

Alfa Romeo Tipo 33

The development & racing history



Peter Collins & Ed McDonough
Forewords by Nanni Galli & Teddy Pilette

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Forewords by Nanni Galli & Teddy Pilette

My adventures in motorsport began when I won the Italian Touring Car Class Championship for over 1150cc in my Mini-Cooper in 1965. I bought an Alfa Romeo GTA for 1966 and began racing from the private Cortini team workshop, not with Autodelta.

At the first competition of 1966, the Monza Four Hours, I had one of the less competitive cars but set faster times than the superior vehicles. Because of this Ingegnere Carlo Chiti, the Director of Autodelta, invited me to Alfa Romeo's test track near the village of Balocco. Late in this test, with my own car, I managed to make a better time than all the other drivers. This was how my professional relationship with Alfa Romeo began. With my Alfa GTA, under the direction of Maurizio Siena and with the general direction of Carlo Chiti, I obtained a number of victories in England and all over Europe. In one particular competition which means so much to me, I beat the much-missed Formula One driver Jochen Rindt at Zolder in 1966. This was the greatest source of encouragement.

I spent the next several years driving the Tipo 33, both the 2-litre and the 3-litre. I had important wins at Le Mans 24 Hours and Daytona, and worked very closely with Chiti and the team at Autodelta for many years. This helped me to expand my career into European Formula 2. With the Tecno team I was 5th in 1969, and that helped me into Formula 1 and eventually into other sports prototypes.

I did so much racing and testing with the Tipo 33 that it is hard to remember it all, but it was always a wonderful feeling to be with Alfa Romeo and Autodelta. I am very happy to see the history of those days being recorded. They were the years in which the competing drivers fought against each other, but in private life we were all good friends. I certainly believe this was a more difficult period for drivers than today. They were unrepeatable times.

Nanni Galli

Count Rudi van der Straeten, who was very interested in racing, had been racing Alfa Romeos in the 1960s. In 1967 he had a GTA which I was asked to race, and then I also raced the TZ2 which he had. The VDS team had a close relationship with Autodelta and Alfa Romeo in those years, so it was natural that the team should become involved when the Tipo 33 appeared. I was signed

only to drive prototype cars because I already had some good experience at a higher level. Count van der Straeten had the money to buy whatever cars he wanted, and he could have been more successful with other makes, but he did what he wanted to do and continued with Alfa Romeo.

The VDS team bought the cars and the spares from Autodelta. The Count wanted to be free of the politics of the company so he paid for everything. There was an agreement for some development but we were always a step behind in the development as with many private teams. We had help from Autodelta, but with a delay, and the cars were never as quick as the factory cars. We had a good supply of parts, but the engine in the early days was very fragile, so it was always going back to Milan for work.

I drove the car in 1968 for the first time at Jarama, in preparation for the Le Mans test days. We had the car in the beginning of the year so we had a chance to get used to it. All the VDS team shared the car at the Le Mans test days, and then I raced at Monza, and Autodelta sent Biscaldi to drive in the car with me. Then in May we went to the Targa Florio. I love to drive fast on the road, so going to the Targa Florio was very special. I could always drive fast on those kinds of roads and it was very great fun, a shame that those kinds of races don't exist anymore. I truly enjoyed places like the Targa, Mugello and Vila Real in Portugal. At the Targa the car was still far from being perfect, because it had the strange chassis which affected the handling. It was very loose at the back, and very different at the front, so it was very hard to drive.

We had a very busy time in the VDS team in those years. The Count didn't like to stay at home, so we were frequently away racing with the Tipo 33. We were really the only important private team, and raced all over Europe, from Spain to Sweden, probably more than any other private sports car team at the time. It was a good time for me. If we could have got the 3-litre engine, van der Straeten would have stayed with Alfa Romeo. We were promised it but it never came. We had the 2.5-litre engine, which was very good, but not enough to win outright which is what the team wanted. But those were very good years. I stayed with VDS for twelve years and it is good to remember those times.

Teddy Pilette

Nanni Galli draws one of his Balocco crashes for the authors! (See drawing in photo gallery.)



Teddy Pilette was a stalwart member of the VDS Alfa team.



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Neil Doig supplied additional photos, but a huge thanks goes to Jos Hugense in Holland whose collection of photos allowed us to identify many of the cars discussed in this book, and many photos from his collection are included. Mike Jiggle drove the camera car at photo shoots and also took some of the photos, though Peter Collins provided most of the photos of our tests with cars. Casey Annis and Vintage Racecar Journal supplied the 1972 Laguna Seca CanAm photos. Dominic Gasnerie offered help from his large Le Mans archive.

General help, information and difficult to obtain gems came from Simon Kidston, Keith Booker, Juhani Anttila, Marcello Gambi, and Emilio Comelli. We would not have been able to meet as many people such as Signors Gambi and Comelli without the help of our friend and Alfa stalwart Jason Wright. Antonio Magro at the Museo Alfa Romeo at Arese gave us access to a number of cars, especially the OSI Scarabeo, and similar help was provided by the Biscaretti Museum in Turin. The assistance of Alfa Romeo in Italy was a key factor in this book being possible. Rare insights into the connection between the Alfa T33 and Tasman and other racing came from Frank Gardner, Alan Mann and Patrick Quinn. Thanks to Mick Walsh for encouragement.

We hope we have not left anyone out, and apologise if we have.

The present from the past

The formal decision to undertake the writing of this history of the Tipo 33 came during the final weeks of completing my book, *The Alfa Romeo Alfetta 158/159*, although co-writer Peter Collins and I had been committed to the idea for some three years and had been studiously gathering material on the Trenta Tre, often feeling it might have been easier to find, explain and build a replica of the Holy Grail!

However, researching the Alfetta had been invaluable in creating the necessary mindset for tackling this task. It forced the author to grasp the difficulty of understanding how Alfa Romeo worked as a company, and particularly, how hard it was to be certain about the nature of the decision-making process in relation to competition within that company. While many sources variously see the Tipo 33 as purely an Alfa Romeo, there are others who would see it as entirely an Autodelta project, and some who would see it as a 'Chiti', attributing everything to do with the Tipo 33 sports car to engineer Carlo Chiti. The parallels between the relationship of Alfa Romeo and Scuderia Ferrari and Alfa Romeo and Autodelta are especially interesting in understanding how the Tipo 33 came about and how the racing programme progressed over the long period from 1967 to 1977. Peter Collins' recent book on the Lancia Integrale also provided valuable experience in researching the origins of an Italian motorcar.

The difficulty for the authors in this book was that there was both truth and error in all of the stories we were told about the origins and development of this particular model of post war Alfa Romeo. There were indeed those who saw Carlo Chiti as the master planner of what would become a World Championship winner for Alfa Romeo. There were those who said he was the creator, designer and builder of the Tipo 33. Indeed, there were also those who wanted to give him little or no credit at all, and were very disparaging about his role. Much of the problem arose from the lack of record-keeping typical of so many such projects at the time and since. Alfa Romeo, Chiti, and Autodelta, during the period the cars were built and raced, kept virtually no records, and this single fact makes the identification of individual cars problematic if not impossible. We heard from owners, for example, who had been told by Carlo Chiti, "this is the 2nd place car from the Nürburgring". Sometimes it was true,

and sometimes it wasn't. There were additional myths already perpetuated about the main characters in this drama, some of which we had to unravel very carefully. There were also many people who claimed knowledge of the origins of cars but would present no evidence.

While it is essential to identify the origins and background of the Tipo 33, we wanted this book to be very specific to that car and not become overly distracted by the complex series of developments going on at Alfa Romeo in the early and mid-1960s, nor did we want this to become only a biography of Carlo Chiti, historically tagged as the single most significant person in the Tipo 33 story. Thus we present a summary of the main events leading up to the development of the Tipo 33 and discuss Chiti's appearance on the scene at that point. We have attached a reference list at the end of this book for those wishing to read the detailed accounts that contribute to other related aspects of the story. It is also important to point out that, as often happens in recording history, these accounts do not necessarily agree with each other, and are differently weighted in relation to which events are more significant. An example of this is the tale of how Autodelta came to be called Autodelta, of which there are at least seven different versions, most of them partially true. We have weighed the evidence and presented the 'strongest' version and chosen not to take up too many pages with all the accounts unless that is essential to understanding something significant about the Tipo 33.

There are two important points to make about the purpose of this book, which is intended to be as definitive an account as possible of the Tipo 33. One is about the desire to and difficulty in providing a chassis-by-chassis account of the story. This, as any Alfa Romeo enthusiast knows, is a profoundly challenging task, the nature of which was always clear on the faces of Alfa experts when we said what we were trying to do, and some of the most knowledgeable said both that it was a 'good thing to do' and also advised against attempting it! From the outset we were aware of the common belief that all knowledge of individual chassis and what they had done had died with Chiti because he kept everything in his head. The success of this book is largely determined by how well the reader feels we tackled that task and how much we uncovered. In the end, we hope we have

The very first Tipo 33 prototype, shown in 1964, was tested with a variety of engines.

provided a good story of an immensely interesting decade. While we present information on individual chassis, we are cautious in our view of the authenticity of every one of them. We know that some cars were never given a chassis stamp; that these were sometimes changed; that where chassis plates were used, these were often transferred from car to car; and that cars with no race history exist. We have also come across chassis which have been declared as 'not genuine', which have turned out to be quite authentic! While we have attempted to be as accurate as possible and considered much evidence, we believe there will be errors. We have decided that a history of individual chassis was beyond the scope of this volume, but also to make this the subject of a second volume which will detail as many cars as possible and their histories. Nevertheless, we have provided as much chassis information as we were able for this book.

The second point concerns the scope of the work, which we believed needed to include not only the competition cars but also the road-going Stradale and the various concept and show cars based on the Tipo 33 chassis. To this end, we have provided not only historical data, but as much information as we could on the location of cars at the time of writing. To that end, the publisher and the authors invite contributions from readers for future revised editions. We actively welcome additions to the task we have begun with the evidence to go on developing the story.

Alfa Romeo and the context of the 1960s

Alfa Romeo left Grand Prix racing at the end of 1951 after winning the first two World Championships for Drivers with the 158/159. The decision was taken to design and build a racing sports car for the then current sports car regulations. This resulted in the appearance of the now well-known Disco Volante, which in its original exciting-looking form with a 2-litre engine, was a complete failure as a race car, and the highly modified 6C 3000CM was constructed for long distance races in 1953. After some promising performances, the latter only managed one victory at the 1953 Supercortemaggiore race in spider form, in the hands of Juan Fangio. That year Alfa Romeo departed from major participation in competition with the exception of involvement in touring car races, where the focus was mainly



Rear view of the Tipo 33 prototype in the Alfa Romeo workshops.





The front of the prototype resembles the OSI Scarabeo spider which followed it.



Giulia engine transversely mounted in the OSI Scarabeo.

on supporting amateurs. As was the practice at the time, work continued on a variety of prototypes, few of which ever raced, though they often incorporated features first tried many years before. An outstanding tradition at Alfa Romeo was to return to earlier well-designed projects and update them for current regulations or trends.

The financial conditions at Alfa Romeo, as in the past, forced the company to abandon competition and concentrate primarily on production cars to bolster the company's lagging fortunes. The Giulietta saloons, spiders and coupés of the mid-1950s brought considerable prosperity and re-established Alfa Romeo as a major manufacturer. This prosperity also funded continued development in the competition department, and in 1960 the Giulietta Sprint Zagato appeared in a short production run. The Giulia range then followed and the Giulietta SZ spawned the next generation racer, the Giulia TZ or Tubolare Zagato. On the surface it would appear that the subsequent development of this TZ (or TZ1 as it has become known), the TZ2, was the immediate ancestor of the Tipo 33, especially as a car bearing the code 105.33 was tested with a version of the Giulia engine that was in the TZ. However, that would be only partly accurate, as the Tipo 33 engine was not a doubled-up 4-cylinder TZ but was inspired by a completely different engine with its roots back in the 1950s.

In 1938, Orazio Satta went to work for Alfa Romeo, as did Giuseppe Busso in 1939, and they worked side by side on a huge range of innovative projects. By 1959, Satta was managing the design departments, and from 1948 to 1977, Busso had been

responsible for the design of all the mechanical parts produced at Portello and then at Arese. Satta had two deputies, one of whom was Giampaolo Garcea and the other Busso. Satta, as manager, laid down the general rules and plans for the design department, and his deputies carried these out. Satta and Busso had been involved in competition work in the early and mid-1950s, experimenting with a proposed 12-cylinder Grand Prix car, the 160, which was never built. A number of prototype engines were built, including a 2-litre V8 block to go into a sporting GT car, but it never reached production. Nevertheless, the engine blocks were made, the idea of a small V8 being very attractive to the design engineers. Incidentally, we were able to examine the prototypes of these original V8 blocks as they sat on the shelves of Marcello Gambi's workshop in Milan. These blocks were numbered 2044, a number that corresponds with a mid-1950s GT engine project. We examined these blocks carefully and they were interchangeable with the early T33 engine. The heads and everything else fits except that there is a central starter motor.

Under Satta's leadership, Alfa Romeo produced a wonderful range of cars in the post war period, and Luigi Fusi credits Satta for providing the leadership for everything from the conversion of the Grand Prix 158 engine from single-stage to two-stage superchargers in 1946, through the Tipo 33/3 tubular frame 3-litre car of 1972.

Although the Tipo 160 Grand Prix car was never built, a number of its characteristics, initiated by Busso, were of interest to the design team some years later when the Giulia was being



The first OSI Scarabeo built on a Tipo 33 chassis, now in the Museo Alfa Romeo.

used as the basis for a possible serious return to competition. A number of ideas from the 160 were adapted when Busso was largely responsible for designing a racing prototype. This was indeed the prototype for what became the Tipo 33. A number of chassis were later passed to OSI and it eventually built a concept car known as the OSI Scarabeo, which incorporated many features Busso had been trying to capture in the prototype. The Scarabeo first appeared at the Paris Show in September 1966. The 160 would have had the driver as far back in the chassis as possible, and the design centered on the driver being able to assess and control the behaviour of the entire car. These principles were incorporated into the prototype and then into the Scarabeo, with the driver well back, though these two cars had the engine behind the driver, unlike the 160. The Scarabeo used a 4-cylinder Giulia engine located transversally and at a slightly inclined angle. Visibility and driver control were excellent, clutch and gearbox were integral with the engine and drive to the differential was also an integral unit. A novel approach to the chassis frame was taken, with large diameter tubes linked in an H-shape, these tubes carrying the fuel. Experimentation with exotic materials was part of this project, with considerable quantities of magnesium appearing in various versions. Three of the Scarabeos were built, one of which remains in the Alfa Romeo Museum at Arese in coupé format. A spider also exists in Alfa Romeo's possession, though it is not on display, and a third car managed to escape and is believed to be in Canada. The spider version of the Scarabeo bears a strong resemblance to the prototype which Busso had been working on, and it seems likely that the prototype chassis became one of the Scarabeos.

The spider prototype had been tested in 1965 with a TZ engine, sometimes thought to have been in TZ2 specification. However, the prototype which was taken to Alfa's test track at Balocco on January 14, 1966 with Consalvo Sanesi as the test driver and Giuseppe Busso in charge, had the developed V8 unit, based to an extent on the mid-1950s unit. The car tested again at Monza a short time later, with further engine and body developments. The prototype had the engine in-line rather than transversally as in the later OSI Scarabeo. This little effort in the depths of the Italian winter turned out to be the first running of what would become the Tipo 33 sports racing car of 1967.

The bulk of the work on the Tipo 33 prototype had taken place in 1965 but would seem to have started in the later part of 1964, about the time when Alfa Romeo was considering what its competition programme might be three to four years hence. This was when Fiat and Ferrari had announced the Fiat Dino sports car and the Tipo 33 would have been a counter to this move. However, it is unlikely that anyone ever planned that there would be a prototype, which would then be used also as the basis for a concept car. This just seems to have happened, as was the practice at the time. Though Sanesi tested the spider prototype in January 1966, the first car that came from OSI was a coupé. Later information suggests that the car had been built in cooperation with OSI of Turin to whom Alfa Romeo had supplied at least three of the H-shaped chassis frames, suspension parts, and at least one Giulia GTA engine with integral gearbox and transversally located final drive. The first coupé seems to have had the driver slightly further forward than had been originally intended. The spider moved the driver even closer to the front,

OSI's final Scarabeo coupé on the Tipo 33 chassis.

about midway in the wheelbase. The concept of the driver sitting away from the front wheels was abandoned altogether in the final coupé.

It is fascinating today to examine this car. With the help of Museum curator Antonio Magro, the authors recently had this opportunity with the coupé, which remains at Arese. The tubular frame chassis is visible from underneath as is the independent rear suspension with transverse arms and coil springs with hydraulic shock absorbers mounted inside. This car remains very much as it was in 1966 and sits in close proximity to the various models of the Tipo 33 racing cars in the Museum's possession, though relatively few visitors will be aware of the direct link between them.

Chiti, Chizzola and Autodelta

The initial tests of the new prototype, coded in January 1966 with the type number 105.33, were carried out directly under the supervision of Giuseppe Busso with the assistance of long-time chief test driver Consalvo Sanesi. Sanesi had raced in the 158/159 Grand Prix cars, and had played a major role in the development and testing of the Disco Volante and 6C 3000CM cars, and had raced the latter as well. Soon after the first tests, Satta directed Busso to hand the project over to Carlo Chiti to take it forward.

Carlo Chiti, born in Pistoia in 1924, came to Alfa Romeo as a trained engineer in 1952 and was soon employed in the Special Experiences Department, an appropriate name for what was essentially the racing department, as one of Chiti's first responsibilities was to iron out the early problems with the Disco Volante and then the 6C 3000CM. The department closed down at the end of 1953, the point at which Satta was focusing efforts on new production cars. Chiti worked with fellow engineer Giotto Bizzarini at Alfa Romeo, and when Bizzarini moved to Ferrari he tried to get Chiti to join him. Ferrari Technical Manager Andrea Frascchetti joined Bizzarini in trying to get Chiti to Ferrari.



Ironically, it was Frascchetti's death in a road accident that led to Enzo Ferrari offering the Technical Manager post to Chiti, whom he had already met.

While Chiti respected the traditional Alfa Romeo and Ferrari view that the engine was the key ingredient in a racing car, he had a growing interest in suspension and aerodynamic developments, and with the task of improving the Ferrari F1 Dino 246 in 1958, was paying more than a little attention to what John Cooper was doing with rear engine cars and with independent rear suspension. Chiti was instrumental in convincing another Alfa Romeo engineer, Lodovico Chizzola, to come to Ferrari where they worked together until the end of 1961. This was one

As can be seen, the tubes were subject to cracking, but survived for many races without repair.

of the many successful collaborations that emerged in the racing departments of the time, and this one was to move even closer together in the near future.

Chiti was, of course, a major figure in Ferrari, winning the World Championship in 1961 with the 156 Sharknose, a beautifully designed and executed Grand Prix car with the engine behind the driver – a first for Ferrari. However, political strife was abundant at Ferrari at the end of what had been a very successful year. The main figures in the Ferrari competition team left en masse in November, something that Chiti was later to admit he regretted doing. Chizzola had already gone a few months before, preferring to return to his home at Udine to design his own cars and take on the distributorship of Innocenti, calling his new concern Autosport.

Carlo Chiti spent 1962 planning his own new F1 car, the ATS, in conjunction with Count Giovanni Volpi di Misurata, Bolivian tin industrialist Jaime Patino, and the Florentine industrialist Giorgio Billi. Chiti designed and built a tidy 1.5-litre, 90 degree V8, engaging 1961 World Champion Phil Hill to drive along with Giancarlo Baghetti. Hill had left Ferrari at the end of 1962 following a disappointing year. The ATS project had considerable promise, but misunderstandings and disagreements between the partners lead to a falling out and then severe under-financing which clearly meant the project would not survive. While it carried on for 1963, however, a very impressive ATS GT coupé was built, and most of the testing and racing of this car was done by Teodoro Zeccoli, who forged a good relationship with Chiti.

In 1962, Chiti was approached by Satta at the request of Dr Giuseppe Luraghi who had become Alfa Romeo's president in 1960. Luraghi had, in the 1950s, been the Director General of Finmeccanica, a financial group which included the mechanical and construction sections of the Italian IRI – the Institute for Industrial Reconstruction. The government-owned Alfa Romeo was part of the IRI. Luraghi, in his role within the IRI, established the long-term plan for Alfa Romeo, the plan that became reality in the hands of Orazio Satta. Luraghi guided the company through difficult days, but fortunately he was a fan of racing, and the 1900 saloons of the early 1950s found themselves with Finmeccanica sponsorship. By the time the Giulietta and Giulia production cars were selling in large numbers, Luraghi had left



Close-up of the fairly crude arrangement for the fuel tanks.

IRI to concentrate on Alfa Romeo. He wanted a return to serious competition, something that would start with supporting privateers and hopefully develop into a fuller factory return to racing. In this atmosphere, work began on the Tubolare Zagato, or TZ, a collaboration between Alfa Romeo and Zagato. Race development had been done by a number of small tuners with the Giuliettas, but Luraghi envisaged a bigger, specialist operation. Thus he had Satta approach Chiti to consider undertaking this responsibility with the ATS setup.

Chiti saw the value in a working link between ATS and Alfa Romeo but was unable to convince the backers of the wisdom of



The chassis number stamp on the early chassis tube: 75033.022.

such a connection. They had their own interests and presumably did not want to have such a big company involved. Had they foreseen the rapid failure of ATS, they may have acted differently. As 1963 progressed, Chiti could see the difficulty ATS was in, and he and Chizzola met to discuss the future. While the timing of events remains uncertain, the pair agreed that they would form a partnership which would allow them to work on various racing projects. It is even likely that they saw a chance that they could salvage the arrangement with Alfa Romeo. They agreed to form a company to design and construct race cars, and the first headquarters would be located in a building owned by Lodovico Chizzola at Feletto Umberto in the Friuli region near Udine. The three partners in the business were Chiti, Chizzola and Chizzola's brother Gianni, also an engineer. At one point there were those who thought Feletto Umberto was a partner in the new concern!

At first the trio was going to continue to use the name Autosport but soon realized this would bring them into conflict with Innocenti, so temporarily used the title Delta-Auto. Gianni Chizzola claims credit for the name Autodelta, as he lived in Milan, his brother in Udine and Chiti in Bologna, forming a neat triangle. The Greek letter D for Delta, which is triangle-shaped, was the inspiration for the use of the word Delta, and thus Autodelta was born. It was registered in March 1963 and it was not long before there were further meetings with representatives from

Alfa Romeo, and the decision was made to have the TZ built at Autodelta's premises. As Chiti was still attempting to run ATS, it is possible to speculate that he foresaw ATS' short future and nurtured the Alfa Romeo deal. It also seems quite likely that the attention given to the new relationship with Alfa Romeo was partly the cause of ATS' downfall.

With Chiti and Chizzola as the two shareholders in Autodelta, arrangements were made for the new concern to become the competition arm of Alfa Romeo. This was not a new venture as a similar relationship had existed with Enzo Ferrari and the Scuderia Ferrari, with mixed success, and in the early 1960s Fiat had similar arrangements with Abarth and Renault with Alpine. With Chiti commuting back and forth between Bologna and Udine, the business grew rapidly, with the aim of producing 100 of the TZ model for the purposes of homologation as an FIA-approved GT car. Luraghi's philosophy was not to have a large competition department, but to have an outside specialist doing this work. The TZ was immediately successful but the operation was plagued by huge logistical difficulties. The chassis were built in a workshop in Veneto which had specialized in aircraft construction. Then the chassis were sent on to the Zagato works in Milan to have the shapely bodies fitted, before being delivered to Udine for the mechanical components and finishing.

Luraghi felt that as the competition side was prospering and sales to private customers were very healthy, Autodelta

needed to operate from premises much closer to Arese. Chiti and Lodovico Chizzola were invited to Arese and Luraghi offered Chizzola the post of General Manager and Chiti the Deputy Manager's job, or as Chiti himself said "possibly vice versa"! This would involve a transfer of shares for the very low price of some five million lira each, and Autodelta would become the property of Alfa Romeo. Thus Autodelta stopped being a copartnership on November 30, 1964 and became a stock company. Autodelta was essentially a small nationalized company within a larger nationalized company.

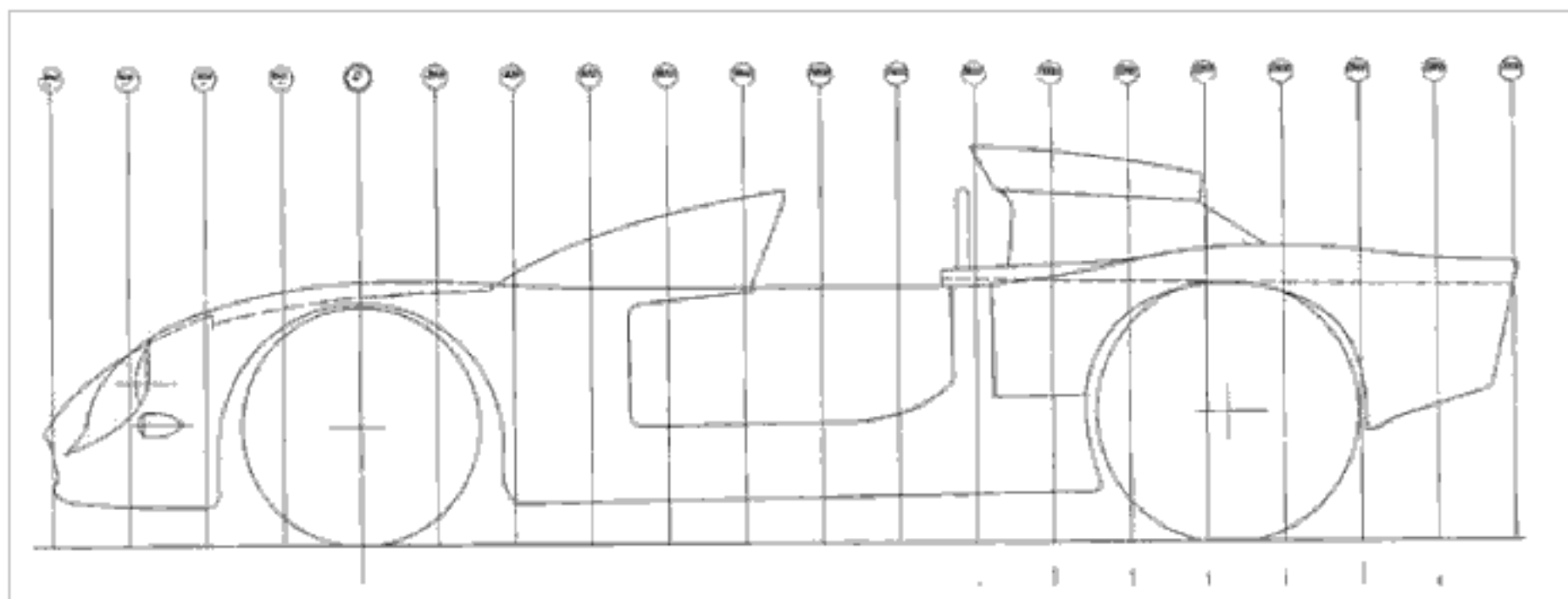
Chizzola did not want to work in the new premises in Settimo Milanese in Milan and returned to Udine. It was not intended at that time that Autodelta would expand into a large competition department within Alfa Romeo, though it did develop and return to running works cars within a relatively short period of time, even coming back into Grand Prix racing. The small Autodelta operation in Udine disappeared in the form that it had first existed and instead became the banner under which Alfa Romeo competition operated. The TZ and TZ2 programme was very successful through 1964, 1965 and into 1966, with the cars winning many events in international racing and rallying. The success of the Alfa Romeo/Autodelta 'merger' and of the TZ project, along with an expanding range of activities in saloon car racing, set the stage for the next step. The timing was just right for a new project, so it was no coincidence that Satta and Busso had been working on the prototype known as 105.33 using it as a 'test hack' in 1965 and in the early part of 1966, when a more finalized V8 engine car appeared.

Sports car racing in the mid-1960s

The World Championship of Marques, or as it tended to be known, the FIA World Sports Car Championship, was established in 1953 and remained in more or less unaltered form until 1961. Cars generally had to be built by recognised manufacturers and had to be road-going vehicles, though this definition was very loosely interpreted. In the early days of this series, there was no limit to engine size, and the cars could be either open or closed. The Championship itself only gave points for overall placing, though individual race organisers created further interest by creating class awards. There was no championship for the

classes and at one time, as many as fifteen classes with different rules existed. As time went on, more organisers came to use the FIA's own class structure. At some races, particularly at Le Mans and Sebring, the Index of Performance became a much sought after win by many entrants. It was based on a formula which calculated performance in relation to engine size. The monetary and prestige prizes at these events were considerable and thus many small teams produced cars to compete against the bigger-engined machines. There was always a mixed response to the small cars battling with much bigger and faster ones at circuits such as Le Mans, but entrants certainly took the Index seriously.

In the early years of the Championship, individual races, particularly Le Mans and the Mille Miglia, got far more attention in their own right than did the Championship in its entirety. At various times, rule changes saw some races such as Le Mans outside the title race but that did not damage the race itself. This changed in the later 1950s, especially after the end of the Mille Miglia. When manufacturers took the Championship seriously, organisers emphasised their events as part of the Championship, and there was more public awareness that individual races were part of a bigger whole. The serious accident at the Mille Miglia which led to its ending also brought a 3-litre limit to sports cars in the interest of safety for 1958, a measure similar to that introduced at Le Mans after the crash in 1955. These capacity limits were also aimed at reducing costs, which they did in the short term, though eventually smaller often came to mean more expensive rather than less, as greater technology was required to win. Throughout the 1950s, there was constant debate about the nature of the cars. Occasional preference was expressed for cars closer to production vehicles, and at other times the tide went the other way. In the latter part of the decade, the Grand Touring class began to be more visible, though production sports cars, GTs and cars far more similar to prototypes had always raced together. In 1960 the FIA established the Coupé de Grand Tourisme, giving GTs their own category and emphasising the importance of the same, which became the core of the Championship after 1962. By the early 1960s, Championship rounds had been established as having a minimum distance of 1000km or minimum duration of six hours. Races for the GT Cup were sometimes run separately and were shorter, though many still ran alongside the sports cars.



*An early drawing of the 1967 Tipo 33
race car.*

In an attempt to gain more interest from manufacturers, the FIA made the World Manufacturers Championship exclusively for Grand Touring cars from 1962. This resulted in great protest from the many lovers of exotic sports cars and from several race organisers. Thus, the organisers of Le Mans, Sebring, the Targa Florio and Nürburgring established their own championship known as the Challenge Mondial, which remained part of the FIA GT series but also introduced a new category: Prototypes. The definition of the term was somewhat vague, and prototype was just a new name for cars that were more modern versions of the old sports cars. The prototype Ford GT40 of the 1960s was a newer version of what the Aston Martin DBR had been in the 1950s, and the Porsche 917 was the archetypal prototype of the 1970s. The Alfa Tipo 33 managed to be a modern prototype in both the latter decades.

The FIA later developed a parallel Prototype Championship and at the end of 1965, the GT series had been reduced in prestige. The Challenge Mondial ran until 1974, but from 1965 on, the main races were for prototypes. There was no capacity limit for this group between 1963 and 1967, the period in which many exciting cars began to appear, mostly with mid or rear-engines, in large and small capacity classes. The day of open sports cars partly, though not entirely, seemed to be coming to an end with a plethora of mid-engine coupés. While the GT category continued between 1962 and 1965, the TZ had many important wins and results which helped to pave the way for a more ambitious programme in the Prototype Championship. In 1966 and 1967 there were two separate championships, the Trophee des Constructeurs for the Prototype formula which

was known as Group 6. This was divided into two classes, above and below 2-litre displacement. The other championship was the Championnat des Voitures de Sport, and this was for cars of which a minimum of fifty had been homologated. This was a confusing time for anyone with less than expert knowledge of racing, though in fact the two series seemed to coexist fairly well. It became clear in 1967 that prototypes would dominate from 1968, and that there would be a move towards cars which were very much Grand Prix machines, thinly disguised with two-seater bodies.

In 1966, it was clear that the emphasis on GTs had declined, and at Alfa Romeo, Luraghi, Satta and Busso saw the next premier category would be for what were variously called Prototypes or Competition Sports Cars. Thus the decision was taken to develop the 105.33 project starting with a 2-litre engine but with the long-term aim of playing a major part in a World Championship when a 3-litre engine capacity came into effect for Prototypes in 1968, in what would be known as the International Championship for Makes.

Chiti reflected in 1991 that "a meeting was called in the summer of 1966 where Giuseppe Luraghi asked: 'Chiti, can you build me a 2-litre sports car?'" (Orefici, 1991, p.78). This is probably a somewhat over-simplified view of what happened as Satta and Busso had already engaged Chiti and Autodelta on the development of the Scarabeo-based prototype. The Tipo 33 in its own right really emerged in the spring or late summer of 1966



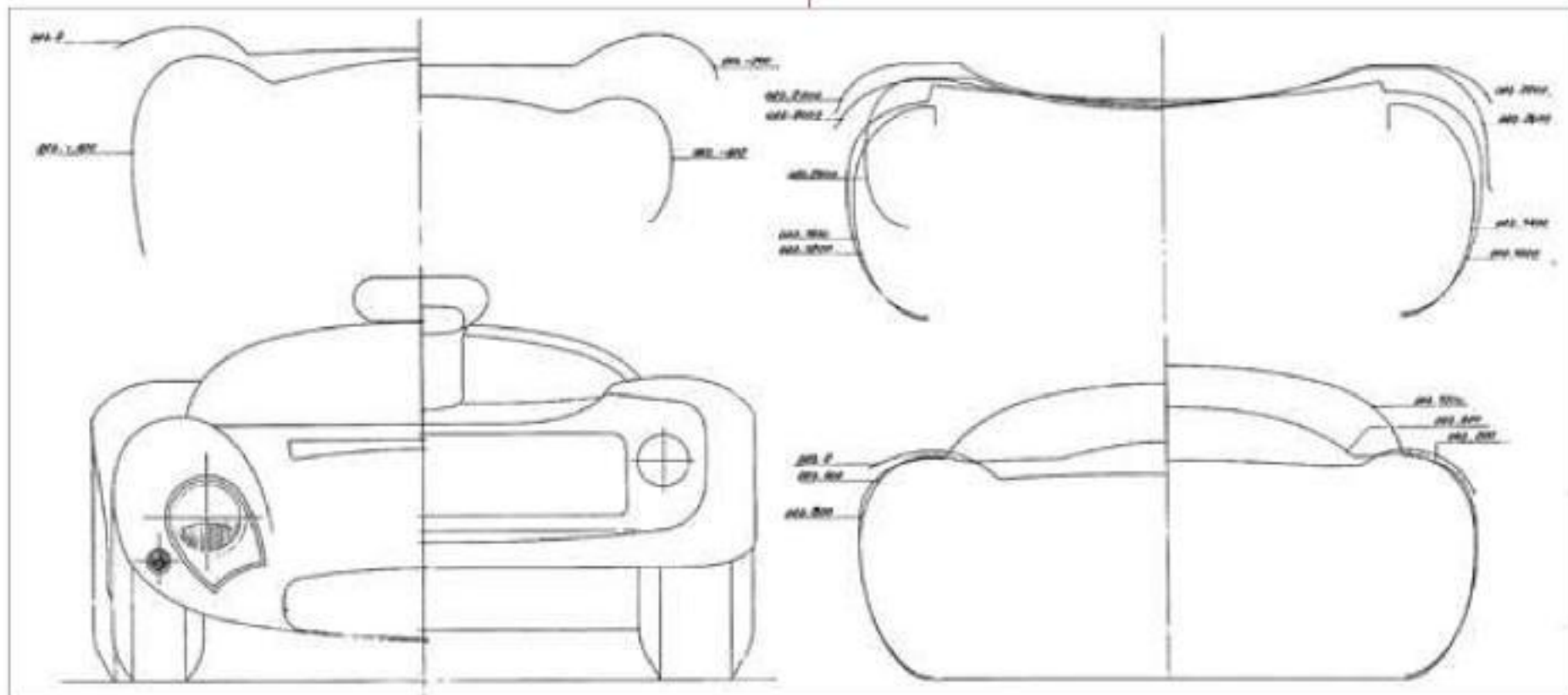
as further work was done on the prototype, and Chiti undertook the task of turning that prototype into a real racing car.

He had the basic chassis design, gearbox and articulated axle. The existing V8 engine from the mid-1950s acted as the inspiration for the unit Chiti developed rather than being something that was taken off the shelf and put into the chassis. The experience with the Giulietta-based 4-cylinder was very useful, and in one sense the 2-litre V8 at least resembled a 'doubled-up' Giulietta, but it was far more sophisticated than that. Chiti's ATS experience came in very handy because he had developed a potent 1.5-litre racing engine and converted that into the 2.5-litre power unit for the ATS GT car. The engine for the first Tipo 33 was a 2-litre monoblock producing 270bhp at 9600rpm.

The lack of accurate records means that it is unclear at which point the TZ2 engine being used in the prototype 'hack' was transferred into the 'proper' chassis that was being built for serious testing, or indeed whether it was transferred at all. There

are certainly accounts that attest to both versions. Testing went on through the winter of 1966/67, with a number of serious incidents taking place in the trials with the new car. However, the car, which was shown to the press at Balocco on March 6, 1967, was a striking machine in spite of its newness, with a unique chassis frame with two side members that acted as fuel tanks. These side members were joined by a third tube which also acted as a fuel-carrying tank. The tubes were constructed from heavy gauge aluminium and had been riveted together, and they had been given a plastic internal coating to prevent leakage. The construction of this chassis frame would be improved for 1968. The front rack and pinion steering and front suspension were carried by a magnesium sub-frame which formed the front bulkhead.

Views of the T33 'Periscopica', the first Tipo 33 race car.





The T33 'Periscopica' as it first appeared at the end of 1966.

There was independent suspension all round with wishbones and links and coil-spring damper units, with rear radius rods. The suspension at the rear was carried by another magnesium subframe consisting of two legs connected by a sheet metal support saddle. A 6-speed gearbox hung at the back of the engine, and braking was by ventilated discs, the rear brakes being inboard. It used 13in wheels and the wheelbase was measured at 7ft 4in.

The 90 degree V8 engine had chain driven twin overhead camshafts on each bank with hemispherical heads and 48 degree valve angles. Bore and stroke was 78mm x 52.2mm, capacity was 1995cc and the compression ratio was 11:1. The kerb-side weight

was 580kg and top speed varied with short and long-tail versions between 170 and 185mph.

At the press conference, the designers were announced as Satta and Busso. In neglecting to include Chiti in this announcement, despite all of his work, the car's origins were indicated more clearly. The tall air intake to the Lucas fuel injection system immediately sparked the nickname 'Periscopica', though the names of the early cars are somewhat problematic, as they tended to get a name for each of the early events they did, and the name changed as developments took place. Thus the 'Fleron' car was the same chassis as a slightly later car known as the 'Mugello', but we will cover this in more detail in the next chapter.

Once the racing programme was under way, it was Chiti who became the driving force of Autodelta. He had a strong influence on those he met and worked with. Alfa Romeo archive manager Elvira Ruocco shared her memory of Chiti:

“There was a meeting of the Registro Italiano Alfa Romeo and I was there with Bruno Bonini and I saw Ingeneere Chiti. I asked Mr. Bonini to present me to Mr. Chiti because I had always seen him in pictures but I had never met him. Mr. Bonini told him that I was responsible for the historical archives and Mr. Chiti replied ‘We have an historical archive, I never knew this.’ So I invited him to visit the archives to see what we had. Then he called me on the phone and said he wanted to come the next week. He asked if I remembered that he had done experiments with petrol and

methanol in Autodelta many years ago. He didn’t have any of the papers, so I found a dossier of papers on these experiments. When he came to visit, I presented him with these reports, and I showed him all our documentation, photos, and albums and he said ‘Oh, my God, I didn’t know there was this treasure at Alfa Romeo. I will come here often.’ A little while later he sent me a membership in the club Amici Carlo Chiti and I still have my membership cards. This is a good memory for me. I remember that week in July 1994 when Carlo Chiti died. First Mr. Bonini was killed that week at Spa. Then Gianbatista Guidotti died, and then Mr. Chiti.”

Ed McDonough

I

H is for handling

1967

Hheavy snow in Northern Italy is not unusual and during the early days of 1967 Lombardy received a considerable amount. Carlo Chiti had coincidentally decided that the time was right for the first race-circuit test and demonstration of his T33 sports-racing car to Alfa Romeo's management.

The date agreed was January 7th and much snow-clearance work had first to be undertaken at Monza, the chosen venue. Previous testing had taken place mainly at Alfa Romeo's own test track at Balocco out of the public eye. Although this important step in the new car's development was to occur at a public racetrack, serious steps were taken by Chiti's men from Autodelta to ensure that there would be no let-up in the secrecy surrounding the new car.

All the gates surrounding the Monza circuit were shut, securely locked, and guarded – no simple task in itself – and the test took place on the short junior circuit which turned right just after the pits and, at that time, included a chicane immediately prior to this turn.

At the wheel of the new car was test driver Teodoro Zeccoli and it was clothed in what was to be the most common 1967 style of bodywork. Teodoro was an extremely experienced man, having come to Alfa Romeo from Abarth. He tested every Alfa Romeo race car from 1963 until 1981. "I used to test for 500 kilometres a day, every day, with Alfa at Balocco", he explained when interviewed at his BMW sales premises at Imola.

The engine was developing about 240bhp by this time and Zeccoli started off carefully on the circuit which included the very fast Parabolica corner, but also the tight 90 degree corners of the Junior circuit. One of these was partially the cause of his undoing.

Once up to speed, the car was going well when, without warning, braking hard for the chicane, all retardation vanished. Instantaneously Teodoro was just a passenger. It didn't help that snow was piled up by the track either and after a short but hectic ride, the car hit a drain cover that had been left open by workers clearing the snow. Over the T33 went, finally landing and catching fire. Teodoro was lifted from the wreck suffering from a crushed eleventh vertebra and sand was thrown on the burning vehicle. Unfortunately much of the chassis and car was

magnesium so each time the fire was put out, it would suddenly and uncontrollably flare up again. Apparently the springs retaining the brake pads had fatigued when heated and the pads just popped out. He speculated that this might have been chassis number 002.

What was it like to drive this 1967 T33? Teodoro: "It was not easy, the chassis was a disaster." This comment was repeated by Nanni Galli who graphically described how the rear of the car was stiff and held the road well but the front end was far too flexible and he described the front wheels as pattering independently across the road.

None of this should be laid entirely at Carlo Chiti's door. As we have seen, the chassis was conceived by Satta and Busso and Chiti was given the job of sorting out the engine, chassis and suspension to create a coherent whole. This perhaps helps to explain why Chiti didn't protest when the chassis design was attributed to Satta and Busso at the later March press launch. We shall see that this was not a job that could be completed in one

The press launch of the T33 at Balocco in March 1967. Testing had taken place before the launch.





A view of the shapely rear of the car as Teodoro Zeccoli drives it for the press.

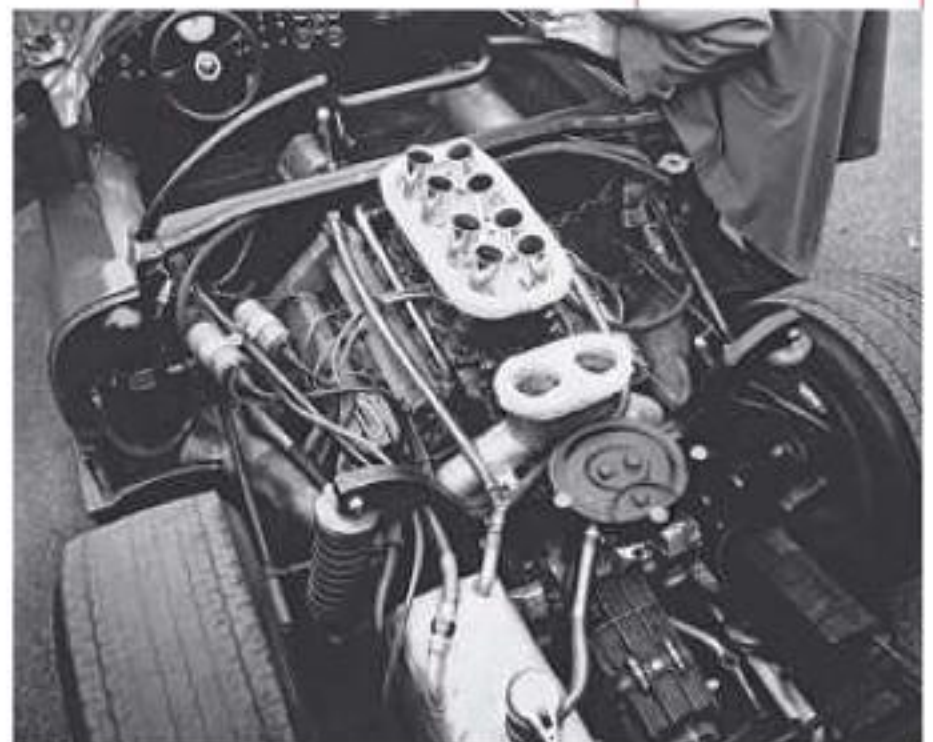
The press gets the first view of the 2-litre engine in place in the T33.

attempt and the car that gave Zeccoli a scary ride that snowy day at Monza was the start of a long trail that wasn't to finish until ten years later.

By early 1967 sporadic reports and observations of Alfa's daring new project were being announced by the world's motor sporting press, with sneak pictures by Franco Varisco appearing in the UK's *Autosport* magazine in February. Eventually the press was invited to Balocco on March 6th and the wraps were finally off the Alfa Romeo Tipo 105.33 sports prototype.

For some time the car was known and referred to purely as the Tipo 33, or Type 33. Some have retrospectively given the 1967 cars the title T33/2, but, throughout that year the only engines available to Chiti and Autodelta for the car were of 2-litre capacity so there was no need to identify the car in this way. The situation was to change as 1967 gave way to 1968 but for this first year of the car's evolution we shall use the simple term T33.

Autosport magazine's March 10th 1967 issue contained a report of the press debut of the new car. As always, Teodoro Zeccoli was in attendance undertaking driving duties. Three complete cars were available for inspection. Alfa Romeo GB





announced from its Sloane Street, London premises that "the Alfa Romeo 33 makes its debut and wins," suggesting grandiosely that "no technological difference exists between Alfa Romeo and the best manufacturers in the world ... In planning the new car the company has adopted the most modern techniques both in design and technology". Perhaps the most telling remark is the line which says "In due course it will be decided how the lessons learned from this new venture can be used to improve the breed".

It must never be forgotten that during this time Alfa was a state-owned company. Zeccoli: "You have to remember that Carlo Chiti was a race-engineer in charge of the competition department of a state-run business. He went to races and developed cars, then, when he returned he would have to go to Rome to justify what he had done."

And what had he and Alfa done? Adopted the most modern techniques? Well, the chassis for the car had been designed three

years before in 1963/4. The Alfa Romeo Press release insisted that it was entirely new and of noteworthy technical interest. As time went by the drivers would perhaps think of it slightly less charitably.

Aeronautical techniques were used in the design of the unusual chassis and they were built by an aircraft company, Aeronautica Sicula, highly skilled in the necessary fabrication processes. The frames were made from three pieces of aluminium tubing 5ft long and 8in in diameter. As explained in the previous chapter, they were riveted together in the form of an "H". They were also coated inside with a synthetic mastic material and served as 26-gallon fuel tanks. At the front, a magnesium casting connected the two ends and provided mountings for the pedals, master cylinders and steering gear. The front suspension assemblies were also attached to this "bulkhead". At the rear a fabricated sheet steel bulkhead was bolted to arms that reached out from the bottom legs of the "H" and the rear suspension was

Zeccoli tests the T33 for the press, with an Autodelta Alfa Romeo F-12 service van in the background.

hung from this. All the magnesium components were cast by Campagnolo in Vicenza.

The front suspension was described as "very simple." The spring and shock absorber worked vertically on the lower front suspension member, the top arm being a small, narrow fabrication. The anti-roll bar was mounted high behind the front suspension and the rack and pinion steering was a first for Alfa Romeo. The rear suspension "followed current Grand Prix practice." It was helped by a wide lower lateral arm itself braced by a tubular cross-member which absorbed some of the stresses from the anti-roll bar and the spring and shock absorber. Zeccoli: "The shock absorbers passed over the half shafts and you couldn't adjust the rear anti-roll bar, only change it. Problem was, to do that, you had to take the engine out!"

The engine was a V8 of 1995cc with four overhead camshafts. Consideration had been given to the idea of a 12-cylinder engine by Satta and Busso but this had been rejected on the grounds of the cost of future production applications. Not surprisingly, Carlo Chiti was entirely happy with the concept of a V8. When he was involved in the mass parting-of-the-ways at Ferrari in late 1961 he was working on a future V8 F1 project. Zeccoli: "When Chiti left Ferrari, he put the F1 plans in his pocket and walked away with them."

This car eventually became the ATS Grand Prix car and when Chiti was asked to design a V8 for the 33 sports car, he was only too happy to oblige by using the experience he had already gained from the 1500cc V8 ATS. Valve angles, porting, chamber design and the dimensions of the bottom end were all derived from the F1 car and the ATS factory even produced all the aluminium castings used in the first T33 V8s. A 1600cc version was produced by Alfa before the 1995cc definitive size was settled on. Two points here are worth considering. These were not the first V8s that Alfa had produced. Experimental engines of this configuration had been built back in 1939-40 for a stillborn passenger car, but intriguingly, the authors were shown castings for a 2-litre V8 produced during the 1950s, again for a stillborn passenger/GT car. Still more intriguing is the fact that Teodoro Zeccoli had come to Alfa after being with Abarth in Turin for some time. That company had shown its Tipo 239 V8 many times at shows, but the engine had never raced. Now, at



the press presentation, it was seen that Chiti's V8 bore and stroke dimensions were identical to the Turin products.

The 33 V8 utilised an aluminium cylinder block with wet liners and five main bearings. A flat crank of 180 degrees was lubricated by a dry sump system. Two valves per cylinder were used and these were closed in the same way as the ATS engine, by triple coil valve springs. Only one 10mm plug ignited each cylinder and fuel was admitted by Lucas Mark II fuel injection. The engine

Nanni Galli gives an indication of what driving the early Tipo 33 was like with its 'unique' handling.

weighed 286lb and, according to Chiti, developed 220-230bhp at around 9000rpm but it was clear there was scope – and intention – for much more. Chiti admitted that 4-valve heads were being tested and there was room in the block for a capacity increase to 3-litres. A 6-speed transaxle by Colotti was contained within a magnesium casing and there was no synchromesh, gears being engaged by dog clutches. There was also no gate for the gear lever.

So, again, we have to remember that Satta and Busso designed and created the basics of what would be the T33, but Chiti, as Marcello Gambi said, “sorted it all out”!

That the Targa Florio was one of their most important goals was demonstrated by the fact that all the mechanical elements were set as low as possible, consistent with the ability to clear the Sicilian roads. The whole engine and transaxle package was inclined at seven degrees towards the rear of the car.

The disc brakes were made to Alfa's design, as were the callipers, which were produced by Campagnolo. In a similar fashion to Chiti's ATS and the TZ, the rear brakes were inboard with the differential. Wheels of 8in width were employed at the front and 9in at the rear, all of 13in diameter. It was noted at the Le Mans trials in April that a handbrake was also fitted, which operated on a separate disc brake mounted transversally at the rear.

Several different styles of bodywork were tried before reaching the shape settled on as displayed at the press launch at Balocco. The front half bears a strong similarity to the Alfa-OSI Scarabeo spider prototype. The rear consisted of a large flat deck with raised areas over the wheelarches but it was dominated by a huge snorkel air intake, hence the car immediately taking the nickname “Periscopica”. Apparently Chiti said that the idea for this had come direct from the Chaparral 2D. One other tail variation was tried during the year and we will deal with that later on.

Nanni Galli described the early days of the T33 story: “I was already in Autodelta driving a GTA, under Chiti, with Zeccoli as the main test driver and Giunti and I doing all the development work and racing. Satta had made this chassis at Alfa Romeo, but the car was developed within Autodelta. I found the car quite difficult to drive in the beginning. This chassis was not like anything I had seen before. It had aluminium and magnesium



and was very different. I first drove the car in 1966 and in the beginning of 1967. I then got a new contract for 1967 and that was for one year. I had bought a car from them, a GTA, in 1966 and worked with them on developing the GTA.”

Now that the existence and details of the car had become public knowledge, it was time to take part in some events. The men in suits in the government offices in Rome must have been warmly anticipating when the first victory would happen. They didn't have to wait long. The press announcement was on March 6th and a week later a T33 had won its first event. Bizarrely this took place at a relatively obscure hill-climb in Belgium at a place called Fleron.

It has been the source of much speculation as to how this came about. Most manufacturers would have chosen at least a national race event, if not an international one. In his book *The Roaring Sinfonia*, Chiti is quoted as saying that at a meeting with Alfa Romeo management some months before, they had asked him to ready the T33 in order to take part at this hill-climb, but it seems unlikely that they would have ever heard of the event. Zeccoli: “It was the only event left on the calendar that could be entered before the Sebring 12 Hours which Chiti had committed the team to taking part in. There was no plan, time was too short.” Zeccoli himself shared the view that using Fleron as a preparation for Sebring was indeed somewhat odd. Nanni Galli added: “It was a decision made by Chiti with Satta to do this event at Fleron. In those days the hill-climbs were important and Ferrari and



Teodoro Zeccoli enjoys recounting the early days of the T33, at his office in Imola, Italy.



