orange
Mopar Synthetic w/Mopar LS additive	75W-90	GL5	4A Trans Black				

As seen above AMSOIL M/T Fluid and Redline MT-90 had the least effect with a 1A rating (shown in Green) with five others having the most effect on soft metals with a rating of 2A to 4B (shown in Red). Multiple brands had an effect somewhere in the middle range (Shown in Yellow).

Automatic Transmission Fluids

As you can imagine automatic transmission fluids have changed over the past several decades with some fluids no longer available.

Compatibility with today's available types.

Many early auto transmissions used Type A transmission fluid. From what I understand it is sometimes available as a gear lubricant but from research it appears that NAPA Type FA fluid is compatible with Type A. Also, I found that Ford and Mercury originally called for DEXTRO III/MERCON fluid which was discontinued in 2007. However, I found if a Ford or GM vehicle called for DEXTRON III, DEXTRON VI is backwards compatible with DEXTRON III. Further, if a Ford made car called for MERCON the new MERCON V is backwards compatible with the old MERCON. However, Ford and Mercury cars (1961 to 1981) must still use FA type fluid. For Chrysler products research indicated use of ATF+4 for older Chrysler transmissions. Also, for Chrysler, if Type A, FA, or DEXTRON fluid is called for you can use DEXTRON VI. The table below summarizes this above discussion

Original Fluid	Can Use	
Type A	Type FA	
DEXTRON III	DEXTRON VI	
MERCON	MERCON V	
ATF	ATF+4	Older Chrysler
FA Fluid	FA Fluid	NOTE: 1961 to 1981 Ford/MERCURY must use FA

Like transmission lubes, many can also be used in differentials.

600W gear oil and GL-1 Fluid

These lubricants are mostly used in pre 1930s vehicles. While these lubricants are fine for these older transmission, such lubricants are a **not** Extreme Pressure (EP) rated and should not be used when an EP Hypoid gear oil is called for in a differential.

GL-4 and GL-5 Fluids

As a general rule GL-4 is fine as a differential lubricant. GL-5 might be compatible as most differential units have limited or no soft metals and therefore corrosion is not an issue. However, to be safe I would recommend if you do use a GL-5, use one with a minimal D-130 Corrosive test result of 1A or 1B. For a viscosity rating, I would suggest a 75W-90 or straight 90 weight if a manufacturer-recommended weight is unknown. These weights offer a good lubricative balance in both hot weather and when the car is run in cooler temperatures.

Differential Additives

Just a short note regarding rear end friction modifiers. If you have a locking positive traction differential as a rule you must add a friction modifier in the rear differential lubricant. Without such a modifier the discs will not slip properly and banging or clunking will be noted when turning. Too much friction modifier and the discs will slip, so be cautious of the amount of modifier used. The additive reduces the friction between locking clutch discs in these units allowing the posi-traction to work. Lubricant manufactures sometimes sell lubricant types with the friction modifier already in the oil. I have found by experience that these lubes may not

contain sufficient modifier depending on the application. I would suggest using a regular lubricant and adding the amount of modifier called for by the vehicle manufacturer.

Steering Box Fluids

The final area I will mention is steering box lubricants. As with older transmissions, older steering boxes frequently have brass or bronze parts. Therefore, any lubricant that has an effect on such metals like some GL-5 lubes should not be used. Further, unlike a transmission, the gears rotate through the lubricant. The gears are not bathed in lubricant as with a transmission or differential assembly. The use of regular grease sets up a channel effect, specifically, the gears move the grease away for the gear face and the lubrication effect is lost. Therefore, a high cling-self-leveling lube that stays on the gear teeth and sector shaft is required.

EP 00 Grease

EP 00 grease can sometimes be used but as a caution it would depend on D130 test results. AMSOIL SAE 190 and 250 have a low corrosion rating of 1b so would be fine. The D130 rating for other EO-00 brand greases is sometimes difficult to determine so it is unknown what impact they may have on brass or bronze fittings.

Corn Head Grease

Research suggests that corn head grease is fine to use in most steering box applications as the acidity is low and hence it has a low corrosive impact. It is available in most John Deere tractor stores or online.

Homebrew Grease

I have found a homebrew grease works just fine. I combine a slurry of 25% graphite grease and 75% 600W gear oil. As an alternative to 600W, STP can be used.

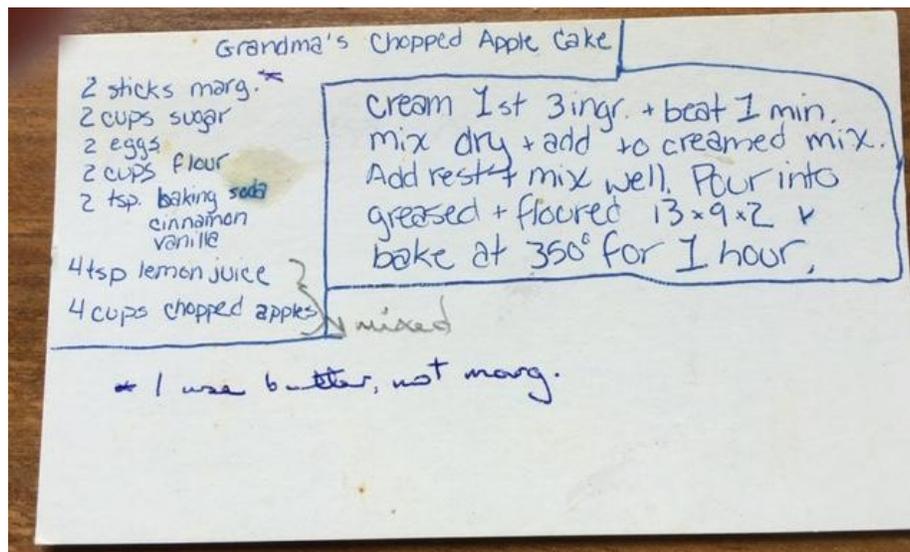
I hope this information is helpful to the club. If you have any questions, please email me at degravedennis@Yahoo.com.

