



# MASERATI: A History



ANTHONY PRITCHARD

## **Maserati: A History**

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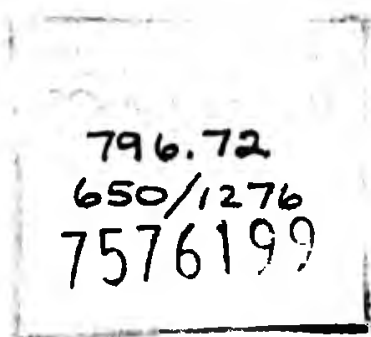
# Maserati: A History

by  
Anthony Pritchard



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# Contents

	<i>page</i>
LIST OF ILLUSTRATIONS	7
1 The Maserati Brothers	11
2 The Pioneering Years: The Straight-Eight Cars, 1926-30	15
3 Bologna versus Portello: The Straight-Eight Cars, 1931-2	27
4 A Season of Substantial Success: The 8C-3000 and 8CM-3000 Straight-Eight Cars, 1933	41
5 The Waning of Italian Racing Power: The 8CM-3000 Straight-Eight and Tipo 34 Six-Cylinder Cars, 1934	51
6 Scuderia Subalpina Strives for Success: The 8CM-3000, Tipo 34 and V-8R1 Cars, 1935	70
7 Never in the Picture: The Tipo V-8R1, 34 and 8CM Cars, 1936	84
8 The Fastest of the Eight-Cylinder Cars: The Tipo 8CTF and 8CL, 1938-46	93
9 Battles in a Minor Key: Maserati Voiturettes, 1932-8	99
10 Sixteen-Valve Voiturettes: The 4CL, 1939-40	119
11 Post-War Motor Racing Revival: The 4CL, 1946	123
12 Scuderia Ambrosiana to the Fore: The 4CL, 1947	131
13 A New Maserati Model: The 4CLT/48 'San Remo', 1948	137

14	Fighting a Losing Battle: The 4CLT/48, 1949	144
15	The 'San Remo' in Decline: The 4CLT/48, 1950-1	151
16	Six-Cylinder Sports Cars: The A6GCS, 1947-56	162
17	Maseratis for Formula 2: The Platé-Maseratis and the A6GCM and A6SSG Cars, 1952-3	179
18	The Early History of a Classic Racing Car: The 250F Grand Prix Car, 1954	197
19	A Year of Disappointment: The 250F Grand Prix Car, 1955	217
20	A Maserati Renaissance: The 250F Grand Prix Car, 1956	234
21	Maserati's Finest Season: The 250F Grand Prix Car, 1957	257
22	The Decline of a Classic Racing Car: The 250F Grand Prix Car, 1958-60	277
23	Chasing the Sports Car Championship: The 300S, 1955-8	288
24	Four-Cylinder Sports Cars: The Tipo 150S and 200S Cars, 1955-7	306
25	The Fastest Sports Cars: The Tipo 450S, 1956-7	315
26	The 'Bird-Cage' Maseratis, 1959-65	327
27	The Production Cars	339
	AUTHOR'S NOTE	353
	APPENDIXES:	
	1: Specifications of Maserati Cars, 1926-75	354
	2: The Evolution of the Straight-Eight Cars	359
	3: The Evolution of the Four-Cylinder Voiturettes	361
	4: The Evolution of the Post-War Six-Cylinder Cars	363
	5: The 250F Production History	368
	6: Maserati Competition Performances, 1926-65	371
	INDEX	393

# List of Illustrations

	<i>page</i>
Alfieri Maserati, founder of the company, who died in 1932 ( <i>Publifoto</i> )	33
The two surviving brothers, Ettore and Ernesto ( <i>Publifoto</i> )	33
The first Maserati, the Tipo 26 1,500cc straight-eight	34
Forerunner of the Maserati, the 1925 2 litre Diatto	34
Ernesto Maserati driving a 1,500cc straight-eight in the 1929 Targa Florio	67
The original 1929 'Sedici Cilindri' twin-engined Maserati	67
Luigi Arcangeli with straight-eight 8C-2500 car in the 1930 Rome Grand Prix	68
The sixteen-cylinder 4 litre car at Pescara	68
The two coupled, straight-eight 2 litre engines of the 'Sedici Cilindri'	85
Ernesto Maserati at the wheel of a Maserati in sports trim in the 1931 Coppa della Consuma	85
An experimental eight-cylinder car built in 1932-3	86
Whitney Straight with a modified 8CM car at Brooklands in 1934	86
The Tipo 34 car, combining the 8CM chassis with 3.3 litre six-cylinder engine	87
A Tipo 34 fitted with torsion bar independent front suspension, San Sebastian, 1935	87
Dick Seaman at the wheel of a V8-R1 Maserati in the 1936 German Grand Prix ( <i>'Motor'</i> )	88
Piero Taruffi's 4C-2500 four-cylinder two-seater car in the 1936 Monaco Grand Prix	88

A 4C-1500 single-seater driven by Roy Salvadori ( <i>Guy Griffiths</i> )	105
Tony Rolt with the 6CM which he drove in numerous British events ( <i>Guy Griffiths</i> )	105
George Abecassis with his Tipo 6CM in the 1947 Jersey Road Race ( <i>Guy Griffiths</i> )	106
The Tipo 8CL 32-valve car built for Indianapolis in 1946	106
The streamlined 4CL driven by Villoresi in the 1939 Tripoli Grand Prix	139
Luigi Villoresi and his 4CL in the 1946 Milan Grand Prix ( <i>Publifoto</i> )	139
Reg Parnell in the 1948 Jersey Road Race ( <i>Guy Griffiths</i> )	140
Baron de Graffenried on his way to victory in the 1949 British Grand Prix ( <i>Guy Griffiths</i> )	140
Bignami, Scuderia Argentina's chief mechanic, making final adjust- ments to Fangio's 4CLT/48	157
Harry Schell at the wheel of a Platé-Maserati based on the 4CLT/48 chassis ( <i>T. C. March</i> )	158
Giorgio Scarlatti and the A6GCS with which he took fifth place in the 1956 Targa Florio ( <i>Bernard Cahier</i> )	158
Enrico Platé's 'interim' car, raced in 1953 with the latest engine and chassis modifications but hybrid body ( <i>Guy Griffiths</i> )	159
Froilan Gonzalez drove this new twin-plug A6GCM into second place in the 1952 Italian Grand Prix ( <i>Publifoto</i> )	159
Froilan Gonzalez at the wheel of his works A6SSG in the 1953 British Grand Prix ( <i>'Motor Sport'</i> )	160
Felice Bonetto driving an A6SSG in the 1953 Swiss Grand Prix ( <i>'Autocar'</i> )	160
Fangio in the lead in the 1953 Italian Grand Prix	177
Roy Salvadori at the wheel of a 250F at the 1954 <i>Daily Express</i> Trophy race ( <i>T. C. March</i> )	177
Stirling Moss with his private 250F in the 1954 <i>Daily Express</i> Trophy race ( <i>T. C. March</i> )	178
Juan Fangio drove this 250F to victory in the 1954 Belgian Grand Prix ( <i>'Motor Sport'</i> )	178
Roy Salvadori with a 250F took second place in the 1955 <i>Daily</i> <i>Express</i> Trophy race ( <i>T. C. March</i> )	211
Luigi Musso racing a works 250F at Aintree in 1955 ( <i>T. C. March</i> )	211



Stirling Moss competing in the 1956 British Grand Prix ( <i>T. C. March</i> )	212
Jean Behra practises for the 1956 Italian Grand Prix with his new 'off-set' 250F ( <i>Publifoto</i> )	212
Juan Fangio in the 1957 Italian Grand Prix, in which he came second ( <i>Publifoto</i> )	245
Jean Behra battles with his V-12 in the 1957 Monza race ( <i>Publifoto</i> )	245
The Scuderia-Buell-entered 'piccolo' Maserati driven by Masten Gregory in the 1958 Italian Grand Prix ( <i>Publifoto</i> )	246
The lightweight 250F-based Tec-Mec of 1959	246
The four-cylinder 200S engine with twin-plug ignition	279
A streamlined Maserati built in 1955	279
Stirling Moss and Denis Jenkinson at the start of the 1956 Mille Miglia	280
Jean Behra driving a 300S in the 1956 Buenos Aires 1,000 Kilometres race	280
Stirling Moss's 200S took second place in the 1956 Supercortemag-giore race	297
The unraced V-12 3 litre car tested by Moss at the Nürburgring in 1958	297
The Tipo 450S with Costin-styled body ( <i>'Motor Sport'</i> )	298
The Tipo 61 'Bird-cage' car, winner of the 1960 Nürburgring 1,000 Kilometres race	298
A Briggs Cunningham Tipo 63 Maserati with rear-mounted 3 litre engine	299
The Tipo 64 driven by Davis and Abate in the 1962 Targa Florio	299
Two views of the modified Tipo 151 car that was fielded at Le Mans in 1964	230
The Tipo 151 4 litre V-12 coupe at Le Mans in 1962 ( <i>'Motor Sport'</i> )	317
Final competition model: the Tipo 65 car with rear-mounted V-8 engine	317
The A6G 2 litre production model of 1954	318
Serious production of touring cars started with the 3500 Gran Turismo of 1956 onwards	318

A special 5000 GT model with V-8 engine and Touring coachwork built in 1959	351
A later, 1961, version of the 3500 GT with Vignale coachwork	351
High-performance saloon: the 4·2 litre V-8 Quattroporte in 1966 form	352
Early example of one of the most successful production Maseratis—the 4·7 litre Ghibli with Ghia body	352

# I

## The Maserati Brothers

Over a period of thirty years from the conception of the marque in 1926 until its withdrawal from serious racing activities in 1957 Maserati grew to be one of the most important and most successful names in the history of motor racing. Every great marque clearly bears the stamp and character of the man or men who form the driving force behind the company. Just as every Bugatti was a work of engineering artistry reflecting Ettore Bugatti's genius for style, every V-12 Ferrari mirrors the *Commendatore's* obsession with mechanical perfection, so every competition Maserati bore witness to the simple, honest craftsmanship of the brothers from Voghera.

In the late eighteen-seventies Rudolfo Maserati, a railway-engine driver in Piacenza, in Northern Italy, courted and wed Carolina Losi. After their marriage the couple made their home in Voghera, a few miles to the west of Piacenza. Between 1880 and 1898 Carolina Maserati gave birth to six children, all boys, who were christened Carlo, Bindo, Alfieri, Mario, Ettore and Ernesto.

Mainly because of their father's work, the Maserati brothers developed at a very early age a love for things mechanical. Carlo's ambition, initially, was to follow in his father's footsteps and to work for the railway company. It is recorded that by the time he was fourteen he was building working model steam engines to the fascination of his younger brothers and to the delight of his parents who realised that their eldest son had above average ability.

During the middle eighteen-nineties the first, primitive cars were beginning to appear on the roads of Europe and Carlo soon switched his interest to the internal combustion engine. Carlo's first job was at a cycle works at Affori, a few miles from Voghera, and by 1897 he had designed and built his own motorcycle, incorporating a four-stroke single-cylinder petrol engine mounted in a strengthened cycle frame and driving the rear wheel by a belt and pulley system.

A local nobleman, the Marquese Carcano di Anzano del Parco, was so

impressed by Carlo's motorcycle that he offered to finance the seventeen-year-old in building further examples of this first successful machine. Patronage always has its price and subsequent machines built by Carlo Maserati bore the name 'Carcano'. Two years later Carlo's development work had progressed to the building of a motorcycle fast enough for him to score a victory in a 35 mile race from Brescia to Orzinovi, a race in which the opposition consisted of a number of cars and one other motorcycle. In 1900 Carlo won the *Corsa di Resistenza* at Padua (his patron also finished second) and the motorcycle class of the 127 mile Brescia-Mantova-Brescia race.

While he was at Brescia, Carlo Maserati was introduced to Vincenzo Lancia, at this time a very successful works Fiat driver, and from Lancia he heard about the Fiat company and its prospects. The outcome was almost inevitable: Carlo gave up his motorcycle project and went to work for the Fiat company, where he soon became head of the testing department. Working in Turin in close company with such great personalities as Lancia, Nazzaro and Cagno whetted Carlo's appetite for racing, but there was little prospect of it being satisfied at Fiat.

Some years later Carlo Maserati left Fiat to join the Bianchi concern in Milan as head tester and as a racing driver. Racing Fiats had achieved innumerable successes, but the Bianchi company had no real racing history to boast of, nor any brilliant prospects; in competitions the cars proved reliable, but plodding. Carlo Maserati's most conspicuous performances were ninth place in the 1907 *Coppa Florio* in Sicily and a sixteenth place the same year in the qualifying race for the *Kaiserpreis* in Germany.

In 1908 Carlo joined another company in Milan, *Automobili Junior*, where he built a racing car and designed an aeroplane engine. In the meanwhile, Bindo and Alfieri Maserati had joined the *Isotta Fraschini* company in Turin as testers. Twenty-one-year-old Alfieri was chosen in 1908 to drive a works 1.2 litre *Isotta* in the 286 mile *Grand Prix des Voiturettes* at Dieppe. The complexities of the regulations for this race, which placed a limitation on the size of the cylinder bore varying with the number of cylinders, does not fall within the scope of this book. It suffices to say that the regulations favoured the rather freak single-cylinder French cars entered in the race and Alfieri drove creditably to finish fourteenth out of thirty-two starters.

Tragedy struck the Maserati family in 1910 when Carlo, probably the most talented of the brothers, was taken seriously ill and died. After Carlo's death, Mario Maserati, the one brother who was not obsessed by

things mechanical and who had been studying at the Brera Art Academy, devoted more and more time to his real love—painting. In contrast to his brothers, all of whom were of a volatile nature and whose enthusiasm for any new project was so easy to rouse, Mario possessed a far more tranquil, more *distrain* temperament.

It was soon after Carlo's death that Alfieri, taking with him sixteen-year-old Ettore, went to the Argentine to work at the Buenos Aires factory of Isotta Fraschini. While these two Maserati brothers were in South America, they built a racing car based on Isotta components and ran it in a number of local events. Alfieri and Ettore returned to Italy in 1913; although he continued to be associated with Isotta, Alfieri had now opened his own small garage business at Pontevicchio, Bologna.

During World War I Alfieri, Bindo and Ettore all worked on aero engines for the Isotta company; Bindo and Ettore were engaged in production and testing, but most of Alfieri's energies were devoted to design development work and resulted in a very considerable broadening of his technical experience. Alfieri still found time, however, to design and commence manufacture of mica-insulated sparking plugs at his Bologna works.

Once hostilities were over Alfieri turned back to his first love, motor racing, and with the active support of Isotta's chief engineer, Cattaneo, built a two-seater racing car based on a shortened Isotta chassis and powered by one of the company's large-capacity four-cylinder engines. Alfieri won the Mont Cenis and Aosta Grand St Bernard hill climbs twice and also scored a victory in the 242 mile Circuit of Mugello in 1922 despite strong Alfa Romeo and Fiat opposition. Few technical details of this car are known, but it was subsequently fitted with an eight-cylinder Hispano-Suiza engine and appeared at a number of races during the early 1920s. It is illustrated on page 216 of T. A. S. O. Mathieson's *A Pictorial Survey of Racing Cars* (Motor Racing Publications, 1963).

As a result of Alfieri Maserati's successes with the Isotta, he was approached by the old-established Societa Anonima Autocostruzione Diatto, a railway manufacturer founded in 1902 which also turned out a rather indifferent line of touring cars, the largest of which were the Model 25 and slightly more sporting Model 35 of 2,952cc (90 × 116mm). Despite this rather unpromising basis for a competition car, Alfieri built a neat two-seater (not so different in appearance from his Isotta) with a maximum speed of about 95mph. In 1922 he defeated the Alfa Romeos in the 249 mile Autumn Grand Prix at Monza, finishing third overall and winning the 3,000cc class. The following year his successes included vic-



tories for the third time in the Mont Cenis and Aosta Grand St Bernard events and a popular win on home territory at Bologna.

The next stage in development was a racing car based on Diatto's 2 litre Model 20. This very highly tuned car, known as the Model 20S, had a 1,997cc (79.7 × 100mm) twin overhead camshaft four-cylinder engine developing 75bhp at 4,500rpm and a rather high, angular body. The 20S scored a number of successes including wins by Meregalli in the Circuit of Garda in 1923-4. Meregalli also won this race with a Diatto in 1922, but it would seem that the car used that year was the 3 litre model.

Alfieri Maserati turned out himself to drive the Model 20S Diatto in the 1924 San Sebastian Grand Prix at Lasarte. On paper, the Diatto's prospects in the face of strong Bugatti, Delage and Sunbeam opposition were slim indeed; but Maserati led all the French opposition and was in third place when engine trouble brought his fast run to a halt.

So far Alfieri Maserati had used his considerable talents to make a silk purse out of a sow's ear, developing staid road-going tourers into competitive racing cars. Now Diatto gave him *carte blanche* to build a Grand Prix car from scratch. Maserati produced a sleek, slim 2 litre straight-eight which was only just ready in time for the Italian Grand Prix at Monza. It is said that the car was finished so late that there was time to apply only one coat of paint to the aluminium bodywork and, hence, when the car raced, it appeared to be an anaemic shade of pink. Certainly the eight-cylinder Diatto was too new, too untested to perform well and Alfieri Maserati and the very experienced driver at Monza, Emilio Materassi, were setting their sights too high. Early in the race the Diatto's supercharger bolts sheared and the Diatto disappeared off the circuit.

Diatto were now in severe financial difficulties and decided to withdraw from racing without giving the new straight-eight car a proper chance to prove its worth. In financing this car and then abandoning the project, Diatto had performed a remarkable service for Alfieri Maserati. He took over the project, reduced the engine capacity to 1,500cc to comply with the 1926-7 Grand Prix formula and carried out a number of minor improvements. Officine Alfieri Maserati, whose badge was to be Neptune's trident, the ancient symbol of the city of Bologna, was now seriously in business and Alfieri's technical skill was well supported by the brilliant driving of Ernesto, the youngest of the Maserati brothers. The modified Diatto that appeared as the first Maserati at the 1926 Targa Florio was the forerunner of many successful designs bearing the symbol of the trident that were to emerge from the works of Officine Alfieri Maserati over the next fifty years.

## The Pioneering Years: The Straight-Eight Cars, 1926–30

### THE 1926 RACING SEASON

Brilliant sunshine blazed on to the barren, baked earth and faded grass, the peasants in their peaked caps gathered in tight clusters and the officials perspired in their formal suits and wing collars. Pale blue Bugattis, the Type 35 2 litre straight-eights introduced in 1924, dominated the scene and the model had once already, in 1925, won the Targa Florio, even fifty years ago the most arduous of racing car events and held over five gruelling 67 mile laps of twisting, badly surfaced Sicilian country roads. Bugatti driver 'Meo' Constantini, the 1925 winner, was the favourite, while drivers of other Bugattis included such famous names as Count Conelli, Emilio Materassi and Ferdinando Minoia.

Thirty-three cars were entered in the 1926 Targa Florio, the raucous Bugattis with an exhaust note likened to the tearing of calico; sports Alfa Romeos stripped for an out-and-out racing car event; quieter, more refined OM sports cars and, amongst the red of Italy, the first Maserati driven by its creator, Alfieri Maserati, with Guerino Bertocchi acting as riding mechanic. Technically the Maserati, the Tipo 26, was identical to its immediate predecessor, the 2 litre Diatto raced by the Maserati brothers in 1925. The twin overhead camshaft supercharged straight-eight engine had been reduced in capacity to 1,492cc (60 × 66mm) and in this form it was said to develop 120bhp at 5,300rpm, giving the Bologna car a maximum speed of close to 120mph. The Tipo 26 had a wheelbase of 8ft 8in, a front track of 4ft 4.25in and weighed 1,591lb. For the Sicilian race the normal streamlined tail was removed and it ran with a short, cut-off tail on which two spare wheels were mounted. On the front was

the now famous trident badge which had been copied from a statue of Neptune in the main square at Bologna.

Although the Targa Florio was a Formule Libre race to which cars of any capacity were admitted, the current Grand Prix formula was 1,500cc with the additional requirements of a minimum weight of 600kg and the fitting of two-seater bodywork. Riding mechanics were carried in the Targa Florio, but they had not been carried in Grand Prix racing since the start of the 1925 season.

Constantini roared to victory for the second year in succession in this 336 mile race, ahead of other Bugattis driven by Minoia and Goux. There were twenty-one retirements, but the Maserati finished the race, enveloped in dust, streaked with oil, in ninth place, an hour and a quarter behind the winner (Alfieri's actual time for the race was 8hr 37min 11sec), and first in the 1,500cc class.

The 1926 Targa Florio was the marque's first race and its next important event was the 1926 Italian Grand Prix at Monza where two cars were entered for Alfieri Maserati and Emilio Materassi. There was a very poor entry in this race which was held on the 6.214 mile combined road and banked track circuit and there were only two finishers, the Bugattis of 'Sabipa' and Constantini. Both Maseratis retired with supercharger problems early in the race. Shortly afterwards Maserati competed in a speed trial at Bologna and one of the Tipo 26 cars was driven by Materassi over a flying kilometre at 104mph to win the 1,500cc class.

## THE 1927 RACING SEASON

Maserati's first race of the 1927 season was the 262 mile Formule Libre Tripoli Grand Prix run on the Mellaha circuit on 6 March. Alfieri Maserati drove a 1,500cc car into third place overall behind the Bugattis of Materassi and Balestrero, and first place in the 1,500cc class ahead of a brace of French Salmson cars.

Three Maseratis were entered in the Targa Florio held on 24 April and one of these was the new Tipo 26B car which was driven by Alfieri Maserati. The 26B had a capacity of 1,980cc (62 × 82mm) and its power output of 145bhp at 5,300rpm was sufficient to endow it with a maximum speed of 125mph. The 1,500cc cars were driven in Sicily by Ernesto Maserati and Count Maggi. Once again the race proved largely a Bugatti benefit, eleven of the twenty-two cars entered were Bugattis and Materassi and Conelli took the first two places for Molsheim (the marque's third

successive victory in the race). Nevertheless, Alfieri Maserati, who was a skilled and talented driver, did well to bring his car across the line in third place. Ernesto Maserati was eliminated by a broken front axle and on Maggi's car the chassis broke.

One of the most important races in the Italian calendar was the Coppa Acerbo, which was held at Pescara on the Adriatic coastline. In this 317 mile race Tonini finished second to a 2 litre P2 Alfa Romeo driven by Giuseppe Campari. There is no direct evidence, but it is almost certain that Tonini was at the wheel of a 1,500cc car.

## THE 1928 RACING SEASON

In 1928 the only restrictions in Grand Prix racing were a minimum weight of 550kg and a maximum of 750kg. In fact, even these restrictions were ignored and most races were run on a Formule Libre or capacity basis.

At the end of March the Bologna team competed in the 193 mile Circuit of Pozzo. Tazio Nuvolari, still very much an up and coming driver, won the race with a Bugatti at an average of 72.3mph, but Count Maggi was second across the line with his 1,500cc Maserati, ahead of Cleria's 1,100cc Salmons and Giuseppe Fagioli's 1,500cc Bugatti. Luigi Fagioli, much better known in later years than his brother, also drove a Maserati in this race, but finished a none too satisfactory seventh.

Five Maseratis were entered in the Targa Florio, described by *Motor Sport* as 'the greatest road race of the year'; 2 litre cars were driven by Ernesto Maserati, de Sterlich and Borzacchini, while 1.5 litre versions were handled by Fagioli and Marano. The race developed into a straight fight between the works teams from Bugatti and Alfa Romeo. Albert Divo won with his 2.3 litre Type 35B Bugatti from Campari's 6C-1500 supercharged Alfa Romeo and Chiron's 2 litre works Bugatti. W. F. Bradley, the doyen of motor-racing journalists, reported that the Maseratis were plagued by supercharger trouble and the highest placed Bologna car was Fagioli's in seventh position.

During the year the Maserati team contested a number of other Italian events. In the Coppa Acerbo at Pescara, Ernesto Maserati crossed the line first in the 1,500cc class at an average of 66.45mph (Campari was the overall winner at 68.25mph) and Luigi Fagioli finished third in the class with his Maserati. Borzacchini and Ernesto Maserati, probably

with 1,500cc cars, took second and third places in the Susa-Mont Cenisio hill climb.

The team's final outing of the season was in the European Grand Prix at Monza, a race marred by a horrible accident. Emilio Materassi, at the wheel of one of his ex-works 1,500cc straight-eight Talbot cars, struck the left-hand rear wheel of Foresti's Bugatti, went off the track at around 120mph and ran into the spectators. The driver and twenty spectators were killed and many more injured. This 373 mile race was won by Louis Chiron (Bugatti Type 35) at an average of 99.35mph from Achille Varzi (Alfa Romeo P2) and Tazio Nuvolari (Bugatti Type 35). Count Maggi and Alfieri Maserati brought their Bologna cars across the line in fifth and sixth places. The Maseratis at this race were reported as being 1,700cc machines, but this seems very unlikely and they were almost certainly the familiar 2 litre 26B model.

## THE 1929 RACING SEASON

Two new Maserati models were introduced in 1929. The first of these was an improved version of the original 1926 car which was made in two versions, as the 8C-1100 with 1,078cc (51 × 66mm) supercharged engine developing 100bhp at 5,500rpm and as the 8C-1500 with the same cylinder dimensions as the original car and a power output of 120bhp at 5,000rpm. The 8C-1100 was reckoned to be no real match for the six-cylinder Amilcar, the most successful 1,100 of the late 1920s, but it achieved a fair measure of success in minor Italian races.

The other Maserati development in 1929 was far more dramatic, far more original and was to achieve substantial international success. Two of the eight-cylinder 2 litre engines were mounted alongside each other at a slight vee angle on a light alloy coupled crankcase. The left-hand cylinder block was standard, but the right-hand block had reversed inlet and exhaust ports to bring the exhaust manifold to the outside of the assembly. The two Roots-type superchargers mounted at the front of each unit compressed at 15lb psi and Officine Alfieri Maserati claimed a power output of 305bhp at 5,200rpm and this seems to have been an accurate claim. The chassis had been lengthened (the wheelbase was increased to 8ft 11.75in) and strengthened. A large single radiator of the usual Maserati inclined pattern served both engines. The original clutch, gearbox and final drive were retained. This model, typed the V4 and usually known as the 'Sedici Cilindri', was of relatively compact dimen-



sions, conventional in appearance and by no means as fearsome in its handling as might be expected. Maximum speed of the 'Sedici Cilindri' under favourable conditions was around 160mph.

Two years later Vittorio Jano, perhaps the greatest of all Italian automobile engineers, built a special Alfa Romeo powered by two six-cylinder 1,750 engines and known as the Tipo A. This car, clearly inspired by the success of the Maserati, had a separate clutch, gearbox and prop-shaft for each engine. It was thus far more complicated than the Maserati and its handling verged on the suicidal.

At the Monaco Grand Prix two 2 litre cars were privately entered, but both retired. Baconin Borzacchini finished second with a 2 litre car to Brilli-Peri's Talbot in the Tripoli Grand Prix at Mellaha and in the Bordino Grand Prix at Alessandria he was again second, beaten this time by Achille Varzi with a four-year-old Alfa Romeo P2. In the latter race Ernesto Maserati took third place. All the Maserati entries retired in the 1929 Targa Florio (there were only four finishers), but Borzacchini was able to derive some consolation from breaking the lap record on only his first lap of the Sicilian circuit.

On 1 July 1929, the 'Sedici Cilindri' made its début in the high-speed Circuit of Cremona (to the east of Milan) held over five laps of a 25 mile course. The sixteen-cylinder car was shared by Borzacchini and Alfieri Maserati and Ernesto Maserati drove a 2 litre car. Borzacchini was timed with the 'Sedici Cilindri' over ten kilometres at a speed of 152.9mph (a Class F world record) and Alfieri turned in fastest lap of the race at 124.4mph. This was the fastest road race ever held up until that time and it was, in fact, the first time that an international record had been set on Italian soil. Unfortunately the 'Sedici Cilindri' retired with mechanical trouble and the race was won by Count Brilli-Peri's Alfa Romeo P2. Brilli-Peri was timed at 138.77mph over ten kilometres and averaged 114.41mph. As Peter Hull has pointed out, the Alfa's speed (which was a Class D record) represents the highest official speed recorded by a Grand Prix car prior to the introduction of the 750kg formula in 1934. The 'Sedici Cilindri' was a Formule Libre as opposed to Grand Prix car, but although their speeds were never recorded, both the Maserati 8CM-3000 and the Alfa Romeo Monoposto were faster than the P2. Achille Varzi (Alfa P2) was second at Cremona and Ernesto Maserati finished third with his 2 litre Bologna car.

There was no Italian Grand Prix as such in 1929, but instead the Monza Grand Prix was staged on the short, banked 2.82 mile circuit in three 62 mile heats for cars of 1,500cc, 2,000cc and unlimited capacity. In the

unlimited heat Maserati was humiliated, for August Momberger's 7 litre Mercedes-Benz SSK beat Alfieri with the 'Sedici Cilindri' into second place by a fifth of a second. In the final, also of 62 miles, Varzi (P2 Alfa) won from Nuvolari (Talbot 1,500cc) and Momberger. Alfieri Maserati retired, but had turned in fastest lap at 124.2mph, a speed that was never bettered because the banked track alone was so rarely used for racing.

## THE 1930 RACING SEASON

By 1930 Maserati was well organised as a serious racing team and ready to tackle the might of Molsheim and the rather elderly products of Portello with a new and highly developed car that was to prove one of the most successful in the company's history. The new car was the Tipo 8C-2500, and although it retained many features of earlier Maseratis it was to all intents and purposes a completely new design.

The straight-eight engine had a capacity of 2,495cc ( $65 \times 94\text{mm}$ ), twin overhead camshafts mounted directly above the valves and driven by gears and a Roots-type supercharger driven from the nose of the crankshaft. The two valves per cylinder were inclined at an angle of ninety degrees. The five-bearing crankshaft ran in plain outer bearings and a single central roller bearing. There were tubular connecting rods and alloy pistons. A single Weber carburetter was fitted and ignition was by a Scintilla magneto driven from the front of the engine. With a compression ratio of 7.5:1, the 8C-2500 engine developed 175bhp at 6,000rpm.

In most respects the chassis was similar to that of earlier cars from Bologna, with a three-point mounting for the engine, a dropped centre-section and suspension front and rear by rigid axles and semi-elliptic springs. Transmission was by a multi-plate clutch, a four-speed gearbox bolted to the engine crankcase and torque-tube final drive. The Maserati brothers had commissioned the Isotta Fraschini concern to produce many of the castings for the new car and these included an Elektron gearbox casing and final drive centre-section. Elektron was also used for a number of engine components, the brake shoes and brake drums.

The 8C-2500 retained the 8ft 8in wheelbase of the earlier cars and it had a front track of 4ft 4in. It had an unladen weight of 1,768lb and its maximum speed was 135-40mph. In appearance it closely resembled

earlier Maseratis, with the same squarish, inclined radiator and a shapely, tapering tail incorporating the fuel tank.

Maserati scored a total of seven major victories in 1930 and it was one of the most successful seasons in the team's history. The opposition was, however, very weak. The Type 35 Bugatti was now in its seventh season of racing and the twin overhead camshaft Type 51 derivative was not raced until the following year. Alfa Romeo did not introduce their very potent 2.3 litre Monza car until 1931 and in 1930 they raced the old P2, two of which they had bought back from private owners. As raced by the works in 1930, the P2s, which had first appeared in 1924, incorporated a number of parts from the 6C 1750 Gran Sport sports cars and were slightly increased in capacity to 2,006cc. In this form they developed 175bhp compared with the 134/145bhp in their original 1924 form.

Maserati's first race of the 1930 season was the Tripoli Grand Prix, held over four laps of the very fast 16 mile Mellaha circuit on 23 March. Baconin Borzacchini scored a runaway victory with the 'Sedici Cilindri' and Luigi Arcangeli (2 litre Maserati) took second place ahead of Clemente Biondetti (1,500cc Talbot). Borzacchini averaged 91.46mph and although it has been said that this was a record average for a road race, that distinction was, of course, held by the Circuit of Cremona. A sad occurrence in practice for the Tripoli race was the death of Count Brilli-Peri who had crashed with his Alfa Romeo P2.

