

The official newsletter
of: Revs Institute
Volunteers

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*Thank You to
this month's
contributors:*

- Tom Saracco
- Max Trullenque
- Bill Vincent
- Joe Ryan
- Chip Halverson
- Tom Dussault
- John Wharton

TAPPET CLATTER



Volume 28.8

April 2023



Chairman's Notes

By Chip Halverson

Wow, what a busy time at Revs Institute. Starting on March 1st we had our member meeting with John Doonan as our speaker. In his position as President of IMSA he is one of the most influential people in Motorsport. His update on prototype racing was very informative. Of great interest was his description of the Garage 56 project with a Chevy stock car at Le Mans. Should be great fun to follow that. Thanks to fellow volunteer Bill Vincent for getting his good friend John to join us.

Next, we had the Road Rally on the 10th. The British Open Pub was a perfect location. The questions for the rally were challenging and fun. Thanks to John Fritz, Mike Lawther, and Mark Koestner for their usual great job of organizing. Everyone I talked to hopes we can do it again next year.

About the time you read this we will be having our Annual Member meeting on April 5th. Our guest speaker is Diane Parker on the subject of storytelling. As we all know, one of our most important skills for interpreting the collection is storytelling. Those of us who heard her talk at the Automotive Museum meeting were very impressed.

Following her talk we will have our annual meeting. Since we had three candidates for three open slots there is no need for an election. It will be great to have John Wharton, who has been a major contributor to the Revs Institute mission, start another term.

(Continued on page 2)

Chairman's Notes... continued

(Continued from page 1)

Our two new directors will be Eric Judson and Mark Komanecky. Both have been big contributors to the museum and will be great additions to the board.

On April 15th we will be having our Cars and Coffee. This promises to be a fun day and complete sell out. We will need a lot of volunteer help for this event. Please sign up on VicNet. Finally, there will be a group travelling to Vero Beach to see the exhibit of Art Deco cars which includes our Airflow and Delahaye. They have about twenty spectacular cars in the exhibit. Their volunteers are planning a special day for us to show their appreciation for the help we gave them on their trip here.

I want to conclude by thanking Roc Linkov and Hank Bergland as they finish their terms on the board. They epitomize what Revs Institute Volunteers do, step in and use their talents and energy to improve our results.

Thanks, from all of us. *Chip Halverson*

Membership Report *By Tom Dussault*

The Membership Committee met in March to discuss issues and ideas for 2023. We now have 153 members; a total up from 119 members two years ago. We have suspended interviews with seasonal/part-time applicants until the fall. Bringing new members on board in the spring does not allow adequate time to complete initial mentor training prior to leaving for the summer. We will continue to interview applicants who are year round residents.

We welcome Mark Komanecky and Bob LaPorta to the group of members who reach out to groups in our community through the "Ambassador" presentation. Mark Komanecky and I recently spoke to eighty members of the Marco Island Men's Club. A number have since visited the museum and we hope to recruit a volunteer or two.

Mark and Bob recently spoke to residents of Village Walk of Bonita Springs. They will also represent Revs Institute at the "HOA Activities Directors Expo" in April.

Kudos to Phil Panos and Tom Saracco for heading up Revs Institute's participation at the Hodges University Veterans Car Show as well as Bob Rode and Carmen Ermi for showing their cars at the event.

Our next committee meeting is scheduled for April 18th. All members are welcome to join us.

COORDINATOR'S CORNER



By Whitney Herod

At Revs Institute, we expect excellence. Our values and standards govern how we do what we do and are - for the most part, concerned with how we relate with our guests and each other. To ensure the best guest experience, Volunteers must be vigilant in upholding Revs Institute's Mission and Values, who consistently;

- Looks the part - follows dress code, well groomed, commands attention with body language and energy level.
- Guest focused - attentive to the needs of our guests, not sitting, looking at phone or talking to other volunteers when guests are present.
- Dependable - Arrives on time for shifts, gives as much advance notice as possible if unable to report for shift, starts and finishes tours on time.
- Respectful of others - Courteous, helpful, and mindful of other's feelings.
- Continually learning and seeking to improve.

Docent Qualifications

Because they are responsible for leading tours, Docent are our most visible Brand Ambassadors. Therefore, we look for these key strengths when considering candidates for Docent:

Strong interpersonal skills: Able to build rapport with others; perceived as warm friendly, and trustworthy.

Engaging Presenter: Projects voice well, good command of language, entertaining storyteller, gauges the audience level of interest and adjusts accordingly.

Adaptable: Adjusts tour to the audience type or special needs or requests.

Open to feedback: Docents must be open to both giving and receiving feedback.

Committed to advancing the Revs Institute Mission: Demonstrates high energy and enthusiasm towards our common goals.

Please contact me if you are interested in becoming a docent.

Events Calendar

Event	Date	Info or contact
Cars and Coffee	April 15 @ 8:30 am	Sign up on VicNet
Road Trip to VBMA	April 17 @ 7:00 am	Sign up on VicNet
Village Walk Tour	April 19 @ 10:30 am	Sign up on VicNet
Suncoast BMW Car Club	April 21 @ 10:30 am	Sign up on VicNet
Sherwin Williams Tour	April 21 @ 1:30	Sign up on VicNet
TD Bank Dinner	April 25 @ 7:00 pm	Sign up on VicNet
Goldcoast Region PCA	April 28 @ 10:30 am	Sign up on VicNet
International Order of T Roosevelt	April 28 @ 1:30 pm	Sign up on VicNet
SuperCar Rooms Tour	May 3 @ 1:30 pm	Sign up on VicNet
Wildcat Run Tour	May 12 @ 10:30 am	Sign up on VicNet

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

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APPET

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 (very) obscure or (impossibly) tricky. Test your knowledge and *have fun!*

Gas turbine engines to power airplanes, commonly known as jet engines, were in development in the late 1920s and early 1930s concurrently in the U.K., Germany and Spain. The post war engineering efforts created many gas turbine powered aircraft. The gas turbine was seen as a leap forward in technology to power everything, including cars.

