





Metal Memory
the mystery of 0718

by s. scott callan

a provenance on ferrari 250 testa rossa
serial number 0718

this excerpt was prepared for you

spring 2015

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introduction

In concept, this book started life as a Provenance. As such, it set about to verify the date, location and driver history of the sixth Ferrari 250 Testa Rossa produced, serial number 0718. Many an automotive author has generously given of his time and ink to write about the many limited series competition cars to come from Maranello individually and as a whole. The 250 TR has been often and lovingly included. Much has been scholastic in its veracity, some, adding myth to the legend.

After a year's investigation on 0718, and many more on Ferrari's operation, the author has here constructed a family photo album, with interwoven narrative.

The narrative is the story that came forward from the author's investigation and richly illustrative interviews conducted into 0718 specifically. To provide a deeper insight into the 250 TR itself we delve into the engineering transformation within Maranello that resulted in the resurrection of the competition V-12 engine, the unique (to the firm at that point) chassis it was placed in, and a body design that gave visual signature to this 1958 customer sports racer.

From these elements was composed the publication you now hold. It is the Provenance of a Ferrari, that became the telling of a fifty-year-old mystery, red herrings and all.



Table of Contents

PROLOGUE		10	CHAPTER TEN	TIME CAPSULE	116
CHAPTER ONE	THERE IT WAS AGAIN	14		1959 VACA VALLEY GRAND PRIX	135
CHAPTER TWO	TRs & MEXICO AT THE TIME	19	CHAPTER ELEVEN	RAPIDLY, THROUGH THE CALIFORNIA LANDSCAPE	148
	1959 RIVERSIDE GP FOR SPORTSCARS	26		1961 SACRAMENTO SPORTS CAR RACES	156
CHAPTER THREE	BEFORE THE BEGINNING	34		1961 LAGUNA SECA	174
CHAPTER FOUR	THE CHESS PIECES MOVED	39	CHAPTER TWELVE	LICENSED IN THE SECOND ACT	192
CHAPTER FIVE	TRANSFORMATION & V-12 RESURRECTION	42	CHAPTER FOURTEEN	AGED LIKE GOOD WINE	200
CHAPTER SIX	LESSONS LEARNED TWENTY-FIVE YEARS EARLIER	49	CHAPTER FIFTEEN	NICKEL BITS & RAW ALUMINUM	211
	1957-58 BUILD SHEET	59	CHAPTER SIXTEEN	BACK ON TRACK	239
CHAPTER SEVEN	THROUGH THE LENS, THE SONG OF TWELVE	64	CHAPTER SEVENTEEN	RETURNED TO INTENDED PURPOSE	262
	1960 LAGUNA SECA	74	CHAPTER EIGHTEEN	ACROSS THE WORLD RAPIDLY	278
CHAPTER EIGHT	CONTACT SOUTH OF THE BORDER	82	CHAPTER NINETEEN	HISTORIC CONTEXT, VINTAGE PRESENT	299
CHAPTER NINE	MIGRATION IN THE MIDDLE OF THE FIRST ACT	102	EPILOGUE		330
	1959 RIVERSIDE KIWANIS GRAND PRIX	107	TIMELINE		338
			ACKNOWLEDGEMENTS		342
			PHOTO CREDITS		343



The autumn wind was coming off the lake in chilling gusts. Indian summer was this day but a memory, as the gold and red leaves moved in great animate clouds through the park. School had started, but the four boys on their bicycles clung to summer's faded image. Each sprint race had them atop their Nortons, running through the Isle of Man's hedge-lined roads. Heads down, tucked in to cut wind resistance, peddling with determination and laughter, they headed for the yacht basin of Belmont Harbor. The sun was angling low behind Lake Shore Drive's apartment buildings, bringing on the dusk all too early. Fading light, and winds filled with the implication of Chicago's coming winter, had cleared the park. The boys rode alone through empty bike paths, on through the harbor parking lots recently deserted by the warm weather sailors.

Still, there were a few boats bobbing beneath blue canvas, rigging chiming against the masts. The last voices of the season past. For the most part the boats had been moved to winter moorings, or dry dock, leaving expansive solace, to make wide arcs through the empty parking spaces. As the boys dreamed dreams of the great road races, and they the victors beneath cloudless summer skies, a glint of the fading light was seen, almost simultaneously by all. Ah, reason to peddle further before the ride home, to warmth, dinner, and siblings all assuming the school year pattern.

"Is that what I think it is?!"

"Wow, look at it!"

There it sat. All by itself in an empty parking lot. Its weathered silver paint glowing in the dimming light, leaves brushing up against its Englerbert tires and wires.

"It's a Testa Rossa!" The cry was a unison echo as Schwinn brakes squealed to a halt. Bikes were laid upon asphalt with a little less care than was the norm.

Squat, wide, aggressive in repose. Speaking more clearly of speed than all the pages of the bedside Sport Car Graphics. The gooseflesh rising was not from the chilled lake wind, but from the tales of the Mille, LeMans and the Targa, being told by this metal.

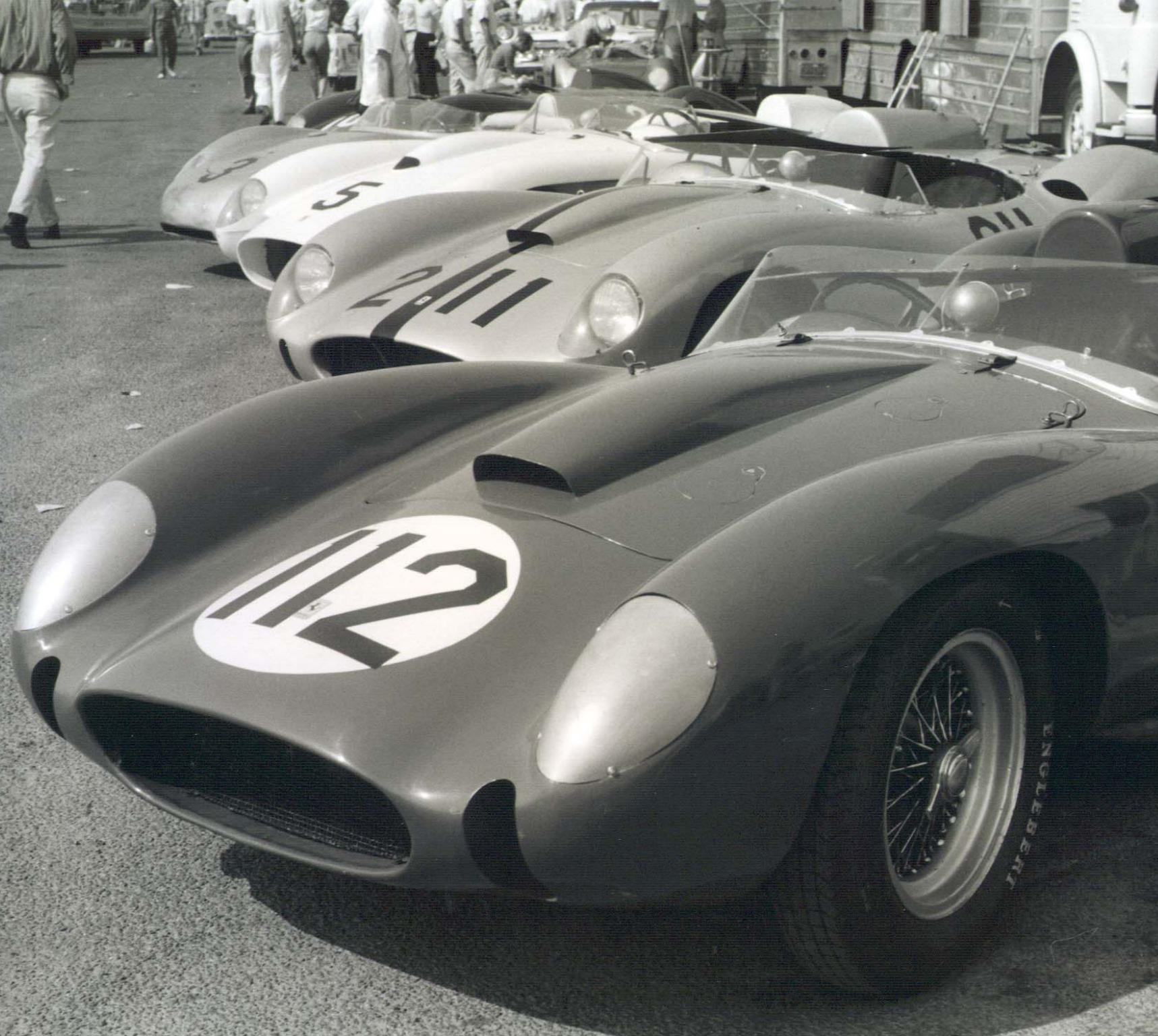
Furtive looks were cast about for the owner. Was it one of the greats buttoning up a yacht for winter? No, the owner of this would be out sailing in this weather. The slips before them were inspected for movement. The silent appraisal was soon broken by the chatter of discourse on the exploits of the TRs, of Ferrari, of the sport. It was only last year that Phil Hill had brought all gathered here the pride by proxy of his World Championship. And here before them was the physical expression of the great European racing circuits, silent, yet not silent. The stories of Automobile Quarterly, the reports of Road & Track, all come alive.

Like many a retired competition car of the period, this one had found its way to the street. Its Illinois license was quite securely attached to the round tail, above the four megaphone exhaust. The well-

worn seats looked to have been polished by a lot of track time. The fabulous row of velocity stacks could be spied through the hood's scoop. This was a car that had been used, and used hard. The rock pitted nose and chipped paint at the front, to the none too fresh tires worn on tarnished wires and rims, fired the imagination, and kept the conversation lively.

Twilight soon called the boys home. With the apprehension of pilgrims leaving a religious monument, they gathered up the bikes and headed off through the now unnoticed colors of the park. Looks were cast over their shoulders, and at each other, to again see if it was real, or merely an apparition imagined. Every yard traveled seem to more clearly define that which was now a memory, to be retold a hundred and one times, if the reality of having seen it became less believable.

Then, from the far lot came a crackling explosion. The unrestrained symphony of twelve gathered volume, gathered ground. As it came abreast the boys, the driver gave them a knowing look, and nailed it. He knew his audience. They all sat up on their bikes, applauding and howling silently in the echoing thunder, that receded behind a swirl of autumn leaves.



There it was again

1



There it was again. Open right to the page on David Love's coffee table in blue gray light, as the afternoon rain tapped out a rhythmic theme on large picture windows. In recent days this story of 0718's history has been often quoted for my benefit. The passage, from Joel Finn's seminal work on 250 TRs published thirty years ago, has long been accepted as fact. But, like so much in Ferrari history, had it become legend, accepted and repeated, by having been carved in stone by ink on the well-thumbed page?

One must certainly respect the scholarship represented for standing up to the onslaught of Ferrari tales told and retold in the thirty years since publication. During the period of these decades past we have seen competition cars transformed from worthless obsolete racers to priceless objects

of desire, with revered histories.

As the rain ran down the large picture windows its descending translucent shadow moved across this tale of 0718. Finn had written that 250 Testa Rossa, serial number 0718, was initially an Ecurie Belge car, first run in-anger by Lucien Bianchi at Goodwood on 7 April 1958. Wearing the number 59, Bianchi brought the TR beneath checker in 5th place. The debut was followed by an appearance at Silverstone, were Bianchi again piloted, achieving a 6th place in the standings. Finn goes on to state that 0718 was then entered in the June festivities at LeMans. Here Bianchi was joined by Mairesse for the run of twenty-four hours in weather much like this wet afternoon. The yellow Francorchamps garage car covered only a tenth of the distance required to finish, the clutch

having sidelined Bianchi and Mairesse.

The text then tells of a sale to the Mexican driver Julio Mariscal, an import duty fracas with his government, and its transfer to John von Neumann's Ferrari Reps operation in LA, Pedro Rodriguez' DNF at Riverside in July of '59 and its subsequent resale to Sacramento racer, Gordon Glycer.

This all has the ring of logic to it. Ferrari's latest three liter customer sports racer being campaigned in Europe during its premier season, then coming west to compete in the then quite active competition calendar of Mexico and California.

Closing the book I looked over at David, who was showing my son Miles a 1/43rd scale model of his TR,

painted in the pale Guatemalan blue as Jaroslav Juhan had run it at LeMans in '58. There was a provenance certain. As a look was cast out over the rain soaked Berkeley hills, the spectrum of anecdotal evidence, both supportive of Finn's conclusion, and not, came to the fore.

Jay had gotten me into this most engaging automotive mystery. Prior to receiving, via FedEx, the comprehensive archive on 0718 gathered to date, Jay, in signature skepticism, had warned against Finn's published conclusion.

'The numbers don't match,' Jay had told me in one of our early conversations. 'Swaters' records show his 250 TRs were 0724 and 0736. The Bianchi car being 0724.'



