

Alfa Romeo 1900 C52 Disco Volante *a fianchi stretti*: The Complete Story

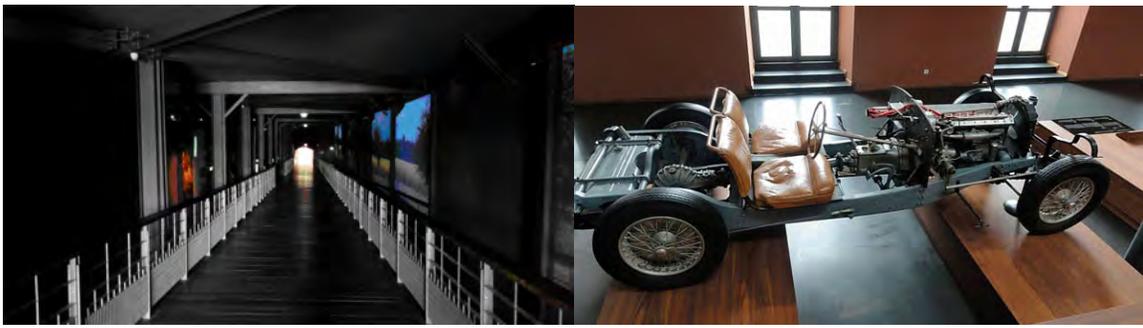
By Renan Uflacker

On a recent trip to Mulhouse, in the Alsace region of France, I had the opportunity to visit the Musée National de l'Automobile, home of the famous "Schlumpf Collection." The building, constructed in 1880 to be a textile mill, was used by Fritz Schlumpf to store and show his automobile collection. The museum was restored in 2006.

The entrance of the museum is impressive. There is an access ramp which leads to the main entrance and sided by an artistic, contemporary sculpture with sports car reproductions racing through the glass wall of the entrance lobby in a quite-realistic, ethereal race. The effect is unforgettable and the sense of anticipation is unavoidable.



Entering the museum, you pass over a bridge through a very dark tunnel with several simultaneous projections of films of racing car events of the past. At the end of this tunnel, if you look left and down, there is a Bugatti display where you see the impressive bare chassis of a 1937 Bugatti Type 57S, complete with power train and engine. The quality of the craftsmanship is superb.



I planned the stop in Mulhouse to see the unique Alfa Romeo 1900 C52 Disco Volante *a fianchi stretti*, or “Flying Saucer *with narrow sides*”, which is a one-off racing machine but part of the remarkable Disco Volante series of cars. The Alfa Romeo was the target of my interest, but I found it almost anonymously mixed in with more than 100 Bugattis (I counted 92 on exhibit at the time, including two Royales) and 300 other exquisite cars, ranging from the years 1892 to 1971.

Several weeks in advance I had requested permission to have access to the Alfa Romeo for examination, to do measurements, take photographs and review the documentation pertaining to the car. The request was granted by the museum curator, Mr. Keller, except for the review of the relevant documents, which would be sent later by mail. Christine, the museum secretary since 1982, greeted me at the entrance with Eric, a very friendly security officer, who would help me with access to the car.

Upon entering the main exhibition hall, the first impression is one of amazement, as it seems massive and spectacular with 900 cast-iron lampposts lining the hallways. Even if you have seen pictures of the museum, which are available on the web, you will certainly be surprised by the magnificent view.



Overview of the exhibit hall

Eric, very professional and to the point, took me directly to the Disco Volante and we started the one-hour appointment, allowing me time to get inside the car, under the car, look at every space and discover the secrets of this jewel while making notes and taking photographs. The Alfa Romeo Disco Volante, like most other cars in the exhibit, is displayed within borders of gravel approximately 35 meters in length by five meters wide, separated by six meter-wide passageways in a geometric fashion, illuminated by the custom-made iron lampposts. The presence of the gravel on the floor produces a significant amount of dust in the exhibit hall, and

most cars, including the Disco Volante, have residues of the gray dust on the chassis and suspension. The wall behind the row of cars is lined with a monumental mirror that covers its entirety, in such a way that you can see the backs of the cars with extraordinary depth. Despite the anonymity of the Alfa Romeo 1900 C52 *a fianchi stretti*, it is in very good company, between a Mercedes Bens 300SL on the left (the personal transportation of Mr. Schlumpf) and, on the right, a Ferrari Biplance Sport 250MM, 1952, with a Scaglietti body, originally exhibited at the Paris Motor Show in 1952 and first owned by the film director, Roberto Rosselini.



First view of the Alfa Romeo 1900 C52 Disco Volante a fianchi stretti and its companion cars.