Zeccoli is pensive about a question on the 1960s.

Porsche took them seriously so it was a big thing for a team to do a mountain event. The preparation was very important for these hill-climbs."Galli had been doing considerable early testing with Zeccoli.

It was, however, well worth Autodelta making the effort. It took two cars and Zeccoli was the driver. After trying both cars in practice, he chose the lower geared version and won the event outright by 0.2 seconds, taking victory from Harry Zweifel's 4.5-litre McLaren-Oldsmobile V8 single-seater with Charles Voegelé 3rd in a Brabham-Climax 2.7. Zeccoli's time in the T33 was enough to set a new record.

Flushed with success, the two cars were taken on to the Zolder circuit for more testing where Andrea de Adamich managed to unofficially break the GT lap record. Earlier in March, Autodelta announced that it would be entering three T33s for Le Mans and clearly the project was moving up a gear as late in the month *Autosport* announced that the Belgian Team VDS of Count Van Der Straaten would take on the running of one car later in the season.

Autosport magazine was again swept up in the speculation surrounding the possible competitive chances of the cars when it described the entry of three T33s in April's Sebring 12 Hours race as "the most exciting cars on the entry list."The next week, its editorial stated that "the cars displayed astonishing speed" – but it wasn't enough.

Only two Autodelta cars took the start of the race, and De Adamich and Zeccoli had managed to qualify faster than

Pinto during the Le Mans tests at Mulsanne corner.





Rain provided Autodelta with its first serious wet testing at the Le Mans test weekend.



the Porsche 906s and Ferrari Dinos – their most immediate competition in the 2-litre class. These two cars were chassis 004 and 005.

De Adamich was light on his feet and jumped into his T33 first, managing to lead the race overall for a couple of laps before the heavy metal got past. Both of the cars showed the speed they were clearly capable of, but a mixture of teething and development problems affected their engines and both cars retired.

Autodelta must have been seriously stretched in manpower at this time as the next weekend were the Le Mans 24 Hours trials and three cars were present. At the same time reports were received that one T33 with road-registration plates attached had been seen practicing on the Targa Florio roads in Sicily. At the Le Mans test weekend one of the cars – race number 37 – displayed the main variation of the year in bodywork. The rear 'periscopica' section was completely replaced by a long, curved tail down to the rear. With De Adamich driving, this car was the quickest 2-litre present, but as the Porsche competition was only testing and a 1500cc Alpine was only 2 seconds a lap slower, this was not necessarily a good indicator of performance.

Commenting on the tests Bruce McLaren was moved to remark that the T33s looked interesting but complex to construct, to which Chiti apparently replied that they were actually easy to make. It was a sign of the times that Bruce reckoned that Italy must be good at that sort of thing and that the English certainly weren't!

The Targa Florio was to be the T33 goal of the year and there were reports that the team was hoping to win the event outright.

Despite the statement from Chiti and Alfa at the press launch at Balocco that the car was 2-litres as they didn't want to compete against the big players just yet, there was a report that Geki (Giacomo Russo) was to have a 2.2 V8 in his T33 in Sicily.

By the time the cars were assembled at the start on May 14th the report had been proven to be somewhat optimistic – which was also the attitude of Chiti and the team, despite the fact that the Autodelta fleet of four T33s, to be crewed by De Adamich/Jean Rolland, Galli/Ignazio Giunti and 'Geki'/Nino Todaro and Jo Bonnier/Giancarlo Baghetti, were up against the full might of Zuffenhausen. Huschke von Hanstein had brought three of his latest Porsche 910 models with 1911 cc flat sixes. This was the team that Alfa Romeo saw, quite rightly, as its main competition. Ferrari appeared to have lost interest in any sort of works involvement with its V6 Dinos, so the World Sportscar Championship 2-litre Division was entirely an Italy versus Germany affair.

Alfa had been in Sicily for some time testing, but it was during official practice that the T33's Achilles heel was to be clearly seen by the press and public. Particular comment had been made at the press launch regarding the front suspension. The spring and shock absorber worked on the bottom suspension member attached at its top to a fixed chassis-mounted bracket. To save weight and space, the top suspension member was narrow and thin and not at all what was really required for the pounding the rough Sicilian roads dealt out to a racing car. Unsurprisingly, considerable trouble was experienced in practice with these parts. Most of the T33s suffered breakages and Chiti eventually ended up devising a wire-cable "fix" with the wire wrapped around the suspension units. Galli's comment when talking about this incident was that "I am very happy to be here!"

Galli also commented that this first race with the T33 was probably his favourite, his most memorable: "The car was so difficult, but I had so much adrenaline, I was young and it was so

Carlo Chiti (left) speaks to Andrea de Adamich at Nürburgring in late May as Nanni Galli looks serious.

exciting for me. I was a driver who Mr Chiti said would drive in his dreams. I wasn't afraid of the car."

Not only was this a problem exacerbated by the rough Targa roads, but it was also brought on by the fundamental lack of front end rigidity caused by the "H" design of the chassis. As Nanni Galli and Teodoro Zeccoli had said, the rear end of the car was adequately stiff, but the front end was subject to constant movement both laterally and vertically. Thin suspension components did not really stand a chance in this environment.

This is not to say the cars were not fast. De Adamich ended up sixth fastest overall ahead of all the 2.2 Porsches in practice and he and Jean Rolland, according to *Motoring News*, enjoyed a drive in "great style" before succumbing to the inevitable suspension breakage. In fact they led the 2-litre class for some time and *Motoring News* commented that it had been a particularly fine drive "... both drivers having pressed on knowing that the strength of their car's suspension was suspect." Eventually the final survivor of the four T33s, that of Galli/Giunti, made a late exit from the race with the same problem. Many reporters suggested that Chiti and his men should not lose heart and should be happy with the speed of the cars. Galli reflected on driving the car for the first time in Sicily – with something of a nostalgic laugh: "This magnesium chassis in this U-shape or H-shape ... it made the rear strong but everything else twisted." Carlo Chiti himself was hoping secretly for better things at the Nürburgring 1000 kilometres due to take place two weeks later ...

Anyone spending 9 pence and picking up their copy of *Motoring News* on Thursday June 1 would have been in no doubt that Chiti was facing the music in front of state officialdom in Rome. "Porsche swamp the Ring" shouted the banner headline, but the T33s had not failed quite so comprehensively as they had at the Targa. Some reports suggested that their front suspension had been strengthened but, even so, the De Adamich/Galli car suffered the familiar breakage after eighteen laps and was lucky to get to the pits and take over the Bussinello/Zeccoli car which, despite being followed all weekend by a cloud of smoke, was running well and eventually finished a gallant 5th overall. All cars were running with 6-speed gearboxes and fuel injection.

This must have been encouraging to Chiti and the team, although Nanni Galli told the authors that the cars were "an act of



The De Adamich/Galli T33 at Nürburgring scrutineering in May.

faith when you set out in them, as you never knew what was likely to happen." All the drivers looked upon Chiti with affection and respect. The respect was for his honesty, integrity and abilities as an engineer. The affection was for his slightly wacky and bizarre lifestyle. Zeccoli: "Sometimes we felt that he would wake up in the morning and if he had been dreaming, that is what would be his next great idea!" When asked where the designation '33' had come from, Zeccoli replied that perhaps it was a number which had appeared in one of Chiti's dreams. Zeccoli and Galli also recounted some of the tales of Chiti's affection for stray dogs, and he reportedly would travel great distances if he heard of one, and bring it back either to his home or to the factory. There were accounts of these dogs living in the spare bodies of the T33s! Toine Hezemans was apparently bemused by not being able to sit down in Chiti's office because all the places were taken by rescued strays. However, the 33 designation wasn't from a dream, but had been an internal Alfa Romeo number: 105/33.

The authors asked Nanni Galli how he had got on with Carlo Chiti: "Chiti was like a volcano. He was a very clever man. The problem was that he was an engineer, but as a man he had to do and be everything ... the engineer, mechanic, team director, even be the driver if he could have fit in the car ... everything. Even though there was a man to do the chassis or the shock absorbers, he wanted to do everything. He was very clever but the problem was that you had to give him a big role. He was a big man in every way. What you needed to do was find him a room, with a small window, and you had to keep the key! He was a very human



Mechanics wait for the cars to get through scrutineering at Nürburgring.

however, to make up for any lack of success the T33s were taken to a number of important hill-climbs even though the company stated that Autodelta was still developing the cars as sports prototypes. This meant that there was no reduction in the T33's weight, so top results in these events were unlikely as they were at least 100kg too heavy.

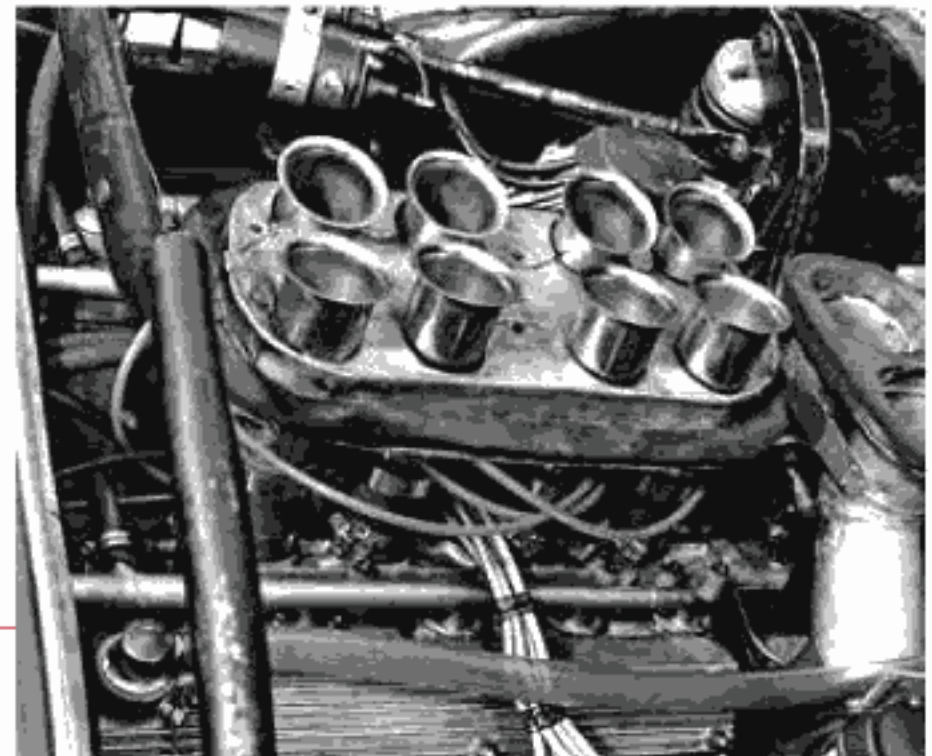
The first to be tackled was at Rossfeld in Germany where two cars were said to be in 'identical' condition and set up as at the Nürburgring only a week before. Some sort of chicanery was going on here as De Adamich stopped during his final practice run at one of the last hairpins before the top

person, and he was always with us in the car, that is how he was. And if he could fit, he would actually have been in the car. If you didn't feel safe with the car or with people in the team, it would be difficult to do what we did. But Chiti made a very good team because he could feel what was happening and you knew you were safe with him. In Autodelta the mechanics knew what they were doing and they were able to interpret what was happening to the engineer. They were very close in that way. It's like the way Schumacher helps Ferrari now ... it is because he helps to make a team. I think he respected and listened to Giunti and me because we drove the car very fast!"

Looking at the complete 1967 season in retrospect, it is clear that most of the steam had gone out of the project even by this early stage. The World Sportscar Championship at this time in the late 1960s had few events left to run. The Le Mans 24 hours was due in June and a new race at Brands Hatch had been scheduled for July, to be called the Brands Hatch 500 Kilometres.

On the same day it was simultaneously reported in one of the motoring journals that Autodelta had entered three T33s for the new race at Brands Hatch and withdrawn its complete entry from Le Mans. If they couldn't survive in long-distance races,

and pretended not to be able to find a gear. Up against Porsche's new 910 Bergspyder on a six and a half minute climb, the T33s only trailed by between 15 and 30 seconds which was not too disheartening.



The 2-litre engine in close-up at the Nürburgring.



Chiti talks to De Adamich during one of the practice sessions. Chiti spent a great deal of time at races with the drivers.



Nanni Galli tries out the car before practicing for the Rossfeld Hill-climb in June 1967.

French rally ace Jean Rolland, who had partnered De Adamich on the Targa, was hoping to have a T33 at Mont Ventoux but the car did not appear. Instead they were at the rather unlikely venue of the Monte Pellegrino Hill-climb near Palermo in Sicily. Nanni Galli succeeded in taking fastest time of the day. Jean Rolland later got his chance at the French Chamrousse Hill-climb at the end of July when he took fastest time overall.

In the meantime a rumour was doing the rounds that John Surtees was considering using T33 V8 engines in a single-seater team for the Tasman series. In late July this crystallised into a 380bhp V8 for Surtees to put into a Lola-Alfa Formula One car. More hill-climb activity in Italy took place at Cesana Sestriere on July 16th. Galli: "This was one of my worst moments in a T33. During practice I clipped a kerb and a tyre punctured causing the car to roll".

It should not be forgotten that this was on a relatively narrow public road up the side of a mountain totally devoid of any of the protection expected on a race circuit. Perhaps an even bigger surprise for Galli was that on its return to the paddock, the battered car was cajoled and hammered back into some sort of shape so that the Prato driver could take part in the next day's event!

But Chiti was still hankering after major success in a long-distance race, and the perfect opportunity was virtually on his doorstep with the late July running of the annual Mugello

race. Very similar to the Targa Florio, but perhaps even tougher, this race was held over a circuit of closed public roads to the north of Florence which included the Futa Pass as used on the pre-1958 Mille Miglia.

Dick Suter's report in *Autosport* pulled no punches though. Other than the race organisation being appalling, he described the three T33s from Autodelta as having engine covers which were "hastily cut-out attempts at aerodynamics". Although the team had been training at the circuit for some time it was "in trouble from the word go with punctures due to different rear wheels



Galli at speed at Rossfeld Hill-climb.

A very happy Galli at Cesano Sestriere Hill-climb where he got himself into lots of trouble.

and defective steering, due to a suspension problem. Judging by the way Chiti and his people were going about things it looked as though Porsche and Ferrari would have little to worry about from the Milan team."

The report continued "the steering went on Colin Davis' Tipo 33 ... Alfas had had this problem throughout practice but had obviously made no effort to solve them for the race." Further, "Porsche ... were a marked difference to the chaos that reigned in the Autodelta pit." Nanni Galli's front suspension collapsed coming down off the Futa Pass and Suter's last riposte at the Alfas was that late in the race "Autodelta had now pushed away the scruffy and ill-prepared Tipo 33s – the Autodelta set-up has a long way to go before it starts to worry Porsche." Galli added:

"The suspension itself was very strong but the effort it made caused the mounting points to break. This happened at Mugello and at the Targa Florio. It was very exciting to drive at Mugello which was like the Targa Florio, but faster. When you came down from the mountain to the valley you were doing 260 or 270km/h. It was unbelievable, every corner was different. I don't think I could have been thinking about the suspension."

The entry of three cars was withdrawn from the BOAC 500 at Brands Hatch and the bittersweet 1967 season began to run down. At Mont Dore Hill-climb in August Rolland was 4th overall but Silvo Moser's entry in a T33 at Ollon Villars never reached the start line. The unsatisfactory year continued to wind down and then along came tragedy. A car had been entered for the Paris 1000 Kilometre race at Montlhéry and Teodoro Zeccoli was at the circuit in late September for some testing with Jean Rolland.

Zeccoli: "When Rolland had the accident, he shouldn't have been driving. Everyone had packed up for the day and we were going home when Alfa France asked Jean to drive the car for advertising/marketing purposes. He had never driven it at Montlhéry before and he took off after a hump and didn't know how to react. When the car landed, it veered off into some trees and exploded. He was killed instantly."



Another view of Nanni Galli trying hard at Rossfeld.



Andrea de Adamich won the Vallelunga race late in the 1967 season.

At the same time as this tragedy was reported, there were stories coming out of Italy that a so-called Group 4 version of the T33 had been seen with a fibreglass body by Scaglione, a 5-speed gearbox and a more torquey motor. This could have been the Stradale road version of the car, but with no pictures to help identification it seems much more likely that this was an early view of what would turn out to be an entirely different T33 for the 1968 season and beyond. However, before we go into any more detail on this car two 1967 cars made one last public appearance.

On October 15 at Vallelunga, the annual Ettore Betteja Trophy was held for sports cars. It was not an important or high-profile event, but it is easy to imagine that Chiti's bosses would have been anxious for their rather tarnished dream to possibly have one last polish, if only to satisfy the men in Rome. Against little opposition, at the eleventh hour, everything went right and De Adamich and Giunti romped home 1st and 2nd respectively. The sighs of relief must have been audible in the Eternal City. Zeccoli told the authors that when the officials were visiting Chiti, he would ask the doorman at the factory who was with him. According to the answer he got, he could prepare the answer to the questions which might then be put to him about how the latest test had gone!

De Adamich gets the back end hanging out at Vallelunga.

Less than a month later, one open and (according to *Motoring News*) "very scruffy" car appeared on the Alfa Romeo stand at the Turin Show. Alongside was a "coupé" which had apparently been doing the rounds of the shows and had certainly been at Frankfurt. This was the first "Stradale". Alfa had decided that out of the T33 should come some sort of production vehicle that would make the whole racing project somewhat more digestible to the 'men in suits' and government auditors. Centred round the V8 motor, two options seemed to be crystallising. At the 1967 World Expo in Montreal, a front engine coupé by Bertone was exhibited, but there were no plans for using the T33 engine at that stage. The other possibility was the already mentioned "Stradale" T33, which shared the stand at Turin. Briefly, this was a T33 chassis extended by 10cm with a fibreglass body by Scaglione. It looked stunning, but again, there appeared to be no plans for production of the car.

By the time the snows had returned to Northern Italy, Zeccoli was well advanced with testing of the new car for 1968. "I tested every model of car to come out of Autodelta, including all the F1 cars," he said.

Chiti must have realised early on in the 1967 T33's career that a completely new car was required. His main problem was that



the Satta/Busso 'H' chassis had to be retained and used again but otherwise the difference between the 1967 and 1968 cars was "complete, they changed everything," said Zeccoli – except for that basic chassis.

How to sum up the 1967 season then? The overlong gestation period of the concept, which had started back in 1964, cannot have helped. Considering Chiti was essentially given a collection of parts and told to 'get on with it', 1967 should perhaps have

been a year of thorough testing of the mechanical components under real race conditions. But that should have been preceded by a year of testing alone. That was not how things were done, however.

With the 1968 Daytona 24 Hours coming up only five weeks into the New Year, was the experience of 1967 going to provide some sort of an advantage?

You bet it was!



1967 T33 technical spec

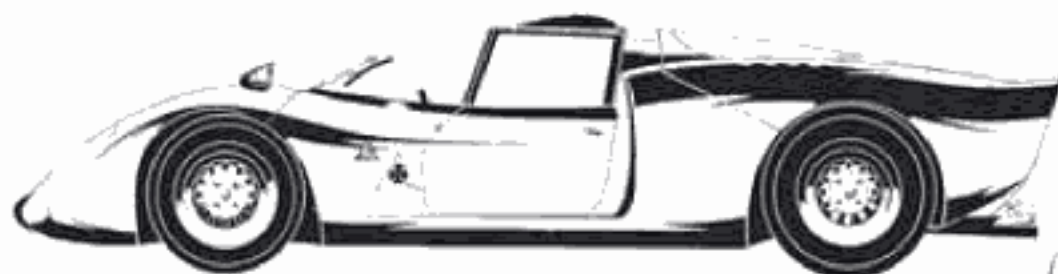
Chassis	H shape large diameter magnesium tubes with fore and aft subframes
Engine	1995cc V8
Bore and stroke	78mm x 52.2mm
Compression ratio	11:1
Cylinder head	DOHC per bank 2 valves per cylinder initially Gear driven
Fuel system	First cars had four carburetors
Power	Approximately 270bhp at 9600rpm
Transmission	Alfa Romeo built 6-speed gearbox/final drive in unit with rear-mounted engine
Length of car	3.96m
Width	1.76m
Height	0.99m
Wheelbase	2.25m
Track front	1.34m
Track rear	1.45m
Tyre sizes	4.75 x 13 front, 6.00 x 13 rear
Weight	580kg
Top speed	298km/h at Le Mans with long tail

The first 1968 T33/2 coupé was ready at the end of 1967.

II

Shaping up

The T33, as a matter of necessity, underwent many changes in its first year of competition. The major problems of aerodynamics and suspension geometry had to be addressed both in the short term, which was partly dealt with by missing some events, and over the long term by developmental changes. The 'periscope' air intake was seen as a short term arrangement and was there to compensate for poor airflow over the body, which inhibited the entry of air into the engine as well as preventing cooling air getting to the brakes. Carburettors had been tried early in the year but were found impossible to adjust, presumably due to the airflow problems, but in any event Autodelta chose to persevere with the Lucas fuel injection. It wasn't until well into the season that it was realised that the periscopic air intake was actually helping to lift the front of the car, and front nose spoilers appeared to compensate for this. The shape of the early cockpit, in what was loosely referred to as the Fleron car, caused excessive drag and side-wind instability. The centre of pressure of air flowing over the body was quite far forward, creating instability at the front rather than usable downforce.

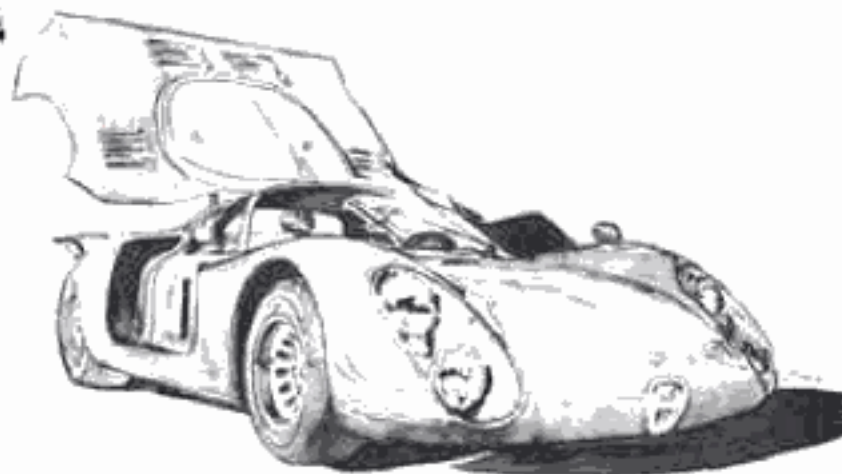


Drawings of the 1968 T33/2.

A number of changes based on testing at Balocco had resulted in a new rear body section, which was the focus of much work in the second half of that first season. This is sometimes referred to as the Mugello body. This reshaped section did away with the periscopic intake, and the result was a reduction in drag and movement of the centre of gravity towards the centre of the car. Wind tunnel tests indicated that the new shape, though still an open body, had the same characteristics of a fully closed coupé. These developments created a target for the design team of retaining a configuration which would be equally efficient whether open or closed. Aerodynamics became increasingly important at Autodelta, as it was envisaged that the 2-litre cars would continue for at least the 1968 season, and without a costly engine development programme there was an emphasis on improving other aspects of the 'package'.

In September 1967, a Stradale version was made public, which will be dealt with separately. However, at the same time, a very stretched team was working on the car for racing in 1968. This was seen as the third stage of development, the 'Fleron' and the 'Mugello' being the first two. It is important to note that these two concepts did not remain static and one tended to evolve into the other, just as the next stage also evolved.

It may appear to be jumping the gun somewhat, but for the purpose of clarity it might help to say that





The clean lines of the new T33/2 coupé are obvious in this shot at Monza.



Zeccoli out again testing in the Monza snow early in 1968.

Autodelta found itself working flat out on the 1968 car, which would become known as the Daytona to mark its achievements in the race there in February. Of course, this name did not emerge until after that race, but the car that was in development was being built specifically to do well at that event. The new car was designed around the original and largely unchanged H-tube chassis configuration, which retained numerous problems. However, there was a new coupé body, based on the so-called Mugello experiments, and this came in both short and long-tail versions. To add a bit more confusion, the long tail variation tended to attract the name Le Mans, while Daytona stuck to the shorter tail car, though this is technically inaccurate as Autodelta wanted a car for different types of circuits and a degree of interchangeability. It was not envisaged that only short tail cars would go to one circuit and only long tails to another.

While the body shape was the most apparent difference to the previous cars, there were many other changes. In order to change the centre of gravity, much of the weight was transferred towards the centre of the car. Thus the water and oil radiators moved to each side. The problems of lift and instability in 1967 were approached by lowering the side profile and the front leading edge, generally reducing the height. Major changes to the

body were aimed at making access much easier than it had been. It was thought there would be times when it was preferable to relocate the oil coolers to the front, particularly at slower circuits, so removal of the entire front body section was impractical. Improved air-cooling to the engine, brakes and cockpit was also part of the body shape brief. Wind tunnel testing in late 1967 and early 1968 concentrated on better airflow and reduction in lift. There were some differences in drag coefficient between the long and short-tail bodies, and it was recognised that track testing and racing was required to provide more information, but also that the long tails would require stabilizing fins to locate downforce and to prevent rolling on very high-speed corners. The front suspension had also been significantly strengthened. Speeds for the car equipped with the long tail were expected to reach just under 300km/h. Shortly before the cars were sent to Daytona, the figures released still had the engine turning out 270bhp at 9600rpm, and the weight was 580kg. These figures were similar to the 1967 version, but this was a very different car.

The FIA had instituted the Group 6-based championship regulations from 1968 through 1971, a return to prototype racing and thinly disguised Grand Prix cars. Group 4 cars up to 5-litres were also allowed into the International Championship

The test team checks the engine during the Monza tests.



of Makes and the GT Cup was renewed for Group 3 GTs, which were essentially modified GT cars. Group 4 would be renumbered as Group 5 and in 1969 manufacturers would be producing very special cars indeed ... the Porsche 917 and the Ferrari 512.

In the meantime *Autosport* announced in the first issue of the New Year that Autodelta would be racing the new version coupé in Group 6 races, and said the engine was producing 250bhp at 9000rpm and that a 3-litre car was expected. Drivers for 1968 were listed as: Galli, Giunti, Zeccoli, Schutz, Vaccarella, Biscaldi and Baghetti. One 2-litre car was being sent to Daytona for Zeccoli and Schutz who had already been testing at the Florida circuit.

In New Zealand, Frank Gardner finished 2nd in the Alec Mildren-prepared Brabham BT23D with a T33 engine which had been bored out to 2464cc. Gardner was thus 2nd in the Tasman series, having already had a win with the car. Gardner then retired at Levin after leading, retired at Wigram and was 3rd at Teretonga. Alec Mildren had close connections with both Alfa Romeo and with Autodelta. Through Australian journalist Patrick Quinn, we learned from Frank Gardner that Mildren had told Alan Mann in the UK that Autodelta wanted to evaluate the new 2.5-litre engine. Testing in the Australian summer during the European winter seemed ideal, and as Alec Mildren also had an association with Jack Brabham, two 2.5-litre engines were delivered to Alan Mann in 1967. A chassis was built up and Ron Tauranac supplied the suspension and other mechanical parts, with Alec Mildren financing the project. Frank Gardner added that this was a volatile crew of people working together and they didn't always get along, though each respected the others' abilities. When it was completed, the car was sent out to Australia where it won the Hordern Trophy race at Warwick Farm. Alan Mann, however, said he didn't recall installing Alfa engines, and it may well be that he was involved in the building of the Mildren, and that the installation of the Alfa engines into the Brabham actually happened at the end of 1967 in Australia. Alan Mann added that



Frank Gardner was enjoying good results in the Tasman series with Alfa power.

if he did install Alfa engines he would like to know who to send the invoice to!

In late January, the entry for Alfas at the forthcoming Daytona 24 Hours had been confirmed. *Autosport* now said there would



The Casoni/Biscaldi/Zeccoli T33/2 finished 7th overall at Daytona 1968.

be four cars, three Autodelta entries of the "Mk 2 versions of the Tipo 33" for Schutz/Vaccarella, Zeccoli/Casoni and Galli/Giunti, with an American Alfa Romeo Inc. entry for Andretti/Bianchi. Actually Autodelta entered all the cars, five of them, for Schutz/Vaccarella, Andretti/Bianchi, Casoni/Biscaldi/Zeccoli, Galli/Giunti and a T-car for Casoni. It also entered GTA Touring cars for Leo Cella/Zeccoli/Biscaldi and Pinto/Dini. The Galli/Giunti car was destined to be a non-starter as Giunti crashed it testing in late January when a wheel came off and the car overturned, trapping Giunti inside with a broken arm. Then Galli hit the wall in another car, but this was much less serious.

The new FIA rules meant that the entry for Daytona was odd, with no large capacity sports cars and no 3-litre cars being ready. Vaccarella and Schutz were in the quickest T33/2, now being variously referred to as 33/2 and Series 2, and this pair was quicker than the Ferrari Dino of Pedro Rodriguez and Charlie Kolb. While some of the Group 4 sports cars were near the front

in qualifying and the early laps of the race, the 24 Hours settled down to a fight between the 2.2-litre Porsche 907s and the 2-litre T33/2s. Vaccarella and Schutz were in 8th after two hours. Gerhard Mitter's Porsche 907 had spun on dropped oil on the 104th lap, catching out Masten Gregory's Ferrari, and the T33/2 of Andretti/Bianchi seemed headed for the wreckage when Dieter Spoerry's Porsche tapped it, straightening it out so that it missed the carnage – though Spoerry didn't. Andretti/Bianchi had moved closer to the Porsches but then required repairs to the accident-damaged bodywork. By midnight, Vaccarella and Schutz were 5th, Andretti/Bianchi 7th, and Casoni/Biscaldi/Zeccoli 9th. Andretti and Bianchi made several additional stops to secure the damaged bodywork. In the final stages all the Alfas had plug troubles but literally 'plugged' on to the finish, with the three Porsche 907s securing 1st, 2nd and 3rd and the Titus/Bucknum TransAm class Shelby Mustang coming 4th overall. Then came the three T33/2s in the order they had been running, finishing 5th, 6th and 7th overall and being the best Under 2-litre Prototypes. There was no separate category for Under 2-litres but it was a superb performance, and Chiti's decision to keep to an 8300rpm rev limit was a sound one.



Richard Attwood tries the T-car in an early practice session at the Brands Hatch 6 Hour Race.



Nino Vaccarella powers through Bottom Bend at Brands Hatch.

Only a few weeks after Daytona, Leo Cella was killed testing the T33/2 at Balocco. The ex-Lancia Italian rally champion had finished 20th overall at Daytona in the Autodelta GTA with Zeccoli and Biscaldi who had also been driving a T33/2. Marcello Gambi was at Balocco when Cella was killed. The car ploughed 300 meters into some trees but didn't catch fire. Gambi thought that Cella had suffocated. The car wasn't badly damaged, and poor Cella was just found sitting dead in the driver's seat. There was conjecture that he had been preparing to race the car at Sebring, but this seems unlikely as the cars do not appear on the entry list for Sebring in 1968. During the same week in February, it emerged from Australia that Alec Mildren was looking at the possibility of fitting a 3-litre version of the Alfa engine in a Brabham chassis for Frank Gardner to race in Formula 1, following the good showing in the Tasman series. Gardner had retired at the Warwick Farm race with a noisy engine. Gardner was then 3rd at Sandown Park and repeated this a week later at Longford, Tasmania. In the March 1 issue of *Autosport*, it was announced that the T33/2s had been withdrawn from Sebring and speculated that this was due to Cella's accident. Shortly after this, the Le Mans entry was published, with four Autodelta T33/2s to be present and one private car from the Belgian VDS team. However, no one realised at this point that the race would end up being postponed until September.

Nanni Galli's view was that Cella's accident was possibly due to the fact that he was essentially a rally driver and was not used to the handling characteristics of the T33/2, especially the stiffness at the rear and the flexing of the chassis under stress. He described vividly the position he would get into while trying to control the car as the back started to break away.



Attwood/Vaccarella/Baghetti shared this car which failed to finish.

Many people in and around motor sport have vivid memories of the weekend of April 6/7, 1968. In the UK, thousands came to watch the BOAC 500 at Brands Hatch, and remember the news filtering through that Jim Clark had been killed in a Formula 2 race at Hockenheim. Some recall the Brands race, though for many it was overshadowed by Clark's death. If Clark had accepted Alan Mann's invite to drive at Brands, history would have been different.

At Le Mans, the April test weekend was taking place, and Autodelta sent one car for Lucien Bianchi and Teodoro Zeccoli, and the VDS team brought its new car for Serge Trosch and Rob

The Pilette/Biscaldi car sits in the Monza pit lane during practice.



Slotemaker, and they were 6th and 8th respectively. Back at Brands Hatch, there were three cars which had had much testing in the long spell since Daytona. These were for Richard Attwood/Nino Vaccarella, Schutz/Bianchi and Galli/Baghetti. The Alfas were fairly low down the grid, but Bianchi was quickest, even though he was commuting back and forth between Kent and Le Mans. An hour into the race, it had turned into a Ford GT40/Porsche battle at the front, and Richard Attwood had got his Alfa into 10th overall. Attwood told the authors recently that he was very impressed with the car, found it fairly straightforward to get used to and was very disappointed when a camshaft broke after five of the six hours. Attwood was the quickest Alfa driver, and he rather hoped he would be invited back for more, but somehow it never happened (though he became a regular in GT40s and Porsches). Bianchi and Schutz had a misfire at the midway point, and Bianchi had an accident at 124 laps which put him and Schutz out. Galli and Baghetti soldiered on and finished 14th in spite of a misfire. Attwood and Vaccarella had shown the T33/2 to be competitive with most of the other 2-litre prototypes.

A few weeks after Brands Hatch the Monza 1000 Kilometres took place as scheduled, but Autodelta scratched the three works entries, leaving only the two VDS cars for Gosselin/Trosch and Pilette/Biscaldi. These two struggled throughout practice and were both out before 14 laps with engine failures. Autodelta had decided to conserve its energies for the Targa Florio, which turned out to be a wise decision. Reports at the time indicated that Autodelta was spending a lot of effort on a 3-litre car, but they proved to be slightly wide of the mark.

Six T33/2s in the so-called Daytona configuration, with short tails, appeared in Sicily for the Targa Florio on the first weekend in May. Four were Autodelta entries: Galli and the now recovered Giunti, Bianchi/Casoni and Baghetti/Biscaldi in the Under 2-litre group, joined by the two VDS 2-litre machines of



Pilette at speed at Monza.

Pilette/Slotemaker and Gosselin/Trosch. The much heralded '3-litre' was not a 3-litre after all but a 2.5-litre destined for Targa ace Vaccarella and Udo Schutz. The stroke on this engine had been increased from 52.2mm to 64.4mm and this produced a healthy 315bhp. All the cars had the oil radiators returned to the front, as had been the plan when the new cars were designed,



Chassis 015 after many years sitting in an Angolan lumber yard.



This is Nino Vaccarella in chassis 015, the 2.5-litre car which spent many years in Angola.

with an opening for air entry in the front body panel and the air exiting behind the front wheels. The 2.5-litre engine was built very much to the same specifications as the two engines sold to Alec Mildren for his Brabham in the Tasman series, and much had been learned from that experience. These engines had Spica injection rather than Lucas. According to Marcello Gambi, only two or three cars were built specifically for the 2.5-litre engine as it shared the 2-litre engine's external dimensions, but 'quite a few' engines were made for the team's use and for Tasman use as well. The authors were able to examine a 2-litre and 2.5-litre crank at Gambi's workshop in Milan.

In practice, Elford and Siffert were under the old lap record, but a stunning Vaccarella was only two seconds slower. Vaccarella told the authors, while driving the Disco Volante in a Retro Targa event, that the 2.5-litre car had "more punch but also more weight". Giunti got everyone excited when he posted a time just short of Vaccarella's. Autodelta, along with Porsche, had been in Sicily for weeks ahead of the event practising. The T33/2s were tending to struggle against the times being set by the Porsches as they lost grip when pushed very hard on the rougher parts of the course, whereas the Porsches managed to hold the road better ... though two or three seconds over a lap of nearly 45 miles is not very much! Nanni Galli made a point to the authors when he was asked about whether he always drove the same car in 1968 (his Targa car is now owned by Marc Devis in Belgium): "I knew which car I preferred, and for the Targa I preferred this car, and drove it more than once. There was a difference between the individual cars. This was a testing car and I said to Chiti 'I want this car' which he gave to me and Giunti. This was set up for us, and

for the Targa everything was put in the way we liked it. The cars each had their own character. There was a difference in handling, though not so much difference in power. If a car wasn't set up the right way, they were very difficult to drive. You would learn what the car was going to do and you could feel confident with it. Giunti and I knew that we could drive this car closer to the limit than with the others. We felt we had a really good car for this race. And that is why we were so close to Chiti ... because he could understand these things." This approach seemed to work as Giunti set the fastest time amongst the 2-litre cars by over a minute.

Pole sitter Vic Elford was in trouble with his Porsche 907, which had its wheels come loose, and he had to stop twice. Vaccarella in the 2.5-litre car chased the Scarfiotti Porsche in 2nd place, and Giunti was similarly close to Lins' Porsche. After the fuel and driver stops at the end of the third lap, Galli was going as quickly as Giunti had been, but Schutz had only just replaced Vaccarella when he left the road, not endearing himself to the Sicilians. Galli and Casoni were actually 1-2 in the T33/2s at one stage, but Elford was inexorably catching up after his delays and came through to win. Galli/Giunti were 2nd and won the 2-litre class with Casoni/Bianchi 3rd, Pilette/Slotemaker 5th and Baghetti/Biscaldi 6th. Gosselin/Trosch had retired the other VDS car. It was a superb showing for the T33/2s.

Two weeks after the successful foray to the Targa Florio, six cars went to contest the Nürburgring 1000 Kilometres – four Autodelta entries and two VDS cars. The 2.5-litre car was in the 3-litre class as at the Targa, but this time there were two of them with Udo Schutz in one with Lucien Bianchi and Vaccarella in



the other with Mario Casoni. The 2-litre cars were for German driver Herbert Schultze and Giancarlo Baghetti and Galli/Giunti. However, at the very last moment the newer 2.5-litre car was scratched and Vaccarella moved to a 2-litre with Schultze, and Baghetti and Casoni didn't drive. The VDS cars were for Gosselin/Trosch and Pilette/Slotemaker. Udo Schutz was right behind Henri Grandsire's huge practice crash but that didn't stop him

An impressive line-up of T33/2s at Nürburgring, 18 and 19 being Team VDS cars.

from setting fourth fastest time behind a Porsche 907 and 908 and a GT40. Vaccarella and Galli were 8th and 9th quickest.

It had been a damp weekend but the race start was dry.



The Gosselin/Trosch VDS car finished 13th at the Nürburgring.



Galli/Giunti under hard braking at the Nürburgring.

Schutz managed to stay in 2nd spot in the opening stages and Galli had got into 4th. Schutz was delayed by having to change batteries twice, due to a faulty alternator. Some of the Autodelta pit work was pretty chaotic as first two cars came in together and then Schutz showed up again for another battery! One of the VDS cars was stopping with electrical problems as well. Chaos reigned again in the pits when the Vaccarella/Schultze car came in with smashed bodywork just as a routine stop was going on. Giunti and Galli drove brilliantly to finish 5th and win the 2-litre class, with Vaccarella/Schultze 10th and 3rd in class. Schutz/Bianchi came 7th, and the VDS cars were 13th and 29th.

In the week after the race at the Ring, Lucien Bianchi and John Rhodes were testing a Cooper F1 car at Goodwood and Silverstone with a 2.5-litre Alfa engine, as had been rumoured for some weeks. The car was then sent to Autodelta at Settimo



The Chevron B-8 of Meek and Craft and a Ford GT40 bracket the T33/2 of Pilette/Slotemaker at the back part of the Nürburgring.



Galli/Giunti finished 5th at the Nürburgring.



Schultze and Vaccarella were 10th at Nürburgring.



Ignazio Giunti concentrates at the Karussell.

Milanese where Chiti was to fit a 3-litre engine for Spa for the Belgian Grand Prix. Up until this point, there had been no official word about the existence of a 3-litre unit. Not too surprisingly, the engine did not materialise for Spa.

Autodelta had entered a car in the 3-litre prototype class at the Spa 1000 Kilometres for Schutz and Vaccarella, presumably the 2.5-litre each had now driven, but this didn't appear, and only two VDS cars were there for Pilette/Slotemaker and Gosselin/Trosch. These finished 12th and 16th. *Autosport* had remarked that the T33s came with long and short-tail body sections, whereas Porsche had entire cars in each format rather than changeable body sections. Herbert Schultze was entered at Mont Ventoux Hill-climb in June as well, finishing 2nd in a 2-litre car.

The Nuremburg 200 was run a month later, and VDS sent two cars for Teddy Pilette and Trosch. Pilette got the 2.5-litre car which seemed to have passed to the Belgian team, and finished a good 5th in the main event, while Trosch was relegated to a consolation race where he had a reasonable 4th place finish. Two VDS cars then went to Zandvoort in early July for the Coupé Benelux, and the top spots were claimed by the T33/2s of Pilette and Slotemaker, though it is not clear whether one of these was the 2.5-litre car.

In mid-July, Horst Kwech, long-time Alfa saloon racer in the USA, managed to borrow a 2-litre T33/2 for himself and John Martino for the Watkins Glen 6 Hours, a race that was not too inspiring as two JW Gulf GT40s finished twenty laps ahead of the rest of the field. The Alfa qualified 11th, got up to 10th, and

then retired with the engine having expired after only seventeen laps.

Also in July, the Alfa engine again failed to appear for the Cooper team at the British Grand Prix, but Kevin Bartlett took the ex-Gardner/Alec Mildren-run Brabham-Alfa to a win in the main single-seater race at Warwick Farm in Australia. Autodelta had loaned a 2-litre T33/2 to Herbert Schultze for the Solituderennen, which was at Hockenheim. Schultze failed to finish. A T33/2 had also competed at the Trento Bondone hill-climb in July. Ex-Autodelta mechanic Marcello Gambi told the authors how it would be common for him to be sent off to Germany on his own to look after Schultze's car: "It was just the way it worked then. Mr Chiti would call me in and say 'you are going to Hockenheim this weekend!'"

Then at the end of July came a splendid victory for Autodelta ... the first. Though it was a non-championship race, the Gran Premio del Mugello was a very important win for the team, a daunting 66km circuit which is spread over 200 square miles of lush Tuscan countryside. Autodelta entered four cars in the very competitive 2-litre prototype class, for Vaccarella/Bianchi, Casoni/Dini, Biscaldi and Galli/Giunti, and there were two VDS cars for Pilette/Zecoli and Slotemaker/Trosch. They would be up against the Porsche 910s of Elford/van Lennep and Siffert/Steinemann.

Autodelta had been practicing at the circuit for a month, and it wasn't too surprising that Galli, Casoni and Bianchi set the three fastest times. When van Lennep wrecked his car, Elford didn't have a vehicle and Autodelta immediately attempted to

*Lucien Bianchi prepares
to go out to practice at
Mugello.*



secure his services, which the organizers refused as he hadn't driven a car (he would eventually get into an Autodelta seat, however). Zeccoli was the first car away, and cars were sent out at odd 5 and 10 second intervals depending on class and capacity. Bianchi led at the end of the first long lap ahead of Siffert's Porsche 910 and Casoni, but Siffert had already passed eleven cars having started 13th. Then Siffert was leading from Galli/Giunti, Casoni/Dini and Bianchi/Vaccarella. When Rico Steinemann took over from Siffert he was delayed by a spin and Giunti nearly caught him, but then soon stopped with an engine problem. Porsche lost more time when Steinemann came in after only one lap believing Siffert would be ready to go. However, the Swiss was sound asleep and Steinemann shot out again but Vaccarella was in front. Nino wasn't feeling well so Galli now took over this car. Biscaldi had crashed his car but Galli held onto the lead in spite of Siffert's efforts. In the end, Galli/Vaccarella/Bianchi won with Siffert in 2nd. The other Autodelta cars did not finish but the VDS car for Slotemaker/Trosch was 5th. It was a superb win, though perhaps not sufficient reward for all the testing that had been done.

In mid-August, the VDS cars were at the Kanonloppet Races for the Swedish Grand Prix, where Pilette was a strong 4th in the 2.5-litre car with Slotemaker 6th in the 2-litre. The following week the two VDS cars were at the German Wunsdorf airfield circuit along with a car for Herbert Schultze. Torrential rain came down after only twelve laps leaving a surprised and pleased Schultze getting a rare win with Pilette and Slotemaker 3rd and 4th. Another week later and Pilette had another very good race at the Austrian Sports Car Grand Prix at Zeltweg, one of the last races to be run there before the Österreichring was built. Pilette was in 3rd before Paul Hawkins got the GT40 past him but finished 4th with Serge Trosch managing 12th overall and 4th in the 2-litre class.



*Both Giunti and Galli loved racing on the long
Mugello circuit.*



Spartaco Dini at Mugello, a circuit considered tougher than the Targa Florio.



Teddy Pilette was in the 2.5-litre VDS car at Karlskoga in Sweden.

It was perhaps surprising that a full works Autodelta entry appeared for the non-championship race at Imola in mid-September, only two weeks before the rescheduled Le Mans 24 Hours. Three cars went for Giunti/Galli, Casoni/Dini and Vaccarella/Zeccoli, the latter having been carrying out regular testing for Autodelta all season. Galli and Giunti were in a class of their own in practice, two seconds quicker than Casoni/Dini, and six seconds ahead of the Porsche 910s of Nicodemi/Facetti and Vic Elford. Galli equalled the existing Bandini lap record and set a new one in the race. Once Vaccarella/Zeccoli got in front, they just disappeared, and the T33/2s were 1st, 2nd and 3rd before both Porsche 910s retired, but they could not come near the Alfas anyway. This was Autodelta's best showing, and the T33/2 was now clearly a very competitive car.

On the same day, Pilette was at Hockenheim for the Martini Gold Cup, and again he took the 2.5-litre car to a strong 4th behind much bigger machinery, with Herbert Schultze in the 2-litre further down the field after thirty laps.

The Le Mans 24 Hours took place on September 28-29, fully five months after the test weekend in April, so what had happened then had little relevance. The season's racing and testing had allowed Autodelta to bring about a number of changes, all relatively minor and aimed at reliability. For the team, it was an advantage to have had all this time to prepare for a race where it was hoped the cars might be the 'giant-killers' to rival Porsche. There were four cars from Autodelta and two VDS machines. All six were 2-litres and they were assigned to Giunti/Galli, Facetti/Dini,



The nimble T33/2 of Pilette manages to stay ahead of Ulf Norinder's Lola T70.

Casoni/Biscaldi and Vaccarella/Baghetti, with Zeccoli and Lucian Bianchias as additional drivers. Bianchi did not, however, spend much time in the Autodelta pit as he was down to co-drive a JW Gulf GT40 with Pedro Rodriguez. Pilette/Slotemaker and Trosch/von Wendt were in the VDS cars. All the cars ran with long tails and small vertical fins on each side of the tail.



Rob Slotemaker gets some body roll at Karlskoga.

Nino Vaccarella was fastest of the Alfas and fastest 2-litre car, qualifying in 14th place, then came Giunti/Galli, Facetti/Dini and Casoni/Biscaldi with the VDS car of Pilette/Slotemaker in 33rd. One of the authors was at that race, working in the signalling pits for the GT40 of Salmon/Liddell, and recalls the first splashes of rain before the start, which was to be 3pm to give an extra hour of daylight. It wasn't discovered until later that the T33/2 of Casoni was the first car to move. However, as the cars got to the end of the Mulsanne Straight and the slow corner, the tail-sliding Porsche 908s, four of them, were in front, but Nanni Galli had got up to 5th ahead of the 3-litre Alpine and all the GT40s. The first few laps were amazing as Galli held onto the Porsches with everyone else trailing behind. Trosch only lasted seven laps in the VDS T33/2 before the engine blew, and by this time the GT40s were catching the Porsches. After four hours the Porsches were having some problems, but the T33/2s had settled down with Giunti/Galli 8th and leading the 2-litres. Brian Muir had put one of the JW cars into the sand on the outside of Mulsanne Corner and was entertaining the signal crews with his digging efforts.

At eight hours, Autodelta cars were 5th, 6th, 7th and 8th overall, sounding wonderful and managing both dry and wet



This is one of the long-tail cars just before the Le Mans 24 Hours.



Teddy Pilette takes the VDS Alfa past Brian Muir at Mulsanne Corner after Muir put the GT40 into the sand.

minutes to dry out wet electrics. Two hours later, in the pouring rain, the Matra had its wipers stop and went into the pits, giving Galli/Giunti an incredible 2nd place. When the rain stopped at 10am the Matra went ahead followed by two Porsches, but the Matra retired. If Galli/Giunti had not lost time on Sunday morning having a coil spring and damper unit replaced, they would probably have taken 2nd place overall. At the

end, however, Rodriguez/Bianchi won, with a 907 and 908 next ... but then came Giunti/Galli, Facetti/Dini and Casoni/Biscaldi – 4th, 5th and 6th and winning the first three places in the 2-litre class. The author was then and is now very happy to have seen that result. On the basis of this performance Roberto Businello, the Autodelta team manager for Le Mans, announced that three 2-litre cars would go to Kyalami in November. He also reported that the 3-litre car was not ready to race at that time.

Nanni Galli said that he remembered how well the 2-litre car was going during 1968 and was being improved, while the 3-litre car, with an all-new chassis, was problematic in testing. He said the engine was just too heavy, weighing some 170kg compared to the Cosworth 3-litre at 140kg. Galli also said Le Mans was a good example of how Chiti could make the team work. He paid great attention to keeping the drivers happy and focused on the task.

Ex-Autodelta mechanic Marcello Gambi, who took over quite a lot of Tipo 33 spares after the company closed down in the 1980s and remains a 'consultant' to Tipo 33 owners, had joined the team at the end of 1967. He was part of the team that had been involved in turning the original 1967 car into the 1968 machine, his first job being a general mechanic. He attended a great deal of the testing, and if they had to work all night, that's what they did. Manfredini was in charge of the test bed, Maggi and Matati the engine builders, and Vignone and Gobbi headed the gearbox department. Paulino Flore from Udine worked in the dyno room, and Nicola Pavone was another of the team who had come from Udine. Fanini was responsible for assembling engines. Gambi



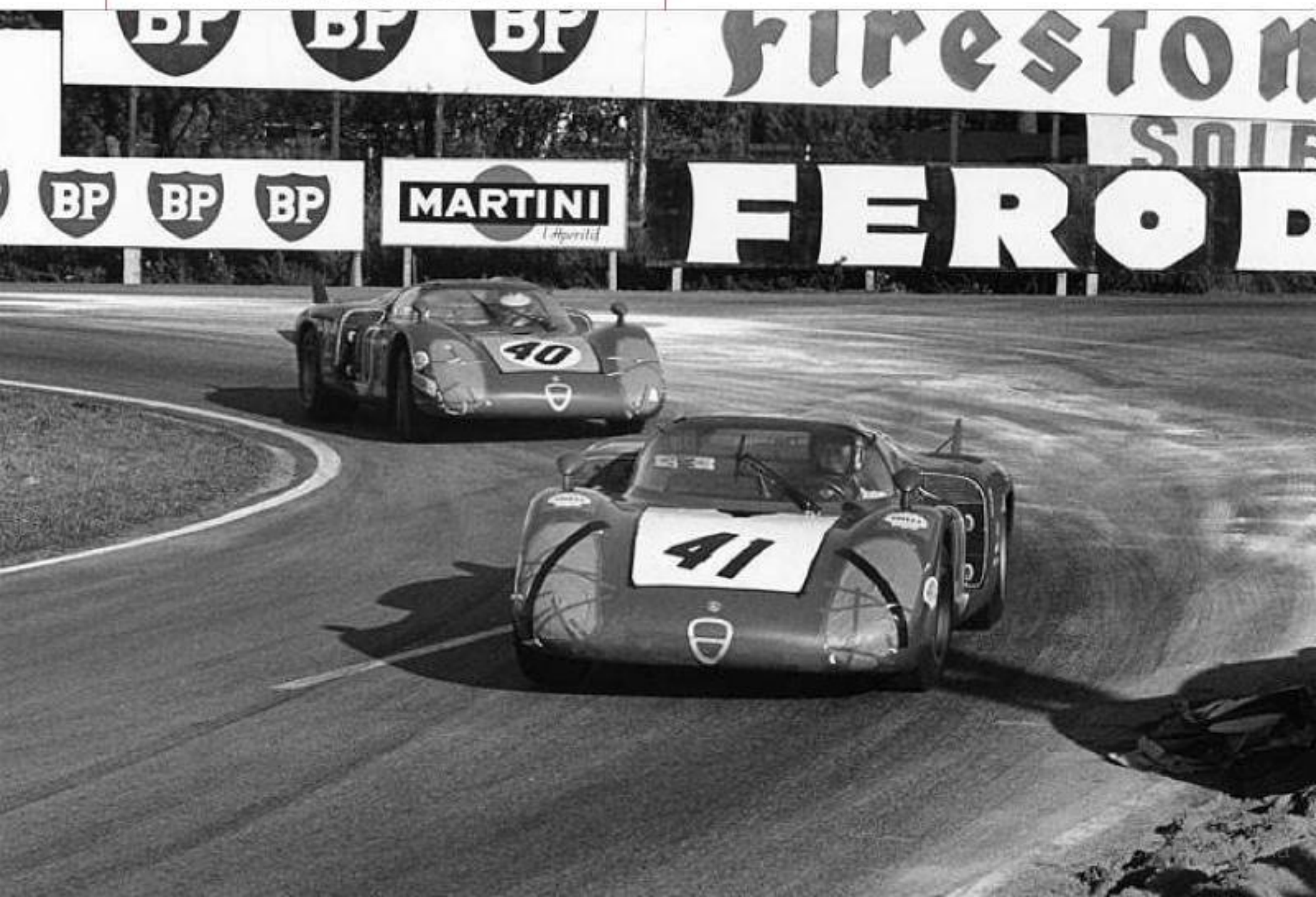
One of the VDS cars chases down the Corvette of Greder/Maglioli, which had engine failure. There was rain on and off during the 24 Hours.

conditions. Not much later, the Pilette/Slotemaker car had a broken half shaft on the straight and retired. In spite of a spin, Bianchi kept the eventual winning Ford GT40 well in front from before halfway, and Galli/Giunti were in 3rd at 2am. A few minutes later, the Vaccarella/Baghetti car stopped on the straight with a faulty fuel pump, and then Casoni pitted for ten

Casoni leads Facetti on Sunday morning at Le Mans.