Anecdotal (web sites and conversational) evidence aside, implied affirmative defense of Finn's position could be found on page five of the brief written by Gordon Glyer discussing his ownership of the car, as received in the Fed Ex'ed archives. 'I think it was on the way back from the 1960 Vaca Valley race that a float stuck in one of the Webers and allowed the fuel to fill the number eight cylinder. Carelessly, I attempted to start the engine without walking it through a revolution or pulling the plugs. Hydraulic lock-locked solid! After a lot of thought and some telephone time with Richie (Ginther), we wisely dismantled the engine. We found a cracked piston and bent wrist pin and a repairable, slightly tweaked connecting rod. There were some very minor scores in the crankshaft that .002" cleaned up. Rather than waste crankshaft by turning .010", we cut .002" and silver plated .002" onto the standard bearings. I'm still proud of my machinist, Nestor Mosca, whose shop was near the Oakland airport. Please understand that we had nothing in the way of a

workshop manual: it was strictly fly by the seat of your pants and telephone time with Richie. I was instructed to set the camshaft/valve timing according to the marks stamped in the flywheel, which I did very carefully. When I got all finished, I had a very sick Ferrari. I was told that the car had been a DNF at LeMans due to clutch failure...'

To further explore the implications of this passage it was brought up in a phone conversation with Gordon. "When I bought the car from von Neumann's Ferrari Repts, Richie had told me the car had been at LeMans, busted the clutch, and had a street 250 flywheel installed. That's why I had the timing mark problem when we rebuilt the engine."

Replacing the phone to its cradle, lighting a Camel and leaning back in my office chair, I couldn't help but be amused. Pre-War cars had been traced through every owner, every activity, to where they had been hidden to survive the War, and been ignored and cherished since. Here

was one of the most sought after and significant Ferraris ever made. One of perhaps twenty made. Discussed on the printed page more than once, yet beneath the pedantic microscope that had come to be the Ferrari legend, 0718's early history eluded consensus. It was time for a two pronged attack.

An e-mail was sent off to Adolfo Orsi for a bit of archive research at Maranello. While this representative action was in train, it would only be appropriate to contact Joel Finn.

After several rings, a recorded greeting, assuring that indeed the correct number had been dialed, and another of the omnipresent electronic tones of this generation, I began speaking into the telephonic ethers. Mid-way through said message a gravely voice inquired as to the purpose of the call. Following introductions I got right to the point, and inquired, "Upon what research were your conclusions drawn as regards 250 TR 0718?" What ensued was a most engaging discussion of one man's efforts to interpret the doc-

umented actions of others.

Conclusions, Finn rather firmly stated, were based upon rather wide open access to Maranello's archives in the late sixties. The competition histories of the cars revealed themselves through the currently unobtainable race records composed for an absent Enzo by an attendant team mechanic at the races that made up the European season of '58. In the absence of an available Xerox, photos were taken of the documents for later reference. And, in a tone that expressed good fortune and foresight, additional insight was gained through economic benevolence of the time, which allowed for multiple ownership of obsolete pontoon-fendered Ferraris.

Impressive. But still, I pointed out, "How did 0718, become 0724, the Ecurie Belge car of Bianchi?"

The story told is worth paraphrasing.

'It had always been Mariscal's dream to drive in Europe. So a test was arranged in November '57 at the Modena

Autodromo. The factory reaction to this test was that Mariscal was much too wild to be released on the European circuits. A deal was worked out to lease the car to Swaters for the European season. After which it would be shipped to Mariscal in Mexico. This was told to me by Mariscal's mechanic, who had accompanied him to Italy for the test. As for the numbers, they were changed while it was run by Swaters and then changed back when shipped to Mariscal. This happened all the time. Numbers were changed to show the cars were new when they weren't.

Interesting. The conversation went on for some time. Covering events surrounding the investigation, and composition of Finn's book. He had indeed done his homework. And was on the ground during a most interesting time in Ferrari's history.

When inquiry was made as to the availability of the document photos made in Maranello's archives so long ago, it was made clear that those files were long buried, and the TR project was in the past, to remain there. And

similarly, it was pointed out, the comments on 0718 were being drawn from memory of research conducted decades ago. One could only respect the clarity of those memories at this time, and be engaged by the manner with which the stories were related.

Jim Sitz had told me of meeting Finn during the composition of the TR book, and how intense and detailed was his focus on the subject. There was no reason to doubt Jim's conclusions at conversation's end; but Finn had left more questions in the wake of our conversation.

What, for example, would be the benefit of renumbering a car Swaters was leasing from Mariscal for the summer? And, why would Swaters arranged to lease an early series TR, when he could obtain a latter series car in time for Bianchi's debut at Goodwood?

Finn had summated Ferrari's operation during that first decade of operation with the old Churchill caricature of the Soviets; A riddle wrapped in an

enigma. But industry, no matter how artisan in its size and improvisational in method, is man-hours spent, and compensated, for a purpose. The purpose implied is multiple profit through simultaneous sale of a single product; here the purchase/lease to Swaters after money had already been collected from Mariscal. To what end? The car would be clapped out after Swaters finished the European season, and a complete overhaul would be required before shipment to Mexico. Money collected, money spent, and Mariscal receives a second hand competition car in autumn for new car dollars spent in January (?).

Riddle wrapping in enigma? Perhaps. Or perhaps, the broad brush of colorful legend applied liberally.

The solution seemed to lie in Mexico.

"Jaroslav knows everybody in Mexico." The voice on the phone was that of Larry Crane, ex-art director of Automobile magazine. He was graciously providing me with contact names and numbers accumulated while composing his book on the Carrera. "He was the Fiat distributor in Guatemala, and the first Porsche distributor in South America."

A couple of days after my conversation with Larry I took the opportunity to dial the Swiss phone number given me for Jaroslav Juhan.

"Julio Mariscal, yes, I know him personally, I know he's still alive. He was also in the Carrera Pan-America, driving a C-type, I think it was. C-Type Jaguar, it was in 1954," Jaroslav began telling me after establishing the purpose of my call.

"I understood this car, 0718, was sold to the Ecurie Belge. But I think that's the car you are talking about because, they are saying, the Ferrari records are saying clearly, that the car was sold to Ecurie

Belge. And was raced by Lucian Bianchi, which was a very good friend of mine, yes? Apparently at Goodwood, and then he raced it at Silverstone. He finished 5th in Goodwood. And he was sixth in Silverstone. And then '58 in LeMans, with Bianchi and Mairesse, both good friend(s) of mine. They are not here anymore to give us some more information."

"Swaters' records show the Bianchi, Mairesse car at LeMans was 0724," I put forth.

"0724...this can't be, because I was racing in fifty-eight at LeMans. With the car David owns now."

"Really?"

"Oh yes," Jaroslav continued, "...we didn't finish, we were running in ten position, at the first, with a French driver, Francois Picard, he died about three years ago, good guy, very pleasant to drive with him...he smashed the car against a Colin Chapman Lotus, under the Dunlop (bridge) after six hour of race. But we'd been staying very well in the race. In fact we tried to be on the podium. Which means the first three. And we would do

it, because we been driving very slowly, just trying to stay out of traffic, it was a very wet race.

"And just a minute what was the story? I can go back and trace what happened with the car. The Ferrari records I have show 718 was that car, and was sold to Julio Mariscal, the car was resprayed white. And of course Johnny von Neumann is named there. I haven't seen him for four or five years. Johnny, he must be older than I am now. If he's still with us, I don't know, but maybe yet."

"Yes, I believe he is. You have Ferrari records that show 0718 is the Bianchi Mairesse car?"

"Definitely, quite a good record, you see. Of course we are a very, very, very long time away now. We are talking '58, almost half a century. But that was it. "

"Can you make a copy of that documentation?"

"Yes, I can fax it now."

"That would be superb...These are Ferrari records? From the Scuderia?"

"Yes, that's it. Julio Mariscal, and he repaint it white, apparently. And it

arrived in Mexico. And was slapped with (a large) duty...Julio should know that...I don't know exactly what it was in Mexico, but in Argentine I know it, because I sold my Spyder Porsche in 1955, in Argentine, and it was 600% duty...so you can imagine. So many Argentiners get killed in the last Pan Americana, because Peron said 'who ever will be driving on the Pan Americana, he can come back with a car, to Buenos Aires, get it duty free.' So there were something like 50 Argentiners participants, eight of them get killed. They purchase some Chevrolet, and the first turn without brakes, they're in a ditch. 600%, I don't know what Mexico was, but it must have been similar.

"He had it reshipped to Los Angeles, where Johnny von Neumann agreed to dispose of it for him."

"Do you actually know when he brought it into Mexico?"

"It says, late in 1958. It was sold to Julio. I think that's correct. I can make you a copy of it.

"Do you have the car?" Jaroslav asked.

"No, the car is owned by a gentleman up in Montreal."

"You know today, it seems to be ridiculous. But if I mention a figure I paid for my car, David's car, I paid personally, to Ferrari, in his hand, in fact my wife paid for me, because she went earlier to Europe, and pay him \$7,300 dollars for the car. New. After the race (LeMans), I was at the end of very poor automobile racing career, so I didn't know what to do. I was racing with Francois again in Rheims, the twelve hour race, we finished fifth, in his Berlinetta (0901 GT); because my car was a little bit damaged in the front from racing it in LeMans, not that much. But still we couldn't (race it at Rheims), because the casing of the steering, the steering box broke during the crash, right? Only one headlight, otherwise the car was in perfect shape. So, we tried to get in the sound car, at one o'clock in the afternoon, just driving, filling it with petrol, and that's it, and finishing the race. And be, at one o'clock in the afternoon, with the same brand new car, then for these last three hours be at full speed. In fact we've been traveling, and we were braking only once

in (the) lap; at the end of the straight. And that was that day. I was lapping at four minutes, fifteen seconds. The fastest lap was with Mike Hawthorn at 4:01 in the factory car, and in fact with a four liter engine. It wasn't that bad. And when Francois crashed (at LeMans) we were in tenth position overall, after six hour of race. Wasn't that bad.

"It was very difficult to sell the (TR). When I finish at Riems, I said I didn't want to race anymore. It was stupid to be running round and round, during the night, people is eating and drinking, at home and at the cinema, and your trying to go fast, and nothing happens. So I finished racing the day, or day before, Fangio finished, following the Grand Prix of France. In fact we were racing before the Formula one race (at Riems).

"And it was very difficult to sell the car. In the meantime, when I was at Riems, the car was repaired at the factory and was sent by Ferrari to Porto, where I should race the Grand Prix of Porto, in Portugal. But , in the meantime I decided not to race, so the car was on the same lorry, on

its way back to Maranello, and it was there. And I didn't know what to do with the car. So I sent it to Vasek Polack, to Los Angeles, to sell it. I consigned it to him, and it took two years to get some money back, for it. Can you imagine."

"How long did you say, Two years?"

"Two years, yes. Then I had to pay the duty, which in the United States at the time was six or seven hundred dollars. Enormous money. For twelve hundred dollars you could buy the new Chevrolet. I totally collect for the car maybe five thousand dollars.

"He (Polack) was renting the car, to McAfee, and many other drivers. It was very different from today. No million dollars.

"A dollar was a lot of money. You know in Panama a gallon of whiskey was one dollar."

"And much needed if you were in Panama."

"Exactly."

(laughter)

"Bianchi and Mairesse, as they both about the same age as myself, maybe even

a little bit younger, but they are both not here any more. We were very, very good friends, especially with Mairesse."

"I wonder why the entry records at LeMans show they were driving 0724, rather than 0718 ?"

"724, let's see... You know there are many, many (stories)...for example with my car in the similar record, they say my car was running after LeMans, (that) it was running different races in Europe, small races, which is not true. After LeMans, in '58 with Francois Picard, never run any race in Europe. After (Rheims) I asked Manicotti, who was the sales manager at Ferrari, I said 'Dottore, you send it down to Vasek Polak.

"724 was sold to Finland... run 1958 Nurburgring.. purchased by Kennedy, in late 1958...sold it in '59, Chinetti..."

"These are records from the Scuderia that you have?"

"Yes, but this is a pretty serious record. You know I get bombarded now about whether I drove 005 or 012 Porsche Spyder in South America. And I don't know. I believed all the time it was 005.

I'm convinced now it was 012. So I don't know what to say. But I can swear enough, because I never looked on the chassis for the number. And it's a most funny way, it can't be traced at the factory.

"There is some historical book where my Testa Rossa was owned by Jabby (Gerard) Crombac. And this just is not true. He never, yeah Ok, his great participation at that time to me, or better say to Francois Picard. That is just not true. My car was purchased by myself, personally by my cash money, directly from Enzo, delivered by my wife and that's it. And it's a very serious book."

"What I try to do in my research is freshly pursue the facts, using what has been written as clues, while putting aside what has been long accepted."

"I think you will never find out."

"Thank you for the optimism."

(laughter)

"Because you know," Jaroslav continued, "it's really difficult to remember, and everyone at that time was fiddling. Somehow, something, to buy the car, even-

usually find a sponsor, which in fact never exists in these times, your sponsors came from America to Europe. Even my car in the Mexico race, my Porsche wore no ads on it. The Hans Herman car was full of painting for Telefunken. I was so stupid. The people from Bull, they are some computer people, they came to me and offered me fifteen hundred dollars, if I agree to paint on the car the Bull sign. I said 'no my dear, no one touches the car. My car is virgin and no one touches it.' The car didn't even belong to me, (laughter) it belonged to Ferry Porsche. Ferry send me over the car. I was delegated the responsibility to win the race. Not to scratch the body. Not to break the engine. And send the money to Ferry Porsche. So I never get my car painted with any advertising.