Before we go any further, it is worthwhile to recount some of the convoluted history and events leading to the creation of the museum, an event known today as the “The Schlumpf Affair”. Hans and Fritz Schlumpf became very wealthy, having started their own textile company in 1935 and building an industrial empire upon it. The resulting affluence allowed Fritz to start a fabulous car collection and, around 1964, Hans and Fritz bought the H.K.C. Mulhouse textile mill building to house the cars. Fritz’s passion for the finest cars drove him to purchase the most desirable cars in the world, ending up with a collection of over 400 cars, including more than 120 Bugattis.

All of the cars were secretly stored and restored at the old H.K.C. Mulhouse mill building. Part of the old mill was sumptuously rebuilt with offices, a large workshop, a large display area with more than 20,000 m² (~200,000 square feet), with custom-made lampposts, restaurants, Wallace fountains, organ music and velvet everywhere.

In 1976, everything was ready to welcome guests for a majestic inauguration. But at the same time, however, the economy of the textile industry spiraled down and the crisis abruptly reached the companies of the Schlumpf brothers. Bankruptcy followed, with cessation of production and more than 2000 workers laid off. In 1977, the workers broke into the building and discovered the car collection.

Subsequently, the building was occupied for two years and the collection was displayed to the public, with the revenues reverting to the unemployed workers. Some uncertainty followed and some cars were sold in the black market. Under life-

threatening conditions, the Schlumpf brothers escaped to Switzerland and took residence in Basel, just 30 kilometers (18 miles) from Mulhouse. The brothers were deprived of all their possessions in France and, in 1978, the car collection was placed in the national historic register, and the assets were passed to the state and classified as a French historic monument.

In 1982 a museum, organized under the management of a conglomerate association, related to the state, private investors, and the city of Mulhouse, opened its doors officially under the management of the National Automobile Museum Association, but the collection entered in decline thereafter.

A tremendous legal battle followed the seizing of the assets and, in 1999, a French court ruled that the Schlumpf family should be financially compensated with a total of more than 60 million French Francs (about 16 million Euros today) and the return to the family of 62 cars from the “Malmerspach collection”, including 17 Bugattis. Fritz Schlumpf died in 1992 before the case was settled. The Court of Appeals in Paris also ruled that the Museum organization is obliged to add “Collection Schlumpf” to the museum name and in all the documents referring to any part of the collection.

The museum was restored and modernized in 2006, preserving the main hall, where most of the cars are exposed, with reproductions of Paris’ Pont Alexander II’s lampposts. In addition to the 400 cars in the exhibition, there are about 200 cars in storage or awaiting restoration.

Now, back to the Alfa Romeo Disco Volante story.

In 1951, at the end of the racing season, Alfa Romeo retired from racing after winning the Formula 1 world championship. Money was short, and the development of the 1900 Berlina project was the priority, to improve the financial situation of the company. However, the competition department did not shut down completely and continued to develop a car for potential participation in the 1952 races of Le Mans and Mille Miglia, with the hopes of selling racing cars to amateur sports cars drivers and racers, and to produce good publicity for the company.

In the meantime, Giuseppe Busso continued to develop the 6C3000 engine originally designed for a larger Berlina car, which was later used as a modified 3500cc version, in the 6C3000CM cars, improperly named Disco Volante. In 1951-1952, with the collaboration of the designer/engineer Gioachino Colombo (at the time with Alfa Romeo since January 1951) and Carrozzeria Touring, the Alfa Romeo Disco Volante concept turned into reality and became an immediate publicity tool for Alfa Romeo.



Alfa Romeo 1900 C52 Spider, 2000cc



Alfa Romeo 1900 C52 Coupé, 2000cc

The Touring-bodied Disco Volantes were introduced to the press and to the public with great fanfare, and the design of the Disco Volante became an icon recognized around the world, creating an aerodynamic concept unique for the time. The official name of the car was Alfa Romeo 1900 C52 but due to the popularity of the flying saucer sightings in the 1950s, the curiosity about space exploration, and the strange and innovative design with the ogival cross-section body, the car was informally called "*Disco Volante*" within Carrozzeria Touring, and the name stuck. Due to Alfa Romeo budgetary restrictions, the 1900 mechanicals were used and a number of parts would come from the 1900 Berlinas and Coupes, cars already in design and/or production. The engineers of the racing department used an aluminum rather than cast-iron engine block and press-fitted 2000cc wet-cylinder liners to boost the 1900's engine power to 158bhp. The body design provided extraordinary aerodynamic features, allowing the lowest drag at the time (Cd of 0.25).