1. **Question:** When was the 1st gas turbine powered car built?
2. **Question:** When was the first working gas turbine engine made?
3. **Question:** Did The Ford Motor Company build a gas turbine automobile?
4. **Question:** Did the Chrysler Motor Company build a gas turbine powered car?
5. **Question:** How many gas turbine cars did Chrysler build?

The answers appear later in this issue

Members Meeting with John Doonan

The March members meeting presented John Doonan, the President of the International Motors Sports Association (IMSA), the premier sports car sanctioning body in North America. IMSA has been around since John Bishop formed IMSA, with backing from NASCAR's founder Bill France Sr., in 1969. IMSA was sold several times from the 1980s to again be owned by the France Family, headed by Bill France Jr. who hired John Doonan to head the re-formed organization.

John grew up around racing crewing for his father when he was just a boy. John's grandfather raced ovals, John's father raced sports cars alongside Volunteer Bill Vincent and his race partner. Bill invited John to speak at Revs Institute.



*John Doonan
Eric Jensen Photo*

John made his and his father's hobby a career leading to his position of Mazda Motorsports Manager. Mazda has had a strong involvement in motorsports from the MX5 Miata all the way to IMSA Daytona Prototypes (DPi - the fastest class!). A rough few years in DPi culminated in a 3 wins in a row John's last year with Mazda as IMSA had already hired him away before season's end.

Once on the job, John managed to negotiate a common rules package between the Le Mans 24 Hour sports car rules and IMSA's series rules so that each groups cars could race in North America, the U.K. or Europe without major change. This pleased the manufacturers as well as the team owners because it is a cost effective solution. As our Chairman, Chip Halverson, states it; "This is like negotiating peace in the Mid-east." It is a huge accomplishment. As a sports car racing fan, IMSA provides great racing, a great weekend show with a family environment.

A side project assigned to Mr. Doonan by Bill France Jr. is the "Garage 56" project at Le Mans. This classification is a demonstration class not fighting for a class win, but to show off technology. That technology will be a NASCAR stock car, with some weight reduction, bellowing its big V8 engine around the 100th anniversary Le Mans 24 Hour. John's goal is to finish, and *not finish last!*

If there is any doubt about the effect John Doonan has on sports car racing, a look to this March's Sebring 12 Hour race held in conjunction with a 1000 mile World Endurance Cup race held the Friday before the 12 Hour. It is a grand time to be a sports car racing fan.

Hodges Car Show

By Tom Saracco

On Saturday, March 18th Hodges University hosted its second annual car show on the Ft. Myers campus. Proceeds from the show benefited the Dr. Peter Thomas Veterans Service Center newly renovated in the heart of the campus.

For the second year Revs Institute was the featured exhibitor. However for the first time Revs Institute was asked to provide judges for the other cars at the show.

Attending were Carmen Ermi, Phil Panos, Bob Rode, Joe Ryan and myself. Rick Kusy for Revs drove the 1960 Multipla which had a premier spot at the show. Both Bob Rode (1987 Porsche) and Carmen (2018 Abarth Fiat Spider) exhibited their personal cars as well. Phil and Joe were the expert judges for Hodges as they have performed those functions for many years.

The weather which initially threatened rain cooperated and it was a beautiful sunny day. Revs



Institute had an information table where we promoted the museum, the volunteer program and the upcoming Cars and Coffee event on Horseshoe Drive. There were about 100 cars showing which ranged from an early restored BMW Isetta to a crazy V8 powered motorcycle with a drag slick as the driving wheel. There were muscle cars, trucks, hot rods and even two VW powered trikes. Hodges had a DJ and food trucks and after the judging awarded first, second and third ribbons to each of three classes. There was also a People's Choice award where the attendees chose their favorite ride.

Tom Saracco Photos

Phil's Ride-Along

By Eric Jensen

Our Volunteer Banquet for 2023 Awarded Phil Panos the prestigious Joe Leikhim award for outstanding service. Phil's long service to the Volunteers and lifetime hours certainly have set records that will be hard to beat!

As part of this award was a nice long ride in a favorite Miles Collier Collections car. That car was the Cunningham C1, the first car ever produced by the Cunningham car company.

The C1 was driven by Pedro Vela. Phil came dressed for the day complete with leather helmet and goggles. Here are a few pictures to commemorate his ride.



*Maximillian Trullenque Photos
Courtesy of Revs Institute*

Spring Gimmick Rally

By Eric Jensen

Another fine gimmick rally was organized by John Fritz, Mike Lawther and Mark Koestner. The final stop and lunch was at the British Open Pub in Bonita Springs. This year's winners were Bob and Susan DiRenzo in 1st, Tom Dussault and Mary Pyatt in 2nd and Tom and Joyce Saracco with Katheryn Martin-DeRogatis in 3rd for the most creative answer.



*Maximillian Trullenque Photos
Courtesy of Revs Institute*

MythBusters Part III

By John Wharton

At the Revs Institute, we strive for the utmost accuracy in the information we share. MythBusters mission is to identify and eradicate outdated, misunderstood or just plain wrong information about the cars of the Miles Collier Collections. This month we continue installments from the class with Part Three.

The Elva-Porsche: Just not THAT Elva-Porsche

What Revs volunteer working the Porsche gallery hasn't pointed to the photo of Bill Wuesthoff and Augie Pabst happily celebrating their 1963 USRRC 500 win at Road America in the cramped cockpit of the Elva-Porsche? It's just that the car on display is not THE Elva-Porsche (*top right*) in which Bill and Augie won that race. In fact, as Bill has been quick to point out, Miles Collier's Elva-Porsche (*bottom right*) - the last one of 19 built - was campaigned by Joe Pendergast.