"This is very good...And I say to the Bull people, 'Look I have a friend here, with an Alfa Romeo. I was selling Alfa Romeos, I sold it to him, and the official Alfa Romeo team was running their 1900 four door limousines, and I told them 'He is totally without money, not a penny in the pocket, so go to him and put the Bull

on his car'. So they did, for five hundred dollars, the gangsters. But they had so much advertising with him because, in the first place he put the ad on the roof, nothing happened to Cerezo (the driver), but the car was totally damaged, and the Bull sign traveled all around the world as a newspaper photograph."

(Laughter)

Jaroslav placed his virgin bodied 550 spyder, number 012, fourth over all.

"I never put any advert on my car." Jaroslav continued, "It was always naked. I was stupid.

"Fifteen hundred dollars. Can you imagine the money at that time. Fifteen Hundred Dollars. A V8 Chevrolet at the time cost fourteen hundred dollars.

"I was driving for my pleasure, not for money. When I stopped, in the last stage of the third Pan American (1953), I had some small engine failure, 150 miles from the end, and I stop on the road. The Porsche organization didn't exist, and I'm on my own, a hundred kilometer from Chihuahua. And two hundred kilometer

from Ciudad Juarez. And no money. I had ten dollars in the pocket. Ten dollars. Then a lorry stopped, with about eight guys in the lorry. It was a big lorry. And I said 'Boys where are you going?' And they said 'We are going to Mexico City.' 'Can you take me to Mexico City?' And he says 'Yes, why not?' 'Because I have my racing car with me.' 'Oh, doesn't matter.' 'But' I said, 'I only have ten dollars.'

"The chief of the group, he recalculated how many bottles of Bacardi there are for ten dollars. And it was twenty five bottles, and he said 'That's good. Twenty five Regal Bacardi, let's go.' And he take me with my car, and my co-pilot to Mexico City. More than two thousand Kilometers! For twenty five bottles of Bacardi. Can you imagine."

"Superb."

"Good time." (Jaroslav was fourth in the Small Sports class during the 1st stage; first for the 2nd, 3rd, & 4th; second for the 5th & 6th stage and third during the 7th stage prior to his parking the Porsche one hundred and fifty miles from the finish of the 1953 race.)

"Last time I saw him (Mariscal) was in 1954," Jaroslav continued, "in Puebla Mexico at a race I was racing in. He was racing a Jaguar C type. I finished just in front of him, or just after him. It was a race on the Puebla airport. It was a nice race. A very funny race. That was in the very early Porsche 001. Very amusing. We'd been old friends together. It is not like today. Everyone is enclosed in his motor home. We never had a motor home. Some tent somewhere. Or we were sleeping in the seats of the car. That was our comfort. And a common toilet with about, I don't know, about two thousand, three thousand people."

"Well that's what happens when you turn down those checks from Bull."

(Laughter)

The fax from Switzerland came through ten minutes after warm adieus completed the call. The familiar passage, faxed from this source, was again an affirmation of Finn's scholarship in the eyes of those elemental to its plot.

UNITED STATES

GRAND PRIX

SPORTS CARS



SOUVENIR PROGRAM 50c
PROCEEDS TO CHARITY

RIVERSIDE INTERNATIONAL RACEWAY
OCTOBER 10-11, 1959

Sponsored by
TIMES-MIRROR CO.
of
LOS ANGELES

SCHEDULE OF EVENTS

UNITED STATES GRAND PRIX FOR SPORTS CARS

SATURDAY, OCT. 10

SOUTHERN CALIFORNIA AMATEUR CHAMPIONSHIPS

Practice 9:00 A.M.
Racing at 12:00 Noon
All Races 8 Laps

Race 1	Formula III
Race 2	Production Classes H and G
Race 3	Production Class F
Race 4	Production Class E
Race 5	Production Classes B, C, and D
Race 6	Modified under 1000 cc
Race 7	Ladies Race
Race 8	Modified under 1500 cc
Race 9	Modified over 1500 cc

SUNDAY, OCT. 11

THE U.S. 200 MILE GRAND PRIX FOR SPORTS CARS—2:00 P.M.

Qualifying 9:00 A.M. to 12:00 Noon
Consolation Race 12:30 P.M.
Grand Prix Purse \$20,000

OVER 2000 cc		UNDER 2000 cc	
First Place	\$2500	First Place	\$2000
Second Place	\$2000	Second Place	\$1500
Third Place	\$1500	Third Place	\$1000
Fourth Place	\$1000	Fourth Place	\$700
Fifth Place	\$700	Fifth Place	\$500
Sixth Place	\$500	Sixth Place	\$300

ACCESSORY PRIZE MONEY \$5000

\$1500 each by Firestone Tire & Rubber Co., and \$3000 by Goodyear Tire & Rubber Co. as follows:

First, \$750 Second, \$500 Third, \$250
(providing the driver is using company rubber)

Lap prize money, \$25 per lap for the leader for 62 laps

Qualifying—\$225 for fastest qualifier over 2000 cc
\$225 for fastest qualifier under 2000 cc

GRAND PRIX '58

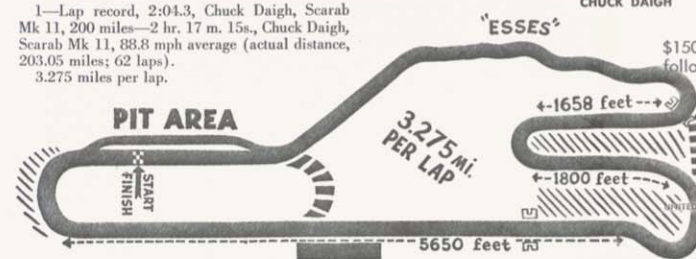
A Fast-Finishing Scarab and its Winning Driver



1—Lap record, 2:04.3, Chuck Daigh, Scarab Mk 11, 200 miles—2 hr. 17 m. 15s., Chuck Daigh, Scarab Mk 11, 88.8 mph average (actual distance, 203.05 miles; 62 laps).
3.275 miles per lap.



CHUCK DAIGH



Lap Time Conversion Chart — Based on a 3.275 Mile Course

Time your favorite for one lap with your watch and convert to miles per hour

Minutes	Seconds	MPH	Minutes	Seconds	MPH	Minutes	Seconds	MPH
2	22	45	2	49	70	2	04	95
3	56	50	2	37	75	1	58	100
3	34	55	2	28	80	1	52	105
3	17	60	2	19	85	1	47	110
3	01	65	2	11	90	1	43	115

200-Mile U. S. Grand Prix for Sports Cars

Riverside International Raceway

Sunday, Oct. 11, 1959

Entry List

Car No.	Make	Dis. cc	Driver	Home Town	Entrant
1	Dean Van Lines Special, Chevy	5800	Eric Hauser	Hollywood	Dean Van Lines
2	Ferrari	3000	Phil Hill	Santa Monica	Eleanor von Neumann, Sherman Oaks
7	Lotus Lemans	1100	Art Snyder	Gardena	Art Snyder, Gardena
9	Meyer-Drake	1750	Billy Cantrell	Anaheim	Mar-Chris Co., Los Angeles
10	Alfa-Romeo Veloce	1300	Chuck Kessinger	Glendale	Martinez-Presberger, Burbank
11	Cooper-Monaco	1962	John Fitch	Lime Rock, Conn.	Chas. Kreisler, New York City
18	D-Jaguar	3700	Carlyle Blackwell	North Hollywood	Carlyle Blackwell, North Hollywood
19	Porsche RS Spyder	1560	D. D. Michelmore	Reseda	D. D. Michelmore, Reseda
23	Lotus MK X	1320	John Timanus	North Hollywood	Lotus Cars, Burbank
25	Pink Elephant No. 2	4242	Jim Chaffee	Mt. Baldy	Jim Chaffee
27	D-Jaguar Special V-8	5000	Bill Krause	Long Beach	Frank Millard Sports Cars, Encino
28	Aston Martin DBR 2	4160	Stirling Moss	London, England	David Brown, Feltham, England
29	Ocelot Spider Chevy	4500	Joe Playan	Venice	Scuderia Excelior, Pasadena
32	Lotus MK XI	1098	Kirk Neumann, Jr.	Beverly Hills	Kirk Neumann Jr., Beverly Hills
35	Ferrari Mondial	1900		Italia Motors, Los Angeles	
38	Porsche Carrera	1498	Scotter Patrick	Hermosa Beach	Riviera Imported Cars, Hermosa Beach
46	Ferrari Testa Rosa	2952	Dick Morgensen	Phoenix	Morgensen Motors, Phoenix, Ariz.
47	Mercury Roadster	6500	Wm. Hitchcock	Long Beach	Wm. Hitchcock, Long Beach
50	Porsche RSK	1498	Ken Miles	Hollywood	Precision Motor Cars, Beverly Hills
51	Corvette	4640	Bob Bondurant	La Canada	Lundin Motors Inc., South Gate
53	Ferrari Mille Miglia	4100		Italia Motors, Burbank	
54	Mercedes-Benz 300 SL	2992	Dean Mears	Hollywood	R. G. Lewis and Co., Hollywood
55	Porsche RSK	1589	Sam Weiss	Sacramento	Imported Sports Cars, Sacramento
60	Ferrari Monza	4990	Bob Oker	Whittier	R. Robt. White, MD., and Bruce Danielson, Redlands
65	Porsche RSK	1500	Ricardo Rodriguez	Mexico City	Pedro Rodriguez Sr., Mexico City
68	Ferrari	3000	Pedro Rodriguez	Mexico City	Pedro Rodriguez Sr., Mexico City
69	Ferrari	4900	Dan Gurney	Riverside	Frank Arciero, Montebello
70	Old Yeller No. 2	6000	Max Balchowsky	Hollywood	Max Balchowsky, Hollywood
73	Lotus Sebring	1098	Pete Brock	Los Angeles	Pete Brock, Los Angeles
74	Aston Martin DB3S	5500	Jack Graham	San Jose	Jack Graham, San Jose
83	Willment	1500	Tony Settember	Pasadena	Tony Settember, Pasadena
85	Aston Martin Corvette	5600	Clem Proctor	Compton	Clem Proctor, Compton
88	Porsche RSK	1487	Jack McAfee	Hollywood	Competition Motors, Hollywood
89	Lotus Mille Miglia	1100	Ray Pickering	Torrance	Ray Pickering, Torrance
93	Devin Corvette	4640	Andy Porterfield	North Hollywood	Evans Industries, Pasadena
97	L-S Spec.-Corvette	5000	Jack Johanson	Riverside	Jesse J. Tidwell, Riverside
98	Maserati	5700	Chuck Daigh	Long Beach	John Edgar, Encino
99	Ferrari-Maserati	4200	Skip Hudson	Riverside	Frank Arciero, Montebello
100	D-Jaguar	3443			Ray Seher, Reno, Nev.
102	Ferrari Testa Rosa	2500	Jack Nethercutt	Los Angeles	Jack Nethercutt, Los Angeles
103	Leader Card Sportster MK 002 Scarab	5000			Leader Card, Inc., Milwaukee, Wis.
107	Bocar	5000	Harry Heuer	Chicago	Peter Hand Brewery, Chicago
108	Scarab	5000	Augie Pabst	Milwaukee	Peter Hand Brewery, Chicago
109	Ferrari Testa Rosa	2500			Pabst Motors, Inc., Milwaukee
110	Lotus Ferrari	1990	Chas. Parsons	Monterey	Martys Used Cars, Monterey
112	Ferrari Testa Rosa	3000	Jasie von Neumann	Sherman Oaks	Eleanor von Neumann, Sherman Oaks
117	Campbell Special	1100	Bob Harris	Malibu	Bill Campbell-Keenan Wynn, Burbank
118	Lotus Ferrari	2000	J. P. Kunstle	Carmel	Ecurie-LesMordus, Geneva, Switzerland
120	Ferrari Monza	3500	Lloyd Katskee	Omaha, Neb.	Lloyd Katskee, Omaha, Neb.
121	Lotus MK IX	1640	Bob Challman	Hermosa Beach	Bob Challman, Hermosa Beach
126	Ferrari Testa Rosa	3000	Gordon Glycer	Sacramento	Gordon Glycer, Sacramento
142	JH Special	5000	Doug Walker	Santa Ana	Wm. Hill, Santa Ana
143	Ferrari Testa Rosa	2000	Chuck Cornett	Fresno	Geo Harm, KARM, Fresno
145	Maserati	4500	Lloyd Ruby	Houston, Tex.	Micro-Lube Co., Houston
163	Ferrari	4400			Sorrell Enterprises, Inglewood
169	Hagemann-Buick V-8	5600	Alex Budurin	Tucson, Ariz.	Broadway Animal Hospital, Tucson, Ariz.
172	Kurtis-Cadillac	5700	Mickey Thompson	El Monte	El Monte, Calif.
177	OSCA LeMans	1498	Bill Leyden	Beverly Hills	Bill Leyden, Beverly Hills
181	Mercedes-Corvette	5500	John Mantz	Duarte	R. B. Becker, Whittier
182	Lister-Corvette	5700	Wayne Weiler	Phoenix, Ariz.	Fike Plumbing Co., Glendale, Ariz.
211	Ferrari	4100	Richie Ginther	Granada Hills	Richie Ginther, Granada Hills
234	Elva MK IV-A	1100	John Peters	North Hollywood	John Peters, North Hollywood
243	Cooper-Porsche	1598	Alfred Whatley	Alamo	Alfred Whatley, Alamo
266	Jaguar-Lister	3800	Jack Flaherty	San Francisco	Kjell Qvale, San Francisco
271	Lotus LeMans	1500	Jim Boxburger	San Diego	Moradyne Co., San Diego
311	Devin-Olds	5000	Ak Miller	Whittier	Miller-Hanson Special, Whittier