According to C.F. Bianchi Anderloni, three Disco Volante spiders with a light-alloy block 2000cc engine were built. One additional car was fitted with a cast iron block 3000cc engine, the original Busso's engine, requiring a modification in the chassis with a slightly longer wheelbase and slight bodywork modifications. A second 3000cc spider car was possibly built but there is no information available on it and, according to Anderloni's recollection, Alfa Romeo dismantled that car. To save money and time, of the three original 2000cc spider cars, one was developed as a closed version (coupe) and the other as a narrow sided spider (*a fianchi stretti*) so, as a result, Alfa Romeo had three different versions of the same car for testing.

One DV Spider 2000cc and one DV Coupe 2000cc are housed at the Museo Historico Alfa Romeo, in Arese. One DV Spider 3000cc car is in the Museo dell'Automobile Carlo Biscaretti in Torino. The modified DV *a fianchi stretti*, with the 2000cc light alloy engine—the focus of our research—is now part of the Schlumpf collection. Despite all the promotion and publicity achieved by the concept car, the wind tunnel-tested Disco Volante, a revolutionary design with a belly pan and great aerodynamic penetration, was not as successful as the designers expected. The cars proved to be unstable at higher speeds with lift at both ends. The existing C52 Disco

Volante *a fianchi stretti* is possibly the last of the four cars originally called Disco Volante (despite the chassis number AR 1359*00002 which suggests that it was the second chassis in the series), most likely a recycled chassis from one of the first three true Disco Volantes, as suggested by Carlo Felice Anderloni in his book *Alfa Romeo Disco Volante* (1993). However, nobody really knows in what order the cars were assembled.



Original photo of the DV C52 a fianchi stretti on the left. On the right, a recent picture of the same car at the Schlumpf Collection, 60 years later. Note the absence of the turning lights under the headlights in the original photo. Also note the different form of the windshield and the absence of the cross within the vertical core.

Who Made the Car

The Disco Volante *a fianchi stretti* was built by Carrozzeria Touring using the company's trademark Superleggera construction technology.

The coachbuilder preserved the tubular space frame chassis, mechanical and power train characteristics of the original DV car. The body redesign was significantly simplified with removal of the bulges of the original car body to improve stability at higher speeds, possibly without the interference of Gioachino Colombo, who by that time was leaving Alfa Romeo for Ferrari.



"Superleggera" lettering on the hood.



Tubular space frame chassis is visible under the seat.

According to C.F. Anderloni, in his *Disco Volante* book (1993), Carrozzeria Touring built the three 2000cc spider Disco Volantes. One remained a spider, one was rebodied into a coupe and the other was refurbished as "fianchi stretti." I guess that settles the issue that the "fianchi stretti" was originally made by Touring.

However, it is possible that the refurbishing could have been carried out by Colli under Touring's direction, but Anderloni did not elaborate mentioning only that the modifications were easy to make.

In 1952, Touring was doing the new body for the 1900 C52 DV coupe, which was much more involved, while simultaneously working on the other DV spider 3000 (two were made, accordingly to Anderloni's recollection in his book) and the new 1900 sprint coupe, which was a much more important project and the focus of survival for the company, now entering a period of "mass production".

The following is Anderloni's quote about the Disco Volante *a fianchi stretti*: "It was simpler to build and did not require any special aerodynamic research, and actually all that was necessary for building that car was to take something away from the original." It is, therefore, conceivable that Carrozzeria Colli may have been commissioned to refurbish the body of the DV car with chassis AR1359*00002.

It is all conjecture, but it may explain some of the rumors about the existence of a Colli Disco Volante car, which is certainly not the Rezzaghi car "Alfa Romeo 1900 Spider Colli Tubolare Gilco", independently built in 1953 by Colli under the leadership of Fusi, for a Mr. Benvenuti from Napoli using the 1900 mechanicals and a Gilco chassis #0029853 (possibly the date the car was finished) after building the 6C3000CM racing cars for Alfa Romeo.



The 1900 Spider Colli Tubolare Gilco, owned by Charles Rezzaghi, in 1954.
The Rezzaghi car as it appears today (right), now known as the Arengi-Annoni car.

However, despite the modifications, several DV design characteristics were maintained, such as the original aerodynamic frontal profile, giving the car a low drag coefficient, which was once more recycled in the later Alfa Romeo Colli 6C3000CM series and subsequently imposed by Alfa Romeo in many other 1900 cars developed by independent coach builders, to present the cars with a corporate trademark.



AR 6C3000CM coupe

AR 6C3000CM spider

1900 Touring Sprint, Series I

Racing History

The Alfa Romeo C52 Disco Volante *a fianchi stretti* was, apparently, a last-minute solution in an attempt to overcome the aerodynamic handicaps of the ogival body of the original Disco Volantes and was the only one that was ever raced in Italy,

France and Switzerland, while the other original Discos were never raced, except for appearances in the modern Mille Miglia driven by Phil Hill (at least twice) and the Targa Florio Classics 2001, driven by Nino Vaccarella.