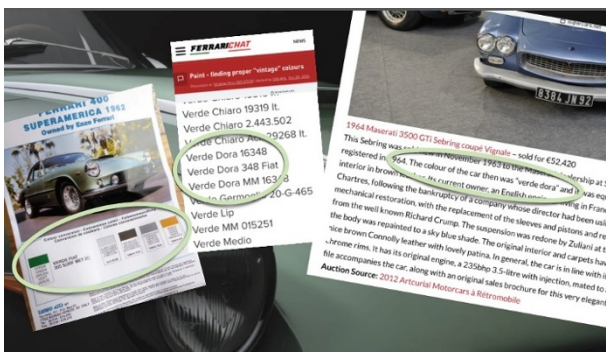


Peter Harholdt Photo

Ferrari 400 Superamerica: Unique car, but not-unique color

Few cars attract more adoration from our visitors than the 1962 Ferrari 400 Superamerica Aerodynamica Coupe. This was the top of the Ferrari line in the early 60s. Forty-six Superamericas were made between 1959 and 1964, and only 14 of them during that period had this short-wheelbase Aerodynamic Coupe configuration. Each Superamerica customer could personalize design aspects of their cars. Enzo went so far as to have the souped-up motor from his previous personal 250GTE dropped in this car (hence the later infamous serial number switch). So, we could assume that, as with other Superamerica owners, *Il Commentadore* also choose the design of the nose, instrument panel, trim, upholstery and, yes, color of the car.

Certainly this car's custom Pininfarina styling is even further enhanced by its paint, a color called Verde Dora or "gilded green". The paint is striking and special in



*Tameo Kits cover by John Wharton;
FerrariChat.com; Supercars.net*

appearance - multi-layered with titanium and copper power mixed in. But, it turns out that Verde Dora was *not* a color that Enzo cooked up for one use and then ordered destroyed. Rather, Verde Dora was one of dozens of colors that were available to Italian coachworks and car makers in the 60s, including Maserati and even Fiat.

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MythBusters...continued

(Continued from page 9)

The Revs Institute gift shop even has a kit that instructs on how to mix component colors to recreate Verde Dora. Apparently, Enzo didn't take the formula with him to the grave after all.

Ford Model T: "Any color ... so long as it's black"

And, speaking of color, it's time to deal with the misconceptions of monochromatic Model Ts.

As Mr. Collier's 1909 Model T Touring edition shows, the early hand-built cars could be had in a range colors. In fact, black wasn't even a color choice on a Model T until 1914. By then, the combination of increased demand, shortened build times and impacts from World War I may have influenced Henry Ford to utter the famous



policy of "any color [the customer] wants, so long as it is black". And so it was, from 1914 to 1925.

Most black Tin Lizzies were "flow painted" using a process called japanning, a baked enamel that only worked with black pigment. It made for a more durable and lustrous finish. And, while it's true that Japan Black lacquer dried faster than other paints

for metal, it's just as likely that the drive to churn out cars in just one color came from the quickening pace of the assembly line, coupled with Henry Ford's search for material efficiency and savings. In the final three years of Model T production, six new colors were made available after spray lacquers were invented by Edmund Flaherty for DuPont. Or, you could also choose black.

While we're talking about Henry Ford, let's touch on another myth, one of the big misconceptions about his contribution to auto-making. Ford is sometimes credited with inventing the assembly line. But it turns out he merely adopted it from the meat-packing industry, and a year *after* Ransom Olds.

F1 Arrows: No "grounding" in this myth

More than one reference has been made to the underpinnings of a modern F1 car to be found in the 1988 Arrows. True enough, but one recurring reference has to do with so-called "ground effects."

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MythBusters...continued

(Continued from page 10)

Specifically, *passive* ground effects, the cleverly managed use of the Venturi Effect through the ducting and sculpting of the underbodies of race cars. It was first fully realized in the highly successful Lotus Type 79 F1 car, and widely imitated after that.

But, passive ground effects became a victim of its own success. It so dramatically improved the handling of cars that speeds ramped up too quickly for safety to keep up. The practice was banned by the FIA following the 1982 season. So, while the '88 Arrows does have a rising diffuser towards the rear of its otherwise flat underbelly, it's decidedly not a "ground effects" car.

Grand Sport Corvette: Wash cold, air dry, no-shrink

OK, it's a Chevy, it was built in the 60s and it was radical. No, not Smokey Yunick's 1967 NASCAR Chevelle, the legend of which put it in the NASCAR Hall of Fame. But



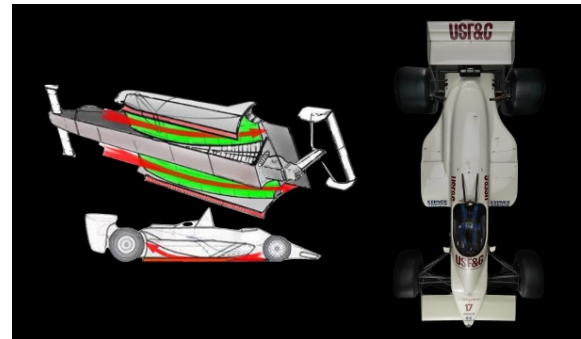
Ebay Photo

somehow Smokey's Chevelle seems to have inspired the rumor that another sly automotive genius, Zora Arkus-Duntov, came up with a racing '63 Corvette coupe that was over a thousand pounds lighter than the street version - by making it 7/8th scale.

The basic dimensions of the Grand Sport Corvette at Revs Institute are that of the street version. CH Motorcars' Mike Grebing has noted the car is indeed full-size, as the windshield was replaced here at one time and a stock piece of glass used. Duntov found other ways to shave off the weight - lightweight aluminum

frame and chassis, aluminum block and even Lexan panels in place of the windows (and even omitting the split back window).

