

The official newsletter of

**Revs Institute  
Volunteers**

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this month's  
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- Lodge McKee
- Scott George
- Mace Wolf
- Miles Collier
- Whitney Herod
- Chip Halverson
- Phil Panos
- Morris Cooper
- Joe Ryan
- Anna McDowell
- Bob LaPorta

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# TAPPET CLATTER

Volume 27.4

December 2021



## Chairman's Notes

Chip Halverson

**A**s I walked into Revs Institute this past Saturday I entered a very exciting place. In the shop, the F1 Eagle and the 908-2 were back after the Velocity Invitational event in Monterey. The lobby was very busy with guests and front desk informed me that we were sold out for the day. In the galleries there were new faces manning stations and new Docents leading tours.

The Guest Services volunteers were extremely busy, including station one. I had the opportunity to be in a station with one of our new Stewards. It was amazing to see how quickly they were learning, and to feel their energy.

To get to this point from where things were a year ago, is a tremendous testament to the entire volunteer organization and Revs Institute staff. A special shout out is due to our Membership and Training Committees, and to all of the new volunteers and new Docents who made the effort necessary to assume those new roles.

Earlier in the month we had our first in person membership meeting in almost two years. Whitney put together a great lunch and program. Thanks to Mr. Collier, Mace, Scott and Lodge for your very informative talks. We had intended to have another member meeting in December but the calendar quickly filled up with extra tours throughout the month and the holidays. We are planning on a January meeting and will inform you of the details shortly.

*(Continued on page 2)*

## Chairman's Notes....continued

(Continued from page 1)

Our monthly Board meeting is scheduled for Friday, December 10<sup>th</sup> at 10 am in the theatre. All members are welcome to attend. You will be receiving information soon regarding the election for directors which will take place in the spring.

Finally, our annual banquet is scheduled for Saturday, January 22, 2022. It is a great time bring a guest and get together with our fellow volunteers and staff for a celebration. Good food, beverages and an awards presentation should make for a fun evening. Please be sure to sign up and secure your place.

All the best! *Chip Halverson*



The Tappet Clatter Editor wants  
to wish everyone Happy Holidays  
and a Wonderful New Year  
filled with inquisitive  
Revs Institute Guests

## TAPPET RIVIA

By Joe Ryan

This section is devoted to questions about the Miles Collier Collections cars or cars of the same period. Some of the questions might be a bit obscure or tricky. Test your collection knowledge and *have fun!*

This month, we will feature questions from one car, the 1962 to 1964 Ferrari 250 GTO

1. What car cannot be copied or replicated, or tribute built and sold by law?
2. How many 1962 to 1964 Ferrari 250 GTO's were built?
3. Who did Enzo Ferrari approve as the U.S. dealer for the 1962 - 1964 Ferrari 250 GTO?
4. Who were the designers of the 1962 -1964 Ferrari GTO?

***The answers are posted later in the issue.***

## Your Membership Committee

### *How We Interview New Applicants*

*By Phil Panos*

I have been a member of the Membership Committee for a little while now. I have been asked to write a description on how the committee works. It will be explained to the best of my ability. We review every application that is sent to us, then set up an appointment to interview each applicant face to face. The interviewee is given a thumbnail sketch of the history of the Collier family here in Florida as well as their part in the beginnings of sports car racing in America.



*Photo Courtesy of Anna McDowell/Revs Institute*

We follow a written guideline of “Interview Criteria” but modify it as we go along to fit the applicant. Our questions are pretty basic.

- a. Are you a full or part-time resident?
- b. How long does it take you to drive to Revs Institute?
- c. Are you employed full time, part time or retired?
- d. Have you volunteered anywhere else in the past?
- e. What are your automotive interests?
- f. What kind of cars do you drive, work on, or collect?
- g. How many shifts a month do you think you can commit to as a volunteer at Revs?

We then tell them about the Revs Institute museum.

- a. Number of sections, number of galleries.
- b. Number of cars on the floor at any one time.
- c. The importance of our library.
- d. The duties of the station guides, stewards and guest services.
- e. Uniform of the day.

I usually explain the training process to the applicant without sugarcoating this as it does require some commitment from the new volunteer. I believe our training program is probably the best of any automobile museum in the world (personal opinion). We stress the mandatory requirements, such as the the fact that the Workbook must be completed and will be checked periodically. We explain that the new volunteer will work with a mentor in each gallery while doing Station Guide duty.

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## *How We Interview New Applicants.... continued*

*(Continued from page 3)*

This training will teach the new member how to interact with our guests. This also helps the member to learn about the nuances of every car in the Miles Collier Collections.

My reasoning for not sugarcoating the learning process is to head-off any preconceptions on the part of the applicant that we are going to just issue them a shirt, lanyard and ID badge and "throw them to the wolves," so to speak. I want to make sure they understand that they will be expected to learn the museum by doing all the work required.

This interview process takes thirty to forty-five minutes. Finally, we give the applicant the chance to ask any questions and we try to answer them honestly to the best of our abilities.

The committee holds a short conference apart from the applicant to decide whether yea or nay. If the decision is yea, he or she is asked to complete an application form and an authorization for a mandatory background check.