The same Maserati drivers and cars appeared in the Monaco Grand Prix on 6 April (it is difficult to envisage a less suitable car for this tight circuit than the 'Sedici Cilindri') and here the opposition was much stronger. Five 2 litre Type 35 Bugattis were entered (among them works cars driven by Williams, Chiron and Bouriat) and five 2.3 litre Type 35B cars. The race was Bugatti-dominated and although Borzacchini held fourth place at one stage, both he and Arcangeli retired with mechanical trouble. René Dreyfus, still very much an amateur at this stage in his career, won with his Bugatti after a very close struggle with Chiron's works car and other Molsheim drivers took the next four places.

The fourth Mille Miglia was held on 12-13 April and the Maserati drivers were Luigi Arcangeli with a 2 litre straight-eight in sports trim and Tamburi with a 1,100cc car. That Arcangeli's car was the fastest in the race soon became evident. He set a searing pace in the opening stages of the race and by Bologna he held a good lead, over fifteen seconds ahead of Nuvolari's 1,750cc supercharged Alfa Romeo. Arcangeli maintained his fast pace after leaving Bologna, but his brakes failed on a mountainous stretch of the course, the Maserati went off the road and

was wrecked, and Arcangeli was taken to hospital with slight injuries. The 1,100cc Maserati also retired. The race was won by the Alfa Romeo of Nuvolari and Guidotti at an average of 62.41mph.

Yet again in 1930 Maserati strove to win the Targa Florio, but were soundly trounced. The new 8C-2500 cars made their début in this race and four were entered for Arcangeli, Borzacchini, Fagioli and Ernesto Maserati. The opposition included a strong entry of Bugattis and OMs and from Scuderia Ferrari (now entering cars on behalf of the Alfa works) one of the rebuilt P2s for Achille Varzi and 1,750cc six-cylinder cars for Tazio Nuvolari, Giuseppe Campari and Count Aymo Maggi.

Scuderia Ferrari set a searing pace from the start of the race and the young and fiery Varzi pulled out a lead of 1½ minutes over team-mate Nuvolari on the first lap. Ernesto Maserati was the highest placed Bologna driver in eighth place, but he gradually fell back further down the field. Arcangeli went off the road on lap 3 because of a locking brake and retired soon afterwards. A lap later race-leader Varzi, with Chiron's Bugatti now hot on his heels, found himself in trouble. His P2 had shed its spare wheel which had damaged the fuel tank as it fell off. At the end of the lap Varzi rushed into the pits, all four wheels were changed, the mechanic grabbed a can of fuel and the Alfa roared back into the race.

When the fuel level became low and the Alfa's engine started to mis-fire, the mechanic knelt on his seat and began to pour the fuel from the can into the rear-mounted tank. The Alfa was bouncing badly over the rough Sicilian roads, much of the fuel was spilled and some drops falling on the hot exhaust ignited. The flames shot up round the driver's neck, but Varzi drove on while the mechanic beat them out with a seat cushion. Eventually the fire was extinguished, but valuable time had been lost and Chiron was now in the lead. It was not, however, destined to be a Bugatti race and on the run down from Bivio Polizzi Chiron's brakes locked up on the loose surface and the Type 35 smashed into a retaining wall. Chiron rejoined the race to finish second behind Varzi and Conelli took third place for Bugatti ahead of the Alfa Romeos of Campari and Nuvolari. The Maseratis of Ernesto Maserati and Borzacchini finished eighth and eleventh.

On 18 May the Circuit of Caserta was held over ten laps of an 18 mile circuit, roughly triangular in shape with two sides of the triangle consisting of fast straights and the third a difficult mountainous stretch. The fastest car in the race was the 7 litre supercharged Mercedes-Benz SSKL of Frederico Caffisch and this was reckoned to be 10mph faster along the straights than any of the other cars entered. Maserati fielded an 8C-

2500 for Pastore and a 2 litre for Fagioli; 2.3 litre OMs of the type raced in the Targa Florio were driven by Gazzabini, Morandi and Rosa; Campari drove a 6C-1750 Alfa; and two Tipo 65 Italas with engine capacity increased to 2,300cc, twin overhead camshafts and superchargers were entered for Bellingeri and Facchetti. Caffisch went straight into the lead at the start and led throughout the race. Initially, Pastore held second place, but he fell back to the tail of the field because of mechanical trouble, and at the end of the race the order behind the Stuttgart giant was Rosa, Campari and Fagioli.

A strong team of Maseratis was fielded in the Rome Grand Prix held on the Tre Fontana circuit a week later. Luigi Arcangeli drove an 8C-2500, 2 litre cars were entered for Fagioli and Pastore and 1.5 litre cars were handled by the Neuzioni brothers. There was a 1,100cc class in this race and a 'baby' Bologna straight-eight was driven by Alfieri Maserati. Of the Maseratis *Motor Sport* said, '... the different Maseratis are very hard to distinguish as their outward appearance is very similar and each one being an entirely special job built in this racing car factory at Bologna, the engine sizes are varied in accordance with the race for which the car is to be entered.'

The opposition included an Alfa Romeo P2 driven by Tazio Nuvolari and 6C 1750s driven by Campari and Tadini; Louis Chiron was at the wheel of a Bugatti Type 35B and Caffisch had the 7 litre Mercedes with which he had won at Caserta.

Arcangeli headed the field away from the start and stayed in front until lap 7 when Nuvolari forced his way into the lead. The Maserati driver, a native of Rome and determined to do well on home territory, hung on to the tail of the Alfa Romeo until Tazio slowed slightly on lap 15 and then shot by into the lead again. The battle was not yet over, however, and three laps later Chiron took the lead with his Bugatti and set a new lap record of 87.23mph. Arcangeli fought back, worrying the Monégasque every inch of the way, and Fagioli was now in third place ahead of Nuvolari. On lap 19 both Nuvolari and Fagioli retired (the latter because of rear axle trouble) and when the cars started their twentieth and final lap Chiron led by a mere length. Arcangeli gradually gained ground on the long finishing straight and flashed by Chiron to win by two-fifths of a second. This was the first important victory in the history of the marque. Arcangeli's Maserati had averaged 83.60mph and behind him the finishing order was Chiron—von Morgen (Bugatti)—Campari (Alfa P2). Alfieri Maserati also won the 1,100cc class of the race at an average of 68.80mph from a brace of French-built Salmson cars.



There were two Maserati entries in the Indianapolis 500 Miles race held on 30 May, but neither performed well. Baconin Borzacchini drove the 'Sedici Cilindri' with the superchargers removed (superchargers were banned in this race during 1930-3). Gone with the blowers was the car's speed and Borzacchini who 'never seemed thoroughly at home on the bricks of Indianapolis' retired early in the race with engine trouble. The other Maserati, a 2 litre model, was driven by Lettorio Piccolo Cucinotta (apparently a local driver who was known familiarly by the crowd as 'Piccolo Pete'). Cucinotta drove a steady but unspectacular race to finish twelfth out of the fourteen to take the flag. Arnold, driving Harry Hartz's 100 cubic inch Miller, won the race at 100.44mph.

The Maseratis continued to perform well in Italian events. On 29 June Luigi Fagioli drove an 8C-2500 in the 40 mile Cuneo-Colle della Maddalena hill climb, a round in the newly inaugurated 'Championship of the Mountains' and with a time of 39min 29.4sec finished second to Nuvolari with a P2 Alfa Romeo (38min 27sec). The third victory of the season followed in the 139 mile Coppa Ciano race at Leghorn which Fagioli, with an 8C-2500, won at 54.47mph from Campari (Alfa Romeo P2) and Count Maggi (Bugatti). By the Coppa Acerbo race at Pescara the brilliant Achille Varzi had deserted Scuderia Ferrari to drive for Maserati and Borzacchini had left Bologna for Modena. At Pescara, Varzi drove his 8C-2500 brilliantly to win from the similar car of Ernesto Maserati and Borzacchini's Alfa Romeo P2. Varzi averaged 75.37mph for the 159 miles. Another victory for Maserati followed in the 186 mile Circuit of Avellino where Fagioli with an 8C-2500 won at 54.54mph from Arcangeli (Alfa Romeo) and Rosa (OM).

Maserati's next important race of the season was the Monza Grand Prix held on 7 September. As in 1929, the entries were divided into classes according to engine capacity and each class had to run in a separate heat over fourteen laps of the circuit, which was the 4.263 mile short Florio combined road and banked track. The first two in the heats for 1,100cc cars and for those who had not qualified in other heats, and the first four from the 2,000cc, 3,000cc and over 3,000cc heats were admitted to the final provided that they had averaged over 68.75mph.

In the 1,500cc to 2,000cc heat two Maseratis driven by Pedrazzini and Sartorio faced six Bugattis and two of the old straight-eight Talbots. The heat was Bugatti-dominated and the Molsheim entries of Etancelin and von Morgen took the first two places ahead of Pedrazzini and yet another Bugatti driven by Minozzi.

The next heat was for cars between 2,000cc and 3,000cc and there

were expectations of a stiff three-cornered fight between Maserati, Bugatti and Alfa Romeo. Three 8C-2500 Maseratis were entered for Achille Varzi, Luigi Arcangeli and Luigi Fagioli; Bugatti Type 35B cars were driven by Burggaller, da Farra and Stefanello. Scuderia Ferrari entered P2 Alfa Romeos for Borzacchini, Campari and Nuvolari. These cars ran in the class up to 3,000cc because they had been bored out from 1,987cc to 2,006cc for the 1930 season. In fact, the heat proved a Maserati walk-over and Arcangeli won from Borzacchini (P2) and team-mates Fagioli and Varzi.

In the heat for cars over 3,000cc and under 8,000cc Bologna again dominated. Ernesto Maserati with the 'Sedici Cilindri' seared into the lead, but tried rather too hard and ran off the road. The car was undamaged, and after it had been pushed back on to the track with the help of spectators Ernesto rejoined the race to win at 91.40mph from Caracciola (Mercedes), Stapp (Duesenberg) and Caflisch (Mercedes). It was, of course, open to Caracciola to object on the grounds that Ernesto Maserati had received outside help in regaining the circuit, but this was a course of action which he was too sporting to take.

Among the starters in the extra heat for those who had failed to qualify in the capacity classes were Campari and Nuvolari, and this was a convenient way of admitting them to the final. This scheme almost misfired, however, for Lehoux with his Type 35 Bugatti went straight into the lead and held off the P2s until his gearbox broke. The final heat was for 1,100cc cars and in this Premoli (Salmson) and Scaron (Amilcar) took the first two places ahead of the Maseratis of Klinger and Zanelli. Premoli declined to run in the final, however, because he felt that his car had no chance whatsoever of competing successfully with the larger capacity cars on level terms.

When the flag fell for the start of the final the Alfa Romeos of Nuvolari and Campari accelerated into the lead, but it was short-lived, Arcangeli taking the lead for Bologna on that first lap and Varzi moving up into third place. The battle was waged for six laps and then the Alfas were forced to stop at the pits for new tyres, leaving Bologna in complete control of the race. Varzi stopped at the pits for new plugs and rejoined the race in third place behind Arcangeli and Ernesto Maserati. While Arcangeli cruised round, Varzi was driving at his hardest; he passed Ernesto three laps from the finish and closed right up on Arcangeli before the race-leader was aware of the danger. Varzi forged past his team-mate on the last lap to win by a fifth of a second, Ernesto Maserati crossed the line in third place and then came Minozzi (Bugatti) and Fagioli. After

the first seven cars had taken the flag, the crowd surged on to the track and the remaining three finishers had to be stopped short of the finishing line.

The privately entered Bugattis of von Morgen and Burgaller took the first two places in the Czechoslovakian Grand Prix on 28 September, but Maserati scored one more major victory before the season ended. Varzi and Count Maggi drove 8C-2500 cars in the Spanish Grand Prix at San Sebastian on 5 October. The racing career of the P2 Alfa had ended at Brno and the only marque to oppose the Maseratis in the Spanish race were private Bugattis. Varzi and Maggi went straight into the lead at the start of the race, hotly pursued by the Molsheim entries of Lehoux, Etancelin and Dreyfus. Etancelin overturned his car, and when Varzi stopped to refuel at half-distance Lehoux and Dreyfus moved into the first two places. Shortly afterwards Dreyfus imitated his compatriot by overturning his Bugatti, Lehoux retired with mechanical trouble, Chilean Juan Zanelli crashed his Type 35 and von Hulgen's caught fire! Now that the ranks of Molsheim had been thinned by misfortunes, Varzi was completely unchallenged and went on to score an easy victory at 86.82mph from Count Maggi and the elderly 4.5 litre Targa Florio Peugeots of Stoffel and Ferrand.

With victories in seven races, certain of them major international events, the marque Maserati had well and truly arrived and had set for itself a very high standard that it would be unable to maintain as racing became more and more competitive with the introduction of new models from Bugatti and Alfa Romeo.

### 3

## Bologna versus Portello: The Straight-Eight Cars, 1931-2

For 1931 the weight restrictions applied to Grand Prix cars during the years 1928-30, but largely ignored, were scrapped completely and there was free formula (Formule Libre) racing apart from the requirements that cars should be fitted with two-seater bodywork (though no mechanic was carried) and that races should be of a minimum length of ten hours (which usually meant the use of two drivers).

There were no new developments from Bologna in the early part of the season, but Maserati faced stiffer opposition in the form of the Bugatti Type 51 (the 2.3 litre Type 35B fitted with twin overhead camshafts) and Vittorio Jano's latest masterpiece, the 8C 2300 2.3 litre twin overhead camshaft, straight-eight Alfa Romeo. This new design from Portello made its début in medium-wheelbase 'sports racing' form in the Mille Miglia in April, and in short-wheelbase 'racing' form in the Italian Grand Prix in May (after which race it became known as the Monza). The Monza, with 178bhp at its disposal, was not quite as powerful as the 8C-2500, but it handled better (the steering and road-holding of the 8C-2500 were notoriously primitive) and could often better Maserati lap times.

On 26 April six Maseratis, all private entries, ran in the Bordino Grand Prix at Alessandria. There was an exciting battle in the opening laps of the race between Achille Varzi with one of the new Type 51 cars and Tazio Nuvolari with an Alfa Romeo. Nuvolari retired, Varzi won the race from Minozzi and von Morgen, both of whom were at the wheel of Type 35 Bugattis, and the highest placed Maserati driver was Count Castelbarco who took fourth place with an 8C-2500.

An interesting runner in the Double-Twelve race at Brooklands on 8-9 May was an 8C-2500 Maserati in stark, but attractive, sports trim and driven by George Eyston, partnered by Giulio Ramponi. At the start

of the race the 'Maser' proved reluctant to fire, but although it joined the race late, it soon made up ground on the leading  $4\frac{1}{2}$  litre Bentley driven by Tim Birkin. The Bentley retired with bearing failure and not long afterwards the Maserati was in the pits for repairs to broken wing stays. It rejoined the race to turn in some very fast laps in excess of 100mph before succumbing to axle failure just before the end of the first day's racing. The race was won on handicap by the 746cc MG Midget of the Earl of March and Chris Staniland.

On 10 May the Targa Florio was held over four laps of the 90 mile Long Madonie course because storm damage to roads and bridges prevented the use of the more usual 67 mile Madonie circuit. Maserati entered 8C-2500 cars for Fagioli, Biondetti and Dreyfus; Scuderia Ferrari fielded 8C 2300 Alfes for Nuvolari and Arcangeli and from Bugatti came a bright red Type 51 for Achille Varzi. Nuvolari won the race from Borzacchini (six-cylinder 1,750 Alfa) and Varzi. The Maseratis were out of luck; Fagioli, in third place on the first lap, crashed into the parapet of a bridge, Biondetti crashed on the second lap and Dreyfus, who went off the road several times because of his unfamiliarity with the course and was slowed by plug trouble, completed only three of the four laps.

The Italian Grand Prix was held at Monza on 24 May, but despite the team's success at the circuit in 1930 Maserati missed this race, offering the explanation that because two cars had crashed in the Targa Florio, a team could not be prepared in time. The only Bologna car to run in the race was a private 8C-2500 driven by Klinger and Ghersi. The race was dominated by the new Alfa Romeo Monza cars which took the first two places in the order Campari/Nuvolari and Minoia/Borzacchini; Divo/Bouriat finished third for Bugatti. The private Maserati ran well, but although it had risen to fourth place by the end of the sixth hour of this 10 hour race, it retired with engine trouble.

Two sports 8C-2500 Maseratis were entered in the last Irish Grand Prix held on the Phoenix Park circuit at the beginning of June; the Bologna cars were driven by Campari and Eyston and the strongest opposition came from Tim Birkin with a long-wheelbase Alfa Romeo 8C 2300 Le Mans. The Irish race was held in two parts which were run on a handicap basis, the Saorstat Cup for cars of up to 1,500cc on the first day, and the Eireann Cup for the larger cars on the second day. The results of the Grand Prix were decided on the aggregate results of the two events.

Campari led the field strongly in the opening laps of the Eireann Cup, despite a thunderstorm and a downpour of rain that inundated the

circuit, and Eyston held second place ahead of Birkin. Eyston's engine began to run roughly and he pulled into the pits for a change of plugs. Soon afterwards Campari rushed into the pits with his four-seater 'Maser' and jumped out of the car with his hands clasped over his face. While Campari had been attempting to lap Birkin, a stone thrown up by the rear wheels of the Alfa had smashed his goggles and a splinter of glass had entered his eye. Reserve driver Giulio Ramponi took over while Campari received medical attention, but Ramponi was unable to match the pace of the Alfa and had soon dropped back to four minutes in arrears.

Although his injured eye was badly cut and his vision restricted, Campari insisted on rejoining the race and began a frantic chase after Birkin's Alfa. In the words of *Motor Sport*:

Lap after lap he [Campari] shot up to Mountjoy, a slow right-angle corner at the end of the two-mile straight, and it seemed as if he would never cut out in time. Then close on the corner at something over 110mph, the car swayed and shuddered under the full power of its wonderful brakes, down through the gears he went, and he was round and away. As he and Birkin appeared each time the soaking crowds cheered and yelled.

At the end of this 300 mile race Campari was just under three minutes behind Birkin. Eyston regained third place, but then he ran low on fuel, stopped at the pits and as he was starting up his still rough-sounding Maserati, the Hon Brian Lewis's very quiet Talbot 105 splashed past into third place on handicap. Birkin's Alfa Romeo had averaged 83.80mph, Campari's Maserati 82.56mph, Lewis's Talbot 79.92mph, Eyston's Maserati 82.20mph and Earl Howe's 7 litre Mercedes, which finished fifth on handicap, had averaged 85.13mph. On the aggregate results of the two races first place in the Grand Prix was awarded to Norman Black (MG Midget), Birkin was second (he had lost time through a fuel stop in the closing laps), Horton's MG was third and Campari was classified fourth.

On 7 June, four works Maseratis ran in the Rome Grand Prix held on the Littorio circuit. Ernesto Maserati drove the 'Sedici Cilindri', 8C-2500s were handled by Dreyfus and Fagioli, and what was described as the 'new 1,750cc' car (presumably a 2 litre) was entrusted to Clemente Biondetti. There were four qualifying races won by Scaron's Amilcar (1,100cc class), Biondetti (2,000cc class), Varzi's Bugatti (3,000cc class) and Ernesto Maserati. The last heat for cars over 3,000cc was rather a farce as the only contestants were the 'Sedici Cilindri' and di Vecchio's Hispano-Suiza-engined Itala (a car built by the late Emilio Materassi).

But for Varzi, the final would have been completely dominated by Maserati. The young Bugatti driver took the lead at the start, but burst a tyre, and Ernesto Maserati, Dreyfus and Fagioli moved up into the first three places. Varzi rejoined the race, fought his way back to third place, but then withdrew to the pits with engine trouble. Fagioli, too, was a victim of mechanical problems, but rejoined the race after a pit stop. The order at the chequered flag was Maserati (who had averaged 94.65mph), Dreyfus, Biondetti, Ruggeri (Talbot), Cerami (private 8C-2500) and Fagioli.

There were twenty-three starters in the French Grand Prix, another 10 hour race, held on the full 7.767 mile Montlhéry circuit on 21 June. Among these were three Scuderia Ferrari Alfa Romeo Monzas, three works Bugatti Type 51s and three works Maserati 8C-2500 cars; the last-named were driven by Ernesto Maserati/Fagioli, Dreyfus/Gheresi and Birkin/Eyston. The Bugatti team was very nearly withdrawn because of persistent failure during practice of its Michelin tyres. Private Bugatti owner Williams came to the team's aid with his private stock of Dunlop tyres, for which gesture he was awarded a place in the works team and so scratched his own entry.

When the race started at 8 am Fagioli roared into the lead with his 8C-2500. He was passed by Louis Chiron (works Bugatti) on lap 4, but went back into the lead again three laps later. Fagioli was setting a searing pace, he turned in a new lap record of 85.50mph on lap 12, but Chiron was with him every inch of the way. Dreyfus was in third place ahead of the Bugattis of Divo, Williams and Lehoux, but had already dropped a long way behind the leading duo. With 150 kilometres of racing completed, Chiron had regained the lead and he and co-driver Varzi stayed in front for the remaining  $8\frac{1}{2}$  hours of racing until the flag fell. Ernesto Maserati relieved Fagioli, but gradually lost ground, and Dreyfus/Gheresi moved up to second place, only to fall back again during the fifth hour. The Italian cars, both Alfa Romeos and Maseratis, were plagued by brake trouble and the Maserati/Fagioli 8C-2500 retired with engine problems. The Alfas also lacked the speed of the Bugattis, Scuderia Ferrari pit-work was not quite so slick and Chiron/Varzi had the race completely under their control. At the end of the ten hours the Molsheim entry crossed the finishing line ahead of Campari/Borzacchini (Scuderia Ferrari Monza), Biondetti/Parenti (works Maserati) and Birkin/Eyston (private Maserati). The other surviving Maserati of Dreyfus/Gheresi took eighth place.

On 5 July René Dreyfus with an 8C-2500 Maserati faced Phillipe

Etancelin's new Alfa Romeo Monza and seven Type 35 Bugattis in the Grand Prix de la Marne at Reims. Dreyfus led at the end of the first lap, but was passed by Chiron's Bugatti on lap 2. At the end of this lap Chiron coasted into the pits to retire with a broken prop-shaft. Once more Dreyfus was in front, but on the next lap he was passed by Lehoux's Bugatti Type 35B. The Maserati driver fought back, snatched the lead again on lap 7, but Lehoux was firmly glued to his tail and repassed Dreyfus three laps later. At the end of this 248 mile race Lehoux led by just over two minutes and Dreyfus crossed the line in second place over a minute ahead of Czaykowski's Type 35 Bugatti.

Maserati missed the Belgian Grand Prix on 12 July to concentrate on preparations for the German race held at the Nürburgring a week later. Here 8C-2500s were entered for Fagioli and Dreyfus and Birkin entered his private car. The opposition from Scuderia Ferrari was limited to one Alfa Romeo Monza, but there was a team of Type 51 Bugattis driven by Chiron, Varzi and Williams and four Mercedes-Benz SSKL 7 litre stripped sports cars driven by Caracciola, Stuck, Merz and von Brauchitsch. These SSKLs weighed around 31cwt, over twice as much as the French and Italian Grand Prix cars, and they had a voracious appetite for tyres. Before the race the team spent hours practising wheel changes (they could change all four wheels in thirty seconds) and were hoping that it would rain, as this would result in a reduction in tyre wear. There were thirty-three entries in this race, including fourteen runners in the 18 lap 1,100cc class (the large-capacity cars had to cover twenty-two laps).

In the words of Cyril Posthumus (*The German Grand Prix*, Temple Press Books, 1966):

An hour before the 9.30 am start of the race, black clouds lowered over the Eifel and blotted out the distant mountains. Then drizzle began to fall, changing to heavy rain, soaking the crowds and the circuit alike as zero hour drew near. Flagfall, and Luigi Fagioli, a master at swift getaways, hurled his low red Maserati into the lead, followed by Caracciola's Mercedes, Tim Birkin's Maserati and Varzi's Type 51 Bugatti, their wheels flinging up great columns of spray, the air filled with exhaust notes varying from the thunderous Mercedes to the higher-pitched Italian and French straight-eights, raucous 1,100cc Amilcars and shrill, screaming DKW two-strokes, until the 33rd car, Theissen's 520cc front-drive DKW, had vanished beyond the North Curve, and the spray clouds settled.

At the Schwalbenschwanz, 18 kilometres from the start, Caracciola, the *Regenmeister*, forged past the Maserati and after five laps Nuvolari



was through to second place. Despite his good start, Fagioli was not able to hold his own under these very difficult conditions; he was passed by Chiron on lap 8 and a few laps later lost control and crashed his Maserati, fortunately without serious injury. Dreyfus also retired his 8C-2500 with engine failure. Caracciola maintained his lead, despite a pit stop lasting 62 seconds (compared with 57 seconds for the stop made by Chiron, now in second place) and despite the circuit drying out in the closing laps of the race. Caracciola crossed the line to win his third German Grand Prix, 1min 18sec ahead of Chiron, Varzi finished third, Nuvolari fourth and Birkin, whose Maserati had been delayed by plug problems, could manage no better than tenth place, last but for Earl Howe's Bugatti.

On 2 August Nuvolari with an Alfa Romeo Monza won the Coppa Ciano on the Montenero circuit at Leghorn at an average of 51.90mph, Chiron finished second for Bugatti and Luigi Fagioli, thoroughly out-driven in this 135 mile race, brought his 8C-2500 Maserati across the line in third place.

The following day Birkin appeared with his 8C-2500 at the August Bank Holiday meeting at Brooklands. Great things were expected of the Maserati, but the weather proved to be too windy for record-breaking. In the last race of the day Birkin lapped at 135.45mph, not a record, but within striking distance of the record which stood to the credit of Kaye Don (Sunbeam Tiger 4 litre) at 137.58mph. Birkin did, however, set a new record for the mountain course of 75.21mph.

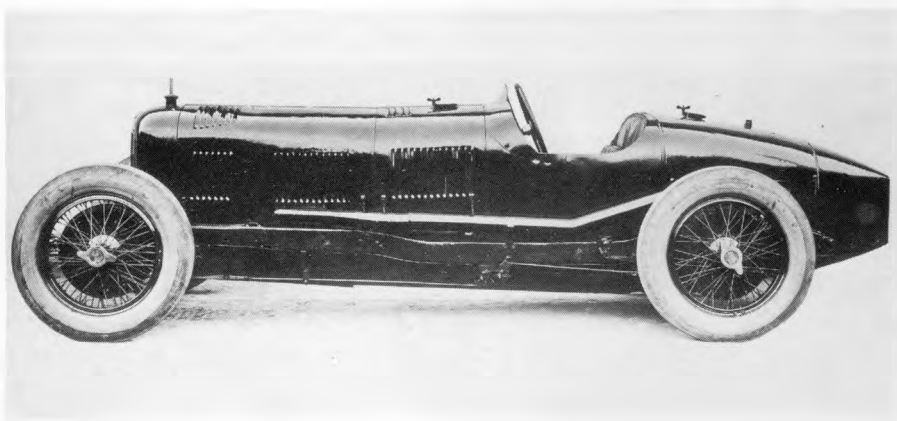
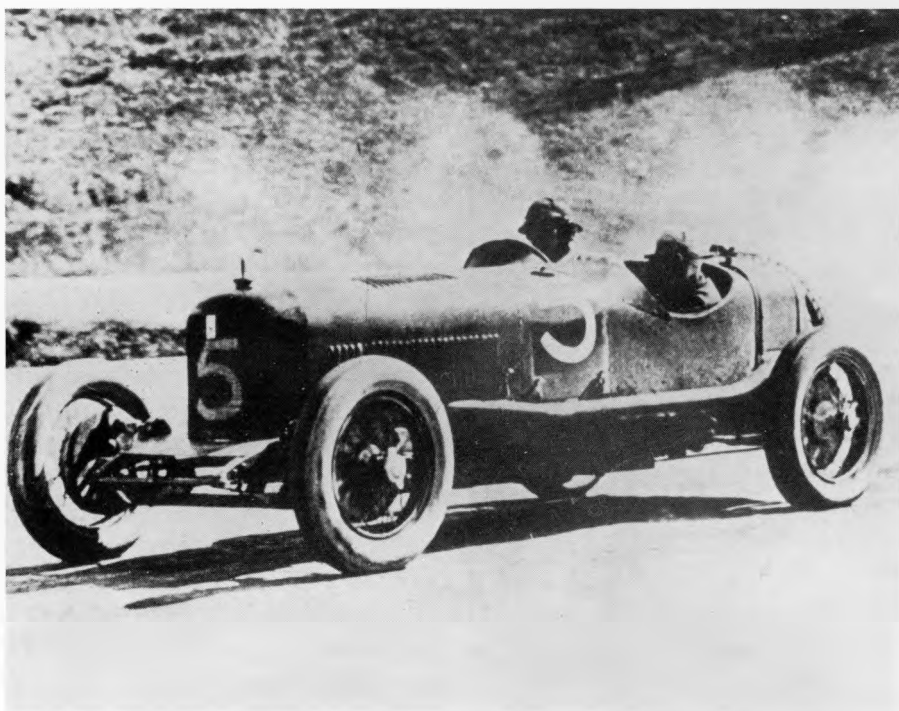
Maserati 8C-2500 cars in sports trim were driven in the Tourist Trophy at Ards by George Eyston and E. Fronteras, but they were completely out of luck in this race and no match for the Scuderia Ferrari-entered Alfa Romeo 2.3 litre cars in Le Mans long-wheelbase form. The MG Midgets of Norman Black and S. A. Crabtree took first and third places on handicap, Borzacchini was second for Alfa (he averaged 79.05mph) and he just failed to catch the leader in a flat-out drive in the closing stages of the race, while Eyston could manage no higher than eighth place at an average of 77.29mph. Fronteras retired very early in the race.

Bologna had suffered several demoralising defeats in 1931 at the hands of both Alfa Romeo and Bugatti, but the team made a convincing comeback in the Monza Grand Prix where the improved 8C-2800 was raced for the first time. Technically the car was unchanged, but the capacity had been increased to 2,795cc (68 × 94mm). This resulted in the improved power output of 198bhp at 6,000rpm and a maximum speed of



*Plate 1* Alfieri Maserati, founder of the company bearing his name and successful racing driver, who died in 1932; *Plate 2* The surviving brothers, Ettore and Ernesto, seen at their Bologna works in post-war years with one of their own four-cylinder engines.





*Plate 3* The first Maserati was the Tipo 26 1,500cc straight-eight seen on its debut in the 1926 Targa Florio. Alfieri Maserati drove it into ninth place; *Plate 4* Direct forerunner of the Maserati was the 1925 2-litre Grand Prix Diatto built by the Maserati brothers.

around 145mph. Unfortunately, nothing had been done to improve the roadholding and this was a shortcoming from which the Maseratis suffered compared with their Portello rivals throughout the early 1930s.

The Monza race was run on the same lines as the 1930 event, that is with a series of qualifying class heats and a final of 149 miles. As in 1930, the 4.263 mile Florio road and track circuit was used. The 20 lap 1,100cc heat was won by Scaron's Amilcar (the highest placed Maserati was Klinger's car in fifth place) and in the 14 lap 2,000cc heat Ruggeri, with what was described as an older-type Maserati, won from the Bugattis of Biondetti and Czaykowski and Pedrazzini's Maserati. None of the qualifiers in these two heats was willing to run in the final.

Next came the 14 lap 3,000cc heat in which Fagioli and Dreyfus took the first two places with the new 8C-2800 cars. The heat for cars over 3,000cc was undoubtedly the most interesting and contained a fine entry that included Ernesto Maserati with the 'Sedici Cilindri', Varzi and Chiron with the new and very potent 4.9 litre Bugatti Type 54 cars, and Nuvolari and Campari with the Tipo A twin-engined Alfa Romeos. Nuvolari led for a while before falling back with tyre trouble and set fastest lap at 101.23mph, but the Bugattis of Varzi and Chiron came through to win from Nuvolari and Campari and poor Ernesto, never in the picture in this race, trailed home in fifth place.