As for Smokey's '67 Chevelle being 7/8s scale, in his autobiography *The Best Damn Garage In Town*, even Yunick dispelled the legend, citing the actual (albeit borderline) frame and body modifications he did do to the full-sized car.



F1-dictionary.net , Peter Harholdt Photo

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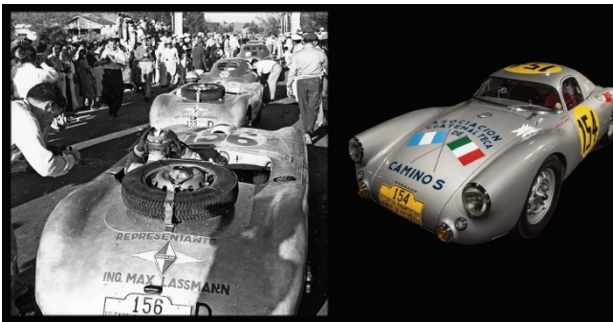
MythBusters...continued

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As a final nail in this scaled-down coffin, one automotive writer noted that a 7/8 scale Chevelle would better resemble a Vega in size in dimensional comparison.

Porsche 550: The first - of many

One of the real gems of the Miles Collier Collections is serial number 001 of the seminal 550 series of Porsche racing cars. Our visitors are duly impressed when we



Revs Institute Photo, Peter Harholdt Photo

tell them that the Porsche Museum had to settle for 004, one behind Jerry Seinfeld's example. But, the rest of the four-year run of 550s is negated by stopping the narrative at 004. And saying "Only four 550s were made..." is most definitely not accurate. That first year, 1953, *five* prototypes were made, the first two being pushrod-powered and the following ones with Fuhrmann four-cams. Subsequent cars, with ladder

frames and nearly all open-cockpit, included suspension enhancements suggested by engineer and then-Porsche driver Zora Duntov. A total of 89 550s were made through 1956 and 30 remain. Up until 2016, Seinfeld, had *two* of the 30 left. He still has 003, but sold a restored 1955 RS, for \$5.3M.

A Le Mans STOP: The not-so-left-hand keys

We've all heard it, and some of us have even said it - Porsche ignition keys are on the left because it harkens back to earlier Le Mans starts, and the obsessive nature of Porsche engineers over details to eke out speed and efficiency. It's a great story, and Porsche seems to use the legend to this day to sell cars, if you check out the key location on the cars in the Porsche showroom down on Davis. But, is it true?

Let's turn to Stuttgart and see what Porsche says. The 2017 Porsche Cup website noted that "the placement of the ignition switch to the left of the steering wheel enabled race drivers to start their engine even while they were still climbing into their car during the start ... at Le Mans. And, when something works well, we keep it that way."



John Wharton Photo

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MythBusters...continued

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But, the head of tours at the Porsche Museum countered this, saying that “putting the ignition on the left side of the steering wheel [on the first 911 prototype] saved a few centimeters of copper wire, which was an expensive commodity in Germany then.”

What about the notion of saving time in a Le Mans start? If the car’s already in first gear, the right hand won’t be need for shifting into gear ... you just push in the clutch, turn the switch (with either hand), and let out the clutch. And, as most people are right-handed, it would take longer fumbling around with turning a key with their left hand.



John Wharton Photo

As for the “if something works, we keep it that way” comment, take a look at the cars in our Porsche gallery and see where the ignition is. A total of nine cars have the ignition on the left, and nine on the right. So much for this “left-handed comment”.

The keys to this myth are the holes.

While we’re on the subject of Porsche ignitions, let’s talk about the drilled keys on the race cars. Yes, Porsche race engineers were obsessive. But, no, they weren’t so over the top about saving weight that they’d go to the extreme of drilling a few grams out of a key. Our volunteer Porsche savant Ralph Stoesser has noted that in a sports racer the ignition key is pinned into place and is not removable. It’s basically part of a hot-wired setup, where the starter motor relay, fuse block and fuses, and related wiring are omitted for some true weight savings. With the switch “HOT” at all times, the ignition load flows through the switch and fixed key, and gets hot to the touch very quickly. So the holes in the key were basically a heat sink. Ralph notes that many of the collection racing Porsches are now retrofitted with relays for safety when being exercised.

F1 Cooper T43: First, but not *first*

Let’s cover more ground-breaking technology, and the first rear-engine win in the highest level of European racing. This is a case of semantics.



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MythBusters...continued

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If you refer to it as “GRAND PRIX” racing, the Cooper T43 was NOT the first car to win with a mid-engine layout. The Ferdinand Porsche-designed Auto Union P-Wagen Type C, with a V-16 engine crammed behind the driver, achieved that in the mid-30s.



But, if referring to *FORMULA ONE* racing, which restarted top-level open wheel racing in Europe in 1950, the Cooper T43's victory at the 1958 Argentine Grand Prix was indeed the first mid-engine win - in the modern era.

This same degree of distinction is needed when talking about Dan Gurney's 1967 win at Spa in the Eagle Westlake. He was the first American in an American-built car to win in *Formula One*. But Jimmy Murphy won the *French Grand Prix* in a Duesenberg way back in 1921.

Student Volunteer Accepted to Grad School

Congratulations to our Library Volunteer Ben Gott who has recently been accepted into the graduate program at University of South Florida. Here's what Ben has to say about volunteering at Revs Institute:

My name is Benjamin Gott. I'm an FGCU history student and former volunteer at the Revs Institute Library and Archives. Not only has my year at Revs Institute given me the opportunity to meet people in the field I hope to work in, but also the experience and feel of working in such an important field. I've been accepted into the graduate program at University of South Florida, where I plan to obtain a Masters in Library Information Science. The people I've worked with were integral in guiding me towards that decision. The supportive and understanding community built while volunteering made it a joy to be a volunteer in the Library. I tell everyone proudly that I was part of the REVS community, and how much I enjoyed and appreciated volunteering at Revs Institute. Thank you to everyone in the Library and Archives for everything, and further, everyone at Revs Institute for giving me an opportunity to explore the behind the scenes of a distinguished museum and learn about the field.