Vaccarella and Biscaldi ran in close formation for several hours and were 5th and 6th.





Casoni and Biscaldi ran in close company with the Servoz-Gavin/Pescarolo Matra towards the end of the race as the Matra engine started to tighten.

recalled that after Chiti had got involved with Motori Moderni in the late 1980s, he would come to Gambi's workshop in Milan and have lunch with him. It was Gambi's son Marco who was trying to get Chiti to slow down in 1994 when his health was deteriorating. Gambi said that Chiti always treated the Autodelta workers very well. He was greatly respected by them.

In October, VDS ran a 2.5-litre car at the Paris 1000 Kilometres at Montlhéry for Pilette/Slotemaker. This was said to be the chassis which ran at Le Mans with a 2-litre engine, refitted with the larger unit and the shorter tail section. Pilette was up into 6th place but had serious engine trouble at only twenty laps and retired.

By the time the Kyalami Nine Hours took place on November 9, Businello's enthusiasm had been tempered by the need to concentrate on the cars for 1969. Thus no Autodelta cars appeared at all, and instead VDS had two of its cars with 2.5-litre engines. In subsequent years, it was said that VDS found it very difficult to get spares or help from Autodelta in spite of its frequent good results. Meanwhile, Alec Mildren in Australia seemed to be on very close terms with Chiti and had no such difficulties. By the end of 1968, Mildren's ex-Tasman Brabham-Alfa was up for sale.

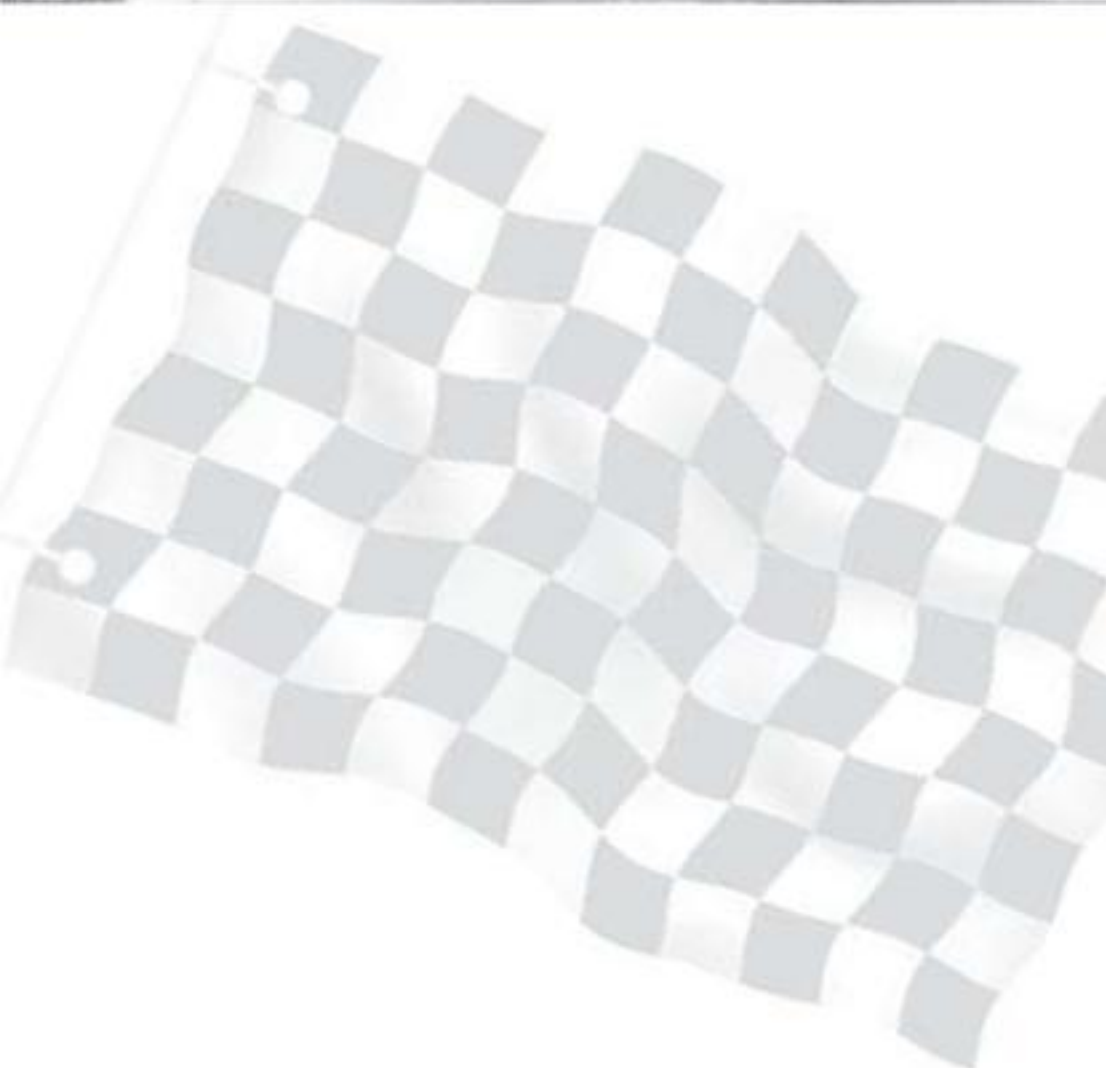
At Kyalami, von Wendt/Trosch and Pilette/Slotemaker were 13th and 16th in practice. However, it was Teddy Pilette who sprinted across the track at the Le Mans start and was away first from the large field into a lead of some five seconds. The bigger cars didn't take long to get past him but an Alfa at the head of the field was certainly good for Alfa Romeo's reputation in South Africa. However, the other car was in trouble almost immediately, suffering from overheating. Pilette sat in 6th place for some time, gradually moved up to 3rd, then needed stops to try to solve a fuel blockage problem and dropped to 7th. The other car was out, and when it rained near the end of the race, the Pilette/Slotemaker car collided with David Piper's Ferrari, putting both the Alfa and the Ferrari out of the race.

Autosport's Paddy McNally was driving a Porsche 910 in the race and later commented that Richard Attwood had been about to lap Herrmann's Porsche 907 when he came across Slotemaker with no lights on in the darkness and rain.

Alfa Romeo finished 1968 3rd in the Manufacturers Championship behind Ford and Porsche and also 3rd in the Challenge Mondial, which had run concurrently.



The Le Mans class winning T33/2s were the feature of several end-of-year motor shows in 1968.



1968/9 T33/2 technical spec

Chassis	H shape large diameter magnesium tubes with fore and aft subframes
Engine	1995cc V8 (some cars used 2462cc version)
Bore and stroke	78mm x 52.2mm
Compression ratio	11:1
Cylinder head	DOHC per bank 2 valves per cylinder initially Gear driven
Fuel system	Indirect fuel injection utilising Lucas bomb (Spica on 2.5)
Power	Approximately 270bhp at 9600rpm (2.5:315bhp at 8800rpm)
Transmission	Alfa Romeo built 6-speed gearbox/final drive in unit with rear-mounted engine
Length of car	3.96m
Width	1.76m
Height	0.99m
Wheelbase	2.25m
Track front	1.34m
Track rear	1.45m
Tyre sizes	4.75 x 13 front, 6.00 x 13 rear
Weight	580kg
Top speed	Approximately 298km/h at Le Mans with long tail

III

Up to 3 litres

The big news as the New Year opened was that John Surtees would join Autodelta for a limited number of sports car races during 1969. He considered his F1 contract with BRM to be his priority and Alfa would also have to fit in between CanAm races but that still meant that Daytona, Sebring and Brands Hatch would be clear. The telling bit though was that he made clear he was only prepared to join the team on the proviso that testing and development of the new 3-litre V8 produced good results.

Chiti had said back at the press launch in March 1967 that the V8 had enough meat in it to allow for future capacity increases, and rumours of its existence had been confirmed in October 1968 when Autodelta team manager Roberto Businello officially announced that the 3-litre engine was not yet ready. By the end of January Autodelta was confident enough to announce that development of a 4 valve, 3-litre was going well although taking an overview in retrospect of the whole T33 era it is sometimes slightly difficult to take the team's press releases seriously.

For instance, another report from the team in early February listed all its official drivers for the year: John Surtees, Nino Vaccarella, Ignazio Giunti, Lucien Bianchi, Spartaco Dini, Nanni Galli, Mario Casoni, Enrico Pinto and Carlo Facetti. One hopes they didn't all cancel all other engagements ...

Cockpit of the new T33/3.



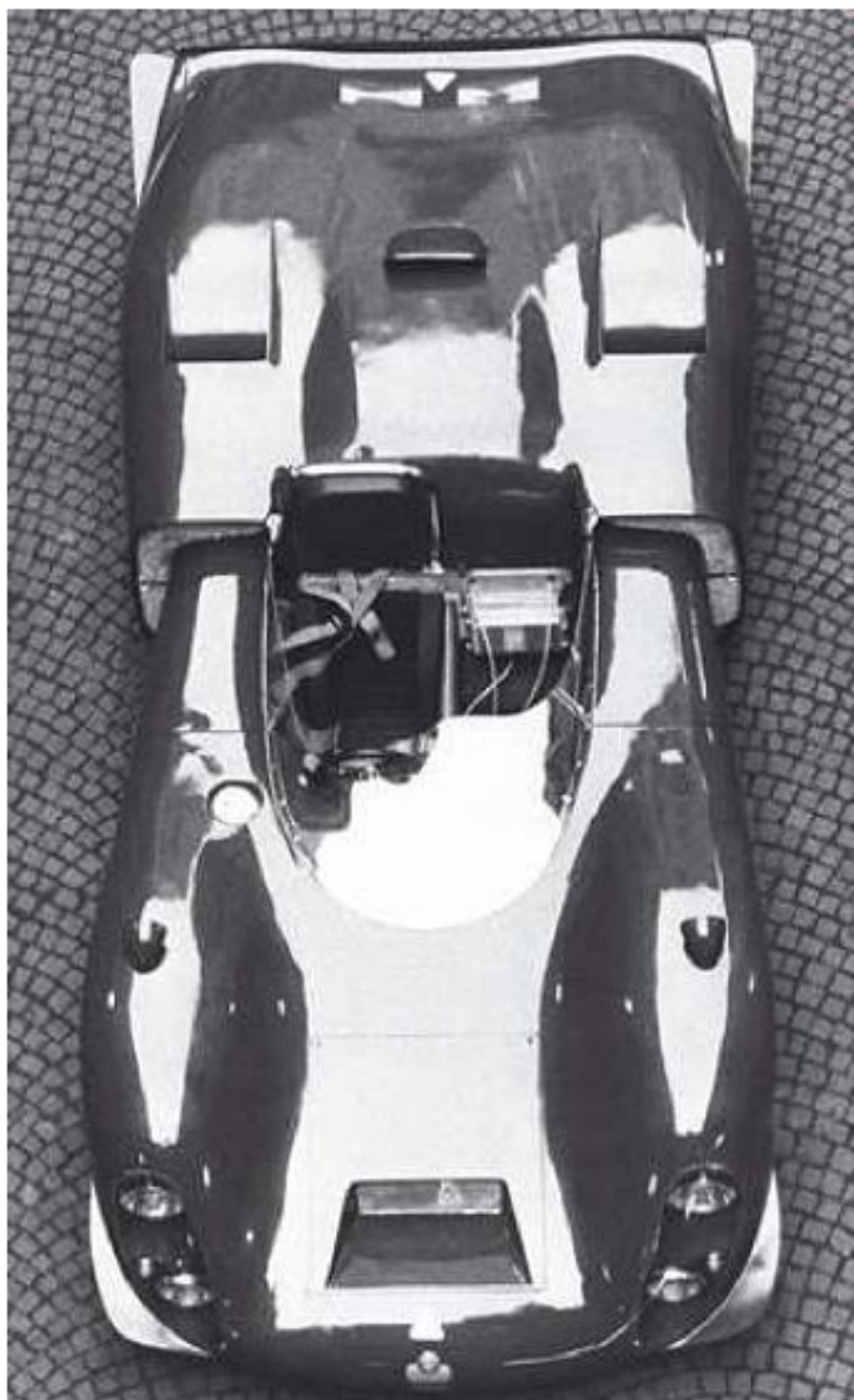
1969



Early season testing of the new 3-litre T33/3 at Balocco.



Zeccoli during testing of the new T33/3.



An overhead shot of the new and shapely T33/3.



Piers Courage was given a test in the T33/3 at Vallelunga, long before he started to race for Autodelta.



Zeccoli gives Dr Luraghi a ride in the T33/3 at Balocco. The full-width roll bar indicates it may have been later in the year.

The team did not go to Daytona. Alfa's only representatives there were Mario Calabattisti and Eduardo Dibos from Lima, in an Alfa Romeo Peru-entered T33/2. At about 8pm an E-Type Jaguar blew up, blinding Calabattisti who braked hard, causing a Porsche 911 to fly over the top of him before a 907 hit him hard in the rear. The Alfa then turned over, trapping the hapless Calabatisti who later returned to the circuit after hospital treatment but of course was unable to drive. The car was 'a total wreck' according to reports.

The FIA announced early in February that the 'Daytona' style T33/2 coupé was homologated into Group 4 and soon after Autodelta stated that there would be five 3-litre cars at Le Mans, one of which would be for Team VDS. This was not totally wishful thinking as the cars did exist. This was proven at the end of March when the Sebring 12 hours was held.

Perhaps the cars may not have been wishful thinking, but almost everything else that went on surrounding Autodelta that weekend was. Three cars were entered for Surtees/De Adamich, Vaccarella/Bianchi and Galli/Giunti/Casoni. A preliminary test session was held at the circuit two weeks earlier for the teams, and Autodelta attended but got little done. The cars reportedly ran for less than one hour during the whole weekend and it came to light that as they were running on Dunlop tyres and Surtees was contracted to Firestone, something would have to give. Everyone the authors have spoken to has confirmed that Carlo Chiti was an extremely genuine man of the utmost integrity, and he could not let Dunlop down and break their contract. Consequently Surtees was forced to step down, Mario Casoni taking his place.

There is, however, another side to this story. The T33/3 cars at Sebring were new, and this was their first public appearance.

Galli does serious testing at Vallelunga in the T33/3.



Autodelta announced the new car on March 4 and reported on De Adamich's testing at Vallelunga.



John Surtees showed up at the pre-Sebring testing in Florida, was very annoyed at what Chiti had done to his car, and left!

They were of a completely different design to any T33 before. Chiti had sat down with a clean sheet of paper and banished the H-pattern chassis. There was now a dural monocoque chassis. This had rubber foam-filled fuel tanks, boxed into the sides of the monocoque. The monocoque used the transmission casing as a stressed member. This contained six speeds but later on in the season a new 5-speed replaced it. Magnesium was still used for the bulkheads. The new 3-litre V8 motor had revised dimensions of 86 x 64.4mm cylinders with four valves per cylinder. Lucas fuel injection was again employed and power was in excess of 400bhp at 9000rpm. One unusual aspect of the cars was the use of glue, rather than solder, in the construction of the radiators. These stood amidships, just behind the cockpit. The rough surface of the track at Sebring and lack of any serious testing – on some nights the cars were apparently driven flat out up and down the start/finish straight, just to get an idea of their potential performance before the race – led to these radiators literally falling to pieces during the event, resulting in the early retirement of all three ... but not before Galli's car had lost a back wheel and then been rammed by it in the rear! Galli attributed this to poor machining of the hubs.

Nanni Galli: "At Sebring in 1969, I lost the wheel. The problem was that the hub assembly on the rear corner had not been machined properly. That was the kind of problem we would have." There were also reports that the breakage of the radiators may have been due to the drivers touching the corner markers on the Sebring circuit, which would have been fatal to side mounted radiators.

Maybe Surtees had seen something like this coming, but in recent conversation with him he reiterated the proviso made at



Galli and Giunti did many miles of testing at Sebring. Giunti is on the right.





The Pilette/Slotemaker VDS car practicing at Brands Hatch, here at Druids.

The Vaccarella/Bianchi car in the Sebring 12 Hours race: they failed to finish.

the time that he would only drive for the team if the cars were competitive. Surtees: "I went along and I thought I would drive the T33. They had asked me to. I went out to Balocco and did a lot of the testing. At first I didn't like the car but then we got it handling pretty well. I went to Sebring and took the car out and it was horrible. I said to Mr Chiti 'this is not right, this is not how I tested it, we're back to square one'. He assured me the car was exactly as it was. I normally keep quite a good relationship with the mechanics, and they said 'Mr. Chiti told us to put it back as he had designed it'. So I told Mr. Chiti what he could do with his car and I never drove the car again. It isn't nice but it made me think that someone other than Chiti must have been involved with the success of the Ferraris back in 1960/61. I think it was Franco Rocchi who never got the credit for all that he did."

Never one to mince words, John's experience was to be echoed later on in 1975 by another team driver.

Alfa management and the men in Rome were reportedly now getting edgy, demanding that some good results were obtained pronto although the test development programme had been delayed by bad weather. If car troubles weren't enough, tragedy struck the next weekend at the Le Mans Trials. Only one 3-litre car was taken and this was fitted with larger radiators following the Sebring problems, as well as very large injection trumpets. This was for use by Zeccoli and experienced sports car driver Lucien Bianchi, although VDS driver Teddy Pilette was allowed out to try it as the Belgian team had been promised customer 3-litre V8s soon. In the meantime it was having to make use of 2.5-litre versions of the 2-litre V8 which were fitted with different crankshafts. The team also brought a 2-litre Group 4 car to the tests as well. *Autosport's* caption to its T33/3 picture was 'not right yet' which neatly summed up the ongoing situation.



The Gosselin/Bourgoigne VDS car in practice for the Brands Hatch 6 Hours.



Zeccoli tried the car on Saturday and ironically Bianchi set the fastest Alfa time in it, but on Sunday Bianchi was braking at the end of the Mulsanne Straight when the car inexplicably turned sharp left and hit a telegraph pole. It disintegrated on impact and poor Lucien, the winner at Le Mans in 1968, was killed instantly. Marcello Gambi said he believed it was a suspension failure.

Entries for the BOAC 500 at Brands Hatch in mid-April were, perhaps not surprisingly, devoid of factory 3-litre support, with only Team VDS putting in an appearance with two Group 4 Daytona T33/2 coupés. One finished 9th in the hands of Rob Slotemaker and Teddy Pilette and the other retired with no oil pressure.

Team VDS was by now the only serious entrant of T33/2s in top class racing and its two cars were out again less than two weeks later for the Monza 1000 Kilometres race. The confirmation of the 2-litre Daytona model into Group 4 was beginning to have



The Gosselin/Bourgoigne VDS car in the 6 Hour race.

Ferraris and Ford GT40s with the VDS T33/2 in hot pursuit exiting Druids at Brands Hatch.



an effect amongst the other classes, as it meant that ex-works cars were within the reach of a few private owners. Several of these were lined up on the grid at Monza, ready to do battle over the daunting combined banked and parkland track, which was in use for what was to be the last time for the 1000 Kilometres race there.

Autodelta had still not let Count Van der Straeten's team have a 3-litre engine, so it was making do once again with one of the enlarged 2.5 units in its Pilette/Slotemaker entry which therefore had to run in the Up-to-3-litre Group 6, alongside the works Ferrari and Porsche teams. There were echoes of 1968 and the Cooper team which had waited all season for a promised 3-litre F1 engine.

Close-up view of Rob Slotemaker's VDS car.





Pilette at Brands Hatch on his way to 9th overall.



Engineers Marelli and Severi conducted a test session at Monza with the 3-litre cars prior to the 1000 Kilometres race.

Teddy Pilette was a stalwart member of the VDS Alfa team.

The FIA regulations for sports car racing had come into force in 1968 but that was largely a year of transition. Group 4 for Competition Sports Cars had been developed mainly to provide numbers and a place for the leftovers from previous seasons. The minimum number of fifty cars produced for homologation was reduced to twenty-five in 1969. The intention had been to provide a class for the relatively low volume cars built such as the Porsche 910 and the Alfa Romeo T33/2, while new cars that were being built would presumably be in accordance with Group 6, 3-litre prototype rules. No one had expected any manufacturer to produce 25 cars for homologation in Group 4. However, Porsche and Ferrari surprised everyone by constructing the 5-litre 917 and 512, making a Group 4 car that would dominate the prototypes of Group 6. The regulations for Group 6 were relaxed and thus these cars became rather more like Group 7 unlimited machines, except for the 3-litre limit. Windscreen, ground clearance, and spare wheel regulations disappeared. Aerodynamic experiments eventually led to greater control in this area, as had happened in F1. Porsche also built cars for Group 6 in 1969, the 908/2, which meant it had an arsenal for every type of circuit on the calendar. Ferrari also came up with a Group 6 312P. For Alfa Romeo, the T33/3 was built to take advantage of the Group 6 rules, with the 3-litre engine needed to give a chance of outright victory, and the original chassis was not up to housing a 3-litre.





In the end, Monza was left to the privateers. This is the Zadra/Dalla Torre car, chassis 029.



Pinto/Alberti were 5th in the Targa Florio in chassis 022.

Also in Group 6 at Monza but in the Up-to-2-litre class were Antonio Zadra/Giuseppe Dalla Torre in their Daytona 2-litre under the banner of Scuderia Trentina. They had cut the roof off the car to lighten it, thus making it a 'prototype'. In the process they had unofficially re-christened it a 'P33'.

The standard 2-litre Daytona entered by VDS and driven by Claude Bourgoignie/Taf Gosselin was in Group 4, along with Spartaco Dini/'Nicor' in their SCAR Autostrada car and Enrico Pinto/Giovanni Alberti in the latter's newly acquired example.

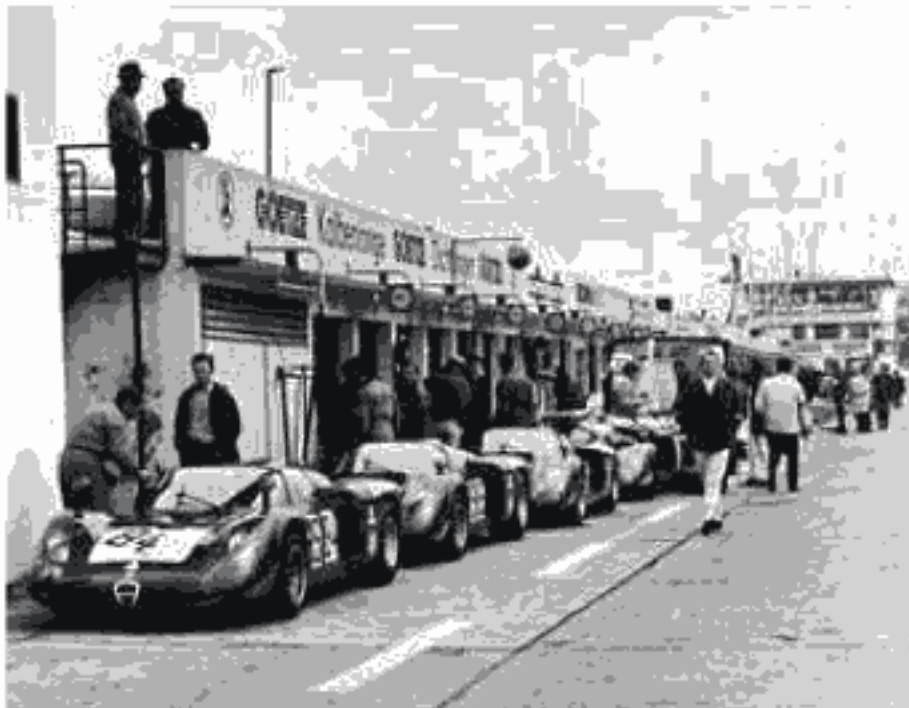
The latter finished well, getting 7th place, and three of the cars were in the top ten, but Alberti's car was to achieve an even better result in Sicily two weeks later when they were 5th overall on the Targa Florio. This was Chiti's 'must win' event but the bulk of the World Sportscar Championship calendar consisted of five endurance races with no more than fortnight gaps between them. He had clearly given up hope of turning the new 3-litre into a Ferrari/Porsche beater, and was waiting for the season to become less hectic before re-entering the fray. In the meantime he bided his time with two Group 4 Daytona entries for Casoni/Dini and Giunti/Galli and a Group 6 Daytona, as it had a 2.5 motor, for Vaccarella/De Adamich. Galli: "I always tried to make sure we had the same car every time we raced [chassis 017] as it was the only way to achieve consistent handling. All the other cars were different between each other and they varied from race to race."

Dini managed to crash his car badly in practice, so it did

not start, and co-driver Casoni transferred to Zadra's Scuderia Trentina entry. Pinto/Alberti were running under the Scuderia Madunina banner.

Once again the Porsche team was reliable and ready. The T33/2s offered little resistance except for an Elford Porsche/Galli T33/2 incident. Elford: "I had dropped back [in a Porsche 908] after a pit stop and was being forced to follow the 2nd-placed T33/2 of Galli. We went like this for about 5 kilometres until I got fed up and on a long section down the side of a valley came up alongside him into a corner. We touched and the impact pushed him off briefly. I continued, but all the way back up the other side of the valley, the local Sicilian spectators were making very rude gestures at me as they had seen what happened to their red car in the distance."

At around this time it was reported that Alfa France had acquired two Group 4 Daytona T33/2 cars and Jean-Pierre Jaussaud took one to a maiden 6th place against Lola-Chevy opposition in the Bourgogne Trophy on May 1 at Magny Cours. The authors recently spoke to Jaussaud about his 'memorable days' in a T33: "I drove an Alfa 33? Where was that? Oh, Magny Cours ... how did I do? I won? Oh, I am so good, where is the champagne? That must have been the Alfa France, with M. Landon, the chief of sport at Alfa France. That was 1969, the year I did Le Mans with Ford. I am so 'appy that there are people who know what I did!"



An impressive array of 2-litre T33/2s turned up for the Nürburgring 1000 Kilometres.

Alfa Deutschland was also prepared to put its name on T33/2s and Herbert Schultze took one so adorned to 2nd overall in a combined 2-litre Group 4 and 6 race at Fassberg near Hanover. He was beaten by the inevitable Porsche 910. On the same day the Spa 1000 Kilometres was held on the original circuit and the VDS stalwarts turned up with both of their cars sporting 2.5 motors. The Pilette/Slotemaker car was very quick but neither used the long tails that had been developed for fast circuits, as bizarrely they made the cars impossible to drive.

What probably was to become the T33/2 with more wins to its credit than any other was just getting into its stride in the USA. Alfa dealer Otto Zipper had purchased a factory car and Scooter Patrick was the driver. The car won all six races it was entered for during the season, which was a record that Chiti would dearly have liked to replicate in Europe, but a sorted 3-litre was still not ready.

Autodelta was still appearing at odd events to keep the flag flying, and De Adamich turned up with a factory T33/2 at the Martini International Trophy at Silverstone on May 17, along with the VDS cars only one of which ran a 2.5 this time. They must have been able to change engines in their sleep by now. Pilette finished 7th and De Adamich 8th in pouring rain.

Next up on the punishing World Sportscar Championship timetable was the Nürburgring 1000 Kilometres, and Chiti made a strange decision not to run the 3-litre cars, which had performed well in testing the previous week. De Adamich was mystified when only T33/2 Daytonas showed up, although they were 'immaculately prepared' said *Autosport*. *Motoring News* suggested that, by now, the 3-litre cars were a totally lost cause.

The Autodelta cars were entered by Alfa Romeo Deutschland and were crewed by De Adamich/Vaccarella, Facetti/Schultze and Galli/Giunti. The latter pair put up an amazing performance in practice with an 8min 51.1sec lap in their favourite chassis 017, which was not only the fastest Group 4 car – against Porsche 910s, Chevron B8s and Abarth 2000s – but also 13th fastest overall. Sadly it blew its engine in the race when ahead of Porsche's early 917. In the end the Facetti/Schultze pairing won the class and came in 7th overall ahead of the monstrous 917.

In southwest France the week after, a T33/2 took part in probably the most extraordinary event of the type's career. Autodelta engineer Marcello Gambi: "I towed the car to the meeting on a trailer with Giunti. We were not certain what to expect or what the format was." The event was a special-stage rally called the Ronde Cevenole. The roads were Tarmac but narrow and one lap was over 26 miles. The course had to be covered ten times.

Gambi: "The roads were rough and covered in dust and grit. There was nowhere to service so we dug a hole in the ground and at the end of each lap Giunti would position the car over the hole and I would change the oil." The car survived the ordeal and Giunti brought it home in 1st place setting up a one lap course record of 27min 31.4sec in the process, an average of nearly 60mph on tortuous roads.

Hill-climbs were on Alfa Deutschland's timetable, with appearances at Rossfeld – where Scarfiotti lost his life tragically – and Mont Ventoux in June with Michel Weber doing the driving chores. Tony Fischhaber was also at both venues but unusually at the wheel of one of the longer wheelbase T33 Stradales. The Stradales will be covered in a separate chapter.

June is also the month of Le Mans but the usual two VDS cars, one with a 2.5 motor, were a poor substitute for factory 3-litre prototypes, and the team felt much the same way. The Autodelta drivers were also looking for other ways of competing in the 24 hour grind. Vaccarella and Galli found seats in Matras while Zeccoli was taken on by NART. Vaccarella was 5th with Jean Guichet and Zeccoli 8th with Sam Posey. Nanni Galli recounts his Le Mans experience outside the Autodelta team: "In 1969 I drove the Matra because I convinced them that I could bring something, my experience, to them. I drove with Robin Widdows and we



This is the Bourgoigne/Gosselin VDS car at the Ring. It finished 11th.

This was fixed for the second heat but Giunti had to start at the back. Confidence was obviously high as he reportedly said that he was going after the lap record. In the end a broken gearbox spelled an early bath, but not before climbing up through the field to 5th place. The word potential must have cropped up a lot in Chiti's reports back in Milan and Rome after the weekend.

finished 7th and it was a good experience." Robin Widdows recently recounted how good a team-mate Galli was, and how pleased he was to experience the way Matra worked.

Both of the T33/2s had long tails fitted, and that meant the 2-litre car of Bourgoigne/Gosselin had to be moved to Group 6 where its team-mates were already, because the team-mates were using the 2.5 motor. This was all because neither of these items were homologated into Group 4. *Autosport* remarked that VDS seemed to be doing more for Alfa Romeo's image than the factory was. The 2.5-litre car retired with engine problems and the 2-litre with accident damage.

It would be fair to say that this was the nadir of the T33 story so far. The 3-litre T33/3 was a crucial step forward for Alfa Romeo and it signalled that it was prepared to go after the top teams for top results, but after the debacle of Sebring came this long drought. This finally came to an end on June 29 at the Norisring circuit in Nuremberg, the location for all Hitler's wartime speeches.

Autodelta actually brought three cars. Two were Group 4 T33/2s for Stenzel and Schultze and entered by Alfa Deutschland, but the third was, at last, the first European public viewing of the new, open T33/3. By all accounts it did not seem much different from Sebring, considering the excessive gestation period it been through, but on the track, the stopwatch told a different story. Because this was a non-championship race, cars such as the Lola T70 were able to run larger engines and with Porsche 908s from Zuffenhausen as well, the competition was of a high standard.

Chiti and Alfa management must have been very pleased with the outcome of practice when Giunti put the new car on pole position, and even more pleased when the combo led the first heat briefly before a problem arose with the valve mechanism.

The De Adamich/Vaccarella car in unpleasant Ring weather. This is another example of Autodelta sending the older cars as the new T33/3 was not yet ready to race.



Guy Verrier drove this Alfa France T33/2 at Les Andelys.

VDS was still happy to haul its two cars around Europe and the weekend of July 6 saw them pitched up at the northwest Portugal road circuit of Vila Real. Each year this attractive track, which included two railway level crossings each lap, ran a popular sports car race attracting a competitive field and, for teams such as VDS, it provided good start money. Pilette/Slotemaker with the 2.5 car did well in practice, getting the second row of the grid with only Lola T70s and a Ford GT40 in front. A good start by both cars finished in retirement through a crash for Pilette and head gasket problems for Gosselin in the Group 4 car.

Chiti's men debuted a different version of the new T33/3 at Hockenheim on July 11, when Vaccarella turned up to drive a very attractive coupé version of the car. Giunti was also there to drive the open car from the Norisring. Chiti's cup overflowed in practice, as the coupé ended up on pole with the Alfa Deutschland-entered open car alongside. Not only that, but Schultze went fastest in the 2-litre class in a T33/2.

The two T33/3s set off in the lead and by lap four were 'in command', according to reports. Behind were Porsche 908s, Lola T70s and David Piper's Group 7-bodied Ferrari P4. On lap eleven a stone was thrown up and it hit Vaccarella's coupé windscreen hard enough to smash it, which was surprising as the car was fitted with toughened glass. By the time Nino had manoeuvred his goggles into position he had dropped back but he recovered to finish a really encouraging 3rd. Giunti suffered gearbox problems again as at Norisring and fell back to 6th, but even so, Chiti could take heart once again.

Before the next test for the new cars, the annual round-the-mountains Mugello race was held. Zadra/Dalla Torre and Pinto/Alberti arrived with their usual chassis 029 and 022 whilst Aldo Bardelli, who had previously run a TZ2 in Italian national events, had brought T33/2 chassis 014 and this car was to be shared with Carmelo Giugno.

Autodelta turned up to support these cars with all its trucks, mechanics and equipment and two T33/2s in SCAR Autostrada (a local company) colours, which were driven by Galli/Giunti and Dini/'Nikor'. These two cars put up the fastest times in practice but Abarth's new 2000 Sports were close behind. In the race they proved to be more reliable and also able to stay on the track; basic but important at such a treacherous circuit. The only V8 Alfa to finish was Dini/'Nikor' in 11th place.



Vaccarella takes over from De Adamich during the Österreichring 1000 Kilometres race.

More success was coming the way of the T33/3 however. For many years Austria had wanted to join the burgeoning Grand Prix calendar, but had no suitable circuit. International races had been held on an airfield at the town of Zeltweg and eventually the money was found to build a full-size GP standard track in the hills behind the town. It was completed in the summer of 1969 and a preliminary sports car race was held there on July 27 to test the facilities for the forthcoming 1000 kilometre event. As the location of Zeltweg was not too far from the northeast

Galli waits for refueling to be finished before he gets in the car at the Österreichring 1000 Kilometres. Chiti stands behind him.



Italian border, the Österreichring as it was christened became very popular with Italian spectators and teams and Chiti saw it as another chance to get some race testing done out of the glare of publicity.

The new circuit was very fast and included many long, flowing curves. Autodelta entered Giunti in what appeared to be his Norisring/Hockenheim open T33/3. A hollow victory was obtained. Masten Gregory had the advantage over the Alfa during the race until he ran out of petrol and asked for a push to help him recover. This was deemed illegal and a protest from Chiti elevated Giunti to first place – not a way either of them would have preferred to win.

Between that meeting and the 1000 Kilometres proper, two privateer T33/2s were hill-climbed. Casoni took the SCAR Autostrada T33/2 to Chamrousse and finished 5th and a week later French rally man Guy Verrier took the Alfa France example to an obscure outing at Les Andelys, not far from Monet's garden near Rouen – and won.

Back in Austria over the second weekend in August, the hills were alive to the sound of serious sports cars as the Österreichring hosted its first World Championship race in the form of the 1000 Kilometres for Sports Prototypes.

Chiti and his men were up against the real thing with their T33/3s for the first time since the disastrous Sebring, and all eyes were focused on them. Three cars were entered for Giunti/Galli (chassis 003), De Adamich/Vaccarella (chassis 004) and Casoni/Zeccoli (chassis 002). The ever-faithful VDS team was there as well with its 2.5 for Pilette/Slotemaker and the 2-litre for Bourgoignie/Gosselin. Presumably because of the close proximity to Italy, Zadra/Dalla Torre also came with chassis 029.

Autodelta had arrived with the wrong gear ratios, despite having been to the circuit only two weeks previously. Chiti blamed a strike at the factory. Early on in the race, Casoni lost control, spun and was hit by a Porsche 906. One down, two to go. Those incorrect gears were probably having an effect because the lap speeds at the new circuit were very high and the T33/3s were putting up a good show in the top six against a Porsche 917 and a Mirage Cosworth 3-litre. It was too much for Giunti as the

Nino Vaccarella brings the T33/3 closed car to the line for the Enna race in mid-August.





Vaccarella leaves the line with the unique T33/3 coupé with the McLaren-based Serinissima alongside.



Nanni Galli in the 33/3 at the Imola 500.

oil pressure went, causing his retirement. He was the last of the three though as De Adamich had already had the brake pedal go to the floor and went off through several fences, ending up unhurt in barbed wire. Both VDS cars retired so Zadra/Dalla Torre were in the only T33 to finish – in 17th place. It was not a good result and the cars only appeared in races of lesser importance for the rest of the year.

The gorgeous one-off T33/3 coupé that Vaccarella had driven with a broken screen at Hockenheim was taken down to the lakeside circuit of Enna, Sicily for the annual bank holiday sports car race on August 15. Nino, the hero of Palermo and Sicily, was to drive it. This ensured a good crowd for the organisers and, with little competition, Vaccarella did all, and more, that was asked of him. Two other T33s were present but were no competition, as they were the well-known pair of 'Nikor' in a SCAR Autostrada T33/2, and Alberti with his chassis 022 running in Group 6 with the roof cut off.

Nino dominated practice and the race and after just over an hour crossed the line in 1st place, two laps clear of the 2nd place man! Marcello Gambi told us that Nino could be very difficult to get into the car before a race: "everybody else would be in their cars on the grid and Nino would still be looking for his goggles or helmet." 'Nikor' took 3rd beating Alberti into 4th.

Some idea of how the whole motor racing scene has changed was provided by the sight, on the same weekend after the Österreichring, of both VDS cars – and both with 2.5 motors according to *Autosport* – at the Swedish circuit of Karlskoga

for a sports car race, accompanied by the intrepid Zadra in 029. Austria to Sweden in five days, before most motorways existed and towing a T33/2 on a trailer, deserved some sort of award.

Motoring News reported that the VDS team's morale was by now at a very low ebb, with still no sign of a 3-litre car coming its way. Yet in spite of this it finished off the 1969 season with races at Mantorp Park and Anderstorp in Sweden in September, and finally finished its year with 1st and 4th in class at Jarama near Madrid, on October 26.

Alfa Deutschland was still plugging away, its cars taking part in the Ollon Villars Hill-climb with Michel Weber at the end of August and also coming a worthy 5th against stiff opposition in the annual Nürburgring 500 Kilometres race on September 7. This was always held for under 2-litre cars.

Chiti was out with the works cars for one final 1969 outing, the 500 Kilometres race at Imola on September 13. A fleet of privateers was also taking the chance of an international outing with Alberti/Pinto in 022, Bardelli in 014, Zadra/Facetti in 029 and 'Nikor' with his T33/2 sharing with Casoni.

Autodelta brought three open T33/3s for Giunti, De Adamich and Galli and it was the latter who set the Alfa pace in second practice until De Adamich went faster. Gulf had brought its Mirage Cosworth for Jacky Ickx and this was by far the fastest car of all. There was also the usual horde of Porsches, one of which, Bonomelli's 910, was tapped into an enormous accident by Galli right at the end of a practice that finished, according to *Autosport*, on 'a rather hysterical note'.

Giunti was the only finisher of the trio in a race shortened by torrential rain. He finished 2nd, which was tarnished somewhat by being three laps down on Ickx, who won. Galli's car ran out of brakes and De Adamich was going well in 2nd place when he pulled into the pits, got out and the car was pushed away with mutterings of 'motore' without the engine cover even being lifted. And on that unsatisfactory note, the 1969 T33/3s finished their career and were never seen again.

One might-have-been which would have been very interesting was revealed by John Davenport in his Tour de France report, which appeared in *Autosport* in early October. He said that Alfa France had entered its two T33/2s and the organisers confidently expected them to show, but they were scratched right at the last moment. It would have been intriguing to see what they could have achieved after Giunti's success on the Ronde Cevenole and a later win for one of the cars on the Rallye AGACI crewed by Gerard Larrouse/Guy Verrier. This pair also brought the versatile car to a win in the Montlhéry 300 race on October 25.

None of this was of any interest to Team VDS which had finally got tired of waiting for its 3-litre car. At the Paris 1000 Kilometres it announced that it had sent its two T33/2s back to Milan and that was the end of the affair. Talented Belgian driver Teddy Pilette recently told the authors that he really enjoyed racing the Tipo 33 but with Carlo Chiti and Autodelta, there was always the problem of not knowing what car they would get, or what the specifications would be. They viewed this as part of what came with working with an Italian manufacturer. They did a great deal of testing to try and overcome the difficulties of the unique chassis of the early T33. In spite of the problems, the racing in 1968/69 provided many good times for VDS, Pilette and the other drivers.

On the other hand, over in Brazil, future Brabham Grand Prix driver Carlos Pace was using a T33/2 to make quite a name for himself. By winning sports car endurance races at Rio and Bahia sharing with Fernandez, he ended up as 1969 Brazilian Sportscar Champion. But the car won't be a hidden Alfa in South America – it was written off in another race at Rio.

The question that has to be asked at this stage is: how did Chiti convince everyone that it was worth continuing and what

was Alfa getting out of it? On a positive note, Alfa Romeo did view Alec Mildren's efforts in the Tasman series in a favourable manner. Mildren had his own monocoque built for 1969 and it had some good results when Autodelta finally supplied new valve springs for the 2.5 engine, if not supplying a 3-litre engine. There were rumours that Lola would have an F1 Alfa engine for 1970 but this never happened, though McLaren had one before the end of 1969 to prepare for 1970.

The rules were being bent by both Ferrari and Porsche with their 'mass-produced' 512 and 917 models and it was clear that these cars would provide the future sports car race overall winners. Alfa Romeo had only finished 7th in the Manufacturers Championship and a distant 3rd in the Challenge Mondial.

1969-71 T33/3 technical spec

Chassis	Monocoque panelled in aluminium and magnesium
Engine	2998cc
Bore and stroke	86mm x 64.4mm
Compression ratio	11:1
Cylinder head	DOHC per bank 4 valves per cylinder Gear driven
Fuel system	Indirect fuel injection utilising two Lucas pumps
Power	Approximately 400bhp at 9000rpm in 1969 then 430bhp at 9600rpm by 1971
Transmission	Alfa Romeo built 6-speed or 5-speed gearbox/final drive in unit with rear-mounted engine
Length of car	3.70m
Width	1.90m
Height	0.98m
Wheelbase	2.24m
Track front	1.50m
Track rear	1.38m
Tyre sizes	4.75 x 13 front, 6.00 x 13 rear
Weight	700 kg (1969) 650kg (1971)
Top speed	Approximately 310 km/h at Le Mans with long tail (1969/70) 330 km/h (1971)

IV

Another slim season

1970

Carlo Chiti had been quoted at one point in 1968 as saying that Alfa Romeo would never build a 3-litre engine for the T33. This was at odds with his other quotes saying there was much more to come from the 2-litre engine. Perhaps by the beginning of 1970, he wished that he had remained with the 2-litre car! Nevertheless, he was now engaged in building an improved version for Grand Prix racing, and in fact came within 10bhp of the Cosworth customer unit. There must have been hopes that a 3-litre unit could finally perform well inside the sports cars.

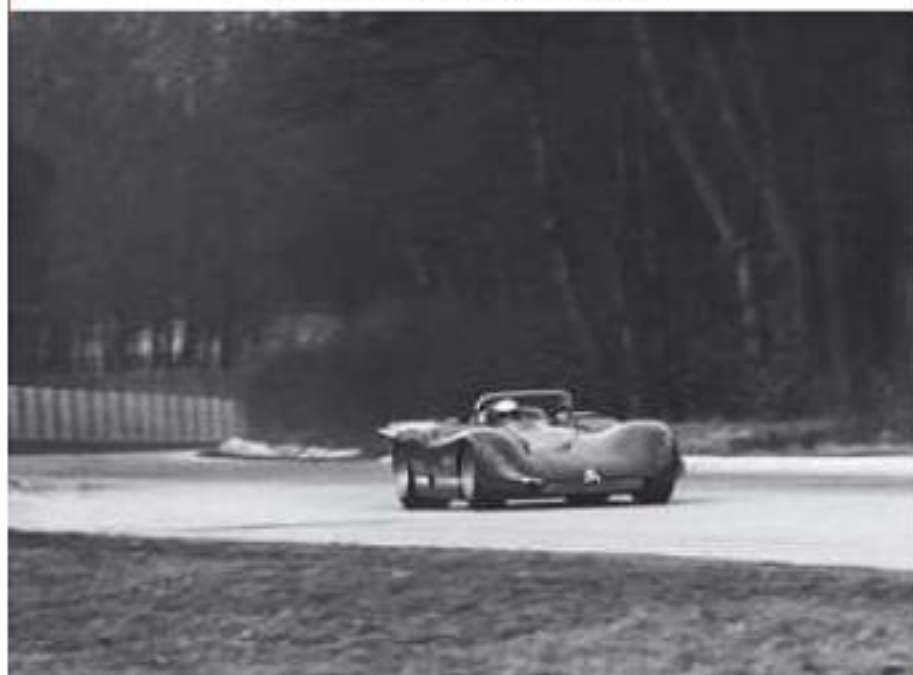
The previous year had made it very clear that the 5-litre Group 4 cars of 1970, particularly the Porsche 917, were going to dominate the season once the handling problems had been resolved. Matra particularly was disappointed as its 3-litre car should have been a winner. Alpine retired from the fight, unable to go on financing its 3-litre programme. Alfa Romeo would persevere and concentrate on improving aerodynamics, trying

out several rear body section shapes and lightening the T33/3 by using more titanium.

In the first week of January, while a T33/3 coupé was being displayed on the Hexagon of Highgate stand at the British Sports Car Show in London, serious racing action was going on in the Tasman series – where the Alfa engine had disappeared from the Mildren team – and in South America. At the Buenos Aires 1000 Kilometres, it was more or less a battle of the 3-litre prototypes. Autodelta sent two new, lighter T33/3 open cars for Andrea de Adamich and new driver Piers Courage and veteran Nanni Galli and another new signing, German Rolf Stommelen. Galli's usual partner Ignazio Giunti had despaired in the 1969 season and gone to Ferrari where he was hoping for an F1 drive, which he certainly deserved. There was a single Matra and hordes of 908 Porsches, and David Piper's 1969 917 with new bodywork.

De Adamich/Courage were not far behind the 917 in practice with the other car 6th quickest, and in the race they both tailed

Early testing of the T33/3 before cars went off to South America.



Autodelta was trying modified long tails in preparation for the Le Mans test weekend.





Detail of the long-tail bodywork.

Piers Courage was a hard-trying Alfa driver. Here he is at Druids corner, Brands Hatch.

the leading 917. The Matra got into the lead when the Porsche had punctures and quit, then De Adamich/Courage took the lead when the oversteering Matra spun. Stommelen spun the other Alfa and eventually retired. The lead Alfa then lapsed onto seven cylinders after a long spell at the front and dropped to 6th at the finish. At least it was a promising start for an 'improved T33/3'.

This optimism seemed justified when the cars gathered at the same circuit a week later for the Buenos Aires 200 Miles and De Adamich/Courage qualified on pole. Galli's fight with Beltoise allowed Courage to get away in the first of two heats to win, with Galli 4th. In the second heat De Adamich won and Stommelen had difficulties, so the team

finished 1st and 8th on aggregate. The Courage/De Adamich pairing looked set to work as they got along well, and because they were of similar size they staked a claim to driving one car which both could get used to. Both drivers were now in F1, as Courage was in the Frank Williams-run De Tomaso and De Adamich had just been announced as the driver of the new McLaren M7A with the 3-litre Alfa engine.

Autodelta had decided that the new T33/3 was promising and therefore time should be spent on development, so it missed the Daytona 24 Hours to prepare for Sebring. The team was so impressed with the hard time it was given by Masten Gregory driving the Richard Brostrom Porsche 908 in Buenos Aires that it invited him to join, along with Dutch driver Toine Hezemans. This pair would be joining the 'regulars' in a four car attack at Le Mans in June. In early March there was hill-climb action in France and the Alfa France T33/2 went to the Ceyreste event, where Jean Guichet was 3rd overall behind Daniel Rouveyran's F2 Tecno and Jean Clement's Porsche Bergspyder.

Work was pressing ahead on the 3-litre engine to go into the McLaren, and there was a danger that this would start to fall behind. Autodelta, of course, was also still running in other categories and in mid-March Toine Hezemans won the Monza Four Hours touring car race in a 2-litre GTA.



Peter Revson talks to Steve McQueen at Sebring. They were 2nd in the race.



Autodelta turned up in force at Sebring, and something that has always been somewhat puzzling to Alfa followers was that the cars entered seemed to be referred to by names rather than numbers. There have been occasional references to this, and Nanni Galli knew the cars had names but not why. It was Teodoro Zeccoli who explained to the authors that Chiti had an interest in astronomy, among other more esoteric subjects, and had put his mind to giving the cars names of stars. There was indeed a complete list of star names but it would appear that hope didn't really lie in the stars and the 'project' got dropped, or Chiti got caught up in other things. In any event, Galli and Stommelen were to drive Vega, Hezemans and Gregory had Rigel, and Courage/De Adamich were in Sirius.

Carlo Chiti's interest in astronomy was more than passing and he had drawn up a list to be assigned to the T33/3 cars. 002 was Sirius, 006 was Vega, 008 was Orion and 014 was Altair. These were the only cars so identified. However, the full list of stars of 2.00 or greater magnitude also included Canopus, Centauri, Arcturus, Capella, Procyon, Achernar, Betelgeux, Agena, Acrux, Aldebaran, Antares, Spica, Pollux, Formalhaut, Deneb, Crucis, Regulus, Adhara, Castor, Shaula, and Belletrix. These were the stars on Chiti's list for use in naming chassis ... yes, there may be a Tipo 33 named Betelgeux out there! The names appeared on the cars at several of the next races.

Masten Gregory's first impression of the T33/3 was that it was noticeably heavier than the 908 but seemed to have more power on tap. There had been a lot of testing done prior to the event, so great things were expected. De Adamich had broken the previous record by five seconds.

Official practice wasn't so positive and Courage/De Adamich were in 9th spot on the fifth row, behind Alfa deserters Vaccarella and Giunti in a Ferrari 512S, with the other Alfas a few rows further



Teodoro Zeccoli drove this T33/3 with Nanni Galli at the 1970 Le Mans test weekend.

back. De Adamich attributed the performance to the bumpy surface of the track, but presumably suspension changes had been made since the superb test times had been set. Up front it was all 917 vs 512S with a single Matra ahead of the first Alfa. After a few hours, the chink in the Porsche armour started to show and one by one the 917s fell by the wayside. Then the Ferraris grew thinner. After running smoothly, the Courage/De Adamich car stopped with a broken distributor which was repaired. This was followed by the Stommelen/Galli car being delayed with a broken oil filter and Hezemans and Gregory having fuel feed troubles. Through all this, the Revson/Steve McQueen 908 Porsche moved into 2nd and only missed beating the Andretti/Vaccarella/Giunti 512S by 23.8 seconds. Gregory and Hezemans soldiered on to a good 3rd, De Adamich/Courage were 8th and Galli/Stommelen 9th. Gregory's finish was his best ever at Sebring after many attempts.

The result was taken fairly well by Autodelta. The team morale was high and Piers Courage was seen as responsible for injecting serious pace into the team. Hezemans described him as the 'fastest driver I have ever known'. Chiti liked Courage a great deal and De Adamich also said that Piers' presence made life easier with Chiti who didn't get on with drivers as a group, a view of De Adamich's not shared by his colleagues. Hezemans really liked Chiti but saw him as Galli did, completely chaotic, with his office filled with cats and dogs sitting on all the chairs!

On the same weekend as Sebring, Jean Guichet again took the Alfa France 33/2 to a French hill-climb, this time the fairly



The Nicor/Dini car had this interesting open body in testing for Monza.



Chiti commands the Galli/Stommelen car at the Monza 1000 Kilometres. This car has the star name Altair on the front wheelarch.

obscure Ampus Hill where he was 4th. Mario Casoni won in a Group 6 Abarth.

Autodelta must have guessed that the Brands Hatch 1000 Kilometres was going to be a disaster so it entered only one car for the speediest pair, Courage and De Adamich. This turned out to be one of the greatest sport car races of all time when, in soaking conditions, Pedro Rodriguez was penalized for passing under a yellow flag, dropped a lap, then proceeded to drive like the proverbial man possessed and lapped the entire field ... five times. This prompted John Wyer to say that 'Pedro actually couldn't see rain!' Courage and De Adamich had qualified next to the JW 917 on the grid and were going well in the wet race. Courage had a massive spin on the 4th lap when his visor misted and he tried to clean it, pitted, dropped to 5th and then started back up the field, like Rodriguez. Just before two hours De Adamich did the same thing in the same place, but didn't get away with it and trudged back to the pits.