We also provide two handouts, the "New Applicant Handout" covering our process, Revs Institute expectations, and the things we provide to new members. The "Station Guide Roles & Responsibilities" covers the characteristics we look for in a station guide as well as "qualifications and commitments" expected of the new member.

We now interview for other positions beyond the traditional Station Guide role. These positions under the 'Steward' heading include collection security, library, Tappet Clatter and Adopt-a-Car assistant/vetting. We have interviewed many students from FGCU as well as from high schools to fill these positions.

After interviewing fifty or so people this year, I would say that it's been interesting. We have picked up a lot of good new members so thanks to everyone for your referrals.

## *Video Treats... click on the picture to view*

*Gunnar Jeanette in the F1 Gurney Eagle at Laguna Seca at the Velocity Invitational.*



*Dual Eagles at Laguna Seca at the Velocity Invitational, an Indy Eagle and the F1 Eagle.*

## November Volunteers' Meeting

*With Miles Collier, Mace Wolf, Scott George and Lodge McKee*

*By Eric Jensen*

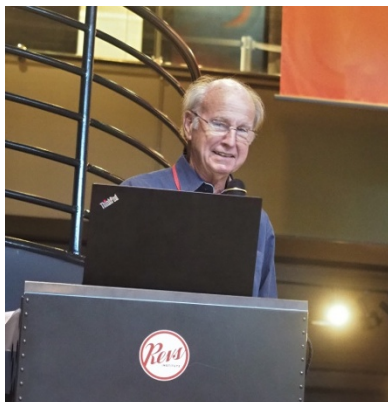
It was an all-star cast of speakers for the first full-scale Revs Institute Volunteers monthly meeting held November 2021. To commemorate the return to normal, Whitney Herod arranged a fine lunch from Two Guys Catering to 70-plus volunteers and staff.

Since we have so many new volunteers, Lodge agreed to create a series of talks about the evolution of the volunteer organization and the collection. This meeting was the first of these talks. The story started from 1986, when the Porsche collection was pretty much together. Mr. Collier met with family friend, Briggs Cunningham as he was interested in purchasing some of Briggs' collection, notably the race cars. This discussion resulted in the acquisition of the entire Cunningham collection.



One of those automobiles, a one of six, [Bugatti Royale](#), was sold from the collection. The Royale was intended by Bugatti to appeal to royalty, although none ultimately ended up in royal possession. Cunningham, at one time, actually owned two of the cars. The Kellner bodied Royale from the collection set a record price that stood for 15 years.

The initial challenge was where should a collection of some 75 outstanding automobiles reside. Fortunately for our volunteers, Naples Florida was chosen. A 600 guest banquet was held to launch the collection. The building, at that time contained only two wings, north and south. The four themes currently in the museum were once segmented into five. Vitesse being split between American cars and Grand Classics (or *Cars of Conspicuous Consumption*) with Revs, Porsche and Automobility as we have today.



The volunteers group was formed in the fall of 1988. Fifty people were invited to apply and were greeted with a banner prepared by Porscheophile volunteer, Dale Miller, with every Porsche model number printed across the face. It formed the basis for a test at the end of the meeting. The chosen men, and women, met every Tuesday night for five years to study every facet of the collection.

Each week the group received study sheets for the next week's meeting with a few hours of study material. The amount of study was significant, often as much as three hours reading.

Lodge, Above - Photos Courtesy of Paul Kierstein/Eric Jensen/Revs Institute

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## November Volunteers' Meeting....*continued*

(Continued from page 5)

Much like the model we use today, the sheets contained information on the car, the creator, the personalities, the engineers, the races won, the race drivers, the significant innovations and the place in history. Each car that enters the Miles Collier Collections creates a unique storage of all the material connected to that car. Every part, accessory and document is retained. Nothing is discarded. In this way the history of the car to that point is retained forever.

Twelve of the volunteers were sent to other museums, not just car museums, to find out how they worked, how they were funded and how their volunteer organizations functioned. At this point, Lodge reached his time limit and promised us more to come with a resounding round of applause.

The show and race season has been a flurry of activity this year as Scott George, our second speaker informed the group. A "normal" year would be 6 to 12 events. The global pandemic pushed much of this year's 10 events towards the end of 2021 so Scott and the shop were very busy prepping, shipping and returning cars to the galleries from August to November. Many cars got a chance to warm their oil and turn their wheels at Targa 66 at Palm Beach International Raceway in Florida and Roads Scholars Invitational at Road Atlanta early in the year. Amelia Island was covered in Lodge McKee's fine article in September's *Tappet Clatter*. The McLaren F1 generated a lot of interest from younger visitors and was featured in a VinWiki YouTube video linked [here](#).

August brought the Monterey Historics racing the Porsche RS-61 and Pebble Beach with both Porsche 917s, the 1924 Miller. There is a road tour that always accompanies the Concours and this year an owner drove his Porsche 917-30 on that tour. It can be seen [here](#), about 20 seconds into the video. It was quite the sight!

Luftgekühlt, an all-Porsche static display, was held in Indianapolis with the 1951 Porsche 356SL attending. The Gurney F1 Eagle and Lancia D50 were sent to the Audrain Newport Concours in Rhode Island. The Chattanooga Motor Festival received the Miles Collier Collections Ferrari 166 Spyder and the Greenwich Concours the Ford GT40 Mark II-B and the Corvette Grand Sport.