Revs Institute Photo

OSCA - The Other Maserati

By Morris Cooper

Briggs Cunningham's Favorite Race Car

This is a story of the Maserati brothers. It is not, however, the story of the car company bearing their name.

The Maserati brothers, Alfieri, Bindo, Carlo, Ettore, and Ernesto, were involved with automobiles from the early days of the 20th century. Three of the brothers built 2-litre Grand Prix cars for an Italian coachbuilder, Diatto. When Diatto stopped building race cars in 1926 the Maserati brothers formed their own marque, with the sign of the Trident. One of the first Maseratis, driven by Alfieri, won the 1926 Targa Florio.



1954 OSCA

*Photo Courtesy of Revs Institute
Peter Harholdt Photo*

Alfieri Maserati died in a motor racing accident in 1932, but three of his other brothers, Bindo, Ernesto, and Ettore kept the firm going until 1937 when they were financially pressured to sell it to Adolfo Orsi, a scrap metal and steel mill manufacturer. Orsi moved the company from Bologna to be next to his mill and hometown in Modena, where Maserati remains to this day, as part of Stellantis.

As part of the deal, the three Maserati brothers signed a 10-year employment contract and remained with the company. When that contract ended in 1947, the Maserati brothers returned to Bologna to start their new company.

They called it O.S.C.A. -- Officine Specializzate Costruzione Automobili—Fratelli Maserati S.p.A. OSCA is considered the real post-war Maserati product. Their approach to custom-made, expensive, and limited production cars were very similar to pre-war Bugatti.

Incredibly, OSCA only made about 12 cars per year, for a total production of 200 by 1965 when they shut their doors.

In 1963 the brothers sold OSCA to Count Domenico Agusta, owner of the motorcycle manufacturer MV Agusta. They did design work for Agusta until 1966 and OSCA ended its operations in 1967.

OSCA's business model focused on producing an extremely limited number of fantastically competitive cars. However, their deliberate decision not to build road versions of their cars meant that OSCA was always short of money.

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OSCA...continued

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Ernesto Maserati did all the design, engineering, and development work at OSCA during its two decades of operation. By the mid-1950s OSCA began facing fierce competition from Porsche, Maserati, and Ferrari. By the time the 1960s came around, the three aging Maserati brothers were struggling to continue racing car development.

The OSCA on display at Revs Institute represents a high point of the company's history. The 1954 Sebring 12-Hour race had Bill Lloyd and a young Stirling Moss driving the Cunningham-owned 1,452 cc O.S.C.A. The competition was Lancia, Ferrari, Aston Martin Austin Healey, Maserati, and the Cunningham team's C4R. These cars failed with various mechanical conditions as well as poor race strategy in pushing too hard for an endurance race. The Lancia D24 cars in particular had some of the world's best drivers competing.

It was a classic "slow and steady" endurance race approach that had the OSCA outlasting its much larger and more powerful competition. As the hours passed, the Briggs Cunningham OSCA stayed close to the front. Four other OSCA cars in that race also did very well, taking four of the first eight places and only one OSCA retiring. The Lloyd and Moss OSCA finished five laps ahead of the next car, and first overall. The other OSCA cars' successful finish resulted in OSCA winning the Index of Performance.



*1954 OSCA Engine
Photo Courtesy of Revs Institute
Peter Harholdt Photo*

In an interview with Sterling Moss on the Revs Institute YouTube channel, Moss says that the weather and course conditions during the 1954 Sebring race were poor, with heavy rain. Moss claimed that the rain did not bother him in his much lighter car and that the OSCA was a pleasure to drive, in complete balance. He must have liked OSCA cars because he owned one for many years.

With its success continuing in 1954, demand for the MT4 car kept growing, despite its high cost. The 1500cc MT4 cost around \$7,500 at the time, almost the same as the much bigger ready-to-race Ferrari. It was even 10% more than its competitor, the Porsche 550 Spyder. OSCA's lengthy delivery delays sent many impatient racers to Porsche.

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OSCA...continued

(Continued from page 16)

At the 1954 Mille Miglia a Porsche 550 Spyder equipped with the four-cam 1500cc engine narrowly beat OSCA in the under 1500cc category. That competition between the 550 and the MT4 lasted through 1957.

The 1453-cc engine had been tuned by Alfred Momo, Cunningham's racing manager and engine genius. Momo's role in the Cunningham team was like Phil Remington was to Carroll Shelby and Dan Gurney's teams decades later. It was Momo

who constructed the distinctive scoop behind the front wheels, using stainless steel instead of aluminum for better chassis stiffness.

Read more about Alfred Momo in the February 2020 edition of the Tappet Clatter

The MT4 sits in its 1954 configuration, with a metal tonneau covering the right side of the cockpit. Its tires now appear very small, 5.00-15 at the front, 5.50-15 in the back, both mounted on 3.5-inch-wide rims. The car's ground clearance seems high, and that was due to the rough 1950s unpaved courses such as Targa Florio. Its single racing screen is replaced with a full-width version for more recent two-person events such as its participation in the Colorado Grand.

Next time you look at the car, notice the beautiful oval front grille. It is not a casting but is instead hand-built with tiny tubes and a sheet metal rim. The hood has plenty of louvers, but not enough to control the engine's heat, and the car has no fresh air leading into the cockpit.

Motor Trend magazine has Briggs Cunningham quoted as saying that this OSCA was his absolute favorite of all the race cars he had ever driven.