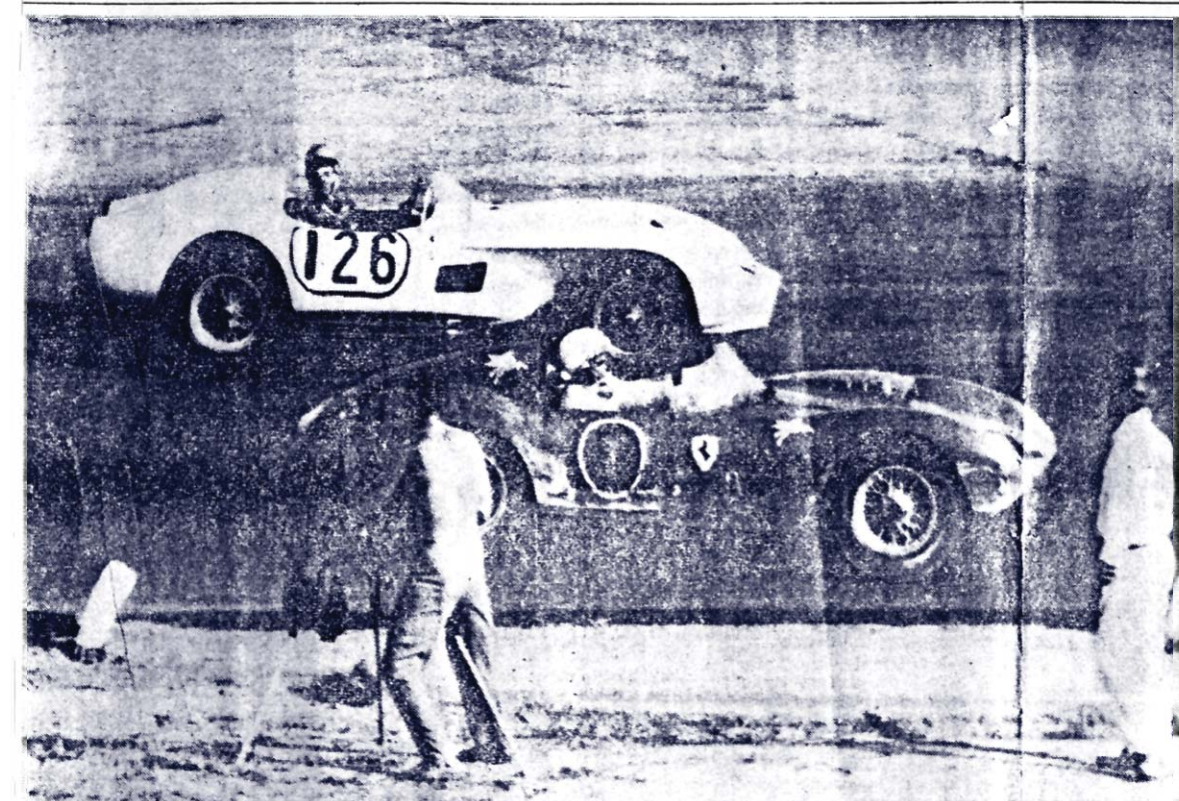


Gordon leading Johnnie Mantz Mercedes-Corvette up Riverside's mile long straight, with Chuck Parson's Lotus 15 following.



Part IV—MON., OCT. 12, 1959 Los Angeles Times ★

PHIL HILL WIN GRAND PRIX



Accident Mars Start of Race

BY JACK CURNOW
Times Staff Representative

RIVERSIDE, Oct. 11—A gala crowd of 75,000 fans turned out here today to see Phil Hill, the Santa Monica ace, run off and hide for a victory in the second annual Times-Mirror Grand Prix over this tough 3.275-mile road course.

His time of 2h. 16m. 45s. was about a minute under the old mark set by Chuck Daigh of Long Beach. Averaging 89.05 m.p.h., Hill finished a full lap and 17 seconds ahead of Lloyd Ruby of Houston, Tex. Ken Miles of Hollywood was third.

Hill in Ferrari
Hill was driving a Ferrari. Ruby a Maserati and Miles a Porsche RSK.

This Grand Prix was an Indianapolis Hoosier picnic brought to Riverside today. Only things missing, as a carnival-like crowd, a couple of hundred horses and a dozen dogs turned out for this Riverside classic, was the race-starting barrage of bal-

MOVING UP—Phil Hill of Santa Monica, making his big move, passes Georgie Glycer on 27th lap of second annual Times-Mirror Grand Prix at Riverside Raceway. Crowd of 75,000 thrilled as Hill, driving a 3-liter Ferrari, went on to score spectacular win. Times photo by Ben Olender

18 Cars Drop Out of Race

Continued from First Page to a halt and a new start was made.

The great English ace, Stirling Moss, holding third place behind the fast Ferraris of Phil Hill and Richie Ginther, went out on the 26th lap with an over-heated engine. Then Ginther, who had held the lead for almost half the race, lost oil pressure in his car and retired his powerful 4.1 liter Ferrari.

The 16-year-old Mexican champion, Ricardo Rodriguez, had moved his RSK Porsche into a definite first place in the under-2,000cc class when his engine failed and he was forced out.

Moss showed a sharp disappointment in the pit after he was forced from the race. He had been slowly gaining on the lead cars driven by Ginther and Hill and was driving a smooth, hard race.

Savvy in Turns
His 4.2 liter Aston-Martin was losing time on the mile-long straight to the speedy Ferraris but Moss drove deep into Turn Nine at the end of the straight on each lap to regain the lost distance.

Moss, at one point in the race on the 11th lap, spun out his car on tricky Turn Eight, but was able to make up the lost time.

Moss' lap times, recorded by his pit crew which included Aston driver Carroll Shelby, showed he was running even with the lead cars and on occasional laps was running even faster. His best (mile-long) was a two-minute, 9.9 seconds recorded by his pit crew on Lap 23.

Closing Gap
It was about this time that it became obvious to the crowd that Moss was making a fighting bid to overtake the lead cars. At that time Hill was running second to Ginther and Moss was slowly closing the gap between his car and the Ferrari of Hill.

Moss said after he dropped out that his one objective in the race was to win despite the handicap of trailing the two Ferraris, each with a higher top speed in the long straight.

The speed shown by Ginther, Hill and Moss soon put them far ahead of the field. Lloyd Ruby, in a 4.5 Maserati held the fourth spot behind the leaders and ultimately finished second behind winner Phil Hill as Moss and Ginther dropped out.

Ruby finished the race and then ran out of gasoline between Turns One and Two just beyond the start-finish line.

Daigh Goes Out
Last year's winner, Chuck Daigh, went out of the race on the re-start when his 3.7 Maserati would not run.



TWO IN ONE—It looks like two drivers are handling one car but actually it's Phil Hill (on inside) easing past Richie Ginther on Turn 7. Times photo by Larry Sharkey

Hill Takes Grand Prix

Continued from First Page

4.1 liter Ferrari, also owned by Eleanor von Neumann, had his toughest fight with teammate Hill, a 1:10.8 Maserati he was never far back.

Hill managed to wrest the lead from Richie for two laps—10 and 11—but Ginther regained and held it until the 35th when the oil pressure dropped completely in his car, forcing him out.

Moss was unable to continue in the fight that long. His oil pressure dropped out of sight on the 26th lap and he had to retire from the chase.

"I was losing oil pressure right along and the engine was overheating," he said in the pits during the race. "I had to use the windshield wipers at times because the oil was hitting the windshield."

Car Unsuit
"But this car just wasn't suited for this type of track. That long back straight was running even faster. His best (mile-long) was a two-minute, 9.9 seconds recorded by his pit crew on Lap 23."

Hill was jubilant, naturally, after his triumph but explained it was hardly as easy as it appeared. He went the last two laps with a sputter or two.

"My generator gave out on the first lap," he said. "I went the rest of the way on the battery. Luckily we had charged it up just before the race. At my intention. The generator had been giving trouble and I didn't want a thing like that to put us out of the race. My engine missed a few times near the end."

"If Richie had been able to stay in there, though, I don't think I could have beaten him. That big machine of his just had too much acceleration for me."

Phil's share of the winning purse as driver—\$4,000 overall, \$2,500 as first over 2-liter car and \$750 in lap money at \$25 a lap—should be handsome. Richie collected \$1,025 even though he didn't finish. He earned \$800 in lap awards and another \$225 as the day's fastest over 2-liter qualifier at 2:06.97.

missing Daigh's 1958 record of 2:04.03 set last year in the Scarab.

Daigh had no chance to defend the crown he won last year. Driving the John Edgar 5.7 Maserati he was first out of the starting grid. But the three-car accident at the start caused a re-start and Daigh developed gear trouble and got no farther than 100 yards on the second start.

Last year's winning car, Scarab Mark II, had little success either. Driven by Jim Jeffords of Milwaukee, it went out with valve trouble on the sixth lap.

Ruby, a distant second in today's race, earned \$2,000 in the Micro Lube Special Third Place Miles on the other hand, received \$2,225.

The extra \$225 he earned was a result of his fastest under 2-liter qualifying time in the morning session.

Docked One Lap
When the race was finally restarted they were both penalized one lap by the sanctioning USAC and sent to the rear of the line-up. Repairs at the post was the fraction, according to officials.

It certainly was a Ferrari show. Of the 15 cars to finish seven were Ferraris.

Next stop for Phil Hill is Sebring in December, the final formula I grand prix race of the year.

Ferrari TR, eighth; Augie Pabst, Scarab, ninth; Charles Parsons, Lotus Ferrari, 10th; Josie von Neumann, only woman entry in her mother's Ferrari TR, 11th; Ak Miller, Devin Olds, 12th, and Loyal Katskee, Ferrari Monza 12th.

One of these finishers Oker, went a good part of the distance without any brakes. The toll of mechanical failures was 18.

Daigh and Pabst had trouble right up to the starting line today. Daigh couldn't get his machine started. With less than a minute to go he got it going and took his position in the front row as the second-fastest qualifier—2:07.02. Pabst had a leaking fuel tank and was sent from the grid to the pits for repairs.

When the race was finally restarted they were both penalized one lap by the sanctioning USAC and sent to the rear of the line-up. Repairs at the post was the fraction, according to officials.

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HOW THEY FINISHED

FINISHERS—1. Phil Hill, 3 liter Ferrari; 2. Lloyd Ruby, 4.5 Maserati; 3. Ken Miles, Porsche RSK; 4. Dick Morgensen, Ferrari TR; 5. Sam Weiss, Porsche RSK; 6. Jack Flaherty, Lister Jaguar; 7. Bob Oker, Ferrari Monza; 8. Gordie Glycer, Ferrari TR; 9. Augie Pabst, Scarab MK II; 10. Charles Parsons, Lotus Ferrari; 11. Jose von Neumann, Ferrari TR; 12. Ak Miller, Devin-Olds; 13. Loyal Katskee, Ferrari Monza.

DRIVERS NOT FINISHING—Eric Hauser, Bill Cantrell, Jim Jeffords, Billy Krause, Stirling Moss, Ricardo Rodriguez, Wayne Weiler, Clem Proctor, John McAfee, Chuck Daigh, Doug Walker, Alex Budurin, Johnny Mantz, Don Huletta and Richie Ginther.

Distance—203.05 miles (62 laps). Time—2 hr. 16 min. 45 sec. Average Winning Speed—89.05 m.p.h. Fastest Recorded Lap—2 min. 10.30 sec. by Ginther. Fastest Top Speed—Ruby Maserati, 157.89 m.p.h.