There were only four starters in the heat for those who had already failed to qualify and the finishing order was Borzacchini (Alfa Romeo Monza), Gherzi (Bugatti) and Minozzi (Alfa Romeo). The fourth starter was eliminated in particularly horrifying circumstances. This was Etancelin (Alfa Romeo) who had made a bad start, but by lap 7 had caught and was trying to pass Minozzi on the inside of a corner. The Alfa Romeo skidded out of control and mowed down a group of spectators who had pulled down the fencing so as to be able to watch the racing from the edge of the track; three onlookers were killed and ten more were injured.

Fagioli made yet another of his lightning getaways in the final and led away from Chiron, Dreyfus and Varzi. Achille Varzi with his big Bugatti passed Dreyfus and Chiron on successive laps and then started to harass the leader. Campari's twin-engined Alfa had failed to start because of trouble with one of its gearboxes, and Nuvolari's survived only until the tenth lap when it retired with a broken piston. Tyres proved the downfall of the Type 54 Bugattis and at the end of lap 13 Varzi had to give up his chase of the leading Maserati to stop at the pits for a wheel-change. Chiron dropped out of contention with his Type 54 when a thrown tread tore away a front brake cable. The Maseratis

appeared unbeatable, but they, too, had their troubles. Fagioli stopped to change a burst tyre, Dreyfus retired with a broken piston, but, luckily for Bologna, the problems suffered by other teams enabled Fagioli to regain the lead and he went on to win this race at an average of 96.60mph from Borzacchini (Alfa Romeo Monza), Varzi (who had been forced to make a second stop for new tyres) and Nuvolari (who had taken over Minoia's Monza).

For Maserati the final race of the season, the Czechoslovakian Grand Prix, was rather disastrous. Fagioli with an 8C-2800 was leading this race over the difficult Brno circuit when he lost control and crashed into a bridge; the bridge collapsed and the second- and third-place runners hit the wreckage (Nuvolari was in third place with an Alfa Romeo Monza). After the elimination of the leaders, victory went to Louis Chiron (Bugatti).

## THE 1932 RACING SEASON

No dramatic changes were made to the range of Maserati models for the 1932 season, but a new 'Sedici Cilindri' was built in even more powerful V5 form with two 2.5 litre straight-eight engines and a power output of over 330bhp at 5,200rpm. Although the team was represented throughout the year at most major races, successes were few and far between following the appearance of the new 2.6 litre Alfa Romeo Monoposto car at the Italian Grand Prix in May. Race durations had now been reduced from ten hours to five hours.

Maserati's first Grand Prix of the season was the 292 mile Tunis race held at Carthage on 3 April. In North Africa the 8C-2800s were plagued by supercharger and plug troubles and the race was dominated by Molsheim; Achille Varzi with a Type 51 Bugatti was the winner at 90.25mph and Marcel Lehoux with a Type 54 finished second ahead of Etancelin's Alfa Romeo Monza. There were no works Alfas entered at Tunis.

At Monaco on 17 April 8C-2800 cars were driven by Fagioli and Ruggeri who faced strong opposition from both Alfa Romeo (the first time a works Alfa team had run at Monaco) and Bugatti. Louis Chiron (works Bugatti) led at first, but under pressure from Nuvolari (works Alfa Monza) overturned his car while lapping two slower entries. After Varzi had retired his Bugatti with rear axle failure, Carraciola (with a white Monza ostensibly privately entered) and Borzacchini (works Monza)

moved up into second and third places behind Nuvolari. This complete domination of the race by the Milan team lasted until Borzacchini retired with mechanical trouble and third place was taken by Fagioli's Maserati. Ruggeri retired his 8C-2800 with mechanical trouble.

On 24 April Luigi Fagioli and the 'Sedici Cilindri' were entered in the Rome Grand Prix held in four 100 kilometre qualifying heats and a 240 kilometre final over the Littorio circuit. Fagioli was virtually unopposed and won the final at a brisk 98.59mph from Taruffi (Alfa Romeo) and von Morgen, Varzi and Count Czaykowski (all with Bugattis). A 2 litre Maserati driven by Count Castelbarco finished seventh.

There were only sixteen runners in the 1932 Targa Florio run over eight laps of the 44.7 mile Little Madonie circuit, and the sole Maserati entry was Ruggeri with an 8C-2800 car. Nuvolari, with an Alfa Romeo Monza, led throughout to win at 49.20mph from Scuderia Ferrari team-mate Borzacchini with a similar car and the Bugatti of Chiron/Varzi took third place. Ruggeri brought his Maserati across the line in fifth place, thirty-five minutes behind the winner.

The first Nîmes Grand Prix was organised by the Automobile Club du Gard over seventy laps of a street circuit through the town on 16 May. There were eleven runners, including a Maserati (probably an 8C-2500) driven by René Dreyfus. Louis Chiron led until an oil pipe broke on his Bugatti and then Benoit Falchetto took the lead for Molsheim; Dreyfus finished second ahead of Czaykowski (Bugatti) and Etancelin (Alfa Romeo).

At the Italian Grand Prix run on the full-banked track and road circuit at Monza on 5 June, four Maseratis (two works and two private) faced four entries from Scuderia Ferrari (two of the new Monoposto cars driven by Nuvolari and Campari and two Monzas driven by Caracciola and Borzacchini) and two 4.9 litre Type 54 Bugattis entrusted to Louis Chiron and Achille Varzi. The rest of the field was made up by private Alfa Romeos and Bugattis. The works Maseratis were the 'Sedici Cilindri' driven by Fagioli and an 8C-2800 for Ruggeri; private 8C-2500s were entered for Castelbarco and Premoli.

The crowd was smaller than had been hoped for because of the rival attractions of an important football match and the arrival in Milan of the Tour of Italy cycle race. Nevertheless, there was a pompous ceremony before the start which was given by Signor Starace, Secretary-General of the Italian Fascist party. At the fall of the flag Nuvolari and Chiron accelerated into the first two places ahead of Fagioli, Campari, Varzi and Borzacchini. Both Castelbarco and Premoli made pit stops early in

the race for plug changes and Caracciola lost thirteen minutes in the pits because of magneto trouble on his Monza. Nuvolari, Chiron, Varzi and Fagioli battled furiously for the lead in the opening laps; then, as if the Bugatti drivers had reached some sort of understanding, they eased off slightly, fell back some two hundred yards and waited in the hope that the duel between Fagioli and Nuvolari would prove the leaders' undoing.

At the first round of pit stops Nuvolari was stationary for 1min 36sec, while Fagioli's stop lasted a leisurely 3min 25sec, thereby dissipating all the good work which the Maserati driver had achieved during the first hour of the race. Castelbarco went off the road and put himself out of the race. The 4.9 litre Bugattis were proving heavy and tiring to drive, Chiron and Varzi lost all contact with the leaders and soon both the works Molsheim entries were out of the race. Varzi retired with gear-box trouble and took over Chiron's car which was suffering from a blocked petrol pipe. The pipe was only partially cleared and as a result this Bugatti was running on a very weak mixture; it began to overheat and subsequently retired with a burnt piston.

Fagioli was driving at a furious pace and had closed within thirty seconds of Nuvolari before his second pit stop. But Maserati pit-work was still slow and inefficient and it became clear that Fagioli's only hope of victory was that the leading Alfa should suffer mechanical trouble. In the closing stages of the race Fagioli set a new lap record, 112.2mph, but he was still around two and a half minutes behind the Alfa Romeo at the finish. As *Motor Sport* commented, 'Without detracting in the least from Nuvolari's magnificent performance, it can safely be said that if Fagioli's pit-work had been as well organised as that of the Alfa Romeo drivers, he would have undoubtedly won the race. But then pit-work is all part of the game, and Alfa Romeo fully deserve their victory.' Ruggeri and Premoli brought their Maseratis home in eighth and ninth places. Shortly afterwards Fagioli derived some consolation by scoring Maserati's third successive victory in the Rome Grand Prix with the 'Sedici Cilindri'.

There were no Maseratis entered in the French Grand Prix at Reims on 3 July and Ruggeri's 8C-2800 was the only Bologna car to appear in the German race on 17 July. Ruggeri was never in contention for the lead and retired with mechanical trouble. Nuvolari won the French race for Scuderia Ferrari, but at the Nürburgring the mechanics deliberately dallied over his car during a refuelling stop so that Caracciola should be allowed to win on home territory.

That the Maseratis were outclassed by the latest Alfa Romeo Mono-

posto cars was emphasised by the results of the next three races held on Italian soil. Nuvolari scored three wins in succession with Vittorio Jano's latest design in the Coppa Ciano at Livorno, the Coppa Acerbo at Pescara and the Circuit of Avellino. Maserati failed to feature in the results at the first two of these races, and at the 155 mile Avellino race the best the team could manage was a poor third by Fagioli behind D'Ippolito's private Alfa Monza.

Fagioli next appeared for Maserati in the Czechoslovakian Grand Prix held on the Brno circuit on 4 September. Clearly the Bologna team's fastest car was the 'Sedici Cilindri', but equally clearly this monster was unsuited to the tortuous 30 kilometre Brno circuit which was said to have 110 corners and Fagioli was entered with an 8C-2800 car. This 308 mile race was held in continuous driving rain that caused the elimination of several cars with water-soaked ignition and was beating so fiercely that Achille Varzi (Bugatti) was forced to pull out of the race because of an eye injury. Initially Nuvolari (Monoposto Alfa) led from team-mate Borzacchini and Chiron (Bugatti). Borzacchini retired with a broken differential, Nuvolari was forced to make a succession of pit stops because of ignition problems and Chiron went ahead to win at 67.67mph from Fagioli. Nuvolari eventually finished third, half an hour behind the winner.

At the Monza Grand Prix held on the full 10 kilometre circuit Fagioli was in action again with the 'Sedici Cilindri' Maserati. As usual, the race was run in heats and a final. In the first heat Minozzi brought an 8C-2800 Maserati across the line in second place behind Rudolf Caracciola's Alfa Monoposto and in the second heat there was a close and bitter struggle between Fagioli and Nuvolari. For five laps the two drivers lapped in close formation, constantly swapping the lead, but on lap 6 Nuvolari went off the road at the Vialone Curve and finished second to the Maserati driver after stopping at the pits for a wheel-change.

Before the final, Scuderia Ferrari entered a protest on the grounds that Fagioli had forced Nuvolari off the road during the second heat. The protest was rejected and a disgruntled Ferrari announced that he would not run the Alfas in the final. At this news the crowd became restive and hostile, clamouring for the start of the final with the Alfas on the grid, and Ferrari reluctantly relented, allowing the three Monopostos to be pushed out to the start (Nuvolari's car was damaged and he took over Campari's entry). Maybe the earlier incident had subdued Fagioli, for his driving in the final lacked its usual sparkle and he moved up from fourth to second place only after Nuvolari and Borzacchini made



pit stops because of a loss of fuel pressure. Caracciola won the final at 110.85mph from Fagioli, Nuvolari and Borzacchini. Ruggeri finished ninth with his 8C-2800.

The final race of the 1932 season was the Marseilles Grand Prix held on the slightly banked Miramas circuit on 25 September. Fagioli was at the wheel of the 'Sedici Cilindri' and 8C-2800s were driven by Ruggeri and de Maleplane (earlier in the season the latter had finished fifth at Comminges and fourth at La Baule). The race witnessed another fierce battle between Fagioli and Nuvolari, a battle that was finally settled in the Mantuan's favour when Fagioli dropped back because of mechanical trouble. And Nuvolari lost his expected victory through a too leisurely pit stop which allowed Raymond Sommer's Monza Alfa to sneak into the lead. Nuvolari chased hard after Sommer's private entry, but the works Monoposto burst a tyre and he was unable to make up the deficit. Fagioli finished a poor sixth.

An unsuccessful season ended in tragedy for the Maserati team. Alfieri Maserati had never fully recovered from a groin injury suffered in an accident at Messina in 1927. His health had deteriorated during 1932 and an operation became necessary. The operation was performed by a leading Italian surgeon, Professor Nigrisoli, but Alfieri never recovered and died soon afterwards.

In December 1932, the 'Sedici Cilindri' was taken to the Montlhéry circuit for a series of record attempts and the driver was Ruggeri. Tragedy struck again when Ruggeri lost control of the sixteen-cylinder car at high speed and was killed.

Despite these terrible set-backs Ernesto Maserati, who took control of the company following his brother's death, was planning a much more ambitious effort in 1933 and the team's new 3 litre car was to prove a match even for the latest products of Alfa Romeo and Bugatti.

## A Season of Substantial Success: The 8C-3000 and 8CM-3000 Straight-Eight Cars, 1933

The Maserati straight-eight engine was a comparatively simple and unsophisticated design, but in seven seasons of racing it had proved sound and reliable, serious engine problems were rare and it was an ideal car for the private entrant whose technical resources were limited. The weakness of all early Maseratis was their indifferent roadholding, and this shortcoming was particularly marked in the new and more powerful 3 litre cars built at Bologna from 1933 onwards.

For the 1933 season the Maserati brothers had developed a much improved straight-eight engine with a capacity of 2,992cc ( $69 \times 100$ mm) and a power output of 210bhp at 5,600rpm. This engine, which weighed a little under 400lb, was basically similar to earlier Maserati straight-eights, but the crankcase was narrower and the compression ratio had been raised.

Single-seater bodies had been permitted in Grand Prix racing in 1927–8 and since the beginning of the 1931 season, but Maserati had continued to build two-seater cars and the first two 3 litre cars, designated the 8C-3000, retained two-seater bodywork. All subsequent 3 litre cars, however, were the new monoposto 8CM-3000 version. The most striking feature of the single-seater was the very narrow chassis which had a space between the side-members of only twenty inches and was substantially narrower than that of the rival Alfa Romeo Monoposto. This narrow chassis resulted in excessive ‘whipping’ that caused the cars to skitter and caper round the circuits in a manner that was alarming for both drivers and spectators. When Earl Howe acquired one of these cars in 1934 (by which time the chassis had been widened), his

mechanic soon discovered that he was able to jack up one wheel six inches from the ground while that on the opposite side remained on *terra firma*!

The steering column of the 8CM-3000 was in the centre, with the accelerator and brake pedal to its right, the clutch pedal to the left and the gear-change for the four-speed 'box between the driver's legs. A major technical innovation was the use of hydraulic brakes (these had not been seen in Grand Prix racing since Murphy's Duesenberg won the 1921 French race) with very large Elektron drums and Elektron brake shoes. The handbrake was on the gearbox. The rear axle was similar to that of earlier Maseratis, but weight had been reduced by the use of Elektron for the differential housing and what was claimed to be a special steel for the axle tubes. There was a torque-tube between the gearbox and the differential and the driver sat just ahead of the differential. Despite its roadholding deficiencies, the 8CM-3000 was a close rival for the Alfa Romeo Monoposto that had dominated racing in 1932 and both cars had a maximum speed of close to 155mph.

During the winter of 1932-3 the Maserati brothers also experimented with a front-wheel-drive 3 litre car, the design of which had been inspired by the American Miller. This Maserati featured front suspension by Lancia-type sliding pillars and transverse quarter-elliptic springs and a very complicated transmission system. It was apparently not successful and was abandoned without being raced.

Early in 1933 it was announced that Raymond Sommer had been appointed Maserati agent for France and had ordered two of the new 8CM-3000 cars to be raced as a team by himself (chassis number 3004) and Goffredo Zehender (3006). The Maserati factory published an impressive list of works drivers, but at most races it fielded only a single car (8C two-seater, chassis number 3001), at first driven by Luigi Fagioli and later in the season by Giuseppe Campari. Another distinguished name to join the list of Maserati owners in 1933 was Bernard Rubin, co-driver of the winning Bentley at Le Mans in 1928, and his two-seater 8C (chassis number 3002), said to have 'a guaranteed speed of 150mph, with an amazing power-weight ratio' was to be driven by Sir Henry Birkin.

The shock announcement that Alfa Romeo was withdrawing from racing (for financial reasons) meant that Maserati's chances of success in 1933 were much enhanced. In the early part of the season the Scuderia Ferrari drivers, headed by Baconin Borzacchini and Tazio Nuvolari, had to make do with the now obsolescent Monza 2.6 litre cars and it was not

until the Coppa Acerbo race in August that Alfa Romeo once more released the famous Monoposto to the Scuderia.

The first important race of the 1933 season was the Tunis Grand Prix held at Carthage on 26 March. The Carthage circuit largely consisted of a succession of fast bends that could be taken almost flat-out and the race was run in heavy rain for much of its distance. The starting grid was formed by rows of three cars and positions on the grid were determined by the drawing of lots, a system that was understandably enough unpopular with all the faster drivers. The race proved an Alfa Romeo benefit, for Sommer's 8CM was an early retirement because of a sheared magneto drive and Fagioli's works two-seater dropped out with the same trouble after a succession of pit stops. Although unable to match the speed of the Scuderia Ferrari-entered Monzas of Nuvolari and Borzacchini, Zehender drove a steady race and moved up to take third place after the retirement of Varzi's Bugatti and Etancelin's Alfa.

At Monaco none of the Bologna cars was in the picture. Sommer retired his 8CM early in the race with a hole in the crankcase and although Fagioli, in a wild drive during which he frequently took to the pavement, scattering officials and photographers, held fifth place for a while, he dropped back because of fuel-feed problems and finally retired with magneto trouble. Zehender stopped at the pits, his right foot badly blistered from the heat of the engine, and rejoined the race with more heavily soled shoes to finish sixth, six laps in arrears. Sommer was now thoroughly disenchanted with his 8CM and placed an order for a new Alfa Romeo Monza.

On 6 May undergraduate Whitney Straight sat an examination at Cambridge in the morning and then flew to Brooklands to drive his black ex-Birkin 8C-2500 in the Junior Car Club International Trophy race held as a Formule Libre handicap over a distance of 263 miles. The race was run in a clockwise direction, excluding the home banking, but, instead, taking in the finishing straight. There was a massed start with no credit lap system, but the cars had to negotiate an S-bend half-way along the straight and then pass through one of three channels. These were of varying severity to handicap the two larger-capacity classes, while the smallest class had a straight run through. On the fourth lap Straight shot high on the banking and swept past Sir Malcolm Campbell's Sunbeam 4 litre to take the lead into the S-bend. Once in front, Straight drew further and further away from the rest of the field, set a new lap record of 92.70mph and lapped the rest of the entry. The Maserati soon stopped at the pits with mechanical trouble, however,

and although Straight rejoined the race, he retired after thirty-one laps because of differential failure. The winner was the Hon Brian Lewis at the wheel of an Alfa Romeo Monza.

Originally scheduled to be run in March, the Tripoli Grand Prix on the very fast Mellaha circuit had been postponed until 7 May. In this North African race works Maseratis were driven by Fagioli and Campari (the latter had just joined the team) and Birkin was entered with Rubin's 8C. When Marshall Badoglio, Governor of Tripoli, dropped the flag for the start of the race, the Alfa Romeo of Gazzabini nosed ahead, then Birkin carved his way to the front and headed Nuvolari (Alfa Romeo), Campari, Varzi (Bugatti) and Fagioli. For four laps the private Maserati stayed in front, then Campari took the lead. Neither the Alfas nor the Bugattis needed refuelling stops, but time lost in the pits cost the Maseratis the lead. Birkin's refuelling stop almost certainly cost him victory and it was to cost him his life. After a close duel Varzi's Bugatti took the flag a tenth of a second ahead of Nuvolari and Birkin finished third, ninety seconds in arrears. Campari (loose oil tank), Zehender and Fagioli all retired.

During his pit stop Birkin burnt his arm on the Maserati's exhaust and contracted blood poisoning which resulted in his death on 22 June. *Motor Sport* said in its obituary notice:

There is something strangely ironic in the fact that a man who had travelled faster round Brooklands Track than anyone else and who had been renowned for setting the fastest pace in countless road races, should have finally died from a long illness—contracted from a small burn on the forearm . . . But he did not live in vain. To all young men Sir Henry Birkin will stand as an example of courage in the face of adversity, daring tempered by judgment, skill backed up by sound technical knowledge and sportsmanship which was a byword among racing motorists the world over.

Bologna fortunes enjoyed a distinct improvement in the French Grand Prix held on the full 7·7 mile Montlhéry road and track circuit on 11 June. After the withdrawal of the Bugatti team and with other non-starters, there were nineteen runners including the works 8C Maserati of Campari and Zehender's single-seater. At the start Nuvolari led away with his Alfa and Campari held second place ahead of other Ferrari-entered Alfa Romeos driven by Taruffi and Chiron. Both Nuvolari and Chiron were eliminated by rear axle failure and Campari, the fat driver bulging out of the small Maserati cockpit and the car looking very unstable, led from Taruffi and Etancelin, both of whom were driving Alfas. The

Maserati stopped for new rear tyres and once he was back in the race Campari charged round the circuit to make up lost ground, passing Etancelin while he was in the pits and sweeping by Taruffi.

Campari built up a lead of two minutes, but stopped again for new rear tyres and rejoined the race thirty-one seconds behind Etancelin. Yet again the chase was resumed, Campari closed up on the leading Alfa, but rain began to fall and he decided that he needed more new tyres with a non-skid tread pattern. Etancelin should now have had the race in the bag, but he was slowed by gearbox trouble and once had to stop out on the circuit while he banged the lever into gear. Campari's car would not start on the handle after his pit stop and in breach of 'Rule 15 of the Grand Prix regulations' the Maserati was push-started by two mechanics and a third, unknown person. 'Campari drove as one possessed, lolling in the cockpit and masterfully controlling every movement of the steering wheel in his lap' and he overtook the Alfa on the last lap to win by a margin of forty-two seconds. After the race, Campari was fined a thousand francs for his breach of the regulations.

Straight made his Grand Prix début in the Marne Grand Prix at Reims on 2 July and he drove a calm, steady race to finish fourth behind a trio of Alfa Romeo Monzas driven by Etancelin, Wimille and Sommer. Guy Moll would have been third with his Alfa, but was disqualified for receiving outside assistance. Nuvolari's Alfa was eliminated by differential failure and it was this same trouble in two successive races that resulted in his decision to leave Scuderia Ferrari. At this race Campari drove the works 8C two-seater and Zehender and Clemente Biondetti ran 8CM monoposto cars. All three retired, both Campari and Zehender because they had been struck in the eye by flying stones. Engine heat had, unfortunately, badly burned the soles of Straight's feet and the burns were bad enough for him to have to miss two subsequent races.

After leaving Scuderia Ferrari, Tazio Nuvolari formed a private team in partnership with Baconin Borzacchini. The team had a couple of Alfa Romeo Monzas, but Nuvolari's usual mount for the rest of the season was the ex-Sommer Maserati 8CM (chassis number 3004). Nuvolari's first outing with his new car was at the Belgian Grand Prix at Spa-Francorchamps. After only a few laps in practice he diagnosed the car's chassis troubles. 'Flying Mantuan' and Maserati departed for the Imperia car factory near Spa. Complaining bitterly that the 8CM's chassis was insufficiently strong to withstand the stresses of high-speed cornering, he arranged for additional bracing to be welded into position. He returned to the circuit to turn in a lap in 6min 9sec,

two seconds slower than Louis Chiron's fastest lap with his Alfa Romeo Monza.

A draw was made for positions on the starting grid and at the fall of the flag Borzacchini (Alfa Romeo) accelerated into the lead. Nuvolari started from the back row of the grid, but by the end of the first lap he had worked his way through to the front of the pack and he led almost throughout this 372 mile race, falling back only because of his pit stop for fuel and new tyres, which lasted three minutes. At the end of the race he was three minutes ahead of Varzi's Type 51 Bugatti and Dreyfus's similar car took third place. Zehender retired his 8CM with transmission trouble.

The following weekend Nuvolari drove his Maserati in the Coppa Ciano on the Montenero circuit at Leghorn. In this 149 mile race Tazio scored a runaway victory, heading Brivio's Alfa Romeo Monza from the Ferrari stable across the line by a margin of over eight minutes. Campari's works-entered Maserati took third place.

Nuvolari's third and equally successful outing with his 8CM was in the Nice Grand Prix held on 6 August. At Nice, the very simple 3.2 kilometre circuit ran along one side of the road on the sea front that included the Promenade des Anglais (used for speed trials at the dawn of motor competitions), through a hairpin bend, along the return side of the straight and then branched off inland round the Jardin Albert Premier and back on to the sea front again. Zehender entered his 8CM and Campari drove a new works-entered four-cylinder 2 litre car.

There was a furious scrap for the lead between Nuvolari and Etancelin. 'Fi-fi' led initially, but then Tazio forced his way in front. Nuvolari stopped for his brakes to be adjusted and by the time he had rejoined the race, had dropped to third place. That dazzling combination of yellow jersey and bright red Maserati soon overhauled Lehoux's second-place Bugatti and Nuvolari went into the lead when Etancelin retired out on the circuit because of a broken brake rod. Zehender was in trouble early in the race. He stopped at the pits because of an overheated engine, took on extra water, 'fiddled with the shock-absorbers and went away without much energy'. Not long afterwards he stopped for the brakes to be adjusted and after only one more lap the car was retired because of overheating.

By the chequered flag Nuvolari was a minute and a half ahead of Dreyfus's Bugatti and at the end of his lap of honour, 'hundreds of bluejackets from the Italian fleet at Golf Juan tore Tazio Nuvolari from the seat of the winning Maserati, raised him shoulder high, and, a

white naval cap on his head, carried him triumphantly along the Promenade des Anglais—one of the most deliriously enthusiastic scenes ever witnessed in motor racing.’ Campari finished eighth and last with the 4C-2000 car.

The Maseratis had now won four out of their last five races and a direct result of these successes was that, financial difficulties or no financial difficulties, the faster Alfa Romeo Monopostos were released to Scuderia Ferrari in time for one to run in the Coppa Acerbo at Pescara the following weekend; the Monoposto was driven by Luigi Fagioli and it faced single-seater Maseratis driven by Nuvolari, Campari, Taruffi and Zehender. The Bologna *pilotes* threw the race away by over-driving their 8CMs. ‘At 10 o’clock the start was given by the Duke of Aosta, accompanied by His Excellency Acerbo himself. The huge Campari, with his single-seater Maserati, made the fastest getaway as he was in the front row, and the howling, clamouring pack disappeared from sight in a haze of blue smoke.’ On that first lap Nuvolari took the lead from Campari, but he was only a length ahead as they crossed the start/finish line. For the next eight 16 mile laps the two Maserati drivers fought a cut-and-thrust battle. The pressure proved too great for Campari who lost control and crashed and now Nuvolari was unchallenged. Fagioli, at the wheel of the Monoposto, closed within a minute of the leading Maserati, but there seemed little chance of him catching the ‘Flying Mantuan’. Then trouble struck the leader, Tazio pulled into the pits where a seized universal joint was freed, and resumed the race to finish two minutes behind Fagioli and with Taruffi’s Maserati in third place. Nuvolari had the consolation of setting a new lap record of 10min 31.8sec and the knowledge that his 8CM was conspicuously faster than its Milanese rival.

On 20 August the Comminges Grand Prix was held at St Gaudens, only twenty miles from the border with Spain. Since 1932 the St Gaudens circuit had been extensively modified, it now incorporated a new 5 kilometre stretch of road and its length had been reduced from 26 to 11 kilometres (so that the spectators would see the cars more frequently). Campari was unable to start because of the injuries sustained in his crash at Pescara and Nuvolari upset the organisers by sending a telegram to say that he could not arrive in time for the race. So the only Maserati drivers were Zehender with his usual skittish single-seater and Straight with his 8C-2500. Zehender, who suffered the most atrocious luck with his car, was disqualified for receiving a push-start after he had spun off and Whitney Straight retired with mechanical trouble. Fagioli with an Alfa Monoposto scored an easy victory from Wimille’s Monza.



Seven days later the Marseilles Grand Prix was held over one hundred laps of the 5 kilometre Miramas circuit. This was a circuit very much in the old tradition with a dusty surface and lined for much of its distance by log fencing. Maseratis were driven by Nuvolari, the great Baconin Borzacchini (probably with chassis number 3007) and Zehender. In practice Nuvolari was a clear three seconds faster than any of the opposition, which included Monopostos driven by Chiron and Fagioli.

There was a special prize for the leader at the end of every fifth lap and the canny Nuvolari initially let Dreyfus with a 4.9 litre Bugatti and then Chiron go ahead, but nipped in front again at the appropriate moments to take the 5 lap prizes—on the twentieth lap, however, Chiron was ready for him and kept him at bay despite strenuous efforts by Tazio to get past. Soon the first round of pit stops started, Nuvolari was stationary for 1min 17sec while the wheels were changed (but no fuel added). Borzacchini now went ahead, but when he stopped the mechanics were unable to remove one of the wheels. For fifteen minutes Baconin and his mechanics pushed and pulled at the wheel until it was discovered that the hub had broken and the car had to be retired. Nuvolari took the lead again, stopped at the pits at the end of lap 52 for four new wheels and fuel, and resumed the race to battle for the lead with Fagioli. An exhausted Zehender, wracked by the muscular effort of controlling his Maserati through the circuit's succession of curves, stopped and handed his car over to Parenti. After the next round of pit stops it seemed that Nuvolari had the race completely under control, but twenty laps from the finish the Maserati's back axle broke and the Monopostos of Chiron and Fagioli went on to take the first two places. Zehender, who shared fastest lap with Nuvolari in 1min 32sec, took fifth place, four laps in arrears, and this was his first finish with the 8CM since April.

Two races were held at Monza on 10 September; the Italian Grand Prix was run in the morning over fifty laps of the 6.214 mile combined road and banked track circuit and the Monza Grand Prix was held in the afternoon in three 14 lap qualifying heats and a 22 lap final over the banked 2.8 mile circuit only.

In the Italian Grand Prix single-seater Maseratis were driven by Nuvolari, Taruffi (probably with chassis number 3005) and Zehender, and Whitney Straight entered his 8C-2500. Apart from a short spell when Taruffi headed the field, the race was fought out between Nuvolari and the Monoposto Alfas driven by Chiron and Fagioli; because of stops for tyres and fuel the leading positions continually changed, a result, as much as anything else, of the efficiency or otherwise of the pit-work.

Nuvolari made a final stop for new tyres only two laps from the finish, lost the lead and finished forty seconds behind Fagioli's Alfa Romeo. Zehender crossed the line in third place and Straight was classified eleventh. Piero Taruffi retired his Maserati with a broken wheel.

In the second heat of the Monza Grand Prix Borzacchini drove the 8C Maserati with which Campari had won the French race earlier in the year. While battling for the lead in this heat Campari (Alfa Monoposto) and Borzacchini skidded on oil dropped at the south curve in the first heat by Trossi's Ferrari-entered Duesenberg and crashed; Campari was killed instantly and Borzacchini died from his injuries soon afterwards. In the final, which was reduced in length to fourteen laps, another popular driver, Count Czaykowski, was killed when he crashed his 4.9 litre Bugatti near the scene of the earlier fatalities. Marcel Lehoux (Bugatti Type 51) won the final from the Alfa Monzas of Moll and Bonetto.

Nuvolari's last race of the season with his 8CM was the Spanish Grand Prix revived at San Sebastian on 24 September after an interval of three years. At this race the new, long-awaited 2.8 litre Type 59 Bugattis, perhaps the most handsome racing cars seen in the 1930s, made their début and these were driven by Varzi and Dreyfus. Early in the race Nuvolari took the lead from Fagioli and he set fastest lap of the race at 96.59mph. Rain began to fall, Nuvolari lost control on the now slippery track and crashed badly. Chiron and Fagioli took the first two places with their Monopostos from Lehoux's Type 51 Bugatti.

Probably the most successful amateur Maserati driver in 1933 was Whitney Straight whose 8C-2500 had been extensively modified. Because of the great physical effort needed to change gear on the standard Maserati 'box, Straight had fitted a Wilson self-change gearbox controlled by a vertical cranked lever. Increasing the supercharger pressure had boosted power output to nearly 200bhp and the car was said to be capable of 142mph. Apart from his exploits mentioned earlier in this chapter, Straight finished second in the Albi Grand Prix, set fastest time in the wet at the Brighton Speed Trials, broke Caracciola's record for the 13.5 mile Mont Ventoux hill climb near Avignon by a margin of forty seconds and smashed von Stuck's record at Shelsley Walsh. In these last three events the 8C-2500 was fitted with twin rear wheels.

