

**A Visit with Jacques Le Friant  
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# Porsche 356 Registry



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## Porsche 356 Registry



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# A Visit With Jacques LeFriant

It's not  
Rocket  
Science  
...or is it?



## Photos and story by Sean Cridland

There's a Mitchell and Webb comedy routine, whose punch line is "well... it's not exactly rocket science..." For most of us the line is funny but remote since most of us are not rocket scientists. When I dropped in on San Diego's Jacques LeFriant in early February I discovered his early career was precisely that. Maybe that's why he finds working on Carrera 4-Cam engines fairly straightforward; it's not exactly rocket science.

Born in New Orleans, LeFriant found mathematics and physics courses to his liking early on. He attended Catholic primary school, Jesuit high school, then did two years at Loyola University before swapping majors and moving over to the University of Louisiana at New Orleans. While still a student he started work for Boeing at the Michaud Assembly Facility. His job was to do reliability studies on the S-1C rocket booster. In plainer terms, the S-1C was the first stage of the Saturn V rocket that lifted the NASA Apollo program from earth to about sixty miles in the sky before continuing on to the moon. The S-1C remains the most powerful rocket booster in history, providing 7,500,000 foot-pounds of thrust in just one hundred fifty seconds. As explosive as it was, from Apollo 4 through Apollo 17 and then the Skylab project, the S-1C launched thirteen times and never suffered a failure nor a loss of payload or personnel. It remains one of NASA's greatest successes, even fifty years later. One would suppose that if you can understand the loads and stresses on a machine of that power and complexity, a Carrera 4-cam would be relatively simple.

During the Vietnam war, LeFriant volunteered for duty in the Navy's nuclear power program, entering as an officer candidate because of his schooling and experience with the NASA program. He served on some diesel boats (submarines) and came to San Diego to work on a nuclear submarine based there. Later, he spent some time at the Navy's New London, Connecticut Submarine base, but neither he nor his cars liked the cold weather. After moving back to San Diego to do graduate work at UCSD (University of California at San Diego), he worked as a civilian for the Navy doing signal processing then on a torpedo program doing submarine simulation.

His interest in Porsches developed when he was still working for Boeing. He had a friend with a 1958 356A coupe. LeFriant liked it and bought a T5 356B coupe. He drove that car till it came to a swift end in Houston when complications ensued from a broken clutch cable. Like many of us who have learned to drive around the problem, rather than replace the cable, he just drove the car, double-clutching as needed. At three in the morning, rather than stop at a red light (which would require shutting off the engine and then restarting in gear) he decided to run the light...and got hit, totaling the car.

After getting married, he bought another Porsche, which he drove during his time in the Navy.

His experience with driving them inevitably led to



working on them and becoming further interested in their inner workings as well as the then-growing Porsche culture of Southern California. Not long after, the shop he owns now came available, just outside the Navy Base at San Diego. Scott's Porsche Parts, as the sign says, was started for Jerry Scott by the Aase brothers (Dennis and Dave). LeFriant bought it and – at least initially – hired some people to run it. Eventually, he quit his job and ran it full time throughout the 1980s and '90s and into the current era. Though LeFriant talks as if he's winding things down, you wouldn't know it from the amount of activity he still maintains.

My interview with LeFriant was much more a journey than an exposition, more an odyssey or a labyrinthian tour, with commentary running from the technical aspects of 4-cam motors to California Porsche history. His facility is located in the National City sector of San Diego and encompasses several buildings, including his engine shop, a machine shop, at one point a body shop, salvage parts business, and his burgeoning business in after-market parts of his own development.

As we wound through the various shelves and stacks, LeFriant described with great detail all the various machines, tools, cars, engines and parts. Keeping up meant adopting a steep learning curve and gave me a feeling I think Alice must have felt when she fell down the rabbit's hole to Wonderland. Rooms of parts led into small passageways, opening up into larger shops, and then back into dark caverns, but all with interesting treasures of parts and pieces of 4-cam engines, early 911 stuff, parts of his own design, libraries of books and technical manuals and pieces of American Porsche history.