The Le Mans test weekend had been going on at the same time, which was somewhat bizarre, and saw drivers going back and forth between the UK and France. Autodelta sent only one car, which was a test car only, to Le Mans, and this was driven by Zeccoli and Galli, setting third fastest time behind a 917 and 512S.

The opening round of a new championship, the FIA 2-litre Group 5 and Group 6 Championship, started at the Paul Ricard circuit in France. Alfa Deutschland brought a T33/2 for Michel Weber and the Alfa France car came for Jean Guichet and these were 14th and 18th in practice. Weber had the wheel nuts shear and he retired, and Guichet finished well down the order.



Stommelen on the straight at Monza.

Four Autodelta cars arrived the following weekend for the Monza 1000 Kilometres after much testing in the previous weeks. The cars were described as 'new' and they were assigned to the regular drivers plus Zeccoli and Carlo Facetti. Giovanni Alberti's Scuderia Madunina T33/2 was there for himself and



Carlo Zuccoli/Enrico Pinto, while the SCAR Autostrada T33/2 had Guido Nicolai ('Nikor') and Spartaco Dini as drivers. In spite of oil scavenging problems, Courage/De Adamich were quickest among the 3-litre prototypes, coming 10th, and Stommelen/Galli were right behind them. The race settled into the expected Porsche/Ferrari confrontation. Galli sneaked past De Adamich and they led the Matras. Alberti had a brush with the Armco and retired. At half distance, Stommelen was delayed with a broken throttle cable, then Gregory ran out of fuel and had to coast back to the pit. This car then ran out of water and the engine blew on lap 131. Courage had a 170mph spin at Curva Grande but eventually got back into the race, finishing 13th. Zeccoli stopped

Jack Brabham (Matra) leads Mike Parkes (Ferrari) and the De Adamich/Courage Alfa at Monza.

on the circuit, and Galli/Stommelen cruised to 7th overall and 3rd 3-litre prototype behind the two Matras. The SCAR car had also retired with engine trouble.

The Targa Florio followed hot on the heels of the Monza race. There were three 3-litre entries for De Adamich/Courage, Hezemans/Gregory and Galli with recruit Umberto Maglioli brought in as a Targa specialist and three-time winner. A further car had been entered but was only used as a test car, mainly by



Galli tries a full-face helmet for the first time at Monza.

Masten Gregory. In the 2-litre Prototype class, Scuderia Madunina had its T33/2 for Alberti and Pinto. Practice was problematic for nearly everyone. Ex-Autodelta driver Casoni was in a 3-litre Abarth shared with Jonathan Williams, and Casoni hit a kerb within a few hundred yards of the exit from the pits! Masten Gregory broke a front wheel on a barrier at Cerda, which was just up the road from the start, and Hezemans had a puncture. Piers Courage was pressed into action driving the service car, taking parts out to the cars on the circuit. He and De Adamich then did very respectable times. Vic Elford was asked to try a lap in the 917, and this must have been an incredible sight though he settled for the 908 at 30 seconds a lap quicker.

Piers Courage had taken his debut at the Targa Florio very seriously and was there in March and April practising in a variety of Alfa touring and sports cars including a GTA, which must have been interesting for the other traffic on the road. Toine Hezemans reported that they managed to wreck a dozen rental cars, some GTAs and at 4am one morning they went out in a T33/3, which Gregory managed to write off. All of this must have worked as Courage set the fastest time of all the Tipo 33s.

When race time came, Alberti's co-driver Pinto had failed to show up so he offered the drive to Jonathan Williams as the Casoni Abarth was a non-starter. Rain before the start brought delay and chaos and mud was spread over the entire circuit.

De Adamich's car can be seen to have the star name Procyon over the wheelarch, an indication that Chiti was serious about his star names.

Nevertheless, the big cars were off first and two stars were out within a few miles as Elford's Porsche and then Maglioli's Alfa crashed. Galli remembered this as "oh yes, the first lap, about three corners and boom!" Courage, Hezemans and Williams were well up the order and after the first changes, the Hezemans/Gregory car was in 3rd, but no one could equal the pace of the Finn Leo Kinnunen sharing a JW 908 with Rodriguez. On the fifth lap Gregory managed to get the T33/3 upside down and retired. *Road and Track* had reported that Masten was following his mentor Maglioli into all the same walls and trees on the circuit! Courage's great drive ended on lap eight after contact with another tree, and the incredible Williams/Alberti effort got 7th overall and won the 2-litre Prototype class. Siffert/Redman won outright from Kinnunen/Rodriguez.

Courage had been followed by Attwood and had been distracted by the fact that Attwood had spun and disappeared. Courage's loss of concentration made him go off as well. He then wrote a long letter to Autodelta explaining that he thought the T33/3 was far too twitchy to make a reliable long distance racer.





Courage and De Adamich were very quick in the Targa Florio but were not running at the finish.

He argued that the car was uncontrollable once the rear wheels were sliding anything beyond a small amount, and at the Targa the damp and mud meant they were sliding all the time. He also felt the car was 150kg too heavy. Courage suggested that Autodelta should get Jack Brabham or Bruce McLaren to advise on a lightening and handling programme to bring the car closer to the Porsche 908. Autodelta's immediate response to Courage is not known but its action was to get to work on a lighter and shorter car which Stommelen tested at the Nürburgring on both



The talented English driver Jonathan Williams made a rare Alfa appearance at the Targa.

the short and long circuits. He had an off-course excursion and a broken valve spring but was lapping very close to 908 times.

Galli also reflected on the T33/3's weaknesses at the Targa Florio: "The difference between the 2-litre and 3-litre cars was a big difference in power, and at the Targa on the grass and mud, it was very hard to drive. You really needed a much softer car but if it was too soft it would bottom, so it was difficult to set up the way it was because the car was too heavy. When you have a heavy car, everything is difficult. You had to make adjustments



Rolf Stommelen exits the Karussell at the Ring.

to reach a compromise and this was difficult to achieve because of the weight at the back ... more than 30kg too much. That was the main difference. At the front, the 33/3 was loose. I had already said to Ing. Chiti that it was too light at the front when we tested at Balocco, even with the aerodynamics. I think the right weight balance was 60/40 but this car had 70/30, and a really good car is 50/50 in weight. Adjusting the aerodynamics did not make a difference."

The following week saw a Group 5/6/7 race at the Fassberg airfield circuit in Germany where Michel Weber was entered in the Alfa Deutschland T33/2. On pole position was Teddy Pilette in the VDS Lola T-70, much happier after leaving the Alfas behind following the non-appearance of a 3-litre engine. Weber was 5th in the first heat and running in 6th in the second when he had a delay and finished out of the overall results. Pilette won the second heat.

Autodelta had decided to withdraw from Spa on May 17, having had three cars crash, concentrating on developing the

newer light car and preparing a small effort for Nürburgring and then Le Mans. Michel Weber had the Alfa Deutschland T33/2 at the Salzburgring for the FIA 2-litre Championship race, but bent valves in practice stopped him from starting.

The Nürburgring 1000 Kilometres was the next weekend. Bruce McLaren had been killed testing a CanAm car at Goodwood the previous Tuesday, and Hans Laine also died when practising his Porsche 908 at the Ring, dampening the whole weekend. Autodelta had still not caught up and reduced the Ring entry to the single new lighter car, which Stommelen had been testing, and the German was to share the car with Piers Courage. The car was some 150lb lighter, 20lb being accounted for by magnesium wheels. The rear suspension geometry had been altered according to Courage's suggestions, as had the roll centres. Titanium alloy was now being used in many of the chassis



The Zeccoli/Facetti car in the pit lane at Le Mans.

fittings and the engine, the rods now being largely titanium. Courage was very quick in both the wet and dry sessions, but at one point Stommelen was fastest of all in the wet. Courage had to disappear into a ditch at one stage to miss a spinning Porsche. Autodelta had switched from Firestone to Goodyear tyres and started on the dry Goodyears on a damp circuit. Stommelen ran in 6th place and gave John Surtees' Ferrari a very hard time for several laps, while the Porsche 908s dominated at the front. Courage took over but on the eleventh of forty-four laps the rear shock absorber broke and he had to stop as the car was running on the sump. The 908s went on to win.

Michel Weber and the Alfa Deutschland T33/2 were at Anderstorp in Sweden on June 7 for the next 2-litre Championship

race, his T33/2 having had a new head after the Salzburgring failure. After qualifying 13th, he retired from the first heat with gearbox 'noises' and never made the second heat. On the same weekend, Hubert Ascher brought a T33/2, chassis 029, to a Group 5/6/7 race at Dijon in France, where he finished 14th in a race won by Richard Attwood in a Lola T-70.

Then came Le Mans, the race so many teams had worked towards all season. For serious fans, Steve McQueen helped to preserve the 1970 race on film during the making of his 'epic' by having a camera car in the race and cameras at many points around the circuit. The opening laps of the race are splendid. The



Facetti crashed on the uphill run to the Dunlop Bridge.

race at the front was clearly going to be between the 917s and 512S but the Group 6 battle should also entertain, with Matra, Alfa and the Porsche 908s making it a serious contest. Autodelta brought four new cars after the losses earlier in the season, and *Autosport* kindly identified them by chassis number, a rarity at the time: Courage/De Adamich (AR75080.010); Stommelen/Galli (AR75080.007); Hezemans/Gregory (AR75080.014) and Zeccoli/Facetti (AR75080.009). The modifications made to the new light car at the Ring had been adapted to these cars, with further lightening of the radiators. Thus the car in Le Mans trim was down to 765kg, 40kg lighter than previously. However, the 'old' suspension geometry was used for this circuit and the four cars had long tails with vertical fins. Maurizio Siena was in place as technical director at Le Mans and he said the rear fins were giving an additional 13mph. The engine was now producing 395bhp but the drivers were to use 8600rpm rather than the usual 9600. Galli said recently that in spite of all the changes, he was still a 'little worried' about what the car would do at top speed! Galli/Stommelen were quickest Alfa in qualifying, coming 17th.

The traditional start with drivers sprinting across the road had been abandoned as drivers were not doing up their belts,



A close-up view of De Adamich under-braking at Le Mans.

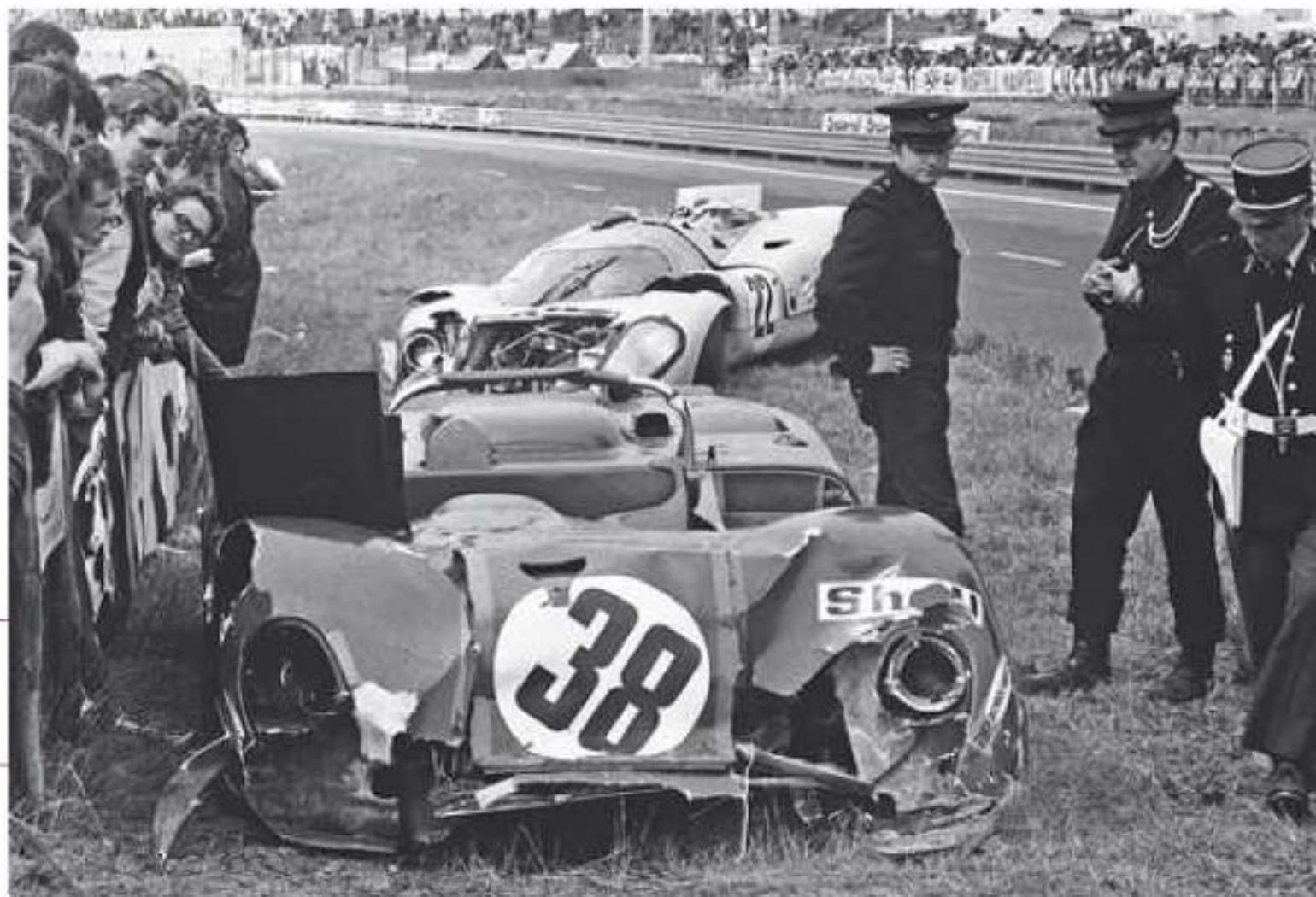


so the cars lined up along the pits with the engines off when the flag came down. Galli stopped early having missed the chicane and then Hezemans was in, his engine ruined by a stone which had gone down the inlet trumpet and broken a piston. One down. Zeccoli had the passenger seat sliding around so that was repaired. At two hours it rained, and De Adamich/Courage led the 3-litre group. Facetti then was the quickest Alfa in the heavy rain, but spun going up the hill to the Dunlop Bridge and bent two wheels on the barrier. He went back to the pits for a jack and two wheels but when he returned, he discovered that Mike Hailwood had spun the JW 917 right into the Alfa. Two down.

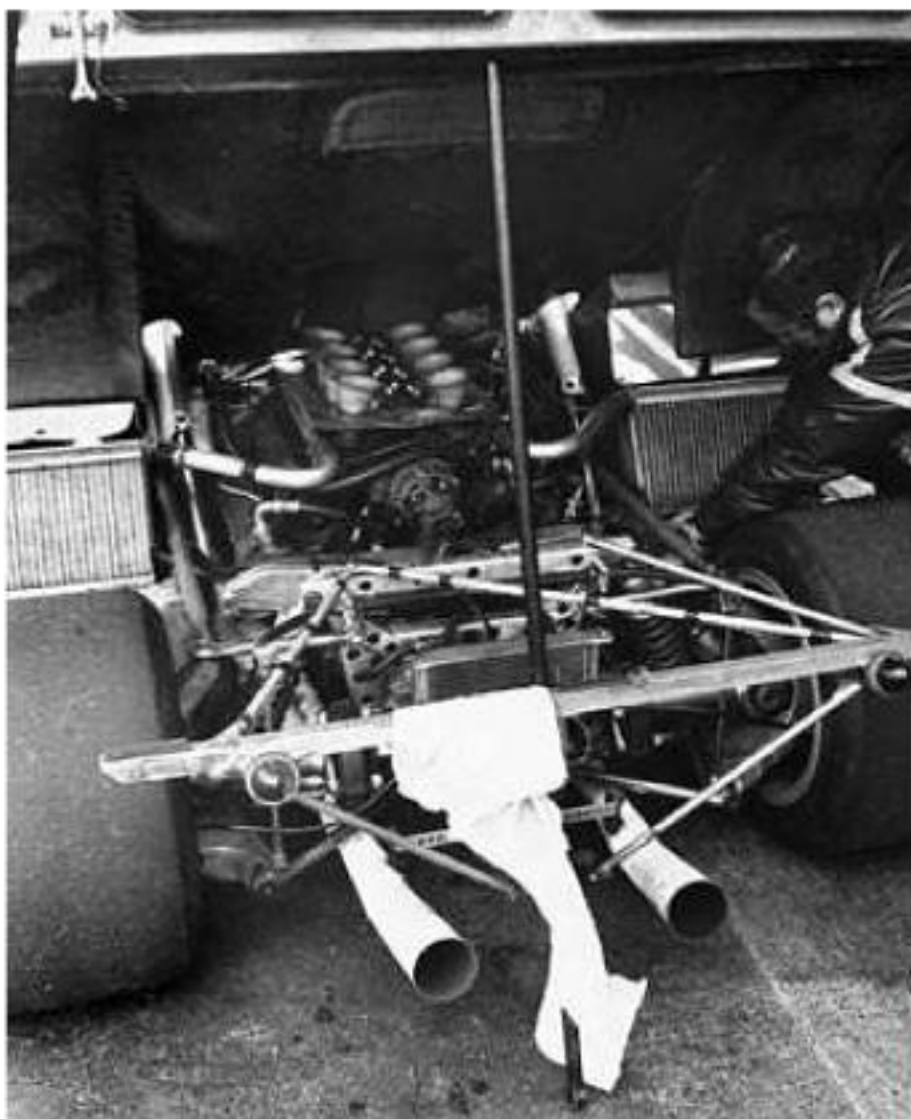
Galli and Courage were suffering from the weather, requiring new plugs for the Italian and a repaired alternator for the Briton. After four hours, Galli was still in 8th. Courage spun at the Esses and a new rear body section was fitted. Around midnight, Courage ran out of fuel in the pit lane and went after some more on foot. Galli needed a loose oil pipe fixed but he and Stommelen were going well. After sixteen hours they were 5th and Courage/De Adamich were 9th. Then Galli/Stommelen got disqualified for allegedly receiving outside help earlier when Galli had stopped on the circuit to check the loose oil pipe. Three down, and now the Courage car was misfiring. At 10.30 it coasted into the pits with a dead engine. Four down. Attwood/Herrmann pushed the steady 917 to the front

and won. De Adamich later said that the car he was sharing with Piers Courage went onto seven cylinders in the second hour, and they were going to quit. A plug was changed but it was no better, and they ran in the top ten for nineteen hours and then thought they would finish. Only seven cars were officially classified as finishers. Sadly, only De Adamich of all the Alfa drivers would see Piers Courage again. De Adamich was driving the McLaren-Alfa at the Dutch Grand Prix. De Adamich couldn't get it to qualify but this was overshadowed by Courage's death in the DeTomaso during the race.

Gerard Larrousse was in an Alfa France T33/2 at the 1970 running of the Ronde Cevenole, ten laps of the 42km circuit. He climbed through the field in treacherous wet conditions but had a puncture which then caused a rear upright to break, so he retired. Larrousse did the event twice and also raced a



The Hobbs/Hailwood Porsche 917 crashed at the same spot as Facetti.



The engine of the T33/3 at Imola in September.

T33/2 at Montlhéry. He described driving the Tipo 33 to the authors recently: "I remember that car was fantastic because it was very light and very fast but I remember having to give up once because we lost the battery in the wet. I also drove it at Montlhéry with Guy Verrier at the 300 Kilometres. It was a nice little car. The Ronde Cevenole was a very little known event. The car was given to me to drive by Francois Landon, the father of Patrick Landon, because I was used to driving prototypes on the road, as I did the Targa Florio. I was happy to drive the car and I knew the circuit because I had raced there before in a Porsche 911R. For me it was a type of driving that I knew. This kind of event doesn't happen now except for some stages like this and on the Tour Auto. On some parts you can drop off the side 200 meters ... very dangerous, but the Tipo 33 was a very good car to drive."



Mechanics work on De Adamich's car in practice at Imola.



Galli and De Adamich both tried the car in practice at Imola.

There was a Group 7 Interseries race the same weekend at the Norisring and Alfa Deutschland brought the T33/2 for Herbert Schultze. Schultze did well in practice, just behind Rodriguez in a Richard Brostrom 908 and ahead of a similar car of one 'Nick Lauda'. While 917s were 1st and 2nd, Schultze hung onto Rodriguez and scored a fine 4th place behind the Mexican. It was thus very sad that Schultze was killed two weeks later on the very last lap of the Nürburgring Six Hours where he was driving an Autodelta

The sports cars were at Imola in September, and the McLaren-Alfa was also running for De Adamich at the Italian Grand Prix.



GTAm, a race won by De Adamich/Picchi in another Autodelta GTAm. De Adamich had recently managed to qualify and finish in the McLaren-Alfa at the French Grand Prix, two places behind Giunti's Ferrari. In early July Bardelli had entered his T33/2 in the Trento Bondone Hill-climb, and Autodelta had decided not to take cars to Watkins Glen later in the month. Bardelli then turned up again at the Enna round of the 2-litre Championship in his T33/2 with a number of spoilers but the car was totally out-classed in this competitive series.

After a quiet spell, Autodelta revealed that they had been testing at Salzburgring with the wholly revised car for 1971, featuring revised bodywork and a shorter wheelbase. De Adamich, between his Grand Prix commitments, was doing the testing with Teodoro Zeccoli. Nanni Galli said: "We said to Mr Chiti that the engine needed to be moved forward towards the centre of the chassis so this was done. It still didn't have enough power but it was better. It didn't really get a better weight balance until 1972."

Autodelta brought two of the new-style cars to the Imola 500 Kilometres in September, for De Adamich and Galli. These had further body changes with front skirts similar to the Porsche 908, and the front subframes had been modified and further lightened, so the car was now lighter than the experimental one at the Nürburgring. At the last moment it was decided to practice two but run only one car in the race. Galli was quicker in the slightly lighter car. Redman's Porsche 917 slid on Galli's dripping oil and clipped the Italian's Alfa. The two



De Adamich enters Parabolica at Monza in the Italian Grand Prix.



De Adamich waits to take over the car at Österreichring, while Chiti (right), supervises.



Testing of the new version T33/3 takes place in Austria in late 1970.

drivers were teamed up in the one car in 4th place on the grid, while further back was the T33/2 of Bardelli/Nesti. The big Italian crowd gave a huge reception to the T33/3 as it cruised to 2nd place. It couldn't beat the 917s on pace, but outlasted some of them and all the Ferraris, lapping the Porsche 908s. Things were looking better. Even Aldo Bardelli and Mauro Nesti got into the top ten, coming 8th. Galli/De Adamich of course had won the 3-litre class.

The team remained at Imola for further testing, trying 13in front wheels, and De Adamich and Stommelen were two seconds quicker than the fastest time in the Imola race. Autodelta staff were upbeat as Toine Hezemans had clinched the European Touring Car Championship in a GTAm. There were even reports that Alfa Romeo would be building its own F1 car for 1971.

At the new Österreichring circuit, the 1000 Kilometre race was taking place late in the season on October 11. Four Autodelta entries came for the usual team plus new recruit Henri Pescarolo. Hubert Ascher entered his T33/2 for Klaus Reisch but it didn't show up. All the Alfas now had 13in front wheels, further revisions to the front suspension and brakes, and new bodywork still to come. Still, all was not well as the cars had been doing 1min 41.8sec in private testing a week or so before and couldn't break high 43s in the first session, with better gearing. Stommelen got into the 42s in final practice before being edged into the barrier by a 911 Porsche. Three cars for Galli/Stommelen, De Adamich/Pescarolo

and Hezemans/Gregory had the third row while Zeccoli/Facetti were one rank back.

At the first stops, Gregory/Hezemans had alternator drive problems and were delayed and Facetti had trouble starting his car. Galli had the engine blow on his car on lap sixty-one and Facetti went off the road. De Adamich was 3rd, two laps behind the leading Porsches. Gregory came in so he could hand over to Hezemans and the car wouldn't start. The mechanics changed



Klaus Reisch in the Ascher-entered T33/2 at Neubiberg in late October.



Dave Charlton and Paddy Driver drove this T33/2 at Kyalami 9 Hours.



Testing of the latest T33/3 carried on right through the end of the year. This is Zeccoli at Balocco.

the battery to no avail, so they push-started it to see if that would work. It did and Hezemans should have turned it off and used the starter to begin, but just roared off. Chiti stood there looking innocent and pretended to be astonished when they were disqualified. In the final laps, there was only the Siffert/Redman Porsche 917 left and Pescarolo, who had unlapped himself. Then the engine went bang, but he and De Adamich were given 2nd though not running on the last lap.

On October 25, Hubert Ascher entered Klaus Reisch in the sports car race at the F2 meeting at Neubiberg, Germany with the T33/2. Reisch put up a good show to come 5th. On the same weekend two private T33/2s had been entered for the Montlhéry 300 near Paris.

In South Africa at the end of the first week in November, an out-dated T33/2 which looked very much like the open 'semi-works' car Zeccoli drove at Mugello, appeared for Dave Charlton and Paddy Driver for the Kyalami Nine Hours, having been purchased from Autodelta. Considering it was up against some heavyweights, 9th on the grid was respectable. Unfortunately it only lasted about an hour after a plug electrode dropped into a cylinder and bent a valve. Ex-Alfa driver Giunti and Jacky Ickx took victory in the Ferrari 512S, beating the Porsches.

After several announcements and counter announcements, Alfa Romeo said it would not be building its own F1 car for 1971, having already indicated that it was in existence. Instead, it had learned so much from the McLaren-Alfa tie-up in 1970, that it

would be supplying engines for a March-Alfa in 1971 ... obviously didn't learn that much! The plan was for two cars for Galli and De Adamich. As often happened, it wouldn't quite work out that way. There was also talk of Otto Zipper building an Alfa-powered Formula A car in the USA. In the meantime, three T33/3s were heading for South America and by the following week the story was that there were four cars. This is interesting as the Brazilian 1000 Miles of Interlagos had taken place on November 22, and the T33/2 of Alberti and Facetti showed up and took 3rd place without any Autodelta cars making it. On the same weekend, the Cape Town 3 Hours was run at Killarney and this time Paddy Driver was teamed with Mike Hailwood, and they managed a creditable 6th. Paddy Driver improved this a week later at Lourenco Marques 3 Hours by qualifying 5th and then finishing 2nd to Brian Redman's Chevron B-19-FVC.

In Brazil, there was another sports car race at Interlagos where an Italian driver Da Matta had finished 2nd in a T33/2, while at Bulawayo, in the fourth of the Springbok Series, Paddy Driver's luck ran out when he lent the car to Derek Tunmer for a few laps. Tunmer selected 3rd gear instead of 5th, revved to 12,000 and bent all the valves so Driver didn't get a race. As the year was coming to a close, Henri Pescarolo was at Paul Ricard testing the latest modifications to the T33/3. This car turned out to have the engine which Alfa planned to use in the Grand Prix March project, producing 435bhp, which was then increased to 455bhp.

V

Hope turns to reality ... at last

Carlo Chiti must have wondered if he was in for another nightmare season like 1969 when, even before practice had begun at Buenos Aires for the 1000 Kilometre race, new recruit to the Autodelta ranks and future World F1 Champion Emerson Fittipaldi reduced one of the Milanese team's new cars to scrap in a huge testing accident. The New Year was only a week old, too.

World Championship Sports Car racing teams had little chance of relaxing over the Christmas and New Year period of 1970/1, as the first round of the New Year was in Argentina on the second weekend. Most were at the Buenos Aires track early for a chance to test new car/driver combinations and Emerson was out getting the feel of his new T33/3 when a tyre picked up a nail and deflated, sending the car into the barrier with no warning. The Brazilian was unhurt and soon fixed himself up with another drive in a Porsche, so Chiti was left having to reduce co-driver Toine Hezemans' role to that of spectator.

Emerson Fittipaldi talked with enthusiasm and a very clear memory about that particular event: "I only did one race with the

Alfa ... well, I didn't even do a race, I only did a crash! I remember Carlo Chiti and the Autodelta team were very enthusiastic to drive for. I loved the car, it was great to drive, but I had a puncture and had a crash ... it was the biggest shittest crash of my entire career! It was at nearly 200 miles an hour, a huge crash, but the car was very strong and I just walked away and went to drive a 917 with Carlos Reutemann. I got out of the car but then came Ronnie [Peterson] in the Ferrari 512 and drove on the wreckage and he got a puncture too and he crashed. I remember they didn't have enough brushes at the circuit to clean up so there were a lot of punctures. I didn't drive an Alfa again but I did see Chiti. He was a very flexible and interesting character and I liked to be around him. He was capable of improvising anything, and I had a lot of respect for him because he was successful, often in difficult conditions. Alfa Romeo came into racing in a very strong style and I was impressed with how Chiti could deal with them."

So what sort of car had Emerson crashed? The 1971 T33/3 was very similar to the revised car that had appeared the previous year at the Österreichring and that had been merely an



The De Adamich/Pescarolo car finished 4th in spite of some obvious problems.



Vaccarella's car is loaded for its flight to America for the Sebring race.

Henri Pescarolo gets ready for practice at Sebring.



update of the 1970 version. Winter testing had resulted in the adoption of 13in front wheels and consequently a lower front nose-line, but as Nanni Galli said often to us "the problem with all the V8 cars was primarily weight". In order to help increase power and decrease weight a revised lubrication system had been devised and titanium con rods were universally adopted having been tried in 1970. This new car developed 440bhp and weighed 640kg. The Matra 660 was 630kg. But the car which took centre stage in Buenos Aires was Ferrari's new challenger. This was effectively a flat-12 Grand Prix car with a two-seater body utilising the fabulous Forghieri 3-litre F1 engine. With at least 450bhp at its disposal it tipped the scales at only 600kg. No wonder it was fast and Giunti proved it by leading the race before tragically hitting Beltoise's Matra and losing his life. Nanni Galli found it difficult to speak about this nearly thirty-five years later, such was the closeness of their relationship and the respect he had for him as a driver. Autodelta felt the loss very sharply, as Giunti had been at the heart of Autodelta in the early days.

The Ferrari's was the level of performance that Chiti had to aim for from his cars. 1971 was due to be the last year that the 5-litre cars would be allowed, so from 1972 the maximum World Sportscar Championship capacity allowed would be 3-litres and there would be no more Porsche 917s or Ferrari 512s. Ferrari had built the little 312P as a test bed for 1972.

Chiti realised that this last year of mixed classes might give the T33/3s a chance to shine before facing more focused and serious opposition in the future. The race showed signs that he may be right as both cars were on the pace if not downright quick. In practice, the De Adamich/Pescarolo pairing finished up second quickest 3-litre in 5th place, with Stommelen/Galli 7th. Giunti's tragic accident cast a pall over the race itself but the all-conquering John Wyer Gulf Porsches admitted to being relieved to see the end of the race because the two T33/3s were uncomfortably close and ready to pounce should the blue and orange cars falter. All reporters spoke favourably of Autodelta's performance in finally bringing its cars home 3rd and 4th in reverse practice order. Said one: '... the Autodelta team becomes better organised and more reliable all the while.' Chiti must have been happy to make his post-race report.

Things got even easier for him in March, but first a brief diversion. Although it has no place in any detail here, for the sake



Masten Gregory has a pre-practice discussion with his mechanic.

of the story it must be included that the racing car manufacturer March from Bicester in the UK announced its Grand Prix contender for 1971, type numbered the 711. Distinctively clothed in a particularly slippery and aerodynamic body, the standard car was powered by the ubiquitous Cosworth V8; however, a second version was shown to the press with a T33/3 motor in its tail and the driver was to be De Adamich, who'd had an unsatisfactory season racing a McLaren the previous year also with an Alfa engine. One report suggested that the work Autodelta had put into the engine over the winter had made it the equal of a Cosworth and maybe the results of the Sebring 12 hours in March gave justification to that claim. John Bolster suggested in



Nino Vaccarella in the Sebring pit lane.

Autosport that the V8 would be replaced by the Alfa flat-12 by the summer, but, as we shall see, that timing was to be somewhat optimistic.

Frenchman Henri Pescarolo came into the Autodelta picture late in 1970 when it was apparent that he would be a March F1 driver in 1971. Pescarolo told the authors how the Alfa connection came about:

"I was pushed out of Matra after a fantastic first year in Formula 1 in 1970 but Jean Luc Lagardere, the boss of Matra, considered that Jean-Pierre Beltoise was not a very good first driver. He contacted the Ferrari driver Chris Amon who came in 1971 and there was no more car for me so I was very disappointed

Teodoro Zeccoli was at Sebring to help with testing.



with Matra but I had a very good experience anyway in sports prototypes and F1 so Alfa Romeo was interested in getting experienced drivers. They contacted me and I was very pleased. I was angry with Matra and I wanted to drive anything else against them but I was very pleased to go with Autodelta because they were already a famous team and Carlo Chiti was a very good engineer. I knew all the drivers very well and the ambiance in the team was absolutely fabulous, with Hezemans, Nanni Galli, Stommelen, De Adamich and me. That was really fantastic and I had a good contract because I was a Formula 1 driver. In 1971 I was driving for Frank Williams which was good, so I had a good offer from Autodelta and I was pleased, and that was a fantastic season. We had terrific battles on the track but we were all really good friends."

Before Sebring an announcement came from Autodelta cancelling its three car entry for the Le Mans 24 Hours. It cited

Rolf Stommelen was achieving high speeds on the straight past the pits at Sebring.





Nanni Galli took over from Stommelen in practice and was faster.

the poor state of the Italian economy as the reason because this had led to a severe cutback in activities involving spending. Meanwhile, Chiti and his men had a race to run and at Sebring the Argentina story unfolded again, where the new Ferrari 312P was quickest 3-litre car with the T33/3s about two seconds a lap behind in practice. They were also trading times with all the Porsche 917s so they were encouraged to be runners-up.

Three cars were entered with driver pairings Galli/Stommelen 5th, Vaccarella/Hezemans 10th and De Adamich/Pescarolo 11th. Chiti must have had his fingers crossed when the second car retired early on with fuel pump trouble, but he would have been considerably brighter at half-distance as his other two cars were lying 1-2. It couldn't last as they were both overtaken by a recovering Porsche 917 that went on to win but 2nd and 3rd places were getting better and better. 'Galli was making his Alfa fly ... he was running hard and fast and lean' wrote Pete Lyons. One of the authors was at that race, and recalled that when the famed Rodriguez/Donahue coming together started to reduce the size of the opposition, the Alfas seemed to have a reasonable chance of winning that race. Indeed, he had a conversation with Pescarolo to that effect and Henri said they would win outright "very soon!"

Henri Pescarolo commented on the cars at Sebring:

"The 1971 Alfa Romeo engine was reliable unless it was over-revved. It was very easy to over-rev because you used 9000rpm, but if you went to 9500rpm you were a lot faster. The competition between Stommelen, Hezemans, Galli and me was so intense, it was not surprising that a few drivers were going over the revs allowed to be faster. I was careful and so was De Adamich so that was why we had quite good results. At that time there was no rev limiter. Some drivers were serious like De Adamich and me, and some were not so serious and wanted to go faster and that is when they broke the engine. I had a very good 'souvenir'



Galli rounds the hairpin at Sebring where the T33/3 was as quick as the Porsche 917.



A close-up view of Pescarolo in practice.

... a memory from Sebring. I love to race in the States at Daytona and Sebring, which are great places to begin the season. We were well prepared for Sebring because we knew it was a race that we could possibly win. I don't remember the details of the race very much, except that I finished 3rd with De Adamich. The Alfas were very competitive there and the handling was very good, the engine was reliable and I had a good team-mate, as serious as me."



De Adamich also tried car 34 in practice, here leading on to the back part of the airfield circuit.

It is fascinating how famous names crop up in connection with Tipo 33s, often right at the beginning of their careers. On March 20 the late, great Bob Wollek appeared for possibly the first time in *Autosport* magazine having won a very wet French national race at Albi despite a spin. He was driving one of Alfa France's T33/2s. He was also to come 3rd in the same car at Nogaro in April.

All the major World Sportscar Championship players were present at Brands Hatch on April 2. It was the first European round of the year and the weather was cold and dreary. The Autodelta team was to go home later considerably warmer and brighter. Alfa's competition was formed by the usual two Gulf Porsche 917Ks, two more from the Martini team which were as quick as John Wyer's cars, plus one other for Willi Kauhsen. There were two Ferraris in the big 5-litre class, one for the experienced Jose Juncadella with David Hobbs and another for Herbie Muller, also very experienced, and Rene Herzog. Ferrari itself brought its second 3-litre flat-12 312P – the first having been destroyed in Argentina – for Jacky Ickx/Clay Regazzoni. This was expected to show its best form yet around the twists and turns of the Kentish Grand Prix circuit.

Another shot of Stommelen driving his heart out for a quick time.

Autodelta was now being talked about in the press in a fashion never seen before. After its good showings in South America and Florida it was suggested 'this year they mean business'. It brought two T33/3s and they both had new gearboxes saving about 10 kg '... and so the steady process of improvement goes on', as *Autosport* said. The cars were now handling well and the driver pairings matched well with De Adamich/Pescarolo in one car and Stommelen/Hezemans in the other. As soon as practice started Stommelen began to show inspired form which was to last all weekend. He was fastest of all for a while until the 312P had some sorting carried out. Even then it was only by Clay howling the flat-12 round, on and over the limit, that Maranello was able to beat Milan. The 5-litre Porsches trailed until Siffert put in a huge effort to join the Ferrari and T33/3 on the front row. De Adamich and Pescarolo ended up 6th.

Race day was cold and wet and only dried up later, never getting warmer, but the Alfa men probably didn't notice. The first





The start of the 1971 Brands Hatch 1000 Kilometres, with Stommelen alongside Ickx's Ferrari.

four hours saw the two cars settling into positions in the lower half of the top six. This was mostly because they decided to run intermediate tyres in the wet which proved to be a conservative choice. The track began to dry later and this coincided with the Gulf Porsches hitting problems, and the Ferrari had lost time with an incident early on. The latter was the fastest car on the track thereafter but spent its time playing catch-up. At 16.06 Stommelen went into the lead and '...the Autodelta pit crew into paroxysms of delight ...' But they could not relax as the Ferrari was being hurled around, apparently braking as late as the F3 cars the day before.

With an hour to go the T33/3s were 1st and 2nd. The Ferrari was experiencing niggling problems but going like the wind. Then, with thirty minutes to go a huge cloud of smoke appeared at Druids; Chiti must have wondered what he had done to deserve it as it was caused by Hezeman's engine blowing up, so Pescarolo took over the lead with the 312P only two laps behind. A slip-up now could spell the end. Then Ickx brought the Ferrari in for a routine stop and it would not start. Chiti had told Pescarolo to drive only fast enough to preserve the engine and get the car home. Everyone was on their toes, the cold, raw afternoon forgotten as the Ferrari howled back onto the track to try and catch the T33/3.



Rolf Stommelen pushes hard at Druids Corner at Brands Hatch.

It never did it and finished 2nd to the Alfa; it had been an historic day. This was the first win for an Alfa Romeo in a World Championship race since the last GP wins of 1951. After four years the dream had finally come true for Chiti and his men, but could they do it again? The answer was an emphatic yes – but not yet.



Pescarolo and De Adamich took a great win for the T33/3 at Brands Hatch.



Stommelen and Hezemans were in a new car but it wasn't running at the finish.

Henri Pescarolo talked about Brands Hatch:

"Brands Hatch was another big race for me and for the team. Everybody thought it was not possible for us to win with a 3-litre against the bigger 5-litre cars. That was true on the long and fast circuits, but on this tighter and shorter circuit, we had a better chance and we could be competitive. Today it would be something like the Zytek and my car! I was still surprised that we could be that good at Brands Hatch. De Adamich and I had the same approach for the race, which was to drive without damaging the engine. We were very constant, very serious, never over-revving. So we had a reliable car and we got a fantastic result because we won! Hezemans and Stommelen were in front, and they were good drivers, but they pushed the engine. They wanted to prove to everybody they were the fastest so they used a few more revs than they were allowed. We were more reliable, because we had decided to drive slower than the others. It was certainly the best race for me in 1971."

First they all had to go to Monza, which is very fast and therefore suited the 5-litre cars. The Gulf Porsches dominated the race, but the T33/3s put up another good performance. Some thought had gone into the latter's high-speed stability and a slightly longer tail was fitted to all three cars entered with small fins on the top. A fourth car had been entered for Zeccoli/Picchi but this was withdrawn. Practice proved very little as it rained all the time only becoming sunny on race day.

Nanni Galli had an incident in the wet with the Gipsy-Dino, damaging the fastest T33/3 much to Stommelen's annoyance. Somehow the Autodelta men were allowed to take the wreck back to their base – only half an hour away – and 'rebuild' it. There is no record as to whether the car which returned to the track was the chassis (020) which had been crashed and taken away,



After Brands Hatch, De Adamich was testing for Monza.



Stommelen (pictured) and Hezemans finished 4th at the Monza 1000 Kilometres.

or not. Nor is there any record as to whether a scrutineer made any effort to check. *Motoring News*: "Back went the car to the factory for a complete rebuild, which probably involved taking the chassis plate and placing it on one of the spare cars waiting there!" The next day Stommelen pointed at the car and said 'this' car doesn't handle so well as the one crashed the day before.

Galli's arm was too painful to use so drivers had to be doubled up for the race with De Adamich/Pescarolo finishing 3rd, Stommelen/Hezemans 4th and Stommelen/Hezemans/Vaccarella 5th. So now the cars had proven reliability as well as speed.

Despite the amount of activity at World Championship level, Autodelta also found time to slip in an entry for a works T33/3 for Zeccoli at the Interserie sports car round at Imola on May 2. Supposedly this was the 'Stommelen' car from Monza, but which one was that? It could have been the car crashed in practice, or either of two cars the German handled in the race! Pity the poor historian ...

Cars were also filtering out to private owners and this event witnessed the first run of 'Riccardone' in his T33/3. Zeccoli's competition consisted of CanAm Porsches and a March with an 8.1-litre Chevrolet V8 as well as the works development Ferrari 512M in the hands of Arturo Merzario. Teodoro was born close by and put his local circuit knowledge to good use, finally finishing 4th overall by the end of the two heats. 'Riccardone' (R Benelli) ran out 14th in his new purchase.

On the same day, May 2, the central French circuit of Magny Cours ran a race meeting to celebrate the lengthening of the track. Klaus Reisch ran his T33/2 and finished 3rd overall in wet conditions. He must have been on tour because the next

This is Autodelta's fueling rig at Monza with the team's familiar F-11 service vehicle.





Nanni Galli worries about the fuelling procedure at Monza.

weekend at Monthéry he won the national sports car race held at a Formula 3 meeting in the same car.

It was World Championship time again on May 9, this time at the dauntingly fast old Spa. Chiti was more interested in winning the upcoming Targa Florio so entered only one car for De Adamich/Pescarolo. Although lacking outright speed, they managed another 3rd place and another win in the Group 6 Prototype class. The team had now won the latter award at every 1971 event it had entered. How much longer could this last?

For Chiti and Autodelta/Alfa Romeo the Targa Florio was the jewel in the crown and all available resources were activated to win the island road-race. A major contribution to this effort was expected from Nino Vaccarella. Back on Alfa's side after trying his hand with Ferraris, the local law-teaching hero from Palermo ensured that at least the team would receive plenty of column inches in the local papers. The T33/3's 1971 record was also a major factor in Nino joining the team. At Sebring, watching the Ferrari 312P he had said: 'If I had the 312P for the Targa I could give everyone a one minute start.'

Stommelen undergoes the same torture as the other drivers.



Pescarolo looks on as De Adamich is refuelled and given a protective covering.





De Adamich has an off-track moment at Monza.



Pescarolo and De Adamich were 3rd at Spa in the single Autodelta entry.

The Maranello men weren't coming though. Their 312P had been through the wars, being involved in incidents in almost every race it had entered, and Forghieri had said it wasn't worth wasting it as after the Targa any car is 70% scrap, even if it finishes.

Held over the weekend of May 16, the Sicilian classic involved covering the 44 miles of the Little Madonie circuit eleven times. Porsche had been made to realise in 1970 that its 5-litre 917s would be near-impossible to drive on the twisting mountain roads, and had been persuaded by John Wyer to build special ultra-lightweight 3-litre Group 6 cars, designating them 908/3. For 1971 it brought the same specification cars that were 80bhp down on the T33/3s, but 60kg lighter so there was little in it between the two types.

Autodelta arrived on a high with five cars and an 'unlimited' supply of engines. Three cars were to run in the race, driven by Vaccarella/Hezemans, De Adamich with Gijs van Lennep – an experienced Targa driver temporarily without a Porsche drive – and Stommelen with Finn Leo Kinnunen, who was also a temporarily unemployed Porsche driver and the current lap record holder. The fourth car was a hack, only intended as a general practice machine. It was used during the days before the roads were closed even when there was plenty of everyday traffic around.

Chiti also brought a brand new car. He had said publicly that he was impressed by the Porsche 908/3 and this was his take on the concept. Some pundits suggested it was merely a copy, and it certainly looked like one. *Motoring News* said it was 'a dead ringer for a Porsche, but painted red'. It had a short wheelbase

with the driver situated well forward and a simple blunt nose. It was a spaceframe and it carried the 3-litre V8 in a space where it was suggested by the team that a flat-12 might well sit one day. Technically the most interesting aspect was that the gearbox was situated between the engine and differential. There was a possible development link here leading to the same arrangement on the 1972 March 721X F1 car as the Bicester team was utilising Alfa engines and there may well have been cross-fertilisation of ideas.

The new arrival had been given the title T33/TT/3. The TT stood for Telaio Tubolare (tubular chassis) or one reporter said it was Telaio Trellicio, 'trellis chassis'. The former appellation has stood the test of time. It is perhaps indicative of the way the Tipo 33 project, in general, had gone so far in that the fifth version should consist of what was effectively a retrograde step in its adoption of a spaceframe chassis after the success through 1971 of the T33/3s with a monocoque.

There was never any intention of racing it, as Chiti had only brought it so that some idea of its performance could be gained on the road. It was entered for Carlo Facetti/Teodoro Zeccoli but they never drove it, although Vaccarella and Stommelen actually did. Its wheelbase, at only 219cm, was 13cm less than the T33/3s and at 560kg the car was 50kg lighter. Stommelen did a 37 minute lap when the other cars were doing 34/35 minutes. He reported it was too stiff and eventually it broke something at the rear.

A privately entered T33/3 also turned up under the Scuderia Brescia Corse banner for Todaro/ 'Codones' (Ferdinando Latteri) and they had plenty of work to do after hitting a wall in practice.



The brand new T33/TT/3 trailed by an Alfa Giulia estate to the Targa Florio for its first appearance.

In the end Porsche tripped over itself with none of its cars finishing practice unscathed, and the times were dominated by the T33/3s with Vaccarella/Hezemans fastest ahead of De Adamich/van Lennep and Stommelen/Kinnunen. These were the only cars to break the 35 minute mark, but the team's confidence took an immediate hit when Stommelen's gearbox broke in Cerda only 12km from the start.

Porsche listened to the commentary of what was going on in the mountains with disbelief as both the Gulf cars were crashed on the first lap. The crowd at the start line greeted this news with loud cheering. This was something that the Brescia Corse team was not going to receive as a puncture caused its car to leave the road and hit a spectator's Fiat 500 hard at the end of the main straight. There were no injuries although reports sounded very surprised about this. Hezemans made a routine stop in the pits and was horrified to see his front tyres down to the canvas. He remarked he had just been doing 200mph down the straight about a minute before!

On lap eight it was all over when the remaining Porsche 908/3 hit a kerb hard and retired. This elicited even louder cheers from the spectators as the T33/3s stroked home in 1st and 2nd places with their beloved Nino in the lead car. Chiti

and ended up with a 1-2-3 win with the T33/3s following behind in 4th and 5th. The fastest Alfa had been that of Stommelen/Galli but Nanni suffered an oil line coming adrift and loss of all the lubricant.

Nobody would have expected two Autodelta T33/3s to put up much of a fight against CanAm 5-litre Porsches and 8-litre

must have been in tears; this was the first Alfa win at the Targa since 1951 and its second World Championship victory in four races. *Motoring News*: 'Autodelta feel more confident than ever before now that they can show the Porsches the way home.'

Its bubble burst two weeks later at the Nürburgring 1000 Kilometres. Autodelta had entered three cars but turned up with four as the T33/TT/3 was in the programme for Facetti/Zeccoli but it was only practised. The three other team cars were reliable but ultimately not quick. That accolade went to Ferrari, which was back with its 312P. The Porsches seemed to relish being at home



This is the winning Targa car of Vaccarella and Hezemans.



Vaccarella has many fans on the Targa Florio.

Vaccarella passes through the pit area.

Chevy-powered cars, but Stommelen and Hezemans, the former in the previous weekend's De Adamich/Pescarolo car and the latter in the team spare, put on a good display at the Belgian Zolder circuit the next weekend in an Interserie round. The Alfas may have looked like underdogs but their nimble handling made them reasonable prospects. At the start of the second heat, the



Chiti and De Adamich confer at the Nürburgring in late May.



8-litre McLaren of Peter Gethin out-accelerated Stommelen off the grid and then braked so early for the first left-hander that the T33/3 hit its back-end hard and bounced back for a second time. Sadly this did the Alfa more damage than the McLaren, putting the German down to 6th at the finish. With a clear run Hezemans wound up 3rd and another T33/3, an early 1971 car with heavier gearbox which had been sold to Klaus Reisch and entered by Alfa Ascher, the Austrian Alfa importers, was driven by its new owner into 7th place.

Never let it be said that Autodelta did not take these lesser events seriously. During the first practice session, Stommelen pitted with water coming out of one exhaust. Team manager Bussinello ordered an engine change and six mechanics accomplished this in two hours getting the car out for the tail end of the second session.

Three weeks later the team was back on the World Championship trail at the Österreichring – no time for

Stommelen and Galli failed to finish in the new T33/TT/3 at the Ring.



Zeccoli and Facetti were only out for practice in the T33/TT/3 at Nürburgring.



Hezemans and Vaccarella managed 5th at the German race.

relaxation – and it brought with it three T33/3s. Stommelen experimented with some aerodynamic modifications involving two adjustable aerofolls and all three cars were running larger brake callipers to spread pad wear but were otherwise unchanged. Reisch was present with Carlo Facetti to run the Alfa Ascher T33/3 seen at Zolder. It retired early in the race with a dropped valve. Also back again was the T33/TT/3, this time having had some suspension modifications. Once again it practised only with Pescarolo/Galli but as the latter shunted it during the last session it could not make its hoped-for race debut. The mooted flat-12 was still nowhere to be seen and would not now appear until Buenos Aires 1972 according to Chiti. After trying the car on new low-profile tyres both drivers had recommended that it should race. Nanni was not Chiti's favourite during practice as not only did he damage the new car when he spun it but he also managed to take off team-mate Vaccarella on the track due to a misunderstanding.

On such a fast circuit – lap speed 133mph – it was to be expected that the 5-litre cars would be quick. Rodriguez put in one of his extraordinary drives to take 1st for Gulf Porsche while the two remaining T33/3s finished 3rd and 4th, Pescarolo having had his oil pressure disappear.

Before the final round of the World Championship, it was reported that Chiti had developed a 4-litre version of his T33 V8. The alloy block had been extended 10mm upwards allowing a longer stroke, and 510bhp was the result. The valve gear had been redesigned and it appeared it was meant for Interserie racing.



Carlo Chiti rules over the pits in practice.

The World Sportscar Championship was drawing to a close and many drivers were changing teams or some were looking for seats for the first time. The volume was greater in 1971 because this was the last year that the rules allowed the running of the 5-litre cars alongside the 3-litre Group 6 cars for points, and 1972 was to be the first year of the new 3-litre maximum capacity limit. Some teams would disappear, such as Porsche, others would expand, such as Ferrari and Alfa Romeo, and new teams were



expected to arrive. Thus there was considerable movement in the driver market and as Watkins Glen was to be the last mixed formula race some drivers wanted to obtain some experience with different cars before the new season.

Autodelta's line up was therefore considerably different as De Adamich was due to be partnered by the fast rising Swede Ronnie Peterson and Galli was to have Porsche refugee Vic Elford to share driving chores. The third car was down for regulars Pescarolo/ Stommelen. One of the authors of this book, hoping to have seen victory at Sebring, was also at Watkins Glen.

Chiti wanted Elford in particular with his extensive Porsche experience, and to help persuade him ensured that the Englishman was promised the debut of the 33/TT/3. Sadly that didn't amount to much under the circumstances, as during practice for the Watkins Glen 6 Hours in New York State an errant Porsche 911 got in its way and in the ensuing incident it was written off. Nanni Galli was driving at the time.

This sparked into life one of the many Tipo 33 conundrums. The reliable and accurate Pete Lyons reported in *Autosport*

magazine that the engine in the wrecked 33/TT/3 was taken out and used to replace the engine in Galli/Elford's normal T33/3. Only it wasn't normal because it had apparently been running an example of the earlier reported 4-litre version, thus being renamed T33/4. Presumably this was so it could be used in the CanAm race which took place the day after the Six Hours. A good placing in this event was extremely lucrative so it was worth trying the car with extra horsepower. Trouble was, with the 33/TT/3 written off Elford/Galli needed a conventional 3-litre car so the mechanics hauled out the 4-litre and installed the 3-litre. It was not possible to fit the 4-litre into the 33/TT/3 as the larger head castings made it too bulky.