The “fianchi stretti” was raced in Italy by several pilots, particularly in the south of Italy and in Sicilian events, always as private entries on loan from Alfa, and never by Alfa Romeo itself, which at that time was racing the 6C3000CM cars.

■ Piero Carini raced the “fianchi stretti” at the Coppa Sant Ambroeus in January 11th, 1953, (finishing 2nd), at Messina in July 25th, 1954, (finishing 10th), and at Coppa Inter Europa in September 11th, 1954, (finishing 4th).

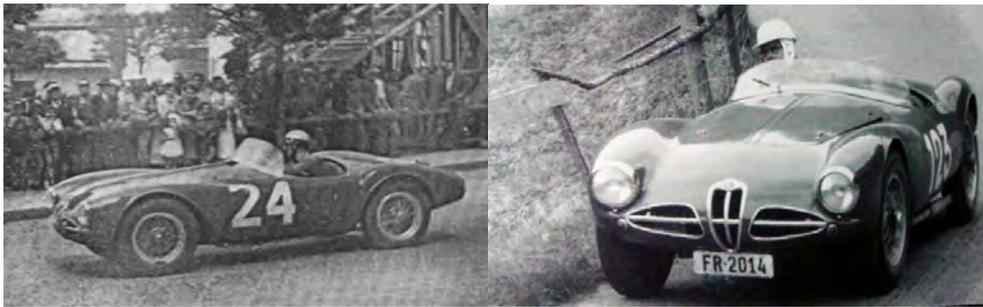
■ Pietro Palmieri and Francesco Matrullo raced the car at the 12hrs of Pescara, in August 16th, 1952. (did not finish).

■ Goffredo Zehender and A. de Giuseppe raced the “fianchi stretti” in the Mille Miglia under the number #532, class S2.0, in April 16, 1953, abandoning it after eight hours of racing.

■ Soldani and Vivaldo Angeli raced the car in the 10hrs of Messina, on July 7th, 1953, (finishing 11th).

■ Nicola Musmeci raced the “fianchi stretti” at the Coppa d’Oro di Siracusa (Sicily) in October 10th, 1954, (finishing 8th), and Catania-Etna in 1954.

■ Luigi Bellucci raced the car at Avellino, July 12th, 1953, (finishing 2nd), at Giro Delle Calabria, August 2nd, 1953, (finishing 3rd), and at the Gran Premio Sport Merano, Supercortemaggiore (#68) in September 6th, 1953 (did not finish), won by Fangio with the 6C3000CM car.



At left, Alfa Romeo 1900 C52 a fianchi stretti during the Giro Delle Calabria competition, in 1953, with #24. 3rd place. Bellucci is driving. At right, Jean Ducrey racing the “fianchi stretti” at Kandersteg in Switzerland, 1959, with #123.

The “fianchi stretti” was eventually sold by Alfa Romeo to the Swiss racing driver Jean (Willy) Ducrey, who participated in several races in the 1954-1955 season, including the hill climb Cote de Planfoy (France) (3rd), Bremgarten Circuit (Switzerland) (did not finish) and the Gran Prix d’Orleans (France) (2nd) in June 5th, 1955. He also participated in the hill climb at Kandersteg in 1959 (#123) (Switzerland). The car was subsequently returned to Italy when the Napolitan pilot Luigi Bellucci bought the car. On April 3rd, 1963, Fritz Schlumpf bought the unique Disco Volante “a fianchi stretti” from Bellucci, through Mr. Jean Studer, an ex-racer and partner in an Alfa Romeo dealership in Switzerland.

Report

Overall aspect: The Disco Volante *a fianchi stretti* that I inspected in Mulhouse is an attractive, reasonably-preserved car with some modifications from the original, mostly in small details, which I will address later. I am not sure if this car has been restored, as it shows signs of wear and tear, possibly by being used in racing. The paint job is of mediocre quality and there is overspray under the car and on the suspension parts. There is damage with fractures in the aluminum skin in the front end, particularly under the central core grill but apparently unrelated to a previous crash. The finishing of the metal inside the engine bay and inside the cockpit is of poor quality and may have been repainted silver over an old paint job. The engine bay is well preserved, as well as the suspension.

The body: The car has a wonderful and attractive design, and is considered more stylish but less elaborate than the older-sibling Disco Volante car. The aluminum body is typical Touring Superleggera with very well-finished surfaces and narrow and uniform gaps and, on close inspection, is very symmetrical except for the core on the grill which is slightly asymmetric and obviously hand made.



(left & center) Note the careful finishing of the aluminum body. (right) Damage underneath the front end of the car.