Another record broken by Maserati in 1933 was the standing start kilometre world record which stood to the credit of the late Parry Thomas with his special 'Babs' at 86.90mph. On 26 October at Montlhéry the Swiss driver Hans Ruesch, at the wheel of an 8CM-3000 (chassis number

3008), improved on this record with a speed of 88.33mph. Freddie Zehender was also at Montlhéry in late 1933 to make Class D (up to 3,000cc) record attempts and although he failed in his ambition to break the one-hour record, apparently because of mechanical trouble, he took a number of records over shorter distances, all of which had previously been held by Bugatti. Details of these are given below, with the speed of the previous holder in parentheses:

50 kilometres:	130.50mph (129.17mph)
50 miles:	131.47mph (130.04mph)
100 kilometres:	131.78mph (130.14mph)
100 miles:	132.43mph (124.15mph)

With the fine score of four wins in major Grands Prix the marque Maserati had enjoyed one of its most successful seasons since its inception. Admittedly, this was largely attributable to the fact that for much of the year the Scuderia Ferrari had been obliged to race the older and less powerful Monza Alfa Romeos, and if Tazio Nuvolari had not switched to a Maserati in mid-season, successes would have been few and far between. The appearance of a larger capacity, more powerful version of the Monoposto in 1934 and the entry into Grand Prix racing of Mercedes-Benz and Auto Union was unfortunately to result in a sad reversal of Bologna fortunes during the coming year.

## 5

# The Waning of Italian Racing Power: The 8CM-3000 Straight-Eight and Tipo 34 Six-Cylinder Cars, 1934

For 1934 the Association Internationale des Automobile Clubs Reconnus, the then controlling body of motor sport, introduced a new Grand Prix formula. The main requirements of this formula were (1) the dry weight of the car without driver, fuel, oil, water or tyres should not exceed 750kg (14.73cwt); (2) the bodywork of the car should present a minimum cross-sectional area of  $85 \times 25$ cm at the driving seat; and (3) all races must be over a minimum distance of 500 kilometres (310 miles). It was intended that the new formula should rationalise racing at its existing level, as fought out between Alfa Romeo, Bugatti and Maserati, and that twin-engined monsters like the 'Sedici Cilindri' Maserati and the Alfa Romeo Tipo A would be outlawed.

Two German companies, Auto Union and Mercedes-Benz, however, saw the new formula as a brilliant opportunity for publicity and propaganda; employing the most advanced technical resources and with the benefit of substantial financial support from the German government they built immensely powerful cars, complying with the strict letter of the new regulations but making a mockery of their intent. On their early outings the German cars were plagued by teething troubles and for much of the year racing continued to be a hard-fought battle between the Italian teams from Milan and Bologna. Early in 1934 Alfa Romeo produced a faster and more powerful version of the Tipo B Monoposto car with an engine of 2,905cc ( $68 \times 100$ mm) and developing 215bhp at 5,400rpm. Only too often during the 1934 season the latest Monopostos from Scuderia Ferrari, handled by a very able and well-balanced team of drivers, trounced the Maserati 8CMs. Bugatti's contribution to

the new formula was a 3.3 litre version of the beautiful Type 59 car, but this did not appear until after the 1934 Monaco Grand Prix.

For 1934 the only changes made to the 8CM-3000 were an increase in the width of the Elektron-bronze chassis frame from twenty to thirty inches (primarily to facilitate compliance with the new body requirement), the addition of radius rods to the front springs, and a claimed increase in power output to 230bhp (but this figure does seem to have erred on the optimistic side). Because of Alfa Romeo's refusal to sell Monopostos to private owners, the Maserati brothers received a large number of orders for delivery for the 1934 season. Tipo 8CM-3000 cars were supplied to Earl Howe (chassis number 3013), the Gruppo San Giorgio (a team consisting of Balestrero, Biondetti, Battilona and Palmieri), the Scuderia Siena and Whitney Straight. Tazio Nuvolari remained a Maserati driver with his private car (chassis number 3018), and 'Fi-fi' Etancelin acquired a 1933 narrow-chassis 8CM car (this seems to have been chassis number 3010). Noel Rees bought the 8C raced by Birkin for the Hon Brian Lewis to drive.

Straight had formed a private company, Whitney Straight Ltd, with co-directors who included Reid Railton and the Earl of Brecknock, and with Giulio Ramponi in charge of tuning and preparation. Straight ordered four new 8CMs, but in fact only three were raced. The first of these (chassis number 3011) was a narrow 1933 model. Railton modified the Straight cars extensively by boxing in and strengthening the chassis, carrying out suspension modifications, installing a Wilson pre-selector gearbox of the type used by Straight in his 8C-2500 and by fitting a new body of slightly lower weight and distinguished by a shield-shaped radiator grille. The Straight 8CMs, which were immaculately turned out in a white and blue colour finish, were driven by both Straight himself and H. C. Hamilton. R. E. L. Featherstonhaugh drove Straight's 'old' 8C-2500. One car ordered by Straight, but not raced, was offered for immediate delivery by Whitney Straight Ltd with the claim that it was capable of at least 160mph in *The Autocar* of 6 July 1934.

The first important race of the 1934 season was the Monaco Grand Prix held on Easter Monday over the usual one hundred laps of the famous street circuit. Maseratis were driven by Earl Howe, Whitney Straight (with his first, 1933 type car), Eugenio Siena (with the ex-works 8C two-seater) and 'Fi-fi' Etancelin. The Frenchman's car was not wide enough to comply with the minimum width requirement, but was accepted by the scrutineers after small aluminium wings level with the driver's seat had been fitted to the body. All the Maserati drivers

were in trouble because their cars had proved overweight. The tyres were removed, sumps, back axles and gearboxes were drained of oil and still the 3 litre cars were too heavy. Eventually the drivers circumvented the trouble by fitting alloy wheels. The sole works Maserati at this race was a four-cylinder 2,500cc car driven by Piero Taruffi. Neither of the German teams was yet ready to compete, but the Maseratis faced stiff opposition from 2.9 litre Monoposto Alfas entered by Scuderia Ferrari for Chiron, Lehoux, Trossi and Varzi and from 2.8 litre Type 59 Bugattis driven by Dreyfus, Wimille and Tazio Nuvolari.

In the opening laps Chiron led from Dreyfus and the fastest Maserati driver was Etancelin in third place ahead of Guy Moll; Taruffi and Nuvolari were scrapping for fifth place and then came Whitney Straight. Earl Howe was plagued by carburation trouble throughout the race and Taruffi's four-cylinder car had developed an engine misfire. Tyres smoking under acceleration, Etancelin's Maserati closed up on Dreyfus and went through into second place; shortly after half-distance, however, 'Fi-fi' lost control when his car struck a particularly bad bump, he cannoned into the sand-bags at the Station hairpin and put himself out of the race with broken steering. On the very last lap Taruffi, in fourth place, retired with engine trouble and at the fall of the flag the Alfas of Moll and Chiron took the first two places ahead of Dreyfus, Lehoux and Nuvolari. The Maseratis of Siena, Straight and Earl Howe finished seventh, eighth and tenth.

In the Bordino Grand Prix held on the 8 kilometre Alessandria circuit on 22 April the Maseratis were again out of luck. The race, staged in two 8 lap qualifying heats and a 15 lap final, was run in torrential rain that made the roads glisten blackly and lethally. In the first heat Carlo Pedrazzini at the wheel of an 8CM Maserati (chassis number 3014 entered by the Scuderia Siena) misjudged the corner before the bridge over the river Tanaro and hit a wall. The unfortunate driver was flung out of the car and suffered injuries to which he succumbed almost immediately. Nuvolari finished third in this heat behind a brace of Ferrari-entered Monopostos driven by Chiron and Tadini. In the final, the 'Flying Mantuan' lost control at almost exactly the same spot as Pedrazzini had crashed, hit a tree and suffered severe injuries that included a broken leg. Monopostos driven by Varzi, Chiron and Tadini took the first three places.

While Tazio was in hospital recovering from this accident, a local gymnastic club presented him with a section of the tree into which he had crashed and on which had been inscribed, 'To Tazio Nuvolari,

intrepid ace of the wheel, as a record of the providential obstacle which, although preventing a sure victory, saved a precious existence.'

Straight's next outing was in the Junior Car Club International Trophy at Brooklands which was run, as in 1933, with a handicapping system whereby the different classes of cars followed different channels through a stretch of the track at the fork on the finishing straight. Other Maserati drivers in this race were the Hon Brian Lewis with the red, two-seater 8C and Featherstonhaugh with Straight's 8C-2500. Rain had fallen shortly before the start and when the flag fell, Straight accelerated away into the lead, throwing up a great shower of water as he splashed through the puddles. 'For 45 miles Straight kept the American colours proudly ahead, the Maserati running beautifully with the characteristic broad flicker of orange exhaust on the cut off . . .', then Straight clipped a barrel at the artificial corner, damaged a tyre and was forced to stop for a wheel-change.

Lewis with his two-seater Maserati now went ahead, but when he stopped to refuel it could be seen that his face had been lacerated by flying stones and his cheeks were smeared with blood. The red 'Maser' was stationary for only forty-six seconds, but within two laps of Lewis rejoining the race, Straight had retaken the lead. For the remainder of the race Lewis dogged Straight's wheel-tracks, and with ninety of the hundred laps completed he was only twenty-three seconds in arrears. Noticing that his right-hand front tyre was showing the white breaker strip, Straight was forced to ease his pace and crossed the finishing line only four seconds ahead of the red two-seater. The 8CM would not have lasted another lap, for no sooner had Straight taken the chequered flag than the tyre threw a tread.

The high-speed Mellaha circuit in Libya was the scene of the Formule Libre Tripoli Grand Prix on 6 May. For this 326 mile race Maserati took the dust covers off the 5 litre 'Sedici Cilindri' which was entered for Piero Taruffi. Maserati 3 litre cars were driven by Whitney Straight, Hugh Hamilton (with an 8CM borrowed from Nuvolari), Philippe Etancelin, Clemente Biondetti, Goffredo Zehender and Eugenio Siena. Scuderia Ferrari was represented by 2.9 litre Alfa Monopostos driven by Chiron, Moll, Trossi and Varzi. Interesting contenders were two American Millers, a 3 litre driven by Lou Miller and a four-wheel-drive 5 litre Indianapolis car in the hands of Peter de Paolo.

Taruffi took the lead at the start of the race and streaked away from the rest of the field until he 'cooked' one of the corners and crashed so heavily that the corner was named after him! Chiron now led until he

stopped at the pits for a wheel-change, then Varzi went ahead with Hamilton in second place. Chiron regained second place, but the English driver chased the Alfas hard until the needle in the Maserati's carburetter float chamber stuck and caused his retirement. Straight also retired with mechanical trouble. The Alfa Romeos of Varzi, Moll and Chiron took the first three places. On this circuit the 8CMs were attaining speeds of close to 160mph.

On 20 May the Automobile Club Morocain held the Casablanca Grand Prix over sixty laps of the Anfa circuit. Of the fifteen entries, seven were Maseratis, including the Straight-entered cars of Whitney Straight and Hugh Hamilton. For some unexplained reason Scuderia Ferrari fielded the older 2.6 litre Monopostos at Casablanca and these were driven by Chiron, Comotti and Lehoux. Louis Chiron led throughout and Etancelin drove a fine race with his Maserati to finish second, fifty seconds in arrears. Because of a burst tyre only three laps from the finish, Straight dropped from third place to finish fourth behind Lehoux, and Biondetti was eighth. At one stage Hamilton held third place, but he dropped back because of tyre trouble and retired later in the race.

Although both the new Auto Unions and Mercedes were expected to make their début in the Arrusrennen at Berlin, only the team from Zwickau appeared at this race. The Italian opposition consisted of three Maserati 8CMs in the hands of Earl Howe, Nuvolari and Siena, and three Scuderia Ferrari Alfas driven by Chiron, Moll and Varzi. Tazio Nuvolari had not fully recovered from his crash at Alessandria; he was still swathed in bandages and as he could not use his left foot, the clutch pedal of his Maserati had been moved closer to the central accelerator so that he could operate both with his right foot. Avus was a high-speed circuit consisting of long straights connected by slightly banked loop roads and it did not acquire notoriety as a dangerous course until later when a steep banking had been substituted for the northern loop. Von Stuck (Auto Union) led the race until he was forced to make a pit stop for new tyres and then Guy Moll, whose Alfa had a 3.2 litre engine and rather curious streamlined body, went ahead. Stuck later retired because of clutch trouble and Moll won the race from Varzi, Momberger (Auto Union), Howe and Nuvolari.

Both Auto Union and Mercedes-Benz competed in the Eifelrennen held at the Nürburgring the following weekend and the leading Maserati drivers were conspicuous by their absence. The finishing order was von Brauchitsch (Mercedes)—Stuck (Auto Union)—Chiron (Alfa Romeo); the 3 litre Maseratis of both Ruesch and Siena succumbed to engine



trouble. An addition to the calendar of street races in 1934 was the Grand Prix held at Montreux in Switzerland. Etancelin was fastest in practice with his Maserati and led the race from Whitney Straight until brake trouble caused him to slow off. Trossi fought his way to the front with his Scuderia Ferrari Alfa and Straight fell back because of supercharger trouble and an oil leak spraying on to his face that caused him to make frequent pit stops to clean his goggles. At the end of this 90 lap race Trossi led Etancelin by over thirty seconds and Varzi with another Alfa finished third. Maseratis driven by Straight, Hamilton and Zehender took fourth, fifth and sixth places.

On 9 June Whitney Straight competed at Shelsley Walsh hill climb. Straight, whose white and blue car was fitted with twin rear wheels (the special extended hubs to take these did not arrive until the last hour of practice), was in brilliant form; driving with superb control and smoothness he reduced his own hill record to forty seconds dead. The following day Benoit Falchetto drove his Ecurie Braillard 3 litre Maserati to victory in the Picardy Grand Prix ahead of Sommer (Alfa Romeo) and Brunet (Bugatti). In the Penya Rhin Grand Prix, run at Barcelona on 17 June, Varzi scored another victory for Scuderia Ferrari. Nuvolari led with his Maserati in the opening laps, but his injured legs were still giving him pain and he dropped back to fourth place before retiring. H. C. Hamilton retired his Straight-entered 8CM after only fourteen laps. American Peter de Paolo had agreed to drive an Ecurie Braillard 8CM for the remainder of the European season, but he crashed badly in practice at Barcelona and was taken to hospital with a fractured skull and injured arm.

Another Maserati success followed in the British Empire Trophy which was run as a handicap race at Brooklands on 23 June. It was held over 100 laps of a special 3 mile circuit incorporating two artificial 'forkbends'. Straight was fastest on scratch at an average of 82.45mph, but he took second place on handicap to George Eyston at the wheel of an MG Magnette. Brian Lewis retired his two-seater Maserati with engine trouble, but Earl Howe was even less fortunate; he accidentally touched his Maserati's accelerator instead of the brake (so easy if the driver was not fully accustomed to a central accelerator) and crashed, damaging the front axle and two of the wheels. A week later at Brooklands Whitney Straight, with one of his 8CMs, set new Class D International records, for the flying kilometre at 136.98mph and for the flying mile at 135.49mph.

One of the season's more interesting races was the French Grand Prix held at Montlhéry. Against three Mercedes driven by Fagioli, Carac-

ciola and von Brauchitsch, two Auto Unions for Stuck and Momberger, three Bugattis entered for Benoist, Dreyfus and Nuvolari and three Scuderia Ferrari-entered Alfa Romeos for Chiron, Trossi and Varzi, the only Maseratis to run were cars driven by Etancelin and Zehender. Etancelin drove his usual 1933-type single-seater and Zehender had the old two-seater works car raced by Siena at Monaco. Both the 4.4 litre V-16 Auto Unions and the straight-eight 3.4 litre Mercedes-Benz W.25s displayed a fair turn of speed, but the German cars did not run as fast as they would later in the season and they lacked reliability. Scuderia Ferrari dominated the results, the Monopostos of Chiron, Varzi and Moll (the last-named relieved Trossi during the race) took the first three places and Chiron set fastest lap of the race at 91.94mph. The only other finisher was Benoist with a Type 59 Bugatti (with 3.3 litre engine) who was four laps in arrears. Etancelin retired after only eleven laps because of a broken oil pipe and Zehender was forced to withdraw after his mechanic had spent a fruitless twenty minutes trying to re-attach his 8C's rear axle by its buckled U-bolts; parts of the circuit were terribly bumpy and this probably accounts for the two-seater's rear axle troubles.

A week later the Marne Grand Prix was held on the very fast Reim-circuit and at this race there was a strong entry of Maseratis. Bologna built cars were driven by Tazio Nuvolari, Raymond Sommer (probably chassis number 3017), Goffredo Zehender, Hugh Hamilton and Whitney Straight. Once again the Maserati boys were out of luck and at the end of this 500 kilometre race the only Maserati finisher was Hamilton's car in fourth place behind the Scuderia Ferrari Monopostos of Chiron, Moll and Varzi/Marinoni. Nuvolari, now fully recovered from his crash at Alessandria, drove at his hardest, but was plagued by tyre trouble. Initially he held second place, struggling to get to grips with the leader, his arch-rival Achille Varzi, but on the eighth lap one of the Maserati's tyres punctured and Nuvolari was forced to stop for a wheel-change. Tazio rejoined the race in third place, two laps later he was forced to stop for another wheel-change and he now rejoined the race in eighth place. Still Nuvolari's troubles were not over; a third tyre burst just as he was passing the pits and he had to complete a full lap on the rim before he could stop for the wheel to be changed. He eventually got under way again, but retired soon afterwards with rear axle failure. Straight's car succumbed to piston failure soon after the start, Etancelin abandoned his car in the pits because of gearbox trouble, Sommer made innumerable pit stops before retiring with unspecified mechanical problems and Zehender was yet another victim of mechanical trouble.

On 15 July the German Grand Prix was staged at the Nürburgring and Auto Union and Mercedes-Benz pulled out every stop in an effort to win this race and make up for the humiliating defeat suffered at the hands of Scuderia Ferrari at Montlhéry. The entry list for this 25 lap (354 mile) race was made up as follows:

Auto Union:	von Stuck, Momberger and Buggaller (the last-named deputising for the sick Prinz zu Leinigen)
Mercedes-Benz:	Caracciola, Fagioli and Geier (the last-named replacing von Brauchitsch who had crashed in practice, breaking an arm and five ribs)
Alfa Romeo:	Chiron, Moll, Varzi (entered by Scuderia Ferrari)
Maserati:	Nuvolari, Zehender (both nominally entered by the works), Hamilton (with a Straight-entered car) and Ruesch

No works Bugattis were entered, but the field was made up by Hartmann's private Bugatti and several private Alfa Romeo Monzas.

The race was fought out between the two German teams, the Alfes were also-rans and of the Maserati drivers, only Nuvolari was ever in the picture. Stuck won the race for Auto Union, Fagioli was second for Mercedes and Chiron brought his Alfa home in third place after a brilliant and hard-fought race; the Auto Union of Momberger retired in the closing stages and this permitted Nuvolari to move up to fourth place. The inexperienced Hans Geier did well to finish fifth for Mercedes and Zehender took sixth place, but only after Swiss Alfa Romeo Monza driver Ulrich Maag had been disqualified for removing certain parts from his car before the weighing-in and replacing them afterwards! Hamilton retired with piston failure on the first lap and Ruesch was eliminated by fuel pump trouble.

The Vichy Grand Prix over a 2.35 kilometre 'round the houses' course was staged on the same day for the first and only time. The race was run in two 30 lap heats and a 60 lap final, to which were admitted the first four finishers in each heat and the faster of the two fifth-place finishers. Maseratis were driven by Etancelin, Falchetto (chassis number 3015 entered by the Ecurie Braillard), Straight, Sommer, Biondetti and de Villapadierna and the only real opposition to the Bologna cars came from two Monoposto Alfa Romeos entered by Scuderia Ferrari for Count Felice Trossi and Marcel Lehoux. Trossi won the first heat from Falchetto and Etancelin. Rain began to fall just after the start of the second heat; Straight took an immediate lead and built up such an advantage

on the first lap that he stayed in front despite executing a full 360 degree spin near the start/finish line. Lehoux closed right up on Straight as the heat progressed and at the fall of the flag the American was a bare 1.1 seconds ahead of his Algerian rival.

Etancelin took the lead at the start of the final, with Lehoux in hot pursuit until he buckled a wheel against a kerb and had to stop at the pits for a wheel-change. Although the Maserati concern has always been highly praised for its pioneering use of hydraulic brakes, it does seem that those fitted to the 8CMs were more trouble than they were really worth. Drivers complained and journalists of the period commented that these brakes faded badly when subjected to hard use on a winding circuit and, as at Montreux earlier in the season, Etancelin was for this reason forced to ease his pace. He was waving his arms in despair as he passed the pits and before the finish he was passed by both Trossi with his Alfa and Straight with his white and blue Maserati.

On 22 July two Grands Prix were held in France (at Dieppe and Albi) and the Coppa Ciano was held in Italy. The Dieppe Grand Prix was another race run in two heats and a final and was held on an exciting 8.15 kilometre circuit that incorporated a long uphill and downhill straight after the start, a sharp right-hand turn into a twisting downhill section and another sharp right-hand turn followed by an uphill twisting section. Etancelin drove his 8CM superbly to win the first one-hour heat from Lehoux's Ferrari-entered Alfa Romeo and Chris Staniland's Bugatti Type 51 entered by T. A. S. O. Mathieson. Chiron won the second heat for Scuderia Ferrari from the Maseratis of Zehender and Earl Howe. The first five finishers in each heat qualified for the final which was of two hours' duration. Lehoux led away with his Alfa, but Etancelin soon pushed his way to the front and demonstrated the superior speed of his Maserati by occasionally letting Lehoux slip in front again and then accelerating past him again at will. At the finish the order was Etancelin—Lehoux—Earl Howe—Rose-Richards (Bugatti Type 51).

Whitney Straight failed to start at Dieppe because his latest 8CM, the third and final example to be raced by the team, was not ready, but the Straight organisation appeared the same day at Albi. In the absence of Scuderia Ferrari, this 30 lap race was dominated by the Straight team. Hugh Hamilton led the race until his engine began to miss on one cylinder and while he was in the pits, Featherstonhaugh went into the lead with Straight's old 8C-2500 car. Hamilton rejoined the race to finish second, Veyron (Bugatti) was third and Sommer brought his 8CM across the line in fourth place.

At the Coppa Ciano held on the Montenero circuit near Livorno the sole Mercedes-Benz entered for Fagioli failed to materialise and the race devolved into a battle between the Scuderia Ferrari Alfas and Nuvolari's Maserati. Varzi and Moll duelled furiously for the lead and took the first two places for the Scuderia; Nuvolari finished third for Bologna, three and a half minutes behind the winner, and thereby prevented an Alfa Romeo landslide, for of the nine finishers, eight were Alfas.

The anticipated Auto Union and Mercedes-Benz battle in the Belgian Grand Prix at Spa-Francorchamps on 29 July did not take place. Only forty-eight hours before the race both teams sent telegrams withdrawing their entries. Mercedes stated that their cars could not be ready in time and Auto Union claimed that they wanted to give their drivers a rest. The real reason, however, was that the Belgian customs had demanded 180,000 francs duty on the 3,000 litres of special fuel that the German teams wanted to bring to the race. Also absent from Spa were Nuvolari (the 1933 winner) and the Whitney Straight team. So there were only seven starters and the single Maserati entered was driven by Raymond Sommer. Chiron crashed his Monoposto, Varzi's retired with engine trouble and the Type 59 Bugattis of Dreyfus and Brivio took the first two places ahead of Sommer, Benoist (with another Type 59) and Montier (driving his own Ford V8 Special).

On 5 August the Klausen hill climb, over a distance of fourteen miles and for much of its length consisting of successive hairpin bends, was held in Switzerland and the entry in the unlimited capacity racing class included several Maseratis. Rudolf Caracciola with a Mercedes-Benz made fastest climb of the day in a record 15min 22.2sec. Hans von Stuck was second for Auto Union in 15min 25.4sec and Whitney Straight, not really happy with the handling of his car despite the use of twin rear wheels, recorded third fastest time in 16min 20.6sec. Other 8CMs driven by Ruesch and Tuffanelli finished fourth overall (and in the unlimited class) and seventh in the unlimited class respectively.

The Coppa Acerbo was held at Pescara on 15 August and teams were entered by both Auto Union and Mercedes-Benz. The Stuttgart cars were driven by Caracciola, Fagioli and Henne and those from Zwickau by von Stuck and Sebastian. Corsi drove the 'Sedici Cilindri' Maserati and 8CMs were entered for Nuvolari, Straight, Hamilton, Earl Howe and Zehender. Scuderia Ferrari fielded Monoposto Alfas for Varzi, Chiron, Moll and Ghersi.

When Minister Scarara lowered the flag for the start of the race, although rain was no longer falling, the track was still wet and slippery.

Caracciola led from Stuck at the end of the first lap, Varzi moved up into second place on lap 3, but soon stopped for two new wheels, and the order was now Caracciola—Fagioli—von Stuck—Nuvolari. Hans von Stuck retired his Auto Union on lap 6, Nuvolari stopped at the pits to clear the fuel lines of his Maserati, Straight retired, Caracciola crashed heavily (fortunately without injury) on lap 9 on a hilly section of the circuit and Fagioli stopped at the pits for new rear wheels. The face of the race had changed completely and now Moll led for Alfa Romeo from Henne, Varzi and Fagioli.

Chiron stopped at the pits to refuel, but a mechanic allowed the fuel from the high-pressure hose to flood over the hot exhaust and in a matter of moments the car was ablaze. The Monégasque was dragged out of the car by the Ferrari mechanics and escaped with slight burns, but the car was almost completely burnt out. At about half-distance Corsi, too inexperienced a driver for such powerful machinery as the sixteen-cylinder Maserati, swerved off the road and crashed badly, suffering broken ribs. By this stage of the race both Hamilton and Zehender had retired their Maseratis because of mechanical trouble.

Moll stopped to refuel, Varzi (now at the wheel of Gherzi's car) took the lead and Fagioli was rapidly closing on the leading Alfa. When Varzi stopped for a wheel-change, the Mercedes went in front. Now Moll, in second place, began to turn on the pressure in an effort to catch the Stuttgart car. On lap 18 he tried to lap Henne's Mercedes at a point on the circuit at which rain had recently fallen. The Algerian was travelling at over 160mph when his Alfa touched the German car, the back of the Monoposto swung round, Moll almost regained control, but struck a ditch. The Alfa reared up, bounced into a bridge and careered on for four hundred yards before coming to rest against the wall of a house. The twenty-four-year-old driver survived the crash, but died shortly afterwards. It seems that the Italian car had been caught by a powerful gust of wind and Moll had applied the brakes in a vain effort to correct the situation. Fagioli went on to win the 321 mile race from Tazio Nuvolari whose car, as the speeds given below indicate, was very much slower than the German opposition. Brivio took third place with his Type 59 Bugatti.

The competitors were timed over a flying kilometre of the main Montesilvano straight and the fastest representatives of each marque were:

Caracciola (Mercedes-Benz)	179·6mph
Sebastian (Auto Union)	171·1mph
Chiron (Alfa Romeo)	168·7mph

Nuvolari (Maserati)  
Brivio (Bugatti)

155·2mph  
159·3mph

On 19 August the third Nice Grand Prix attracted an entry of eighteen cars, seven of which were 8CMs; the Maseratis were driven by Nuvolari (who had won the race for Bologna the previous year), Etancelin, Straight, Ruesch, Sommer, Zehender (with a car entered by de Villapadierna) and Count de Villapadierna himself. Strong opposition came from the Scuderia Ferrari-entered Alfa Romeo Monopostos driven by Varzi, Chiron and Trossi.

Varzi and Chiron headed away the field at the start of the race and Nuvolari was third ahead of René Dreyfus (Type 59 Bugatti). Dreyfus passed Nuvolari, Chiron fell back behind the Bugatti and Maserati and under pressure from the 'Flying Mantuan' Dreyfus left his braking too late at one of the corners and crashed into the straw-bales. Setting a searing pace at the head of the field, Varzi turned in a new lap record of 1min 45sec, Nuvolari knocked a second off this time in his pursuit of the leader and Varzi later equalled the new record. Sommer was already out of the race because of mechanical trouble (he then took over dell'Orto's Alfa Monza for which he was nominated as reserve driver) and on lap 13 Whitney Straight went into a corner too fast, hit the straw-bales and put himself out of the race with a bent front axle. Nuvolari's Maserati succumbed to piston failure and so the Scuderia Ferrari Alfas now held the first three places. When Chiron stopped at the pits for a plug-change, Etancelin moved up into third place with his blue Maserati and gained another place when Trossi ran out of fuel two hundred yards from the pits. At the end of this 100 lap race Varzi crossed the line a lap ahead of Etancelin, Trossi was third and the other 8CMs of the Count de Villapadierna and Zehender took fourth and fifth places.

On 26 August the Swiss Grand Prix was held for the first time at the Bremgarten circuit, near Berne, and the same day the Comminges Grand Prix was run on the St Gaudens circuit. Although the German teams ran only in the Swiss race, Scuderia Ferrari and the Whitney Straight fielded cars at both events. Berne was *en fête* for the country's first National Grand Prix and, according to *Motor Sport*, 'Every hotel was booked up months before, innumerable posters covered the walls and the shop-keepers all dressed their windows in a suitable Grand Prix fashion. The pâtisseries-confiseurs vied with each other in making chocolate and sugar cakes of racing cars, and altogether the city could be described as being "motor racing conscious".'

Bremgarten, named after the public forest belonging to the local citi-

zens' guild near and through which it ran, had been used for motorcycle racing since 1931, but this was the first occasion on which it had been used for car racing. It was a fast 4.52 mile circuit on which the cars were attaining 140mph as they passed the pits and a difficult one with a succession of fast bends, made more difficult by the play of light and shadow from sunlight filtering through the trees.

After the Prix de Berne Voiturette race won by Dick Seaman with Whitney Straight's MG Magnette, the cars were wheeled out for the 317 mile Grand Prix. Mercedes-Benz W.25s were driven by Caracciola, Fagioli and von Brauchitsch; Auto Unions by von Stuck, zu Leinigen and Momberger; and Alfa Romeo Monopostos by Chiron, Varzi and Ghersi. The Maserati 8CMs were driven by Tazio Nuvolari, Hugh Hamilton (with a Straight car), Earl Howe and Clemente Biondetti. René Dreyfus had his usual 3.3 litre Type 59 Bugatti.

Hans von Stuck led throughout with his rear-engined Auto Union, but Tazio drove his Maserati magnificently, holding second place until forced to retire by an incurable misfire; like Moss in 1961, Nuvolari had shown that on a driver's circuit a truly great champion can compensate with skill for the shortcomings of his car. After Nuvolari's retirement Dreyfus moved up into second place, but fell back to finish third behind Momberger's Auto Union. The Mercedes were out of the picture in this race because of mechanical troubles and the Alfa Romeos failed to display their customary speed. Varzi, Chiron and Ghersi finished fourth, fifth and seventh for Scuderia Ferrari.

The race was marred by the death of Hugh Hamilton; he was lying seventh on the last lap when he went off the road at a corner in the wooded section of the circuit, hit one tree and rebounded into another, from which a branch broke off and fractured the skull of a spectator. The Maseratis of Biondetti and Earl Howe were outclassed and finished at the tail of the field in eighth and ninth places, four laps in arrears.

At Comminges, Whitney Straight went into the lead at the start of the race and led until lap 5 when he was passed by Comotti with a Scuderia Ferrari Monoposto. Etancelin also passed Straight, but retired his Maserati with mechanical trouble. Straight fell back to third place again, behind Zehender's 8CM, when he was forced to stop at the pits for a wheel-change.

Next came the Italian Grand Prix at Monza; as a result of the terrible accident that had marred the 1933 meeting a special 2.485 mile circuit was used and it was hoped that this would prove much safer. This very slow circuit, known as the 'Short Florio', ran anti-clockwise and in-



corporated the slightly banked south curve of the track circuit with chicanes to slow the cars, a section running diagonally to link up with the road circuit, the south curve of the road circuit (this part taken in a clockwise direction), the pits road and an acute hairpin bend which led back on to the outer track and south curve again.