*Briggs Cunningham (left) and Alfred Momo (right)
Photo Courtesy of Revs Institute
William Hewitt Photograph Collection*



Photo Courtesy of Revs Institute

The FIA - And Why France?

By Bill Vincent

With motorsports now in full swing, there are numerous sanctioning bodies hard at work supporting and promoting their individual race series - while we enjoy the fruits of their labor! (*For me, often from my couch!*) And, as dangerous as it might be, while looking over so many of the beautiful competition cars in the Revs Institute galleries, it got me thinking...

Most of the top level series can trace their structure and rules back to:

8 Place de la Concorde, Paris, France - home of the FIA.



The FIA, or the Fédération Internationale de l'Automobile, or as we know it here in the states: International Automobile Federation, is THE controlling body overseeing motorsports all over the world.

As mentioned, its headquarters are in Paris (*right*), with offices also in Geneva and Valleiry. It governs over Formula 1, the World Endurance Championship, and the World Rally Championship among others. It is even the keeper of the land speed record regulations!

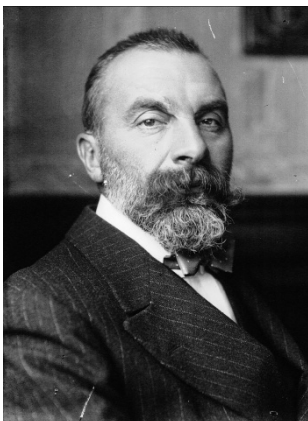


Even series it doesn't directly oversee or sanction their races, are modeled after the guidelines the FIA has laid down, including licensing and safety rules, etc.

But how did the FIA come to be? And why France? Why not jolly old England, Italy, Germany, or that young upstart - the U.S.? All of which could probably put up a decent argument, with their own automotive histories!

The FIA was born out the Association Internationale des Automobile Clubs Reconnus (AIACR), or The International Association of Recognized Automobile Clubs.

It was founded in Paris on June 20th, 1904. It was kind of a gathering of national motor clubs and was designed to represent the interests of motorists at the time, as well as to oversee international motor sport - which was gaining popularity.



In 1922 the AIACR created the Commission Sportive Internationale, or CSI, and was initially headed by Chevalier Rene de Knyff (*left*), until 1946. It would set the regulations for international Grand Prix motor racing and the European Drivers' Championship which was introduced in 1931.

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The FIA ... continued

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After World War II, the AIACR was renamed the Fédération Internationale de l'Automobile (FIA). The FIA and its CSI established a number of new racing categories, among them Formula 1 and Formula 2. It also created the first Formula One World Drivers' Championship, in 1950.

Then in 1978, the CSI was renamed the Federation Internationale du Sport Automobile, or FISA, and was then headed by Jean-Marie Balestre *(right)*.

But again... Why them? And why France?

So with the progression kind of laid out, here's my twisted view from that couch as to the why... *(For what it's worth!)* Well, France *was* one of the first countries to hold a formal motor race of any kind.

That first race was the Paris to Rouen Horseless Carriages Contest, which was held on July 22nd, 1894. It beat the first auto race in the U.S., which took place in Chicago on November 28th, 1895. That Chicago race covered a 54.36 mile course with a field of four petrol powered cars and two electric cars. *(Electric!?!- Are we coming full circle?)*



The oldest Grand Prix, The French Grand Prix, was also first run on June 26th, 1906. So, France had all that going for it.

While the U.S. came to dominate the automotive industry in the first half of the twentieth century. It can be argued that the automobile was first invented in Germany in 1886 and perfected in France in the late 1800s.

And France dominated the number of automobile manufacturers at the time.

Some of the most notable of the world's most famous carmakers are:

Daimler (Germany - founded in 1890, first car in 1886)

Peugeot (France - founded in 1810, first car in 1890)

Panhard et Levassor (France - founded 1887, first car in 1891)

Delahaye (France - founded 1894, first car in 1895)

Renault (France - 1898)

Fiat (Italy - 1899)

Ford (U.S. - first company in 1899, second in 1901 and Ford Motor Co. in 1903)

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The FIA ... continued

(Continued from page 19)

This does not include the large number of small “one off” builders of the time.

Now, it's oft said that with many clubs and organizations, 10% of the members do all the work - while the other 90% complain about it!

While in the beginning, France seemed to constitute more than that 10%, they also appeared to be the ones who first stepped forward and made the effort to try and organize things regarding motorsport. It seems that ever since, with the French being kind enough to put in all that effort - the rest of us 90%-ers were more than happy to follow their lead! Now, many of the cars at the Revs Institute give us the chance to see the fantastic results of competitors building machines to the rules and regulations they set forth!

Merci beaucoup La France

The Checkered Flag *Remembering Our Volunteers*



Long time volunteer, George Meyer, passed away at 97 years old in Clayton, Missouri. George went to his reward on March 25th. His sparkling parade is over. He is survived by his wife Gail (nee Quante), five children, five grandchildren, and two great grand children. He did not go gentle into that good night.

George wintered in Naples, Florida which brought him to the Revs Institute. He was a founding member of the Volunteers starting in November, 1988. He was

granted Emeritus status in December of 2020 after 3045 lifetime volunteer hours.

George still followed the Revs Institute and the Volunteer activities by reading the Tappet Clatter from his home in Missouri.