There is no obvious evidence of structural damage in the body skin, except for some cracks and wrinkles underneath the front end, particularly in the center where apparently there was a towing hook, which was nonexistent at the time of inspection. The paint job is not of the best quality and may have been repainted over previous coats of red. The trim pieces are few and all in polished aluminum, particularly in the front grill.

The headlights are sealed beams, probably replacements, and there are small turning indicators below the headlights which were added on later in the car's life. The taillights are small and work as brake lights as well. There are two smaller taillights used as turning indicators underneath the main taillights, which were also added on later in the life of the car.

The hood, covering the engine bay, is split into two halves and attached to a center bar by two hinges on each side. The hood is locked in place by two small rotary catches. The rear end of the car has been slightly modified from the original

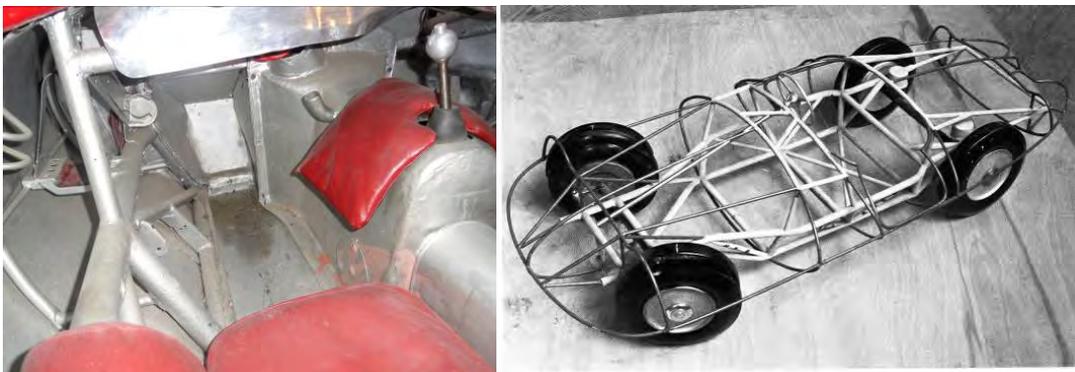
as can be seen in the pictures below. Some of the original holes in the metal had disappeared and the license tag holder is no longer present. The tag light, however, is still present, just below the large aluminum gas tank port.



Note the absence of the tag hardware and the presence of the turning lights under the taillights in the more recent photo, on the left, and the overspray on the suspension and exhaust pipes.

The Chassis: The chassis number is AR1359*0002*. Evidence of the tubular space frame chassis is visible everywhere inside the car, in the cockpit, in the engine bay, underneath, and in the rear part of the car within the spare tire compartment. The structure of the car body is typically Touring and was based on a space frame comprising tubes of differing sections and thickness which, when welded together, helped create a monolithic structure of considerable strength.

Alfa Romeo and Touring worked together very closely on the structures of both the chassis and the body attachment structure, reducing repetition and excess weight. The chassis is comprised of two almost-independent structures, the inner a thicker and stronger tubular basic chassis structure and the superficial, thinner tubular body structure where the aluminum skin was applied in almost perfect symbiosis with the chassis structure, making it difficult to perceive where one finishes and the other starts. The suspension is attached to the space frame, as are the engine and transmission.



Inside the cockpit, note the tubular frame of different dimensions; note the small "virtual space" for the passenger feet (left photo). In white, the inner, stronger tubular chassis structure and the dark, more superficial thinner tubular body structure on an original DV prototype (right photo). (From Anderloni's Alfa Romeo Disco Volante, 1993).

The cockpit: The cockpit of the car is small, short in length and narrow on the sides. The seats are low on the floor with a metal platform supporting the cushions, which are covered in red leather. The seat position is very upright in the 1950s style, but the back of the driver's seat is somewhat adjustable using the press-stud type buttons on the driver's seatback for height adjustment. There are lateral cushions to protect the arms and legs of the driver, although a padded right-leg rest is missing. There is a cushion over the transmission tunnel, which was supposed to reduce heat contact of the left leg of the driver with the central tunnel.

The shift lever for the four-speed gearbox is mid-fifties style, topped by an aluminum knob with a reverse lockout button. In the center of the dash there is a large Veglia tachometer, good for 10,000rpm, but with the red line at 6,800rpm. On the left there is the usual set of gauges for water and oil temperature, with oil and fuel pressure on the right. The dash, in aluminum, is not as the original and has been extended all the way to the left, and the temperature gauges have been repositioned, side-to-side, instead of on top of each other as seen in the original photos of the car.

The steering wheel is "Nardi looking" aluminum and wood, but does not have an inscription, or maker identification, while the plastic horn button is faded and the Alfa Romeo emblem in the center almost disappeared. The windshield is clear plastic fixed to the body by a polished aluminum trim from which emerges the windshield wiper. The windshield shape is different from the original, identified in photos from the time of the car presentation to the press and is unknown why or when it was changed.



