



Ferrari Owners' Site – Special Edition – Ferrari 250 GTO

250 GTO - An Appraisal

The design and development of the 250 GTO was the culmination of years of experience gained with the preceding 250 GT berlinettas, and strictly speaking (and certainly for homologation purposes), it was not a new model, but an upgraded 250 GT berlinetta for the 1962 season and beyond.



The title 250 GTO was never the official model name, the "O" being added for "Omologato" (Homologated) unofficially, but it was the name that stuck. In the March 1963 issue of *Motor Sport*, the renowned British motoring journalist Denis Jenkinson wrote a story on the

development of the 250 GT Ferrari, to which he added this postscript. "There is some doubt about the origin of the designation G.T.O., for early in 1962 English speaking journalists were using the term, but people in Modena had never heard of it. However, later in the season it was generally accepted, and a story came out that it was supposed to have been called 1962 250 GT, and as it was homologated for G.T. racing with the F.I.A., at some point in the paperwork it was written 250 GT - O, meaning "Omologato", and in error the hyphen was missed out by a typist in copying the memo. Thus the G.T.O. was born on paper!"

Despite the opposition crying "foul" the car complied fully with the regulations, and had equal or greater claim to compliance than the Aston Martin DB4 GT Zagato, or Jaguar's lightweight 'E' type. The official model title was 250 GT berlinetta Comp./62, with the bodywork classified as , Scaglietti berlinetta comp. 62 in the individual model build sheets.

Going back to 1959/60 when the 1960 version of the 250 GT competition berlinetta (2400 mm wheelbase) was designed, developed and constructed (factory nomenclature: 1960 Competition

Berlinetta, chassis 539/Motor 168B/60), the factory filed the necessary homologation papers to motor sport's governing bodies, the FIA and CSAI. Concurrently or successively, they also filed homologation extensions, which listed possible modifications that could be adopted on the model if required, these extensions also being homologated.



These homologation papers provided a detailed description of the car and its components, listing elements like chassis and engine type, construction materials, axle ratios, dimensions and weights, so that inspectors at any race circuit could check the compliance of any particular car with the registered specification. Apart from the homologation extensions granted with the original application, further extensions for additional specification amendments, and alternatives were granted in March 1961, July 1961, January 1962, May 1963 and February 1964.

These homologation extensions covered components like dry sump lubrication, larger valves, 5 speed gearbox, 6 carburettor intake system, coil spring/shock absorber combination front and rear, and oil cooler, all of which formed part of the standard specification on the 250 GT berlinetta Comp./62 (250 GTO). Thus whatever the opposition thought at the time, the car was fully in compliance with the regulations that governed its construction and the components used. Every modification incorporated into the 250 GTO was made according to the homologation papers and extensions. The rules said that after 100 cars had been built, the bodywork could be changed. When homologation was requested for the 250 GTO in early 1962, the 250 GT berlinettas were already above that number, in terms of numbers produced and delivered, and meanwhile more were being built and sold.

When Jaguar stunned the world with the 'E' Type at the 1961 Geneva Salon, the reverberations lost no time in being felt in the corridors of power in Maranello, no doubt due to its close resemblance to the 'D' Type. According to Sergio Scaglietti, "The entire Ferrari organisation got quite a jolt," particularly general manager Girolamo Gardini, whom he quoted as repeatedly stating

"They are going to beat us with their new GT and we have to make something."



The 1962 season was very important to Ferrari in the GT category, as the Manufacturers Championship had been switched from Sports Racing to GT cars by the FIA/CSAI, starting in that year. The first step was to take a 1961 Competition chassis (2643 GT), a revised version

of the 539 frame of 1960 vintage, with additional bracing added around the rear section, particularly where the front of the leaf springs mounted onto the chassis frame. The engine was the 300-bhp version of the 1961 Competition engine, with dry sump lubrication and six Weber 38 DCN carburetors, as per the Testa Rossa unit, with a 1961 Competition gearbox attached to it. The rolling chassis was despatched to Pininfarina in Turin, where it was wrapped in a light alloy body, very similar to the 400 SA coupe.

The first appearance of 2643 GT was at the 1961 Le Mans 24 Hour Race in June, where it was driven by Tavano and Baghetti. It retired after 13 hours, but not before it had impressed with its potential, having climbed to eighth overall before retirement. The whole episode was closely monitored by the factory, highlighting the major drawback of the body configuration, a lack of high-speed stability. This car disappeared from sight until the beginning of 1962, when it reappeared at Daytona in the hands of Stirling Moss, where it finished fourth overall on its way to winning the GT class. Under the North American Racing Team banner Hugus and Reed took it to eighth at Sebring, and fourth at Le Mans in the same year, by which time it was sporting a spoiler behind the rear screen to provide some rear downforce.