With he and his son now the primary staff, LeFriant now focuses his time almost exclusively on 4-cam engines. As we look through his engine shop, there are several in various stages of rebuild, from clients both the United States and abroad. One was a 904 engine from a car currently living in Japan. Throughout the shop are various tools for measuring the close tolerances required for the proper tun-



Far left: a "positive" of a 4-cam valve cover is used to make a mold for casting new ones (see lower left photo). Cylinders await their new home on a freshly-rebuilt 4-cam.



A 2-liter engine from a 904 is on LeFriant's test stand. His dyno is somewhat rustic, but provides solid results.

Below, left to right: A freshly molded cam-cover. A "normal" plain-bearing crank version of a 4-cam. Pistons and cylinders await reassembly.







Jacques LeFriant, in his element. Below: Several Carreras await restoration. Below right: Heads for a variety of 356s and early 911s occupy a portion of the shop.



LeFriant works with wide variety of measuring tools, some as vintage as the engines he works on.

ing of the engine's complicated shafts, bevels, and gears. In addition, LeFriant has over the years developed several solutions for common Porsche maladies, ranging from his own version of an Al Cadrobbi Conversion for early Porsche differentials; to various gear-sets, cranks, rods, pistons, manifolds and more. His experiences with Boeing, NASA, and the Navy have provided him with substantial skills in engineering and a strong understanding of metallurgy so that he's able to figure out workable solutions for common Porsche problems. But he's modest enough to admit that much of his reputation is based upon the associations he's made in the Southern California Porsche world and in several of the machine shops and specialty parts manufacturers. Working with area machine specialty suppliers, he has created his own two-piece counter shaft, an oil pump of his own design; also bearings, gaskets, flywheels, valves, cranks, valve covers, manifolds, and a variety of other bits.

After our tour and an excellent lunch at nearby El Pa-



pagallo, we headed out to make several visits to some of LeFriant's suppliers. He says, "you're established by who your friends and associates are..."

First on our stop was Motor Works Inc, where we visited Sergio Bartolini. Aside from engine machining of almost any scope or complexity of problem, Bartolini works on vintage engines of arcane and esoteric design that most people have not even heard of, let alone have the skills to repair.

From there, we travelled to see Bob Molinari at CNC Manufacturing and MRP Clutch, which specializes in clutches for high horsepower dragsters and tractor pulls, but who also does fabrication work on some of LeFriant's after-market transmission parts.

As if that weren't enough, we then headed over to Pauter Machine, where I was treated with a private tour of their facility by Don Pauter. Surprisingly small and jam packed with machines, Pauter's shop is manned almost entirely by family members who turn out some of the highest quality aftermarket connecting rods for Porsche and VW powered cars. Of course to talk about a quality set of rods is easy, but when you see the many steps it takes from billet block to finished product, you begin to understand just how labor intensive the process is, even with modern, computer-programmable machining tools.

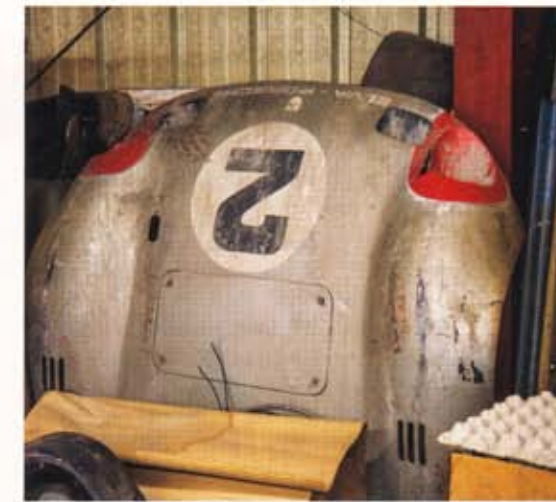
Finally, we landed at Crowder Cams and Equipment, who produce some of LeFriant's rods, camshafts and valves. Of the shops we visited that day, Crowder is the largest and most well known because they manufacture performance parts for several automobile marques. As we spoke with Don Cave, LeFriant's contact at Crowder, it was also apparent that they were more than interested, capable, and personable enough to work with smaller clients too.