At this race a new Maserati model made its début in the hands of Tazio Nuvolari. It had become increasingly obvious that the familiar 8CM straight-eight was no match for either the new and very powerful Auto Union and Mercedes-Benz cars or the ever-improving Alfa Romeo Monopostos fielded by Scuderia Ferrari. In an effort to keep abreast of developments by other teams the Maserati brothers hastily built a new six-cylinder engine of 3,326cc ( $84 \times 100\text{mm}$ ) which would slip into the existing 3 litre chassis. This engine was a direct development of the already well-established four-cylinder design. It featured the usual Maserati twin overhead camshafts, a Roots-type supercharger, single Weber carburetter and Scintilla magneto and it was said to develop 260bhp at 5,000rpm. This combination of 8CM chassis and six-cylinder engine was known as the Tipo 34 and it had a maximum speed in excess of 160mph.

The entry at Monza was made up as follows:

Mercedes-Benz:	Caracciola, Fagioli, Henne
Auto Union:	von Stuck, Momberger, zu Leinigen
Alfa Romeo:	Varzi, Trossi, Chiron, Comotti (entered by Scuderia Ferrari)
Bugatti:	Brivio (Type 59, did not start), Earl Howe (Type 51)
Maserati:	Nuvolari (with the Tipo 34 referred to above), Ruesch, Straight, Zehender (all with 8CMs)

Before the start of the race the cars and drivers paraded past the grandstands and as they passed the official stand, the drivers and mechanics raised their arms in a fascist salute. The race, which lasted  $4\frac{3}{4}$  hours, proved very tiring and drivers of cars that had retired relieved weary team-mates who were still in the race. Monza witnessed yet another German victory and Caracciola/Fagioli with the sole surviving Mercedes-Benz won from the Auto Union of von Stuck/zu Leinigen; the Alfas of Trossi/Comotti and Chiron (driving solo) took third and fourth places. Nuvolari was well up with the leaders in the early laps of the race, but his car gradually lost its braking power and as the race drew to a close he was slowing the Tipo 34 on the gearbox alone. At the end of this

115 lap ordeal Tazio took fifth place. Straight and Ruesch brought their 8CMs home in eighth and ninth places. Zehender retired because of brake trouble.

The same day a series of races under the title of the Grand Prix de France were held at Montlhéry over the 3.1 mile combined road and track permutation known as the *circuit routier*. Benoit Falchetto with an 8CM of the Ecurie Braillard (probably chassis number 3015) won the 55 mile race for cars over 1,500cc supercharged, leading home Brunet (Alfa Romeo) of the same team by a comfortable margin and averaging 86.93mph. In the morning, before the meeting proper had started, a match race was staged between Falchetto's Maserati and Marcel Doret with a Dewoitine aeroplane. The aeroplane won with ease.

On 14 September both Straight (who had set a new course record with his 8C-2500 in 1933) and Falchetto competed in the Mont Ventoux hill climb. Hans von Stuck and his Auto Union were in top form, however, and despite very slippery road conditions set fastest climb of the day in a record 13min 38.6sec. By this win the Austrian clinched the title of 1933 European Mountain Champion. Straight was second, competitive but not quick enough, with a climb in 13min 58.8sec; third-place man Falchetto could manage no better than 14min 14.4sec.

In the Spanish Grand Prix held on the Lasarte circuit at San Sebastian on 23 September the Mercedes-Benz of Fagioli and Caracciola took the first two places and Nuvolari, driving a Type 59 Bugatti in this race, finished third. The sole Maserati to finish, one of the Straight 8CMs, was driven into eighth place by Marcel Lehoux. Of the other Maserati drivers, Brunet with an Ecurie Braillard car went off the road and Falchetto of the same team retired at the pits.

At Shelsley Walsh hill climb on 29 September Straight ran one of his Maserati 8CM cars which had been painted black and, as usual at sprint events, fitted with twin rear wheels. The meeting was run in very wet conditions and although Straight won the 3,000cc racing class with a climb in 44.2sec, he was pipped for fastest time of the day by Raymond Mays who made an ascent with his 2 litre ERA in 44 seconds dead.

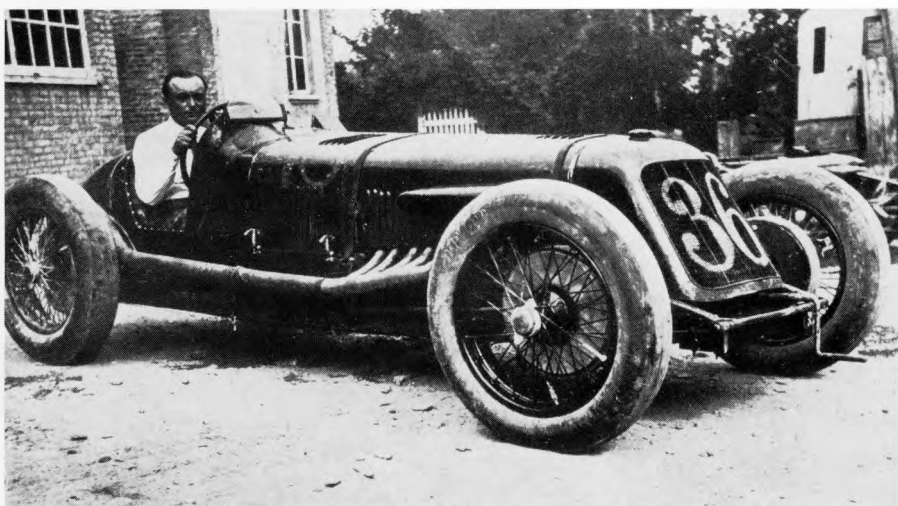
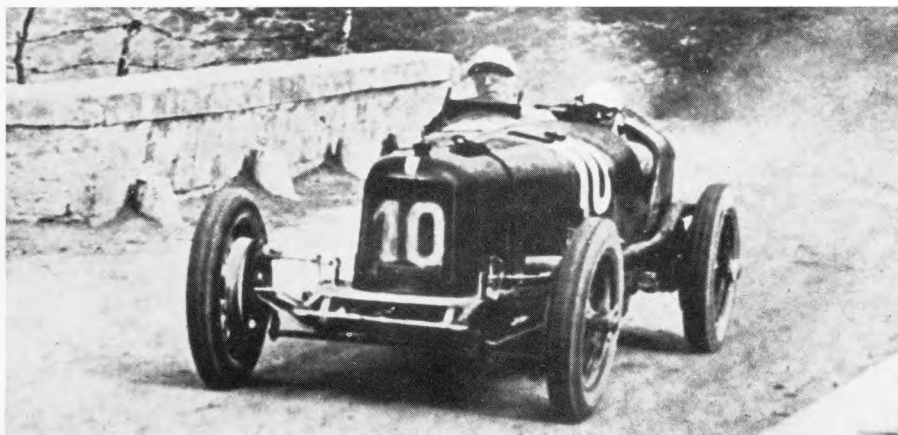
The six-cylinder Maserati next appeared with Nuvolari at the wheel at the Circuit of Masaryk held on 30 September at Brno, in Czechoslovakia. That the circuit was arduous was obvious from the description in *Motor Sport*: 'The Masaryk circuit is long by modern standards, having a length of nearly 20 miles. Half of it is made up of the national roads through Ostrovacice, Bosonoky, Veselka and Novy Liskovec, and the rest is the district route through Brno (Pisarky), Kohoutovice, Zebetin and Ostro-

vacice. The road rises and falls through 750 feet during the lap, with a maximum uphill gradient of 7 per cent and downhill gradient of 9.5 per cent.'

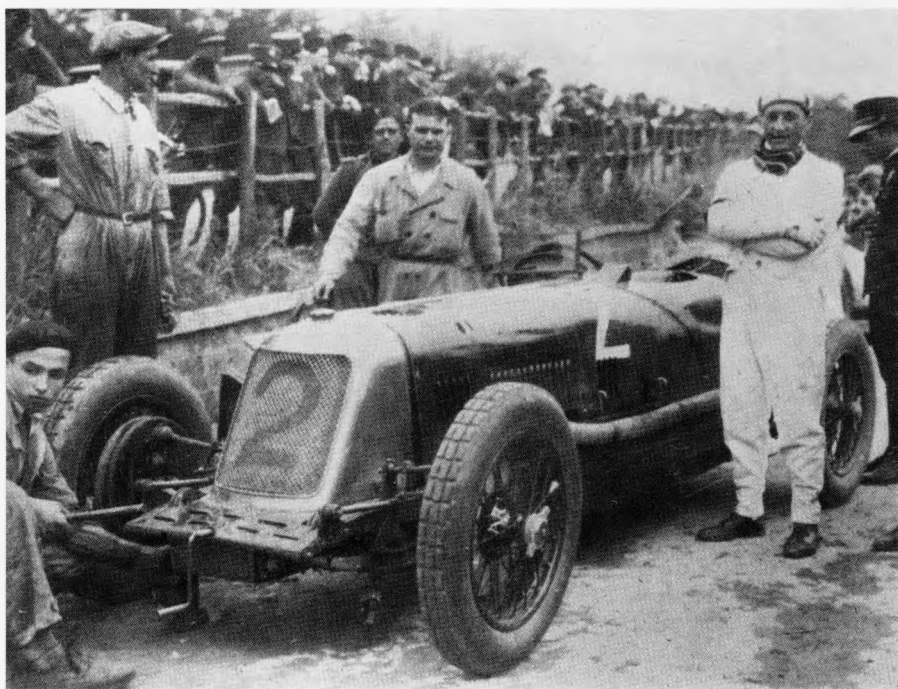
A second six-cylinder Maserati was reported to be entered and surrounding this entry is one of the oddest stories in the history of motor racing. This Maserati had allegedly been bought new at the factory by Josef Bradzil, a thirty-year-old Czech mechanic from Pressburg; he had been given the money by his manager, one Maric, who, in turn, had been loaned it by his fiancée. Unfortunately the engagement was broken off, the fiancée demanded the return of her money and when, for obvious reasons, it was not forthcoming, she issued a summons against both men which led to their arrest by the police. It seemed such a shame that the brand-new car could not be raced and two leading drivers (their identities were not disclosed) asked the authorities if Bradzil could be released from prison for practice (returning to jail afterwards) and, again, for the race. This was agreed to and Bradzil was allowed to practise. On his first lap, only a few minutes after the start, he took a corner at a speed estimated to be in excess of 125mph, the car jumped a ditch, demolished two trees and broke in two; the driver was thrown out of the car and killed. At the inquest a verdict of suicide was returned.

In the Czechoslovakian race Nuvolari drove magnificently to finish third behind von Stuck (Auto Union) and Fagioli (Mercedes-Benz). On 6 October Whitney Straight scored a victory from Penn-Hughes's Alfa Romeo in the 20 lap Donington Park Trophy. At Brooklands a week later Straight won the 12 mile Mountain Championship race from Raymond Mays with an ERA, a car that had been one of the sensations of the 1934 season, and he also scored a win, starting from scratch, in the Record-Holders' Mountain Handicap Race run over a distance of only six miles.

On 14 October the Circuit of Modena was held on a 3.2 kilometre 'round the houses' street course. There were separate 40 lap races for voituresses and unlimited capacity cars; in the latter race Nuvolari with the six-cylinder car scored his first and rather belated victory of the 1934 season, showing convincingly that the new Bologna car was more than a match for the Scuderia Ferrari Alfas which Varzi and Tadini drove into second and third places. Maserati 8CMs driven by Sandri, Soffietti (with an ex-Whitney Straight car) and Corsi finished sixth, seventh and ninth. A week later the Circuit of Naples was run over a tortuous 4 kilometre circuit. Nuvolari and the Tipo 34 were again on top form and won from the Alfa Romeos of Brivio and Tadini; Giuseppe Farina drove



*Plate 5* Ernesto Maserati at the wheel of a 1,500cc straight-eight car in the 1927 Targa Florio;  
*Plate 6* Baconin Borzacchini at the wheel of the original 1929 'Sedici Cilindri' twin-engined Maserati.



*Plate 7* Luigi Arcangeli in the 1930 Rome Grand Prix with the straight-eight 8C-2500 car. He won the race from Bouriat's Bugatti; *Plate 8* At Pescara, Ernesto Maserati drove this sixteen-cylinder 4-litre car into second place.

a 1,500cc Maserati voiturette into fourth place. Soffietti, again at the wheel of the ex-Straight car, finished sixth and Minozzi's 8CM was classified seventh.

The 1934 season finished with two races outside Europe. On 28 October the Algiers Grand Prix was held in two 15 lap heats over the very tortuous 8.1 kilometre Bouzerea circuit and at this race the Maseratis were again well to the fore. Jean-Pierre Wimille with a Type 59 Bugatti won the first heat from Brivio (Scuderia Ferrari Alfa Monoposto) and Straight (8CM). Soffietti (driving an 8CM belonging to Minozzi) finished fifth, Ruesch with the works six-cylinder car took sixth place and Chambost (the ex-Salmson driver had bought Sommer's 8CM) finished eighth. Lehoux, driving a Straight car before a home crowd, blotted his copy-book by sliding off the road on loose sand and stuffing his 'Maser' into a ditch. Etancelin also retired, supposedly because his car was running on incorrect fuel as its special fuel supply had failed to arrive from France.

In the second heat Wimille and Straight led the field away at the start, but the American was passed by Louis Chiron (Scuderia Ferrari Alfa). When Chiron stopped at the pits because of shock-absorber failure, Straight moved up again into second place. In this race luck was not on Straight's side, however, and he retired because of gearbox failure on the last lap. Wimille won the heat from Chiron and Soffietti and these were also the places on aggregate. Chambost finished fourth in the second heat and Ruesch retired the six-cylinder car with fuel problems.

The final race of the season was the handicap South African Grand Prix held on 27 December over the 16 mile Marine Drive circuit at East London. Straight shipped out one of his 8CMs, together with brother Michael's Railton-Terraplane and the MG Magnette for Dick Seaman to drive, and he later flew out to the race in his private aircraft. Starting from scratch, Straight came through to win this 91 mile handicap from Case's locally entered Ford V8 and Michael's Railton.

An Italian journalist calculated the winnings of the leading drivers in 1934, and although Alfa driver Achille Varzi came out on top with prize money totalling 601,000 lira (751,000 francs), heading all the drivers of the German teams, none of the Maserati drivers fared well in the table. Top Bologna driver was Nuvolari in seventh place with 152,000 lira (190,000 francs) followed by Etancelin (eighth) with 150,000 lira (187,500 francs) and Straight (tenth) with 85,000 lira (106,250 francs). Rumours were rife that Whitney Straight was proposing to acquire an Auto Union for the 1935 season, but in fact he sold his Maseratis, eschewed motor racing altogether and thereafter concentrated his energies on aviation.

## 6

# Scuderia Subalpina Strives for Success: The 8CM-3000, Tipo 34 and V-8R1 Cars, 1935

Private Maserati drivers had achieved a measure of success in 1934, but the 8CM was no longer any match for its Italian and German rivals. The straight-eight car was still listed by Maserati for 1935, but it seems no more were built; the model continued, however, to be a favourite mount for private owners for many years to come. In late 1934 the Maserati brothers announced that during the coming season the works would be represented by the Scuderia Subalpina, an organisation formed in 1933 by Count della Chiesa. In Grand Prix racing the team would field V-8 cars for Philippe Etancelin and Goffredo Zehender, but the existing Tipo 34 models would be raced until these were ready. The Subalpina team was well equipped and staffed with three transporters and six mechanics. Another Tipo 34 was entered by Gino Rovere and driven by the young and very promising Giuseppe Farina. Tazio Nuvolari had planned to continue as a Maserati privateer for another season, but under pressure from Benito Mussolini, who was anxious that the Alfa Romeos should put up as good a show as possible, the 'Flying Mantuan' rejoined Scuderia Ferrari.

The first race of the 1935 season was the Norwegian Grand Prix held on 10 February on the Bogstad Estate, ten kilometres from Oslo. The 5 kilometre circuit was laid out over a lake frozen to a depth of sixteen inches. Ruesch brought his 8CM home in third place behind ice-racing expert Widengren (Alfa Romeo) and Ebb (Mercedes).

A fortnight later the Pau Grand Prix was held over the familiar street circuit that has changed so little today and in warm and sunny conditions despite heavy rain throughout the night before the race. Maseratis were

driven by Etancelin (still at the wheel of his 1934 car because the Subalpina six-cylinder cars were not yet ready), Brunet, Soffietti and Falchetto. Hans Ruesch should have run his car but telephoned the organisers to report his withdrawal from the race because of deadlock with the customs at the Franco-Italian frontier. The Scuderia Ferrari Alfa Romeos dominated the race and Nuvolari led home team-mate Dreyfus; the Maseratis of Soffietti, Falchetto and Brunet finished third, fourth and fifth. Etancelin held third place and chased the Alfas hard for the first twenty laps, but oil pump failure caused his retirement. Within a matter of weeks Etancelin had sold his 8CM to Armand Girod.

Shortly afterwards Ruesch scored a victory in the Grand Saconnex, a hill climb at Geneva; this climb more closely resembled a British 'sprint' climb than the usual European mountain event and Ruesch with his 8CM covered the course in 24.4 seconds.

In the 1935 Mille Miglia, the greatest of the Italian classic road races, held on 14 April, the fastest cars were a 2.9 litre Alfa Romeo Monoposto in sports trim entered by Scuderia Ferrari and driven by Carlo Pintacuda (the body was so narrow that co-driver the Marquis della Stufa was bulging out of the passenger side of the cockpit) and a Tipo 34 Maserati with sketchy two-seater body (but rather roomier than that of the Alfa) driven by Achille Varzi. The Maserati was a works car loaned to Varzi. It had the latest 3,724cc version of the six-cylinder engine (not raced before) which featured the same cylinder dimensions as the 2.5 litre four-cylinder car raced by Taruffi at Monaco the previous year. Power output even in detuned form was around 300bhp, this Tipo 34 weighed 1,200kg and it was said to be capable of 135mph. The Maserati ran well in the early part of the race and at the Bologna control, 145 miles from the start, Varzi was in second place behind Tadini's Alfa Romeo Monza. On the next stretch of the course over the Raticosa and Futa passes Varzi fell back because of trouble with the scavenge pump for the dry sump lubrication system and disintegration of the bodywork; this body had only been completed on the eve of the race in the same atmosphere of last-minute panic that characterised Maserati efforts in post-war Mille Miglia races. Varzi retired not long after passing through Florence. The race was won by Pintacuda with the Monoposto at a record average of 71.30mph.

The first major Grand Prix of the 1935 season was held at Monaco eight days later. Auto Union and Bugatti were absent from the Monégasque race. Neither the new V-8 cars nor a second Tipo 34 was ready, so Scuderia Subalpina fielded one of their own 3.7 litre Tipo 34 cars for



Etancelin and for their second entry adopted Giuseppe Farina at the wheel of Rovere's car. In the absence of a second six-cylinder Subalpina car, Goffredo Zehender drove a very interesting development of the Tipo 8CM. This had an engine enlarged in capacity to 3.2 litres and new front suspension of the torsion bar-type. The torsion bars ran parallel with and outside the chassis members and had arms at right-angles to support the wheel pivots; friction shock-absorbers were transversely mounted and connected to the forward ends of the torsion bars. This system was later adopted on Siena's Tipo 34 and was a prototype for the suspension to be used on the V-8 cars.

Farina was an early retirement because of fuel-feed trouble and the new version of the straight-eight, plagued by brake trouble, had no real chance to show its paces and after a succession of pit stops Zehender finished seventh. Etancelin, however, drove a spirited race and was accelerating out of corners to the accompaniment of squeals and blue smoke from the tyres of his Maserati. By lap 30 'Fi-fi' had moved up into third place behind the leading Mercedes of Fagioli and Caracciola and was well clear of the Scuderia Ferrari Alfas. Etancelin passed Caracciola on the inside at the Gasworks hairpin on lap 49 and rapidly pulled away from the white Mercedes. Caracciola fought back, re-passed Etancelin on lap 56 as the cars went up the Avenue de Monte Carlo, but retired four laps later with steam pouring out of the louvres of the Mercedes's bonnet. Etancelin's furious driving took its toll, the Maserati lost both oil pressure and braking power and he dropped back to finish fourth, a lap in arrears, behind Fagioli and the Alfas of Dreyfus and Brivio. Soffietti's 8CM finished eighth and Spanish nobleman, the Count de Villapadierna, retired his canary yellow 8CM.

At the Tunis Grand Prix held on the Carthage circuit on 5 May a single Auto Union was entered for Achille Varzi and the German car ran away with this 313 mile race. Varzi averaged 101.20mph and finished over a minute ahead of Jean-Pierre Wimille's works Type 59 Bugatti. The Tipo 34 Maseratis of Etancelin (entered by Subalpina) and Farina (Rovere's car) finished third and fourth and in this race the Scuderia Ferrari Alfa Romeos were soundly thrashed. Zehender crashed his Subalpina-entered car on the second lap.

A week later the 326 mile Tripoli Grand Prix, like the Tunis race a Formule Libre event, was held on the Mellaha circuit which at this time was the fastest road circuit in the world. A very strong entry was received: Mercedes-Benz W.25 cars were driven by Caracciola, Fagioli and von Brauchitsch; Auto Unions by Varzi and von Stuck; in addition to four

Monopostos, Scuderia Ferrari fielded the new 'Sombre, almost evil-looking' *Bimotore* (twin-engined) Alfa Romeos for Nuvolari and Chiron. Maserati was principally represented by the same three cars and drivers as at Tunis.

The Mellaha circuit, roughly quadrilateral in shape, incorporated a straight running beside the sea and a succession of difficult, high-speed curves. It was an extremely hard circuit on engines and tyres (for the German teams the Continental Tyre company brought a stock of three hundred tyres) and the difficulties were exacerbated by the high temperature in which the race was run. Although practice times did not count for places on the grid, which were determined by the drawing of lots, the fastest speeds make interesting reading:

von Stuck (Auto Union)	220.373kph (136.93mph)
Nuvolari ( <i>Bimotore</i> Alfa)	214.753kph (133.44mph)
Caracciola (Mercedes-Benz)	212.432kph (132.00mph)
Etancelin (Maserati)	205.042kph (127.41mph)

These speeds reveal only too clearly the superiority of the German cars over the Maseratis and the Alfa Monopostos were equally outclassed on high-speed circuits. Although the *Bimotore* Alfa was competitive in terms of sheer speed, it handled atrociously; at Mellaha it was plagued by tyre trouble and in any case it was far too heavy to compete in 750kg Formula Grands Prix. Caracciola won the race from Varzi, Fagioli, Nuvolari and Chiron and Zehender finished a poor eighth. At one stage in the race Farina and Etancelin held fourth and sixth places, but both retired with carburettor trouble.

Next came the Avusrennen on 26 May. Scuderia Subalpina fielded cars for Etancelin and Zehender, but this was another Formule Libre race on a high-speed circuit and there was really little point in the team competing. The Maseratis were completely out-classed and both retired in their 5 lap heats because of supercharger failure. The 10 lap final was won by Fagioli at an average of 148.83mph and in this race Chiron brought his *Bimotore* Alfa across the line in second place. On 9 June the second Circuit of Biella was run over a 2.2 kilometre 'round the houses' circuit in two 25 lap qualifying heats and a 50 lap final. For this race the great Achille Varzi was released by Auto Union to drive a Scuderia Subalpina 3.7 litre Maserati. Varzi finished third in his heat behind the Scuderia Ferrari Alfas of Chiron and Tadini but he was so disgusted by the performance of his car that he declined to run in the final. Victory in the final went to Nuvolari (Alfa Romeo) from team-mate Chiron and

Giuseppe Farina, who in this race was at the wheel of the four-cylinder 2.5 litre car driven by Taruffi at Monaco in 1934.

The Eifelrennen held at the Nürburgring on 16 June was another disappointing event for Maserati. In the 1,500cc Voiturette race Raymond Mays (ERA) beat Hans Ruesch's Maserati into second place, and in the Formule Libre race Caracciola won for Mercedes-Benz, German cars took the first six places and the highest placed Maserati driver was Etancelin in eighth spot. The other Subalpina car, driven as usual by Zehender, was eliminated by plug trouble.

The Subalpina team next appeared in the French Grand Prix at Montlhéry. The race was held over the full 7.67 mile course, combining the road sections and the banked track and 'to reduce the speed at dangerous points' (ie, to make life more difficult for the drivers of the all-conquering German cars) three chicanes were introduced on fast parts of the course. These were sited a few hundred yards after the start, in the middle of the main return leg of the road course and, in this case necessitating a left-right-left line, at the junction of the road circuit and the banked track. There were only eleven starters: three Mercedes, three Auto Union, two Alfas, a hastily completed works 3.8 litre Bugatti driven by Benoist and two Maseratis (the Subalpina car of Zehender and Sommer's 8CM).

When Zehender's car was weighed in on the Saturday afternoon before the race, in the words of *Motor Sport*, '783 kilogrammes—the driver could not believe his ears! The same car had been passed by other clubs so it must have swelled a bit in the sun, as some wag said! Seat linings and other things were torn out in an effort to get down the weight, but to no effect. Finally a collaboration and it was decided to pass it, the weight being furnished officially as 750 kilogrammes.' By dint of steady driving and by virtue of the unreliability of the Alfa Romeos, Zehender, although himself slowed by gearbox trouble, gradually overhauled Fagioli's sick Mercedes to break up a Stuttgart 1-2-3 and finished third behind Caracciola and von Brauchitsch. Sommer took sixth and last place.

On 30 June Etancelin and Zehender drove the Subalpina Tipo 34 cars in the 165 mile Penya Rhin Grand Prix held over the tortuous Montjuich Park circuit in Barcelona. The race proved another Mercedes benefit and Fagioli and Caracciola took the first two places for Stuttgart ahead of the Scuderia Ferrari Alfa Romeos of Nuvolari and Brivio. Neither of the Subalpina cars ran well; Zehender finished a poor fifth ahead of Soffietti's Maserati 8CM and Etancelin was eliminated by an

engine misfire. Because of carburation problems with the latest 5.6 litre version of the B-type Auto Union the team from Zwickau had scratched from this race and Dr Porsche had decreed that it would not run again until the German Grand Prix on 28 July.

There were sixteen starters in the three-hour Lorraine Grand Prix held over a 5.5 kilometre circuit just outside Nancy on the same day. Chiron (Scuderia Ferrari Alfa Romeo) won the race from Wimille (Bugatti Type 59) and team-mate Comotti. Marcel Lehoux with an 8CM (it is not clear whether it was his own blue car or a yellow one belonging to the Scuderia Villapadierna) finished fourth. Shortly afterwards Lehoux made fastest time of the day with an 8CM in the Eymontiers hill climb in France.

A new Grand Prix Maserati had been long expected and there had been a great deal of speculation as to its design. This new car, the Tipo V-8R1, finally made its début in the Marne Grand Prix run in two heats and a final at Reims on 7 July. One of the most interesting of Maserati designs, it was a particularly enterprising effort from a concern which had previously built cars of traditional concept and the design was clearly influenced by technical trends in Germany. Unfortunately, it was also one of the least successful of Maserati models. It would probably never have proved a match for the products of Daimler-Benz and Auto Union, but there was never any real chance to find out, for once they had built the car, the Maserati brothers lost much of their interest in Grand Prix racing and there was no proper development programme.

In its original form the V-8 engine had a capacity of 4.4 litres (the exact cylinder dimensions are not known). It was cast in two blocks of four cylinders and with a single overhead camshaft per bank and two valves per cylinder. There was a single Roots-type supercharger driven from the nose of the crankshaft and two carburetters. When the V-8R1 appeared, a power output of 400bhp was claimed. For purposes of comparison it is worth mentioning that the original 1934 3.4 litre Mercedes W.25 had a power output of 354bhp, the 1935 4.3 litre version had an output of 455bhp and the 1936 Alfa Romeo 4 litre V-12 engine (with four overhead camshafts) was said to develop 360bhp. As low a figure as 320bhp at 5,300rpm has been quoted for the later, 4.8 litre version of the V-8R1. A fair estimate of the output of the 4.4 would be over 300bhp, but by only a small margin.

Of the transmission *Motor Sport* said, 'The transmission is an entirely new departure for Maserati and follows the same lines as the German cars. The differential unit is bolted to the frame, and the rear wheels

are carried on swinging half-axes, while the four-speed gearbox is mounted out behind, with its rear end supported on the rear chassis cross-member. With this layout, as on the Mercedes, there is only a shallow tunnel for the prop-shaft, and the driver sits very low.'

The channel-section chassis was of steel alloy and was welded by an American system that permitted very light construction. There are conflicting statements as to the length of the wheelbase, but it seems that it was 9ft 10in, larger than for the 3 litre cars. The front suspension was inspired by Dr Porsche's Auto Union practice; there were twin transverse swinging links and torsion bars running parallel to the chassis and connected to the upper links (on the Auto Union there were twin trailing links with the bottom arms linked to transverse torsion bars). The rear suspension was by semi-elliptic springs with the swinging half-axes above them. It is worth mentioning that the Auto Union also featured swing-axes, but these were suspended from a transverse leaf spring and the V-8R1 rear suspension more closely resembled that of the Mercedes-Benz W.25. Each front wheel had a drag link operated from the double-worm steering box and, as on the 8CM-3000, there were Lockheed hydraulic brakes.

The V-8R1 was the first 'streamlined' racing car built by the Maserati brothers and the press commented on its similarity to the Mercedes-Benz W.25, pointing out in particular that the front suspension was enclosed in the same way and that it had a similar streamlined head-rest behind the cockpit. The overall height was only 3ft and the weight was said to be 745kg.

At Reims, the V-8R1 was entered for Philippe Etancelin but it did not arrive until the second day of practice. Other Maseratis entered in this race were a 3.7 litre Tipo 34 from Scuderia Subalpina for Carraroli and 8CMs driven by Chambost, Girod, Hartmann, Lehoux and Soffietti. Carraroli became a non-starter after engaging in unofficial practice when the circuit was closed (to competitors, that is, but open to the public). He met an oncoming vehicle while cornering on the wrong side of the road, left the tarmac while taking evasive action and completed his trip by ambulance to a nursing home in Reims for treatment to a foot that was broken in three places.

Lack of adhesion and a surfeit of wheelspin seemed to head the V-8 Maserati's list of teething troubles and Etancelin did well to finish second in his heat behind Dreyfus's Scuderia Ferrari Monoposto. Chiron won the second heat for Scuderia Ferrari from Lehoux's 8CM. In the final Etancelin retired with a broken piston and Dreyfus and Chiron took

the first two places ahead of Sommer (private Monoposto) and Lehoux.

On the same day a minor Italian 'round the houses' race, the Turin Grand Prix, was run in three qualifying heats and a 75 mile final over the Valentino Park circuit. Farina with Rovere's 3.7 litre Tipo 34 finished second in his heat to Tadini's Alfa Romeo and took fourth place in the final behind Nuvolari, Brivio and Pintacuda.

There were hopes that the V-8 Maserati would run again in the Belgian Grand Prix held at Spa-Francorchamps a week later, but it failed to appear and the sole Maserati entry was a yellow 8CM from the Spanish Scuderia Villapadierna, driven by Marcel Lehoux. Starting positions were decided by the drawing of lots and Lehoux, who had been slowest in practice, drew a place on the front row of the grid alongside Dreyfus (Alfa Romeo). The start was chaotic and *Motor Sport* commented:

The start was quite the worst we have seen. Several drivers moved forward before the flag fell, but the worst offender was Lehoux. He found himself a length ahead of Dreyfus so he stopped. At that minute the starter dropped the flag, and Lehoux was immediately passed on each side by the cars behind. They had sorted themselves out by the time they reached the bend, however, and we could see that Caracciola was in the van, a few yards ahead of Wimille (Bugatti) and Dreyfus.

Caracciola and his Mercedes dominated what was regarded as one of the finest races of the season as 'Intense heat and the strenuous nature of the Spa circuit combined to test the cars and drivers to the limit.' Another Mercedes shared by Fagioli and von Brauchitsch took second place. Lehoux finished seventh and last, three laps in arrears.