*Views of the dash with gauges and the modifications performed over the years.
On the right is a photograph of the car with the original dashboard and cockpit.*

The room for the driver and passenger feet is very small, and the foot pedals are cramped within a tunnel advancing through the firewall. The gas pedal is bent medially due to the space restriction, getting very close to the brake pedal, which may facilitate the heeling of the gas pedal (“punta e taco” in Italian).

The steering wheel is on the right, typical for the racing cars of the time, with the gear shifting done with the left hand. The tubular chassis is visible everywhere within the cockpit and everything is painted silver. Behind the seatbacks (if pulled forward) there is access to the spare tire compartment, which allows visibility of the rear end suspension and differential, as well as to the 12V battery, which was not present in the car. The battery ground cable was actually visible hanging down under the car.

There was plenty of red paint overspray in the compartment behind the seats. The leather in the back of the seats is worn off due to the repeated movement of the seatbacks forward for access to the spare tire vault. Under the dash, on the left, are two fuse boxes, next to a firewall hole allowing penetration of the engine magneto within the cockpit.



Photos of the cockpit showing the padding for protection of the driver. Note the spare tire compartment. The horizontal magneto (distributor) invades the cockpit through the firewall. Note the cramped space for the foot pedals.

Engine and transmission: The engine number is AR1309*00302* and it is a DOHC, four cylinders in-line, light-alloy block with removable cast iron cylinders wet liners,

with 1,997.4cc displacement, and positioned behind the front wheels and suspension in a rather central location, similar to the other Disco Volante cars. The car has four aluminum-single-body Weber 40DCOE sidedraft independent carburetors with “homemade” trumpets for air intake. The throttle control linkage is complex and attached to brackets built into the right-side aluminum valve cover, which look very different from the other two 2000cc DVs, which have two double-body Weber carburetors.

In fact the carburetors are similar to the ones used in the 6C3000CM cars. The generator is on the left side of the block and fixed to the bracket by a metal band, similar to the early cast-iron 1900 engines. The exhaust header is made of welded pipes (4-into-2) and cylinder number one has a broken exhaust pipe, which has been welded. The starter motor is on the left side as well.



*Pictures of the 2000cc engine with alloy block and number 1309*00302*. Note the penetration of the magneto through the firewall and the absence of a cooling fan in front of the water pump. The steering box is visible on the right, fixed to the chassis, and the pipes from the cooling system go around it. The oil filler is on the left of the cylinder head and painted in red.*

The radiator is low, and placed way up front in the engine bay, and painted in satin black. The tank on top of the radiator is relatively small and the coolant filler is

remotely located on a smaller secondary tank placed in the center of the firewall. There is a long metal pipe connecting the radiator tank with the secondary tank, running parallel to the main pipe connecting the radiator to the cylinder head. The water temperature sensor is attached to a “Y” connection to the main pipe and connected directly to the dashboard gauge through the firewall.

The water pump is different from the regular 1900 engine and is not turned by an external belt. The oil filter is not immediately visible under the set of carburetors and is not visible from underneath the car without placing the car in a lift, which we did not have the opportunity to do.

The oil temperature sensor is attached to the oil filter bracket and is connected to the fire wall and gauge in the dash. The oil pressure system is attached to the right side of the block as the regular 1900 engines and connected directly to the gauge in the dashboard by a small hose.



Close up view of the water temperature sensor connected to the water pipe on top of the cylinder head. The remote water tank is attached at the firewall behind the engine. Note the water pump without an external driving belt. The radiator is visible way upfront in the engine bay. The white tag is the Museum registration number of the car (#1116). The original Schlumpf collection number tag (#1070) was under the passenger seat when we removed it.

The four-speed gearbox is all synchromesh, manual, located under the tunnel within the cockpit. The gear ratios are for racing: 1st-1:2.80, 2nd-1:1.845, 3rd-1:1.235, 4th-1:1, and Rev-1:3.09. Due to the structure of the car underneath, it is difficult to visualize the gearbox from below without having the car on a lift. But the bottom of the gearbox is made in aluminum with fins, and seems to be square in format, similar to the regular 1900 gearbox but all made in aluminum. The oil pan is made in alloy with fins and has a draining port in the back, similar to the early 1900 Series cars.



*Picture of the shift lever with the lockout button, surrounded by the red pad and with a relatively small rubber boot.
Undercarriage view of the car barely showing the oil pan and bottom of the gearbox.*

Undercarriage: The Disco Volante cars were probably the first cars to have an underbelly pan, to reduce drag related to the several irregular protuberances and contours of the mechanical hardware underneath the car.