Because of all this the pairing had little chance of setting good practice times and ended up in 13th grid position. The other two team cars were 6th and 7th. If the 33/TT/3 had started it would have been from 8th spot.

The authors asked Nanni Galli about the 4-litre engine: "They made the 4-litre really just as an experiment to see how it would go. I didn't know of any other specific reason. Chiti said we would



Author Ed McDonough was invited into the Autodelta garage at Watkins Glen in 1971.



The De Adamich/Peterson car was quick all weekend at Watkins Glen.



*Galli and Elford ran well but didn't finish.
Note the novel markings to identify the car.*

try a 4-litre just to see what was possible with this kind of engine, to see how quick it would go and how it would handle. I don't know which he thought was more important. I drove the 4-litre car and it was fast and it had power, but again it had the same problem of too much weight. I tested it at Balocco and that was the problem. I didn't get to try the 4-litre at Watkins Glen." Henri Pescarolo said that he had driven the 4-litre car but only in testing. He saw it as solely a CanAm project and didn't drive in the CanAm race.

The race turned out to be survival of the fittest with heavy rain falling for much of the last two hours. This was the cause of the retirement of Vic Elford when he hit an unseen Lola in the murk. The author was out on the circuit at the time and can attest to just how awful it was, some of the amateur drivers crawling around in the rain. Stommelen had also fallen foul of a slower car so De Adamich/Peterson were left and in the lead. Pete Lyons: "In the pits Autodelta engineer Chiti was a picture of controlled pride ... when the sixth hour ticked away and the winner came home the Italians exploded in jubilation. It is passion like that that makes rainy days at the racetrack worthwhile." This brought Alfa a totally convincing 2nd place overall in the World Championship and justified Chiti and Alfa's faith in the Tipo 33 project. They could only go one place higher.

Too tired to do anything else, Chiti decided to run an ordinary



*Henri Pescarolo and Rolf
Stommelen at Watkins Glen.*

3-litre car in the next day's CanAm so as to save the mechanics any more work. De Adamich drove the car and finished 7th, ironically one place ahead of new Alfa driver, Elford, who was in a pukka CanAm McLaren.



Winner De Adamich at the back of the Watkins Glen circuit.

With the new regulations coming in next season the rumour mill started and it was later reported that German sports car driver Hans Dieter Dechent would run a second team of Alfas in 1972 under the Martini banner.

Klaus Reisch was out again in his T33/3 after it had a full Autodelta rebuild and he managed 5th overall in the Wunsdorf airfield races on August 15. In early September Alfa France had a go at the Ronde Cevenole in southern France with Guy Chausseil in one of its T33/2s. The next weekend, September 12, brought tragedy back into focus.



Andrea de Adamich and Ronnie Peterson celebrate their memorable win at the Glen.

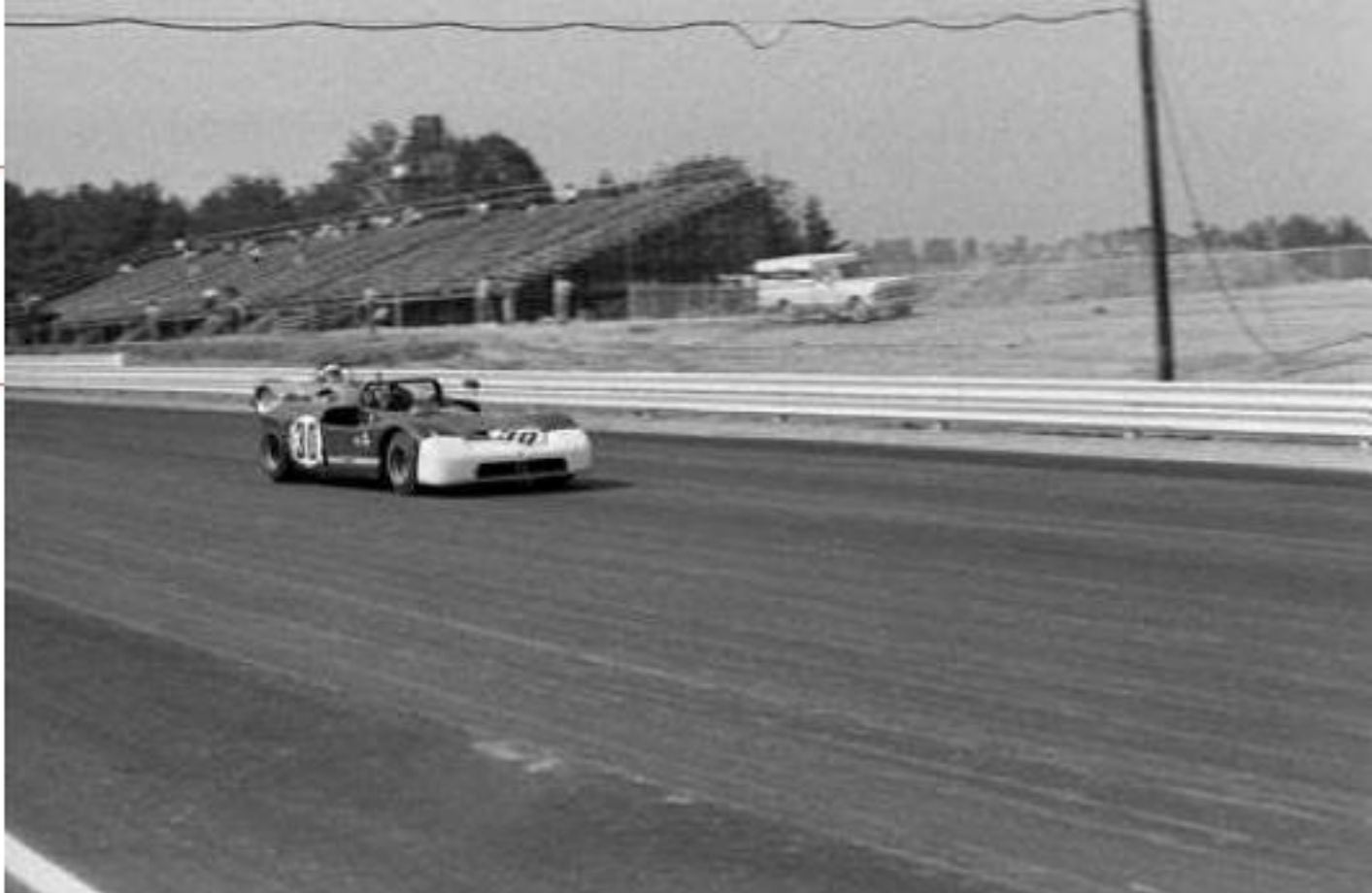
The annual Imola 500 Kilometres attracted a very mixed entry from powerful CanAm cars to small Abarths. As always, Autodelta treated it as a local race and team engineer Severi turned up with a T33/3 for Carlo Facetti and the so far ill-fated 33/TT/3 for Teodoro Zeccoli. Two privately entered T33/3s also arrived, one for 'Riccardone', which was entered by his Scuderia Nettune and the other for Klaus Reisch from Austria with his car sponsored by Spar.

Was the 33/TT/3 ever destined to get a race? This time Zeccoli was getting a tow down the straight from Regazzoni in the Ferrari 312P when he arrived at the next bend too fast. The car swapped ends and hit the barrier. The car's jinx had hit again and it was out for the weekend. Facetti plugged on through a wet and harrowing race day and finished 2nd on aggregate after heats and final results were added together. During one of the heats Reisch had appeared to aquaplane on the pit-straight and hit the pit wall twice. The car burst into flames and the poor driver was thrown out and died later from his injuries.

It was on this sombre note then that the last factory T33/3 was seen in a race. With 1972 ahead of the team, the decision was taken that 33/TT/3 was to be the works car and all attention turned to development of that machine. There was still no news as to whether the flat-12 would be ready – or even if it existed – so it looked as if 1972 would be another year with the V8. Tragedy again struck the team in October when, less than a month after he signed to drive for Alfa Romeo in 1972, Jo Siffert lost his life in a BRM at Brands Hatch. BRM's other driver, Pedro Rodriguez had been killed in July at the Norisring, driving a private Ferrari 512M in an Interserie race.

An entry had been confirmed for the Paris 1000 Kilometres race at Montlhéry on October 17. This was traditionally the last international long-distance race of the season in Europe. It didn't count for points towards any championships so seemed an ideal opportunity for an outing for the reluctant debutante, the 33/TT/3. This was also to be the very last time the Gulf Porsche 917 would be seen, however, the new Alfa seemed utterly determined

De Adamich ran the 6 Hours winner to 7th in the CanAm race on Sunday at Watkins Glen.



that it would never leave a starting grid in 1971.

The driver pairing was Stommelen/Pescarolo and the lap record for prototypes stood at 2min 40sec set up by a Matra. Despite suffering from too much rear brake-bias and bottoming on the many bumps, the pair got the car down to 2min 33.3sec which was 2.5 seconds slower than the 2nd grid place Matra 3-litre that had tested at the circuit previously.

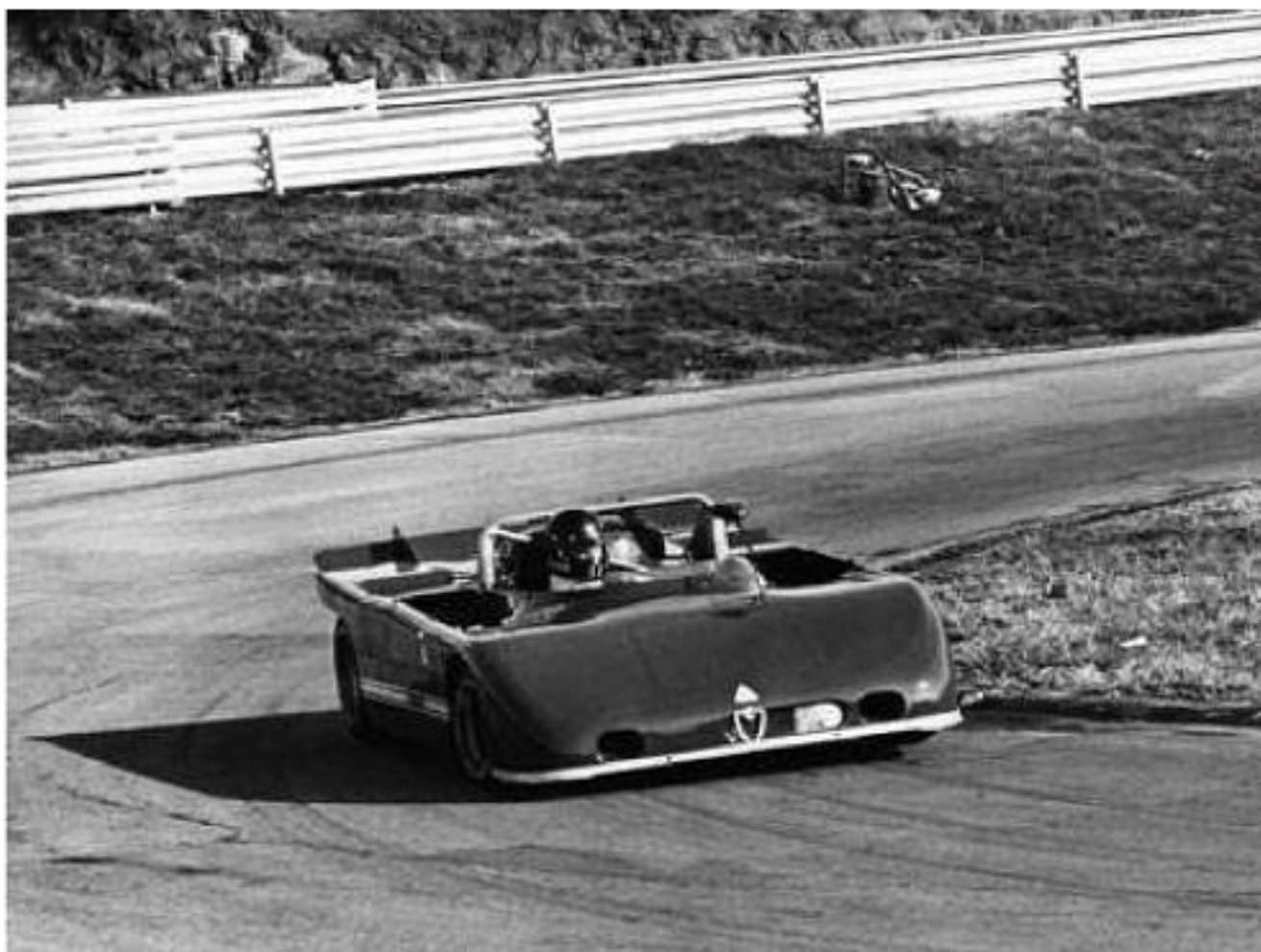
The 33/TT/3 was to start from the third row and on Sunday morning the weather changed to rain, but it had stopped before the warm-up lap leaving a wet track. The field left the pits and headed round to take up their grid positions ... all except one that is. When Pescarolo managed to bring the 33/TT/3 back to the pit area it looked a lot different. Whilst trying a test start and spinning the rear wheels on one of the straights he encountered a change of surface and the car speared off into the barrier, badly damaging the nose and rendering it a non-starter – again. Poor Pesca was given a severe dressing-down. In his defence it was also reported that the mechanics found that the diff had seized. Whatever, no one was going to see a Tubolare race before its public debut in 1972. With no more action on the track to report, the rumour and prediction season got under way. Two months after the suggestion of a Martini Alfa team the idea was scotched by Alfa itself.

Henri Pescarolo explained to the authors what had happened at Montlhéry, amidst a great deal of laughter at his own expense:

"It was embarrassing, not so much for me but for Alfa Romeo because it was a very important race. We knew that sometimes it could rain at Montlhéry and we had no rain tyres with us. We didn't have slick but dry tyres at that time. Just after the start line there is a bridge and it was very wet, dry under the bridge, and very wet after the bridge. On the warming up lap going from the wet conditions to the dry to the wet with not good tyres I turned into the wall and the car was finished. The worst for me was that

*Nanni Galli
in 2005
describing a
testing crash
at Balocco
in 1971.*





De Adamich testing the T33/TT/3 at Vallelunga towards the end of the year.

Autodelta didn't bring the right tyres for that race. But I made a mistake and I was not pleased."

Down at Paul Ricard Autodelta tested its latest 33/TT/3 with Elford and Stommelen on hand to drive. The V8 was said to be producing a reliable 435bhp and Severi, who was in charge, pronounced himself very happy. He also suggested that Ferrari would not be Alfa's main opposition in 1972.

The now almost mythical flat-12 seemed no closer to fruition, the official line being that it might appear in the latter part of 1972. Interestingly, it was said that it would apparently fit into the existing TT chassis 'with very little modification'. The project had received a setback when engineer Giovanni Marelli was injured in a road accident.

Nanni Galli had a close call as well during winter testing in preparation for Daytona. The team was at Balocco to do

high-speed tests with the latest development 3-litre V8: "I broke a driveshaft at Balocco. I came out of the bend at 300km/h and with the long tail was doing 322km/h. We knew because we had the measurements around the circuit. The braking point for the corner at the end of the straight was at 150 metres but I was braking at 100 metres. So the driveshaft broke and I just flew the 100 metres to the corner, then I was on the grass, and then for 400 metres through small trees. There were no brakes at all and I didn't stop until 500 metres. Then at Daytona, I had the same accident." Galli even provided a drawing of the incident for the authors!

So, in spite of the drama, the field was wide open and it was difficult to predict where the winners were going to come from. It looked like 1972 would be a very interesting year.

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VI

Another year of waiting

1972

When the new season dawned at Buenos Aires on January 9, there was a fairly clear indication of what Autodelta's opposition might turn out to be. Ferrari's 312P, now in 312PB form, had been well tested and was producing 440bhp from what was clearly an F1 engine, though slightly detuned. Lola had the new T280 with 3-litre Cosworth engine, and the only other arguments would come from an old Porsche 908/3. However, the Mirage-Cosworth was not far away.

Autodelta came to Buenos Aires with five cars, though only three were the 33/TT/3. These were for new signings Helmut Marko/Vic Elford, veterans Stommelen/Hezemans and Galli/De Adamich. Two T33/3s, 1971 cars, were entered for the returning Nino Vaccarella, who was paired up with local driver Carlos Pairetti, and for Alberti/Facetti. This last car was entered under Alberti's name but was being looked after by Autodelta.

The chassis of the 'new' 1972 cars was slightly longer than the 1971 T33/3 by some 20cm. The steel spaceframe chassis had been pared down just about to the minimum weight limit. However, a newly designed safety fuel tank added 30kg. A great deal of development work had been carried out on the V8 over the winter months and it had been decided that the flat-12 engine would not appear until later, much later as it happens. It remained unclear as to whether the engine actually did exist, now long after the time when it had been scheduled to make an appearance! Chiti's efforts had produced 440bhp from the engines with redesigned cylinder heads, the same figure as Ferrari was quoting. However, the chassis had not been sorted.

Nanni Galli was asked about the difference between the 1971 T33/3 and the 1972 33/TT/3: "The 33/TT/3 was really a very reactive car, very sensitive, much more than the T33/3, that was the problem. You didn't get much warning with this car, and if you had an accident, there was a worry about fire, and the amount of protection. The real problem was that we didn't get to sort it out before we started racing it."

Vic Elford was a real asset to the team in making improvements so the car stood at least a fair chance in the race. It was he and Jo Siffert who had spent time in 1970 and 1971 doing back-to-back testing at the Nürburgring in Porsche 908/3s and 917s, looking for better handling and braking. At Buenos Aires, Vic found the handling pretty awful but recommended softer springs, and after several spins in the first session got some improvements in the brake department. Helmut Marko also managed a number of rotations but also made some suggestions on the handling, though engine problems interfered with progress. The team had brought no less than seven spare engines, though it wasn't clear whether this was good planning or pessimism.

It was Stommelen who put the Alfa cat amongst the Ferrari pigeons by flying around just a fraction slower than Peterson/Schenken in the Ferrari, tyre availability having an impact



Two Ferrari 312Ps bracket the T33/TT/3 of Hezemans/Stommelen at the Buenos Aires 1000 Kilometres.

on several of the teams. Elford/Marko had persistent engine difficulties which left them on row seven. The engine problems turned out to be due to foreign substances in the new Alfa fuel tanks. The Lola T280 of Bonnier and Wisell managed to be quicker than the second Alfa of De Adamich/Galli.

When the race started on Sunday morning it looked promising for Autodelta, but the promise didn't last. Stommelen led the first lap only to tear into the pits with a sticking throttle which lost him three laps. Then De Adamich in 5th was just managing to keep Arturo Merzario at bay in the 2-litre Abarth. The unlucky Elford made a quick stop on lap three to remove a screwdriver which was flying round the cockpit floor. Stommelen, though several laps behind the Ferraris, was managing to match their pace which was promising. During the fuel stops Reine Wisell actually pushed the Lola into the lead. Galli had taken over from De Adamich and was 4th but soon returned to the pits, went out again, then retired after several more laps with water pouring out of the exhaust pipes. A puncture sent Hezemans into the barrier so he and Stommelen were out too. Alberti in the T33/3 managed to get into 5th spot. At half distance, two Ferraris led and De Adamich was 4th and Elford/Marko 5th, and after nearly six hours De Adamich/Facetti/Alberti finished 3rd, Elford/Marko 4th and Vaccarella/Pairetti were 9th. Peterson and Schenken won, Tim Schenken telling the authors recently that this was one of his best wins as a Ferrari driver.

It hadn't been a total disaster for Autodelta, but the Ferrari threat was very powerful and there must have been regrets about not getting the flat-12 engine ready for the 1972 season. A week later there was a minor sports car race at Balcarce, also in Argentina, the home of Juan Fangio, and Facetti was there in a T33/3 as a private entry, this being the car he took to 3rd at Buenos Aires. He had limited practice due to a collapsed wheel bearing and started from row three, but was soon into the lead on this challenging 4.4km track. He lapped everyone up to 4th place but then ran short of fuel and pitted, coming out in 4th. He hadn't put enough fuel in and the engine again started to stutter and he stopped. This was a shame as he won the second heat but was only 4th overall on aggregate. 143,000 people showed up for the race.

Towards late January, the American Peter Revson had been

invited to test what was described as a T33/3 at Daytona prior to the forthcoming long distance event there. However, it seems more likely that this was a 33/TT/3, and there are a number of instances where the model designations of the car led to confusion about which particular model or car was being discussed. It was interesting that at the same time it was announced that Nanni Galli would be testing the flat-12 Tecno F1 car, having given up hope of racing anything competitive in F1 with an Alfa engine.

The Daytona 6 Hours, reduced from 24 because it was thought that many of the new 3-litre cars would not last the distance, was still being publicised with the words 24 Hours, but only because there would be support races and the main race within a 24 hour period. It did manage to attract the works Ferrari 312PBs and the Lolas as in Buenos Aires and three Alfa Romeo 33/TT/3s and a spare car, the T33/3 monocoque. The 33/TT/3s were the same cars as in Argentina so it seems likely to have been the Alberti car which was 3rd in Buenos Aires and 4th at Balcarce. This car had to be used in the race for Galli/De Adamich who crashed their 33/TT/3 in Thursday's practice. For Galli, this was a repeat of the Balocco accident with another driveshaft breakage. Chiti said to Galli "Oh, stupid man." Galli had replied "I am not a stupid man. I broke this in Balocco and here because of the wrong angle on the driveshaft mounting location."

There were also cars for Elford/Marko and Stommelen/Revson. Revson was tied to Goodyears so he had to use those while the others were on Firestones. Tyres looked like they were going to be a problem for Autodelta as this seemed to be the cause of the Galli/De Adamich crash, and there also had been an accident in testing.

Three Ferraris headed the grid followed by a Lola T280, then Stommelen/Revson, Elford/Marko, the second Lola, and De Adamich/Galli. When the flag came down for the Sunday morning start, seven of those cars just got up and left all the others, the second Lola of Larrousse/Craft/Viega not making a single lap. But Schenken had a clutch problem early in his Ferrari and Andretti's was on eleven cylinders, and then Regazzoni had a puncture. Wisell was catching him and as he closed, Regga's tyre exploded and the bodywork came flying back at Wisell as he was taking the lead. He pulled in and Andretti went out in front. All of this looked to be playing into the Alfa team's hands,

This is T33/TT/3 chassis 002 at Daytona, driven by Elford and Marko to 3rd, which is tested in chapter 14.

with the T33/3 running the same pace as the 33/TT/3s. After an hour, more problems for Andretti actually put Revson's 33/TT/3 into the lead ... but only for a lap as he had to stop for fuel and for Stommelen to take over. The T33/3 was 4th and Elford/Marko 5th. Just before the third hour, Revson and Stommelen were in a straight fight for the lead with Andretti and Ickx, which raised Autodelta's spirits enormously. It was the first sign in 1972 that the 33/TT/3 could get on terms with the Ferrari.

When the Ferrari stopped the Alfa went into the lead, but soon stopped when the alternator belt started to slip. Then Galli/De Adamich had a wheel bearing go in the 33/T33/3, with Elford/Marko up to 3rd but Revson/Stommelen in 4th and beginning to feel that the engine wasn't right. Then it just failed. Towards the end, Elford/Marko were in a safe 3rd behind two Ferraris but Elford said the Alfa just wasn't quick enough. Galli/De Adamich finished 5th and though the promise was there, it just couldn't become reality.

The traditional Le Mans test weekend came a week before the Sebring 12 Hour race. There were fears that the 3-litre cars would fail to last the distance and that Le Mans would disappear but Matra had its car ready to enter the fray. Autodelta was stretched beyond its limit with cars testing at Sebring and a four hour touring car race at Monza, so only one 33/TT/3 came to Le Mans for Zeccoli, Vaccarella and Marko. Now on a Goodyear

Helmut Marko signals the Ferrari of Clay Regazzoni and Brian Redman.



contract for the rest of 1972, it had gone for 13in wheels. The braking was now improved and the handling was better. The tail sections were longer but much tidier, and the rollover bar had been reduced by half to improve aerodynamics. The radiators had been relocated to the lower part of the sills and the ducting was also lower down. The body shape was generally neater and more efficient and the lower centre of gravity improved the



This is the T33/TT/3 driven at the Le Mans test weekend by Nino Vaccarella.



Elford and Marko again in 002, this time at Sebring where it didn't finish.

handling. Unfortunately the gearing was wrong, and then Marko had a spin which damaged the new body. A new, more enclosed section was tried but then the exhaust broke so all efforts came to an end. Both Marko and Zeccoli came past the pits making signals about the poor gearing which had handicapped them on the straights. The Four Hour race was a washout as only one Lola T280 appeared, with no other important cars.

As Sebring rolled around there were stories coming out of Italy that the so-called 447bhp engine was only getting 225bhp on the dyno, but the ordering of a new dyno seemed to say what

that was about. The cars hadn't been wildly fast at Le Mans but they were not 200bhp slow! The old fuel tanks had been put aside as new ones were being developed to save more weight.

There were six cars on hand at Sebring, four 33/TT/3s and two T33/3s as spares, and three of the 33/TT/3s had yet newer body work with longer tails, neater nose sections, and low-mounted water radiators either side of the engine with low NACA inlets. These cars had the half-width rollover bar, but this would fall foul of new regulations coming into effect later in the year. The handling seemed to have been improved further. Three cars were for the same pairs as at Daytona, and a fourth car was as at Daytona except for a longer tail and full width rollover bar. This car was for Vaccarella/Hezemans, and the irony was that it was the slowest of the 3-litre cars at Sebring, but the only Alfa to make it to the finish. In practice Stommelen set fastest Alfa time, good enough for 3rd on the grid, while Marko and Vaccarella both hit things ... hay bales, Porsches ...! There was a T-car out, number 32, but with no 'T' on it which confused everyone. Marko had another shunt, and then there were engine changes. There were arguments between the drivers over whether the handling had been improved, and in the final session there were also fuel mixture problems with at least one engine.

At the start the Ferraris were away and gone, with Stommelen the only one to keep them in sight, though in the distance. The new Mirage was already faltering and after a few hours the Alfas looked well placed to take advantage of any difficulties the Ferraris might have. This didn't happen and one by one, the Alfas fell by the wayside. Elford/Marko had the oil pressure drop and the engine tightened. Galli/De Adamich had a tyre fail and this caused major suspension and radiator damage. Then Revson got called in for passing under the yellow flag, threatened the official and was thrown out though De Adamich took over, but then the clutch failed.

During the day, Vaccarella's car had been in physical contact with two, possibly three other cars, and had to have its suspension rebuilt. At night, Vaccarella failed to come around and then appeared walking into the pits. He left with a spare battery and several mechanics, and a little while later the car came into the pits with Hezemans behind the wheel! The shift linkage was replaced but there was also a fuel leak so Hezemans had to go



Vaccarella and Hezemans survived the 12 Hours to 3rd place.



De Adamich at Sebring in the car he shared with Nanni Galli.

carefully in the last hour. Again, Ferrari was 1st and 2nd but the amazing Vaccarella/Hezemans car was 3rd.

The authors had met and spent a lot of time with Vic Elford a couple of years ago at the retro Giro d'Sicilia/Targa Florio. It gave us time to talk about his career and his many races and rallies. He has an extraordinary memory and recounted several races, and his Alfa 1972 season has been recorded in Michael Keyser's fine film, *The Speed Merchants*. He commented on the Sebring race: "I had won the race in 1971 in the Martini Porsche 917, but with the rules change, Porsches were out of it so I went with Alfa Romeo, and it really looked like 1972 would be a fight between us and Ferrari. An Alfa had finished 2nd at Sebring in 1971 and though the Ferraris were faster in 1972, I thought we might have the edge on reliability. In practice we had trouble balancing the brakes and Helmut Marko liked more bias on the rear than I did, which caused me to lock up and have some spins. After the earlier races in the season, Autodelta saw we needed more power and a lot of work had gone in that direction before Sebring. There were wind tunnel tests, which resulted in a new tail for Sebring. We ended up not having the reliability I had hoped for and watched the cars disintegrate before our eyes."

An entry had been made for Rolf Stommelen at the Nürburgring Interserie round on April 1, but while Stommelen was there, the car did not show up. It was an entry for a 4-litre, and the reason given for its appearance was that the car was en route back from Sebring, an interesting story as indeed all the cars at Sebring were 3-litres. Stommelen then told the press in Germany that it had been decided not to waste time with a 4-litre car, as more experience was required with the 3-litre!

Teodoro Zeccoli told the authors he had been testing 33/TT/3 chassis 002 in February, and then in early April 003. Then,



Helmut Marko (left) and Vic Elford in a moment of relaxation at Sebring.

in late April, Zeccoli was testing 33/TT/3 chassis 006 at Vallelunga in preparation for Brands Hatch. He was specifically working on making the bodywork more race-worthy as he himself had experienced the rear section coming off in testing.

At the BOAC 1000 at Brands Hatch, the championship season continued pretty much as it had started, with the Alfas doing



Vic Elford and Andrea de Adamich took 4th at the Brands Hatch 1000 Kilometres.



Galli and Marko managed 6th at the Brands Hatch 1000 Kilometres.

their best to try to hang onto the Ferraris. The three 33/TT/3s were pretty much as at Sebring, with side radiators but slightly shorter rear body sections. The gearbox between the engine and differential brought comment from the press that this was a development taken from the March 721X, though it was actually the other way round! Vic Elford was now teamed with Andrea de Adamich, Peter Revson with Stommelen and Nanni Galli was with Brands newcomer Helmut Marko. *Autosport* went out of its way to point out that Nanni Galli was never as quick as his teammates, a criticism of him that continued to appear as this book was being written. A careful perusal of practice, testing, and race lap times shows this generalisation to be wrong. Giunti for some time was regarded as the really fast Alfa driver, but Galli was quicker on a number of occasions, got some lap records, and was a test driver held in high regard. Marko, however, was impressive by setting a quicker practice time at Brands.

Three Ferraris headed the grid, with Revson/Stommelen next in front of the Lolas which were, as usual, quick in practice, and the very rapid Merzario, who was sharing with the Alfa pilot Hezemans in the 2-litre Osella Abarth. The Alfas had new engines after Friday practice and went quicker on Saturday afternoon but were slower than the previous year. Van Lennep and Bell were trying as hard as possible in the Mirage but it was slower than all the Alfas. The Ferraris rushed off into their usual lead, and a fight ensued between the Lolas and the Alfas. The Osella retired after

only eighteen laps, and the Lolas started to experience reliability problems, though one led during the first round of pit stops. At lap 150 of 235, three Ferraris lead three Alfas. Marko had a stop for new brake pads and Stommelen needed loose rear bodywork repaired, but these were the first unscheduled stops for any of the first six cars.

On lap 205 the Regazzoni/Redman Ferrari had the first of several stops with an engine misfire which saw it drop behind the Alfas to 7th. Andretti/Lock won from Schenken/Peterson, with Stommelen/Revson 3rd, Elford/De Adamich 4th, Regazzoni/Redman back up to 5th and Galli/Marko 6th ... with no other 3-litre cars in sight.

Autodelta then announced that it would miss Monza and Spa to concentrate on getting ready for the Targa Florio. It was in a dilemma as the cars were now reliable but not on the pace of the Ferraris, yet still better than the rest. There was little chance of winning at Monza or at Spa but the hope that it could turn the tables at the Targa was realistic. Ferrari did win at Monza, but it was wet the entire race and Alfa may well have challenged. Ferrari also dominated Spa but it wasn't much of a race without the Alfas. In the meantime, Carlo Chiti got the idea that his T33/TT/3 might win against the 8-litre Interserie cars at Imola and a late entry was made for Galli with his Brands Hatch car. Arriving for the end of the final qualifying session, Galli went out, made a number of adjustments, and turned a time just slower than Willi Kauhsen's



Stommelen tried the T-car in practice though it didn't race.



Elford and Van Lennep didn't finish at the Targa Florio, where Elford was a previous winner.

Porsche 917-10 and the similar car of Leo Kinnunen, giving him 3rd on the grid, ahead of Marko in a CanAm BRM P167. In the race, Nanni held 3rd until a puncture cost him a lap and dropped him to 11th, but he worked back up to 7th by the end of heat one. He improved in heat two and finished 4th overall, and would have been 2nd if not for the puncture.

While this was going on, the organisers of the 1000 Kilometres at the Österreichring in Austria announced that Alfa Romeo would be bringing the flat-12 engine to their race in late June. Meanwhile, a sports car race in Sao Paulo, Brazil, saw a Team Jolly/Fernandez entry of a T33/3 score 4th place.

On May 21, the same weekend as the Targa Florio, two Autodelta drivers were killed, Luigi Rinaldi in the touring car event at Brno, and 'Riccardone' at the Prix Castione-Baratti Hill-climb near Parma. 'Riccardone', whose real name was Carlo Benelli was competing in his ex-works T33/3 when he lost control and hit a wall. The car caught fire and the driver was trapped inside. This chassis was kept by the family for many years and remains in Italy though it has not been restored.

In Sicily, Ferrari changed its mind at the last moment and sent one 312P for Merzario and Sandro Munari. Autodelta sent four race T33/TT/3s and a training car. In spite of missing Monza and Spa, the cars were not greatly changed for this race. The radiator intakes were now found on the tops of the doors and the outlets were at the side rather than the top of the bodywork,

and the cams had been altered to provide optimum power from 5000rpm. There was a new top link inward pivot in the rear suspension which lowered the roll centre, and better adhesion on the tricky surface was the result of increased camber.

Alfa hopes of a win took a dive when Merzario and Munari were quickest even after a few incidents. De Adamich had a water hose come off and he spun and Galli damaged a track rod when he hit a rock, but Vaccarella/Stommelen were only four seconds slower than the Ferrari, with De Adamich/Hezemans next, followed by Elford/van Lennep and Galli/Marko.

Elford was sent off first as the 56th Targa Florio got under way, his aim to draw out the Ferrari in a fatal chase. There were only five 3-litre cars altogether, so the hope was that four Alfas were a match for the single Ferrari. After 38 minutes, the Ferrari came through 1st, ahead of De Adamich and no Elford, whose engine had blown at Campofelice. Galli was 3rd on the road but 2nd on time. After two laps Merzario opened the gap, ahead of De Adamich and Marko who had taken over from Galli. Vaccarella was 4th on the road but now actually 2nd! Ferrari lost a minute to the Alfas during the first stop. Stommelen took over from Vaccarella but there was something wrong with the engine, which stopped at Cerda with a broken valve spring.

On lap five, Marko had moved into the lead on time and was ahead of Munari and Hezemans. Galli/Marko still led on lap six, now from Merzario, while Hezemans also hit a rock, broke a

wheel and lost time. When Merzario passed Galli, Galli knew he still had a minute's lead and thought he could keep the Ferrari in sight but Little Art just disappeared. After another slow Ferrari pit stop, Galli caught Munari but Munari slipped past a Lancia which spun and forced Galli to spin. That and his next stop lost three and a half minutes to the Ferrari. Then Marko drove like a man possessed, setting new lap records. He reduced the deficit to 38 seconds as they started the final lap. This came down to 20 seconds at the service area, 12 seconds at Campofelice, but Merzario was flat out on the straight that runs along the sea and came to the finish line 17 seconds ahead of the Alfa. So Galli/Marko were 2nd, and De Adamich/Hezemans 3rd. This was a brilliant race for both Ferrari and Autodelta. Ferrari secured the Manufacturers' Championship, which was still officially in doubt. There were rumours that Autodelta now regretted not going to Monza and Spa as the title race would have been closer.

Vic Elford talked about the 1972 Targa Florio: "Alfa really wanted to win this and sent four cars. I liked the Targa because it was very much like rallying which I was used to, and I was good at remembering the circuit. In practice, with the roads still open to the public, we had the usual problems with animals and people and cars all over the place. Chiti was very anxious to win the Targa, and was pretty happy when Vaccarella did a brilliant lap in practice, even with some traffic on the road. You have to be up very early to do any serious practice, but it's nice when it's empty."

Elford described driving the Alfa in a practice session, revealing the 'secret' that you need to sustain as much momentum for as long as possible, meaning not lifting or resting, braking for the hairpins with the right foot on the throttle and using the whole road, accelerate smoothly out of all the corners to avoid wheelspin, and avoid dropping a wheel over the edge where you pick up sharp stones. The advantage of knowing the corners at the Targa, as Elford knows, is that you can anticipate all the odd apexes and come out of all the corners quickly and on the right line, and if you know where the surface is smooth you can pick up fractions of a second. Of course, on race day, the road is like driving through a tunnel of people, and that's where you really have to remember because you lose the landmarks. Elford: "At least if you stop on the circuit, there's always a local who will



share his lunch with you. Even up in the mountains, a family will take you in for Sunday lunch."

There was only a week's break until the 1000 Kilometres at the Nürburgring. Three T33/TT/3s were sent with only two to race, as Galli had been 'stood down' for allegedly letting the team down in Sicily by spinning behind Munari. Marcello Gambi's view was that Galli was exhausted at the Targa and stopped once when he didn't need fuel because he was so tired. The race would have been won without this stop, or so was the view in the team. That meant Hezemans wouldn't be driving either, and the



Vic Elford makes an early fuel stop at Le Mans.

team would consist of Marko/De Adamich and Elford/Stommelen. Ferrari had three cars again and Peterson and Schenken got the pole but on the front row with them was the Mirage of Derek Bell and van Lennep. The two Alfas were next, and at the start Stommelen got past the Mirage. After seven laps, the Ferraris led the Mirage and the Alfas, and Marko had a sticking throttle and a broken rev counter. The first Alfa stops were too slow. Elford had taken over from Stommelen and stopped at Brunnchen when the wheel came off. It had not been tightened properly but marshals found it and Vic put it back on, stopping twice to check it on his way back to the pits.

Regazzoni put one Ferrari into the barriers, and the Mirage was briefly in front. At half distance Marko was in 4th, and with only two laps left the Mirage gear change problems worsened and Marko/De Adamich got past into 3rd, behind the two Ferraris. Elford/Stommelen worked back up from 33rd to 11th at the end, Stommelen setting the race's fastest lap. Vic Elford had been flying back and forth to the UK all weekend where he was practising for a race there on Monday at Brands Hatch. Chiti had given him the middle driving stints so he could be on a plane by 18.30 that evening.

In the run up to Le Mans, the Österreichring organisers again announced that Autodelta would have the flat-12 at their race. They must have been reading Chiti's own releases, which announced 450bhp and very light weight due to use of titanium. The chassis would be identical to the current one ... well, as it turned out, so would the engine.

Le Mans, on June 10 and 11, was bizarre and tragic. The long touted entry lost all the Ferraris, the two Mirages and one of the Alfas, so the Matras which had not appeared at any of the previous rounds came in strength but did not have a lot to run against. Ironically, one of the Lolas, that driven by Jo Bonnier, actually got into the lead, but flew off the road on Sunday morning and Bonnier was killed.

Nino Vaccarella powers out of the Le Mans pit lane. He was 4th.



The decision by Alfa to appear at the 24 Hours was considered by many to be a brave one. The engine hadn't changed much, and only one form of long tail bodywork was brought along. This body configuration was giving another 700rpm on the straights, and adjustments were needed to preserve some degree of handling in the corners. Stommelen would be paired with Galli, Elford with Marko and Vaccarella with De Adamich. It was interesting that, with a minimum weight regulation of 650kg, the lightest 3-litre car was the Stommelen/Galli car at 714kg, 4kg less than the lightest Matra. Some of the weight was down to new fuelling apparatus. In the first session Stommelen was actually quickest, and the car he and Galli were sharing was quite quick on the Mulsanne Straight. The Alfas had engine changes for the next session, and when qualifying was over, three Matras led Stommelen/Galli, the Bonnier/Larrousse/van Lennep Lola, Elford/Marko, De Adamich/Vaccarella and the fourth Matra.

The two Lola T-280s were in the lead up until the first stops, when the Matras took over, but no one told Stommelen that he should be slower and he was dicing with Pescarolo and Cevert lap after lap. He stayed in 2nd spot for some time and all the Alfas were running well. After two hours, the Pescarolo/Graham Hill car stopped for fuel, and Stommelen was in the lead from Galli, Ganley's Matra and Jabouille, which then stopped and lost time. A few minutes later, Galli was in the lead but came in for new plugs and a faulty metering unit was diagnosed. At quarter distance the three Autodelta cars were 4th, 5th and 6th, but at the

*Andrea de Adamich
finished 3rd at the Imola
500 Kilometres.*

halfway point, Vaccarella lost ten minutes when a troublesome clutch was checked. Just after 4am, three Matras led three Alfas. The clutch was then changed in Vaccarella's car, which dropped it to 7th, but Stommelen and Galli found their car was losing water. Then the Elford/Marko car needed a new clutch and Elford was so ill that he spun and had to be helped from the car when he got back to the pits. Nevertheless, at seven in the morning, the Alfas were still in line after the Matras.

An hour later, Bonnier's car touched a Ferrari GT car and flew over the barrier on the entry to Indianapolis. Alfa driver Elford was right behind him and parked his car to see if he could help. He then drove back to the pits and eventually the car had clutch failure and was out. Then the Stommelen/Galli car in 4th lost drive and retired with six hours to go. The Vaccarella/De Adamich car, with new brake discs, was going well again. Then De Adamich hit a barrier in the rain and lost twenty minutes, and the long tail Porsche 908 of Casoni/ Jost/Weber pulled into 3rd behind the two Matras with the Alfa 4th, and that's how they finished.

Vic Elford had been passed by Bonnier on the Mulsanne Straight and was on his tail as the Swede's Lola headed for Indianapolis: "He passed me about eight o'clock in the morning and I followed him as he accelerated out of the corner as we started to close on a privately entered Ferrari. We were heading towards the two bends on the backside of the course which are taken flat-out at about 180. At the entrance to the second bend I watched as Jo pulled to the right and started to pass the Ferrari. Then at the last moment he seemed to realise he was making a mistake. I picked my way through the debris on the track and stopped on the side of the road. Jo's car was nowhere to be seen but the Ferrari was up against the guardrail burning furiously. When I opened the Ferrari's door, there was no one inside. The



*De Adamich borrowed an Autodelta car for the
Hockenheim Interserie and was 6th.*

Scooter Patrick put up very good performances against much more powerful cars. He was 7th at Laguna Seca.



driver had gotten out and was on the other side of the rail. I could see the wreckage of Jo's car scattered through the woods and my stomach started to tighten. I got back into the car and drove it back to the pits."

When the teams took the starter's flag at the Österreichring on June 25, 'local' driver Helmut Marko found himself on row two, not in an Alfa but in the 4th team Ferrari with Carlos Pace. Autodelta, in spite of all the unwarranted fuss about the flat-12, had decided to withdraw all its cars of any type from the race, and apparently was ending its season after Le Mans. This was odd, as the 33/TT/3s had performed pretty well in France. Stommelen and Hezemans had got themselves a drive in a Chevron B21-BMW. Marko finished 2nd with Pace, and Stommelen/Hezemans were 5th. Sadly, Marko was struck in the eye by a stone while driving the BRM at the French Grand Prix the following week at Clermont Ferrand. BRM team manager Tim Parnell said recently that Marko was a stunningly quick driver, and it was a great shock when they discovered that the Austrian had lost the sight in one eye. Parnell confided this to the author at the recent Monaco Grand Prix, where Marko was undertaking his executive role for Red Bull F1 racing.

With Autodelta taking a long break, it was down to the private Otto Zipper team in the USA to keep the Alfa Romeo sports car flag flying with an unusual appearance at a CanAm race at Road Atlanta in Georgia on July 9. Scooter Patrick was driving the T33/3 Zipper had bought after it finished 5th at Daytona. It was, it seems, the Alberti car from Buenos Aires and Balcarce. This car was fitted with the 4-litre engine which Autodelta had brought to Watkins Glen possibly as long ago as 1971. While the battle for the pole was going on between the CanAm Porsches and McLarens, Patrick did well to qualify quicker than Oliver's Shadow and twelve other 'proper' CanAm cars. Although Follmer's Porsche won, Patrick had a very tidy fuel stop, and moved up from 13th on the grid to finish 9th.

At Watkins Glen for the Six Hours, Autodelta again did not attend, in spite of considerable testing of the flat-12, at last, in Austria. Otto Zipper entered the T33/3, with 3-litre engine, for Scooter Patrick and Milt Minter and they qualified a good 7th though six seconds off pole. They were in 6th spot when the engine blew after twelve laps. Patrick never made the start of the

CanAm race on Sunday due to the engine blowing up, though this car was in the entry as having a 4-litre engine. The Zipper team was used to swapping the 3-litre and 4-litre engines in this chassis, though the question has to be asked: if the 3-litre blew up, why didn't it put the 4-litre in?

In early September, the same T33/3 which had appeared in May at Sao Paulo was out again in the Sao Paulo 500 Kilometres – a race won by a Joest Porsche 908 – and again was a Team Jolly/Fernandez entry. Two days later, Andrea De Adamich won a very wet Group 5 sports car race at Monza with a T33/TT/3, beating Giorgio Pianta's Lola 212.

Again, there were hopes that Autodelta would bring out the 12-cylinder car for the Imola 500 in mid-September, but on the day it was De Adamich in his usual T33/TT/3 and Teodoro Zeccoli in a similar car. De Adamich was very quick in the first practice, with team-mate Galli in a hired Bonnier team Lola T290, a car which Galli described as one of the best cars he ever drove. Zeccoli had understeered off into the barrier and needed bodywork and suspension repairs. The race was run in two heats and a final, so there were fast and slow cars in each heat. De Adamich, Galli in the Lola, and Zeccoli took the first three spots in the first heat, while Merzario's Ferrari won the second, as Ickx had a long pit stop. In the final, Merzario led from the start, while De Adamich fended off Ickx who had started on the seventh row. Ickx got past but the Alfa was close at the finish, and Galli in the Lola won the 2-litre class, with Zeccoli failing to finish.

As Autodelta hadn't been attending Championship races towards the end of the year, Vic Elford hadn't had much work, and admitted that he had stopped enjoying his racing, and felt that there was no point in carrying on if he wasn't enjoying it. He would be a loss to the team in 1973.

As rumours circulated that Alfa Romeo would be building an F1 12-cylinder car for 1973, Andrea de Adamich borrowed a T33/TT/3 for the Hockenheim Interserie race in early October, as he was in Germany to drive an F2 car and he was trying his best to gain points in the championship for Italian drivers. He was



Scooter Patrick had Otto Zipper's 4-litre car in several CanAm races; here he is at Laguna Seca.



Patrick at work in the 4-litre car, a T33/3 often referred to as a T33/4.

sixth quickest in practice, behind the big Porsche 917/10s, but ahead of many other big-banger Interserie cars. The event was in two heats, and the Alfa had punctures in both, but De Adamich fought back to a respectable 6th overall on aggregate. Shortly after this race, Autodelta announced its 1973 plans to include a three car flat-12 team, and possibly a team of Montreals for the European GT Championship.

Otto Zipper had another occasional CanAm entry for Scooter Patrick at Laguna Seca on October 15, putting the 3-litre T33/3 15th on the grid ahead of much more powerful equipment. Patrick's driving and a very quick pit stop saw the Alfa push its



Scooter Patrick runs wide at a Laguna corner.

way into 7th at the end of ninety hectic laps. George Follmer's Porsche won and he took the championship, but the Zipper team had made a very strong impression. When the CanAm circus went to Riverside two weeks later for the 1972 finale, the Zipper car had the 4-litre engine installed and Patrick was 19th on the grid. While Follmer, Mark Donahue and Peter Revson thrashed it out at the front, Patrick set about working through the field up to 9th, another reasonable result.

Andrea De Adamich showed up in Brazil for the second round of the country's sports car series at Interlagos, finishing 2nd in a T33/TT/3. A T33/3, presumably the Team Jolly/Fernandez car, contested all three rounds, which were all at Interlagos.



Otto Zipper in the pits with Scooter Patrick.



The Zipper team relaxes at Laguna Seca. It was the only serious American team to use the T33.

The 1972 Manufacturers' Championship points table seems to tell it all. Ferrari finished on 208 points and Alfa Romeo was 2nd on 85 points, not that far ahead of Porsche which was not officially entered as a manufacturer. Most season summaries describe the Autodelta season as a shambles or disaster. Ferrari was pretty much unbeatable, though it was only Alfa which put on an occasional show. Matra only went to Le Mans where of course it won, and Lola struggled after the death of Bonnier but continued, whereas Autodelta didn't finish the season. With a bit of luck and more races contested, Autodelta would

have had a lot more points, but it still would not have caught Ferrari. In hindsight, it was scattering its efforts far and wide, as well as trying to develop the flat-12, which it should either have concentrated on or forgotten until the next year. Inside Autodelta, the atmosphere was optimistic for 1973 – but did it believe Enzo Ferrari's threats to withdraw from racing ... again? Testing of a T33/TT/3 with a 12-cylinder engine was going on before the end of the year but that still didn't look like a serious enough threat if the Ferraris were going to be there.

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While this looks like a T33/TT/3, it is in fact the first car with the flat-12 engine, testing at Balocco.



Zeccoli found the new car a real handful at Balocco.



The flat-12 engine in the back of the TT3 chassis.

1972 T33/TT/3 technical spec

Chassis	Tubular
Engine	2998cc
Bore and stroke	86mm x 64.4mm
Compression ratio	11:1
Cylinder head	DOHC per bank 4 valves per cylinder Gear driven
Fuel system	Indirect fuel injection utilising two Lucas pumps
Power	440bhp at 9800rpm
Transmission	5-speed gearbox/final drive in unit with rear-mounted engine
Length of car	3.70m
Width	1.90m
Height	0.98m
Wheelbase	2.24m
Track front	1.50m
Track rear	1.38m
Tyre sizes	4.75 x 13 front, 6.00 x 13 rear
Weight	Approximately 660kg
Top speed	Approximately 330km/h at Le Mans

VII

Promises, promises

1973

The flat-12 saga trundled on into 1973. The testing reports continued and Autodelta was still insistent that it would have a T33/TT/12 on a grid at a race some time during the year. Meanwhile it was a case of marking time.



The new shape T33/TT/12 was out early in 1973 at Balocco for testing.

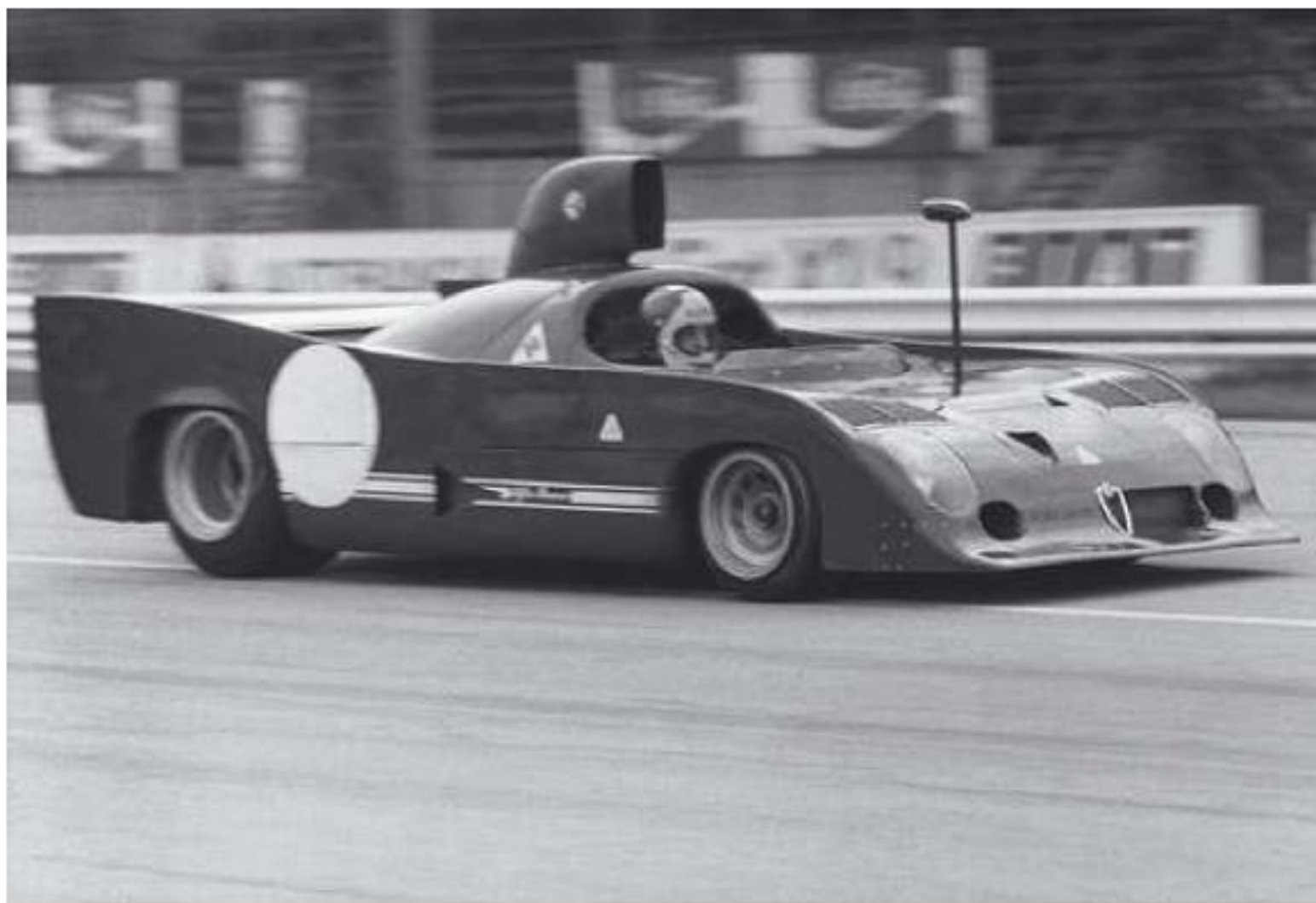


The snow has been cleared from Monza for this test.