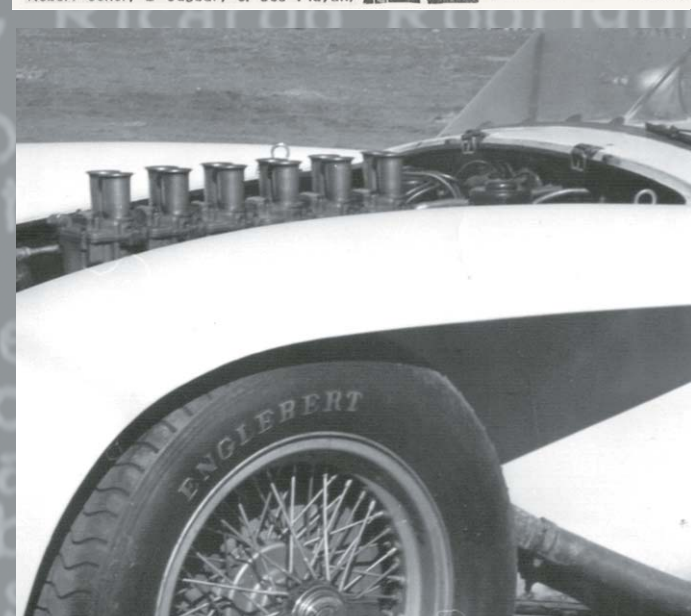
CONSOLATION RACE—1. Roger Ward, 4.4 Ferrari; 2. Don Huletta, Chevrolet Special; 3. Loyal Katskee, Ferrari Monza; 4. Clem Proctor, Aston Martin-Corvette; 5. Robert Seher, D Jaguar; 6. Joe Playan, Chevrolet Special; 7. Carlyle Blackwell, D Jaguar; 8. Jack Nethercutt, Ferrari TR; 9. Scooter Patrick, Porsche Special; 10. Chuck Cornett, Ferrari TR; 11. D. D. Michelmore, Porsche RS; 12. Art Snyder, Lotus Climax; 13. A. Whalley, Cooper Porsche; 14. J. Peters, Elva MK IV-A.

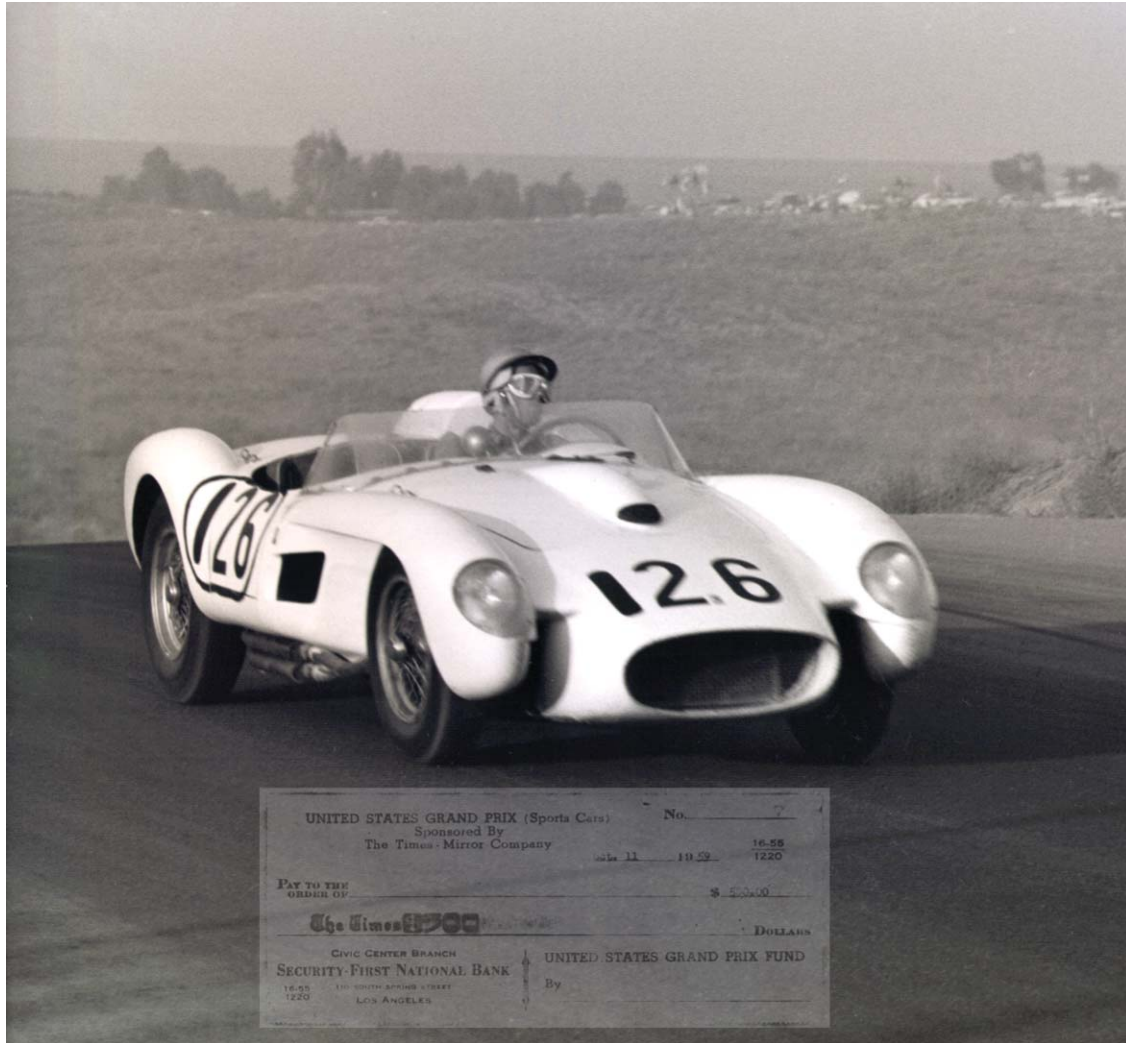
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Sacramento Sidelights



By **BOB KIMBALL**

Well, the Riverside International Grand Prix is over at last and I'm sure the 70,000 people that all tried to get on the Freeway at the same time after the race are glad, too. What a crowd!!

The race was very enjoyable to everyone concerned, especially for Phil Hill, since he walked away with approximately \$7500. Lloyd Ruby was second followed by Ken Miles who was the first under 2-litre car across the finish line. Dick Morgenseon, 3 litre Ferrari, was fourth overall and third in the over 2 litre classification and our own Sam Weiss was fifth overall, 2nd in the under 2 litre race. Ricardo Rodriguez led the little race for some time with Jack McAfee tailing behind him and Miles close behind the two. Eventually Rodriguez and McAfee both retired with mechanical difficulties and Miles and Weiss took over to come in 1-2 respectively. Gordie Glycer, while fighting a tire problem, placed 8th overall and 6th in the big car go which was quite good, considering this was the second time he has been in his new 3 litre Ferrari. It seems Gordie was told he couldn't run re-caps just a few minutes before practice time was scheduled to start. So, he had to buy the only tire available, which

was an American made tire, and it didn't do the job for Gordie. It's too bad Richie Ginther's car didn't go the full distance. He and Moss had quite a duel going for awhile. The race as always was a huge success for the Promoters as well as the drivers and perhaps the Northern California boys learned a little about how to attract a large crowd.



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Does sheet metal have any memory sitting in the half-light of the garage? Does it remember all those who have leaned over its fenders ...gripped its steering wheel with sweat soaked gloves? Does it recall transmitting its response of road and throttle to those who have occupied the left seat? Does it remember those who have beheld its shape from further back? A shape which held the dreams of so many. Or is it just the plastic memory of sheet metal shape held for perpetuity?

The Testa Rossa was emblematic of a significant engineering transformation inside Maranello. Representative of a timeframe that is arguably the firm's most notable evolutionary step, from Scuderia to quintessential race car constructor and premier limited

production manufacturer. Though built in December and January of 1957-58, the engineering shadow 0718 casts upon the half-lit smooth cement of the Montreal garage floor stretches back to the events of 1955 within Maranello.

The twin cylinder, two and a half liter Grand Prix engine left in the engineering department told the tale. This abandoned experiment was symbolic of the direction Lampredi so successfully exploited during his tenure as director of engineering at Maranello. In the same moment it was exemplary of Ferrari's own breadth of engineering principle experimentation during this period, and of the remarkable manufacturing capability for a race car constructor, soon to be taken seriously

as a limited series automobile manufacturer.

Lampredi's designs had sought to create power through simplification. Redirecting the company's Grand Prix engineering from the complexities of the twelve cylinder engines, to weight-saving in-line fours. Cars destined for Grand Prix, then road racing, evolved from the laureled Formula Two 500 of 1951 to become the stunningly powerful fours' and sixes' of '54 and '55. But a paradox had evolved with their power. It was almost a reprise of the engineering dynamics of Grand's Prix early years. A time when engines, with soup can-sized pistons, produced copious amounts of power far beyond the ability of the chassis into which they were mounted. Designed to provide substantial torque to launch Castellotti and Trintignant out of corners, the Scuderia's cars became unstable entering and exiting said corners. Brakes, tires and chassis had become eclipsed.

As the '55 season progressed, inno-

vation became improvisational experimentation on a most demanding level for the Scuderia personnel. Heads, engines, and chassis were being constantly reconfigured to combat the Teutonic efficiency of Neubauer's team, hold back the expected advance from the Trident of Modena, and possibly bring into balance Maranello's front line competition cars. While illustrative of the impressive talents and capabilities of the personnel inside Maranello, the mechanical improvisations embodied in the 555 Grand Prix car and 118 & 121 sports racers lacked the development, some would argue contemporary engineering, to achieve the success their sweat, at the factory and on the circuits, may have deserved.

Ironically, Dino Ferrari's open sports racer body design of '53, as interpreted and evolved by Scaglietti for the Mondial and 750 Monza, reached its elegant apogee in the 118 and 121. Their feline proportion, crispness of ovaloid shape and simplicity of line

gracefully belied the ill-mannered brutality, and ignominious lack of reliability from their 3.7 and 4.4 liter in-line six cylinder engines. By mid decade "clean sheet" designs from Mercedes, Lancia, Maserati and Jaguar, were showing the way through hairpin and S-bend.

Change was required inside Maranello. It was to come about in a most unexpected manner. Ferrari's primary antagonists were the well funded series manufacturers of Stuttgart, Turin and Coventry. Only Maserati and Aston Martin operated on the level of Ferrari. The success of both the former and the latter firms lay in the strategy of evolving a limited range of engineering targets. Ferrari, on the other hand, had taken his industrial improvisational methods, fired by the seemingly limitless ingeniousness of Lampredi, to a level of the very nearly counter productive. As example, in 1955 Maranello was producing a series of altered and modified Formula 1 cars in the guise of the four cylinder 625 and 555. For sports car competi-

tion the six cylinder 118 (376S), 121 (446S), and the four cylinder 550, 750S, 857S Monza and series2 Mondial served the team and the privateer. Two twelve cylinder designs had evolved to the customer cars from Grand Prix origins. The 4.5 liter long block sat beneath exotic sheet metal destined for the road as the 375 America. Colombo's short block could be found in 3 liter guise as the 250 GT Europa. Each aptly defining the market targeted. Add to this industrial mix the sixteen plus road races participated in by the Scuderia and its clients, in locations from Dakar to Venezuela, and the eighteen Formula 1 races. Though this represents a rather impressive array of mounts, it was all a rather myopic effort, development costs were exceeding the revenue from ever expanding sales.

Once again the fates stepped in to assist Ferrari. Gianni Lancia's dramatic foray into competition over the past four years had yielded stunning results. As director of the company

founded by his father, whose competition bonafides had been established prior to becoming a manufacturer and never committed company money to racing since, Gianni had given free rein to his engineers in the development of competition hardware, and a blank check. By 1955 Lancia had developed some most impressive hardware, and critically drained capital. A decision was made to turn over controlling interest in the company to Carlo Pesenti. The industrialist's interest was in providing fresh capital to secure the customer car division, while having no interest in the continued expenditures required for Lancia Corse. Thus began the mid-summer trilateral negotiations between Enzo Ferrari, Gianni Agnelli, and the Lancia family.

It is to be appreciated that the motivation for these negotiations ranged far beyond sport.

This period was marked by the dramatic ascendancy of the country's economy, recognized internationally as the Italian Miracle. Fathered by Italy's

post-War budget minister, Luigi Einaudi, the program *miracolosa* was initiated to rebuild the economy from its pre W.W.I levels, remake a devastated industrial infrastructure, and secure the Lire from rampant inflation; to state it in its most simple terms. As Martin Lewis tells us in his seminal work, *Modern Italy 1871-1982*, The policy chosen by Einaudi, and his fellow economists, was the monetarist squeeze of 1947 - '49. Though initially causing an economic slowing, the secured Lire was soon being saved, thus expanding the available investment capital for industry. The government banks began loaning again, and in concert with Marshall plan investment, Italy's infrastructure was reconstructed in the most contemporary manner. Natural gas reserves, discovered in the Po valley in 1944, were brought on-line. Together with the hydroelectric power from the Alps, Italy's northern industrial triangle was now energy self sufficient. When the dynamic director of Agip, Enrico

Mattei, had the foresight to sign long-term crude oil contracts in the Middle East and Russia, constructing the refineries in Sicily, Italy began enjoying the lowest energy costs in Europe. These many factors had a dramatic impact on basic industries, like the rejuvenated steel industry and cement. To insure the success inherent in the foundation laid for this export-driven economic growth program an 'ad valorem' tariff was imposed, of about 24%, to protect the home market.