Successful Calabrese

Picnic Closes out 2020

The Calabrese Picnic hosted by Pat and Dave Calabrese on Oct. 26 was a well-attended and fun event. There was plenty of good food and room to meet our old friends outdoors. We even got a chance to buy a bunch of George Coon whirligigs.

George donated all proceeds to the club! Some 35 people enjoyed the event. Andy and Chant Clapham's 1960 Corvette was the star vehicle and Dave's roast pork and Margaret Moone's apple cake (see above) were the top dishes. Thanks again to Pat and Dave Calabrese! Dave's full report on the event is included in his treasurer's report later in this newsletter.



What does your back seat look like?

By Charlie Nash

Here are 2 photos showing the contrast in backseat design over the years. Passengers in 1932 could pull down the shades and shut out the dismal, squalid, depression world outside.



1932 Chevrolet

smoke while not unduly tussling a woman's carefully wrought hairdo.

It's sad. We've lost so much with today's automotive technology and design. Can't stretch out our legs or even light up a stogie without public condemnation :)

In the prosperous post-war 50's, passengers happily gained back their girth and body mass. GM designers responded with cavernous interiors. Front and rear speakers would boldly blast the latest hit from Doris Day.

Common to both eras, the ubiquitous ashtray. Two rear ones in the Chevy were an option, and one big one with a cigar lighter, adorned the Buick with enough capacity for 2 smoker's ashes. In addition to the standard rear passenger windows, the Buick's rear compartment had 2 opening crank vent windows, enhancing the removal of excess



1951 Buick Super

The Klingberg Vintage Motorcar Event by Charlie Nash

Contrary to what everyone thought, the Klingberg show actually felt like a show. 250 respectful car owners and their families walked around the field giving the feeling of a real car show. There was no conventional judging or awards ceremony but it didn't matter. A steady stream of spectator cars kept things lively with several onlooker cars making numerous laps around the field. Many cars sported the AACA National First badge.

Besides I just HAD to see the Rain Main Buick being a huge fan of the movie that dealt with autism (and Savant syndrome). Below is Michele's "Shaa Boom" Buick making a proud entrance next to it.



There are over a dozen additional high resolution photos, courtesy of Charlie, of the event in the [gallery section of our website](#). Check them out by clicking the blue link.

Gerry Lynn also provided these additional background links about the show.

[Event Highlights](#) as posted on the Klingberg site. Show [Trophy List](#).

Notices:

Monthly Meetings: Regular meetings can be considered as “by notice only” for the duration of the COVID19 pandemic. You will get an email notice prior to any meeting that we hold.

Treasurer’s Report:

The Calabrese Picnic was held on Saturday, 9/26/2020. 19 Member families were represented, about 35 people attended. Pat and I would like to thank all who attended and made the event a success.

\$105 in 2021 membership dues was collected. **This is a reminder that National and local dues are due at this time.** \$15 for the WPRAACA region should be mailed to the address below. \$40 should be mailed to the National AACA direct or paid online or by telephone. You must be a member of the National organization to be a member of the Region. Unfortunately 9 members did not pay local dues for 2020, so you should know who you are and send \$30 this year if you wish to continue being a local member. Please contact Dave Calabrese if you no longer wish to be a Regional Member.

On a very positive note, George Coon has made an in kind donation to the club. He has put a large number of his Whirligigs and bird houses up for sale with 100% of the proceeds going directly to the club. The attendees at the Picnic were very generous and \$212 was collected for the items he brought and displayed. He does have more available if you would like to purchase them. Personally I think he has been more than generous already.

THANK YOU VERY MUCH, GEORGE!!

The current bank balance is \$1559.71, with the only new activity since March being the items noted above.

Respectfully, Dave Calabrese, 40 Border Ave., Wakefield, RI 02879

Treasurer, AACA Westerly Pawcatuck Region.

Christmas / Holiday Dinner:

President Merrill Moone has sent out an email asking for your opinion on whether or not we should have the annual Christmas / Holiday Dinner. If you have not yet responded please do so.

Interesting Internet Links

The top ten car producing countries ... [cool video link](#) offered by [Charley Roessler](#):
<https://youtu.be/kZCeUTzc850>

Article seen by [Gerry Lynn](#), [Hershey swap meet cancelled](#) for the first time in its history.

From [Ralph Roark](#), he recommends a movie, Horatio's Drive, that is available on PBS for free to members or \$1.99 if you are not. It is also on Amazon. Read about and see all links to it from the [author, Ken Burns', website](#).

[Here's what you get when you spend \\$2 million on a car](#). This video is about 5 min. long and you still have to put up with Donald Osborne singing opera badly at the beginning. Also shows you don't need 1.200 hp. Submitted by [Gerry Lynn](#).

Just when you think they've got the schedule nailed down they throw out this curve ball
[AACA Eastern Fall Meet rescheduled and relocated to Gettysburg | Hemmings](#) . [Gerry Lynn](#)

[Hot Import Nights](#) will make an appearance at Mohegan Sun. The date has been changed a couple of times. See the [latest schedule here](#). This shows you how desperate we are to find car events. Hot Import Nights is on May 8, 2021. It's described as some kind of indoor competition between the best of Japanese and German imports along with current modified US cars. How they compete I can't say.

They say they will also have a "name" guest DJ, a Miss hot Import competition and of course food & beverages. It sounds weird, but there's nothing else automotive on the radar. Hey, if you don't like it maybe you can go win a bundle at the casino. [Gerry Lynn](#)

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