Roads Scholars held the [Four-Cam Jam](#) for Porsches with the Type 547 engine. A couple of "ringers" were sent in the form of the Corvette Grand Sport and the Lancia D50. It gave Porsche factory driver, Patrick Long, a chance to experience the D50, a very different machine than Patrick normally drives. Roger Mandeville, known for his prowess in IMSA Mazda racecars, got a run in the Grand Sport and liked it very much. The Velocity Invitational, held at Laguna Seca Raceway gave Revs Institute's favorite driver, Gunner Jeanette, a lifelong dream of laps in the Gurney F1 Eagle. Bucket list, check! The Porsche 908-2 turned a wheel as well.

Revs Institute's new Managing Director, Mace Wolf shared his thanks for all the volunteers' efforts and his hopes to increase the ticket sales by 10,000 guests next season.

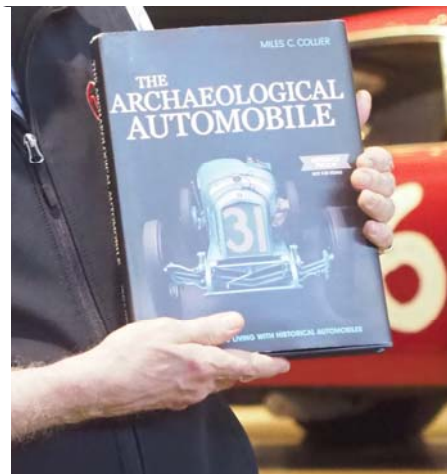
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## November Volunteers' Meeting....*continued*

(Continued from page 6)

Given the demand early in this fall, this certainly looks to be achievable. We will all have many guests to regale with our histories and facts. He has met more than a few of the volunteers and is looking forward to meeting more as the snowbirds return. Mace is soliciting good ideas to further promote the museum and is keeping a list to pursue as resources permit. If you want to learn more about Mace Wolf and the future plans for the Revs Institute, refer to his interview in the October 2021 issue of the *Tappet Clatter*.

Finally, the authorship is complete, the editors have finished their scrutiny, and the printing presses are full bore on his book, *The Archaeological Automobile*, so Miles Collier stepped up to the podium to address the group. First off were thanks to the volunteers for their interaction and interpretation for our guests. Then, the announcement that each of the volunteers will receive a copy of his book. A round of applause, of course, ensued as did a question as to whether each of the 160 copies would be autographed by the author. A paraphrase of the reply; "You know where I am, if you can catch me, I'll sign your copy." From his shared descriptions, the book should be quite an interesting read.



*Miles Collier's new book*



*The Fiat 850 before the transformation*

Scott George came back to the podium for a few updates of shop projects. Revs Learning being an initiative to create hands-on classes in basic engine systems and tuning. Several classes have been given to good reviews. The classes are being packaged such that they can be offered at the Hagerty Clubs as well as at the Revs Institute to new collectors and enthusiasts. The shop was expanded into the truck bay to make room for the build projects such as the RazzoFab. A video series is planned to showcase this Subaru driveline into the red Fiat 850 project and a video editor has been hired for that and other projects.

The Car as Canvas exhibition has had a bit of a U-turn as restorations often do. Using paint remaining from the earlier restoration work of the Ballot, the material was found to have inexplicably developed "granules" and runs in this paint apply. New material is ordered and the applied paint will need to be sanded off and repeated. Pinstriping should start in January. The Porsche 906's paint is finished. Interior fitting is next followed by reassembly. Completion is planned by February. The Bentley Speed Six is complete and will return soon. All in all, a very productive year.

## Was The Electric Car for Women Drivers?

*By Morris Cooper*

**E**arlier this year, Swedish journalist and author Katrine Marcal wrote a book: “Mother of Invention -- How Good Ideas Get Ignored In An Economy Built for Men.”

Her book has been the subject of much recent discussion. Reviewers regard it as a brilliant examination of how innovation suffered due to being associated with femininity, and an illuminating and maddening examination of how gender bias has skewed innovation, technology and history.

Of particular interest to us at Revs Institute is the author’s analysis of early electric cars when viewed soon after the dawn of the automotive age as being cars only for women. There is no disruptive technology about the overnight success of electric cars unless you think a 120-year delay in their development is justifiable. Electric cars are indeed “a blast from the past.” Witness electric taxis in New York City long before there were reliable internal combustion cars, and where batteries were changed in a minute and a half in fleet garages situated around Manhattan. Then, as now, the time required to recharge a battery remained a technological barrier.

But consider where we might be today if we made the equivalent effort to improve electric cars as we did with aircraft following the Wright Brothers first flight in December 1903. According to technology and automotive historians, it was the electric car that displaced horses as the means of transport. Gasoline cars of the time were inferior. Hand cranking a car to start was a difficult and dangerous activity requiring a good deal of strength. In contrast, the electric car was started from quiet and comfort of the driver’s seat.

Perhaps it was the vase for fresh flowers in the Baker Electric or the fact that it had a tall weatherproof enclosed interior to allow women to retain their hats, and controls which did not snag their clothing that prompted men’s negative reaction to a drawing room on wheels. By 1916 the electric car became “branded as a car for the aged and infirm and for the women.”