Then, on March 8 there was a picture in *Autosport* of what we now know was the T33/TT/12 with its second style of bodywork. So there was some optimism for assuming that the car existed. Denis Jenkinson might have needed some convincing as its non-appearance at the Le Mans trials inspired him to describe it as 'the almost mythical Alfa Romeo with its flat 12-cylinder engine.' Later, in his report on the Vallelunga 6 Hours race that kicked off the 1973 World Sportscar Championship, he stated

This photo shows the clean lines of the new T33/TT/12.





Testing moved on to the Paul Ricard circuit in France.

At Ricard, closed and open rear ends were tried, along with a rear deck with no air intake.

that strikes in Italy were responsible for it not turning up there either.

1973 looked like being an exciting year. Matra was going to increase its involvement by a huge margin. Ferrari started to worry when team manager Peter Schetty left to return to Switzerland, and Mirage had a number of developments in hand. The onus was on Autodelta to come up with something to be able to stay in the game, never mind winning.

One Alfa did show up at Vallelunga and that was an ex-Autodelta T33/TT/3 V8. Still wearing its factory colours Jeff Hutchinson in *Autosport* remarked "it was amazing how out-of-date this car looked, yet it was only one year old." Drivers were to be Carlo Facetti and 'PAM' and the car was entered by the long-established Scuderia Brescia Corse. The pair had to wait during practice while a driveshaft was replaced but managed a 'credible' time to put them on row five of the eleven on the grid as slowest competitive 3-litre car. Sadly it retired during the race. The car was chassis 002 which had a number of outings as an Autodelta car, and after this race was painted in Brescia Corse's blue and white. We will encounter it again later in this book.





De Adamich is ready to go out to practice at the Nürburgring 1000 Kilometres.

As expected, Chiti was not prepared to expose the new cars to the rigours of the Le Mans 24 Hours, but Zeccoli/Facetti/'PAM' (Pasotti) were quite happy to run the Brescia Corse 1972 T33/TT/3 V8. They qualified respectably in 12th place behind the Ferrari 312PBs, Matra MS 670Bs and Mirages and then began an amazing run during the race that saw them holding 3rd place overall for five hours overnight. Sadly, it all came to an end after

With undimmed enthusiasm Chiti and his men turned up at the Nürburgring 1000 Kilometres two weeks later with two cars. One was a brand new replacement for Regga's wrapped-up Targa practice chassis and the other was the car De Adamich shunted in Sicily, suitably patched-up. This latter was piloted by Stommelen/De Adamich once again, while Facetti and Regga were in the new car. *Autosport*: '[The De Adamich car] ... showed the hard time it had had on the Targa as the team had had little time to do much else than change the engine and check it over, banging out the odd dents where necessary.'

Stommelen looked 'very businesslike' during practice and should have been on the front row but a mistake with times put the car back to the second. He continued to show speed in the race although the Alfa was not on the same level as the Matras and Ferraris. Regga had his engine drop a valve early on and, with De Adamich at the wheel after eleven laps, the tired Targa car was retired with excuses ranging from a leaking gearbox to another dropped valve.



Stommelen crosses the Adenau Bridge at the Ring.

This dramatic shot shows the T33/TT/12 in the pits at the Nürburgring.



Author Ed McDonough took this shot of Facetti as he (Ed) sat in a car in the pit lane at the Nürburgring 1973.

seventeen hours when the car became stationary in the pits for 1hr 20min having the gearbox worked on and then it dropped more time needing a new clutch and fuel pump. At the end, 15th was an undeserved result for the small team.

It was back for the Österreichring 1000 Kilometres at the end of June and the car arrived at the circuit in the works transporter along with a flat-12 for Stommelen/Regazzoni. This latter was troublesome from the word go, requiring two engine changes in practice because of burst oil pipes while the Brescia Corse car plodded on happily eventually finishing in 7th place with Facetti/'PAM' after a long stop for a leaking brake calliper. In practice, author Ed McDonough, this time in John Blankley's Scorpion-FVA, found out just how tough PAM and Facetti were on the track, having been pushed at least twice in the tighter corners!

The T33/TT/12 was in trouble again in the race with what was diagnosed as a faulty fuel pressure relief-valve. When that



Regazzoni powers the T33/TT/12 out of the Karussell at the Ring.



The Autodelta team poses with the Italian Aerobatic Team at a Monza test session. A few weeks later, several of the squad were killed in a mid-air crash.



Arturo Merzario meets the Italian Aerobatic Team.

rear deck and air intakes along the doors, which fed into new oil coolers. There were new exit ducts behind the rear wheels under the body. There were also ducts either side of the driver's head, which fed air to the rear brakes.

Merzario took pole position fairly early in the proceedings ahead of the quickest Matra of Larrouse and then Facetti. Jarier commented that the Alfa was quicker than the Matra but he gained on braking. When Facetti came into the pits, the ducting around the disc caught fire, such was the heat from the brakes working so hard. Ickx was complaining that his seat was uncomfortable and didn't fit properly and he was sliding around. He would have favoured a pairing with Andretti who was more his size than Stommelen. The Mirage drivers were struggling with handling problems.

There was heavy rain before the start and though the sun came out, the track was still wet. Ickx took his chances on intermediate tyres, and as Merzario took the lead, Ickx started losing ten seconds a lap on the leaders, so he quickly went in to get wet tyres. Pescarolo took the lead from Merzario on lap two



One of the team members tries on Zeccoli's helmet at Monza.

The T33/TT/12 appeared at many end-of-season motor shows in 1974.



then the Alfa's engine expired and a very good result and some money was gone. Merzario again: "I raced the Alfa CanAm against the Ferrari CanAm but we didn't have a chance against these big 7-litre cars, Porsches, Shadows, all those cars, but we were just there for the public."

In early August, Autodelta announced that it was withdrawing its entry for the Paul Ricard 750 Kilometres but would be at Brands Hatch. Carlo Chiti was at the CSI's Group 5 meeting to discuss sports car racing as Alfa Romeo's representative. While the CSI was supporting a Championship with 3-litre prototypes and 5-litre stock blocks, Alfa, Ferrari, and Matra all opposed this, although Alfa and Ferrari agreed that sports car racing needed to be improved.

During this period, there were continuous rumours of the Alfa flat-12 being used in a Hesketh F1 car or the Vels Parnelli F1 car. One engine was reported to have been delivered to Graham Hill's Embassy Team. Then Hesketh said that it actually had an engine though it turned out to be a mock-up. When teams were asked why there was so much interest in the Alfa engine, the reply was that the Alfa engine was by far the quickest under acceleration, though the chassis was by far the heaviest. By October, Brabham had been included on the list of teams to get the flat-12, and by the end of that month, March was in there too.

Meanwhile, Alfa Romeo president M Guani announced that Autodelta would not race anymore in 1974, citing the health of the Italian motor industry. He also cast serious doubt on the plans for 1975, saying that the 500 million lira cost was

not tenable when Alfa was not selling enough production cars. However, energy and resources, he said, might be turned towards the European Touring Car Championship. By the end of the year, it appeared that the decision about sports car racing had been reversed. Carlo Chiti said that he had to fight very hard to oppose an Alfa Romeo management which wanted to drop sports cars. Autodelta had dropped to 4th in the Championship, which was very disappointing. Only when Matra confirmed that it would not be in sports cars in 1975 was there any hope in the Autodelta camp that the next year would be any better.

Merzario felt Chiti had come under great pressure within the company and admired him for his ability to withstand it and keep his attention on developing the team: "The Autodelta team had given me a contract for five years and I thought we could do a good job. I had a good relationship with Autodelta and Mr Chiti. Carlo Chiti was a big man, a big engineer, a big man for the driver. He was different from Ferrari, Frank Williams, Robin Herd or Max Mosley. He would say 'in this team it is like you are the only driver, so you speak to me and I will speak to you'. He was very humano ... very human. In my opinion this was also his problem. If a driver would speak to him and say the car was not good, not perfect, he would listen and try to work on it. In another team, the manager would say to the driver 'you go'. But Chiti would take on the problems of the team and I think that did not help in getting the right results, but it was a very good team to be in. He was very kind."

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IX

Contrary to expectations

1975

After considerable ebb and flow of press releases, official and not-so-official announcements and reports in fairly typical Alfa Romeo and Autodelta style, by the beginning of February it seemed that Alfa would, after all, once again be running a team in the World Championship of Makes for 1975.

It would not be doing so under its own steam however. There had obviously been a lot of truth behind the reports that the Italian government was showing an increasing reluctance to hand over large bags of money to Chiti, purely to allow him and Autodelta to indulge themselves in the vastly expensive exercise of trying to win a major international motor racing championship. But at the same time as this tension was going on, help had arrived in the shape of a German sponsor.

Willibald Kauhsen was a regular competitor in the German-based Interserie sports car races and he was to manage two Tipo 33s, with money from a leading sausage manufacturer. Before anyone went away with any ideas of the cars being painted gaudily with logos and bright colours, it was made clear that this was little more an accounting exercise allowing Autodelta to run another season. The cars were to appear in exactly the same livery as in the past with nothing more than the sponsor's name across the nose – occasionally. It was clear in retrospect that even many long-time members of the team had little knowledge of the details of the Kauhsen involvement.

Merzario discussed his view of the arrangement: "In 1975, the politics in Italy made a big change for Autodelta ... or it looked like a big change. Alfa Romeo was owned by the Italian state and the politics of the time meant that it was not popular for Alfa Romeo to be seen spending so much on sports car racing, so the team was run under the name of Willi Kauhsen Racing Team. Kauhsen brought some German and other sponsorship but the team was still run by Autodelta. All the mechanics were Autodelta, the drivers were mainly the same, and I think a lot of the money still came from Alfa Romeo but the Italian people thought it was German. Chiti was still in charge of the team."

British sports car specialist Derek Bell, who'd had much success in the past with the Gulf John Wyer vehicles, was signed up to drive one of the cars. He stated that he was disappointed not to be continuing with his old team but "the Alfa (flat-12) was the fastest engine in motor-racing at the moment, the thing will be to see if it is reliable enough."

The announcements included the fact that the team would take part in all WCM rounds but would not be at Le Mans. One



German race driver and team owner Willi Kauhsen was the nominal head of the 1975 sports car racing effort.



Lafitte leads from the Porsche 908/3 of Joest and ex-Autodelta driver Casoni, and the Alpine-Renault A441 of Lella Lombardi.

Formula One and Formula Two so I was racing every weekend and it was a great pleasure to be in the team and drive this car, and of course we went on to become World Champions with the team, and this car and with Willi Kauhsen. Especially it provided the training and the practice for me, which helped very much with F1. I drove turbocharged cars for Renault, for Ligier but I never drove the Alfa turbo car. It was interesting to work with Chiti, a special guy, a good guy who made me feel at home in the team, as did Arturo too."

Races were thick and fast now as Monza was two weeks away. How would the T33/TT/12s go on home territory?

The driver line-up was the same and they had three cars to choose from. Endless tyre problems afflicted Bell/Pescarolo in practice with both men trying the spare car, and eventually these were semi-solved by a reversion to 1973 15in tyres and wheels. In the race they were never able to get going, suffering damper problems and eventually loss of oil pressure. Bell was decidedly fed up at the end of it all. Meanwhile, Merzario was flying and having a very hard time with not only the Alpine, but a Mirage as well. Both endured problems that put them out or behind the T33/TT/12 so the remaining WKRT Merzario/Lafitte car won the race.

On the same weekend as Monza, but in Greece, one P Moshous also won a race in a Tipo 33. This was a T33/TT/3 V8 and the race was held at the Tatoi Airfield near Athens that was often used as a final special stage on the Acropolis Rally. The car was an ex-factory chassis and two special engines were built for it, based on the softer, more reliable, production Alfa Montreal V8. The combination went on to win the Greek sports car championship although against slight opposition.



Merzario practices car number 1 in qualifying at Monza.



Lafitte takes the winning car past the pits at Monza.



Derek Bell during a pit stop at Monza. The car didn't finish.

Lafitte, Merzario and Chiti on the podium at Monza.



P. Moshous was driving this T33/TT/3 in Greece the same weekend as Monza. The engine was based on the Montreal unit.



Spa was next on the busy WCM timetable and Alfa faced little opposition. Lafitte was replaced by Jacky Ickx for this race and most interest was in whether Bell and Pescarolo would at last have a clear run.

When the T33/TT/12s arrived in the Ardennes the biggest change was the new sponsorship from the drinks company Campari, made clear by the name being written in large letters across the noses of the two cars. Otherwise it was almost business as usual, except that Bell loved Spa and went four seconds quicker than even Ickx in practice to take pole position. Clearly his luck had changed, and in a race that was all over after ten laps due to the almost total lack of opposition to Autodelta, Bell and Pescarolo dominated in dangerous, changeable conditions that alternated between wet and dry to the extent that the organisers reduced the length of the event from 1000km to 750km. Derek Bell: "Spa was my first win in the Alfa and I thought it was a great race because I beat Ickx in the other Alfa on his home circuit."

So clear was their lead that at the finish they slowed down to allow the Ickx/Merzario car to catch up and stage a formation finish. In the words of *Autosport*, Alfa had enjoyed a 'textbook' race and the result put it into the lead of the WCM.

The Spa race had been enjoyed by Bell's co-driver Henri Pescarolo, who reflected on the difference between being at Autodelta again and his time back at Matra:

"Autodelta was completely different from Matra because what happened to me at Matra never happened to any other driver. I started my career at the same time that Matra started racing. We started all together ... the mechanics, designer, engineers, drivers, team manager ... at the lowest level, which was in Formula 3 at that time. We grew up all together and each

year Jean Luc Lagardere kept the best mechanics, designers and drivers, so each year it was very difficult for us because there was always the pressure of new people coming from outside, which happened with Servoz Gavin and Roby Weber. Beltoise and I stayed for ten years except when we got upset about what happened in Formula 1. It had been like a family, starting like a baby, and you grew up with them. At Autodelta, I was the driver coming in a new team. You knew it was for one or two or three years but that was normal for a driver's career. For me the ambiance was fantastic, but it was not a family like Matra. My relationship with Carlo Chiti was good, except that he was very strange in that for him a car was only an engine. He was



This T33/2 derivative showed up at the Monte Dionysis Hill-climb in Greece.

not interested in the rest of the car, or so it seemed to me. We would go to a track to try to find the right setup for a race that would come one or two months later. We would work a lot and find the right setup, and when we arrived for the race, everything was different. That was just because Carlo Chiti decided it should be different and he would change it."

In 1975 Italy enjoyed the slightly doubtful prestige of staging three rounds of the WCM and by far the worst of these, as far as the teams were concerned, came next. This was a 2000 mile-plus haul from Northern Europe to the hot and uninspiring circuit of Enna-Pergusa in the middle of Sicily.

That nobody really wanted to go was borne out by the very thin entry, making it clear that WKRT/Alfa/Autodelta only had to finish to win. The race was a sop to the Automobile Club of Palermo which had had its classic Targa Florio event outlawed by the FIA. Not that this was to stop them running it, as we shall see later. By far of most interest at Enna was the new car that Chiti's men brought with them. No doubt they could see yet again a good chance of using the weekend as an extended test session.

The driver pairings were Merzario and Jochen Mass and the usual Bell/Pescarolo who had their Spa car. The former pair had been provided with a training car that was to a new specification. It retained the tubular chassis, so was still a T33/TT/12, but it featured a gearbox back in the standard position behind the differential. At the same time, the wheelbase was longer by 11.6cm and with weight-saving throughout the body and chassis, the whole car was around 40kg lighter than the other team machines. The purpose of all this was to shift the weight bias towards the rear, a problem that had needed attention for some time.

Despite having the meeting almost to themselves, various dramas still cropped up. The Merzario/Mass car suffered an ever-worsening misfire during practice and Bell became extremely unhappy with the antics of the mechanics, who took ages to look for a failing oil pressure problem before deciding it was the gauge that was wrong. Team 'boss' Kauhsen even donned his helmet at 05.00 on race day morning to take the first car out, to ensure that the misfire had been sorted.

After all this, the race was five hours of endurance for everyone involved just surviving the heat and lack of facilities. The fact that

In spite of the names on the car, it was Jochen Mass who co-drove with Merzario to win at the Enna 1000 Kilometres.



the Merzario/Mass car won and Bell/Pescarolo came 2nd was no surprise, nor that they were twenty-three laps ahead of the 3rd place car at the end of a long afternoon. Merzario commented on the best characteristic of the T33/TT/12, its speed on the straight: "On the fast circuits, at the Le Mans test, or Enna, the car was doing 348km/h, so it was best on the fast circuits and had a few small problems on all the slower circuits, especially with brakes."

Derek Bell told the authors that "after Enna we had to go back to Milan for a big press conference. We all flew back on a jet from Sicily and went to the factory. It was the first time I ever had this horrible feeling. We got to the factory and the workers were all out chanting and they came into the auditorium where we were having this conference and threatened to go on strike. It was quite frightening and the first time I had a certain amount of fear about my sport. There was a nasty atmosphere with the unions wielding their power. The security people had to come in and take these guys out, and then we had to stand up and say what a wonderful season we had had, and I just didn't feel good about it."

Jochen Mass talked to the authors about his time at Autodelta: "My drive came about through the legal and political issues in 1975, so 'officially' it was run by Willi Kauhsen. I had Alfa connections because I had started racing in Alfas. I was happy to be invited in the team because I liked the car. It was actually a great sports car. I wasn't involved in doing a lot of work on it,



and sometimes it was too soft ... you know, grinding away the bodywork! It was a very good engine and the TT12 chassis was not bad if you set it up right. It was usually quite soft but it was fun being in the team and I quite enjoyed it. It was because of that season that Bernie (Ecclestone) later took the Alfa engines into Formula 1. Bernie asked me how they were power-wise because I had raved about the engines. They were heavy units in a way but they were good engines."

It was back to some sense of normality with the Nürburgring 1000 Kilometres on June 1. The entry was good as was the circuit and Alfa had brought three cars, although safety in numbers didn't work as Alpine was back with a better and quicker car. Bell had done some pre-race testing with the new, longer car and in fact went fastest of the Alfas with it, but due to the lack of spares it was decided not to race it yet. The third car had been brought

for rising Grand Prix star Jody Scheckter to share with Mass, and it sported a different livery as it was painted in red, white and blue Redlefsen colours in deference to Willi Kauhsen's sponsors. The other two cars were in standard red/Campari livery.

The Alpine was quickest and the Alfas just had the edge on the Mirages. That was how the situation would have stayed all weekend but for a cracked turbo pipe on the French car that allowed the T33/TT/12 of Merzario/Lafitte to take a lead, which was challenged by the Mirage. The latter's last-minute pit stop gave the nod to the Alfa. The other two Tipo 33s had not fared so well. Pescarolo had crashed early on when the track turned unexpectedly wet in the middle of a corner whilst Mass/Scheckter were sidelined by worn-out front brake pads. The problem was 'cured' by rendering the front brakes inoperative for the rest of the race. The result was 6th place. Jacques Lafitte:

Jacques Laffite at the Nürburgring 1000 Kilometres, here leading the Lola of Alan Jones/John Sheldon/Rafael Barrios.

"I remember the Nürburgring race as the best one I did with the team. I did a fantastic race because with a car that handled like that, it was exciting and dangerous, and I remember that I never concentrated so much as at that race. The difficulty driving the car was that there was no power steering and the steering was very heavy, as was the whole car. The gearbox was not that easy, and there was a lot of downforce with that car so you didn't get much feel."

Though Pescarolo didn't win at the Ring, he admitted that it was probably his favourite circuit with the T33/TT/12 because it was such a challenge. He tended to cite the old Spa circuit and the Ring as his favourite places.

All these wins had been encouraging Gaetano Cortese, the President of Alfa Romeo, to attend the races and this had started rumours that maybe the company might be interested in joining Formula One, especially as its flat-12 engine now had proven power and reliability.

Bell and Ickx won the 24 Hours of Le Mans on June 14/15 in the Gulf GR8, which Bell refers to as the Mirage. He told the authors "I had very little contact with Carlo Chiti, but after Jacky and I won at Le Mans, he came to us at pre-practice at the Österreichring on Wednesday after Le Mans. He looked at me and said in Italian 'you have occhi molto lucido', which meant something like very dizzy eyes or very distant eyes. I said I had just won Le Mans so that was the reason, and he said I should go back to the hotel and take the night off. The next day I set a pole position time so he was right, and he did have a bit of input at times, and I would say it was usually more when we were down in the Italian area that he came to races because he didn't have that much to do. He came to the test because he really was interested in testing."

Neither of the two factors which had encouraged Cortese, power and reliability, were to come to the team's initial assistance at the Österreichring 1000 Kilometres in late June. The circuit consists largely of very long, very fast right-hand bends and one thing the front weight-biased T33/TT/12s didn't like was exactly that. The revised car was tried but not raced – again. This was strange as it was designed to deal with just such a problem as this. Meanwhile, the two Alpines present ran away from them. Vittorio Brambilla had been drafted in to share with Merzario and the race day weather was bad, alternating between sun and



Jacques Laffite reflects positively on his time at Autodelta. He is seen here at the Monaco Grand Prix in 2005.

violent thunderstorms. Because of this the race was shortened, but this was of no advantage to the Alpines which both suffered injection belt failures whilst showing the Alfas the way. So the race fell into the laps of Bell/Pescarolo, who led their team-mates home for another, unexpected, one-two. *Autosport* said it was "a race nobody was sorry to see the end of." For the last few laps Merzario had been waving to the pits, presumably requesting that the race be stopped.

The result tied up the 1975 WCM crown for Alfa Romeo and earned the manufacturer the title of World Champion for the first time in its history. Despite this, it was not too proud to continue racing after the end of the WCM, which had only one round left,



Rear view of the unusual coupé with which Andruet thought he could win the event.

times only in 1976, but that wasn't the end of the story. Much had been made of Alfa Romeo's victory in the Championship and that provided strength to Chiti's position in the future.

John Watson reflected on his 1975 season at Goodwood recently: "I had my first race with Autodelta at the Nürburgring with a tubular chassis car, on the same day as the Italian Grand Prix as I remember. It was a Willi Kauhsen-run car and I had a big race with Tim Schenken in the Porsche 917-10. I could beat the pants off Schenken with the Alfa everywhere except in a straight line because he had 850bhp and I had about 550. It was a nice car to drive but there were problems with cars of that period, particularly tubular frame cars made in Italy. We were used to having tubular frame cars made in Britain with beautiful welding, and the welding on these cars was something like a volcanic eruption. But they built bloody good sports cars, but they were endurance cars, not sprint cars. Of course, it was my first experience with the Alfa Romeo flat-12 engine which I then went

on to enjoy in 1977 and 1978 in F1 with Brabham. I really enjoyed being in the team, though I had started to wean my way out of sports cars to focus on F1."

Fellow driver Derek Bell also had vivid memories of 1975: "Willi Kauhsen had contacted me in 1974 and asked me to partner Henri Pescarolo in an Alfa 33TT12. My first race in an Alfa was at Mugello and we finished 4th. I finished 1st four times which I thought was pretty good, and then I won Le Mans with Jacky Ickx in the Mirage. I thought it was good for a German to be running the team to prevent the chaos that was often present. We had a good team with people like Merzario. I believe Kauhsen did a lot of work rebuilding the cars before the season started. The cars were always enjoyable to drive but they were heavy, which was an Italian and Alfa characteristic. The shift from understeer to oversteer was not very smooth. Changing gears was easy ... a bit slow but positive. The exposed gate was worrying but you got used to it."

X

Change of priorities

1976

A new Group 5 formula was to come into effect in 1976 and this was to last until 1981. This formula had been suggested for the World Manufacturers Championship as early as 1972. Though the new formula was officially called Special Production it was known popularly as the Silhouette formula, and there was no minimum number requirement, although the vehicles had to be derivatives of cars from Group 1, 2, 3 and 4. In an attempt to encourage manufacturers the regulations were very liberal, allowing many modifications. The cars needed to bear a resemblance to an original production car.

A problem remained as to what to do with the 'old' sports cars, the two-seater prototypes. So, a separate series called the World Sports Car Championship was created and was renumbered Group 6.

There was a distinct and uncharacteristic lack of the usual optimistic press releases flowing out of Autodelta over the winter of 1975/76. There had been testing during this time, though it wasn't entirely clear what was being tested. In mid-February, Chiti announced that he wanted Merzario and Jean-Pierre Jarier as his main drivers for 1976, dispelling the earlier doubts as to whether there would be sports car racing this year. Chiti was very impressed by Jarier's driving at the recent Brazilian Grand Prix in spite of the error, which probably cost him the race. He also felt he was a good, analytical driver and thus a good test driver. A one-car assault on the Championship was envisaged, especially in light of the Formula 1 efforts being made with Brabham. Jarier, interestingly, would only be available when not committed to his contracted drives for Renault-Alpine. In retrospect, work was also going on in relation to developing Alfa Romeo's own Grand Prix chassis as well.

The 1976 sports car effort would start with the T33/TT/12 with the standard flat-12 engine, but then the 2140cc turbocharged unit, which was being tested at the time on the dynamometer, would be raced – or so was the early plan. The Turbo flat-12 had two compressors, one per bank of cylinders, and 550bhp had



Alfa Romeo was keen to show its championship winning car at the early 1976 motor shows.



The T33/TT/12 was on display at the prestigious Geneva Motor Show.



Side view of the 1975 car.

been quoted by Chiti with the expectation that they could find 600bhp. The car would run on Pirelli P7 tyres with a radial carcass, bringing Pirelli back onto the racing scene after a long absence.

A week after these first 1976 announcements came the news of a very substantial change to the T33/TT/12: it would now be the T33/SC/12, SC standing for 'scatolato' which translates from the Italian as monocoque. This new chassis replaced the spaceframe chassis of the last few years, though outwardly it did not look dramatically different. Arturo Merzario had already been testing the new chassis with a standard flat-12 engine. The car met the 'new' Group 6 rules and it had the same wheelbase as the TT tubolare, but 15in wheels were made mandatory so the track was slightly narrower. A savings of 40kg had been made, including using a titanium rollbar. The engine now had a Spica injection system, which should account for a 10% saving on fuel. It was also announced that the new turbo engine was not yet ready for testing. Merzario's testing was said to have produced encouraging results.

On May 16 the Aston Martin Owners Club organised a race meeting at Brands Hatch, including a race for sports, GT and Group 4 sports cars for the Houbigant Trophy. Richard Pilkington had his ex-Brands winning T33/3 on pole ahead of Martin Morris in a 1972 T33/TT/3. These two had a good battle with Mike Salmon in a Ford GT40 and Pilkington eventually led Morris across the line to win.

Autodelta made its first appearance in 1976 at the third round of the World Sports Car Championship, the Imola 500 Kilometres

G6 race. The Group 6 races could be either 500km or four hours, and the Autodelta entry was the debut of the new T33/TS/12 ... the turbocharged car. Well, *Autosport* said absolutely that this was the debut of the Turbo, but indeed that was wrong. The reporter even commented on how good the engine sounded but it was not the long-awaited turbo! As Jarier was in the Alpine-Renault, Vittorio Brambilla was to partner Arturo Merzario, and the main opposition in addition to the French cars was the Martini works Porsche 936 Turbo of Ickx and Mass. The Italians had a mixed set of practice sessions, Merzario finding his car on fire out on the circuit, caused by a leak in the fuel system between the tank and



In the UK, Martin Morris drove a T33/TT/3 at Brands Hatch at an AMOC race meeting.

the injection system. This was put out pretty quickly and the Alfa was fourth quickest behind the French cars and the Porsche, but four seconds off pole time. Teodoro Zeccoli was also in an Alfa, the T33/TT/12 of Ottomano's Aequator Cottages team.



Richard Pilkington at Brands Hatch in the T33/3 which had won at the same circuit in 1971.



Pilkington and Morris in the two different models of the T33 with 3-litre V8.

Brambilla forced his way into 3rd after the start and one of the Alpine-Renaults of Scheckter/Pescarolo retired quite early. The Alfa was 2nd behind Jarier/Lafitte. When Brambilla made his stop to hand over to Merzario, he was having gear selection problems. After some work, Arturo set off but went past the pits next time hunting for a gear. This lost the car two laps and they were down in 4th. The engine ran beautifully but the gearbox didn't and Brambilla took over for the final stint. At forty-two laps, Jarier was baulked by Zeccoli and spun, flat-spotting all four tyres. He pitted and that let the Martini Porsche into the lead. Brambilla was up to 3rd as the Alpine-Renault chased the Porsche, in spite of

a spin for Brambilla. Lafitte unlapped himself and was pulling away when he made contact with one of the Saubers, and this damaged the French car's side radiator. The car overheated and retired with twenty-six of the 100 laps to go. The Alfa was 2nd, a troubled four laps behind the Porsche, and Zeccoli came home 9th. Merzario described the difference between the T33/SC/12 and the T33/TT/12: "The monocoque car was more rigid than the tubulare which still had some bending, some flexing in the chassis, especially as you put the power on hard. It was better on the tighter corners and on smooth circuits, not a lot better, but better. There was no difference on the fast corners."

Autodelta had no plans to go to Le Mans for the 24 Hours, though Frenchman Jean-Claude Andruet had made an entry for the event in June in his name, in an Alfa T33/TT/12. For a variety of reasons, including the involvement with F1, this never came about and the car was listed as a DNA.

On June 27, the Enna 4 Hours took place at the Sicilian circuit, with the T33/TS/12, according to *Autosport*, again entered for Merzario and Casoni and the Ottomano car for Zeccoli and Ottomano, a T33/TT/3 V8. However, it was not the Turbo car but the T33/SC/12, the monocoque chassis with the flat-12



This is the first view of the new T33/SC/12 with the scatolato chassis ... a monocoque. It was 2nd in its first race.

non-turbo engine. Merzario and Casoni were third quickest behind two Alpine-Renaults but ahead of the Porsche of Mass and Stommelen. Merzario was immediately in the pits with injection pump failure, and after this was attended to 'Little Art' was flying and was overtaking the French cars, but he tangled with a slower car and suffered suspension damage. After an hour and a half he gave up the fight and retired, leaving the works Porsche 936 Turbo to take the win after the Alpine-Renaults also retired.

In mid-September, the CSI announced that Group 6 would have championship status again in 1977, even though only one works Porsche 936 and the two Alpine-Renaults had seriously contested the series during 1976. Two weeks later, Autodelta was again present at the seventh and final round of the Championship at the Salzburgring, and the T33/SC/12 was there for Merzario and Brambilla. This was a ninety minute race and Brambilla

and Merzario found the car very comfortable in the wet on the 2.6-mile circuit and were on pole by a good margin. But after only sixteen laps the engine had lost its edge, and then broke and lost the lead as it limped into the pits to retire. The Porsche 936 won its sixth race of the series. The final points tally was thus Porsche 100 points, Alpine-Renault and Osella 47 each, Lola 40, and Alfa Romeo down in 7th with only 15 points.

Later in September, Autodelta announced that a new T33/TS/12 would race in 1977 with a 1991cc turbocharged flat-12 boxer engine, a car which had been tested by Merzario and Brambilla. It was also expected that there would be little opposition from works cars in 1977. Derek Bell told the authors that at the end of the season Carlo Chiti contacted him and asked him to drive at Avus in 1977, though at the time, he had little other information about this race.



1976/7 T33/SC/12 technical spec

Chassis	Monocoque in aluminium
Engine	2993cc
Bore and stroke	77mm x 53.6mm
Compression ratio	11:1
Cylinder head	DOHC per bank 4 valves per cylinder Gear driven
Fuel system	Indirect fuel injection utilising two Lucas pumps
Power	520bhp at 12,000rpm
Transmission	5-speed gearbox/final drive in unit with rear-mounted engine
Length of car	3.80m
Width	2.00m
Height	0.96m
Wheelbase	2.50m
Track front	1.49m
Track rear	1.47m
Tyre sizes	9.50/20 x 13 front, 13.10/26 x 15 rear
Weight	720kg
Top speed	Approximately 330km/h

XI

The final countdown

Alfa was bubbling with exuberance and confidence as the New Year clicked round to 1977. This was the year when its Grand Prix aspirations were really going to bear fruit.

Most were surprised to hear that it would not abandon its sports car programme after all, when this had been thought most likely. Its big advantage of course was that its 3-litre flat-12 engine was common to both Grand Prix and sports car disciplines, and hard work had been taking place over the winter to ensure that a better, more reliable unit would be available. In an interview with the French sports paper *L'Equipe*, Brabham F1 driver Carlos Pace said that in 1976 it was impossible for him to show any confidence in the engines as they were so unpredictable. After the winter development work they were 10kg lighter and able to put out a reliable 510bhp. Pace also mentioned he would be doing a full season with the once-raced turbo Tipo 33!

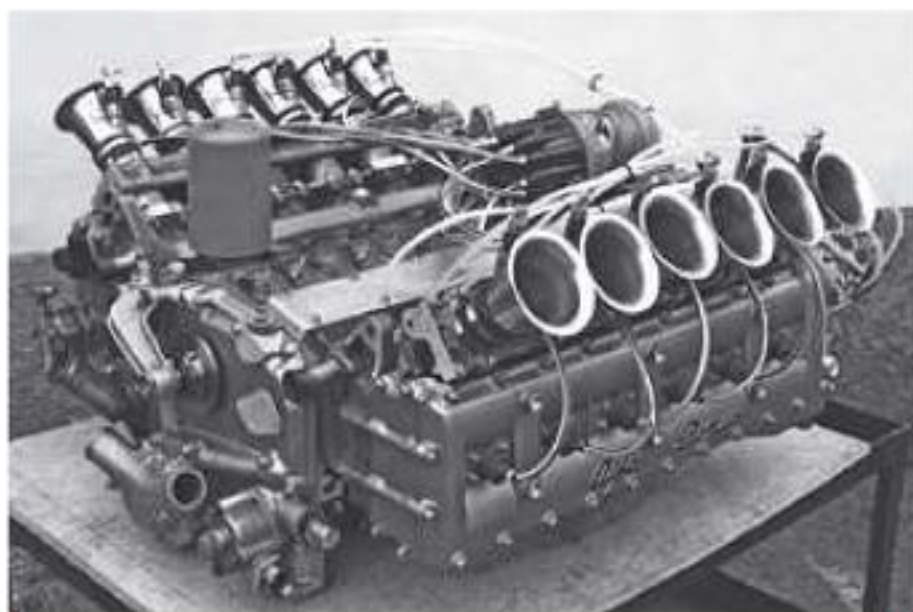
Sports car racing at the top international level was still somewhat in disarray. The previous year had seen a split in the championships with Group 5 becoming the World Championship

for Makes (Porsche 935s, etc). In addition, for 1977, the Group 6 Prototypes would have their own series counting towards the World Championship for Sports Cars.

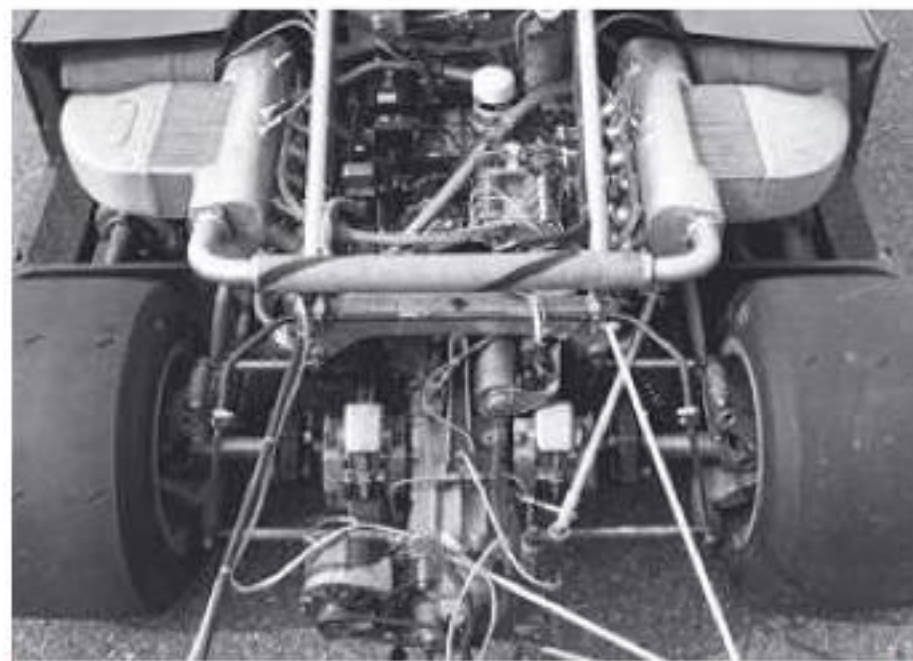
Autodelta decided that it would run a full season in this latter discipline with its T33/SC/12s, and it was a good thing for the FIA that it did as the fields were extremely thin, at one time amounting to only eight cars, three of which were Alfas. It will come as no surprise then that the championship basically involved Autodelta ensuring that it at least finished every race and preferably in a good position.

In February John Watson announced he would be sharing the turbo T33/TS/12 with Carlos Pace in 'selected rounds' the first of which was at Dijon in April for the 500 Kilometre race. Tragically, by the time of the race, Pace had perished in a light aircraft accident. Pace would have been an interesting addition to the team as his contemporaries described him as very, very fast, but hard on the machinery and occasionally reckless.

Autodelta brought along three T33/SC/12s resplendent in the new sponsor's Fernet Tonic livery. One car was a spare which,



Though the turbo engine was being developed, a flat-12 appeared with increased power for 1977.



The rear of the new monocoque scatolato chassis.

Jean-Pierre Jarier shared victory at Dijon with Arturo Merzario.

in retrospect, may have been the Turbo car. All were seemingly to the same specification as those that appeared in 1976 and four of these monocoques had now been constructed. "It was my favourite car of all the T33s," Zeccoli told the authors while meeting at his Imola BMW dealership in 2005, "it was so fast. There was little power below 8000rpm but once, at Balocco, I was timed at 345km/h down the long straight and the next day I managed to increase that to 352!" The fourth had been fitted with the 2.1-litre turbocharged engine that had not yet been developed to race-ready specification. "It has huge lag" said Merzario at the time, "but it is very fast, nearly 30km/h faster than the normal cars."

John Watson complained about the handling, saying that he didn't feel comfortable driving it. Watson: "I didn't entirely enjoy driving the monocoque, and I somehow felt something of an outsider in an already established team. I had become very singular about the racing I did because I was a Grand Prix driver and then adapting to sports car driving and sharing wasn't really what I enjoyed. I had done sports car racing with Mirage in 1973 and in a Chevron in 1974 before Grand Prix cars. It was the norm in sports car racing for there to be single-seater drivers because it gave you more experience, and you could earn more income. It was a means of establishing yourself and getting your feet under the table. Once I was in Grand Prix racing, it seemed difficult to go back into a sports car race. It had lost some of its attraction and I think this was when we saw the beginning of the decline of sports car racing. Formula 1 was growing and taking a different direction."

Not surprisingly the Alfa was the quickest car in practice although a 'cottage industry' car called a Toj, fitted with a Cosworth DFV, was very close and, being driven by ex-Alfa man Stommelen, looked like providing some competition to the red cars.

And so it happened. Despite their expected domination, Chiti's men had to fight off the German car and, when they pitted, it took the lead until sidelined by gearbox problems. In fact, with one of the Alfas retiring with engine problems, Merzario was fighting down in 4th place at one stage before those ahead suffered problems, allowing him to reel off the last laps and win. It had not been a convincing race or victory, and Monza was next week!



Vittorio Brambilla pushes on at Dijon, but ultimately retired.

For that race, three cars were listed but the one marked for Jarier never ran. The race turned out to be a battle between teammates Merzario and Brambilla until the former hit problems. Then, when trying to make up time, he rounded a corner and found an Osella facing him, stationary. He hit it hard, thankfully with no driver injuries, whilst Brambilla went on to win the race.



Merzario takes over from Jarier at Dijon, with Chiti watching on the left.

One other Tipo 33 had been entered and that was a T33/TT/3 V8, to be crewed by Bruno Ottomano and Paolo Gargano, but it failed to qualify. Ottomano was the lawyer of Aldo Moro, the President of Italy, and Moro had instructed Autodelta to give him the Tipo 33. He was later to receive T33/SC/12 chassis 014 as a present in the same way, although after Moro's assassination Ottomano had to return the car to Autodelta.

Alfa's interest in the Interserie race series had waned with the cessation of Willi Kauhsen's influence at the end of 1975, and so it was with some surprise that old hand Derek Bell turned up at the Avus circuit in Berlin and won the second round, in what was quoted at the time as being an 'experimental' car. There appeared to be no obvious reason why Chiti should feel the need to test any radical developments at this stage in the Tipo 33's career. Bell wasn't aware of the exact specs for this car but did remember that it was incredibly fast on the straights at Avus: "Autodelta put me in the car for Avus where I remember it storming down the straight at over 215mph."



The Merzario/Jarier car leads at Monza, but didn't finish. Jarier shared with Brambilla in the other car to win.



The winning Monza car with Brambilla behind the wheel.

When Derek Bell was asked why he had been selected for this race after not being involved with the team in 1976, he responded thus:

"Well, Carlo Chiti had contacted me at the end of the previous year to ask me to drive at Avus. I never knew why they chose me and not any of the other drivers. I had won races, but so had

Arturo. I wasn't clear at the time about what was then referred to as an 'experimental' car. I think it was an Italian thing, and if I had lived in Italy or spoke Italian, I would have found out years later that, as with Ferrari, they had been using a special piston or special materials. With Ferrari, you could find out much later that the reason the engine blew up wasn't the reason they blamed you for. At Ferrari, they told me that I shifted gears too quickly and that's why the pistons went! I never quite knew what they were doing with that car at Avus, and I don't think they would have told me. All I would say is that I think they had an experimental

flat-12 engine, and they only had one, and they gave it some extra tweaks. I was very flattered to be in the car instead of Merzario. It was in Germany but they could have used any number of other drivers. The car was a rocket and it was a bit embarrassing, and the question was how fast do I go because it was so quick. I am sure it was entirely to the regulations as were all their cars. I don't think they ever used anything not legal because we were never that quick. I know the cars were honest in 1975 because we knew how fast we would go and we wouldn't be on pole. The Alpines were quicker but always had a problem."

At the end of May the WSC continued at Vallelunga with the AC of Rome's 400 Kilometres. Those of a cynical nature might like to know that the event was brought forward one week at the last moment, resulting in it clashing with a Group 5 race in which ace Toj driver Rolf Stommelen was otherwise engaged. Autodelta took its usual two T33/SC/12s for Merzario and Brambilla, with Spartaco Dini down as co-driver for both cars. Ottomano was also present with his V8 but was painfully slow, finally finishing 10th in the race although many laps down on the winner, Vittorio Brambilla. Merzario suffered some tyre and misfiring problems that required several pit visits and he finished 2nd, ahead of coming Autodelta saloon man Giorgio Francia in his fleet Osella PA5.

On June 19 the few regulars in the WSC were depleted even further as the venue was Enna, Sicily. Autodelta had no paper opposition to its two regular T33/SC/12s. Drivers were Merzario



It is easy to see why Arturo Merzario is known as 'Little Art'!

as usual and Dini in the second car, with Osella man Francia being called-up for his first Alfa factory drive.

The new recruit was responsible for a Sicilian operetta on the grid when he found he could not restart his engine after the warm-up lap. One of the mechanics realised what had happened and made to go to the car to tell the driver to switch the electric fuel-pump on. In doing so, he was restrained by the Clerk of the Course and had to yell at Giorgio for some time over the noise of the engines to make him understand. All was well in the end and the car left the grid with the rest only to be immediately black-flagged. The Clerk had taken offence at what the mechanic had been trying to do and so the car was pulled in because the pit-crew member had been 'aggressive and insulting'! Despite misfiring and wilting oil-pressure, Merzario won, but only after a pesky Osella had dared to take the lead – and then blown up. Talk about nadir, *Autosport* described it as 'turgid'.

In terms of numbers, things were even worse at the next round, held at Estoril in Portugal in July. Only eight cars turned up and three of those were Tipo 33s! Chiti had decided to race Autodelta's complete production run of atmospheric T33/SC/12s. Some new front-suspension tweaks were tried as were different rear bodywork configurations. Chiti had made a team decision that Merzario was to be the chosen winner, Brambilla was back from his March Grand Prix appearances in the second, and the third was to be shared by Francia/Dini. The race was reduced in length, at the last moment, from three hours to two and a half to try and retain some spectator interest, and the Alfas duly finished in the above order after Brambilla had managed an early spin and spent some time playing catch-up.

Chiti's decision to take three cars to some rounds was not because he felt the public needed to see so many T33/SC/12s on one grid, but simply because the fields often looked so thin during 1977 that organisers sometimes threatened to cancel the

races. Doing so would probably have resulted in the FIA declaring the whole World Championship for Makes null and void, and that was something Alfa/Autodelta/Chiti certainly didn't want to happen.

The next round at Paul Ricard actually had a healthy number of 2-litre and GT entries, so the boys from Milan arrived with only two cars and three drivers. Accompanying Merzario and Brambilla on this occasion was Jarier, who had been asked to help out if needed. In fact he did take over the winning car for a brief period, getting his name into the results but, after dominating practice, the two Alfas nearly didn't complete a lap as they enjoyed a closely competitive moment at the very first corner. Only one car survived to fend off the close attentions of Stommelen and the Toj, and it was Merzario once again at the wheel.

A wild spin in practice and a duff shock absorber causing another spin in the race put Merzario out of the Imola 250 Kilometres in September, leaving team mate Brambilla to take the honours. After the race, the WCM points situation showed Alfa to have double the number of Osella in 2nd place – it was all becoming desperately dull for everyone except, no doubt, Chiti, who must have relished his post-race debriefs with the 'suits' in Rome.

The final round was at last held two weeks later at Salzburgring, and Alfa sprang a surprise. This time three cars turned up and one was powered by a 2.1-litre turbocharged



The Turbo car as it sits in the Alfa Romeo Museum today.



flat-12. This car had never been raced before and was entrusted to Merzario who managed to wrestle the difficult 680bhp overweight, 'under-tyred' and under-braked machine to 2nd place behind winner Brambilla, with Francia/Dini coming 3rd in the other, normally aspirated T33/TT/12. Merzario's pit stop took the best part of three minutes as the hot turbo motor took a long time to restart. Still, it was all in the interests of future development as Chiti's vision could foresee the rise of forced induction in many areas of the sport. Hadn't Renault debuted the first ever turbo Formula One car that summer? Only nine cars started and, as *Autosport* said, "there were seven finishers in at the death of the World Sportscar Championship".

Merzario: "At Salzburg, I had the Turbo, the first time in a race with the Turbo. It had big power, but with a big problem with a flat spot. The Turbo was either on or off ... a big problem. I came 2nd but I had problems with the brakes and then re-starting. Then when it was wet, there was no more exciting car to drive in the world!" The Turbo car now lives in the Museo Alfa Romeo at Arese. Marcello Gambi said that the turbo had been kept very much as a spare during the 1977 season.

Autodelta had taken victory in every round and it should forever be rightly proud of that achievement, but the opposition had been minimal. There was still one last act to be played though, as it wasn't quite the end of the Tipo 33 story. The final curtain was brought down at Hockenheim on the afternoon of Saturday October 8, and it was staged by the German Interserie organisers. Arturo Merzario was inevitably the driver and the car was the turbocharged machine. Few magazines reported the event. The Tipo 33 had spluttered into life ten years before and had developed into a promising project successfully taking on the world. Sadly FIA indifference and misunderstanding of the



Front view of the Turbo car at Arese.

After much hype, the Turbo car first raced at Salzburgring in 1977, finishing 2nd with Merzario.

relevance of sports car racing led to the demise of the Tipo 33's raison d'être and, more to the point, Chiti had bigger fish to fry. Not only had Autodelta revealed the existence of its own Grand Prix car during the year, but Niki Lauda was coming to lead the F1 Brabham team and, with its Alfa Romeo power, the rotund Tuscan had a chance to shine at the pinnacle of motor racing in



Arturo Merzario was seldom without his cowboy hat.

1978. The 'suits' in Rome had been kept happy for another year and Alfa Romeo had added another championship to its list of achievements. And, yes, Merzario had the honour to win this final race at Hockenheim, something he remained pleased with.

For those drivers who had been with Autodelta, there were a lot of good memories. Arturo Merzario valued the chance to drive with people like Mario Andretti, who became a good friend and was what Art called an ideal team-mate. He also thought highly of Pace as a driver though he said after Carlos drove the car "it was finished"! He also highly rated Lafitte, and considered Vaccarella as the best of the road circuit drivers. Nanni Galli thought Giunti was an incredibly quick driver, and also thought Helmut Marko and Rolf Stommelen were not only quick but good for the team. Teodoro Zeccoli believed Piers Courage was probably the best Alfa 33 driver, and that no one else had such a good feeling for the car and the handling. Zeccoli: "Courage could go to a track he



The enthusiastic Merzario still drives the T33/TT/12 at historic events; here he is at Goodwood.

had never seen before and within a few laps would be quicker than the drivers who raced there all the time ... including me!" In the early days, Zeccoli rated Giunti very highly, as did Galli. Marcello Gambi had his memories of Carlo Chiti: "Chiti liked to be driven by my son Marco. Marco always drove fast and Chiti liked that. He would always be late for the airport and Marco would drive on the pavements to get him there on time." Gambi

liked Spartaco Dini, mainly for his off-track adventures, and "Mr. Coca-Cola ... Vaccarella! He carried a bag of Coca-Cola in the car. He bent two cars at the Targa Florio in practice. Once, he crashed and just sat in the car finishing the Coca-Cola!"

Both Merzario and Galli had some difficulty in picking out the best races, as Merzario said: "All races at Alfa Romeo were good, even when they weren't!"



Nino Vaccarella comes out for historic events, and drove at a retro Targa Florio event.

1977 T33/SC/12 Turbo technical spec

Chassis	Monocoque in aluminium
Engine	2134cc
Bore and stroke	77mm x 38.2mm
Compression ratio	11.1:1
Cylinder head	DOHC per bank 4 valves per cylinder Gear driven
Fuel system	Fuel injection and two turbocharger induction
Power	640bhp at 11,000rpm
Transmission	5-speed gearbox/final drive in unit with rear-mounted engine
Length of car	3.80m
Width	2.00m
Height	0.96m
Wheelbase	2.50m
Track front	1.49m
Track rear	1.47m
Tyre sizes	9.50/20 x 13 front, 13.10/26 x 15 rear
Weight	770kg
Top speed	Ran at 352km/h in tests

XII The Stradale ... a most beautiful road car

What had started as the 'Project 105.33' in 1964, and had even earlier roots in a V8 GT car thought about in the mid-1950s, found itself going in a number of directions once the business of building a serious international race car got under way in 1965/66 and the car was launched in public in March 1967. It had long been considered desirable for this project to be linked to a production car of some sort, and the thinking that prevailed once the race car was active in 1967 was that there should be an exclusive road car ... a Stradale ... based on the same chassis. This car should fundamentally be '95% a race car' with some road trim, parameters set down by Satta and Busso in conjunction with Chiti in the later stages of thinking.

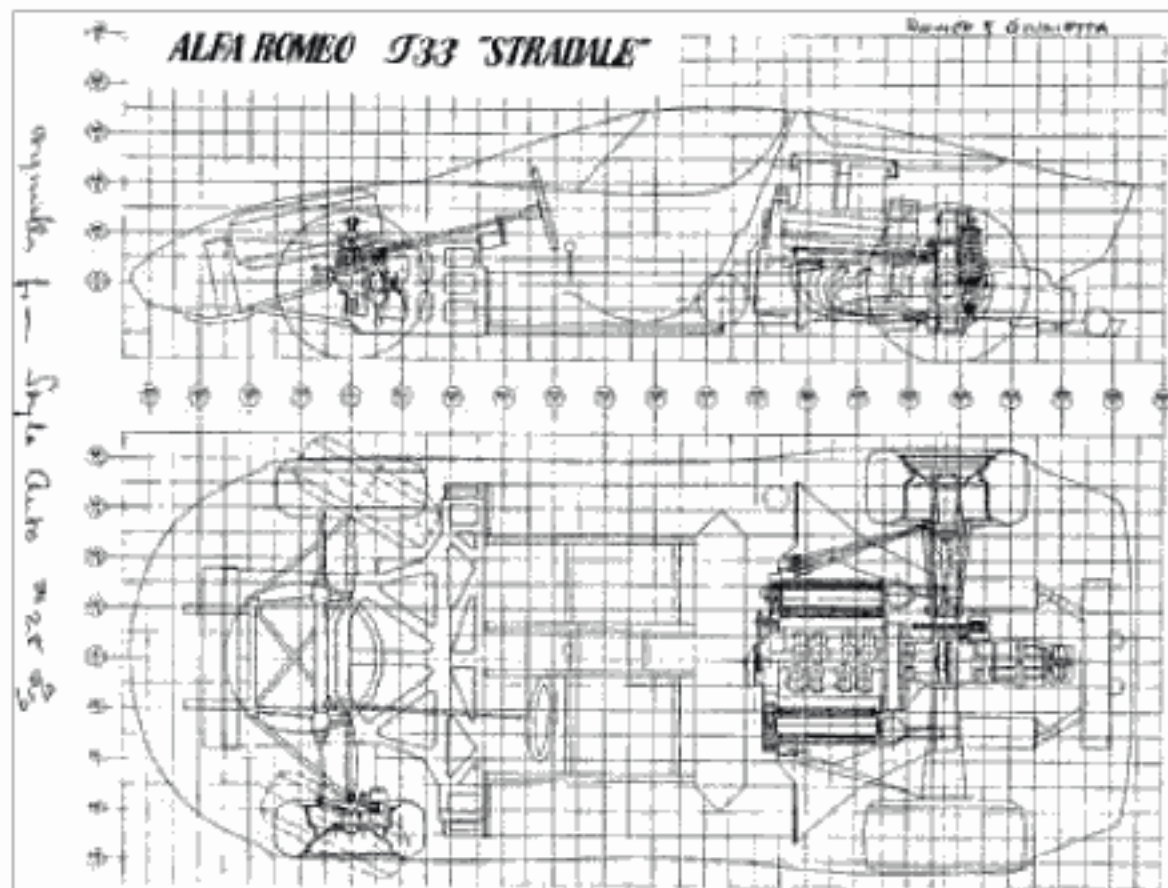
The commission to design the Stradale was given to Franco Scaglione and the brief was not an easy one: the car was to have

a minimum of 'roominess and comfort compromises using the dimensional and architectural bonds of the original chassis' and it was to have not less than 95% of the performance of the racing spider. What has become clear is that at one point Alfa Romeo intended to build two versions of the Stradale – one that was a high performance road car with safety glass, full interior padding and finish, heating, sound deadening and windows that would open, and a competition Stradale that would look like the road version but have engine tweaks, fixed windows, racing seat and a sparse interior.