Always popular with British entrants were the Dieppe races which in 1935 were held as separate two hours' races for unlimited capacity cars and Voiturettes. There was a strong entry of Maseratis in the unlimited race, but the Scuderia Ferrari Alfas of René Dreyfus and Louis Chiron took the first two places. Giuseppe Farina with Rovere's Maserati Tipo 34 held fourth place until forced to stop at the pits, but fought his way back through the field to finish fifth ahead of Ruesch's red and white Swiss-entered 8CM and Brunet's 8CM, which was said to be extensively modified (apart from other 'mods' it had a streamlined headrest).

There were 250,000 spectators at the Nürburgring for the German Grand Prix on 28 July and before a home crowd both Stuttgart and Zwickau made their most strenuous efforts of the season. There were five entries from Mercedes-Benz (plus three spare cars) and four from Auto Union. The full entry list was made up as follows:

Mercedes-Benz W.25 3.9 litre driven by von Brauchitsch, Caracciola, Geier, Fagioli and Lang

Auto Union 5.6 litre driven by von Stuck, Varzi, Rosemeyer and Pietsch

Alfa Romeo Monoposto 3.8 litre driven by Nuvolari and 3.2 litre by Brivio and Chiron

Maserati Tipo 34 3.7 litre driven by Etancelin and Zehender

Maserati Tipo 8CM-3000 3 litre driven by Gherzi, Hartmann and Ruesch

Alfa Romeo Monoposto 2.9 litre (private) driven by Balestrero

Bugatti Type 59 3.3 litre driven by Taruffi

ERA B-type 2 litre driven by Mays/von Delius

Von Delius crashed into a tree in practice and as his ERA could not be repaired in time for the race, he and Mays shared the same car. The surviving ERA, which was Britain's first entry in a major Grand Prix for many years, retired because of a misfiring engine.

This was the famous race in which Nuvolari led for two laps, fell back to sixth place because of an inordinately long pit stop, but fought his way back to second place by the end of the next lap, lap 13. At this point in the race he was 1min 9sec behind the leading Mercedes of von Brauchitsch, but by the start of the 22nd and final lap he had reduced the deficit to 35 seconds. The German driver had been kept fully aware of the situation by Neubauer and it seemed improbable that Tazio could catch and pass the leader in the space of one lap. But on that last lap the Mercedes's left-hand rear tyre burst and Nuvolari swept by to score a totally unexpected Alfa Romeo victory. In the pits von Brauchitsch, who had finished the race running on the rim, wept bitterly. Harold Nockolds wrote in *Motor Sport*, 'It had been a memorable race and the sight of Nuvolari hanging on to the Merc for lap after lap, with a car 20mph slower, is one which will live in the memories of all who were fortunate enough to be present. Nuvolari is the master.'

But what a pity that he was not still driving for Bologna, for once again the Maseratis were right out of the picture and Ruesch, Zehender and Gherzi finished at the tail of the field in tenth, eleventh and twelfth places. Both Etancelin and Hartmann retired, the former with engine trouble.

The organisers of the Comminges Grand Prix held on 4 August had been expecting Scuderia Subalpina to send the new V-8, but instead two of the older Tipo 34s arrived at the circuit for Etancelin and Zehender. These Maseratis almost failed to arrive at all, for their transporter broke down twice, once at Limoges and again at Cahors. The race was run in two 10 lap qualifying heats and a 15 lap final. Private Monoposto driver Raymond Sommer won the first heat from Etancelin, Chiron (Scuderia

Ferrari Alfa Romeo) and Laszlo Hartmann (8CM). In the second heat the winner was Gianfranco Comotti (winner of the race in 1934) from Lehoux with his 8CM. Zehender had been in second place until he lost his oil pressure and after a pit stop for the pump to be adjusted he resumed the chase to finish third ahead of de Villapadierna's Maserati.

Etancelin took the lead at the start of the final from Lehoux, Comotti and Zehender. Chiron's engine was misfiring badly and he lost all hope of winning when he stopped at the pits for the plugs to be changed. When Etancelin's engine started to run roughly, he was passed by Lehoux, Sommer and Zehender. Sommer went through into the lead, Comotti retired with back axle trouble, Zehender's engine broke and Lehoux ran out of petrol just before the finish—as the finishing line was on a hill he was unable to push his blue Maserati across the line. Behind Sommer the finishing order was Raph (private Monoposto), Hartmann, Chiron, de Villapadierna and Etancelin.

By the Coppa Ciano, which was also held on 4 August, the Montenero circuit had been extensively modified by a new road which cut from Ardenza to a point in front of the tribunes where the cars negotiated a right-hand hairpin bend which led them past the stands once more. The pits were situated on the narrow strip of ground between the roads. For the first three laps Eugenio Siena held third place with his Tipo 34, but he was far from happy with the handling of his car, fell back to fourth place behind Tadini's Alfa Romeo and went off the road on lap 10. Nuvolari with a Scuderia Ferrari Alfa won the race for the sixth time and the highest placed Maserati driver was Chambost (with an 8CM) in sixth position. Eleven days later the Auto Unions of Varzi and Rosemeyer took the first two places in the Coppa Acerbo at Pescara ahead of a quartet of Ferrari Alfas. The only Maseratis entered were the 8CMs of Dusio and Soffietti and both retired.

Maserati enthusiasts must have been sad to read in the *Motor Sport* report of the Nice Grand Prix which was held on 18 August, 'The Alfa Romeos of the Scuderia Ferrari gave as pretty an exhibition of superiority in the Nice Grand Prix as has ever been seen in motor racing. True, they had no organised opposition to contend with, for one cannot really call the Maseratis raced by Etancelin and Zehender a team.' And only two years previously Nuvolari with an 8CM had completely dominated this race! In 1935 the Ferrari-entered Monopostos of Nuvolari, Chiron and Dreyfus took the first three places and the only other finishers were Sommer (private Alfa Monoposto), Chambost and Soffietti (both with 8CMs). Farina with Gino Rovere's Tipo 34 had held second place until



he over-revved his engine in his efforts to stay with the leading Alfa, Zehender retired with ignition trouble and Etancelin tired of his car after brake trouble had caused him to make a lengthy pit stop. Zehender took over this car, but he was forced to retire when he was unable to restart the engine after yet another pit stop. Interestingly enough, while in France after this race Nuvolari took delivery of a private aircraft, a French Potez, to speed his travelling between race meetings. It would seem that the aircraft was a 585 model, a popular three-seat touring monoplane. *El Duce* must have strongly disapproved because Tazio did not purchase an Italian machine!

The second ever Swiss Grand Prix held at Bremgarten on 25 August proved another Mercedes benefit. Practice was not without its traumas for the Mercedes team, however, for Geier crashed badly and was taken to hospital in a critical condition. He recovered from the accident to rejoin the team not as a driver, but as a timekeeper. His place for the race was taken by Herrmann Lang. In a fast, but wet and miserable race the W.25s of Caracciola and Fagioli led home the Auto Unions of Rosemeyer and Varzi. Nuvolari finished fifth with his 3.8 litre Alfa and Lang took sixth place. None of the Maserati drivers did well and Farina, in seventh place with Rovere's Tipo 34, was the first independent driver to take the chequered flag. The Hon Brian Lewis retired his Tipo 8CM after only a few laps, and Hungarian driver Laszlo Hartmann crashed his Maserati.

Yet again a different circuit at Monza was chosen for the Italian Grand Prix which was held on 8 September. The pits and stands were situated at the start of the west straight and the circuit ran in a clockwise direction round the south curve, took a diagonal turn inwards to join the road circuit and followed this through the northern loop to join the main straight again. There were five chicanes (four of these formed by straw bales) to slow the cars, on the south curve, at the exit to the south curve, immediately after the Curva de Vialone, in the Curva delta Roggia (at the northern end of the circuit) and at the start of the main straight. The course proved gruelling for both cars and drivers and the strain of constant braking and acceleration from 40mph through the chicanes to 160mph on the straight sections resulted in the elimination of most of the entry.

The high rate of mechanical failure eliminated the complete team of four Mercedes, the hot favourites which had won all but two of the season's major Grands Prix, and two of the four Auto Unions. Etancelin crashed the V-8 Maserati and both Zehender (with a Subalpina Tipo 34)

and Gherzi (with Siena's independently sprung Tipo 34) retired. Hans von Stuck won the race for Auto Union at 86.20mph from the 3.8 litre Alfa Romeo of Dreyfus/Nuvolari and the Auto Union of Pietsch/Rosemeyer. There were only five finishers. Initially it was feared that Etancelin's injuries were serious, but X-rays taken at the Ansaldo Clinic in Milan revealed that there were no breakages and his injuries were restricted to a severe bruising and shaking. 'Fi-fi' was, however, out of the Subalpina team for the rest of the season.

It had been hoped that Varzi would drive the Subalpina V-8 Maserati in the Circuit of Modena on 15 September and the crowd was led to expect a titanic struggle between Nuvolari and his arch-rival. Unfortunately, the Subalpina car could not be prepared in time and the eight cars on the starting grid consisted of six Scuderia Ferrari Alfa Romeos, Farina's Maserati (this would be Rovere's Tipo 34) and Romano's Bugatti. 'The start was at 4.5pm and Farina made one of his characteristic lightning getaways, leading at the end of the first lap from Marinoni. Nuvolari seemed to be in no hurry and was lying sixth.' Nuvolari had soon come through to second place, he took the lead from Farina on lap 6 and a lap later the only Maserati entered was out of the race with mechanical trouble. The Alfa Romeos of Nuvolari, Tadini, Pintacuda and Brivio took the first four places and the only other finisher was Romano's Bugatti, ten laps in arrears. Almost certainly because of the mechanical damage suffered in this race, Rovere's Maserati failed to appear at the 500 Miles race at Brooklands the following weekend.

Mercedes-Benz dominated the results of the Spanish Grand Prix which was held over the Lasarte circuit at San Sebastian on 22 September and Caracciola, Fagioli and von Brauchitsch took the first three places. On only the second lap Varzi (Auto Union) had drawn into the pits, blood streaming from a facial cut caused by a smashed windscreen. Varzi rejoined the race and set a new lap record before retiring. There were only two Maseratis in this race: Siena's Tipo 34 which retired and Lehoux's car (there is doubt as to what car this was, but it was probably a Subalpina Tipo 34) which finished eighth.

A week later the Czechoslovakian Grand Prix was held at Brno over a distance of 272 miles. Mercedes-Benz did not enter and none of the leading Maserati drivers contested this race. Rosemeyer with an Auto Union won from the Alfa Romeos of Nuvolari and Chiron.

On the same day as the Czechoslovakian Grand Prix, the Circuit of Lucca was held in Tuscany. At the start of the first heat Corsi (at the wheel of a Maserati, probably an 8CM) collided with Barbieri (Alfa

Romeo); the heat was stopped and restarted without these drivers whose cars were too badly damaged to run. Pintacuda (Ferrari Alfa Romeo) won this heat from Balestrero and Fontana (both with Alfas) and with Dusio's 8CM in fourth place. In the second heat Siena brought his Tipo 34 Maserati across the line in third place behind the Ferrari Alfa Romeos of Tadini and Comotti. Siena retired in the final with fuel-feed problems and the Alfas of Tadini, Comotti and Pintacuda finished in the first three places ahead of the 8CMs of Dusio and Gherzi.

The first ever Grand Prix road race to be staged in Britain was held over a distance of 300 miles at the beautiful Donington circuit on 5 October. Works foreign entries were conspicuous by their absence and Auto Union, Mercedes-Benz and Scuderia Ferrari all gave the race a miss. There was, however, one of the strongest Maserati entries seen during 1935; Farina drove the Tipo V-8R1 Maserati on loan from the Scuderia Subalpina, the only occasion on which the model appeared in Britain, Rovere entered his familiar ex-Nuvolari Tipo 34, the driving of which he shared with MG man Bill Everitt, and ex-Whitney Straight 8CMs were driven by Featherstonhaugh and Austin Dobson. Sommer drove the private Alfa Monoposto with which he had won at Comminges, Shuttleworth had a similar car and ex-works 3.3 litre Type 59 Bugattis were entered by Lord Howe, C. E. C. Martin and Eccles. In practice Farina lapped in 2min 8sec, a second faster than the official lap record which stood to the credit of Eccles.

Race day was wet and miserable and the rain stopped falling only fifteen minutes before the start. When the Union Jack fell for the start of the race, Farina accelerated into the lead and had soon built up a commanding advantage over Featherstonhaugh, Howe, Martin and 'B. Bira' (ERA). Of Farina's domination of the race *Motor Sport* wrote, 'Farina's average speed after ten laps was 64.55mph, which was pretty quick considering the state of the roads. It was obvious all the same that he was not hurrying . . . [the Maserati] just rolling round the corners and "wuffling" away like a V-8 Ford, and keeping Sommer at a comfortable 150 yards.' Despite more rain showers, Farina continued to build up his lead until lap 41 when his V-8R1 retired with a broken half-shaft. Sommer led with his blue Monoposto until forced to stop for a change of plugs, dropped back behind Martin's Bugatti and later retired because of a broken half-shaft. Martin went off the road and rejoined the race to finish third behind Shuttleworth's green-painted Monoposto and Howe's Bugatti. In fourth place came the Maserati of Rovere/Everitt. Everitt had started the race with this car and had worked his way up

to second place only to spin off at Starkey's corner because of brake trouble. He had handed over to Rovere when the vibrations of the Maserati caused severe numbness of the feet. Dobson crashed his 8CM and Featherstonhaugh retired with transmission trouble.

On the following day the last Grand Prix of the season, the Coppa Michele Bianchi, was held at Cosenza in the toe of Italy. There were three qualifying heats, each of twenty laps of the 2.5 kilometre circuit. Bianco won the first heat with a 1,500cc four-cylinder Maserati and Ghersi with his 8CM was second to Pintacuda in heat two. Brivio (Scuderia Ferrari Alfa Romeo) beat Siena into second place in heat three. Siena retired in the final and Ghersi and Bianco finished second and third behind Brivio.

That the new V-8R1 Maserati was a car of great promise was beyond doubt, but it had appeared late in the season, had rarely been raced and it seemed unlikely that the necessary time and expenditure would be devoted to making it a potential race-winner capable of defeating the Auto Unions and Mercedes-Benz.

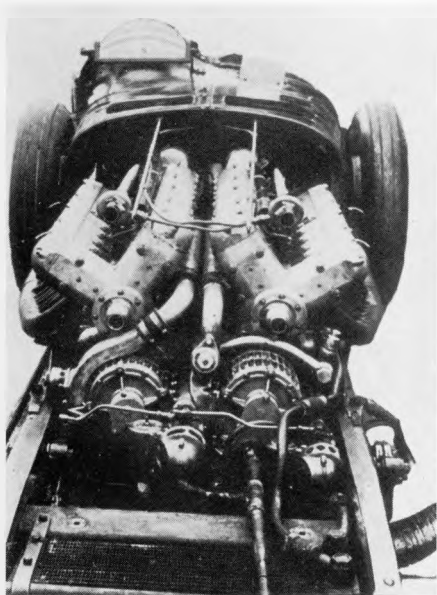
In 1935 the Association Internationale des Automobile Clubs Reconnus organised a European Drivers' Championship. The results were decided on the basis of the German, Italian, Belgian, Spanish and Swiss Grands Prix. The Automobile Club de France did not approve of the championship and so the French Grand Prix was not included. The points system used was rather obscure. The results are of interest in themselves, but also of significance in that not a single Maserati driver featured in the first six:

1st	R. Caracciola (Mercedes-Benz)	16 points
2nd	L. Fagioli (Mercedes-Benz)	22 points
3rd	M. von Brauchitsch (Mercedes-Benz)	31 points
4th	R. Dreyfus (Alfa Romeo)	35 points
5th	{ T. Nuvolari (Alfa Romeo) } { H. von Stuck (Auto Union) }	37 points
6th	{ L. Chiron (Alfa Romeo) } { A. Varzi (Auto Union) }	40 points

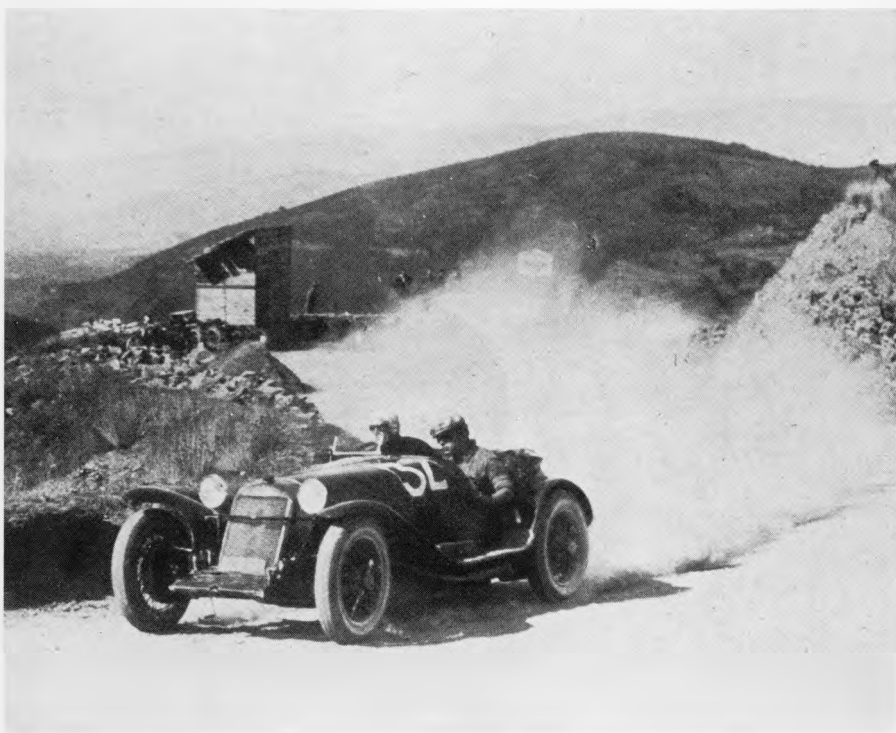
## Never in the Picture: The Tipo V-8R1, 34 and 8CM Cars, 1936

There was small hope of seeing Maserati to the fore in 1936 and Grand Prix racing continued to be dominated by Auto Union and Mercedes-Benz (it proved to be a Zwickau year) with the Scuderia Ferrari Alfa Romeos acting as good also-rans. Little development work had been carried out on the V-8R1, but the engine capacity was increased to 4,788cc (84 × 108mm) and this was accompanied by a small increase in power output. The Maseratis were not fast enough, not reliable enough and were not backed up by a sufficiently well organised team to achieve success. In 1936 one V-8R1 was driven as a private entrant by 'Fi-fi' Etancelin who much preferred racing as an independent and another, rebuilt with a rigid rear axle, was driven by Count Felice Trossi. Trossi had now resigned the presidency of Scuderia Ferrari and had joined Scuderia Torino (the new name for Count della Chiesa's Scuderia Subalpina). Count Gino Rovere became president of Scuderia Torino and the racing manager was Giorgio Ambrosini. A loss to the ranks of Maserati drivers was Giuseppe Farina who had now signed up to drive for Scuderia Ferrari.

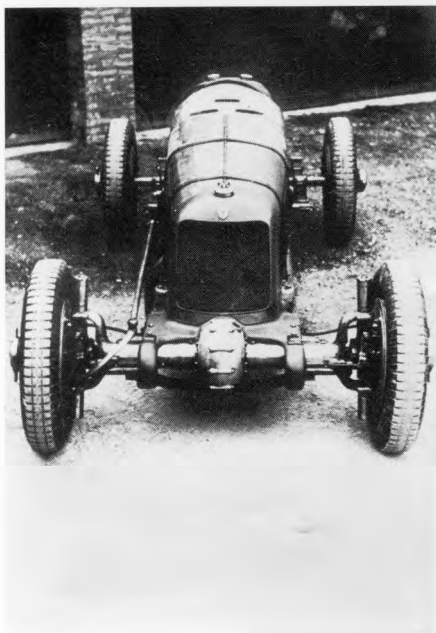
The season started well enough for Maserati with a win in very lucky circumstances. The first race of the year was the Pau Grand Prix which was run by the Automobile Club de Basco-Bearnais on 1 March over a hundred laps of a 2.76km circuit. The entry list was restricted to thirteen cars (twelve starters and one reserve) and although both Auto Union and Mercedes-Benz gave the race a miss, a team of three cars was expected from Scuderia Ferrari. The Alfa Romeos departed by transporter from Modena only to be halted at the Italian-French border and a telegram was received by the race organisers from Furmanik, president of the Sporting Commission of the Royal Italian Automobile Club, stating that 'a superior authority' had given orders that the Italian cars were not to

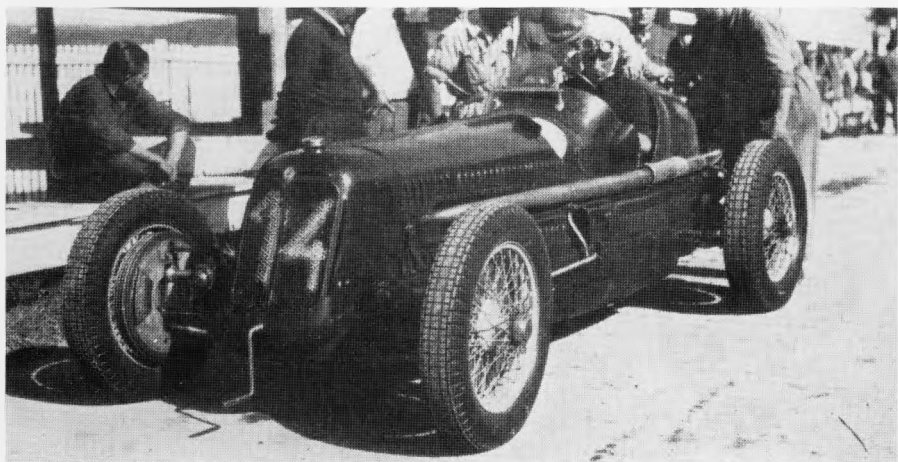


*Plate 9* A view of the two-coupled, straight-eight 2 litre engines that powered the 'Sedici Cilindri'. *Plate 10* Ernesto Maserati, accompanied by Bertocchi, at the wheel of a Maserati in sports trim in the 1931 Coppa della Consuma. The car is almost certainly an 8C-2500.



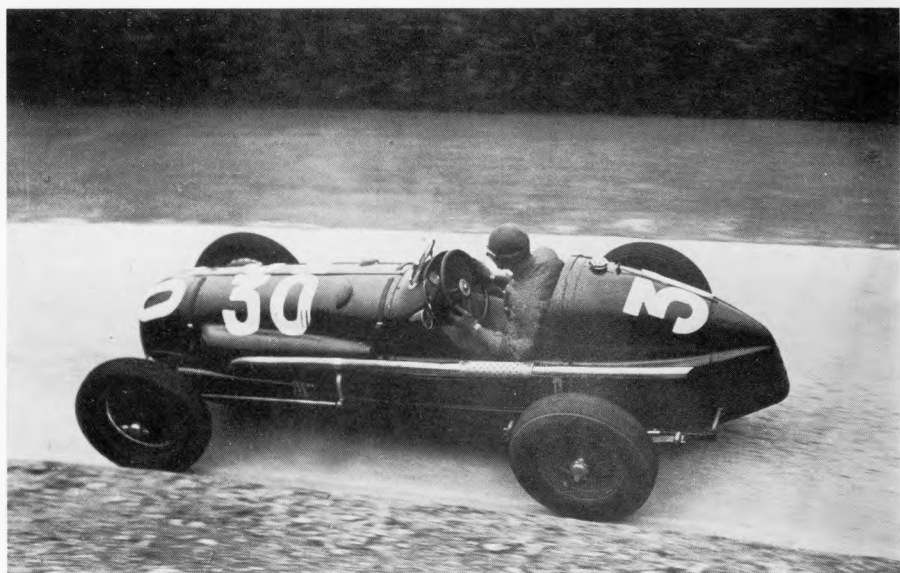
*Plate 11* An experimental eight-cylinder built over the winter of 1932–3. This car featured front-wheel drive and sliding-pillar front suspension; *Plate 12* The most successful driver of 3 litre Maseratis was Whitney Straight, seen here with one of his modified 8CM cars at Brooklands in 1934. Giulio Ramponi, in the beret, was perhaps the most famous mechanic of all time.





*Plate 13* At Monza in 1934, there appeared this new Tipo 34 car, combining the 8CM chassis with a 3.3 litre six-cylinder engine. At the wheel is the great Tazio Nuvolari; *Plate 14* This Tipo 34 raced by Eugenio Siena was fitted with torsion-bar independent front suspension. The car is seen at San Sebastian in 1935.





*Plate 15* Dick Seaman drove this impressive-looking V8-R1 Maserati in the 1936 German Grand Prix, but retired on the third lap with a broken brake pipe; *Plate 16* The 4C-2500 four-cylinder car with two-seater body driven by Piero Taruffi in the 1934 Monaco Grand Prix.

race in sanctionist countries until after the meeting of the League of Nations on 10 March.

As a result Etancelin faced opposition from only a rather mixed bunch of private Alfa Romeos and Bugattis. Initially Jean-Pierre Wimille (Bugatti Type 59) led from Sommer (Alfa Romeo), C. E. C. Martin (Bugatti Type 59) and Etancelin. 'Fi-fi' had made a leisurely start, but began to speed up, catching Martin with ease and, on lap 12, sweeping past Sommer. But Wimille was driving brilliantly and was steadily increasing his lead. On lap 30, however, the Frenchman retired with brake trouble and now Etancelin led by a narrow margin from Sommer. Raymond Sommer caught and passed the blue Maserati, 'Fi-fi' fought back and the two leaders passed and repassed each other until Sommer's Alfa retired with rear axle failure. Etancelin was now unchallenged, but not free from anxiety, for his car began to sound rougher and rougher and although he was still thirteen seconds ahead of Martin's Bugatti at the end of the race, it is doubtful whether his car would have lasted another lap.

On 4 April the British Empire Trophy was held as a handicap race over 100 laps of the 2.55 mile Donington circuit. Since 1935 Donington had been much improved by doubling the width of the starting area, moving the paddock closer to the pits and resurfacing the straight. The main contenders were Dick Seaman with his newly acquired, black-painted ex-Straight Maserati 8CM, C. E. C. Martin and Chris Staniland with Alfa Romeo Monopostos and a whole bevy of ERAs. In order to take advantage of the handicapping, Seaman's 8CM ran in this race with the engine lined down to 2.7 litres. 'B. Bira' led the race with his ERA until he stopped at the pits for a change of plugs and attention to the carburetter (he spun and stalled later in the race) and then Pat Fairfield went ahead with his ERA. Seaman had been driving steadily and consistently, in the first three almost since the start of the race, and he took the lead on lap 87. The Maserati went on to win the race at an average of 66.33mph, 42 seconds ahead of Fairfield.

The Monaco Grand Prix, held on Easter Monday, was marred by torrential rain and a second lap multiple pile-up that eliminated several of the entries. Caracciola (Mercedes) led away from the start followed by Nuvolari (Alfa Romeo 8C-35) and Rosemeyer (Auto Union) held third place ahead of Varzi (Auto Union) and Fagioli (Mercedes-Benz). Tadini's Alfa was suffering from a broken oil pipe and left a large pool of oil at the chicane before it crawled to the pits to retire at the end of lap 1. On the second lap Louis Chiron, his vision obscured by oil on his

goggles, hit the pool of oil, lost control and cannoned into the sandbags. Farina (Alfa Romeo) was another victim of the oil and hit the sandbags and into his tail slammed the Mercedes of von Brauchitsch. Both Brivio (Alfa Romeo) and Trossi (Torino V-8R1 Maserati) were also involved in the mêlée, but they succeeded in rejoining the race. So bad were conditions at this part of the circuit that for several laps drivers were negotiating the chicane at around 12mph instead of the usual 40-50mph. Eight laps later Fagioli spun his Mercedes at the chicane and now Caracciola, leading the race, was the sole survivor of the four-strong Mercedes entry. Rosemeyer's Auto Union slid wildly as it approached the Hotel de Paris, mounted the pavement, slid tail-first into a wall and hung perilously over a sheer drop. Nuvolari forced his way ahead of the Mercedes on lap 10 and behind Caracciola the order was Varzi—Stuck—Wimille—Etancelin—Brivio—Trossi. Caracciola forged ahead again on lap 27 and rapidly pulled away from Nuvolari's Alfa which had started to run raggedly. Trossi retired his Maserati with a broken timing pinion. Etancelin's Maserati was losing fuel from a split tank and retired after trailing petrol for several laps. Caracciola ran through the race non-stop to win at 51.95mph (because of the appalling conditions this was a lower average speed than 'B. Bira's' in the preceding Voiturette race), but the next three finishers, Varzi, Stuck and Nuvolari, all had to make refuelling stops. The sole Maserati driver to finish was Ghersi in eighth place.

'B. Bira', who had won the Voiturette race at Monaco against a strong entry of Maseratis, scored another victory with his ERA on 2 May in the handicap three hours JCC International Trophy race at Brooklands. Well to the fore in this race was H. Rose who took fourth place with the 2.7 litre Maserati that Seaman had driven in the British Empire Trophy race.

Rather sensibly Scuderia Torino decided to miss the Tripoli Grand Prix, run at Mellaha, the fastest road circuit in the world. Varzi at the wheel of a 6.5 litre Auto Union won the race at the fantastic average of 128.9mph and on his last lap set a new lap record of 141.3mph. Although a number of private Maseratis were entered, there was not one among the eleven finishers and among the Bologna retirements was Etancelin with his V-8R1. Mercedes-Benz had their revenge the following weekend when Caracciola won the Tunis Grand Prix on the Carthage circuit at an average of 100.20mph from Pintacuda's Alfa Romeo. Rosemeyer's Auto Union was completely destroyed by fire and Varzi had an almost miraculous escape from an horrific crash when his Auto Union went

out of control at around 180mph and turned end over end several times before coming to rest a shattered wreck; the Italian driver was thrown clear. Etancelin again retired his V-8R1.

In the 142 mile Formule Libre Eifelrennen run at the Nürburgring on 14 June the sole Maserati driver was Chilean, Juan Zanelli, who drove the Scuderia Torino V-8R1. The race was run in rain and mist and in these very difficult conditions Rosemeyer drove a fine race with his 5.8 litre Auto Union to win from the Alfa Romeos of Nuvolari, Brivio and Farina. Zanelli was tenth and last with the Maserati. As a result of this magnificent performance Rosemeyer became known as the '*Nebelmeister*'. Of this race *Motor Sport* wrote, 'The astonishing fact has to be assimilated (and it is not easy) that 300,000 people visited the Nürburgring for the Eifel race meeting. That it pelted with rain and the clouds descended did not detract one whit from the success of the event. In the German mind it is the racing that counts.'

The Deauville Grand Prix on 19 July was a tragic race. Raymond Chambost crashed his 8CM and suffered injuries to which he succumbed in hospital a few days later, but his was not the only fatal accident that sad day. Farina (Alfa Romeo) was leading the race from Lehoux (ERA), but the Italian collided with the British car while lapping it. The Alfa driver escaped with minor injuries, but Lehoux's car caught fire and it seems that the Frenchman was killed outright. Many drivers thought that the circuit was too narrow for safe overtaking and it was not used again. There were only three finishers and Wimille (Bugatti Type 59) won from the Alfa Romeos of C. E. C. Martin and de Villapadierna. Cholmondeley-Tapper's ex-Lord Howe 8CM was rejected by the scrutineers because of defective brakes and failed to start in this race.

At the German Grand Prix on 26 July the Torino V-8R1 Maserati was driven by Dick Seaman, Trossi drove a four-cylinder 4C-2500 car, Zanelli was at the wheel of his yellow-painted 8CM and Cholmondeley-Tapper entered his ex-Howe car. Seaman retired with faulty brakes and Zanelli was eliminated by fuel-feed trouble. Dick Seaman later relieved Trossi at the wheel of his four-cylinder car and brought this across the line in eighth place. Cholmondeley-Tapper finished tenth and last. The Auto Unions of Rosemeyer and Stuck took the first two places ahead of Brivio (Alfa Romeo) and Hasse (Auto Union).