**The Standard of Electric Vehicles**  
The carriage for every-day service—no matter what the weather.  
The simplest to operate—the safest to drive.

**Baker Electric Vehicles**  
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The Car with a motor and controller which require no attention, and that will not arc or freeze.  
The highest expression of modern electrical and mechanical engineering combined with nine years' experience in progressive Electric Automobile construction.

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Let us send you our catalog showing a complete line of fifteen different models of Baker Electrics.  
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Agencies in all principal cities. 33 W. 80th Street, Cleveland, O.

*The 1908 Automobile Line of Baker Electric autos, the largest manufacturer of electrics in the United States*

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## Was The Electric Car for Women Drivers?

... continued

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And of course, there was and is the overwhelming and never-ending need for speed and daring that captured men's imagination. Do you need evidence? Consider that electric cars never took off (literally) until the lowly Prius was replaced by the three second Zero-To-Lose-Your-License twin engine Tesla.

The point of Mercal's book is that innovation is shaped by our ideas about gender. Why were comfort and convenience regarded as relevant only to women? And more importantly, why were "feminine values" regarded as inferior? Marketing electric cars to women was initially seen as a path to success, but in the end our gender stereotypes proved to be an overwhelming obstacle for one hundred years.

Perhaps the best example of sexism in technology innovation is the author's discussion of wheels on suitcases. Although the wheel had been invented 5000 years earlier, placing wheels on a suitcase is incredibly recent. The reason is obvious. Real men carry their suitcases.



1909 Baker Electric Automobile Advertisement

### Mix of car types in the USA from 1900 to the 1920s

- In 1900, there were 200 cars registered; 160 steam powered, 76 battery electric powered and 44 internal combustion engine powered automobiles.
- By 1912, electric vehicle sales peaked and well over 30,000 electric automobiles were on the roads.
- By 1917, only 50,000 electric autos were registered, compared to 3.5 million internal combustion autos
- By 1920, it was clear the internal combustion auto was dominant in the market.

## Early Automobile Maintenance

By Eric Jensen

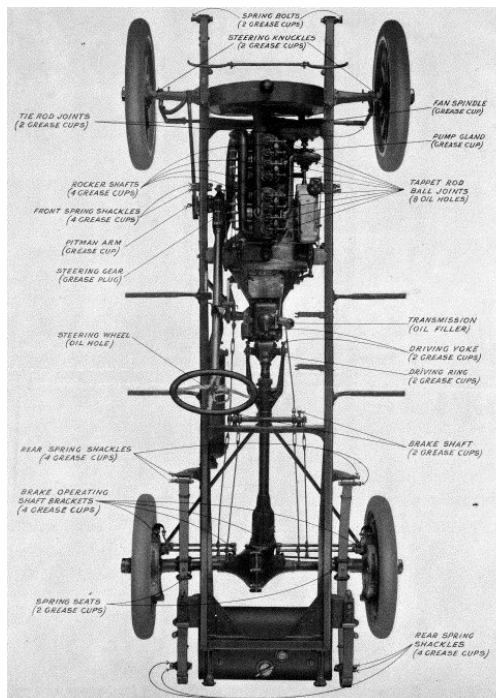
When presenting early automobiles in the museum, it is easy to point to the crank starters, steering wheel spark advance and multiple spare tires to describe the challenges of ownership. Most guests have never experienced manual transmissions, lack of power assisted steering and brakes nor cars without heaters. Operating early vehicles is but one challenge. Keeping them running is a monumental task compared to modern vehicles.

Many of the Revs Institute Volunteers remember cars with seasonal oil changes, grease jobs, tune-ups once a year and maybe even de-carboning cylinder heads. Even these maintenance tasks pale when compared to each Buick in their 1914 lineup of automobiles.

The following maintenance instructions and diagrams are taken from the "*Buick Reference Book Models B36-B37-B38-B55 issued by the Buick Motor Company, Flint Michigan*" published in 1914 by the Cargill Company, Grand Rapids Michigan.



The book explains not only the operation and service of the 1914 Buick, it explains how to do the tasks, in detail. It is a service manual of only 82 pages to cover every operation, mechanical and electrical aspect of the car. A modern service manual for this author's 2013 automobile, for example, has 5007 pages simply for repair procedures. From the manual;



### EVERY DAY

1. With the oil can apply a drop or two of cylinder oil to each of the rocker arm ball-joints through the oil holes on top.
2. Give each of the grease cups on top of the rocker arms shafts half a turn to the right.
3. Give grease cup on a fan spindle one or two turns.
4. Give grease cup on starting gear half a turn to the right.
5. Give grease cup at upper end of steering pitman arm on left side of frame. half a turn.
6. Give grease cups on front spring shackles half a turn each. There are three cups to each spring, one at the forward and two at the rear end of the spring.

There are 9 more steps to perform for a total of 16 steps EACH day the car is driven.

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## Early Automobile Maintenance...continued

(Continued from page 10)

Each of these grease cups would need to be refilled as they were emptied, of course. A Buick owner would either need a handyman to tend to these tasks or need to learn to do the tasks for themselves.