The aluminum structure of the body at the front end of the car advances all the way to the front edge of the oil pan and the oil pan is flush with the body skin, which also covers the radiator underneath.

The bottom end of the gearbox is also flush with the bottom of the car's floor. Behind the gear box there is an aluminum plate covering the bottom of the car all the way to the differential, hiding the propeller shaft, which is quite short.

The central bulge of the differential aluminum housing is partially hidden by the aluminum plate on the anterior aspect and by the gas tank cover bolted to the bottom of the car in continuation to the body structure on the back.

The aluminum underbelly pan in this car was partially loose at the time of inspection, and probably had been removed before to take away the battery from the compartment behind the driver's seat. The undercarriage is stained by oil leaks, which is not rare in Alfa Romeos of that era.



Top, rear view of the "carénage aérodynamique" (as the French say) of the underbelly pan covering the gas tank all the way to the aluminum differential housing. There is not a complete underbelly pan, but several parts covering different areas of the underneath aspect of the car. The aluminum flat sheet is partially loose. Note the battery ground cable hanging from the chassis.

The suspension is very similar to the 1900 road-going cars. The front suspension is independent by transverse links of unequal length (A-arms or wishbones), coil springs and tubular shock absorbers (both shorter than in the road-going 1900), limited by an anti-roll bar at the top.

The rear suspension is a live axle, with aluminum casing of the differential, spring coils and tubular shocks all linked to the underbody by longitudinal thrust arms covered underneath by the aluminum sheet in the underbelly and limited by worn rebound straps in both sides. The braking system is unassisted hydraulic, drums all around with fins, and cooling scoops in the front brakes.





View of the right and left front suspension. Note the red overspray all over, including the cooling scoops. The drum brakes are large and with fins. Note also the severe damage of the aluminum skin underneath the front end. At the bottom right, the rear suspension is shown with a longer shock absorber and a worn rebound strap. The coil springs are visible from the spare tire compartment and are longer than the front coil springs.

The wheels are 400mm in diameter and 6.5 inches in width, painted alloy Borrani angled knock-off spoke wheels silver painted instead of chromed, and the edges are damaged and scratched. The tires fitted on the car are Pirelli Supersport 16x6.5, despite the 400mm in diameter of the wheels. The central spinners are original Alfa Romeo, with two wings, chromed and in good shape.



Borrani knock-off wheel with 72 spokes, with Alfa Romeo chromed spinner with two wings. The wheels are silver painted. Note the large brake drums.

Conclusion:

Visiting the Schlumpf collection was an unforgettable experience, as it is one of the most important collections of classic cars in the world not only in quantity but also in quality. And it was really fascinating to visit with the Alfa Romeo 1900 C52 Disco Volante *a fianchi stretti*, a unique car and a true testimonial to the post-war epic times of Italian and European racing history.

Despite the early popularity achieved by the Disco Volante cars in the 1950s, these cars are now only recognized by hard core Alfa Romeo enthusiasts and classic car historians. The “fianchi stretti” is even less known than the older siblings and ended up anonymously placed among a massive collection of classic cars, which does not help its recognition.

However, the “fianchi stretti” is extremely important for the Alfa Romeo history not only because it was a significant racing car derived from the 1900, but also because it was a transition car between the revolutionary Disco Volante and a newer generation of successful Alfa Romeo racing automobiles loaded with important and revolutionary mechanical and aerodynamic solutions.

In fact, the “fianchi stretti” was *the* aerodynamic solution that Carrozzeria Touring and Alfa Romeo found to overcome the design flaws of the Disco Volante concept, a solution which, however, actually resulted in a more conventional body design. It carried on the space frame chassis and the Superleggera technology to the post war modern car racing arena with reasonable success and later adopted almost universally by multiple racing teams of the 1950s and 1960s.