By the mid-fifties cheap energy and raw materials, stable labor costs and export driven sales, resulted in an enviable up swing in industrial growth to 8.5 percent per annum. The Miracle was in full swing. These economic policies soon gave birth to entirely new industrial sectors. Motor-scooters, washing machines, refrigerators, very quickly dominated the markets of much slower growth Western economies. The only economies growing at such a rapid rate were Japan and West Germany. It was the presence of

the latter country on this short list that had made Mercedes' dominance of the Italian Marques in 1955 more than a sporting concern. The dramatic popularity of Motor Sport in the post-war world had bestowed a promotional significance that was national in scope. As such, the failings of Maranello, the disbanding of Lancia Corse, could bring ignominy far beyond the factory gates for these Ambassadors without portfolio.

The close inter-relation of industry and Government meant that problems of Ferrari and Lancia had to be addressed in a manner that returned the laurels to these representatives of Italian industry. Gianni Agnelli stepped forward, not only as an enthusiast and supporter of motor sport, but as representative for the county's industrial interests in continued international promotion. His agreement to secure acquisition and transfer of Lancia Corse assets and engineering talent to Maranello, in concert with an annual financial subsidy of 51,900,000

Lire (£30,000, or 83,000 1955 USD), for a period of three years, would insure Ferrari's international status as an object of desire. Beneficially reflecting upon Olivetti, Vespa and Alitalia.

4

The Chess pieces are moved

Beneath a gray sky, on 24 July 1955, in the court of the Lancia works, representatives of the Automobile Club of Italy, Fiat, Ferrari and Lancia oversaw the handover of Lancia Corse's assets. Six D50 Grand Prix cars, all the spares, drawings, tooling, two Lancia transports, and a streamlined body built for

the upcoming GP at Monza, were loaded up and driven to Maranello. Besides the hard asset transfer, was the transfer of engineering talent. It was this latter element of the deal that was to transform operations at Maranello.

Aurelio Lampredi had a long-standing offer at Fiat. In light of recent events, acceptance now seemed auspiciously timed. Ferrari had been the beneficiary of much from this man that came to him a young aviation engineer. Fiat was to profit handsomely from this engineer whose talents had fully matured at Ferrari. With the coming to power at Lancia of Professor Fessia, Vittorio Jano decided to accept the position on offer at Maranello, that of consulting director of engineering. With a budget for additional salaries, Ferrari called upon an old collaborator from the Alfa Corse period, Albert Massimino, from cross-town rival Maserati. To oversee a stimulation of customer car production capability, Ferrari further drained Maserati's talent pool by attracting away Vittorio

Bellentani. The latter had become available as a result of Maserati's lack of commitment to the 150S Grand Touring car program for the American market. Joining this august group of seasoned personnel was 28 year old Andrea Frascchetti, whose main focus would be engine development.

With all these pieces moved about the chessboard, it was still only mid-summer; the game only half played. Before family photos had even been placed upon desks of the new employees, it was time to marshal the forces, as they were, and head to Kristianstad, for the 7 August running of the Swedish Grand Prix. Though closer the arctic circle than Modena, and of no official points value in the Sports Car Championship, it was a competition whose cooler midsummer weather attracted all of the official teams. With a simple, we have it, send it, the ignoble 121 was sent north to battle. Its tire melting 360 HP, 4.4-liter engine was able to impress the natives, better the Astons, and stay ahead of Maserati's

nascent 300S, but once again the Swabian efficiency afforded Moss and Fangio exposed Maranello's effort for the slap-and-dash it was.

Thus was marked the perigean orbit of the in-line engines from Maranello. The 118 and 121's were shuffled off to Parravano, Edgar, and Kimberly in the States with a simple Adio; and the new team got to work. At this stage of the season it was to be noted, with a certain sense of irony, that Ferrari was actually atop the World Sports Car Championship on points; in front of Jaguar by two points, and afore Maserati by six. The majority of these numerical laurels being accumulated by the privateers who had lined up and purchased the 500 Mondials and 750 Monzas, over the past couple of seasons. These cars had proven to be generous of power, simple of construction, svelte of line, if rather needy when pushed over the top, but basic all-rounders for the client, and profitable for Ferrari. They had come at a time to be of great benefit for

Maranello, but the failing of the six-cylinders was but the most obvious example that the in-line engines were rapidly reaching the end of their life. Unlike the Formula One based twelve's of Colombo and Lampredi, the in-line engines weren't successfully migrating to the road cars. And on the track, Maserati's A6GCS never really allowed the 500 Mondials much success, and their new 300S definitely had the 750 in the cross hairs. At the top level, as we have seen, German industrial efficiency was getting quite the press.

Stirling Moss tells a story of how at Kristianstad a rock broke the windscreen of the 300SLR; by Dunrod, if a rock broke the windscreen, a new windscreen would rise in place of that which had been shattered. It was this kind of engineering, attention to detail, and capability to prevail that had the British and the Italians wiping their brow in relief, as Neubauer was wiping the tears from his eyes, in front of a row of cars being covered and taken off the stage following their win at the

Targa; which with Dunrod had sealed the Sports Car Championship, and with Monza, garnered the F1 season laurels, for the Three Pointed Star.

As this grueling and frenetic season came to a close in December there was a bit of warm wind competition on the island of Cuba. Beyond Daiquiris in the Hemingway style, sunglasses and turquoise water was a simple yet prophetic victory. Alfonso Cabeza de Vaca, Marquis de Portago took a 250 GT berlinetta Competition coupe to the laurels on his way to dinner. This was to be a portent of things to come for the Italian manufacturer, and the promotion of a country's industry.

Prior to the 17 September running in Ulster of the Tourist Trophy on the Dunrod circuit, a decision was made to make the best of what was at hand in Maranello to finish the '55 season. Though never as smoothly reliable in 3-liter form, as it had been in two liter form, the in-line four of the 750 Monza was suitably altered to continue the fight. The 3-liter was stroked from 90mm to 105mm, while the bore was slightly reduced from 103 to 102mm. The resultant replacement for the ignominious sixes of last season, was almost a return to the age of the low revving stroker engines; it produced 280HP at 5800rpm, from its now 3431.9cc engine. Thus the appellation of 857, to become the 860 Monza of 1956. The engines were put into 750 Monza chassis' and fitted with a new Pinin designed body. Gone was the lithe, sinuous Dino, via Scaglietti, design. This was a return to the substantial musculature of Pinin's pen and hammer.

The reworked four was but a stop-

gap on the way to explorations of power to be obtained from the truly balanced and sonorous delivery of forthcoming twelves'. The first was an anomaly, more analogous to buyer than company.

The 375 America had achieved all the goal set forth. It established Ferrari's reputation as a limited production manufacturer of customer sports racers whose engineering had evolved directly from Formula One. Luigi Chinetti early on appreciated the potential of the 4.5 liter racer as formidable weapon in American competition. Promotion undertaken, availability and support provided, sales were the inevitable result. Chinetti and Ferrari then carefully orchestrated its introduction as a very limited availability custom built high-performance road car. The young Marque was now established as a producer of rapid luxury cars in the big block demanding American market.

The 4.5 became the 4.9 liter 375 Plus, and victor of the promotionally rich

competition at Sarthe' and the Carrera Panamericana in '54. Having learned the profitable lesson, the rather ungainly racer was soon reconfigured as the forthcoming 410 Superamerica. By mid-summer 1955 the factory had dedicated production capability to the new road car. Before the first car rolled out of Maranello, Tony Parravano requested that one be constructed for competition according to his, "only one like it, a special," requirements. One of the first 410 production chassis' was fitted with a mildly fiddled with 5-liter motor (magneto ignition, breathing through three quad Webers), and sent over to Scaglietti's.

Tony Parravano, Italian driver Mario Bornigia, and Hans Tanner collected the car at Scaglietti's, and proceeded directly to the Modena Autodrome. The bodywork Scaglietti fashioned for this anomalous 410 SA chassis looked almost identical to the 750 Monza Parravano was also taking delivery of, save for a low full width speed boat windshield, and a central hood scoop

telling of the 5-liter twelve beneath. The crowd-attracting roar upon being lit-off at the Modena Autodromo also told of the twelve beneath its very "Sportsman's" bodywork. A few blue smoke wheel-well laps about the Autodromo, limited as they were to 5500 in third gear, told that this was indeed a potent car. A couple of days later Parravano and Bornigia took the car to Castelfusano for more speed trials.

The tongue-in-cheek appraisal of this blustery California contractor turned to looks of serious evaluation when Hans Tanner reported to the factory that Mario Bornigia had taken the 345hp "special" to an electrically timed run of 189.72 MPH on the twenty kilometer straight between Roma and Ostia.

With visions of rapidly covering the long flat asphalt stretches of the Pan American Highway, mental notes became metal. An entirely new chassis was conceived and fabricated. Its design reflected the empirical data being accumulated, through trial and

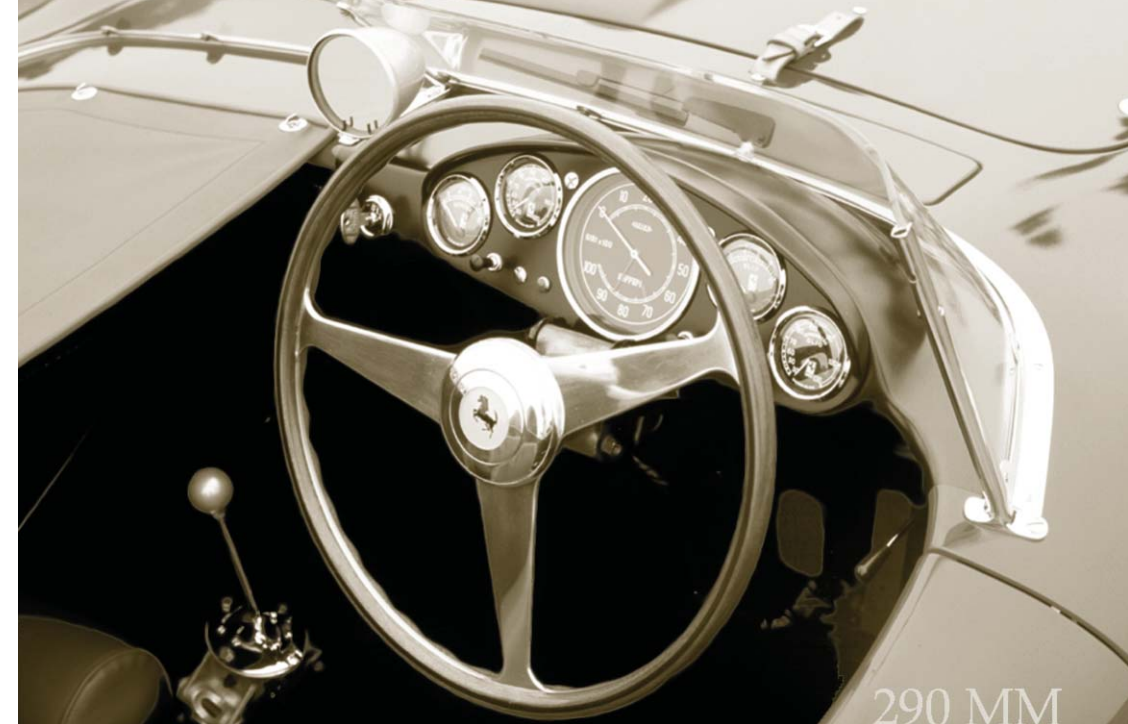
error, on the structural integrity and rigidity resulting from triangulation of smaller diameter tubes. Theories of how to best create lightweight multi-tube frames became facts. Though not truly a space frame, these chassis', with their network of small diameter tubing, were a major departure from the large diameter ovaloid tube designs previously the standard of Maranello. The hand of Massimino, Bellentani and Jano, and the experiments at Maserati and Lancia, were well represented here.

The engine for the newly designated 410S, was a 'what if we' set of modifications. The 5-liter was equipped with an ignition system worthy of NASA; four magnetos were fitted behind the cams in pairs, lighting off 24 plugs. The head used was similar in design to the '51 375GP engine, with a second row of plugs outside the V. Thus configured this power plant, the largest ever placed in one of Maranello's sports racing cars, delivered 380hp in the smoothly linear manner character-

istic of the twelve's.

The body design reflected the engine's layout in the fact that the bonnet was a two piece affair. The front "hatch" was raised for access to the radiator; while the engine cover extended over the crest of the fenders, that once removed, gave access to the second row of plugs next to the exhaust.

The disastrous events at Le Mans earlier in the season had laid bare an unspoken evaluation of the 'fifties racing scene; the cars were too fast for the primitive circuits being raced upon. Within weeks of the June event a number of races had been cancelled by government dictum, responding to public outcry. In Formula One, the German, Swiss and Spanish Grand's Prix were cancelled. During the development cycle of the new 410Ss, the Carrera Pan Americana had joined the list of non-events. Suddenly Maranello's new car, whose serial numbers were followed by CM, for Carrera Mexicana, was an orphaned car.



The design direction taken by the team at Maranello, in creating the two 410S CMs, was not so purposeless. The small diameter tube, triangulated chassis design was soon adapted to take the 860 Monza engine. More significantly the engineering team focused on creating a new 12 cylinder.