Etancelin with his V-8R1 was the sole Maserati driver in the Swiss Grand Prix held at Bremgarten on 23 August, but he retired with throttle linkage problems. Auto Unions driven by Rosemeyer, Varzi and Stuck took the first three places and this was Rosemeyer's fourth victory of the

season. The Italian Grand Prix held at Monza on 13 September was run over 72 laps of a 4.3 mile circuit with four chicanes. Four Maseratis were entered, including Etancelin's V-8R1, but the sole Bologna finisher was Dusio's car in sixth place. Mercedes-Benz, whose cars had been plagued by engine troubles throughout 1936, withdrew from this race and it was dominated by Auto Union, which had proved the top German marque that year. Rosemeyer scored yet another victory and he was followed across the line by Nuvolari (Alfa Romeo), von Delius (Auto Union), Dreyfus (Alfa Romeo) and Pintacuda (Alfa Romeo).

The final event of the 1936 season was the Vanderbilt Cup race held at Roosevelt Raceway, Long Island, New York, on 12 October. The Vanderbilt Cup was presented by George Vanderbilt, nephew of millionaire amateur racing driver William K. Vanderbilt, who had sponsored the annual international road races held on Long Island between 1904 and 1910 and subsequently on other circuits. The 1936 race was run on a sinuous circuit with dirt-track characteristics. The entry included a strong team from Scuderia Ferrari, V-8R1 Maseratis driven by Etancelin and Trossi and American track cars with two-speed gearboxes that were completely outclassed. Although his car was running on only eleven of its twelve cylinders for most of this 300 mile race, Tazio Nuvolari scored a convincing victory from Wimille's Bugatti Type 59 and Brivio's Alfa Romeo. Fourth was Sommer's private Monoposto Alfa, Fairfield's ERA was fifth and Trossi could finish no higher than sixth. Etancelin retired. It appears that the Torino car was sold in the United States, but Etancelin's car was shipped back to Europe.

For Maserati, the 1936 Grand Prix season was rather a non-event. There had been no serious attempt at racing the V-8R1 cars, the old eight-cylinder models were now obsolescent and at the end of the year the works abandoned all interest in this category of racing until the introduction of the new formula for the 1938 season. Private owners continued to race their cars with success in minor events and run without success in major races. The straight-eight cars continued to be raced by British drivers even in post-war days and among those to cut their racing teeth on 8CMs was Kenneth McAlpine, subsequently *patron* of the Connaught organisation. The 8CM was one of the great racing cars of all time, simple, unsophisticated, with primitive roadholding (even by contemporary standards), but fast, reliable and essentially safe even in the most inexperienced of hands. It is sad that so few of these great cars have survived.

## 8

# The Fastest of the Eight-Cylinder Cars: The Tipo 8CTF and 8CL, 1938-46

Approaches had been made to the Maserati brothers by a wealthy Italian industrialist, Commendatore Adolfo Orsi, who was interested in acquiring all the assets of Officine Alfieri Maserati. Orsi's own business interests embraced the steel industry, public transport, machine tools, electrical equipment and agricultural machinery. He was particularly interested in acquiring the very successful Maserati sparking-plug business, but at the same time he saw that Maserati racing cars could bring his companies a great deal of prestige and he had the money to expand the competition activities which the brothers lacked. In early 1938 the take-over was completed and Adolfo's son, Omer Orsi, became managing director. The complete Maserati business was transferred from Bologna to Modena, and the surviving three brothers entered into a ten-year service agreement with Orsi and stayed with the company that they had founded until the end of 1947.

For the years 1938-49 there had come into force a new Grand Prix formula with a scale of minimum weights according to engine capacity and the maximum permitted capacities were 3,000cc supercharged and 4,500cc unsupercharged. The first new car built after the company had passed into Orsi's control was the Tipo 8CTF which complied with this formula. The 8CTF had an engine based on two 69 × 100mm four-cylinder Voiturette cylinder blocks placed end to end and with integral cylinder heads. There were twin overhead camshafts, each mounted in a one-piece aluminium housing, driven from the nose of the crankshaft by a train of gears. Two separate Roots-type superchargers, each with a twin-choke Memini carburetter, were mounted one above the other at

the front of the engine; these blowers were also driven from the nose of the crankshaft and each, compressing at 18/20psi, supplied four cylinders. Ignition was by a Scintilla Vertex magneto mounted on the right-hand side of the engine. Power output was approximately 360bhp at 6,000rpm.

Chassis design closely followed the team's Voiturette practice, but there was a longer, 8ft 10.75in wheelbase. Channel-section construction was used for the chassis, which featured the familiar Maserati torsion bar independent front suspension and an underslung rear axle suspended on quarter-elliptic springs. Transmission was by a multiple disc clutch and a four-speed gearbox in unit with the engine. There was a Lockheed hydraulic brake system with 16in drums at the front and 14in at the rear. The car was one of the prettiest Maseratis to be built and its graceful lines were a well-balanced, scaled-up version of those of the Tipo 6CM.

Although the Tipo 8CTF was basically a very simple and unsophisticated design, contrasting strongly with the very elaborate de Dion-suspended V-12 cars from Mercedes-Benz and Auto Union, it was one of the fastest cars competing in 1938, but also one of the least reliable. The first car (chassis number 3030) made its début in the Tripoli Grand Prix on 15 May and in this race it was driven by Count Felice Trossi. Trossi took the lead and set fastest lap, but was forced out by engine trouble. At the finish the Mercedes-Benz W.154 cars took the first three places. Maserati did not race the 8CTF again until the Coppa Ciano at Leghorn on 31 July. The original car was driven by Trossi and a second car, 3031, was handled by Goffredo Zehender. Zehender retired soon after the start, but Trossi began to motor really fast; he took the lead on lap 4 and held it until lap 8 when he was eliminated by engine trouble. After von Brauchitsch (Mercedes) had been disqualified, first place went to his team-mate Hermann Lang.

The next race for the 8CTF was the Coppa Acerbo held at Pescara a fortnight later. Here only 3030 was entered for Trossi who ran well until he began to feel ill and stopped at the pits to hand the Maserati over to Villoresi. Young 'Gigi' set fastest lap of the race at 87.79mph before retiring with engine trouble. The winning Mercedes in this race was driven by Caracciola. Maserati missed the Swiss Grand Prix at Bremgarten, but fielded two cars for Trossi and Zehender in the Italian Grand Prix at Monza. Zehender retired, but Trossi drove his 8CTF to its first finish and took fifth place. The winner was Tazio Nuvolari at the wheel of an Auto Union. Final outing for the 8CTF in 1938 was in the Donington Grand Prix, originally scheduled to be held on 1 October, but post-

poned until 22 October because of mobilisation of the German army and the ensuing panic. The 8CTF driven by Villoresi was the only Italian car in this Auto Union and Mercedes-dominated race, but it was not in a very healthy state; it failed to display its customary speed and retired with piston failure after eighteen laps.

Because of the decision that all Grands Prix run on Italian soil in 1939 would have a 1,500cc capacity limit and because of Maserati's pre-occupation with the 1,500cc sixteen-valve 4CL model, the 8CTF took a back seat in European racing in 1939. In March, however, a brand-new car (chassis number 3032) was shipped to the United States for Wilbur Shaw to drive at Indianapolis. Shaw was convinced that he could win the 500 Miles race with a European car and had formed this opinion on the basis of the results of the Vanderbilt Cup races held at Roosevelt Raceway, Long Island in 1937 and 1938. The first efforts of Cotton Henning, Boyle's mechanic, to buy a Maserati had resulted in the arrival of a 6CM Voiturette which proved fast enough to qualify for the 1938 race at a speed of 118mph, but was clearly not fast enough to win the race. When the 8CTF arrived in the United States, it was discovered that the cylinder blocks were cracked—the engine had not been drained off after testing at Modena and the water had frozen while the car was in transit. A new engine (number 3033) was hastily shipped out and the 8CTF, running as the Boyle Special (after Michael Boyle who was Shaw's sponsor), qualified for the race at 128.977mph, a speed which was third fastest. In the race Shaw dominated the opposition and, driving the Maserati well within its limits, scored a comfortable victory at 115.04mph.

The works entered the 8CTFs in only one race in 1939, the German Grand Prix at the Nürburgring on 23 July, and here they were driven by Luigi Villeresi and Paul Pietsch. Pietsch, a former Auto Union driver, handled the 8CTF extremely well, taking the lead on lap 3 and although he was passed before the end of the lap by Nuvolari's Auto Union, he still kept going fast enough to finish third, despite two spins and four pit stops, behind Caracciola's Mercedes and Müller's Auto Union. Villoresi retired after spinning off and damaging his Maserati's fuel tank. After this race the two works 8CTFs were sold to Laurie Schell who had previously raced V-12 Delahayes under the name L'Ecurie Blue. One car was entered in the name of Ecurie Lucy O'Reilly-Schell (a cumbersome title combining the names of both Laurie Schell and his wife) for René Dreyfus in the 1939 Swiss Grand Prix on 20 August and he took eighth place.



Laurie Schell was killed in a road accident in October 1939 and after his death his wife took the two 3 litre cars to the United States. At Indianapolis in 1940 a total of four 3 litre Maseratis was entered. Wilbur Shaw appeared at the wheel of his own car again, the two ex-works cars were to be driven by René Dreyfus and René Lebègue, and there was a brand-new Tipo 8CL car in the hands of Argentinian Raoul Riganti. The 8CL had a chassis identical to that of the earlier cars, apart from a slightly longer wheelbase of 9ft 1.5in, but the engine was based on two 4CL sixteen-valve units of 78 × 78mm, giving a capacity of 2,980cc and power output was said to be 420bhp at 7,000rpm. This new car was allotted chassis number 3034. Three of the Maserati drivers qualified as starters, but Dreyfus could not lap fast enough and decided to have a go with Lebègue's car; the engine blew up, putting a con-rod through the side and so Lebègue's car was fitted with the engine from Dreyfus's for the race. Shaw won the race yet again, at 114.277mph, the Schell car finished tenth with both Dreyfus and Lebègue sharing the wheel, but Riganti crashed his 8CL.

The following year Shaw was leading the race when a wheel collapsed, causing him to crash. The two Schell cars had been sold and were now entered as Elgin Piston Pin Specials; they were driven by Duke Nalon, who finished fifteenth, and Mauri Rose, who retired early in the race with engine trouble. There was no Indianapolis race between 1942 and 1945, but in the first post-war race held the following year four Maseratis competed. The works had now completed a second 8CL (chassis number 3035) which was entered for Villoresi by the Scuderia Milano. Wilbur Shaw had retired from racing, but the Boyle car, now fitted with a small head-rest, was entered for Ted Horn. Of the two ex-Schell cars, 3031 was entered for Emil Andres as the Elgin Piston Pin Special and 3030 for Russ Snowberger as Jim Hussey's Special. All four qualified as starters and in the race Ted Horn finished third, Andres fourth, Villoresi seventh and Snowberger retired.

After this race the Scuderia Milano 8CL returned to Europe. It was entered in the Circuit des Trois Villes at Lille on 25 August for Sommer and Louveau and in this 157 mile race they finished a clear lap ahead of Levegh's Lago-Talbot. The 8CL made one more appearance in 1946, in the Penya Rhin Grand Prix at Barcelona on 27 October and in this race Villoresi was again at the wheel. On the two-mile straight of the Pedralbes circuit through the streets of Barcelona the 8CL was achieving 165mph and Villoresi led the race until engine trouble necessitated a pit stop. The 8CL rejoined the race, but retired before the finish. With

the introduction of a new Formula A for the 1947 season, which imposed a maximum capacity limit of 1,500cc for supercharged cars, the effective racing career of the 8CL came to an end. The car raced by Villoresi at Indianapolis was, however, driven by Giuseppe Farina in the 1948 Formule Libre South American winter races. Apart from winning his heat of the first of the two Peron Cup races at Buenos Aires, Farina scored a victory in the Grand Prix of the City of Mar del Plata.

Two Maseratis appeared at Indianapolis in 1947; the ex-Boyle car, now entered by Cotton Henning as the Bennett Brothers Special and painted black and gold instead of the original red, was driven into third place by Ted Horn and Snowberger retired with 3030. The following year the 3 litre Maseratis were still soldiering on and Boyle's old car, still driven by Horn, finished fourth. Paul Russo drove 3030, now entered as the Federal Engineering Special, but this retired. In 1949 an organisation known as Indianapolis Race Cars Incorporated entered the ex-Boyle car for Lee Wallard and the 8CL driven by Villoresi in the 1946 race for Fred Agabashian. Both of these cars, which were painted black, retired early in the race and Sam Hanks failed to qualify with car 3030.

For the 1950 race Maserati built two new Indianapolis contenders, with two four-cylinder engines end-to-end as in the 8CL and with modified 4CLT/48 chassis having increased wheelbase and track. It was intended that these 8CLT/50 cars should be driven by Farina and Rol, but they proved complete failures, were scratched from the race and were eventually sold in New Zealand. Two of the old Maseratis were still running at Indianapolis in 1950, but they had been fitted with Offenhauser 4.5 litre unsupercharged engines. The original works car, 3030, was entered as the Fadeley-Anderson Special and Indianapolis Race Cars fielded 3035, now painted yellow, for Henry Banks. Both cars finished the race, albeit at the tail of the field. Indianapolis Race Cars also entered 3032 in the 1950 race, but it failed to qualify. By 1951 yet another entrant of Maseratis had sprung up, with the grandiose title of Maserati Race Cars. This team entered 3030 with a 3 litre supercharged Offenhauser engine and 3032 in original trim. McDowell qualified 3030, but retired in the race; no driver was nominated for the other car and no attempt was made to qualify it. Joe Barzda entered 3031 for Bud Sennett that year, but it was crashed in practice; Barzda persevered with this car, entering it in both 1952 and 1953, but it did not qualify as a starter in either year.

Although the opposition faced by the Maseratis at Indianapolis in

1939-40 was not particularly strong, these races provided unexpected victories in what had been for many years an American-dominated event and they brought the marque a great deal of prestige in the United States. The Wilbur Shaw car, restored to its original red colour finish, is now on display in the Indianapolis Speedway Museum and 3031 was imported into England by Cameron Millar. It is believed that Riganti's car is still in the Argentine and both 3030 and 3035 (the Villoresi car) have remained in the United States.

## 9

# Battles in a Minor Key: Maserati Voiturettes, 1932–8

Although the Maserati factory took no serious interest in the racing of small-capacity cars so long as its Grand Prix programme was achieving a fair measure of success, the company built Voiturettes from 1929 onwards. These cars were almost exclusively raced by private owners and they scored many successes in minor events in Italy.

In 1929 the Maserati brothers had introduced the 8C-1100, simply a scaled-down version of the larger-capacity straight-eights from the Bologna factory and with a capacity of 1,078cc (51 × 66mm), the usual Maserati twin overhead camshafts and a power output of 100bhp at 5,500rpm. The 8C-1100 had a wheelbase of 8ft 2in (six inches shorter than that of the 8C-2500 Grand Prix car), front track of 4ft 5in and rear track of 4ft 5.75in. At a weight of around 1,768lb, this Voiturette had a maximum speed of 80mph. Alfieri Maserati and Luigi Fagioli drove two of these cars in the 1930 Voiturette race at Pescara, but were beaten into second and third places by Premoli with an eight-cylinder Salmson.

A year later Maserati introduced the first of what was to prove a long line of successful four-cylinder cars. The new model, designated the Tipo 4CTR-1100, had a twin overhead camshaft engine of 1,088cc (65 × 82mm), was fitted with the usual Weber carburetter, Roots-type supercharger and Scintilla magneto and had a claimed power output of 105bhp at 5,500rpm. The Bologna team were striving to reduce weight and make their cars more compact, although not deviating from the very basic, very simple chassis design adopted back in 1926; the 4CTR-1100 had a wheelbase reduced to 7ft 10.25in, front and rear track of 3ft 11in and a weight of 1,360lb. A year later this model was superseded by the 4C-1100 with a lighter single-seater body and reduced overall weight of only 1,061lb.

Maserati had developed a four-cylinder 1,496cc (69 × 100mm) model designated the 4C-1500 and this also appeared in 1932. Power output was 130bhp at 5,500rpm and the model was reckoned to be good for 125–30mph. The 4C-1500 proved to be a most successful car and formed the basis of Maserati's Voiturette efforts for several years until the introduction of the Tipo 6CM in 1936.

On the St Gauden's circuit at Comminges in 1931 Joly with a Maserati won the Voiturette category from a Bugatti driven by Pierre Veyron and another Maserati with Antonio at the wheel. Successes the following year included first and third places by Cerami and Ruggeri in the 1,100cc class of the Coppa Ciano at Livorno (in fact Maserati won this class every year from 1932 to 1935) and for the second year in succession Maserati won the 1,100cc class of the Mille Miglia (a victory repeated in 1933); in 1932 first two places in the class went to Tuffanelli and Bertocchi (the latter was of course Maserati's *Capo Collandatore* or head tester). Ruggeri, who was killed at the end of the year during a record attempt at Montlhéry, won the 1,500cc race at the Nürburgring on the day of the German Grand Prix. Pierre Veyron had now switched to a Maserati and his successes during the year with a 1,500cc car included wins in the 1,500cc classes of the Lorraine and Comminges Grands Prix and second place in the 1,500cc class of the Circuit of Masaryk at Brno. In addition, Maserati was the winner of both the 1,100cc and 1,500cc Italian Championships in 1932.

For the 1933 season Maserati introduced yet another version of the four-cylinder car, the 4C-2000, with engine enlarged to 1,969cc (80 × 98mm) and a power output of 155bhp at 5,500rpm. The chassis dimensions were unchanged, but the weight was said to be 1,273lb. Maximum speed was around 135mph. Racing appearances were few, but one car appeared under the works banner in the Coppa Acerbo and Nice Grand Prix in 1933 and a 2,000cc car was driven by Count Villapadierna at Vichy and Dieppe in 1934. The *raison d'être* of this car and the 2,500cc version that ran in 1934 is difficult to understand, for although they had the right power to weight ratio for certain hill climb and sprint events, they were no match for the Alfa Romeo Monzas and Monopostos on even the slowest of circuits.

Although more and more 1,100cc and 1,500cc cars appeared in private hands in 1933, successes were comparatively few and Maserati suffered a severe set-back at Pescara where Whitney Straight with his supercharged MG Magnette K3 defeated the 1,100cc Maseratis of Barbieri and Furmanik in the Voiturette race. Barbieri, Landi and Furmanik took the

first three places in the Voiturette category of the Coppa Ciano at Livorno and Veyron won the Voiturette category of the Lorraine Grand Prix.

The term 'Voiturette' had been used very loosely to describe cars of smaller capacity than those of the current Grand Prix formula, but from 1934 it was used almost exclusively to describe 1,500cc cars and these formed a category that grew in importance from 1934 onwards. Maserati successes that year included a win by Count Castelbarco in the 1,500cc category of the Eifelrennen at the Nürburgring (a separate race from the main event), and first and second places by Malaguti and Matrullo in the 1,100cc category of the Coppa Ciano. Hans Kessler set fastest lap (a class record) in the first Prix de Berne at Bremgarten, but the race was won by Dick Seaman with Whitney Straight's blown MG Magnette. The outstanding Maserati Voiturette driver of the year, judged by his potential (and widely lauded for it in the motoring press) rather than by his successes which were few, was young Giuseppe Farina who raced a 1,500cc Maserati for the Scuderia Subalpina. Farina, now in his third season of serious competition work, finished third in the Circuit of Biella and won the Circuit of Masaryk Voiturette race.

In 1934 Maserati produced a 2,483cc ( $84 \times 112$ mm) version of the four-cylinder car known as the 4C-2500. Power output was 175bhp at 5,300rpm and maximum speed was around 140mph. Piero Taruffi drove this car in the Monaco Grand Prix, but retired on the last lap when holding fourth place. Only five days later Taruffi was in action with a Maserati again, an 1,100cc car which he drove to fifth place overall and a class win at 64.16mph in the Mille Miglia. Another Maserati success in 1934 was Furmanik's 1,100cc class record gained on the Pistoia-Florence Autostrada.

From 1935 onwards Voiturette racing witnessed a series of epic duels between the products of the Maserati brothers and the British ERAs built at Bourne, in Lincolnshire, with four-cylinder Riley-based engines. Only too often the ERAs came out on top and as a result of the defeats suffered that year the Maserati brothers set to work to develop a new Voiturette to supersede the four-cylinder design which was now in its fifth racing season.

Barbieri won the first heat of the Albi Grand Prix for Maserati, but Bugattis took the first two places in the final. In the 170 mile Eifelrennen Voiturette race the ERAs of Raymond Mays and Tim Rose-Richards sandwiched the second-place Maserati of Hans Rudesch. In the 1,100cc Voiturette category of the Coppa Ciano Tuffanelli and Bianco took the first places (although there was a 1,100cc version of the ERA it was

not entered in this race) and in the 1,500cc Pescara Voiturette race Bianco was beaten into second place by Dick Seaman's private ERA. At Modena, again in the absence of ERA opposition, the Maseratis of Berrone, Tuffanelli and Bergamini took the first three places in the Voiturette category.

One of the most successful Maserati drivers in 1935 was Count 'Johnny' Lurani with a 1,500cc Maserati, but most of his outings were in hill climbs; he scored class wins in innumerable events, including Kesselberg, La Turbie, Stelvio and Varese and also won the 1,500cc class of the Circuit of Biella race.

Furmanik returned to the record-breaking scene at the end of 1935 and at Pescara with a 1,100cc Maserati he recorded 90.98mph for the standing start mile and 82.30mph for the standing start kilometre, thereby smashing the Class G records set by Humphrey Cook with an ERA at Brooklands in August 1934. The 1,500cc class record, however, still stood to the credit of Raymond Mays and ERA.

## THE 1936 RACING SEASON

During the early part of the 1936 season Maserati entrants, whose ranks were now headed by the wealthy Scuderia Torino organisation, were forced to continue to rely on the old-fashioned Tipo 4C-1500 cars and these were absolutely outclassed by the latest B-type ERAs.

The first clash between the two marques came in the Prince Rainier Cup which was held on Easter Monday, 11 April, the eve of the Monaco Grand Prix, over fifty laps of the famous 'round the houses' Monte Carlo circuit. The cup was awarded by Prince Rainier, then the twelve-year-old grandson of the ruling prince and a schoolboy in England, but now, of course, himself the ruler of the Principality and as great a motor-racing enthusiast as ever. A strong entry of nine Maseratis, including Scuderia Torino cars driven by racing motorcyclist Tenni of the Moto Guzzi team and Rovere/Zehender, faced six ERAs and one Alta.

At the start Lord Howe (ERA) led away from Raymond Mays (ERA) and Tenni, but on that lap the Italian pushed his way through to second place. On the third lap there was one of those chaotic mix-ups that have periodically marred races at Monaco. Bianco (Maserati) lost control at the top of the hill by the Casino; Fairfield (ERA) swerved to avoid the Maserati and hit the kerb, damaging a wheel and bending the starting handle under the nose of the car. Lehoux (ERA) and Kautz

(Maserati) both stalled their engines, but they, together with Bianco and Fairfield, managed to get going again. Fairfield made his way back to the pits where the damaged wheel was changed. There was nothing that could be done about the starting handle, the car was push-started and this resulted in its eventual disqualification.

Tenni went into the lead on lap 4 when Howe's ERA developed an engine misfire. Mays stopped for new plugs on this lap and Howe called at the pits three laps later. Behind the leading Maserati the order was now Emilio Villoresi (Maserati), 'B. Bira' (ERA) and Embiricos (ERA). 'Tenni was driving like a demon to get away from the pack, his face already blackened from his close company with Howe's exhaust pipe during the early laps, and Villoresi, unable to leave 'Bira' on the short straights, was flinging his Maserati into the corners and sliding this way and that to the delight of himself and the crowd.' (*Motor Sport*). Soon afterwards Villoresi made the first of two pit stops for plugs and Bianco retired his Maserati with loss of oil pressure. Tenni still led from 'B. Bira', but Embiricos lost his third place to Rovere. Although the Maserati driven by Tenni was marginally faster round this circuit than the pursuing ERA, its brakes were beginning to fade and 'B. Bira' was calmly waiting for the leader to make a mistake. On lap 35 Tenni hit the sandbags at the Gasworks hairpin and the Siamese driver swept into the lead. Zehender relieved Gino Rovere at the wheel of the other Torino car, but this 'Maser' put a con-rod through the crankcase. The race was now completely ERA-dominated and 'B. Bira', Lehoux and Embiricos took the first three places ahead of Kautz, Howe and Villoresi.

The new Tipo 6CM was unveiled to the public for the first time at the Eifelrennen on 14 June. It was powered by a six-cylinder 1,493cc (65 × 75mm) engine with twin overhead camshafts driven by a train of gears from the nose of the crankshaft and with the crankshaft running in five main bearings. The cylinders were cast in pairs and there were two valves per cylinder. There was a Roots-type supercharger compressing at 15.5lb/sq in and power output in original form was said to be 155bhp at 6,200rpm (this was subsequently boosted to a claimed 175bhp at 6,700rpm). Transmission was by a four-speed gearbox with central change and a multi-plate clutch.

There was a chassis of box-section construction, and independent front suspension by double wishbones with the upper wishbones connected to long torsion bars running parallel to the frame side-members. At the rear the suspension was by semi-elliptic springs and a rigid axle. A neat, streamlined body was fitted and in general appearance the Tipo 6CM



resembled a scaled-down version of the unsuccessful V-8R1 Grand Prix car.

At the 170 mile Eifelrennen Voiturette race Scuderia Torino entered two of the new six-cylinder cars for Count Felice Trossi and Laszlo Hartmann and a 4C for Amobono Tenni. Opposition to the Bologna cars came from five British ERAs and Dick Seaman's rebuilt 1927 straight-eight Delage. There were also four four-cylinder Maseratis privately entered for Luigi Villoresi, E. Gessner, Christian Kautz and Hans Rusech.

Although Seaman led away at the start, he went off the road on the first lap and retired with a damaged oil tank. At the end of the first lap Trossi and Tenni headed the field and the leading positions remained unchanged throughout the race. Despite strenuous efforts to catch the leader and setting a new Voiturette record of 71.8mph on his last lap, Tenni was 46 seconds in arrears at the fall of the flag. Hartmann finished sixth with the other six-cylinder car. At this race the ERAs were soundly thrashed and the highest placed drivers of the British cars were 'B. Bira' and Marcel Lehoux who took third and fourth positions.

A fortnight later the Milan Grand Prix was held over a distance of 65 miles in the Parco Sempione. The race received an exclusively Italian entry and Trossi won with a 6CM from other Maseratis driven by Luigi Villoresi, Belmondo, Bianco and Rovere. Only private Maseratis were entered in the Albi Grand Prix held on 12 July and five ERAs faced six Maseratis. The race was run in two heats, each of twenty laps of the 5.6 mile circuit. The first heat was dominated by the ERAs of Lehoux, 'B. Bira' and Fairfield and these drivers took the first three places ahead of Bianco's four-cylinder Maserati. Lehoux failed to start in the second heat because his engine could not be induced to fire and so there were only six starters. 'B. Bira' was unchallenged throughout the twenty laps, the ERAs of Fairfield and Reggie Tongue retired and the Siamese driver won the heat from Pierre Veyron (Bugatti) and Hans Ruesch (four-cylinder Maserati). These were also the final positions on aggregate.

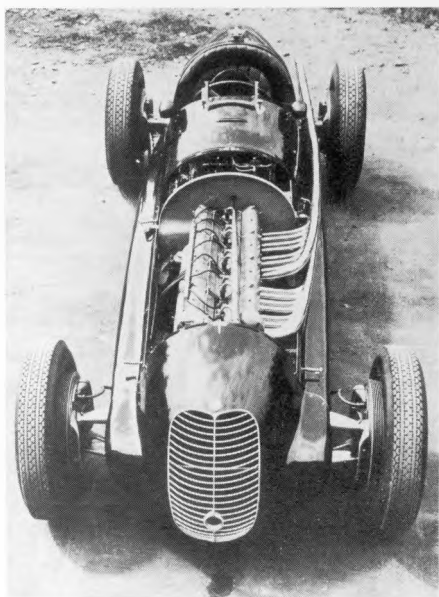
Next came two Voiturette races in Italy. The first was the Coppa Ciano Voiturette race held on a new high-speed circuit at Leghorn on 2 August. A great fight between Trossi with his works 6CM and Seaman's Delage had been expected, but the British-entered car was plagued by carburation problems right from the start of the race. Trossi was able to canter the 65 miles to win from N. S. Embiricos with his grey-painted ERA and Luigi Villoresi (Maserati). Thirteen days later the Coppa Acerbo and its accompanying Voiturette race were held at



*Plate 17* Roy Salvadori drove this 4C-1500 single-seater in a number of early post-war British events; *Plate 18* Le Mans winner Tony Rolt with the 6CM which he drove in British events soon after the end of the second world war.



*Plate 19* George Abecassis with his Tipo 8CTF in the 1947 Jersey Road Race. This car had a non-standard nose; *Plate 20* The Tipo 8CL 32-valve car built after the Second World War to compete at Indianapolis in 1946.



Pescara. On this magnificent circuit, which was roughly triangular in shape and comprised two fast legs and a third mountainous leg with tight corners and hairpin bends, the black Delage was unbeatable. Seaman was in fine form and won the 1,500cc race by a margin of over 39 seconds from Trossi with the works Maserati 6CM. Ruesch, McEvoy and Bergamini finished third, fourth and fifth. Australian Frank McEvoy was at the wheel of a brand-new 6CM and the other two Maserati drivers had four-cylinder cars.

There was only a very weak Maserati entry in the Prix de Berne at Bremgarten on 23 August and Seaman scored an easy victory from the ERAs of Embiricos, Tongue and Earl Howe. Ruesch brought his old four-cylinder car across the line in fifth place and McEvoy finished at the tail of the field with his 6CM after a series of pit stops. Maserati rounded off a successful season with wins by Trossi at the wheel of a 6CM at Lucca on 6 September and Modena on 26 September.

## THE 1937 RACING SEASON

Bologna fielded a works team in 1937 with Amobono Tenni and Ettore Bianco as principal drivers, but, on occasions, also entered Count Trossi and René Dreyfus. Another powerful Maserati team in Voiturette racing was the newly formed Scuderia Ambrosiana headed by Count Johnny Lurani and this organisation entered cars for Lurani, Eugenio Minotti and Luigi Villoresi. A new Maserati Voiturette development in the latter part of 1937 was the Tipo 4CM which combined the newer independently sprung 6CM chassis with the old four-cylinder engine which many drivers preferred because of its superior torque characteristics and greater acceleration out of slow corners. Maserati also built a few 4CM cars with 1,088cc engines.

The first Voiturette race of the season was the Circuit of Turin held on the Valentino Park circuit. Bianco with his works Maserati led away at the start, Dreyfus was in second place and 'B. Bira' (ERA) was hot on the latter's exhausts. On lap 4 the Siamese driver moved up into second place and began to chase after Bianco's Maserati. 'B. Bira' was up with the Bologna car by lap 9, but Bianco was resorting to deliberate baulking tactics and the ERA driver was unable to find a way round the red Maserati.

The flag-marshals steadily looked in the opposite direction whenever the cars approached [wrote *Motor Sport*], and the whole affair was a thoroughly

bad piece of flagrant baulking. As for Birabongse, he saw for the first time the real meaning of the saying, 'When in Rome do as Rome does'—only this happened to be Turin. If it had not been for the fact that Trossi and Farina, who were watching the race, both protested vigorously against the unfair tactics adopted by Bianco, one would be inclined to regard the Italians as the most unsporting people on earth. As it was, the officials took no notice of the protests, and left Birabongse to fight his own battles.

After fifteen laps the Siamese driver succeeded in fighting his way to the front and had soon pulled out a lead of close to twenty seconds. Bjornstadt (ERA) passed both Dreyfus and Bianco and when 'B. Bira's' car succumbed to gearbox trouble, the Norwegian took the lead. Dreyfus now passed Bianco and the Italian lost another place when he stopped to hand the car over to Gino Rovere. At the end of this 73 mile race the order was Bjornstadt—Dreyfus—Tongue (ERA)—Bianco/Rovere.