*Left to right, George , Rod Alexander and Joe Leikhim swapping stories
Photos Courtesy of Revs Institute*

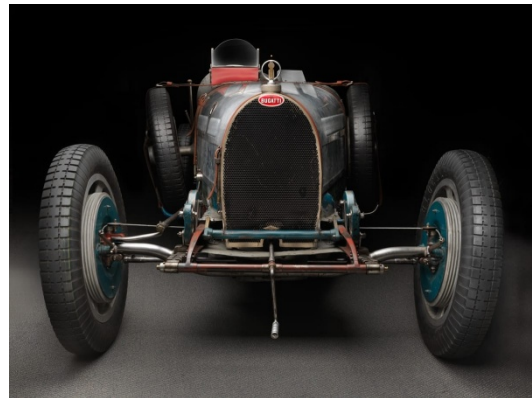
TAPPET TECH

The Bugatti Positive Camber

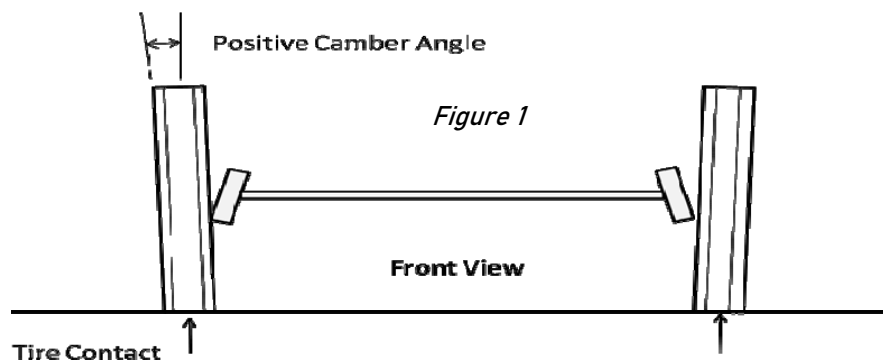
By Eric Jensen

A very common question I hear while in the Vitesse or the Revs Gallery is; "Why do the Bugattis' front tires have so much positive camber?" While Bugattis are not the only cars with positive front camber, they are the most noticeable and frequently commented upon by guests. The simple answer is that it makes them handle better.

The "why" is a little more complicated. To help clear that up we shall start by explaining what camber actually is and does. As always, a picture is worth a thousand words so, behold, a picture. (Figure 1).



*Photo Courtesy of Revs Institute
Peter Harholdt Photo*



As viewed from the front of the car, we can see that the tires are not vertical but lean a bit. That lean angle from vertical is camber. The direction shown is positive camber. If the tires lean in at the top, that would be negative

camber. The angle is generally 0.5 to 3.5 degrees, positive or negative.

So why would it be desirable to have camber at all? Positive camber in solid axle cars helps reduce steering effort and improve stability because it points the tire to the place where the axle's steering kingpin points to on the ground. This reduces how much the tire must scrub the ground to turn and reduces the effect of bumps kicking back into the steering wheel. It also helps stabilize the front of the car on roads that are rounded high in the center, also called, confusingly, "cambered" or "crowned."

There is another reason for camber; cornering. For better cornering traction, the camber angle should be a bit negative. Leaning the outside tire into a turn helps keep the tire in better contact with the road making the car faster in the corner. Leaning it away from the corner will reduce the cornering traction.

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TAPPET TECH

The Bugatti Positive Camber

...continued

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Now that you understand what camber can do for the handling of a car, why would the Bugatti have positive camber to reduce cornering traction? We know that the Type 35 was one of the most successful racing cars of its era with over 2000 race wins, including 5 consecutive Targa Florio victories in the 1920's so Bugatti must have figured out a better way.

After much searching, the author failed to find any information about the weight distribution of the Type 35 cars. Is the car heavier at the front? OR heavier at the rear and by how much? It is at this point, the engineering experience of the writer and math comes into use. I'll spare you the tedious calculations but if we look at a side view of the car (figure 2) we can see all the heavy parts of the car are behind the front axle.

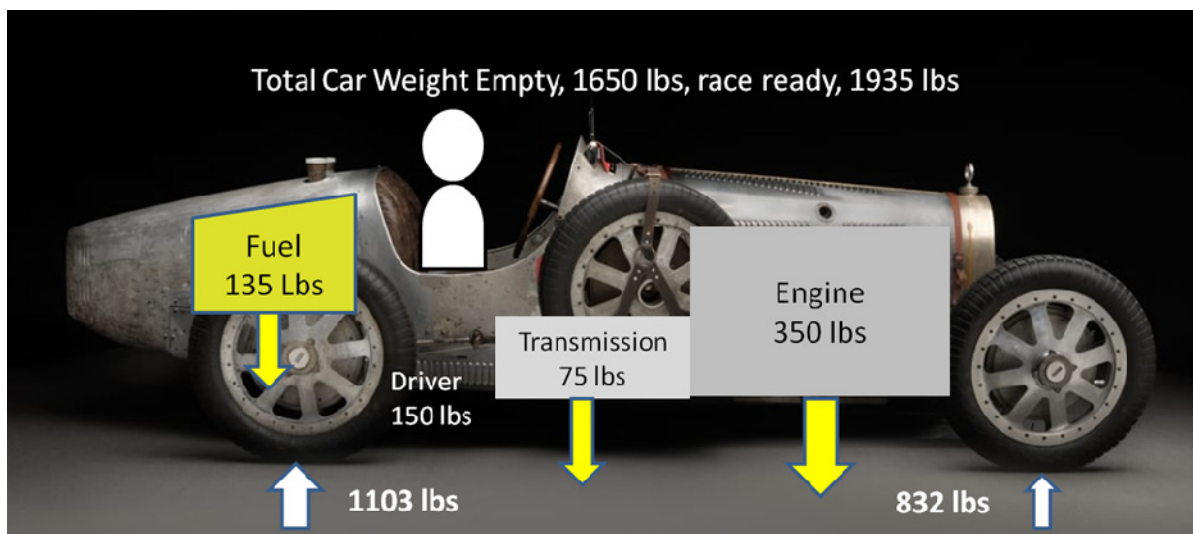


Figure 2
Estimated weights of the various heavy parts and their location within the body.
Figures by Eric Jensen

The heaviest piece is the engine, about midway is the transmission, then the driver, then the fuel tank. All these combined are estimated to comprise about 43% of the car's 1935 lbs with driver and fuel. I am assuming the rest of the car's weight is spread equally from nose to tail. A small portion of that is hung behind the rear axle. An application of math shows that the Type 35 carries about 57% (11103 lbs) of its weight on the rear axle. The front only carries 43% or 832 lbs.