The basic construction of the engine may have seemed an amalgam of V-12 principles characteristic of Colombo and Lampredi's previous efforts, but through the efforts of Jano and Frascchetti, it was to incorporate most contemporary advances, causing an

engineering turning point in the history of Ferrari's twelve's. Here was a design that addressed specific horsepower through the contemporarily interpreted tenets of normally aspirated engines; small combustion chamber, off center ignition, high compression, advanced porting. Engineering criteria that was effectively relegating to the past the supercharged era.

The cylinders would be aligned at the previous 60 degrees, the over-square bore and stroke layout would be maintained; the stroke being increased to 69.5, from the Lampredi

68mm, while the bore was that of the Colombo 250 of 73mm, to achieve the 3.5 liter target, or actual 3490.61cc displacement. Falling, dimensionally, into neither of the previous molds, a new block was cast that was shorter than the Lampredi engines, and wider



than Colombo's. The construction was the screwed in cylinder, gasketless fixed head design of the Lampredi. But, it was the extensive evolutionary design work of the fixed single overhead cam heads that was precedent setting. Here the focus was

on breathing, specifically, attaining strong and balanced vacuum pressure from front to back of the twelve cylinders through perfect design integration between combustion chamber and porting. To insure a clean, strong burn, four magnetos fired of two plugs per cylinder.

This was to be no derivation of a four year old GP engine, detuned for pump fuel, finding its way to road car via sports racer. Here the dictates of Grand Prix performance levels were freshly brought to the twelve. In factory parlance the new engine was the tipo 130, once again through its individual cylinder displacement of 290cc would the car be named.

The 290MM was a dramatic return to the pre-War Alfa (read Jano) philosophy of designing a competition car as a whole. Contemporary engine design to achieve a smooth power delivery as an integrated element with chassis, suspension and braking. A fully balanced racer of 320hp produced at 7300rpm was the result.



The next car to result from this engineering quartet was the reworked 2-liter racer, the Testa Rossa. Here, once again we see the power brought into balance with the entire car. Here the team of Massimino and Bellentani would incorporate contemporary chassis and engine construction to simplify the overall mechanicals of the car. The faithful 90mm x 78mm four cylinder engine was retained, with Massimino overseeing modifications to strengthen the bottom end, and connecting rods. The 553 head, used on the preceding Mondial two, was switched out for a design quite similar to the original 500 design, but with a different cam box design. Power of this unit took the two liter from 160hp to 190hp. As with the 290 project, this car was reanalyzed as a whole, in light of potentials afforded through more contemporary engineering. The conclusion drawn from this review was to design a new chassis employing greater triangulation of frame construction, and coil springs all around - replacing the

previously employed leaf springs at the rear.

The complexities of a differential mounted transmission, to attain positive traction and weight balance, was irrelevant in a car with 190 horsepower. To this end a new transmission was designed to be mounted directly to the engine, using a solid axle. The new transmission employed Porsche patent synchroes on all gears, which afforded extremely positive shifting.

The new chassis design blended the Mondial's large diameter twin tube layout with the small diameter triangulated design tenets employed on the 290MM. The design also focused extensively on the rear suspension, to maintain live axle location for extremely positive traction. On each end of the live axle one trailing arm was attached above the hub center, with the adjustable Houdaille shock below. The coil springs were axle mounted just behind each hub. To establish roll center, a small diameter tube A-frame attached the differential

to two points on the frame just before the rear wheels. With the feet of the A-frame pivoting just ahead of the wheels, and point attached to the differential six inches below drive shaft centerline; accelerating torque reaction was transferred in compression. In concert with pin point coil springs reaction to compression, the Houdailles' handling rebound, and the short trailing arms covering brake reaction, this was a most positive live axle setup. Employed in the magnesium center section was a ZF torque-biased differential, enabling the outside wheel to push if the inside wheel were to lift.

The overall engine was a lower design, and when fitted in the new lower chassis, Scaglietti was able to construct a lower profile car. As a whole this was an effective weapon, with solutions that were advanced in their packaging, cost effective for manufacture, and economical for the single car privateer.

When the car made its American

debut at the New York auto show on 28 April 1956 its lower profile body signaled something new, the simplified drive train surprised, and the crackle red cam covers were the signature.

**Lessons
learned
twenty-
five years
earlier**

6

Starting in the late nineteen twenties a competition emerged in the racing departments of the premier Marques. It saw the dramatic increase in displacement, hence horsepower. It was inspired by the collapse of the 1.5 liter Grand Prix formula of 1926. The increased popularity of racing after the First World War resulted in the construction of a number of dedicated racing circuits. When few major manufacturers built Grand Prix cars to the

new formula, starting grids were thinned dramatically, as were the grandstands. The spectators that did attend the 1.5 liter races, having grown accustomed to the pinnacle hardware of Fiat, Mercedes, Alfa Romeo, Bugatti and Delage, were decidedly unimpressed. As were the promoters by the paltry ticket sales. Thus was born the Formula Libre competitions, clearly illustrating a split between the rule makers and the race promoters. The latter wanted to provide an exciting competition with the era's premier drivers, piloting dramatic hardware. Soon the grids were filled with blown Bugatti T-35Bs, running against 7-liter Mercedes SSKs, Maserati 2800s and Alfa P2s; piloted by the likes of Campari, Caracciola, Varzi, Nuvolari, Borzacchini. The first to address the power of the Mercedes was Maserati with its sixteen cylinder V4. Next came Bugatti's 5-liter T-54. Jano met the challenge by designing Alfa's Tipo A, which spread 3500ccs over twelve cylinders, in the form of

two straight six 1750 Testa Fissas, side by side. The results were startling power, in ill-handling packages, with alarming tire use, and many DNFs. Simultaneously with these leviathans, Maserati, Bugatti and Alfa developed supercharged cars of approximately two and a half liters. These finely balanced cars soon developed a consensus between the rules makers, the promoters, and the enthusiastic public.

History was repeating itself as the decade of the 'fifties reached its midpoint. Jaguar had increased the displacement of their D-type from 3.4 liters to 3.8. Ferrari had been running 4.5 liter, and above, cars of both twelve and six cylinders. And waiting in the wings was Maserati's 450S, which occasionally ran with 4.9 liters.

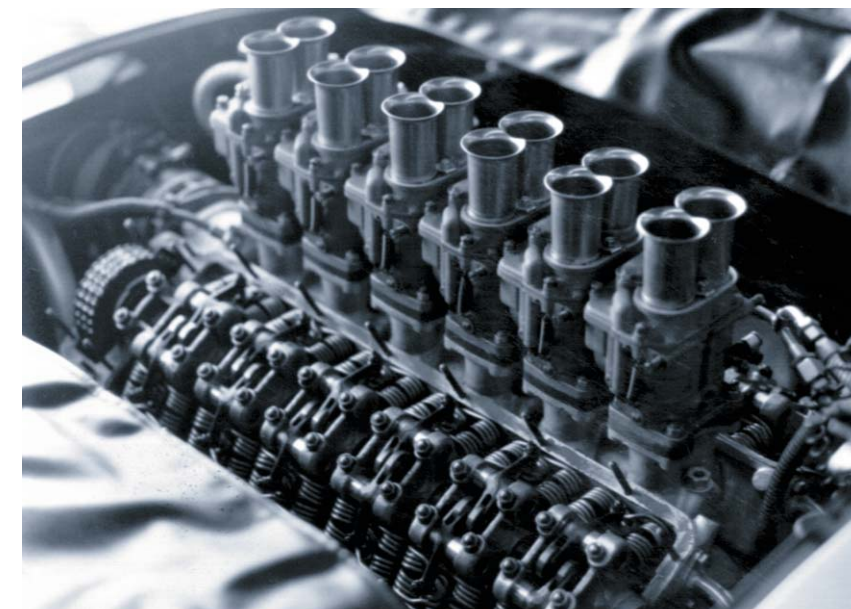
This acceleration of displacement had developed beyond the rules of Grand Prix, in the unregulated world of sports prototypes; run at Sebring, LeMans, Spa, Reims, and the Mille. They had become the standard weapon of choice for the Sports Car

World Championship.

Jano and Ferrari had been here before. They had seen, then as now, it was the smaller displacement cars that filled the grids, won the races, garnered the Championship points, and accounted for the factory supporting sales. Jano had continuously proven throughout his career that his interest was in lightweight cars, whose engines had been designed for impressive specific horsepower. So, as the 290MM grew away from its original intent, as a replacement for the four cylinder 3-liter 750 Monza, plans were put in motion to create a new 3-liter with the torque band, and smooth power delivery, of a twelve.

The first step was to utilize the basic architecture - steel sleeves and water jacket, removable heads - of the 128 engine series, but the relationship with the customer market 250s ended there. All the combustion chamber and porting research done on the single cam 130 engine of the 290MM was replicated, and further evolved for the cre-

ation of the new removable heads. While the twin plugs of the 290MM engine were jettisoned for simplicity, the single row outside the V remained. This positioned the single plug per cylinder off-center in the high compression combustion chamber, thus initiating one of the external signature elements of the 128 LM engine; pre-saging future twelves. Twenty-four head studs were used to fit around the six intake ports. The added benefit being to replicate the compression containing tight fit of a fixed head. Once again, the mechanic's bane, but precise valve alignment, hairpin valve springs were employed.



Like all competition engines, and the cars they powered, it was a birth by degrees. With the first engine producing 240hp on the dyno, it was time to start testing it in a chassis, and begin the process of constructing about it the mechanicals that would indeed make it the fleet and balanced competition car desired. The engineering team chose the chassis currently used in the 290 based series of cars. The chassis, designated 525, was, as has been previously discussed, the firm's first foray into small diameter tube triangulated construction. The design had proven to be robust and effective in handling the power of the last of the big in-line four 860s and the new series of twelves, as they evolved from the single cam 290 into the dual cam 315, 335 and 412s.

In preparing the prototype for the new twelve cylinder, Maranello's engineering team was examining the potential of consolidating the expense of producing both large and small displacement sports racers into one line

of profitable, potent, three-liters. This would involve, to a certain extent, an amalgam of current engineering principle within the factory. The two-liter Testa Rossa, with its direct shifting Porsche-synchro trans in unit with the engine, had proven quite effective, so the new twelve was kitted out in this manner. With the transaxle of the 290 / 335 series no longer required, the cross leaf spring and di Dion rear suspension held a lightweight differential within the factory's altered 525 chassis.

After extensive testing at the Modena Autodrome, and modification under the direction of Jano, Bazzi and Frascchetti, the prototype was showing itself to be a well-balanced and potent weapon. With power nearing the 100hp per liter goal, it was ready for a covert debut.

As the replacement for the profitable 750 Monza, Ferrari wanted to promote the new sports racer to the privateer market. He did this by arranging its first competition to be run beneath the heraldic of a customer team, so the

prototype was technically "sold" to American privateer Temple Buell. As many a 250 GT competitor in the Tour de France, Buell's effort was to benefit from the full backing and on-sight support of Maranello. So extensive was the assistance provided for the prototype's first public outing, the May 26th running of the 1957 Nürburgring 1000km, that it was listed as a factory entry. The selection of this race was specific as it provided a competition setting for further evaluation of Ferrari's new three-liter. The pre-race testing schedule for the 1957 Nürburgring 1000 kms made the track available to the teams for three days prior to the race itself. As Janos Wimpffen tells us in his book *Time and Two Seats*: "Not only is it (testing) held over three days, but it goes on from early morning until late in the afternoon. Altogether the circuit is open for 26½ hours."

From the lineup of drivers the Scuderia had listed on the Nürburgring entrants' list for the new

car, a great many of the available hours would be spent on course. Along with Buell's pilots, Masten Gregory and the young Italian Olinto Morolli, the factory's Olivier Gendebien, Wolfgang von Trips, Peter Collins, Mike Hawthorn and Maurice Trintignant were all listed officially, and put in extensive wheel-time over the 14.174 mile course. The intent of this entry was purely for the purpose of an extensive shake down, while withholding the car from the actual competition. Such was not to be. Jacques Swaters had entered a 250 GT LWB to be piloted by Olivier Gendebien and Wolfgang von Trips. On one of the latter's test runs through the Eifel mountains, the LWB was written off, so the torch of privateer representation of the Marque passed to the prototype.

At the front of this unusually warm and dry competition in the Eifel, large displacement representatives of Maranello and Modena pursued a British dentist, while the new 3-liter

circulated with regularity. In the hands of Masten Gregory the prototype held station in the 6th and 7th position. Passed off to the less experienced Morolli positions were given up, but a respectable tenth was taken at flag fall.

For LeMans a second three-liter prototype was assembled. Here another exploration was pursued. A complete 525 chassis, with transaxle, was fitted with the new three-liter motor. In the on-going contretemps over brake efficiency, that saw the nascent technology of aviation disc brakes being applied to competition cars with irregular results, and superbly powerful engines over burdening drums, Scaglietti explored a solution through air flow. For this second prototype, 0704, Scaglietti took a most unique approach to dynamic cooling of the massive front drums. He created a body that, from the cockpit forward, emulated the airflow of a Grand Prix car with tire airfoils. The radiator containing center section presaged the

frontend shape of 801 GP car, while being, in this initial form, rather wider than the GP car. The leading edge of the front fenders were attached to the independently shaped and structured grill center section by small winglets. The fenders were thus semi-autonomous structures, which served to contain the headlights and aerodynamically deflect air around the tires; providing an impressive amount of cooling to the front brakes.