In the space of a day with LeFriant, I'd been on an almost unbelievable tour of Porsche Carrera engines, heard an almost overwhelming number of great stories about some of the legendary SoCal Porsche mechanics and engineers and toured some remarkably proficient fabricators, machine shops, and manufacturers. The food at El Papagallo's was excellent too.

If you'd like to see a little of what I did, check out the video "Jacques' Place" at:

<http://p101tv.com/videos/138/jacques-place>.

You don't have to be a rocket scientist to enjoy it.



Above, left to right: A LeFriant developed piston. A transmission side plate, a portion of LeFriant's proprietary Cadrobbi conversion kit. An original Elva body ready for restoration.

## Shop Hopping With Jacques

Left: Sergio Bartolini of Motorworks



Pauter rods are made from billet block at the family-run Pauter shop in San Diego.





At Callas Rennsport, Tony (center), Grant Kaepplinger (left) and Tom Prine hosted hundreds on Friday - of all ages (right).  
Below right: Steve Hogue's English wheel was just one of many fascinating metalworking tools.

# Thu - Fri



The first Thursday and Friday in March saw Porsche fans from around the world begin to

gather in Los Angeles. They hit the ground running, off to the many shops which were holding open houses. Friday had the biggest selection and enthusiasts had to plan their lunch times according to who was serving what. Wraps and sandwiches were big but the line at John Willhoit's for bratwurst was one of the longest, indicating that even in their food, this crowd prefers German. Few of those who made the trek between shops went away hungry or thirsty.

That's not to say the open houses have turned into a gastronomic tour, it's just that the proprietors have come to recognize and appreciate the exposure. And we fans appreciate the hospitality!

There are always fascinating cars and projects on view. Tony Callas had an early 911ST and a 959 engine on display (along with, as usual, several 959s). Steve Hogue's RSK-in-progress drew a crowd, and at Willhoit's there seemed to be one or more of everything, including Carreras and Carrera 2s. A special attraction there was the dyno test rig, where pre-registered cars had their rear-wheel output professionally measured.

If you planned well, you could cover Sierra Madre, GT Werk, Klasse 356, CPR Restoration, Auto Kennel, LA Dismantlers, Truspeed and the Justice Museum. Make your plans now for an extra day or two next March!



Mattby photos (2)

# Sat a.m.



Ringleaders Wayne Callaway (top) and Prescott Kelly had reason to smile, as their 32nd Lit Meet was a resounding success. The offerings were as broad as ever, including used items like these radios, plus restored and reproduction pieces in almost every category.



Greeting fans this year were a Convertible D and early 911 from Road Scholars in North Carolina outside the LAX Hilton front doors, a nice touch appreciated by those attending, from all around the US and at least ten other countries.

"I can't believe how many people said thank you for putting this on," Jim noted, adding, "They must be happy, as they keep coming back every year."



Corey Johnson's 4-cam engine parts offerings (above) expand every year, and Stoddard had most of what a 356 owner needs. Frank Barrett of Colorado (far left) is a regular, upholding the original concept of "literature" in Lit Meet. He, Tony Singer and Jim Perrin all had a great selection of original posters.

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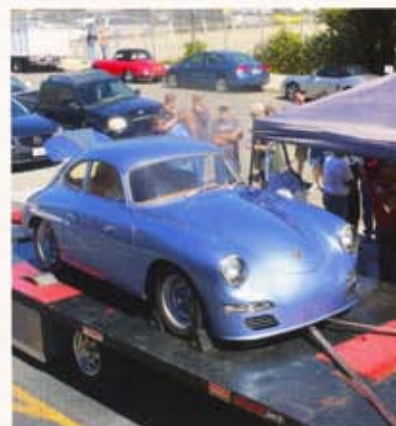
Bruce Sweetman



Roy Lock

Hundreds of brats were served at Willhoit's, and if you dropped one in the shop (left), no problem. The floors are that clean.