### EVERY WEEK

At least once a week after thoroughly washing and cleaning the car, attend to the points which require lubrication as follows:

1. Raise left side of hood and remove pipe plug on top of steering gear worm housing. With grease gun, fill the housing with cup grease.
2. With grease gun apply a small amount of cup grease to forward and rear sockets of steering gear drag link.

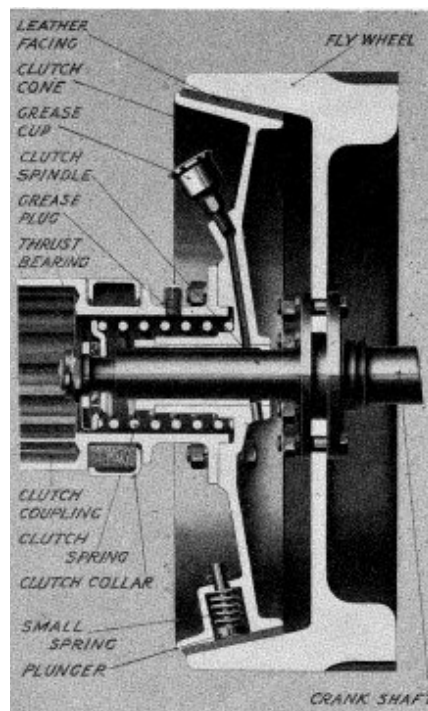
There are 5 more steps to top-up the clutch, transmission and rear axle with grease and oil. This may involve a trip to the local garage each and every week to keep the Buick running and looking like new. A perfect time to fill up the fuel tank at the same time. The moderate do-it-yourself owner, likely of the lower cost models, may spend Saturday afternoons on these tasks.

### EVERY MONTH

Once each month the wheels should receive attention as follows;

1. Jack up front axle, and remove front hub caps by unscrewing them to the left. Remove cotter pins and unscrew spindle nuts by turning left hand nut to the right and right hand nut to the left. Notice that these are right and left hand threads. Do not get them mixed. Slip off wheels and smear spindles and ball races with cup grease. Replace wheels and tighten nuts until wheels have no perceptible shake on spindles but are loose enough to spin freely and will stop with the tire valves down. Replace cotter pins and caps.
2. Move car or jack up rear axle until pipe plugs in rear hubs appear on top. Remove plugs and fill with cup grease from grease gun. Replace plugs.
3. Remove pipe plugs on left side of timing gear case of motor and with a grease gun introduce a mixture of cup grease and cylinder oil, about the consistency of heavy molasses.

About once a month the Delco generator will also require a slight amount of lubrication and cleaning. For the proper method of attending to this, see the explanation in the Delco instruction book.

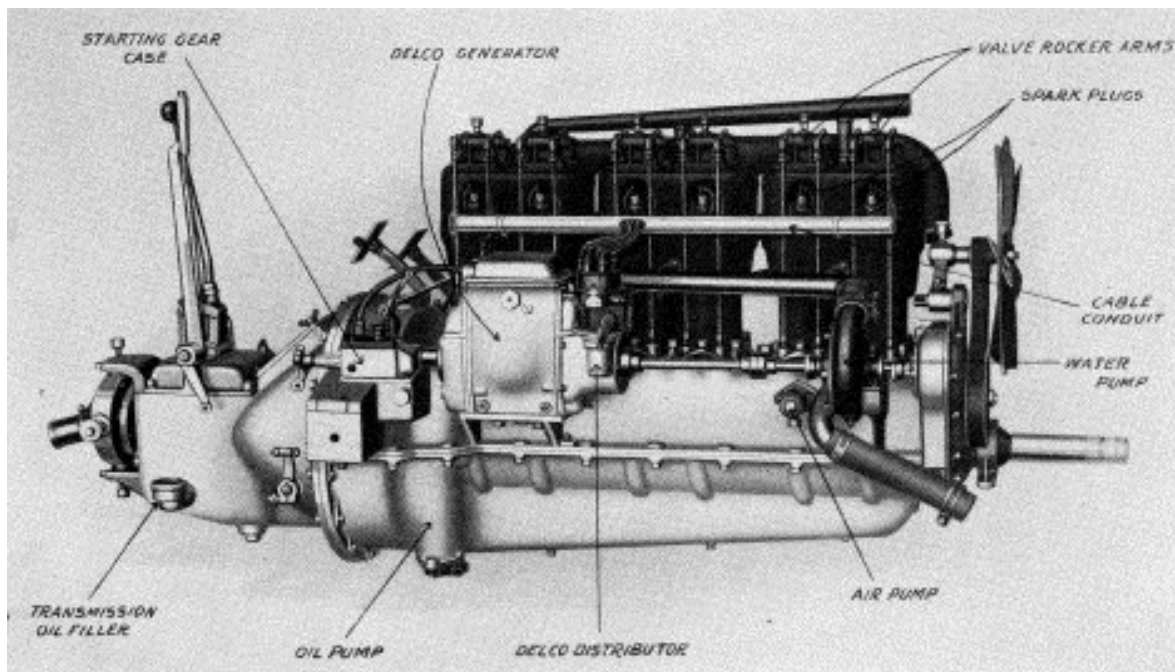


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## Early Automobile Maintenance...continued

(Continued from page 11)

Three or four times a year all the old oil should be drained out of the crank case of the motor, the transmission and the rear axle and these parts washed out thoroughly with kerosene before being filled with clean oil.