Meanwhile, after Le Mans 1961 the development of the 1962 season contender had passed into the hands of the Racing Department, where Giotto Bizzarrini headed a small team to produce a competition package. In an interview with the British magazine *Supercar Classics* in the November 1990 issue, Bizzarrini stated "This was strictly my project, in fact the GTO was the only car

that Scaglietti didn't know about. We hired a body man specifically to work in my department on the GTO." After two months intensive work on a used 1960 250 GT berlinetta, chassis number 2053 GT, which was heavily modified and fitted with a Testa Rossa engine that was mounted lower and further back in the frame, the bare aluminium prototype back was ready for testing in September 1961. The prototype had the basic shape that was to evolve into the definitive 250 GTO, although it was in a very rough form, that earned it the nickname "Il Mostro" (The Monster), from its instigators and "The Anteater" in the press, because of its long projecting snout. Prior to the Italian Grand Prix in September 1961, it was tested by Stirling Moss, where it proved to be very quick, capable of lapping this very fast circuit (then using the banked section of track) much faster than the 250 GT berlinetta had ever managed. However the test wasn't all roses, as high-speed stability was still a major problem that needed to be resolved, nevertheless progress had been made in the right direction, and efforts could now be focused on the Achilles' heel, sorting out the high-speed handling.

"The Anteater" really was a crude prototype, the bare aluminium body was very rough, with hammer and weld marks visible everywhere, together with screwed appendages to the rear wings to alter the airflow and improve stability. The front of the prototype bore a reasonably close resemblance to the



upcoming production model, with its oval radiator intake, surmounted by three slot intakes on the upper nose, with a further opening forward of the bonnet to gain access to the radiator cap. The Plexiglass covered headlights were also there, as were the pair of engine bay air exhaust slots in the sides of the front wings. The rear of the prototype still had influences from the 250 GT SWB, with a rounded tail profile. The engine was mounted as far back as possible in the engine bay, so that the lower edge of the windscreen surround met the rear of the bonnet line. The engine was moved forward for production, and the windscreen angle altered to a more upright position, which meant that the top corners were slightly

above the top edge of the door glass frames. The windscreen had to be of certain dimensions to meet the then current regulations, and Sergio Scaglietti has stated that he felt this spoiled the overall appearance of the car.



Upon completion of its test duties, the rough prototype body of 2053 GT was consigned to scrap, the rolling chassis being rebodied with a standard 250 GT SWB body, and sold to Jaques Swaters Ecurie Francorchamps. In its first race in the Nürburgring 1000 km in May 1962, it was badly crashed. It was despatched

back to Modena, where Drogo rebodied it to a design by Giotto Bizzarrini, which was very low and sleek, but hardly beautiful.

Sergio Scaglietti was given the job of refining the body shape into a respectably finished design for production, which was done in the usual manner, by eye, not using drawings. Work commenced on the first two real GTOs, 3223 GT and 3387 GT, in late 1961, and both were completed and ready for testing on 5 December. Meanwhile there had been a hiatus in the project, when Bizzarrini and a number of top engineers were dismissed in November 1961, after supporting commercial manager Gardini, who had been fired by Enzo Ferrari. The project was then entrusted to a then young engineer, a certain Mauro Forghieri, who had the responsibility of making the GTO handle in a way that was commensurate with its performance.

Numerous modifications were made, and more testing was done by Willy Mairesse both at the Aeroautodromo, and in the early hours of the morning on the *autostrade*. Team drivers Lorenzo Bandini and Giancarlo Baghetti also became involved in the testing, so that the feedback to Forghieri wasn't only from one source.

While all this was going on, Ferrari held its annual Press Conference at the end of February 1962, where the 1962 season competition cars were officially presented. In the chilly factory courtyard on 24 February all the new racing models were lined up, the new Formula

One car, with its 1500cc 120degree V6 4-cam engine, the Sports Racing Prototypes with 2 or 4 cam, V6 and V8 engines, all mid mounted. To the rear of this line-up stood the only front engined 12-cylinder model in the presentation, finished in Rosso Cina with the Italian *Tricolore* painted on a central stripe, it was the 250 GTO, and took a lot of the attention of the press assembly that day. The model presented was devoid of a rear spoiler, and did not feature the gearchange tower and gate, that would feature on subsequent models. The fuel filler cap was in the left side rear wing, which also only featured a single slot minus the "D" shaped trailing recess that would feature as part of the design, by the time of the GTO's race debut, some three weeks later.

Slowly Mauro Forghieri was getting to grips with the high-speed stability problem, and held a long test session at Monza on 10 March 1962, attended by Enzo Ferrari, which saw his efforts come to fruition. This had been an intense process, mainly focussed on the suspension layout, an important part of which



involved the fabrication of steel supports to the differential casing so that it could accept anchorage points for two Watts links. On the first two models these were height adjustable via a supplementary square tube bracket suspended from each main chassis rail with a series of holes, to determine the optimum position.