How the operational departments managed to translate such a plan into reality can only be wondered at, at a time when a vast amount of effort was going into both the existing touring car competition programme and international sports car racing. The result probably tells the tale best as some fifty chassis were

planned for the Stradale project, aimed at wealthy customers who could afford the then expensive \$17,000 price tag for the base model. In the end, fifty cars never got built, and while the records often say eighteen Stradale chassis appeared, several of these went into the concept cars described in the next chapter, and probably only a maximum of twelve cars were built.

There is very little mention in Alfa Romeo history of a two-tier Stradale building programme but it was what had been intended. Though the official period of Stradale availability was from November 1967 until March 1969, the build programme started in January 1967, and it would seem to have included the notion of a competition version from the outset. The car had been launched in September 1967. However, the programme became sidetracked by the diversity of other



These Stradale drawings show the resemblance to the 'Daytona' body shape.



Another view of the early car without the venting to get air to the brakes.



The early Stradale did not have the later vents behind the front wheels. This is at the 1967 Turin Show.

demands, and the order book was surprisingly slow in getting full. This odd state of affairs goes some way to explain the timing of the production of the cars. It would appear that at least two of the cars always thought to be full road-versions were in fact built at least partially to competition specifications. Chassis 75033.106 was raced extensively by Laureati in 1968 and 1969, and chassis 75033.107 was described as an experimental version in which Scaglione used extensive amounts of magnesium. There have also been theories that this car has now been built into a pukka 1968-style racing coupé of the Daytona type. There is also the view among those familiar with Stradales that the project was thought up to utilise the existing racing spares, as it had become clear that a switch to a steel monocoque was on the cards for the end of 1968.

Whatever the realities of this subplot were, one of the most beautiful road-going cars of all time wasn't very successful when it appeared. The wheelbase of the Stradale was 10cm longer than the racing prototype to furnish some interior space and a degree



The later car in 1968 with vents behind front and rear wheels.



An Alfa Romeo photo showing the car with both hinged doors open.

The Stradale was a big hit at motor shows but sales didn't follow. This is the 1967 Frankfurt Show.





A rare competition appearance of the 33 Stradale at a Bologna Hill-climb in 1968.



Enzo Ferrari appeared on the Alfa Romeo stand at this show in October 1968. The Stradale at one time was almost a joint Ferrari/Alfa Romeo project.

of road-going characteristics. It is thought that all the Stradale versions have this longer wheelbase, but it isn't a certainty, as every existing individual car has at least some slight difference from every other. The sills were padded to cover the 200mm chassis side tube. The chassis tubes, as in the race car, were in the H layout with two large tubes connected by another large cross-member. The side tubes carried the fuel. The front subframe was part magnesium with glass fibre skin, and at the rear, the engine and rear suspension were carried by two large tapered magnesium arms bolted to the sills. The magnesium subframe castings were made by Campagnolo. The central section of the chassis on the Stradale was in steel for additional strength and a degree of rigidity.

While the Stradales were designed by Scaglione, the construction was carried out by Carrozzeria Marazzi at Caronno Pertusella near Saronno, though each hand-built car was inspected by Scaglione. Every effort was made to keep the cars functional, and the weight was kept at 700kg. When the car first appeared it had four headlights and no side vents, and some months later it had single headlights, side vents, indicators mounted fairly high on the wings and revised chrome trim.

Alfa enthusiasts have long thought that, given the timing, there was a close connection between the 2-litre engine in the early Tipo 33 race cars and Stradales, and the Montreal which finally appeared in 1970. There is an outward resemblance, but the over-square 2-litre has a bore and stroke of 78 x 52mm producing 260bhp whereas the 2.6-litre Montreal engine only manages 230bhp. A note of qualification is necessary here, as the original power rating for the Stradale was given at 230bhp, but

it would appear that a number of examples escaped the factory with 240 to 260bhp, given that the cars were produced over a fairly long period. There were four cams, two plugs per cylinder, twin distributors and four coils as on the race cars. The Stradale had the racer's revolutionary transaxle, 6-speed gearbox and a final drive ratio of 9:41, giving the car immense acceleration. It stayed faithful to its original destination of being 'almost a race car'.

The Scaglione design was very clever in relation to the way in which it made what was essentially a competition machine look like a road car. This meant overcoming a number of difficulties, and the interior is forced to contain the spare wheel, radiator and cool-air ducting, which leads to the brakes. Scaglione's designs included attention to aerodynamics in order to feed as much cool air as possible to the brakes from outside as well. The body shape was created so that the airflow would be directed to the internal and external wheel faces. When there was turbulence discovered in the prototype testing, Scaglione designed the vents behind the wheel arches. The right side vent allows air to flow into a breathing chamber between the rear window, engine cover and the transparent internal back-light. The left vent feeds cool air directly to the rear brake ventilation ducts. This layout was part of solving the larger problems associated with designing a car less than a meter high, which was also complicated by the unorthodox chassis tubes.

Scaglione used a new approach to entry and exit by making the doors part of the roof structure and hinging them diagonally. While the wide sills still have to be managed, entry is far easier than it would have been with a gull-wing door.

XIII

Concept cars ... dream and reality

In all its diverse forms, the Tipo 33 was probably never so controversial as when it was forming the basis for several concept cars.

The longer Stradale chassis had been made available by the factory as a road car but its high cost and complexity and Alfa Romeo management's greater enthusiasm for the front-engined Montreal probably contributed to the relatively small take-up of the model by customers. Making available a number of these chassis to high-profile carrozzeria – coach builders – would certainly have been seen as good for Alfa's image. In all, six concept cars were constructed by the 'big three' Italian design houses.

The first to appear was the Carabo, or Beetle in English. This was designed by Marcello Gandini when he was at Bertone and was initially displayed on that company's stand at the Paris Motor Show in October 1968. It is said that the Carabo was devised so as to negate the Lamborghini Miura's problem of producing

front-end lift at speed. It was also the first car to feature front-hinged and upward-opening doors and this idea was later taken up by Lamborghini with its Countach. The chassis number is 75033.109. The construction was completed in only ten weeks. It features novel slats over the rear window and similar treatment at the front. The striking unbroken line appearance was possible through the use of a special glass, VHR – verre a haute resistance. The doors opened via a balanced hydropneumatic ram system. This feature gave the car the name Carabo as a beetle opens its wings in a similar manner. The door opening system allowed the car to be parked within eight inches of a wall.

Soon after this, at the November 1968 Turin Show, Pininfarina unveiled its show-stopping P33 Roadster. This car had a wedge-shaped body and open cockpit in sports racing car style. The area behind the seats was stylistically dominated by what we would now call an aerofoil, but which Pininfarina described as



The Bertone Carabo, first of the Tipo 33-based concept cars. This is the 1968 Paris Show.

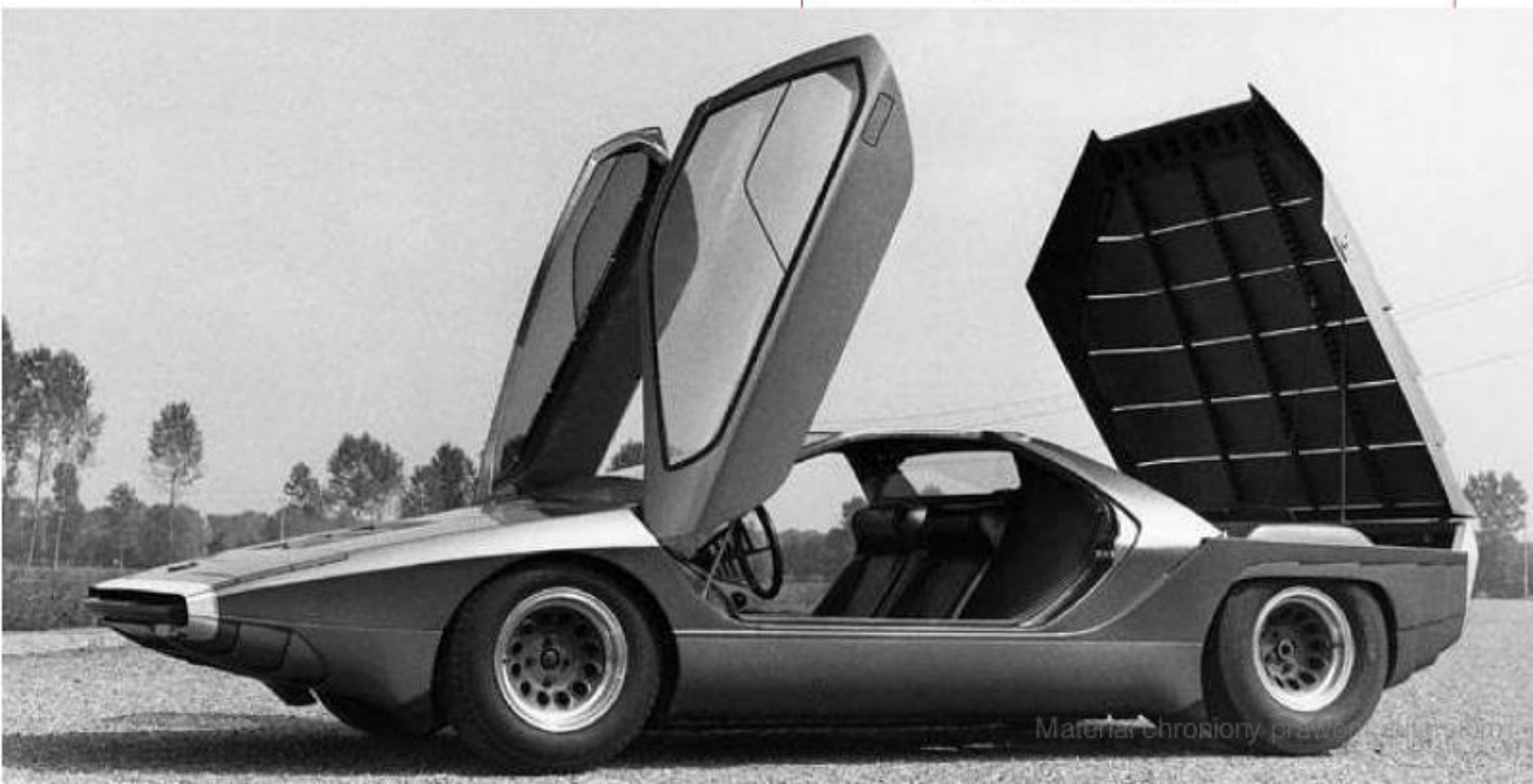


Rear view of the Carabo at the 1968 Paris Show.



Bertone was very proud of the clean lines of the Carabo.

The Carabo used the same approach to doors as did the Stradale.



The striking Bertone Carabo in metallic green.



a 'raked element'. This contained a roll bar and an oil cooler as well as supposedly functioning as an aerodynamic aid. The nose incorporated a row of headlights under a clear plastic cover and was protected by a rubber bumper. The chassis number is possibly 75033.110.

One year later, in much the same sequence, the Paris Show of 1969 provided the scene for the debut of the Pininfarina Alfa Romeo 33 Prototipo Speciale. Many would have done a double take, as on first sight the car looks identical to the same designer's 1968 Geneva Show Ferrari 250 P5, but this Alfa-based offering differs in that it does not have a row of headlamps under glass and it also dispenses with the side and rear strakes. Pininfarina stated that it built the car as the first of a possible short production run of cars to be built in conjunction with Alfa, although this seems strange in that, by the end of 1969, sales of

that company's own in-house Stradale were not high. The chassis number is 75033.115.

At the subsequent Turin Show in November the same year, Italdesign weighed in with its take on the Tipo 33 chassis. They named it Iguana after the rear side air-intakes, which were reminiscent of the scales of the reptile. Giugiaro used the fact that the base chassis was a racing car to emphasise the cockpit



The Pininfarina P33 Roadster, well known to Corgi model car fans.



Close-up view of the rear wing on the P33 Roadster. This is at the 1968 Turin Show.



The 1969 Paris Show saw the debut of the Pininfarina 33 Prototipo Speciale, which was almost identical to the Pininfarina exercise on a Ferrari chassis.



The beautiful P33 coupé inside the Alfa Romeo Museum at Arese.

structure, as it had to be built up in steel and was left bare on this car. The low section on the nose creates clearly separate features of the wings over the front wheels. This and many other features were to be seen later on the designer's Porsche Tapiro and Maserati Bora. The chassis number is 75033.116.

Nearly eighteen months went by before the next Tipo 33-based confection was launched. This happened at the Brussels Show in 1971 when it was Pininfarina's turn again. The car was open and consisted simply of a distinct wedge shape – all the rage at the time with the Lotus 72 Grand Prix car – with few

frills. John Bolster described it in *Autosport* magazine as 'very attractive but for nasty blisters to accommodate the front tyres'. The choice of Brussels as its debut show was rather low-key and few magazines of the day reported the event. Perhaps because of this, confusion has arisen over the identification of this car, especially as Pininfarina had already executed its 1968 P33 Roadster design. In fact many confuse the two and consider them to be the same car. The constructors call this car simply the Alfa Romeo 33 Spider although the additional name Cuneo is used by Alfa Romeo. This has chassis 75033.108.

We can confirm that this is not the same car as the 1968 version as we were able to open the Alfa Romeo Pininfarina 33



The metallic finished Iguana at Arese today.



The Iguana badge on the back of the Italdesign car at Arese.



The third Pininfarina design, the wedge-shaped Cuneo at Arese.

Spider recently – something evidently not done for many years – and the chassis number was clearly not the same as the other car.

Pininfarina stated that this car concluded its 'research on racing car frames with central engines' so it was assumed that this was the last use of a Tipo 33 chassis for a concept car. Except that five years later, at the Geneva Show in early 1976, Bertone unveiled a new car named the Navajo. This experimented with the wedge shape and bore certain similarities to his Rainbow car.

He was, of course, deeply involved in the Fiat X1/9 project at this time and so the shape must have been his contemporary theme. Also, he may have been looking for a tie-up with Alfa Romeo, for under the Navajo's skin was none other than a Tipo 33 chassis, over five years since Alfa last used one. This time though, it really was the last use of the obsolete chassis frame, the number of which is 75033.117. Some reports have this with a 3-litre engine based on a T33/3 chassis, but clearly Alfa Romeo describes it as a 33-based car utilising a Stradale-length 33 tube chassis.



The authors got a close look at the Cuneo's 2-litre engine.



Peter Collins' striking photo of the rear of the Cuneo.



The last concept car built on a Tipo 33 chassis, the 1976 Navajo.



The Navajo concept car in the Alfa Romeo Museum.



The Navajo sits in front of a display of a number of Alfa Romeo design awards.

XIV

Driving the cars

The authors have been fortunate to have been offered first hand experience of each of the Tipo 33 models ... the first T33 2-litre, a subsequent T33/2, the T33/3, T33/TT/3, a T33/TT/12 and a Stradale. They are grateful to the owners and their teams for providing help and assistance.

1967 T33 Chassis 75033.001 – The Fleron winner

Marco Cajani is a larger than life character, an enthusiastic driver of historic racing cars ... an Alfa 1900, the DeTomaso-Alfa F1 car ... and he heads the Scuderia del Portello, Alfa Romeo's prestigious historic racing team. His headquarters in Milan houses the team's transporters, a number of the race cars, Cajani's own superb collection of private cars and ... 75033.001, the 1967 Fleron winner. It should come as no surprise, I guess, that this car should be in Cajani's hands in view of his long association with Alfa Romeo.

The authors first stumbled – literally – across this car as it was being restored in Giovanni Giordanengo's workshop near Cuneo in Italy. Chassis 001 was sitting next to 003, the car belonging to Italian-American Joe Nastase. Both cars were in a pretty basic stage at the time but have since emerged to appear at Concorso Italiano in California and Goodwood in the UK.

Marco Cajani's understanding of the history of the early cars was that there were two prototype 33 chassis, one of which became an un-numbered prototype – this was the car Zeccoli crashed at Monza in January 1967. Cajani has 001P, the other early prototype, which Chiti attested was the car that Zeccoli took to victory in its maiden outing at Fleron in Belgium in March that year. He also said to Cajani that the chassis that went to OSI had no numbering. Cajani saw 'his' car at Alfa Romeo in 1986 and negotiated a purchase. This was at Settimo Milanese which had been the Autodelta headquarters, though by then it was part of Alfa Romeo. The car consisted of a complete original chassis with suspension, engine and all parts except the body. Having agreed to buy it, it then became difficult to get his hands on. It had moved and he eventually had to buy it in component form, a bit at a time. This collection of components went to Giordanengo to have a body made, as no one knew where the original body had gone. Joe Nastase's car was there at the same time having

bodywork done. Cajani said that Chiti at one time wanted Giordanengo to build six replicas of the 1967 car. Cajani was approached after Chiti died for the loan of his chassis to make these replicas, which would have been made from aluminium and steel, rather than magnesium, to distinguish them from the originals. There is no certainty as to how many, if any, were built. Cajani had photographed the 001P numbering on his chassis and then had added his own stamp to mark it. Examination of the Alfa Romeo photos of the bare 1967 chassis reveal the 001P marking.

Amongst the documentation Cajani got with the car were papers which confirmed that this chassis, 001P, was the car taken to the Targa Florio in 1967 and used in testing, though possibly not in the race. Cajani also had possession of the chassis which was the first one used in the 1968 cars, and was a prototype for a car which would take a 3-litre engine.

The owner's research is on going, though he believes 001 was the car driven by 'Geki'/Baghetti/Zeccoli at the Nürburgring in 1967, and that De Adamich/Giunti/Pinto used it at the Le Mans test weekend.

Driving 75033.001

This 'Fleron' car has an early gearbox, a 6-speed with the numbering 10533.018. It had the same tricky feel as I experienced in Paul Grist's 33/2 ... well, it's the same box. The car has left-hand steering with a 3-spoke wheel, the big 'periscopica' air intake sitting behind the unusually shaped rollover bar. Caution has to be exercised on entry as the bodywork is fragile, though the doors are wide. Vision out of the car is not without its problems and you need to sit quite low to use a flatter part of the screen to see. The gearshift is in the centre and the five instrument gauges are set to the right of the wheel. The leather seats are new but in period style, the interior is spacious and the windscreen is full width. The rev counter reads to 8000rpm.

From the outside, it's a beautiful little car, with lovely curves, attractive vents and features ... a striking race car in all ways. I found myself walking round and round and round it.

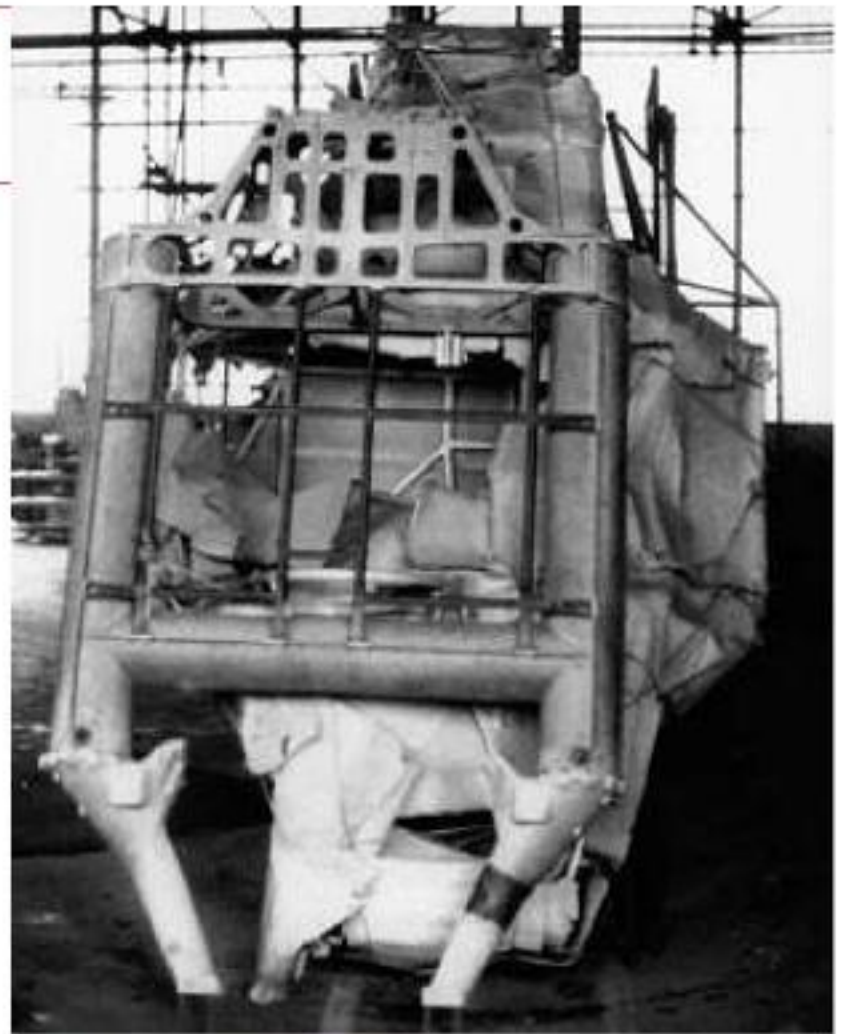
The car has had relatively little running since its restoration, but has appeared at the Goodwood Festival for Cajani and Arturo

*This is the original chassis 001
for the Fleron car still in Marco
Cajani's restored car.*

Merzario, and briefly me. This was to be a short run in Milan which emphasised its lightness, great acceleration, good braking and sensitive handling. As with all the Alfa V8s, the sound echoes wonderfully off the city walls and it revs neatly and crisply. Marco Cajani has decided not to race the car, partly because of its rarity, but also because it has a lot of very burnable magnesium in it which makes him nervous! It is destined to feature at Alfa Romeo and classic car gatherings around Europe and track events where it will get sufficient exercise.

My experience reveals the car to be street manageable in all departments, and the performance and road holding good enough to tempt Cajani into more action. The acceleration is characteristically highly impressive and I don't think he will be able to keep off the gas for long!

Thanks to Marco Cajani and Jason Wright.



*The subframe has its original markings as well as
Cajani's own stamp to protect its identity.*



Marco Cajani's beautiful Fleron winner.



A rear view of the shapely Fleron body work.

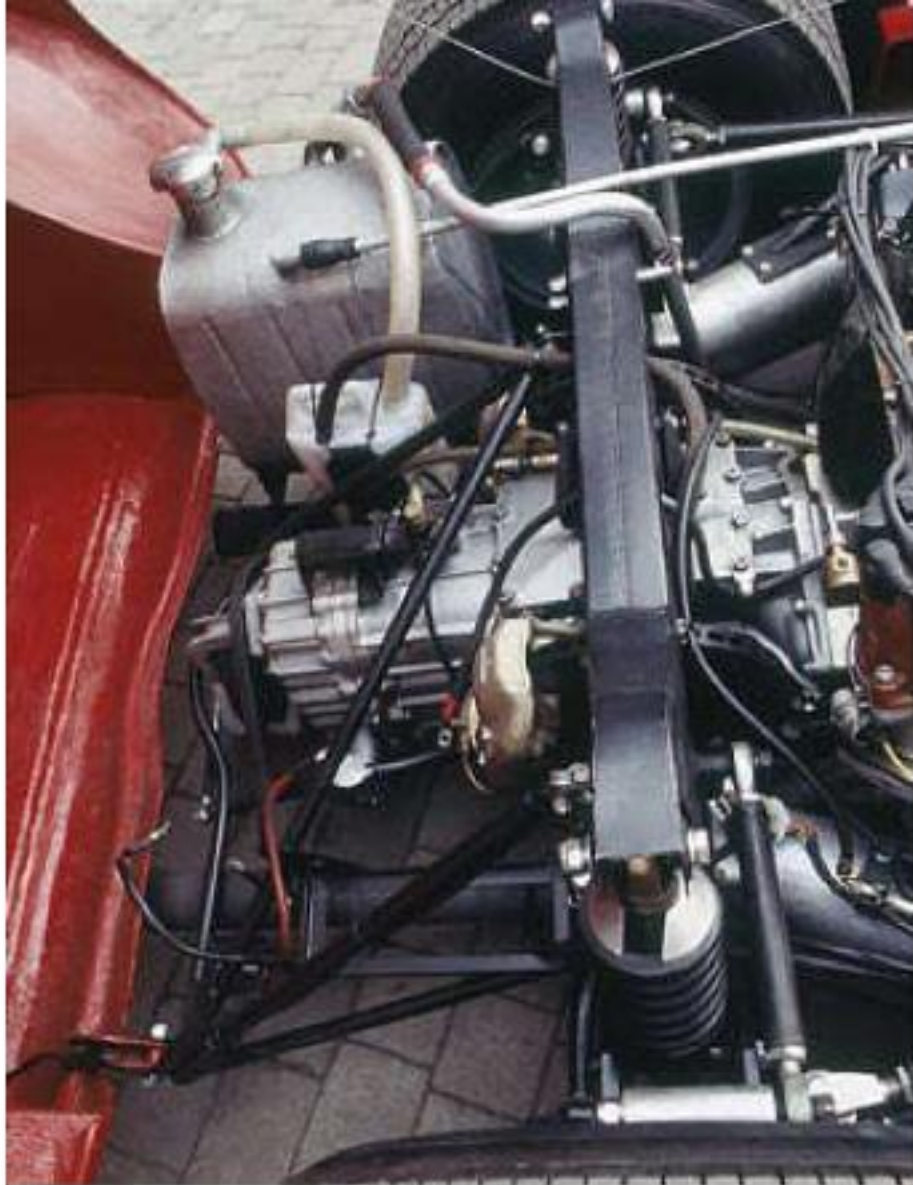


Author Ed McDonough gets set to try Cajani's 001.

The author finds the Fleron car a comfortable place to be.



The driver is well protected from buffeting this large windscreen.



The early car had the gearbox and differential hung well out at the rear.



Cajani puts Arturo Merzario into the car at Goodwood in 2004.



Cajani brought the newly restored T33 to Goodwood in 2004.

1968 T33/2 Chassis 75033.029 – Imola winner

This is a seriously important Tipo 33! Well, any car which could survive the sports car wars of the late 1960s/early 1970s intact must be important, on survival grounds alone. As the reader may have already surmised, keeping track of the Tipo 33s has been a difficult job, Autodelta's records being what they are (or aren't). No one – no one – knows how many T33/2s were made. There are several incomplete lists, which go as far as fifty or sixty. This is clearly inaccurate; the number doesn't amount to more than thirty, and is probably closer to twenty. While there are chassis in existence, like this one, with numbering up to 029, there are gaps amongst the early cars and these cars just don't seem to have ever existed. Ex-Autodelta mechanic Marcello Gambi himself said he thought there were twenty T33/2s built.

Chassis 75033.029 emerged fairly late in 1968, while some reasonably high numbers appeared fairly early in the year. Its first and most important race was when it showed up at the non-championship Imola 500 Kilometres in September for Teodoro Zeccoli and Nino Vaccarella, two great names from the Tipo 33's history, especially the early days. Thanks to Zeccoli's memory and his written diaries, he could confirm that he was indeed driving this car at Imola, and that he had done a lot of testing with it. The Alfas managed to see off the Porsches, all three T33/2s going well and Nino and Teodoro went away to win from Galli and Giunti.

The next appearance was after the car had been sold to Italians Antonio Zadra and Giuseppe Dalla Torre for the Squadra Trentino, a serious and enthusiastic private team. The car appeared in 1969 at Monza, the Targa Florio with Zadra and Mario Casoni, Mugello, Österreichring, Karlskoga in Sweden and the Imola 500 again with Zadra and Facetti. In 1970, Hubert Ascher bought the car and it appeared at Dijon, and then Klaus Reisch drove it at Neubiberg and again at Magny Cours in 1971. The car was in the USA in the 1980s and then back to Europe before Paul Grist found it and provided a good and very active home for a significant car.

Driving 75033.029

029 was sitting aggressively on its 4.15/10.00/13 (front) and 6.00/12.00/13 (rear) Dunlop Racing tyres and original Alfa wheels

outside Paul Grist's workshop. The favourite Tipo 33 of many Alfa racing fans, it's a beautiful car from every angle.

The car has a 6-speed gearbox, which presents a fair challenge to the newcomer. The pattern is standard: left and forward for 1st, back for 2nd, etc. Reverse is right next to 1st and there is no gate, but I couldn't find a record of anyone selecting reverse when they shouldn't have ... or at least anyone who would admit to it! I found it a difficult task to feel secure with getting first and reverse, but it came fairly quickly. It then wasn't a problem – in fact it was as pleasant as most drivers had always described it.

The next lesson was about getting down the box with no synchromesh. This required a good ear and timing, something which had to be learned quickly with the owner in attendance – and in fact it wasn't so bad after a few careful tries. You would want some practice with this before you took it on the Tour Auto or to Sicily where it has been fairly recently.

Starting had been easy, given that the car had been 'resting' recently. A little throttle and the 2-litre unit is talking noisily to you. Once warm, with that oil surging through the pipes, it settles down to a lovely burble. This car features an Accusump, which pressurises the oil system when it is cold, so when the ignition comes on, oil is sent through the system immediately. This gives about 100lb pressure per square inch. The words 'lusty V8' are not an overstatement, in spite of the small size. The sound is truly wonderful, as it had been on Marco Cajani's Fleron, and indeed all the 2-litre cars.

This engine is using Lucas fuel injection with Lucas pumps, which work extremely well as opposed to the numerous problems encountered with the Spica system. The fuel pick-up is instant, and the lack of oiling plugs means the car pulls away cleanly and does what it does best ... accelerate. It absolutely prefers the open road but even a warming up period on slow, tight corners for the driver taught me how to maintain the revs to keep the plugs clean. Yes, it fluffed a few times in 2nd gear but was not nearly as temperamental as might have been expected. When the engine is on the 'cam' in 3rd, 4th and 5th gear, the car provides a fantastic experience. It just gobbles up the road and hurtles down to the next corner. It is now possible to see why the early drivers loved it. Nanni Galli had said he was so impressed by the way it not only gathered speed so quickly, but it would hold

the road – all with that funny chassis under and around you. Of course, Nanni and the others got used to it under rather more difficult circumstances. And it was going much faster than I was now. But it was clearly a superb car for current events such as the Tour Auto, where it would be fast, tractable and loved by the crowds.

Braking wasn't seriously tested during my stint on public roads, but they worked smoothly and well every time. The car is comfortable, either with or without the easily removable sheet roof ... I preferred it opened to get the 'wind in the hair' treatment and there was plenty of that! The two seats are comfortable and supportive to the back and sides under hard cornering and acceleration. There's a small handbrake, exterior mirrors on each wing which make visibility reasonable, and when the roof is off, a relatively wide mirror over the windscreen which gives fine rear vision. In fact, you can rely on this one alone if necessary.

The steering is positive, with lots of feel, which is strange considering the size of the wheels and tyres. The car always feels nimble, which must have been an asset when in fact the drivers

always thought of it as heavy. The ride height has been raised so the car can manage road events and be driven on the road. The car bristles with ducting and vents. There is ducting into the engine and there is an open back-panel above the exhaust, which on some cars had slats. This seems to be effective in getting hot air out of the engine area. Brake ducts are improved on 029, which was a later example of the T33/2.

Getting air to the brakes was a bigger problem with the original tyres which were on this car at some point. The bigger wheels/tyres required extensions to the bodywork. The door profile is lower on 029 than on the first cars. This car also features a titanium subframe and titanium wishbones in the suspension, as well as other titanium parts.

In spite of the exotica, 029 is an eminently usable machine, especially if you don't hit anything! I managed not to do that and had a thoroughly fine time in the seat where my heroes sat. This car exudes history and passion.

Thanks to Paul Grist.

Author Ed McDonough flashes down a country lane in Paul Grist's 1968 car, chassis 029.



The authors found some Targa Florio-like roads to test the car, which Zadra/Casoni raced in Sicily in 1969.



Материјал заштићен ауторским правима



Peter Collins captures the speed of the T33/2 in action.

The T33/2 had very predictable handling, even on bumpy roads: an advantage in 1960s road racing.



Ed McDonough finds the T33/2 a superb performer on the road.



The T33/2 in 'Daytona' format, with the removable roof off in this photo.



Visibility is a feature of all the Tipo 33s; especially important on the road circuits.



The business end of the 2-litre T33/2.

1971 T33/3 Chassis 75080.019 – Targa veteran

Although I missed seeing the original 2-litre V8 Tipo 33 which won on its debut at the obscure Fleron Hill-climb in Belgium in 1967, I was track-side at Le Mans in 1968 when three of the 2-litre cars, now with coupé bodies and long swept tails, finished in the top five at the 24 Hours. I was pit signalling for Mike Salmon's Ford GT40, but Alfa's achievement was not lost on me and thousands of others. I saw that same model at Brands Hatch in 1969, and then back in the USA watched the 3-litre V8 appear at Sebring in 1970 and Sebring and Watkins Glen in 1971. While the purists had a tendency to get upset about a V8 in the back of an Alfa instead of a V12 like Ferrari, the new Tipo 33/3, or T33/3 as it became commonly known, was beginning to put in some excellent performances, not only against the 3-litre opposition in the prototype class but also when it came up against the 5-litre Ferrari 512M and the Porsche 917.

In 1973, I managed to find myself in the same races as the Tipo 33 at Spa, Nürburgring and Österreichring, though by that time the T33/3 was history and even the next model, the T33/TT/3, had been pretty much superseded by the flat-12 engine in the T33/TT/12.

The T33/3 had undergone many detail changes since it first appeared in 1969, though the chassis and engine remained essentially the same. It had a conventional monocoque which extended to the rear of the car to take the engine's stress unlike more modern monocoque constructions. The 3-litre engine was not merely the 2-litre stretched but a new design built especially for this chassis, though for some time it was believed that the engine was just an older block with larger bore and stroke. It had four valves per cylinder and employed Lucas fuel injection, and produced between 420 and 430bhp. The conventional F1 thinking prevailed for the suspension, although at Imola in September 1970 the front had undergone further modification. By this period, several body styles had been tried, the 1970 version looking similar to the Porsche 908. Autodelta had also borrowed the Porsche design for the rear with an upswept rear deck which left the gearbox exposed. At the Österreichring race in October, 13in wheels had been fitted, the brakes and front suspension had further revisions and a new, more square body style had been developed, and this was the body used through 1971.

1971 was looking more promising with a new 5-speed gearbox to replace the earlier, heavier 6-speed box and lower weight all round. At Buenos Aires in January, Stommeln/Galli were 3rd and De Adamich/Pescarolo 4th. After Sebring, Autodelta then went to Brands Hatch and De Adamich and Pescarolo finally won. There was a 3rd, 4th and 5th at Monza, a 3rd at Spa, and Vaccarella and Hezeman's famous win at the Targa Florio with De Adamich and Van Lennep 2nd. A great deal of research by the owner, with the help of Teodoro Zeccoli, has provided evidence that chassis 019 was the car which was 2nd in that 1971 Targa Florio. However, while 019 was the Targa car, questions remain over whether 019 was actually the number on this chassis at the time.

There were then good podium placings at Nürburgring, Zolder and the Österreichring before the team went to Watkins Glen in July. This time I was on hand to see De Adamich and Ronnie Peterson take a superb win, the last for the T33/3.

Chassis 75080.019

There is now, as already mentioned, evidence that 019 was the 1971 Targa Florio car that De Adamich and Van Lennep took to a fine 2nd place. Autodelta driver Teodoro Zeccoli, who was involved with the Tipo 33 from its beginning, was one person who kept a record of the cars he tested, and produced his notes on 019 at the 1971 Targa. Autodelta retained this car into the early 1980s when South Africa collector David Cohen found it sitting at the Autodelta factory. Cohen asked Tony Merrick to examine the car and photograph it and he pronounced it an authentic, untouched car. Cohen bought two additional T33/TT/3s. One of these, 008, was sold to Bobby Bell who retained it, and 009 was later sold by Bell and Cohen to a Dutch-American. 019 was sent to Michael Cane at GTC who restored it, and it was then subsequently for sale by Brooks and then Coys before being purchased by Shipman. It began an active historic career, which culminated in its win at the Historic Le Mans race.

Jon Shipman owned and campaigned it and brought it to the Chobham test track in Surrey straight from a long distance historic race at Spa. Richard Walbyoff, who looks after this and several other important historic racers, said it was running well, perhaps getting a little smoky but could be 'put to the test'!



Ed McDonough was able to drive 019 flat out as it had just returned from the Spa 6 Hours race.

course the somewhat larger V8 engine. This engine had four valves per cylinder and was producing up to 420bhp – mated to a 700kg weight package. With tight, sensitive steering, two turns lock to lock, the potential was clearly there to frighten the 5-litre cars ... and even beat them, which it did in 1971.

Driving the T33/3

At the time I found myself about to clamber aboard a pretty legendary race car, one which I may well have seen racing over thirty years before, the engine

had recently been dynoed at 402bhp, but it was a little tired from a long slog around Spa. Nevertheless it was in race trim and was up for a good tryout. Having spent a fair amount of time just looking at the beautifully built and preserved racer, squatting on its Avon slicks (10.00/20x13 on the front and larger 15.00/26x15 at the rear – the later permutation in the period though 13in all round had been tried), it was time to warm it up and have a run. The car was very highly geared and even on the long straights of our test track 5th was only possible once or twice at the very end of the straights. In the end, 4th gear turned out to be very comfortable all the way round this open circuit, and I didn't use more than 7500 of the 9000rpm available.

The V8 engine was a bit fluffy until warmed up, and pulling out onto the circuit, the gears and steering all felt hard work. As soon as there was some heat in the tires, however, a transformation took place and suddenly I was in charge of a large and powerful kart. I have to admit to being knocked over by the experience itself, but getting the chance to put in some real laps, even with a rev limit, was stunning. First, the gearbox starts to work like a dream when warmed up and the move from 3rd to 4th to 5th to 4th to 3rd is done with a light two-finger snick of the lever. In spite of the sensitive steering, there is plenty of feel and when the gauges all remained steady after a few laps, it became possible to recognise the potential here. 019 was immensely friendly and tractable, a useful quality on a circuit loaded with trees and danger.

In the cockpit, you sit amongst the fast evolving technology of early 1970s professional racing. Nostalgia is induced by the



Medium speed acceleration in Jon Shipman's car was more than impressive.

019 and all T33/3s are tidy, compact and attractive cars. This chassis model came, as we have said, between the large-tubed chassis of the 2-litre car and the return to an all-tubular chassis in the T33/TT/3. This has the boxed monocoque, which was structurally reinforced with titanium. Overall, these cars were heavier than the 33/2 but originally had 15in wheels and of



The 3-litre V8's torque was one of the features drivers rated highly from 1969 to 1972.

high tripod mounted central mirror, necessary for seeing over the high rear body sections which kept getting higher and higher. There is an abundance of large switches, multiple fuel pump buttons and large pedals. There are several gauges, some of which you are never going to get a look at when travelling at the speed this is capable of. Geared for 195mph, I was going to be modest and cautious, but quick nevertheless.

The test track is wide and empty, so the sharp rip of the V8 echoes and heads turn as the car moves around on its first warm-up laps. The third time down the long straight gives the first chance to try the big inboard ventilated disc brakes, which never seem to cause any trouble, better now with modern pads and discs. It's down the box to 4th and 3rd for the banked left-hander under the bridge, keeping the revs up to make the most of the superb mid-range torque and the light weight of the T33/3. The revs rise on the exit as the big Avon slicks bite, and the first sense of g-force is apparent as the throttle goes progressively to the floor and the car rockets away from the banking with a slight

tweak of the tail and arrives quickly at the next off-camber right, which drops from under you. The temptation is to drop to 3rd gear but it's more fun in 4th and you can concentrate on the right line. You plunge slightly downhill and hard left onto a short straight, which opens up into a series of flat-out lefts. This is where you have to be brave in a car that accelerates about as quickly as you can take it in. It's a matter of keeping the foot down and holding on or back off and lose the rhythm. You listen to the wail of the exhaust and know you are really driving. Making this happen more smoothly each lap and coming out onto the straight with more revs each time is what fast driving is all about.

I noticed that it was perfectly breeze-free in the cockpit, the aerodynamics of the F1-inspired windscreen working perfectly. That helps when you are working to go faster to get a maximum speed run down the straight. The suspension works a treat – independent all-round with wishbones, links and coils and rear radius rods. The engine thumps away smoothly, the torque more and more impressive. At one point, we calculated that 5th gear at about 7000-7200 was some 160/165mph ... and that was not trying that hard! It was amazing that everything was working so well and it had just done a very serious race.

Thanks to Jon Shipman, Richard Walbyoff.



The T33/3 is characteristically compact.

The Autodelta badge and standard decorative grille.



*The typical functional interior of the Tipo 33 race car interior.
The gauges are offset for easy reading.*



Ed McDonough was struck by the T33/3's stability under braking, tested hard here as the car approaches the photographer!



This T33/3 has open rear body work, though could be fitted with a closed rear section.

019 was easy to manage at 150mph.



Our test track has a small banked section, and the T33/3 just soared off it.



Zeccoli's notes said that 019 was the 1971 Targa Florio car which De Adamich/Van Lennep took to 2nd.





Dean Lanzante instructs as the team gets the car ready for a second, quicker run.



The V8 fits neatly into the chassis, making one wonder how they got a flat-12 in there.



Ed McDonough found the T33/TT/3 provided a very comfortable 'office'.

The 33/TT/3 has a smoother body line than the earlier T33/3.





The flat-12 engine is well forward in the tubular chassis.



Jacky Ickx raced 007 at Monza in 1974, here leading Facetti, and finished 2nd.

1968 Stradale Chassis 75033.101 – first production Stradale

When I had my first ride in Keith Goring's Tipo 33 Stradale a little while back, the first conversation we had was about how many Alfa people really loved the lines and design of this car, and how for many it was on the top of their all time list of desirable machines – the car you would buy when you won the lottery. His view was that you could safely make a case for this car as the most beautiful. What would be the competition ... the Ferrari 250 Testa Rossa, the Lancia D-50, some Delahayes? Yes, it would certainly be well up there.

While its appearance, the body line particularly, would always be admired, few cars had the performance to match the looks. When previous owner Henry Wessels had it, he said he managed to see 10,000rpm in 6th gear on an Autostrada, over 170mph, working a stopwatch in one hand and steering with the other! There is almost nowhere in the USA where that is possible, even at Daytona where Keith has tried it. In northern Connecticut, near the Massachusetts state line, we were heading for a few roads where at least some of the performance could be experienced, and 6000rpm was coming up as we slid through the gears, momentarily bogging down in some town traffic.

Henry Wessells, known for his Alfa 6C 3000CM amongst other things, bought chassis 101 brand new in Italy and brought it back to the USA. Wessells had been working in Europe, and when he heard about the Stradale in 1967 he went to see Carlo Chiti and ordered one. This car was the first production car, and the prototype chassis 75033.001 lives in the museum at Arese. Keith Goring and Susan Dixon's car, until it was sold to Belgium, was not the first car built. Wessells took delivery of his car directly from Autodelta and drove it to Turin, accompanied by one of Chiti's mechanics so he wouldn't get lost. He managed to talk himself into some laps at Monza with the car and then convinced Alitalia to fly it back to the USA as a publicity stunt, which it did.

Wessells drove it around the Philadelphia area for a while before an incident with another motorist convinced him that this wasn't the best road car for him, although he had done two SCCA races with it. Thus it came up for sale in 1974, passing through the hands of Kirk White (a Roger Penske backer) and a Philadelphia dentist until one Michael Ryan, a friend of Goring's,

Ed McDonough drives the Stradale with Keith Goring in the passenger seat.

is getting better the more it is worked and the slightly heavy clutch and brakes are not a problem. Dunlop racing tyres are the only tyres which will fit the car, and over the bumps of the public highway these make the car somewhat nervous. But you drive through this and keep the power on. The weight bias at the back makes it feel sure-footed under acceleration and even induces a bit of controllable drift ... and always there's that sound. The taller you are the better, as I started to slide down in the seat and then had blurred vision through the raked screen. Back upright, we could do some acceleration tests, with 0-60 coming up in about six seconds, and the power really coming on at 5000rpm.

Wessells may have found it too much as a road car, but my lottery winnings are going to buy one of these, with a bit to keep a good mechanic on hand to look after it!

Yes, this is stunning, and a lot of other superlatives. The argument for the world's most beautiful car is a strong one.

Thanks to Susan Dixon and Keith Goring.



The rear of what many people feel to be the most beautiful road car of all time.



Scaglione design at its very best.



Form and function ... this car is very quick.

The engine layout and position is very similar to the racing Tipo 33s.



The nose tends to be vulnerable in traffic.



Appendix 1 – Competition events

Here, the authors present a list of events in which Alfa Romeo Tipo 33s took part during their contemporary lifetime from 1967 to 1977 inclusive.

The list is comprehensive but in a small number of cases the specific date of an event and/or car running numbers have proved to be elusive and thus are not included, or are included in the month the event took place or at the end of the year.

Individual car chassis numbers are only included on those occasions when the authors have found clear evidence to authenticate them. It has been made clear where speculation or controversy exists, or if the authors have strong circumstantial evidence only.

1967

All cars chassis numbers have 75033 prefix.

12/3 Fleron Hill-climb Belgium

215 T. Zeccoli 1st, possibly chassis 001, two cars taken

2/4 Sebring 12 Hours USA

65 A. de Adamich/T. Zeccoli ret, chassis 004

66 R. Bussinello/N. Galli ret, chassis 005

8 & 9/4 Le Mans Trials

37 A. de Adamich/T. Zeccoli/R. Businello/J. Rolland

38 A. de Adamich/I. Giunti/Pinto

14/5 Targa Florio Sicily

170 A. de Adamich/J. Rolland ret

190 J. Bonnier/G. Baghetti ret

192 N. Galli/I. Giunti ret

200 'Geki'/P. Todaro ret

28/5 Nürburgring 1000 Kilometres Germany

20 A. de Adamich/N. Galli ret

21 'Geki'/G. Baghetti ret

22 R. Bussinello/T. Zeccoli 5th

4/6 Rossfeld Hill-climb Germany

4 N. Galli 4th

5 A. de Adamich 2nd

25/6 Monte Pellegrino Hill-climb Sicily

N. Galli 1st

16/7 Cesana Sestriere Hill-climb Northern Italy

598 N. Galli 3rd

598 S. Moser entered but did not practice

23/7 Circuit of Mugello Tuscany Italy

16 C. Davis/S. Dini ret

26 A. de Adamich/N. Galli ret

33 L. Bianchi/I. Giunti ret

30/7 Chamrousse Hill-climb France

181 J. Rolland 1st Class

15/8 Mont Dore Hill-climb France

J. Rolland 4th Overall

27/8 Ollon Villars Hill-climb Switzerland

201 S. Moser practised only, car too heavy

15/10 Ettore Bettoja Trophy Vallelunga Rome Italy

A. de Adamich 1st

I. Giunti 2nd

1968

All cars T33/2 with 75033 chassis number prefix, engine capacities vary where indicated.

3 & 4/2 Daytona 24 Hours USA

20 U. Schutz/N. Vaccarella 5th

21 N. Galli/I. Giunti crashed heavily in practice, did not start, chassis 017

22 M. Casoni/G. Biscaldi 7th

23 M. Andretti/L. Bianchi 6th, chassis 015

7/4 Brands Hatch 500 Kilometres

42 R. Attwood/N. Vaccarella not running at finish

43 L. Bianchi/U. Schutz ret

44 N. Galli/G. Baghetti 14th

6 & 7/4 Le Mans Trials France

38 S. Trosch/R. Slotemaker/T. Gosselin Team VDS entry from Belgium
39 L. Bianchi/T. Zeccoli chassis 017

25/4 Monza 1000 Kilometres Italy

26 T. Gosselin/G. Biscaldi ret, VDS entry, chassis 007
27 T. Pilette/T. Gosselin ret, VDS entry

5/5 Targa Florio Sicily

178 T. Pilette/R. Slotemaker 5th, VDS entry
180 T. Gosselin/S. Trosch ret, VDS entry
182 G. Baghetti/G. Biscaldi 6th
186 I. Giunti/N. Galli 2nd, chassis 017
192 L. Bianchi/M. Casoni 3rd, chassis 014
220 N. Vaccarella/U. Schutz ret, chassis 015, used 2.5-litre motor

19/5 Nürburgring 1000 Kilometres Germany

5 U. Schutz/L. Bianchi 7th, used 2.5 motor, chassis 015
6 M. Casoni/N. Vaccarella did not start, used 2.5 motor
15 H. Schultze/N. Vaccarella 10th, entered by Alfa Deutschland, also practised by Baghetti
16 N. Galli/I. Giunti 5th, entered by Alfa Deutschland, chassis 017
18 T. Gosselin/S. Trosch 13th, VDS entry
19 T. Pilette/R. Slotemaker 29th, VDS entry

26/5 Spa 1000 Kilometres Belgium

15 L. Bianchi/U. Schutz dna
16 T. Gosselin/S. Trosch 16th, VDS entry
17 T. Pilette/R. Slotemaker 12th, VDS entry

2/6 GP Della Republica Vallelunga Italy

N. Galli 1st

June Mont Ventoux Hill-climb France

H. Schultze 2nd

30/6 Norisring Races Germany

6 T. Pilette VDS entry, used 2.5 motor

7/7 Watkins Glen 6 Hours USA

33 H. Kwech/J. Martino ret, H. Kwech entry

July Trento Bondone Hill-climb Italy

2nd Autodelta entry

7/7 Zandvoort Coupé Benelux Holland

T. Pilette 1st, VDS entry
R. Slotemaker 2nd, VDS entry

14/7 Koksijde North Sea Trophy Belgium

T. Pilette 1st, VDS entry
T. Gosselin 2nd, VDS entry

21/7 Hockenheim Solituderennen Germany

12 H. Schultze chassis 026

28/7 Circuit of Mugello Italy

1 T. Pilette/R. Slotemaker ret, VDS entry
2 S. Dini/T. Zeccoli ret
3 L. Bianchi/N. Vaccarella/N. Galli 1st
15 M. Casoni/C. Facetti ret
20 T. Gosselin/S. Trosch 5th, VDS entry
74 I. Giunti/N. Galli ret

11/8 Karlskoga Races Sweden

12 T. Pilette VDS entry, used 2.5 motor
14 R. Slotemaker VDS entry

18/8 Wunsdorf Races Germany

3 H. Schultze 1st, Alfa Deutschland entry, chassis 026
T. Pilette VDS entry
R. Slotemaker VDS entry

25/8 Austrian GP Zeltweg Austria

6 T. Pilette 4th, VDS entry, chassis 015
8 S. Trosch 12th, VDS entry, chassis 014

15/9 Imola 500 Kilometres Italy

1 I. Giunti/N. Galli 2nd, chassis 017
2 M. Casoni/S. Dini 3rd
3 N. Vaccarella/T. Zeccoli 1st, chassis 029

15/9 Hockenheim Races Germany

4 T. Pilette VDS entry, used 2.5 motor
H. Schultze chassis 026

28 & 29/9 Le Mans 24 Hours

37 T. Pilette/R. Slotemaker ret, VDS entry, chassis 020
38 S. Dini/C. Facetti 5th, chassis 018
39 I. Giunti/N. Galli 4th, chassis 017 or 024
40 M. Casoni/G. Biscaldi 6th, chassis 026
41 N. Vaccarella/G. Baghetti ret, chassis 022
65 S. Trosch/K. von Wendt ret, VDS entry, chassis 012

9/11 Kyalami South Africa

T. Pilette/R. Slotemaker ret, VDS entry, used 2.5 motor
9 K. Von Wendt/T. Gosselin ret, VDS entry, used 2.5 motor

1969

Cars used were T33/2 and T33/3. Detail differences where shown. T33/3 chassis numbers begin with prefix 75080.