More lubrication, oil changes, flushing of the old oils and replacement with new was a constant task with this era of automobiles. Oils were not nearly as good as they are today. Oil filters were not yet installed on cars so this was the only way to flush out contaminants.

### *Once Each Year*

*At least once each year the car should receive a thorough overhauling, at which time the motor, clutch, transmission, steering gear and axles should be taken apart and all the old oil and grease washed out with gasoline or kerosene.*

This is a significant amount of work most likely performed by a local garage at no small expense. Compare this to a modern car that has its oil changed every 10,000 miles, coolant every 5 years, sparkplugs every 100,000 miles. The entire driveline should last more than 150,000 miles over 15 (or more) years without ever being disassembled. While this article makes no specific mention of other routine maintenance such as tires and brakes, suffice to say that each has become far more durable in the ensuing 107 years.

While early cars were difficult to drive compared to modern versions, they were also far more maintenance intensive. Even with those hurdles, the freedom of mobility afforded by the automobile was nonetheless enthusiastically embraced by the world.

# TAPPET TECH

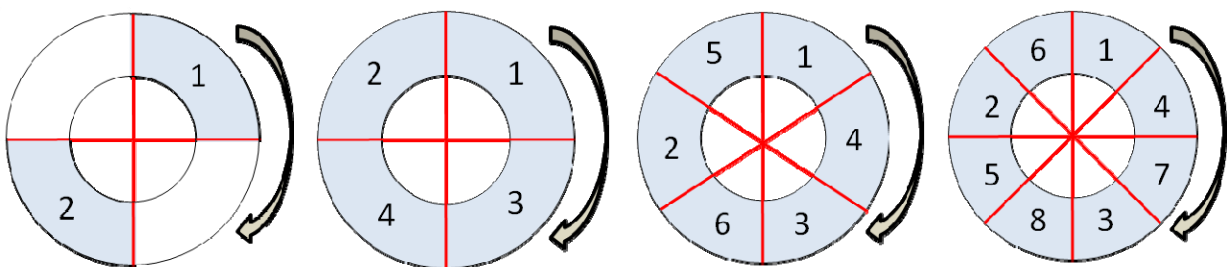
## *Why Do Engines Have Multiple Cylinders?*

*By Eric Jensen*

The world is filled with engines ranging from one to four to eight to even sixteen cylinders. Why did early automobiles grow from two to four cylinders? Then four to six and eight and more? The reasons are simpler than you might think.

In a previous *Tappet Tech*, we explained the four-stroke internal combustion engine cycle. This cycle takes two complete revolutions to complete, or 720 degrees of rotation. If we draw a circle and define it as 720 degrees, or a complete 4 strokes of the combustion cycle, we can represent a two cylinder engine and its power strokes in Figure 1. The shaded segments of the circle are the power strokes of the two cylinders and where they happen in the rotation. The arrow shows the direction of rotation. The two white segments are portions of the stroke where power is not being added to drive the car. A heavy flywheel is required to keep smooth the uneven pulses and to keep the engine turning to the next power stroke.

If we add two more cylinders as we can show in Figure 2, and ignite the mixture in the order listed, we can see that there is a steady delivery of power. The flywheel can be lighter, the engine will be smoother and vibrations to the passengers much lower. This is why the four cylinder engine is so popular in automobiles in the early days of motoring and why it is still so popular today in both cars and motorcycles.



Two Cylinder  
Figure 1

Four Cylinder  
Figure 2

Six Cylinder  
Figure 3

Eight Cylinder  
Figure 4

Notice the cylinders don't fire the cylinders in a 1-2-3-4 order from front to back. The design of the crankshaft does not allow that nor would it be desirable from the standpoints of cooling, vibration, intake delivery or exhaust. It is always preferable to evenly fire back-and-forth in the engine as it produces the smoothest power delivery. For reasons we will explore in a future article, the four cylinder does create some vibrations that get progressively worse as the engine gets larger.

*(Continued on page 14)*

# TAPPET TECH

## *Why Do Engines Have Multiple Cylinders?*

*....continued*

*(Continued from page 13)*

To produce more power smoothly, early cars progressed to six cylinder engines. More cylinders of equal size make a larger engine displacement and make more power. Six cylinders also overlap the power strokes which make the delivery smoother as you can see in Figure 3. Six cylinders in a line is also a naturally balanced engine configuration as every action has an opposite reaction resulting in a very smooth delivery of power.

An bit of an oddity among engine designs is the inline 3 cylinder engine, or half a six. The design is half as powerful, half as smooth but half the size. This design has made an appearance on and off over the decades usually in smaller, low priced cars. The power strokes, like a two cylinder, don't cover the full 720 degrees, nor is the engine balanced as is the inline six. It is smoother than a two cylinder but rougher than a four cylinder. It is included in the discussion simply because it exists and someone will ask... 'Why a not 3?'

So if six is good, how about eight? Now we have two power pulses staged one-half a stroke apart making for a very smooth delivery of power as shown in Figure 4. We have 8 cylinders worth of displacement making lots of power and even better smoothness than an inline six. An inline eight is a brilliant engine design that only fits under the long hoods of early automobiles such as the 1927 Packard or 1930 Duesenberg. Long narrow hoods favored in designs of the 1910s through the 1930s allowed such engines. Different engine configurations were required as the design of cars became more diverse in style and engine location.