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TAPPET TECH

The Bugatti Positive Camber ...continued

(Continued from page 22)

So the rear tires must carry more of the cornering traction because they are carrying more weight than the fronts. So much so that the rear tires will give up traction before the front tires since the front and rear tires are of equal size.

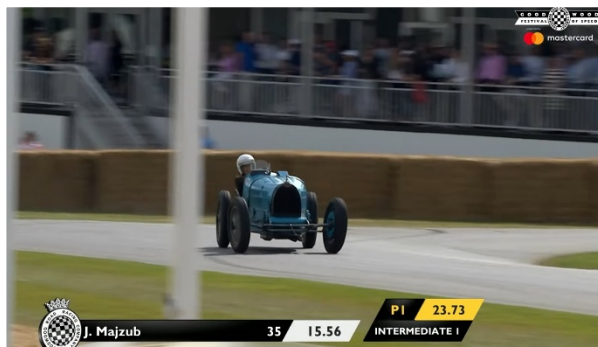
That means the rear of the car will slide wide in a corner before the front tires. That is a condition we call oversteer. If the front tires slide first, that is understeer. A race driver wants good balance in a car for the best handling. Too much under or oversteer will result in a car that is difficult car to drive quickly consistently.

Automotive author Robert Cumberford wrote in Automobile magazine on September 5, 2008;

"...in an epoch of wildly oversteering cars, it was magnificently neutral, thanks to Ettore's intuition that extreme camber promoted understeer"

To better balance the car, we steal a little of the front tires' traction by adding positive camber so that both ends of the car slide at about the same speed in the corner. That creates the condition once known as "four wheel drift" from a well balanced car. Bugattis were legendary for their handling. A car cannot win the Targa Florio 5 times without nimble and balanced handling!

A great visual of this is the YouTube video linked below. Click on the picture to view. A



Type 35B runs the Goodwood Festival of Speed hillclimb event at speed. This is clearly no parade lap! 30 seconds into the clip, you can see the rear of the car sliding wide through the corner. That is oversteer. Notice how easily the driver controls this 90 year old racing car while the tail is hung out behind him. The video clearly shows how Bugatti achieved such racing success!



*Photo Courtesy of Revs Institute
Peter Harholdt Photo*

TAPPET RIVIA

By Joe Ryan

And Now The Answers.....

- Q:** When was the 1st gas turbine powered car built?
Answer: It is believed that the first gas turbine car was the *1950 Jet 1 Rover*. After being shown in the U.S. and the U.K., The Jet 1 was further developed and subject to speed trials. The car was tested for top speed on the Jabbeke highway in Belgium In June 1952. The maximum speed was recorded at 150 MPH.
- Q:** When was the first working gas turbine engine made?
Answer: Jens William Aegidus Elling, a Norwegian inventor built the first working gas turbine in 1903. A patent was granted to John Barber, an Englishman, for the first true gas turbine in 1791, but nothing practical came out of the patent. His invention had most of the elements present in the modern day gas turbines. The turbine was designed to power a horseless carriage.
- Q:** Did The Ford Motor Company build a gas turbine automobile?
Answer: Yes, Ford built a prototype 1955 Ford Thunderbird. The gas turbine engine installed was the Boeing Model 8C making 175 Horse Power. Twenty-five less horsepower than the stock 292 CID V8 making 200 HP. Ford spent almost two hundred thousand dollars to build just one car. That amount is equal to about \$2 Million today!
- Q:** Did the Chrysler Motor Company build a gas turbine powered car?
Answer: Yes, Most automobile enthusiasts know of the Chrysler-built gas turbine cars.
- Q:** How many gas turbine cars did Chrysler build?
Answer: The company built 55 in the early 1960s. A total of 50 of these were offered to the public for a trial program that ended in 1966. The motor used was a Chrysler design model A-831 gas turbine. Many of the cars were destroyed. Three were kept by Chrysler. They still own two of six of the Chrysler gas turbine cars that are on display at different museums around the United States including one at the Walter P. Chrysler Museum. Jay Leno owns one of the gas turbine cars.

Contributions to the column are always welcome.

Adopt-A-Car Program

Available Adopt-A-Car Automobiles and Engines

Alfa Romeo Guilietta	Simplex	C-6R Offenhauser engine
Alfa Romeo AutoDelta	Stutz Black Hawk	Cadillac OHV V-8 engine
Ardent Alligator	Vauxhall 30-98 Type OE	Chrysler Hemi (C-3) engine
Bugatti Type 55 Super	Waymo Firefly	Duesy Sprint Car engine
Cisitalia SC	Abarth 1000-TC-R engine	Ford GT-40 Transaxle engine
Cunningham C-3	Alfa Romeo GTZ engine	Ford Turbocharged Indy
Fiat Abarth TCR		Gurney Eagle GP engine
Jorgensen Eagle		Jaguar XK120 Series engine
Maserati Tipo 60		Meyer-Drake Turbo Prototype
Mercer Raceabout		Porsche Type 901/20 engine
Miller board track racer		Porsche Type 901/22 engine
OSCA Sports Racer		Porsche Type 908 engine
Porsche Elva		Porsche Type 916 engine
Porsche RS-61L Spyder		Columbia Three-Track
Scarab Sports-Racer		Humber 58" Ordinary Bicycle
		Velocipede Bicycle

To adopt a car or engine, contact: Brian Lanoway, Adopt-A-Car Chair
at blanoway@shaw.ca

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