Appreciating that brake cooling was not solely a matter of introducing substantial volumes of air on the face of the brake, but reducing the heat of the entire area beneath the bonnet, the front end mechanicals were exposed to the wind,

in 'thirties' sports racer style. It was an experiment in shaping sheet metal volumes to achieve beneficial engineering results. The resultant design was to have an impact far beyond pragmatic experimentation.

The prototype's driving team of Gendebien and Maurice Trintignant set a solid pace amidst the factory's big block 335s of Collins and Hawthorn, and the 450 Masers of Moss and Behra; maintaining a consistent third position in the early hours. As the race progressed through twilight, the competition settled into a three-way battle between the Bueb / Flockhart D-Jag, Gendebien and Trintignant, and the DBR1 of Brooks / Cunningham-Reid. Approaching roar in darkness, high beam signature, reseeding full-chat echo drifting through the drowsy festival marked the night's chronometric passage of laps. Beneath a welcoming starlit sky, the Jag / prototype / Aston battle

continued. As 2am foreshadowed half distance, the prototype's song of twelve became the choking of eleven, dropping to third, then fourth, then into the garage.

Sixty days later the two prototypes migrated north to the Swedish 6-hour, which held particular significance for the Championship with the possible cancellation of the Venezuelan competition. Mechanical maladies saw both parked at half distance.

With the victory of Tony Brooks' DBR1 at the Nürburgring, and the fine showing by the other nimble sports racers of mid-range displacement throughout the season, a formula consensus was being established beyond the rules. Much as in the days of *Formula Libre* twenty-five years earlier, the consensus spoke of a transformation in the character of road racing competitions; the days of the big blocks were numbered. Always attuned to such voices of opportunity,

especially when the industrially cost effective equaled potential revenue, Ferrari set about finalizing the engineering redirection of his sports racing effort; to consolidate the new sports racing stable on three-liter cars for 1958. The factory would run the three-liter in the transaxled 525 chassis. Meanwhile a new chassis was developed for the privateers.

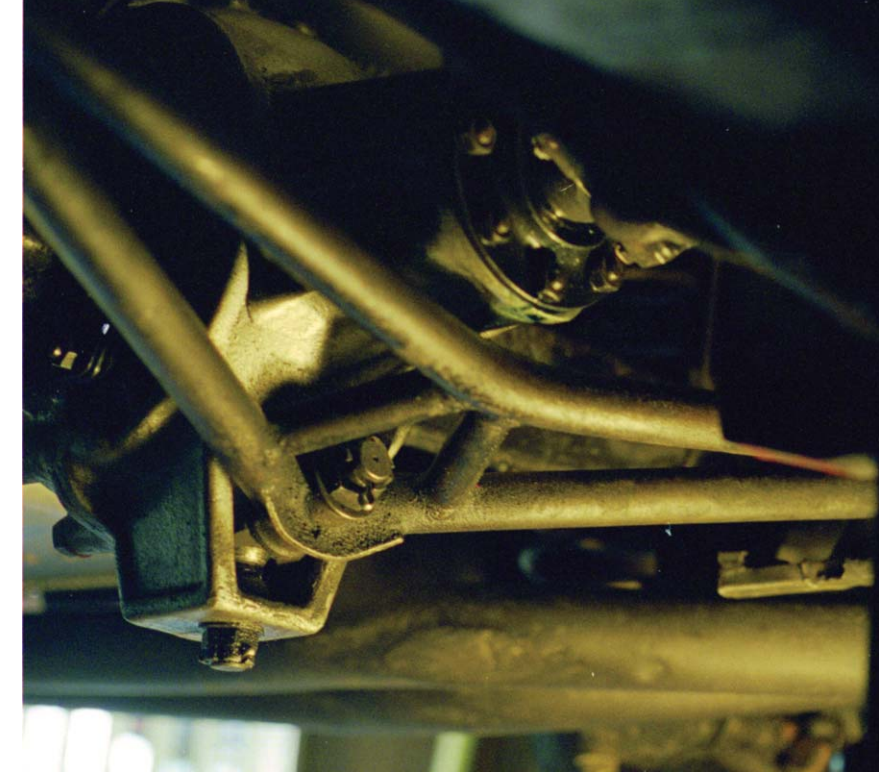
The chassis, designated the 526, was a solid evolutionary step on the way from the multi-tube to space frame. Its design incorporated three individual, yet structurally integrated, load-bearing sections. The forward frame section was a fully triangulated small diameter tube unit, structurally defining the Grand Prix front-end composition. The mid section, with its wide flat two seat area, employed the tuboscocco bracing, i.e. twin parallel tubes, vertically woven together by small tube triangles at the interior's Perimeter. The rear section was a fully triangulated lacework of small tubes, beginning with a sun-bust

array of angled tubes at the tail of the transmission tunnel which formed the basis of the rear enclosure, into which was fitted the fuel tank, and from which hung the suspension bits. Like the 525 chassis, from which it evolved, the two main tubes were of a smaller diameter than previously employed at Maranello.

The design tenets of the chassis reflected a new reality for the ten year old factory, international popularity. The factory had traditionally resisted producing service manuals to inspire, shall we say, customers to return to the factory for service. With the new three liters, the factory intentionally created a design that would be easily serviced and maintained, far afield, by the privateers. The factory cars, which would have a transaxle, suspended by di Dion and cross chassis leaf spring, required the journeyman mechanical attention of the factory mechanics. For the customer cars a new, more easily managed, design, with coil springs and a solid axle, was

the far sighted choice. Differential placement and bracing was given special attention with a new triangulated brace which pivoted off of a ball socket in an alloy box which was cast into the lower part of the differential casing. The two ends extending out to the sides of the framework, in front of the rear wheels. The result was a discreet blending of proven engineering; an effective consolidation of the large and small displacement sports racers, producing near Grand Prix specific horsepower.

Scaglietti's earlier experiment with the second prototype's bodywork volumes to achieve engineering ends, was chosen for the new car's sheetmetal. Its ingenious fusion of sports racer and GP front-end shape, created an aerodynamic venturi that drew heat from the brakes, engine and uniquely arranged headers, while structurally echoing the forward frame section. The shape of partially independent front fenders thus gave signature, and



name, to this body; garnering the design appellation of Pontoon fender.

As with the Mondial and Monza designs which preceded it, the new car was lithe, yet voluptuously feminine; quite distinct from the male muscularity of the Pinin competition designs. The shape was a work in progress throughout its very limited production cycle. The early models had a pronounced delicacy of volume and shape, which gave way to larger grill shapes, addressing the wind

almost on the vertical, and a fore shorted rear-end of increased roundness and height. By the November debut of the customer car, the cam covers had been painted crackle red, thus assuming the mantle and name of the proceeding Testa Rossa.

Timing was once again to be The Drake of Modena's ally; initiating the obvious, FIA dictate amended the redoubtable Appendix J to three-liters over the winter, bringing down the curtain on the past four years' unrestricted growth of displacement, and its associated expense. Thus did pragmatic engineering and strategic manufacturing consolidation take on near mythic proportions, in literary hindsight, as Ferrari found himself ahead of the competition, with a formula specific sports racer.

The pontoon fender TR was a design that became a set piece in the enthusiast psyche, joining the 250F Maserati, D-Type Jaguar and Mercedes' W196 in its 'stromlinienwagen' configuration.



Telaio tipo	526 B	matricola	0718 TR
Motore tipo	128 IM	matricola	0718 TR
Cambio tipo	526 B	matricola	6 IM
Ponte tipo	526 B	matricola	8 B
Collaudo il	Consegnato il
Cliente		
		
		

FOGLIO MONTAGGIO AUTOTELAIO

Peso N. interno

Trasmissione **526/57019 con giunto Fabbri ø 80 ant. a post.**

Freni ant. **508C/549 con ruote 553 e surpressare** cil. diametro **28 F.B.**

Freni post. **608C/481 " " 553 tamburi AZ** cil. diametro **25**

Mozzi ant. **166/70856/857** post. **526B/70936/937**

Pneumatici e ruote an. **RW 3077** post. **RW 3019**

Ammortizzatori ant. **508/64457** post. **518/61298**

Sterzo Scatola guida **508C/75043 ZF R=1/17 complessivo 526B/549**

Radiatore acqua e olio **526B/81103** olio **526B/81107**

Serbatoio carburante tipo **526B/820179** capacità li. **140**

Indicatore di livello

Marmitta di scarico **Tubo unico con finta marmitta** lunghe diametro

Batteria **BAROTEM 1200 AS**

Motore N. **IM 5**

Cambio N. **6 IM**

Ponte N. **B. B. R=7x32**

Frizione **526/50720 Flothel & Sachs**

Pedaliere **con 2 pompe 508B/67225**

Sospens. anter. **contamponatura ridotta di % 10. Barra stab. 518/64524**

Molle anter. **526B/64743 Kg. 330 fless. 0,212 %**

Molle poster. dis. **526B/61629** Carico **Kg. 224** N. foglie fless. **0,65**

Carrozzeria **Soaglietti con volante Nardi.**

Strumenti di bordo

Quadretto

NOTE

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Inviato in carrozzeria il

Finito il **10/1/58** Il Capo Reparto **Franchini**

Autotelaio tipo **526 B** Motore tipo **128 IM** Matricola N. **0718 TR** N. interno **IM 5**

FOGLIO MONTAGGIO MOTORE

Basamento **128IM/10612** Coppa olio **128C/11987** Filtri

Albero motore **128C/12261**

Pistone **BORGO rif. 3671** Repp. **9,2** Peso **gr. 229**

Anello tenuta **1 torsionale + 1 conico** Raschiaolio **1 da % 3,4**

Bielle **128/14509** Peso **gr. 468** Pompa acqua **128C/26449**

Teste cilindri **128IM/17265** Coperchi **128IM/17271** Elab

Guarnizioni testé **128/10622 Klingherite 1000, 250/10420 anelli rame amianto**

Valvola asp. tipo **128IM/17266** Valvola scarico tipo **128IM/17267**

Molla richiamo valvola diametro **128C/17281/2** Alberi distribuzione **130/17229/30 Alzeté**

Scatola distribuzione **128/22404**

Pompa mand. olio **128B/24451** Pompa di recupero **NO**

Pompa benzina **FIMAC 37,5/3422,5** Filtro benzina **NO** Pres. oria

Carburatore tipo **WEBER 38 DGN** N. **6**

Preso d'aria **con 1 carburatori**

Accensione con **2 spinterogeni** tipo **ST 207 DTEM/A** Fase: $D = \frac{AA \ 45/72}{CS \ 73/48} = \frac{AA \ 45/77}{CS \ 72/45}$

Frizione tipo **F & S** Carico

Giocchi albero-motore **0,05** Punteria **0,15 0,2**

PRIMO MONTAGGIO

Data inizio montaggio Data fine montaggio Montatori

OSSERVAZIONI

Histori con 1 solo raschiaolio, ritoccato sede valvola asp.

Data **7/1/58**Il Capo Reparto **Franchini**

OSSERVAZIONI DEL PRIMO RODAGGIO

Motore regolare, sta bene sotto carico, pressione nel carter 25/30 % H2O a pieno regime.

MOTORE DELIBERATO.

Il Capo Reparto **Taddei**

SECONDO MONTAGGIO

Data inizio lavoro Data fine lavoro Montatori

OSSERVAZIONI

Data

Il Capo Reparto



Autotelaio tipo... 526 B

Matricola N. 0718 TR

FOGLIO MONTAGGIO CAMBIO

Cambio tipo 526B/540 Matricola N. int. 6 LM
 Scatola e coperchi 508C/54932/933 Aq. 9
 Marcie 4 con ingranaggi tipo 526B. bionderizzati
 Sincronizzatore 513/tipo PORSCHE
 Ingr. prim. 1° 54944 2° 54945 3° 54930 ingr. rinvio 1° 54946 2° 54946 3° 53752
 Albero rinvio 508B20/53904
 Rinvio ad angolo per contachilometri NO Rapporto
 Pompa lubrificazione SI corpo pompa 342/53044
 Comando marce centrale arretrato con leva 526B/55024
 Giunto Fabbri ø 80
 Prova al banco BUONA

NOTE

Ingranaggi con boccole in metallo bianco TRIONE.

Data 8/1/58 Montato da Baltrami N. Il Capo Reparto Franchini

Autotelaio tipo 526 B

Matricola N. 0718 TR

FOGLIO MONTAGGIO PONTE

Ponte tipo 526 B Matricola N. int. B B
 Coppia conica 7x32 Modulo corona 4
 Planetari NO Scatola differenz. 518/59113/117
 Saggioli NO Cuscinetti ~~509/69123~~ RIV
 Autobloccante 518/59115/116 Ceppi 509/69123
 Semiassi 518/61231 Portaceppi 526B/69374
 Bracci laterali 518/61189 Cilindretti ø 25
 Flange di attacco Guarnizioni freni FREN DO 553
 Scatola del ponte 518/61196 Tamburi 513/69167 AZ

NOTE

Giunto Fabbri ø 80

Data 30/12/57 Montato da Sghedoni W. Il Capo Reparto Franchini