Once the tests had determined the optimum mounting height of the anchorage points, subsequent cars had a non-adjustable bracket, and differential casings were cast with a boss to accept the Watts links. Much work was also done in this test on suspension travel, with numerous different spring rates being tried, until an acceptable compromise between, travel, handling, and to a much lesser degree, comfort, was found. The addition of a small spoiler across the top lip of the Kamm tail, allied to a tray spoiler under the fuel tank improved the high-speed stability enormously, and test drivers Willy Mairesse, Lorenzo Bandini and Giancarlo Baghetti felt much more secure and comfortable driving it at racing speeds, finally recording a lap of 1 minute 45.6 seconds. To put this time into context, it was a full 6.1 seconds faster than Abate's fastest lap in the previous years Coppa

Intereuropa race, driving a 250 GT "SWB" berlinetta. The 250 GTO was deemed ready to take on the competition, although Enzo Ferrari still considered that it required high calibre drivers to exploit its performance to the limit. It had perhaps been tamed, but was still a fearsome beast if provoked by somebody who didn't know how to use the reins.



As with the late Testa Rossa sports racing models, the general idea for the new body was a sort of "Wet T Shirt" approach. The engine and drive train having been lowered, the sheet metal was "wrapped" around the various components, with the minimum clearances possible everywhere,

providing large bulges like the wheel arches, and bonnet blister over the carburettor intake trumpets, making the whole shape as slippery as possible. The front end was more aerodynamically efficient both for air penetration and cooling, whilst both the front and rear of the car generated downforce. This was completely the opposite to the preceding 250 GT SWB berlinetta, with its blunt front end that became a brick aerodynamically at high speeds, and the rounded rump that generated no downforce whatsoever. This is not to denigrate the 250 GT SWB berlinetta, which is an aesthetically beautiful machine, preferred by many to the slipperier 250 GTO, only serving to reinforce the fact that this was the beginning of the end of the period, where road-going GT cars could also compete successfully on the track, without major modification. The 250 GTO and its contemporaries were in fact the last of the line, that could be used practically on the road, and competitively on the circuit.

When the 250 GTO, 3387 GT, made its first race appearance at the Sebring 12 Hour Race on 24 March 1962, it was virtually in its definitive form, with only the hastily added spoiler from the Monza tests remaining as the major item to be modified on subsequent models, to extend the full width of the tail. One other feature was still missing, the brake cooling holes with ducts in the nose. However, the fuel filler had been repositioned from the left rear wing to a cut-out in the top rear corner of the boot lid, to increase clearance for

wheel travel, and to prevent fuel spillage under heavy cornering forces.

This is probably a good point to state that when referring to the "definitive" form, one can only relate to the overall shape, because there are a myriad of differences between individual cars, so that no one example can be said to carry all the "definitive" details. Also a



number of cars had period modifications carried out by their owners, or were updated to a later specification by Scaglietti after accident damage, so that even after a short period of time they no longer had the exact features with which they left the factory. It has to be remembered that these were competition GT cars being used in races and rallies almost every weekend, so originality, apart from compliance with regulations, was of no consequence to the owners, they only wanted to be first across the finishing line.

Similarly, as competition cars they were devoid of creature comforts, and many subsequent owners have added a degree of sound and weatherproofing to make them more habitable for road use in their "retirement". Four of the original '62 bodied cars were rebodied with the '64 style body, and a further example was fitted with a Drogo body for its then owner.

The 1964 bodied car was designed by Pininfarina, and was lower, wider, and shorter, than its predecessor, the design and development being carried out jointly between Mike Parkes, the English engineer/racing driver who went to work to Ferrari in late 1962, and Pininfarina. The original '64 body concept was first used to rebody the ex-Maranello Concessionaires 250 GTO, 4399 GT. Although great things had been promised of this new generation model, it in fact offered no improvement in performance, and the large steeply raked curved windscreen only served to increase cockpit temperatures on sunny days.

Concurrently another project was underway, the 250 LM, this was the mid-engined model that was supposed to replace the GTO in the GT category, which didn't materialise as anticipated for Ferrari due

to homologation difficulties, but that's another story! In overall appearance the two cars were very similar, despite one being front- and the other mid-engined, which at a quick glance could pass as the same model to the uninitiated. So the development of the 250 GTO ended with a variant that was undoubtedly aesthetically pleasing, but which in real terms offered no material improvement in performance, over the original concept.



During the production period 36 examples were built, 33 with the original '62 style body, of which 4 subsequently were rebodied with the '64 style body, whilst the last 3 models built had the

'64 style body from new. Three examples with similar a similar body style but on a slightly longer wheelbase chassis with 4-litre engines were also constructed, and are generally classified as part of the same genre. The 250 GTO collected a hat-trick of Manufacturers' Championships for Ferrari between 1962 and 1964, continuing the winning tradition of the 250 GT series of which it was the ultimate expression. The 250 GTO has become an icon, and rightly so, it is not just an extremely beautiful automobile, but one with an enviable racing pedigree, and the last of the true dual-purpose breed of cars that were equally at home on the street or racing circuit.

Adapted from the book *250 GTO* by Jess Pourret and Keith Bluemel.