Above right: Dyno testing went on for several hours across the street.







George addresses a small group of 356 Registry members at the LAX Hilton members' meeting in March.

As the Lit Meet begins to wind down just after noon, Registry members gathered for a meeting just a few steps away on the Hilton's second floor. Now in its third year, this is an opportunity for members to hear about club news from the trustees, and ask questions. Treasurer Fred Neilsen, as usual, was on hand to make a report and distribute copies of financial records to any interested member. This year there was only a handful in attendance, indicating (we hope) that the rank-and-file are satisfied with the board's performance. A trustee and officers meeting was held the following Monday in Newport Beach.

Lonnie Lovness



Henk Barr's Carpark USA is just a few blocks from European Collectibles and was a stop for many 911 fans on their Costa Mesa pilgrimage.



Holly and Grace, daughters of owners Nick and Ruth Clemence, helped host the hundreds of guests who visited on Saturday evening. That's Holly on the left. Or, wait a minute...

European Collectibles is sort of the "end of the trail" on this open house tour, and as such, a worthy destination. The selection of cars for sale seemed larger than ever, and although most of the guests didn't come to buy, the cars provided an almost endless source for discussion of colors, equipment, originality and other details. Two food trucks, one offering Mexican build-your-own tacos and the other with burgers and every garnish known to man, made sure no one went home hungry.



The several bays of restoration work at European Collectibles held a number of interesting cars in all stages of completion, including Carreras and pushrod 356s.

Left: Jim Liberty's shop is across the street and in addition to 356s under construction, his VW shop truck with a Speedster interior was a big hit.

Continued

Bruce Sweetman

Lonnie Lovness

# Sat p.m.

Oldtimers lament that a real swap meet is a thing of the past. To some degree that's true; what's actually swapped now is cash - and each year it seems to take more of it for the same parts. But the fact is, there still *are* parts - from crusty to pristine originals, and more and more, nice reproductions. In fact, for a 356 owner looking to score bits for his tub you might say this is a golden age. Supply has expanded to meet demand and it all comes together in one place each spring in the Golden State: the SoCal All-Porsche Swap Meet and Car Display.

Having settled comfortably into its home at the Phoenix Club after four years, this swap has become the "wrap" at the end of a big Porsche weekend. Bob Lee, Pete McNulty and Jeff Trask, with help from Porsche 356 Club and Registry members, have given us a great venue with spots for casual vendors on paved areas, plus inside space for the professionals and room for scores of Porsches on display. Frosting on the cake is the Bitburger beer, sausage, kraut and German potato salad available for lunch.

Fortunately, most of the biggest vendors move directly from the LAX Hilton to the Phoenix Club, so if you missed them on Saturday, you have another chance. (Bob, bless his heart, has arranged vendor entry on Saturday afternoon so they can assemble their Fest Halle tables and leave them securely until morning.) But even if you were at the Lit Meet, it's still worth showing up at the traditional oh-dark-thirty hour as the trucks, vans and station wagons unload and set up their offerings. There's always fresh meat.

This year the weather was a big improvement and attendance reflected that. There were lots of happy shoppers and satisfied vendors.

Many thanks to everyone who helped make it so!

# Sunday

The Phoenix Club, Anaheim, CA



Tailgate vendors had plenty of space and great weather, while most commercial sellers were inside the green semi-permanent "Festhalle" tent, surrounded by Porsches on display. Right: Jack Staggs had an effective way to find what he needed.



Bruce Sweetman



Harvey Rosenthal's wife was along as usual to help sell his beautiful reproduction tool kits, one of many vendors with 356-oriented goods.



Right: With the sunshine, 356s came out to play but the shade was not a bad place to be parked.



Bruce Sweetman