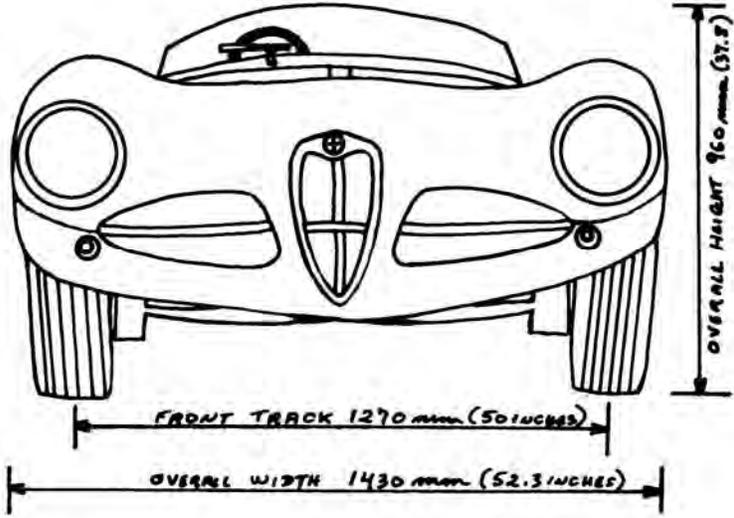
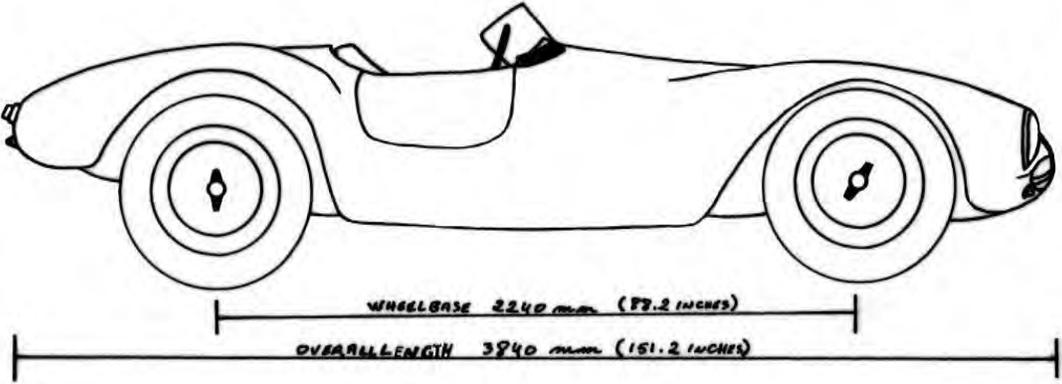
There is very little information published about the Disco Volante *a fianchi stretti*, the reason why we decided to visit with this car and find out “in loco” what are the car’s current features. It was interesting to document that the car had minor but significant changes since its inception, probably made while in the hands of the two previous owners. Extensive racing probably didn’t help to preserve the delicate aluminum skin of the car associated with natural aging. However, the car is superbly crafted in the best Touring style, and the design is timeless, even in 2010.

We hope this report contributes to the knowledge of the Alfa Romeo 1900 C52 Disco Volante *a fianchi stretti* and brings to light again this important piece of automotive history. ♠



The author beside the Alfa Romeo 1900 C52 Disco Volante a fianchi stretti at the conclusion of his visit in Mulhouse.

Dimensional Drawings of the Alfa Romeo 1900 C52 *a fianchi stretti* Spider, by the Author



Alfa Romeo 1900 C52 Disco Volante *a fianchi stretti*

Year: 1952

SPECIFICATIONS

ENGINE

Type	DOHC in-line four, light alloy block, wet cast-iron removable liners
Displacement	1,997.4cc
Bore x stroke	85 x 88mm
Compression ratio	8.73:1
Horsepower @ RPM	158HP @ 6500rpm
Main bearings	five, steel, copper-iridium
Fuel system	Four horizontal single-body Weber carburetors, Fuel tank -105 litres
Lubrication system	Force feed, pressure pump
Electrical system	12V ignition/lights
Exhaust system	Tubular welded 4-into-2, two parallel mufflers

TRANSMISSION

Type	Four speed, all-synchronized
Ratios	1:2.80, 1:1.845, 1:1.235, 1:1
Clutch	multi dry-plate

DIFFERENTIAL

Type	Rigid, aluminum case, tubular, steel
Ratio	10/39-10/41

STEERING

Type	Worm and roller
Turns	N/A
Turning circle	N/A

PERFORMANCE

Top Speed	220-225 Km/h
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BRAKES

Type	Hydraulic drum brakes all around, rear handbrake only
Front/Rear	Aluminum with fins

CHASSIS & BODY

Construction	Superleggera, aluminum, tubular chassis with side members
Body style	Spider, two doors
Layout	Front engine, RWD

SUSPENSION

Front	Independent with transverse links of unequal length, coil springs and telescopic shock absorber
Rear	Rigid, coils springs, upper triangle, lower struts tied to the body, single shocks

WHEELS & TIRES

Wheels Front/Rear	Alloy wheels with angled spokes, 400mm x 6.50"
Tires Front/Rear	Pirelli Super Sport 6.50" x 16"

WEIGHTS & MEASURES

Wheelbase	2240mm (88.2')
Overall length	3840mm (151.2')
Overall width	1430mm (52.3')
Overall height	960mm (37.8')
Front/rear track	1270mm (50')
Dry weight	< 735 Kg (<1620 lbs)

CAPACITIES

Crankcase	5.5 L (1.5 gallon)
Cooling	11 L (2.9 gallons)