1 & 2/2 Daytona 24 Hours USA

25 E. Dibos/M. Calabattista ret, T33/2 entered by Motoritalia Lima of Peru, car badly damaged in accident

21 & 22/2 Sebring 12 Hours USA

Debut of the T33/3. All 3-litre cars entered by Autodelta.
32 M. Casoni/A. de Adamich ret, J. Surtees also entered in this car but did not drive
33 N. Vaccarella/L. Bianchi ret
34 N. Galli/I. Giunti ret

29 & 30/3 Le Mans Test Days France

15 T. Pilette/R. Slotemaker VDS entry, used 2.5 motor, T33/2
19 L. Bianchi/T. Zeccoli Bianchi killed on Mulsanne, T33/3 Autodelta car
37 T. Gosselin/C. Bourgoignie VDS entry, T33/2

13/4 Brands Hatch BOAC 500 Kilometres UK

21 T. Pilette/R. Slotemaker 9th, VDS entry, T33/2
22 T. Gosselin/C. Bourgoignie ret, VDS entry, T33/2

13/4 Holtville USA

S. Patrick 1st, T33/2

20/4 Coupé de Vitesse Montlhéry France

A. de Adamich 2nd, T33/2

25/4 Monza 1000 Kilometres Italy

19 T. Pilette/R. Slotemaker 8th, VDS entry, used 2.5 motor, T33/2, chassis 015
25 A. Zadra/G. Dalla Torre 10th, Scuderia Trentina entry, T33/2, chassis 029
26 T. Gosselin/C. Bourgoignie ret, VDS entry, T33/2
53 E. Pinto/G. Alberti 7th, won class, Scuderia Madunina entry, T33/2, chassis 022
54 S. Dini/G. Nicolai ('Nikor') ret, SCAR Autostrada entry, T33/2

1/5 Magny Cours France

J.P. Jaussaud 6th, Alfa Romeo France entry, T33/2

4/5 Targa Florio Sicily

172 M. Casoni/S. Dini crashed in practice, Autodelta entry, T33/2, chassis 014
178 A. Zadra/M. Casoni ret, Scuderia Trentina entry, T33/2, chassis 029
180 I. Giunti/N. Galli ret, Autodelta entry, T33/2, chassis 017
248 G. Alberti/E. Pinto 5th, Scuderia Madunina entry, T33/2, chassis 022
262 A. de Adamich/N. Vaccarella ret, used 2.5 motor, T33/2

4/5 Phoenix USA

S. Patrick 1st, T33/2

11/5 Fassberg Germany

M. Weber 1st, Alfa Romeo Deutschland entry, T33/2
H. Schultze 2nd, Alfa Romeo Deutschland entry, T33/2

11/5 Spa 1000 Kilometres Belgium

E. Pinto/Demoulin dna, Alfa Benelux entry, T33/2, car not ready
16 T. Pilette/R. Slotemaker 6th, VDS entry, T33/2, used 2.5 motor, chassis 015
17 C. Bourgoignie/T. Gosselin ret, VDS entry, T33/2, used 2.5 motor

17/5 Martini Trophy Silverstone UK

21 T. Pilette 7th, VDS entry, T33/2, used 2.5 motor
C. Bourgoignie ret, VDS entry, T33/2
69 A. de Adamich 8th, Autodelta entry, T33/2

18/5 Kent USA

S. Patrick 1st, T33/2

1/6 Nürburgring 1000 Kilometres Germany

14 N. Vaccarella dna, Autodelta T33/3
15 M. Casoni dna, Autodelta T33/3
16 T. Pilette/R. Slotemaker ret, VDS entry, T33/2, used 2.5 motor
37 E. Pinto/G. Alberti dna, Scuderia Madunina entry, T33/2
76 C. Bourgoignie/T. Gosselin 11th, VDS entry, T33/2
84 C. Facetti/H. Schultze 7th, Alfa Romeo Deutschland entry, T33/2, chassis 026
85 A. de Adamich/N. Vaccarella 15th, Autodelta entry T33/2
86 N. Galli/I. Giunti ret, Alfa Deutschland entry, T33/2, chassis 017
93 Kamusin/Muellers dna, International Racing Club entry, T33/2

8 & 9/6 Ronde Cevenole France

70 I. Giunti 1st, lap record 27 minutes 31.4 seconds, Autodelta entry, T33/2

8/6 Rossfeld Hill-climb Germany

50 M. Weber 2nd, Alfa Deutschland entry, T33/2, also see Stradale chapter

14 & 15/6 Le Mans 24 Hours France

36 T. Pilette/R. Slotemaker ret, VDS entry, used 2.5 motor, T33/2
38 T. Gosselin/C. Bourgoignie ret, VDS entry, T33/2

15/6 Aosta-Pila Hill-climb Italy

A. Bardelli 1st Class, T33/2, chassis 014

22/6 Mont Ventoux Hill-climb France

45 M. Weber 7th Class, T33/2, also see Stradale chapter

22/6 Bologna Raticosa Hill-climb Italy

A. Bardelli 1st in class, T33/2
382 'Nicor' 2nd in class, T33/2

29/6 Norisring 200 Mile Races Germany

27 I. Giunti 12th in first heat, ret in final, first European appearance of open T33/3
H. Schultze 6th, 1st in class, Alfa Deutschland entry, T33/2
R. Stenzel ret, T33/2

29/6 Rio de Janeiro 3 hours Brazil

C. Pace 1st, entered by Alfa Brazil, T33/2

6/7 Curitiba Races Brazil

J Fernandez 1st, T33/2

6/7 Vila Real Races Portugal

T. Pilette/R. Slotemaker VDS entry, used 2.5 motor, T33/2
C. Bourgoignie/T. Gosselin VDS entry, T33/2

13/7 Trento Bondone Hill-climb Italy

50 M. Weber 3rd, T33/2
90 A. Zadra 8th, T33/2
94 A. Bardelli 7th, T33/2, chassis 014

13/7 Coppa Collina Hill-climb Italy

280 'Nicor' T33/2

13/7 Solituderennen Hockenheim Germany

14 I. Giunti 6th, Autodelta T33/3 open car
19 N. Vaccarella 3rd, first appearance of Autodelta T33/3 coupé
H. Schultze Alfa Germany entry by Stenzel, T33/2

14/7 Magny Cours Races France

J.P. Jaussaud Alfa France entry, T33/2

20/7 Circuit of Mugello Italy

11 A. Zadra/G. Dalla Torre T33/2 with bodywork modified to open, chassis 029
19 E. Pinto/G. Alberti T33/2 with bodywork modified to open, chassis 022
20 A. Bardelli/C. Giugno T33/2, chassis 014
82 N. Galli/I. Giunti ret, Autodelta T33/2
84 S. Dini/'Nicor' 4th in class, T33/2

48 'Nicor'/S. Dini ret, SCAR Autostrada entry, T33/2
56 G. Alberti/C. Zuccoli ret, Scuderia Madunina entry, T33/2 now open, chassis 022

3/5 Targa Florio Sicily

6 M. Gregory did not start, Autodelta T33/3, used to replace 14 which had accident in practice
14 M. Gregory/N. Galli ret, Autodelta T33/3
28 P. Courage/A. de Adamich ret, Autodelta T33/3
33 U. Maglioli/N. Galli ret, Autodelta T33/3
56 G. Alberti/J. Williams 7th, Scuderia Madunina entry, T33/2 open, chassis 022

10/5 Fassberg Germany

M. Weber Alfa Deutschland entry, T33/2

24/5 Salzburgring 2-litre Race

M. Weber did not start, Alfa Deutschland entry, bent valves in practice, T33/2

31/5 Nürburgring 1000 Kilometres Germany

6 R. Stommelen/P. Courage ret, Autodelta T33/3 lightweight car, chassis 004

7/6 Anderstorp Sweden

22 M. Weber ret, Alfa Deutschland entry, T33/2

7/6 Dijon France

H. Ascher T33/2, chassis 029

13 & 14/6 Le Mans 24 Hours

35 R. Stommelen/N. Galli ret, Autodelta T33/3, chassis 007
36 P. Courage/A. de Adamich ret, Autodelta T33/3, chassis 010
37 T. Hezemans/M. Gregory ret, Autodelta T33/3, chassis 014
38 T. Zeccoli/C. Facetti ret, Autodelta T33/3, chassis 009

21/6 Mainz Finthen Airfield Races Germany

H. Schultze ret, Alfa Deutschland entered T33/3

28/6 Ronde Cevenole France

G. Larrousse ret, Alfa France, T33/2

28/6 Norisring Germany

35 H. Schultze Alfa Deutschland entry, T33/3

5/7 Trento Bondone Hill-climb Italy

A. Bardelli 7th, T33/2, chassis 014

19/7 Mugello Italy

32 T. Zeccoli/'Nicor' 6th, SCAR Autostrada entry, T33/2 open
A. Bardelli 16th, T33/2, chassis 014
G. Alberti ret, T33/2, chassis 022
K. Reisch ret, T33/2

15/8 Coppa Cita di Enna Sicily

A. Bardelli did not qualify, T33/2, chassis 014

13/9 Imola 500 Kilometres Italy

31 A. de Adamich ret, Autodelta T33/3, first appearance of modified bodywork 1971 style car
N. Galli entered but not run, Autodelta T33/3
46 A. Bardelli/M. Nesti T33/2, chassis 014

11/10 Österreichring 1000 Kilometres Austria

1 N. Galli/R. Stommelen ret, Autodelta T33/3 with 1971 bodywork
2 M. Gregory/T. Hezemans ret, Autodelta T33/3 with 1971 bodywork
3 A. de Adamich/H. Pescarolo 2nd, Autodelta T33/3 with 1971 bodywork
4 T. Zeccoli/C. Facetti ret, Autodelta T33/3 with 1971 bodywork
30 K. Reisch did not appear

25/10 AGACI 300 Montlhery France

F. Mazet possibly Alfa France, T33/2
'Christine' T33/2

25/10 Neubiberg Germany

K. Reisch T33/2, chassis 029

7/11 Kyalami 9 Hours South Africa

D. Charlton/P. Driver ret, bought from Autodelta by Driver, T33/2 open

22/11 Interlagos 1000 Kilometres Brazil

C. Facetti/G. Alberti 3rd, T33/2 open, chassis 022

10 & 11/6 Le Mans 24 Hours France

17 V. Elford/H. Marko ret, Autodelta T33/TT/3, chassis 002

18 N. Vaccarella/A. de Adamich 4th, Autodelta T33/TT/3

19 R. Stommelen/N. Galli ret, Autodelta T33/TT/3

9/7 Road Atlanta Can Am USA

S. Patrick 9th, Otto Zipper entry, T33/4, possibly Daytona 5th placed car with 4-litre engine, chassis 023

22/7 Watkins Glen 6 Hours USA

33 S. Patrick/M. Minter ret, Otto Zipper T33/3 entry, chassis 023 but with regulation 3-litre motor fitted

23/7 Watkins Glen Can Am USA

S. Patrick did not start, only practised, Otto Zipper T33/3, chassis 023

3/9 Interlagos Brazil

Fernandez Jolly Team entry

5/9 Monza Group 5 Race Italy

2 A. de Adamich 1st, Autodelta T33/TT/3

17/9 Imola 500 Kilometres Italy

4 A. de Adamich 3rd, Autodelta T33/TT/3

T. Zeccoli Autodelta T33/TT/3

1/10 Hockenheim Interserie Germany

58 A. de Adamich 6th, car borrowed from Autodelta, T33/TT/3

15/10 Laguna Seca Can Am USA

4/33 S. Patrick 7th, Otto Zipper T33/3 with 3-litre engine, chassis 023

29/10 Riverside Can Am USA

33 S. Patrick 9th, Otto Zipper T33/4 with 4-litre engine, chassis 023

1, 8 & 15/12 Interlagos Races Brazil

17 A. de Adamich car borrowed from Autodelta T33/TT/3

1973

12-cylinder car, chassis numbers begin with prefix 11512.

25/3 Vallelunga 6 Hours Italy

26 C. Facetti/'PAM'(Pasotti) ret, Brescia Corse entry, T33/TT/3, chassis 002

24/4 Monza 1000 Kilometres Italy

16 C. Facetti/'PAM' 5th, Brescia Corse entry, T33/TT/3, chassis 002

5/5 Spa 1000 Kilometres Belgium

7 A. de Adamich/R. Stommelen did not start, crashed in practice, debut of Autodelta T33/TT/12 with steel chassis

13/5 Targa Florio Sicily

2 T. Zeccoli/'PAM' did not start, crashed in practice, Brescia Corse entry, chassis 002

6 R. Stommelen/A. de Adamich ret, Autodelta T33/TT/12

7 C. Regazzoni/C. Facetti did not start, crashed in practice, Autodelta T33/TT/12

27/5 Nürburgring 1000 Kilometres Germany

8 R. Stommelen/A. de Adamich ret, Autodelta T33/TT/12

9 C. Regazzoni/C. Facetti ret, Autodelta T33/TT/12, new car to replace Regazzoni's crashed Targa car, chassis 001

9 & 10/6 Le Mans 24 Hours France

60 C. Facetti/'PAM'/T. Zeccoli 15th, Brescia Corse entry, T33/TT/3, chassis 002

24/6 Österreichring 1000 Kilometres Austria

3 'PAM'/M. Casoni 7th, Brescia Corse entry, T33/TT/3, chassis 002

4 R. Stommelen/C. Regazzoni ret, Autodelta T33/TT/12, chassis 001

24/6 Norisring 200 Mile

48 Logrippo T33/2

29/6 Coppa Citta di Monopoli Hill-climb Italy

P. Gargano 1st, Scuderia Marchitelli entry, T33/TT/3

29/7 Luanda 2 Hours Angola

F. Coelho ret, T33/2, fitted with 2.5-litre motor, car left in Angola since 1970s, chassis 015

16/9 Imola 500 Kilometres Italy

1 R. Stommelen 2nd, Autodelta T33/TT/12, brand new car
2 Did not appear crashed in testing by T Zeccoli
3 C. Facetti 4th, Scuderia Brescia Corse entry, T33/TT/3, chassis 002

14/10 Laguna Seca Can Am USA

33 M. Minter 5th, private entry, T33/3, chassis 023

4/11 Riverside Can Am USA

33 M. Minter 5th, private entry, T33/3, chassis 023

1974

2/3 Pomeroy Trophy Silverstone UK

43 R. Pilkington private T33/3

23 & 24/3 Le Mans Test Days France

3 R. Stommelen Autodelta T33/TT/12
4 A. Merzario Autodelta T33/TT/12

25/4 Monza 1000 Kilometres Italy

3 A. Merzario/M. Andretti 1st, Autodelta T33/TT/12, chassis 008
4 J. Ickx/R. Stommelen 2nd, Autodelta T33/TT/12, chassis 007, Sakahara claimed 011
5 T. Zeccoli did not start, practice only
6 A. de Adamich/C. Facetti 3rd, Autodelta T33/TT/12, chassis 009

12/5 Interserie Silverstone UK

84 R. Pilkington 17th, private 1971 T33/3

19/5 Nürburgring 1000 Kilometres Germany

3 C. Reutemann/R. Stommelen 2nd, Autodelta T33/TT/12, chassis 007, Sakahara claimed 011
4 C. Facetti/A. de Adamich 3rd, Autodelta T33/TT/12, chassis 009
5 B. Redman/A. Merzario 9th, Autodelta T33/TT/12, chassis 008

2/6 Imola 1000 Kilometres Italy

3 A. Merzario/J. Ickx ret, Autodelta T33/TT/12 with shortened chassis, chassis 008
4 R. Stommelen/C. Reutemann 2nd, Autodelta T33/TT/12 with shortened chassis, chassis 007, Sakahara claimed 011

5 A. de Adamich/C. Facetti 3rd, Autodelta T33/TT/12 with normal chassis, chassis 009

30/6 Österreichring 1000 Kilometres Austria

1 J. Ickx/A. Merzario/V. Brambilla 5th but not running, Autodelta T33/TT/12, chassis 008
2 R. Stommelen/C. Reutemann ret, Autodelta T33/TT/12, chassis 007
3 A. de Adamich/C. Facetti 2nd, Autodelta T33/TT/12, chassis 009, Sakahara claimed 011

13/7 Watkins Glen 6 Hours USA

40 R. Stommelen/C. Reutemann did not start, accident in Can Am practice, Autodelta T33/TT/12, 007
60 A. Merzario/M. Andretti disqualified, Autodelta T33/TT/12, chassis 008

14/7 Watkins Glen Can Am USA

33 M. Minter 17th in feature race, Otto Zipper private T33/4
A. Merzario 8th in feature race, Autodelta T33/TT/12

25/8 Coppa Renault Tommasi Sprint Italy

P. Gargano 1st, private T33/TT/3

20/10 Cronoscalata A Monte San Angelo Hill-climb Italy

B. Ottomano 3rd, Scuderia Nettuno T33/TT/3

27/10 Coppa Citta Di Monopoli Hill-climb Italy

B. Ottomano 2nd, Scuderia Marchitelli, T33/TT/3

1975

23/3 Mugello Italy

1 A. Merzario/J. Ickx 2nd, WKRT/Autodelta T33/TT/12, chassis 008, Sakahara claimed 011
2 D. Bell/H. Pescarolo 4th, Autodelta T33/TT/12, chassis 010

6/4 Dijon 800 Kilometres France

1 D. Bell/H. Pescarolo 4th, WKRT/Autodelta T33/TT/12, chassis 010, Sakahara claimed 011
2 A. Merzario/J. Lafitte 1st, WKRT/Autodelta T33/TT/12, chassis 008

20/4 Monza 1000 Kilometres Italy

1 D. Bell/H. Pescarolo ret, WKRT/Autodelta T33/TT/12, chassis 010
2 A. Merzario/J. Lafitte 1st, WKRT/Autodelta T33/TT/12, chassis 008,
Sakahara claimed 011

21/4 Tatoi Circuit Races Greece

7 P. Moshous 1st, private T33/TT/3

27/4 Dionysios Hill-climb Greece

4 I Boubis 1st

4/5 Spa 750 Kilometres Belgium

1 A. Merzario/J. Ickx 2nd, WKRT/Autodelta T33/TT/12, chassis 008,
Sakahara claimed 011
2 D. Bell/H. Pescarolo 1st, WKRT/Autodelta T33/TT/12, chassis 010
2T D. Bell/H. Pescarolo did not start, practice only, WKRT/Autodelta
T33/TT/12, chassis 009

18/5 Enna 1000 Kilometres Sicily

1 A. Merzario/J. Mass 1st, WKRT/Autodelta T33/TT/12, chassis 008,
Sakahara claimed 011
2 D. Bell/H. Pescarolo 2nd, WKRT/Autodelta T33/TT/12, chassis 010

1/6 Nürburgring 1000 Kilometres Germany

1 J. Lafitte/A. Merzario 1st, WKRT/Autodelta T33/TT/12, chassis 008,
Sakahara claimed 011
2 D. Bell/H. Pescarolo ret, accident, WKRT/Autodelta T33/TT/12
3 J. Mass/J. Scheckter 6th, Redlefsen/Autodelta T33/TT/12, chassis 009

22/6 Coppa Citta Di Monopoli Hill-climb Italy

P. Gargano 3rd, Scuderia Marchitelli, T33/TT/3

29/6 Österreichring 1000 Kilometres Austria

1 A. Merzario/V Brambilla 2nd, WKRT/Autodelta T33/TT/12, chassis 008,
Sakahara claimed 011
2 D. Bell/H. Pescarolo 1st, WKRT/Autodelta T33/TT/12, chassis 010

13/7 Watkins Glen 6 Hours USA

3 M. Andretti/A. Merzario 2nd, WKRT/Autodelta T33/TT/12, chassis 008,

Sakahara claimed 011

4 D. Bell/H. Pescarolo 1st, WKRT/Autodelta T33/TT/12, chassis 010

20/7 Targa Florio Sicily

1 A. Merzario/N. Vaccarella 1st, Autodelta T33/TT/12, claimed 008 but
impossible to get car there in time after Watkins Glen

20/7 Abriola Sellata Hill-climb Italy

P. Gargano 2nd, Scuderia Marchitelli T33/TT/3.

20/7 Hockenheim Interserie Germany

J. Mass 1st, WKRT/Autodelta T33/TT/12
H. Pescarolo 3rd, WKRT/Autodelta T33/TT/12

17/8 Cassel Kalden Interserie Germany

D. Bell 1st, WKRT/Autodelta T33/TT/12
H. Pescarolo 2nd, WKRT/Autodelta T33/TT/12

24/8 Zandvoort Interserie Holland

D. Bell 4th, WKRT/Autodelta T33/TT/12
H. Bartrams WKRT/Autodelta T33/TT/12

7/9 Nürburgring short circuit Interserie Germany

D. Bell WKRT/Autodelta T33/TT/12
H. Pescarolo WKRT/Autodelta T33/TT/12, gearbox in front of engine
J. Watson WKRT/Autodelta T33/TT/12, gearbox in front of engine

28/9 Coppa Selva Di Fasano Trofeo Zoo Safari Hill-climb Italy

P. Gargano 1st, Scuderia Marchitelli T33/TT/3

28/9 Hockenheim Interserie Germany

H. Pescarolo 4th, WKRT/Autodelta T33/TT/12
D. Bell 5th, WKRT/Autodelta T33/TT/12
J. Mass ret accident, WKRT/Autodelta T33/TT/12, fitted with F1
specification engine

16 & 17/10 Giro d'Italia Italy

JC. Andruet ret, Autodelta T33/3, coupé bodywork and Stradale chassis
number 114 although the car carries a 75033 prefix

19/10 Monte San Angelo Hill-climb Italy

P. Gargano 3rd, Scuderia Marchitelli T33/TT/3

1976**16/5 Aston Martin Owners Club Races Brands Hatch UK**

23 M. Morris 2nd, private T33/TT/3

25 R. Pilkington 1st, private T33/3

23/5 Imola 500 Kilometres Italy

1 A. Merzario/V. Brambilla 2nd, Autodelta T33/SC/12, first pure racing monocoque made by Alfa

9 T. Zeccoli/B. Ottomano 9th, Aequator Cottages entry, T33/TT/12

27/6 Enna 4 Hours Italy

1 A. Merzario/M. Casoni ret, Autodelta T33/SC/12

8 T. Zeccoli/A. Merzario ret, Ottomano entry, T33/TT/12

19/9 Salzburgring Austria

1 A. Merzario/V. Brambilla ret, Autodelta T33/SC/12

28/9 Coppa Selva Hill-climb Italy

P. Gargano Scuderia Marchitelli T33/TT/3

1977**17/4 Dijon 500 Kilometres France**

1 A. Merzario/J-P. Jarier 1st, Autodelta T33/SC/12, chassis 015

2 J. Watson/V. Brambilla ret, Autodelta T33/SC/12, chassis 014

JP. Jarier did not start, Autodelta T33/SC/12, practised only, chassis 012

24/4 Monza 1000 Kilometres Italy

2 V. Brambilla/JP. Jarier 1st, Autodelta T33/SC/12, chassis 014

3 A. Merzario/JP. Jarier ret, Autodelta T33/SC/12, chassis 015

J. Watson/JP. Jarier did not start, Autodelta T33/SC/12, practised only, chassis 012

4 B. Ottomano/P. Gargano did not start, private T33/TT/3, failed to qualify

22/5 Avus Interserie Germany

D. Bell 1st, Autodelta T33/SC/12, apparently an experimental car

29/5 Vallelunga Italy

V. Brambilla/S. Dini 1st, Autodelta T33/SC/12

A. Merzario/S. Dini 2nd, Autodelta T33/SC/12

B. Ottomano/P. Gargano 10th, private T33/TT/3

19/6 Enna Sicily

A. Merzario 1st, Autodelta T33/SC/12

G. Francia/S. Dini ret, Autodelta T33/SC/12

10/7 Estoril Portugal

1 A. Merzario 1st, Autodelta T33/SC/12

2 V. Brambilla 2nd, Autodelta T33/SC/12

3 G. Francia/S. Dini 3rd, Autodelta T33/SC/12

24/7 Paul Ricard France

A. Merzario 1st, Autodelta T33/SC/12

V. Brambilla ret, Autodelta T33/SC/12

4/9 Imola 250 Italy

1 A. Merzario ret, Autodelta T33/SC/12

2 V. Brambilla 1st, Autodelta T33/SC/12

18/9 Salzburgring Austria

V. Brambilla 1st, Autodelta T33/SC/12

A. Merzario 2nd, Autodelta T33/SC/12, first race for the 2.1 Turbo car, chassis 016

8/10 Hockenheim Interserie Germany

1 A. Merzario 1st, Autodelta T33/SC/12 Turbo, chassis 016

Appendix 2 – Competition events for Stradales

1968**23/6 Bologna Raticosa Hill-climb Italy**

346 S. Dini 4th

28/7 Fribourg Hill-climb Germany

158 A. Fischhaber 7th

4/8 Trofeo Micangeli Hill-climb Italy

316 P. Laureati 3rd class, chassis 106

25/8 Ascoli Colle san Marco Hill-climb Italy

P. Laureati 4th class, chassis 106

1/9 Tolentino Colle Paterno Hill-climb Italy

P. Laureati 1st, chassis 106

29/9 Coppa del Chianti Hill-climb Italy

632 P. Laureati 4th, chassis 106

1969

8/6 Rossfeld Hill-climb Germany

A. Fischaber 5th

22/6 Mont Ventoux Hill-climb France

40 A. Fischaber 4th

20/7 Sarnano Sassotetto Hill-climb Italy

366 P. Laureati 3rd, chassis 106

27/7 Fribourg Hill-climb Germany

A. Fischaber 7th class

27/7 San Giustino Trabaria Hill-climb Italy

232 P. Laureati 4th class, chassis 106

3/8 Lago Montefiascone Hill-climb Italy

P. Laureati 1st, chassis 106

10/8 Coppa Corotti Hill-climb Italy

P. Laureati 5th class, chassis 106

15/8 Svolte di Popoli Hill-climb Italy

482 P. Laureati 7th class, chassis 106

24/8 Ascoli Colle san Marco Hill-climb Italy

438 P. Laureati, chassis 106

28/9 Coppa del Chianti Hill-climb Italy

492 P. Laureati , chassis 106

26/10 Neubiberg Germany

A. Fischaber

Appendix 3 – Some anomalies, conundrums and explanations

1967

There is no written record of which cars went to Fleron for the T33 debut. The only chassis numbers we know for sure are 004 and 005 as the Sebring cars. As these would have been on their way to the USA at or just after the the time of the Fleron Hill-climb and the subsequent tests at Zolder, it would seem reasonable to suppose that the two cars in Belgium were other numbers. Choose from 001, 002 or 003, bearing in mind that Zeccoli crashed one in testing at Monza – according to him probably 002 or an unnumbered car. Zeccoli believes 001 is the Fleron winner.

1968

Papers that were with chassis 026 strongly suggest that it was the car driven by Herbert Schultze for Alfa Deutschland during 1968/69. Some idea of the T33 chassis number problem is graphically illustrated by the numbers of the cars at Le Mans that have been quoted by various sources. These have been 'recorded' as being 012, 017, 018, 020, 022, 024, 025, 026, 033 and 034! Six cars were actually run and, as Wimpffen said, 'What was put down by Alfa on the entry sheet in January was a far cry from what actually turned up in June.'

1969

It would seem that only one 1969 T33/3 Coupé was built. It raced at Hockenheim and Enna only and turned up on Hexagon of Highgate's stand at the 1970 UK Racing Car Show, with its racing numbers from the Sicilian race still affixed nearly six months after.

Throughout the summer Scooter Patrick had a string of six overall wins in races in western USA. There is strong evidence to suggest this may well have been in T33/2 chassis 019.

1970

At the Sebring 12 Hours, the *Autosport* reporter stated that the three T33/3s present had names. These were Sirius, Vega and Rigel – all Italian names for stars! Lengthy discussions with surviving team members had failed to throw any more light on this. In fact it was denied until, looking through 1970 *Motor Sports*, it was noticed that Denis Jenkinson remarked in one of his Letters from Europe that it was odd to see a car named instead of having a chassis number. He was referring to the T33/3 taken by Autodelta to the Le Mans Test Days. Painted on the side he had noted the title 'Aldebaran' – another Italian star name. Another little conundrum semi-solved. A list of the stars intended for use as names finally emerged from the notes of Teodoro Zeccoli.

1971

Subsequent to the debut of the 4-litre V8 engine at Watkins Glen for the 6 Hours practice, these engines never appeared in a T33/TT/3 tubular chassis as they were too bulky and would not fit. (See below)

1972

T33/3 (1971) Chassis 023 was recorded as being the car that Facetti/Alberti drove in the 1972 Buenos Aires 1000 Kilometres. Facetti then used a 1971 car at Balcarce before Autodelta went to Daytona for the 6 Hours where one of the T33/TT/3s was crashed. It was replaced in the race by a 1971 T33/3 and later in the year *Autosport* reported that an ex-Daytona T33 was taking part in CanAm owned by Otto Zipper utilising both 3 and 4-litre engines. Chassis 023 is still in the USA carrying CanAm provenance. It would not seem unreasonable to consider therefore that 023 was used in Buenos Aires, Balcarce and Daytona before being sold and left in the USA.

1974

Mr Sakahara of Japan, owner of T33/TT/12 chassis 011, insists that the car competed in the races shown.

1975

As above re: chassis 011.

An anomaly arises in the chassis used at Watkins Glen and in the Targa Florio. The former race was held on July 13 and the latter on July 20. The same chassis is supposed to have taken part in both races and have won the latter. On the assumption that to do so in Sicily would require

a strong, reliable and above all, fresh car, it seems impossible that a car could be in upper New York State on a Sunday evening and then ready for early practice the following Thursday in central Sicily – and in a fit condition to win the gruelling Targa Florio race. Oh to be a historian.

The car used by Andruet in the Giro d'Italia was a complete one-off and still exists in the collection of Joe Nastasi. It bears a chassis number consisting of a mixture of racer and Stradale (75033.114) and presumably therefore has a longer chassis frame than a racer.

1976

The Imola 500 Kilometres race was reportedly the first appearance of the Turbo, but photographs of the car that day show it to be in exactly the same configuration as a normal T33/SC/12. It was definitely the first time an Alfa Romeo monocoque racing car had ever been seen but, later in 1977 at the Salzburgring, the Turbo that finished in 2nd place was widely reported as making its 'race debut'. The authors consider that this latter case is true, and therefore the Turbo did not take part at Enna or Salzburgring in 1976.

1977

The 1977 season was one of the most straightforward of them all. Four chassis were used, numbers 012, 014, 015 and 016. The latter was the Turbo and can now be seen in the Alfa Museo at Arese. One event has defied all attempts at investigation: an alleged win at Avus with an 'experimental' car.

Appendix 4 – Existing cars

This is a listing of existing cars based on considerable research. We include cars here where the evidence authenticates them as genuine, though the authors do not accept responsibility for errors. A serious effort has been made to identify cars thoroughly. There are additions to be made to this list and the next volume will be a thorough history of as many chassis as possible. The authors invite owners/others to submit information for this volume (edmcdb@bopenworld.com).

1967 T33

75033.001 Marco Cajani, Italy

75033.003 Joe Nastase, USA.

75033.004 Rosso Bianco Museum, Germany

1968 T33/2

- 75033.007 VDS Monza 1968, P. Osborn, UK
- 75033.008 M. Bugnon, France
- 75033.012 Possible VDS Le Mans 1968, Museo Alfa Romeo, Arese, Italy
- 75033.014 Rosso Bianco Museum, Germany
- 75033.015 Angola car, restored by Marcello Gambi, now Franco Meiners, Italy
- 75033.017 Targa Florio, Ring, Targa Florio etc. Greg Whitten, USA
- 75033.019 Zipper/Patrick car, Marc Devis, Belgium
- 75033.022 Alberti car, Joe Moch, USA
- 75033.026 Gregor Fisker, now with a private collector in Japan
- 75033.029 Imola winner 1968, Paul Grist, UK

1969-1971 T33/3

- 75080.003 Rosso Bianco Museum, Germany
- 75080.004 1969 Österreichring open car, Joe Nastase, USA
- 75080.005 Coupé, Nick Soprano, USA
- 75080.006 1969/70 open car, Museo Alfa Romeo, Arese, Italy
- 75080.008 Bob van der Sluis in Holland has reconstructed this ex-Gregory car
- 11512.009 Has 33TT12 chassis plate, B. Bell, now J. Iliohan, USA
- 75980.011 Riccardone/Benelli car, Italy
- 75080.015 1971 car, Targa Florio, Tom Hollfelder, USA
- 75080.019 1971 car, B. Bell, G. Fisker, Jon Shipman, UK
- 75080.023 1971 car, Otto Zipper car with 4-litre engine, Nick Soprano, USA
- 75033.114 One off coupé with Stradale chassis number but T33/3 chassis built for 1975, Giro d'Italia, Joe Nastase, USA

1972 33/TT/3

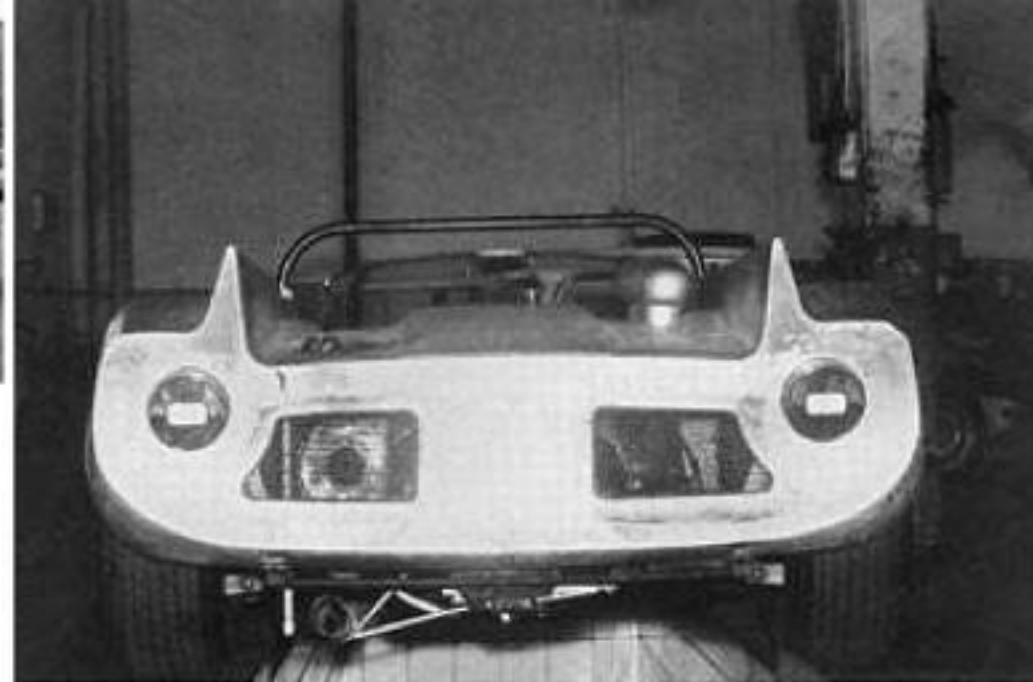
- 11572.002 1972 Nürburgring, Le Mans etc., Brescia Corse, Jeremy Agace, UK
- 11572.003 1972 Daytona, L. Auriana, USA
- 11572.006 Joe Nastase, USA
- 11572.008 B. Bell, UK
- 11572.010 Jean Guikas, France
- 11572.012 Sid Hoole, UK
- 11572.012/1 Coys, UK

1973-1976 33/TT/12

- 11512.001 1973 Spa etc., Nick Soprano, USA
- 11512.006 Museo Alfa Romeo, Arese, Italy
- 11512.007 Österreichring 1974, Ickx, Setton, Gregor Fisker, UK
- 11512.008 1974/75 Championship races, Donaldson, Oakfields, UK
- 11512.010 1975 Championship races, Joe DiLoreto, USA
- 11512.011 1975 Championship races, Y. Sakahori, Japan

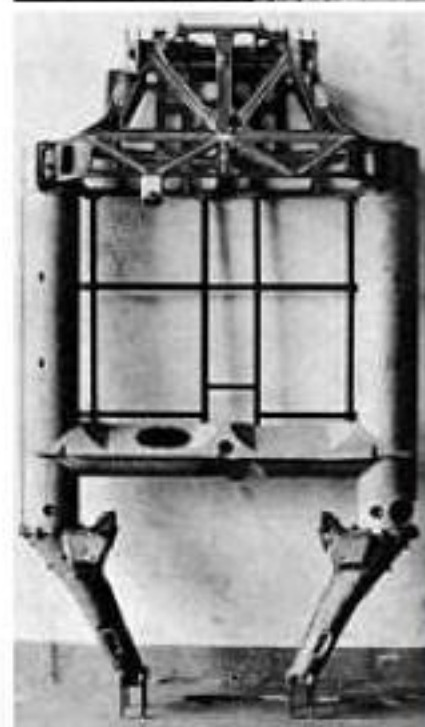
1977 33/SC/12

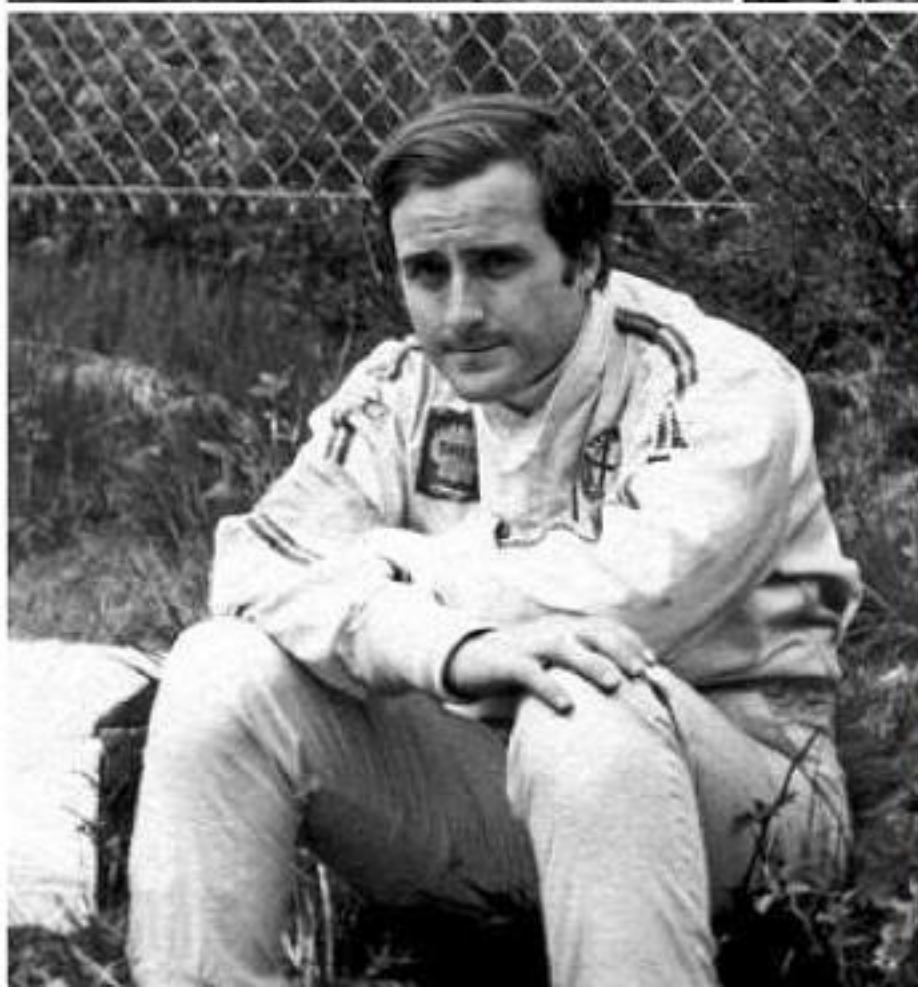
- 11512.014 World Sportscar Championship, Ottomano, Comelli, Italy
- 11512.015 World Sportscar Championship, Joe Nastase, USA
- 11512.016 Turbo car, 1977 Salzburgring and Hockenheim, Museo Alfa Romeo, Arese, Italy

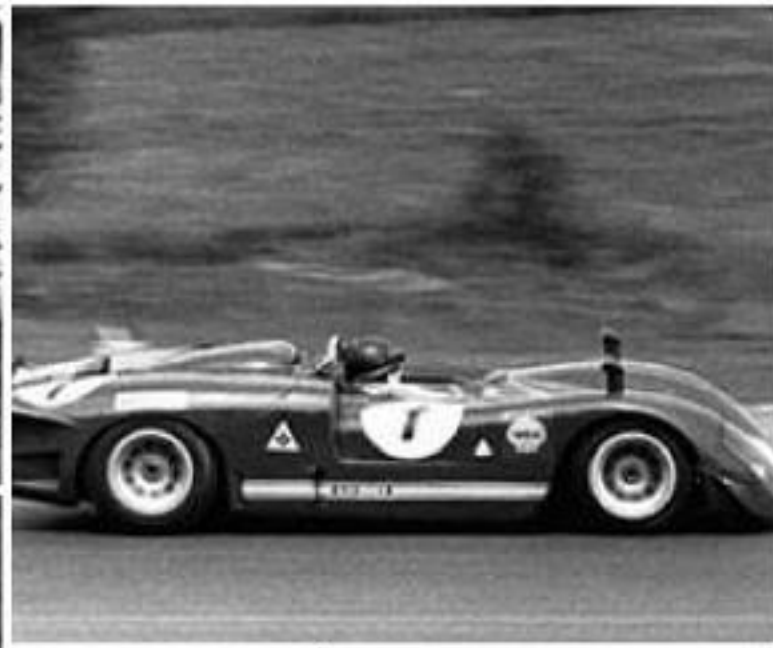


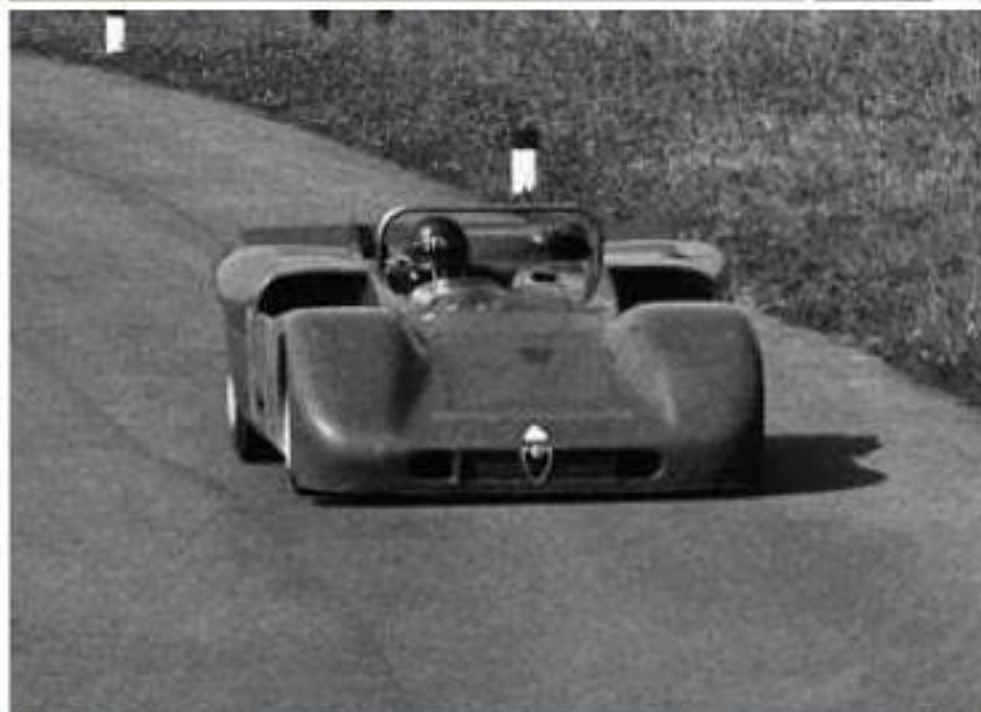
Appendix 7 – Photo gallery

The authors came across and were sent hundreds of images during the course of their research for this book. Unfortunately the quality of many of these pictures was too poor to reproduce them at a decent size. However, the authors felt that many of these rare and unusual photos should be shared with the reader, hence this appendix. A large proportion of these images came from the hard and enthusiastic works of Jos Hugense in Holland, a great Alfa Romeo enthusiast, racer, historian and gentleman, and we thank him and other Alfa friends who sent and keep sending interesting photos.



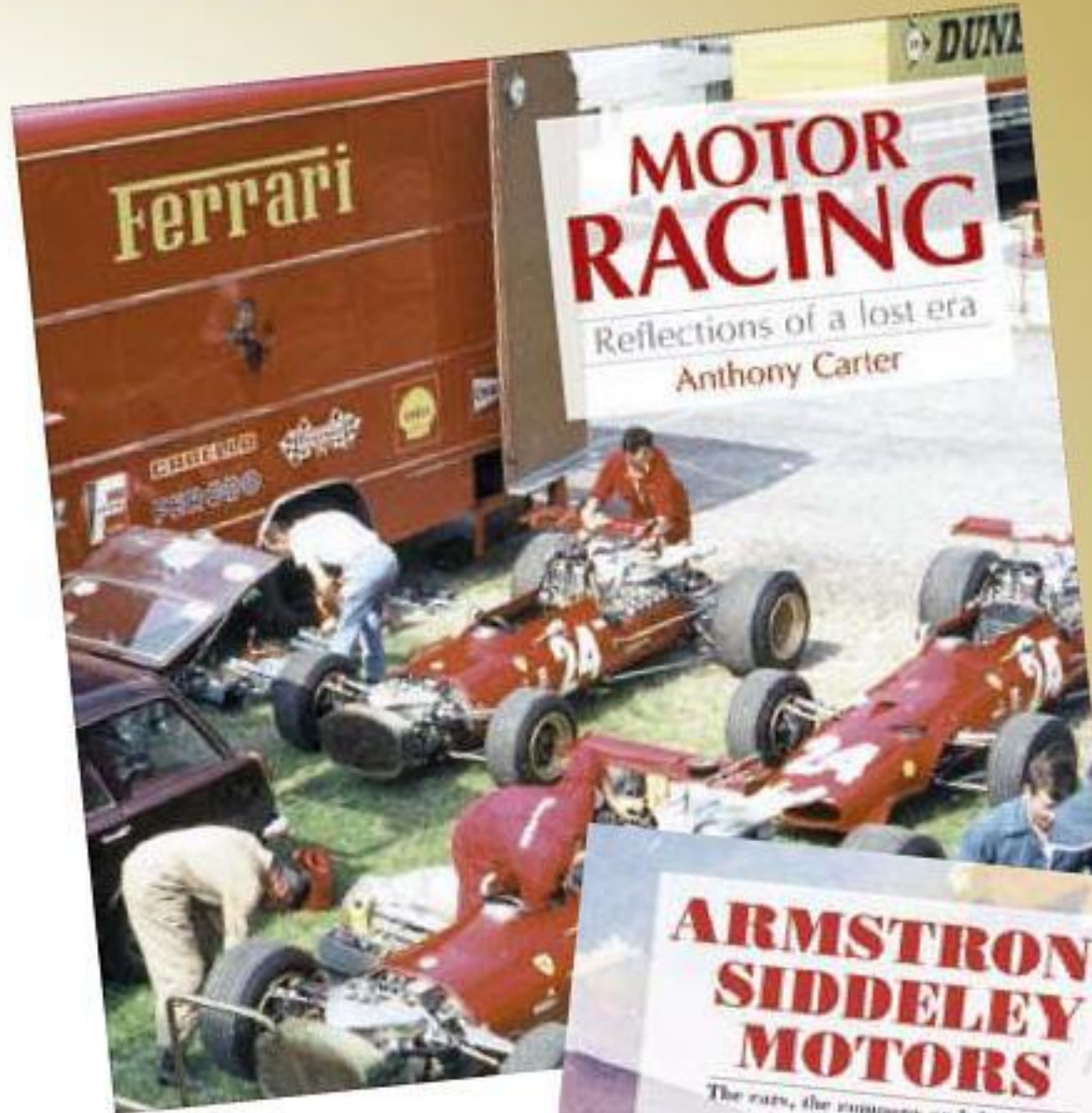






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go out
Drive thit
broken
ahan dengan hik cipta





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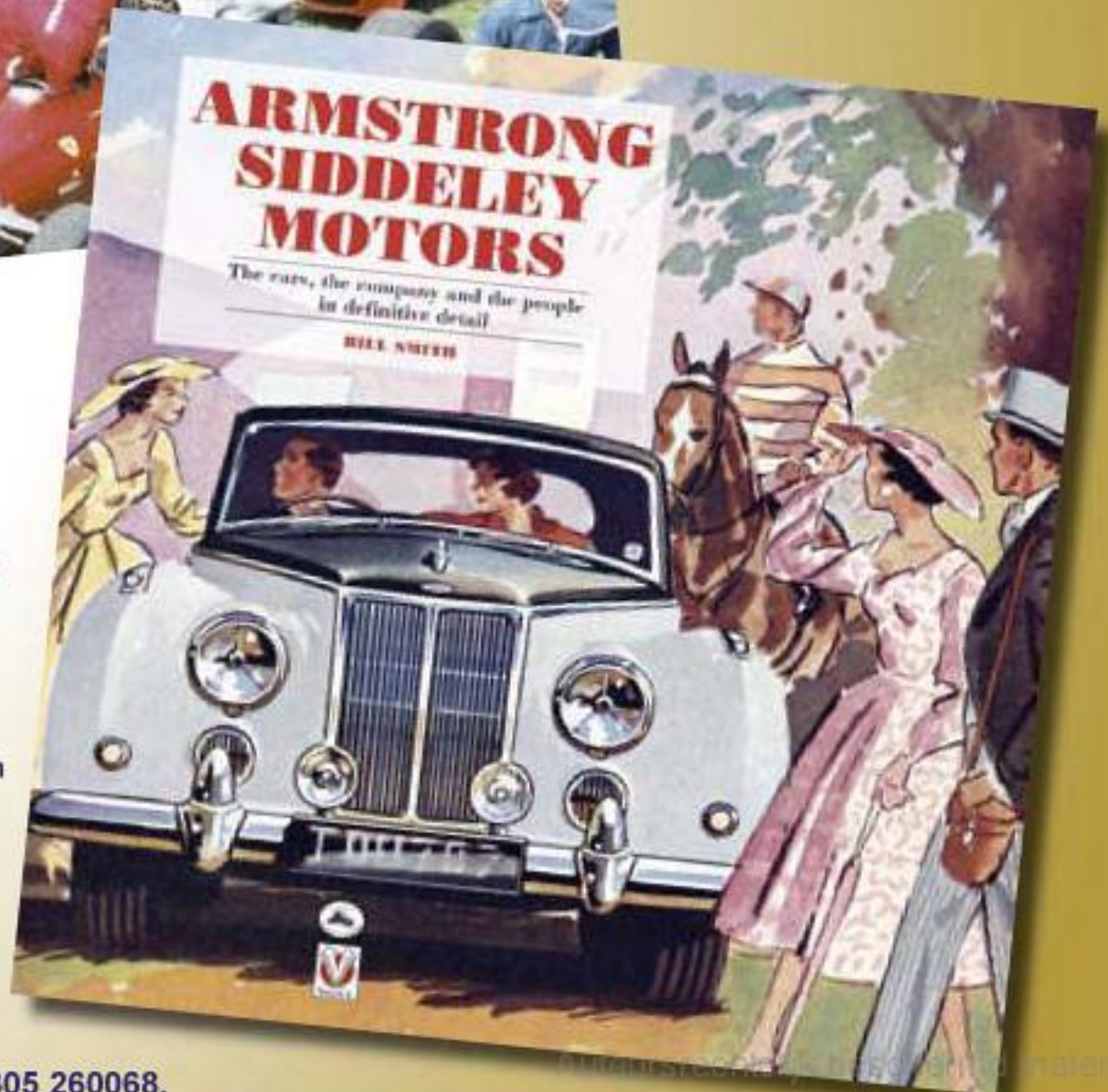
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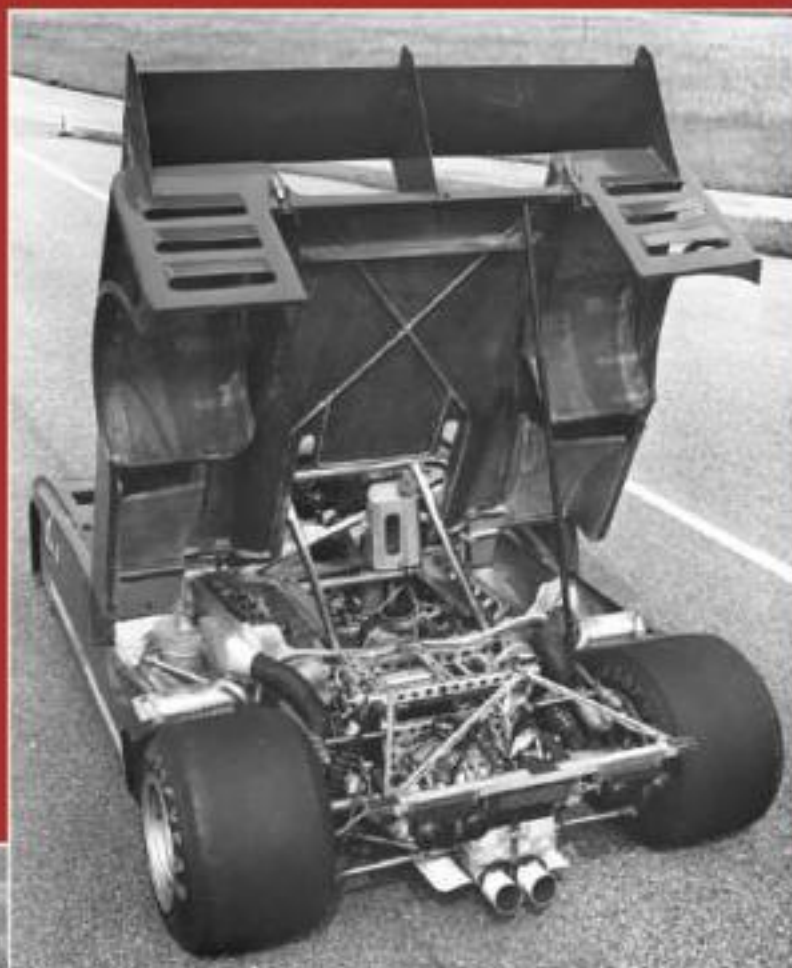
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