V4s, flat 4s, V6s, V8s and flat 8s, V12s, flat 12s and even V16s have been tried successfully over the decades as have inline 5s. The configurations, however, are a different story, for a different article.

*The 1938 Alfa Romeo Tipo 8C  
supercharged straight 8 engine - right  
Peter Harholdt Photo  
Courtesy of Revs Institute  
Figures Courtesy of Eric Jensen*



# TAPPET TRIVIA

*And now, the answers...*

1. What car cannot be copied or replicated, or tributes built and sold by law?  
**Answer:** 1962 to 1964 Ferrari 250 GTO. The Italian courts declared the 250 GTO is a piece of art and therefore not to be replicated in any way shape or form and sold. Ferrari can sue anyone that violates this court ruling.
2. How many 1962 to 1964 Ferrari 250 GTO's were built? **Answer:** A total of 36 were built. a total of 33 were built of the design series and 3 1964 design series II with revised body work. Some "officiators" include the three 330 GTO cars with the four liter 330 engine. Making the official Ferrari confirmed total of 39. The 330 had a large hump on the bonnet.
3. Who did Enzo Ferrari approve as the U.S. dealer for the 1962 to 1964 Ferrari 250 GTO? **Answer:** Luigi Chinetti. The cars were priced in 1964 at \$18,000. Buyers were personally approved by Enzo Ferrari and Chinetti.
4. Who were the designers of the 1962 to 1964 Ferrari GTO? **Answer:** Giotto Bizzarrini did the initial design and engineering but left the company in 1961. One individual, specifically, Gian Carlo Guerra, a metal-worker assigned to shape the car is responsible for the shape of the car. First crafted with aluminum wires, then with sheet aluminum. Sergio Scaglietti completed the design after Bizzarini's departure along with new engineer Mauro Scaglietti.

## ***Are you interested in vetting completed Adopt-A-Car reports?***

*We are looking for a few volunteers who love to make sure things are absolutely correct.*

The Adopt-A-Car program has a handful of completed AAC reports that need vetting. The purpose of vetting is to ensure the statements of fact in each report are correct and clear. This can be done by double-checking the references used in the report and checking the facts stated against other, usually web-based, references or information in the CarPad files. Of course, if you could bring your own personal expertise to the vetting process, that would be valuable as well.

We would expect that vetting a report should take around half-a-day to a full day's effort. You do not have to be physically at Revs Institute to do this vetting work. It can readily be done from the comfort of your home. Your vetting hours will contribute toward your annual volunteer hour requirement.

If you are interested in vetting, please contact Brian Lanoway, the Adopt-A-Car Committee Chair.



## Events Calendar

Event	Date	Info or contact
<b>VT Industries Tour</b>	Dec 8, @ 10:30 am	Sign up on VicNet
<b>Columbia University Alumni</b>	Dec 8, @ 1:30 pm	Sign up on VicNet
<b>Quail West Car Club</b>	Dec 10, @ 10:30 am	Sign up on VicNet
<b>Fiat Club, Georgia</b>	Dec 11, @ 1:00 pm	Sign up on VicNet
<b>HHYC Members Reception</b>	Jan 5, @ 5:30 pm	Sign up on VicNet
<b>Wyndemere Tour</b>	Jan 7, @ 1:30 pm	Sign up on VicNet
<b>Minneapolis Heart Institute</b>	Jan 18, @ 5:00 pm	Sign up on VicNet
<b>Naples Ultimate Garage Tour</b>	Jan 19, @ 1:30 pm	Sign up on VicNet
<b>Volunteer Banquet</b>	Jan 22, @ 5:30 pm	Details to follow

For a full list of daily tour groups and events, go to the 'Calendar of Events' on VicNet.



1958	Alfa Romeo Guilietta Sprint Veloce
1964	Alfa Romeo GTZ
1934	Alfa Romeo 8C 2300
1934	Alfa Romeo 8C 2900B Berlinetta Touring
1967	Alfa Romeo AutoDelta 1600 GTA
1967	Anglo American Racers Gurney Eagle
1949	Ardent Alligator
1988	Arrows A10B Formula 1 Car
1919	Ballot
1926	Bentley Super Sport
1901	Benz Dos-a-Dos
1930	Bugatti Type 35
1933	Bugatti Type 55 Super Sport
1950	Cadillac Series 61 LeMans LeMonstre
1950	Cisitalia SC
1961	Citroen 2CV Sahara
1950	Cunningham C-1 Prototype
1952	Cunningham C-3
1952	Cunningham C-4R
1953	Cunningham C-5R
1955	Cunningham C-6R
1937	Delahaye 135 Comp. Special Roadster
1917	Detroit Electric
1963	Elva Porsche
1970	Fiat Abarth TCR
1955	Jaguar D-Type
1974	Jorgensen Eagle
1927	Lancia Lambda
1962	Lotus Elite Series II SE
1938	Maserati 8CTF
1961	Maserati Tipo 60 Birdcage
1995	McLaren F1
1929	Mercedes Benz SSK
1939	Mercedes Benz W-154
1912	Mercer Raceabout
1935	MG PA PB Leonidis
1922	Miller
1927	Packard Speedster
1896	Panhard & Levassor
1951	Porsche 356SL Gmund Coupe
1956	Porsche 550A Spyder
1959	Porsche 718 RSK Spyder
1964	Porsche 904 Carrera GTS Red
1964	Porsche 904 Carrera GTS Silver
1966	Porsche 906 Carrera 6
1968	Porsche 907
1969	Porsche 908-02 Spyder
1967	Porsche 910-6
1964	Porsche 911
1967	Porsche 911R
1969	Porsche 917 PA
1958	Porsche Carrera Speedster
1963	Porsche Elva
1961	Porsche RS-61L Spyder
1958	Scarab Sports-Racer
1914	Simplex
1928	Stutz Black Hawk
1920	Vauxhall 30-98 Type E
1927	Vauxhall 30-98 Type OE
1869	Velocipede Bicycle
1884	Columbia Three-Track Tricycle
1885	Humber 58" Ordinary Bicycle
	Abarth 1000-TC-R engine
	Alfa Romeo GTZ engine
	C-6R Offenhauser Racing engine
	Cadillac OHV V-8 engine
	Chrysler Hemi engine (C-3R)
	Duesenberg Sprint Car engine
	Ford GT-40 transaxle and engine
	Ford Turbocharged Indy engine
	Jaguar XK Series engine
	Porsche Type 771 engine
	Porsche Type 901/20 engine
	Porsche Type 901/22 engine
	Porsche Type 908 engine

## New Adopt-A-Car Format

Now that the seasonal volunteers are starting to get work their way down to Florida, perhaps it's time to consider adopting a Collection car. None of the cars listed here have ever been researched by a volunteer.

Although a full Adopt-A-Car report is still our ultimate goal, we have made the research possibilities easier by offering shorter sub-topics that you can investigate, such as:

- the car's pedigree
- the history of the car's manufacturer
- its racing history
- how to drive the car
- the innovations in the car's design
- the processes and materials used to produce the car
- the styling features and colors used
- the car's restoration or re-restoration
- anecdotes about the car's history
- identifying additions to the car's research bibliography

The sub-topic research efforts don't have to be long. A one to three-page effort would do.

Any time spent on your research can be applied to your annual volunteer hours, even if your work is remote.

Even better, for those of you who are willing to take on a full Adopt-A-Car research report, we will do our best to get you a ride in your selected car when it's being exercised.

**If you are interested please contact:**

**Brian Lanoway .**

Adopt-A-Car Committee Chair.

## Adopt-A-Car Program

### Available Adopt-A-Car Automobiles and Engines

Alfa Romeo Guilietta	Jorgensen Eagle	Porsche Elva
Alfa Romeo GTZ	Lancia Lambda	Porsche RS-60 Spyder
Alfa Romeo 8C 2300	Lotus Elite Series II S.E	Porsche RS-60 Spyder
Alfa Romeo 8C 2900B	Maserati 8CT	Scarab Sports-Racer
Alfa Romeo AutoDelta 1600	Maserati Tipo 60 Birdcage	Simplex
Gurney Eagle F-I	McLaren F1	Stutz Black Hawk
Ardent Alligator	Mercedes Benz SSK	Vauxhall 30-98 Type E
Arrows A10B Formula 1	Mercedes Benz W-154	Vauxhall 30-98 Type OE
Ballot	Mercer Raceabout	Columbia Three-Track
Bentley Super Sport	MG PA PB Leonidis	Humber 58" Ordinary
Benz Dos-a-Dos	Miller	Velocipede Bicycle
Bugatti Type 35	Packard Speedster	Abarth 1000-TC-R engine
Bugatti Type 55 Super Sport	Panhard & Levassor	Alfa Romeo GTZ engine
Cadillac Series 61 LeMonstre	Porsche 356SL Gmund Coupe	C-6R Offenhauser engine
Cisitalia SC	Porsche 550A Spyder	Cadillac OHV V-8 engine
Citroen 2CV Sahara	Porsche 718 RSK Spyder	Chrysler Hemi engine
Cunningham C-1 Prototype	Porsche 904 Carrera GTS Red	Duesenberg Sprint Car
Cunningham C-3	Porsche 904 Carrera GTS Silver	Ford GT-40 transaxle and
Cunningham C-4R	Porsche 906 Carrera 6	Ford Turbocharged Indy
Cunningham C-5R	Porsche 907	Gurney Eagle GP engine
Cunningham C-6R	Porsche 908-02 Spyder	Jaguar XK Series 6 cyl
Delahaye 135 Roadster	Porsche 910-6	Meyer-Drake Turbo Proto
Detroit Electric	Porsche 911	Porsche Type 771 engine
Elva Porsche	Porsche 911R	Porsche Type 901/20
Fiat Abarth TCR	Porsche 917 PA	Porsche Type 908 engine
Jaguar D-Type	Porsche Carrera Speedster	

**To adopt a car or engine, contact: Brian Lanoway, Adopt-A-Car Chair**

The **Tappet Clatter** is the official newsletter of **Revs Institute Volunteers** of Naples, Florida. Its intended purpose is to inform, entertain and promote camaraderie for our members.

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