The following Sunday, 25 April, the Circuit of Naples was held over thirty laps of the slow, difficult 2.5 mile Posillipo course which was being used for the first time. At Turin it had seemed that the ERAs had the legs of the latest Maserati, but at this race the tables were turned. When the Prince of Piedmont lowered the flag for the start of the race, Franco Cortese with an Ambrosiana Maserati went into the lead ahead of Trossi, 'B. Bira' and Bianco. After five laps Birabongse passed the leading Maserati and Cortese began to drop back because of plug trouble. Trossi, however, was in fine form and repassed the leading ERA to win this 76 mile race at an average of 51.40mph. Bjornstadt moved up to third place and he was followed across the line by the Maseratis of Prosperi, Bianco and de Graffenried.

There were no ERAs entered in the Tripoli 1,500cc race held on 9 May and it proved a complete Maserati benefit. Dreyfus drove his works car magnificently to win at 107.90mph (compared with 134.42mph for Lang's winning Mercedes in the Tripoli Grand Prix) and he was followed across the line by Cortese, Severi, Luigi Villoresi and Dusio. A fortnight later Maserati enjoyed another sweeping success in the absence of ERA opposition. In the Targa Florio, held as a Voiturette race over the 3.5 mile Palermo Park circuit, the Maseratis of Severi, Lurani and Bianco took the first three places. The winner averaged 66.00mph.

Next came the Avusrennen Voiturette race held over seven laps of the 12 mile Avus circuit in Berlin which for the first time incorporated the new, steeply banked north curve. *The Autocar* set the scene in these words:

There was wonderful weather for Berlin's motor racing weekend. Great crowds of sunburnt Germans watched the Thursday, Friday and Saturday

practice. The capital filled with visitors—the usual gay international party that gathers for a great motor race. Berlin in May, with its many outdoor restaurants, wide tree-lined streets and delightful lakes so easily reached by car, could not have welcomed them more kindly.

On Sunday the sun shone brighter still. Thousands of Nazis trying not to appear uncomfortable in the heat of their heavy uniforms, marshalled the crowds (estimated at 300,000) moving past the immense new exhibition hall to the tribunes.

Most of the crowd, of course, had come to watch the battle in the Formule Libre race between Auto Union and Mercedes-Benz. There were no works cars entered in the Voiturette race and it proved a straight fight between the ERAs of Charles Martin and Bjornstadt and the Maseratis of Cortese, Teagno, Platé (with a four-cylinder car entered by Count Castelbarco), Basadonna and Uboldi. Teagno and Cortese nosed ahead at the start which was given by the firing of a maroon, but Martin soon went in front and despite a stiff challenge from Cortese maintained his lead to win at an average of 119·67mph. Cortese spun off on the last lap and behind the ERA the finishing order was Platé, Teagno (another driver to spin), Uboldi, Hug (Bugatti), Basadonna and Bjornstadt who had brought his red-painted ERA, R1A, the original 1934, into the pits twice for new tyres to be fitted. Martin was garlanded by Huhnlein (German Minister for Sport) with an enormous laurel wreath and later Reichsminister Goebbels presented him with a gigantic trophy for the best performance at the meeting by a non-German driver.

On 3 June Luigi Villoresi (6CM) and Emmanuel de Graffenried (four-cylinder car fitted with Tecnauto independent front suspension) ran in the 200 mile Royal Automobile Club International Trophy race in the Isle of Man. Villoresi retired out on the circuit because of a blocked fuel line and had to tramp back to the pits in the heavy rain that was now falling. De Graffenried finished sixth behind a quintet of ERAs. The Swiss baron averaged 66·73mph compared with the 70·69mph of race winner 'B. Bira'. The Maserati drivers stayed in the British Isles to compete in the 155 mile Nuffield Trophy handicap race at Donington Park on 12 June, but the best that Bologna could manage was fifth place by de Graffenried behind the ERAs of Fairfield, Dobson and Mays and Maclure's Riley. Villoresi retired with supercharger trouble. *Motor Sport* commented that, despite its independent front suspension, Villoresi's Maserati suffered from bad 'wheel flap'.

The following day, 13 June, three private ERAs driven by 'B. Bira', Reggie Tongue and Peter Whitehead faced thirteen Maseratis in the Florence Grand Prix. There should have been four ERAs, but Embiricos

non-started with his Bourne car after a practice crash. Works 6CMs were driven by Dreyfus and Bianco, Trossi drove a four-cylinder car and Johnny Wakefield made his race début with his new private 6CM. The race was run in oppressively hot weather and a number of drivers were badly affected by the heat. 'B. Bira' led for the first four laps, but then Trossi went ahead and as the Siamese driver's brakes began to weaken, he was passed by both Bianco and Dreyfus. Trossi, faint from the heat, slowed right off and was passed by Bianco, Dreyfus, 'B. Bira' and Dusio. The Italian count pulled into the pits and handed his car over to Gino Rovere. 'B. Bira' decided to retire after over-shooting a couple of corners because of his brake trouble and Dreyfus had now taken the lead from Bianco. After ten laps Rovere brought his 6CM back into the pits and Trossi resumed at the wheel, turning in a masterful performance and climbing back through the field to finish third behind team-mates Dreyfus and Bianco. There was, however, more than a little confusion among the time-keepers at this race, it was not clear beyond peradventure who had won and the final positions were decided on a consensus of opinion basis.

In the Milan Grand Prix on 20 June thirteen Maseratis were opposed by the same three ERA drivers. Eugenio Siena with a 6CM won the race from A. Marazza at the wheel of an elderly four-cylinder Maserati with two-seater bodywork that had formerly been used for hill-climbing by Lurani. Cortese finished third ahead of Tongue (ERA), Belmondo and Villoresi. 'B. Bira' had motored well with his ERA in the opening stages of the race, but his car developed engine trouble and this caused his retirement.

The Picardy Grand Prix held at Peronne on 27 June attracted works entries from both ERA and Maserati. Bourne defeated Bologna in this 91 mile race and Raymond Mays led home the Maseratis of René Dreyfus and Johnny Wakefield. On 17 July the London Grand Prix, run in two qualifying heats and a 30 mile (15 lap) final was held at the newly opened Crystal Palace circuit. This race proved another ERA benefit and 'B. Bira' won from Ian Connell with Maclure (Riley) and Reg Parnell (MG) in third and fourth places. Private 6CM owner R. Hanson brought his car across the line in fifth place. In the 35 mile San Remo Grand Prix held on the Ospedaletti circuit on 25 July the 6CMs of Varzi, Dusio and Rocco finished in the first three places.

There was a very mixed entry in the Junior Car Club's International Trophy race held on 2 August over a 3.369 mile road circuit at Brooklands and with a handicapping system provided by the use of different

channels. The entry included works ERAs for Raymond Mays (with a 2 litre engine) and Humphrey Cook (with a 1.5 litre engine), 'B. Bira' with his ex-Straight 8CM Maserati and Wakefield's 6CM Voiturette. Mays led from start to finish with 'B. Bira' in hot and close pursuit until his elderly 'Maser' developed serious engine trouble. At the end of this 204 mile race Wakefield was in second place at an average of 80.32mph (compared with the winner's 82.30mph) ahead of Billy Cotton (MG Magnette) and A. C. Dobson (ERA).

Although H. L. Hadley's Austin single-seater won the rain-soaked Crystal Palace Cup at the London road circuit on 14 August, Maseratis were well to the fore; 'B. Bira' took second place with his 8CM and the Hon Peter Aitken and R. Hanson finished sixth and seventh with their six-cylinder Voiturettes.

The Coppa Acerbo Voiturette race at Pescara on 15 August attracted an entry of fifteen Maseratis and the opposition was limited to Reggie Tongue's ERA and an elderly MG Magnette. At the fall of the flag Villoresi led away from Bianco, Rocco, Cortese and Marazza. Further down the field on that first lap Ermini (presumably the same Ermini who built Fiat-powered sports cars in post-war days) went into a high-speed skid while striving to overtake Ubaldi; his Maserati careered into the crowd, killing four people and injuring five others; Tongue's ERA was involved in the mêlée, went off the road and retired shortly afterwards. Out in front Villoresi and Bianco battled for the lead until the former's car developed gearbox trouble; Bianco went ahead, but lost time through a bad skid and Rocco took the chequered flag at an average of 77.59mph from Bianco, Cortese and Severi.

As in past years the Swiss Grand Prix, held at Bremgarten on 22 August, was preceded by the Prix de Berne Voiturette race and for the first time in 1938 there was a confrontation between works ERAs and works Maseratis. The race was run in two 14 lap qualifying heats and a 94.8 mile (21 lap) final. The main contenders in each heat were as follows:

#### *Heat 1*

Maserati 6CM:	Villoresi, Wakefield, Hanson, Gollin
Maserati 4CM:	L. Hartmann
Maserati 4C:	Castelbarco, de Graffenried
ERA:	Raymond Mays (works car), Charles Martin (works car)

#### *Heat 2*

Maserati 6CM:	Cortese, H. Berg, Minotti
Maserati 4C:	de Puy, Marazza
ERA:	A. C. Dobson (works car), 'B. Bira'



Luigi Villoresi accelerated into the lead ahead of Mays's ERA at the start of the first heat and this remained the order throughout the fourteen laps. Martin finished third ahead of Hartmann, Hanson and Gollin. Wakefield retired his green Maserati with a fuel tank leak. Cortese led initially in the second heat, but then Dobson went ahead to win at an average of 88.70mph from Cortese, 'B. Bira', Berg and Marazza.

Shortly before the start of the final, heavy rain began to fall and although Villoresi and Cortese led away from the start the Maseratis were handling atrociously in these conditions, sliding even on the straights, and 'B. Bira' and Dobson forged ahead. As the roads dried out, the ERA domination became even more pronounced and after a close battle for the lead Arthur Dobson crossed the finishing line a fifth of a second ahead of Raymond Mays; 'B. Bira' was third and the highest placed Maserati driver was Cortese in fourth place ahead of Martin's ERA. Marazza, Hartmann, Minotti and Villoresi took sixth, seventh, eighth and ninth places. A sad débâcle for Bologna!

On 28 August the ERAs scored another victory in the Junior Car Club's 200 Mile race at Donington Park. Arthur Dobson, with a works car, was the winner at an average of 69.67mph from 'B. Bira' (Maserati 8CM), Peter Whitehead (ERA) and Johnny Wakefield (Maserati 6CM). The Phoenix Park, Dublin, 1,500cc race over a distance of 100 miles on 11 September was won by Raymond Mays (works ERA) at an average of 102.90mph, but Johnny Wakefield took second place for Maserati and brought his 6CM across the line ahead of Cotton (ERA) and Hanson (Maserati 6CM). There were no ERAs entered in the Circuit of Lucca held over a distance of 73 miles on 19 September and Trossi with a four-cylinder Maserati scored an easy victory at an average of 58.31mph from the 6CMs of Luigi Villoresi and Rocco. The 91 mile Masaryk Voiturette race held on the Brno circuit on 26 September almost witnessed yet another ERA victory; Charles Martin led by a substantial margin until his engine began to miss on one cylinder and he dropped back to finish second to Luigi Villoresi; this was 'Gigi's' first victory with a 6CM. Laszlo Hartmann drove a 4CM into third place.

Two British races rounded off the 1937 season. The Donington Grand Prix on 2 October was fought out by the Grand Prix Auto Union and Mercedes-Benz teams, and Bernd Rosemeyer won for Zuffenhausen from von Brauchitsch (Mercedes), Caracciola (Mercedes), Müller (Auto Union) and Hasse (Auto Union). 'B. Bira' brought his old 8CM across the line in sixth place and Hanson finished eighth with his 6CM.

The final race of the season was the handicap Imperial Trophy at

the Crystal Palace and to this race Scuderia Ambrosiana brought a full team of three cars transported in OM vans. Count Felice Trossi and Count Johnny Lurani drove 4CMs (the latter's car was fitted with quarter-elliptic rear suspension) and Luigi Villoresi had a 6CM. In addition, Aitken and Hanson entered their private 6CMs. ERAs were entered for Raymond Mays (with 1,100cc engine), Arthur Dobson, 'B. Bira', Charles Martin and Peter Whitehead. Great excitement surrounded this race because 'B. Bira' and Mays were neck and neck for points in the BRDC Gold Star and Crystal Palace was to be the decider. Unfortunately, Mays's engine blew up during Thursday's practice and he became a non-starter.

In the first 10 lap heat the winner was Percy Maclure (unsupercharged 2 litre Riley) and he was followed across the line by Arthur Dobson and Count Lurani (whose 4CM was said to be too low-g geared for the circuit); Whitehead and Hanson finished fifth and sixth. Villoresi retired out on the circuit because of engine trouble. In the second heat there was an exciting three-cornered battle between Trossi, Charles Martin and 'B. Bira' and this was the finishing order after a tough fight. Goodacre's Austin was fourth ahead of Aitken's 6CM and Hyde's ex-Cholmondley-Tapper, ex-Howe 8CM. In the final Trossi was an early victim of mechanical trouble, neither Villoresi nor Lurani was able to challenge for the lead and the ERAs of 'B. Bira' and Arthur Dobson took the first two places ahead of Goodacre's Austin. Villoresi and Lurani finished fourth and fifth.

There had been many battles during 1937 between Bologna and Bourne and although it was a bitter pill for the Maserati brothers to swallow, it had to be admitted that the rather square-rigged British ERAs were more than a match for the sleek 6CMs. When the two marques met, the Maseratis came out on top only if the British opposition was weak. It is beyond doubt that the power output claimed for the 6CM was greatly exaggerated and it is likely that the true output was less than the 150bhp of the ERA. One expert has described the 6CM as a disastrous failure. This is clearly not the case, as the cars achieved a fair measure of success, but the constant defeats at the hands of the ERA drivers did little to enhance the Italian manufacturer's reputation.

Certain Voiturette races in Italy had proved a complete Maserati benefit, albeit because of the complete lack of any serious opposition. Victories in this category included the 75 mile Genoa Voiturette race which Marazza with his ancient two-seater won from other Maseratis driven by Severi and Belmondo, the 88 mile Lucca race won by Trossi

from Luigi Villoresi and Rocco, and the 35 mile Campione d'Italia race in which Rocco, Severi and Lurani took the first three places for Bologna.

Record-breaking was still a popular pursuit at Bologna and one of the most enthusiastic of Maserati record-breakers was Furmanik. In 1937 he had prepared a special car with the 1,496cc (69 × 100mm) four-cylinder engine in very highly tuned form and with very elaborate and aerodynamic coupé body to attack Class F records. The record attempts were made at Florence on the Autostrada leading to Leghorn.

Furmanik first of all attacked Raymond Mays's records with an ERA of 96·08mph for the standing start mile and 85·35mph for the standing start kilometre. Furmanik shattered both of these records with speeds of 104·87mph and 89·95mph. The Maserati's axle ratio was then changed for attempts on flying start records. The Italian broke the record for the flying kilometre at a speed of 148·4mph (the record had previously stood to the credit of American driver Duray with a Miller masquerading as the Packard Cable Special at Arpajon). It had been Furmanik's intention to tackle the flying mile record next, but mechanical trouble intervened and further record attempts had to be abandoned.

According to Norman Smith (*Case History* published by *Autosport* in 1958) the engine from Furmanik's record-breaking car was later transferred to the Tipo 4CM car raced by Count Felice Trossi in a number of Voiturette events in 1937, including the Imperial Trophy race held at the Crystal Palace circuit at the end of the year.

## THE 1938 RACING SEASON

At the end of 1937 Scuderia Ambrosiana dispatched a team of cars to compete in South African races. On 16 December the handicap Rand Grand Prix was held over a distance of 121 miles at the 2·4305 mile Lord Howe circuit at Johannesburg. Van Riet with an Austin 750cc Monoposto won the race from Hesketh (MG R-type) and Count Lurani. Sixth place went to 'Mario' (Dr Masacurrati) with a 3·7 litre Tipo 34 Maserati. The second race was the 198 mile South African Grand Prix at East London on 1 January and here the winner was W. Meyer (Riley) who led Eugenio Siena's Maserati and Richardson's Riley across the line. The Grosvenor Grand Prix at Capetown on 15 January was the third and final race in the series and this was won by Earl Howe (ERA) from the Maseratis of Taruffi, Luigi Villoresi and Everitt (whose car was entered by Howe).

The first European race of the season was the Coronation Trophy run on 2 April at the Crystal Palace circuit in two 10 lap heats and a 15 lap final. 'B. Bira' won the first heat from Wakefield's 6CM and in the second heat the finishing order was Dobson (ERA)—Dodson (Austin)—Smith (MG)—Hanson (Maserati 6CM). The Siamese driver also won the final from Wakefield and Dobson. Eight days later Maseratis were well to the fore in the Pau Grand Prix. Shortly before the start Lang's Mercedes lost its oil pressure and so Caracciola was the only Stuttgart starter. Auto Union did not run in this race. Although the two unblown V-12 Delahaye cars of Dreyfus and Comotti could run through this 172 mile race without refuelling, the Mercedes had to make a pit stop and this proved fatal for the German team. Dreyfus went into the lead while the Mercedes was stationary in the pits and Lang (Caracciola had been relieved by his team-mate because his feet had been scorched by engine heat) rejoined the race 1min 23sec in arrears. He succeeded in reducing the deficit only fractionally before the gap began to open up again. The German came into the pits to complain of gear-change problems and after frantic work by the Mercedes mechanics he resumed the race to finish second, over a minute in arrears. Comotti took third place and the Maserati Voiturettes of Raph and Lanza finished fourth and sixth, sandwiching Maurice Trintignant's ancient Bugatti Type 35.

The Tripoli Grand Prix on 15 May cost the lives of two well-known Maserati exponents. The main race was fought out between the Mercedes-Benz, Auto Union and Alfa Romeo teams, but run concurrently with this was a 1,500cc category consisting entirely of Maseratis. From lap 12 onwards the Mercedes of Lang, von Brauchitsch and Caracciola occupied the first three places and behind them came Farina with a twelve-cylinder Alfa Romeo. Eugenio Siena, now a member of Scuderia Ferrari, lost control on a fast curve while lapping Cortese's Maserati which was leading the 1,500cc category, collided with a retaining wall and was killed outright. The second fatality occurred when Farina was lapping Hartmann's 1,500cc Maserati and the two cars collided (a repetition of the fatal accident in which Farina was involved in the 1936 Deauville Grand Prix). The Hungarian suffered injuries to which he succumbed on the following day and Farina, too, was quite badly injured. The finishing order in the 1,500cc category was Taruffi, Rocco, Lurani, Bianco, Raph and Hug.

In 1938 the Targa Florio was again held as a Voiturette race in Palermo Park and the Maseratis of Rocco, Raph and Luigi Villoresi took the first three places. Lurani entered a 4CM in the London Grand Prix at

the Crystal Palace on 25 June, but he crashed badly in practice, somersaulting his car and suffering injuries that made it impossible for him to drive in the race. He made arrangements for his car to be driven by W. G. Everitt. Everitt finished fourth in his heat, but retired in the final. The ERAs of 'B. Bira' and Arthur Dobson took the first two places.

A victory for Maserati followed at Albi on 10 July. Mays with the sole works ERA took the lead on the first lap of heat one, but retired with a cracked supercharger after setting fastest lap in 3min 24sec (96.19mph). Bianco crashed badly when he went into a corner too quickly, slid sideways, rolled his Maserati and demolished a telegraph pole. Villoresi won the heat from Teagno and Soffietti. There were only six starters in the second heat and Armand Hug (who had retired in the first heat) was the winner, over a minute ahead of Villoresi. Hug also set fastest lap in this heat in 3min 33sec (92.13mph). Luigi Villoresi and Soffietti took the first two places on aggregate ahead of Enrico Platé's old Talbot.

The German Grand Prix on 24 July was won by Dick Seaman with a Mercedes-Benz W.154 at an average of 80.72mph after von Brauchitsch's leading Mercedes had caught fire in the pits. The works Maserati entry of two 3 litre Tipo 8CTF cars was scratched and the marque was represented only by the 1,500cc Voiturettes of Cortese, Berg, de Graffenried and Paul Pietsch and A. B. Hyde's ancient 8CM. The British driver ended his race by putting his car in a ditch and, unfortunately, was badly injured. Berg retired because of a defective fuel pump and de Graffenried was eliminated by transmission trouble. Pietsch and Cortese finished in fifth and eighth places.

One of the most important races of the 1938 season proved to be the Voiturette race preceding the Coppa Ciano at Leghorn on 31 July. At this race the new straight-eight Tipo 158 Alfa Romeo 1,500cc cars made their début in the hands of Emilio Villoresi (elder brother of Luigi), Clemente Biondetti and Francesco Severi. Initially Luigi Villoresi led for Maserati with brother Emilio hot on his exhausts. Luigi fell out because of mechanical trouble and the Alfas of Emilio and Biondetti finished in the first two places ahead of Marazza's old four-cylinder Maserati.

A fortnight later the Maseratis and Alfettas met up again in the Voiturette race preceding the Coppa Acerbo at Pescara. The Alfettas were fastest in practice and were hot favourites to win the race. The Milan cars were, however, plagued by plug trouble, Villoresi and Biondetti retired, but Severi battled on gamely to finish fifth behind the works Maseratis of Luigi Villoresi and Paul Pietsch and the privately entered cars of Barbieri and Libeccio. It is interesting to note, however,

that although Pietsch's 'Maser' was timed at 135.9mph over the flying kilometre of the Montesilvano straight, Severi's Alfa, after it had been induced to run properly, was timed at a speed in excess of 140mph.

It was hoped that the Prix de Berne, the Voiturette curtain-raiser to the Swiss Grand Prix on 21 August, would see a three-sided struggle between Alfa Romeo, ERA and Maserati, but the Alfettas failed to arrive. At Bremgarten the leading Voiturette drivers were Luigi Villorosi (Maserati) and Raymond Mays (ERA). Villorosi, Pietsch and Berg headed the field at the start of the first heat, but both Villorosi and Berg retired and Pietsch won the heat from the ERAs of Wilson and Wakefield. In the second heat the works ERAs faced the four-cylinder Maseratis of Bianco and Hug. This was an uninteresting race and the ERAs of Mays, Earl Howe and Tony Rolt took the first three places with ease. Mays again took the lead in the final, heading Pietsch, Howe, Bianco and Hug. Both Pietsch and Mays retired, Howe's ERA developed a bad misfire and Armand Hug came through to score an unexpected victory from Bianco, Wakefield and Howe.

On the Saturday, Emmanuel de Graffenried, with a 1,100cc Maserati, had led the Prix de Bremgarten race for Swiss nationals until his engine seized solid on the last lap and Hans Gubelin at the wheel of a BMW '328' then took the lead. The officials were waiting for de Graffenried and failed to flag off the unfortunate Gubelin who crossed the line in a wild skid after lapping a slower car, lost control, struck the barriers and was killed instantly. Four Maseratis, all probably 8CMs, were driven by Christian, de Graffenried, Mandirola and Teagno in the Swiss Grand Prix, but none made it to the finish. The winner was Caracciola (Mercedes) who led home team-mates Seaman and von Brauchitsch.

Six days later on 27 August four Maseratis ran in the JCC 200 Miles race at Brooklands. Aitken, Hanson and Rayson ran their Voiturettes and 'B. Bira' drove his 8CM-3000. Johnny Wakefield scored a fine victory with his ERA and the Siamese prince had to settle for second place. The only other Maserati to finish was Rayson's car, which took fifth place in the 1,500cc class, ten laps behind the winner.

On 11 September both the Italian Grand Prix and the Voiturette Milan Grand Prix were held on a 4.345 mile version of the Monza circuit which incorporated chicanes. The 1,500cc race witnessed another duel between Alfa Romeo and Maserati. At the start Raymond Sommer took the lead for Portello, but his engine developed a bad misfire and Luigi Villorosi (6CM) went ahead. Villorosi's lead was short-lived, however, he dropped back with engine trouble and brother Emilio took the

lead with his Alfetta to win at 94.80mph from team-mate Severi and the Maseratis of Armand Hug, Cortese and Bagliano.

The finish of the Voiturette race was marred by a ghastly accident which cost the life of Marazza. Sommer's Alfetta caught fire and the French driver stopped in a dense cloud of smoke just before the finishing line. Marazza did not realise that the race had finished and raced by at speed. Blinded by smoke, he misjudged the Lesmo curve, his Maserati spun viciously several times, overturned and crashed into a tree. The driver was impaled on a branch which pierced one of his lungs and he died in hospital.

A week later both Alfa Romeo and Maserati contested the Circuit of Modena Voiturette race. All four Alfas retired and Franco Cortese with a works 6CM won this 55 mile race from Hug and Dobson (ERA). Other and rather more parochial victories were scored by Maserati in 1938 at Naples where Marazza, Luigi Villoresi and Ghersi/Pelassa took the first three places, and at Lucca where Luigi Villoresi won from Cortese and Pietsch.

## Sixteen-Valve Voiturettes: The 4CL, 1939-40

By 1939 the Italian motor industry had adopted a new attitude to motor racing; a year before Alfa Romeo had first raced the new Tipo 158 'Alfetta' Voiturette designed by Giaocchino Colombo, a model that by its very creation recognised the overwhelming defeat of Italian Grand Prix cars by the German Auto Union and Mercedes-Benz teams and represented an effort by the Milan factory to achieve success in another less demanding field. Like Maserati, Alfa Romeo still toyed with Grand Prix racing and had produced three different models for the new Formula A of 1938 onwards, but the Alfetta was the model on which most of the team's efforts were concentrated. During 1938 the 158s had scored two important victories (but had also suffered two humiliating defeats) and although the new Alfas were as yet far from fully developed, they were only too obviously the fastest ever 1,500cc racing cars and represented an even greater threat to Maserati in the 1,500cc category than the British ERAs. Partly in answer to the Alfa Romeo challenge and partly in response to the decision that all major races held on Italian soil in 1939 would have a 1,500cc capacity limit, the Maserati brothers produced a new and much improved Voiturette over the winter of 1938-9. Although the new model, the 4CL, represented a vast improvement over earlier 1,500cc Maseratis, it incorporated many familiar features of Bologna design practice and showed little technical advance over earlier designs.

Just as the straight-eight 8CTF Grand Prix car produced in 1938 had an engine based on two four-cylinder Voiturette cylinder blocks, so the new 4CL and the 8CL 3 litre car that appeared the following year had a great deal in common; both featured 'square' cylinder dimensions of 78 × 78mm and both had four valves per cylinder, the latter a feature pioneered in the 1920s by Bugatti and Aston Martin. The valves were at an angle



of 90 degrees and the twin overhead camshafts were driven from the nose of the crankshaft which ran in three main bearings. Initially, the team experimented with both single-stage and twin-stage supercharging (the latter was featured on 1939 Auto Union and Mercedes Formula A cars), but settled for the single blower. There was a separate take-off pipe for each exhaust valve, feeding into a single tail-pipe. Dry sump lubrication was used with the Elektron oil tank mounted under the driver's seat and bracing the rear of the chassis. In original form power output was 220bhp at 6,600rpm and this endowed the 4CL with a maximum speed of close to 150mph (in the 1939 Coppa Acerbo Villorresi's car was timed at 147mph). Although the 4CL had a slightly lower maximum speed than the rival Alfa, it seems that its acceleration was superior.

The chassis design of the 4CL was very similar to that of the 6CM, a simple, channel-section structure with identical front suspension by wish-bones and torsion bars, but with rear suspension by quarter-elliptic springs that were splayed outwards slightly (a feature retained by Maserati until the end of the 1952 season). Hydraulic brakes were fitted and these had large cooling scoops. Transmission was by a four-speed gearbox in unit with the engine. The body, with the fuel tank in the tail, was of similar basic shape to that of the 6CM, but there was a much deeper air intake and the lines were lower and smoother.

Before the new cars were raced by the works, one had already been delivered to a private owner and Reggie Tongue drove his new acquisition in the JCC International Trophy race at Brooklands on 6 May 1939. 'B. Bira' won this 202 mile race with his old ex-Whitney Straight 8CM-3000 Maserati, Leslie Brooke finished second with his Riley-powered Brooke Special and Tongue crossed the line in third place.

The following day the Tripoli Grand Prix was held on the very fast Mellaha circuit and as Tripoli was an Italian colony, this 244 mile race had a 1,500cc capacity limit. Maserati entered three of the new cars for Luigi Villorresi, Count Felice Trossi and Franco Cortese. Villorresi's car was a very special version with a streamlined body designed by a German company; this extended outwards to enclose the wheels, there were covers over the front wheels (but not the rear wheels) and a streamlined tail with a high headrest. This car, which was raced the once only, was said to be capable of 170mph and this claim was substantiated in practice when Villorresi set fastest lap at 134mph. Twenty-two other Maseratis were entered in this race. Alfa Corse fielded 158s for Emilio Villorresi, Farina, Pintacuda and Aldrighetti, but the real sensation of the race were

the brand-new, superbly styled and tremendously potent Mercedes-Benz W.165 V-8 cars driven by Rudolph Caracciola and Hermann Lang. For both Maserati and Alfa Romeo the race proved a terrible débâcle; none of the works Maseratis survived the first lap, Villoresi's car succumbing to gearbox trouble and the other two retiring with piston failure; and three of the four Alfas retired in their efforts to stay with the silver cars from Stuttgart. Lang and Caracciola took the first two places on the one and only appearance of the W.165s, trailed home by the surviving Alfa of Emilio Villoresi.

Despite this inauspicious début by the works cars, the 4CL enjoyed a good run of successes later in 1939. Another event in May was the Targa Florio, run as a closed-circuit Voiturette race in Favorita Park, Palermo; Villoresi with a works 4CL won the race from other Maseratis driven by Taruffi and Barbieri. The second British purchaser of a 4CL was Johnny Wakefield who travelled to Italy to take delivery and then embarked on a round of Voiturette races on the European mainland. Wakefield's first outing with his 4CL was in the Naples Grand Prix, a 153 mile race over the Posillipo circuit, and here he scored a fine victory over the works 4CLs of Piero Taruffi and Franco Cortese. He then travelled to Peronne (mid-way between Abbeville and Quintin) for the 91 mile Picardy Grand Prix. The opposition was slight and he won the race from older Maseratis driven by Sommer and Horvilleur. Next on Wakefield's calendar was the Coupe du Commission Sportive race on the very fast Reims circuit. Once again Wakefield set the pace, but he fell back because of brake trouble and finished second behind a 6CM with the sixteen-valve engine driven by Armand Hug. Now he trekked south again to Albi for the 221 mile Grand Prix on the Circuit des Plâques. Wakefield was again the winner, followed across the line by Tongue's similar car and 'B. Bira's' ERA took third place.

Wakefield now took a break while the works cars were running in two major Italian races. In the Coppa Ciano at Leghorn the 4CLs of Cortese and Taruffi faced three Alfa 158s driven by Farina, Biondetti and Pintacuda, with Severi as reserve driver. Although the Alfas had the legs of their Bologna opponents, Biondetti was forced to abandon his Alfa in the pits with mechanical trouble and took over Pintacuda's car, while Severi went out with the car in the pits once it had been repaired. Farina led throughout with his Alfa, Cortese was second for Maserati, a lap in arrears, Biondetti finished third, Taruffi took fourth place and Severi brought the repaired Alfa home in fifth place. In the Coppa Acerbo at Pescara the Alfettas of Biondetti, Pintacuda, Farina and Severi

took the first four places and both of the works Maseratis retired. On 20 August the Swiss Grand Prix was held at Bremgarten, but combined with this Formula A race was the Prix de Berne for Voiturettes; there was a separate heat for each category and the survivors ran together in the final in which there were separate prizes for the smaller cars. The Alfas of Farina and Biondetti took the first two places in the 1,500cc heat, followed home by Wakefield with his private 4CL. In the final, the smaller category was again dominated by the Alfas and none of the Maseratis was in the picture.

Although the outbreak of war brought an end to motor racing in most of Europe, Italy did not enter hostilities until 1940 and during that year three major races, two of them for Voiturettes, were held on Italian soil. On 12 May 1940, the Tripoli Grand Prix was run on the Mellaha circuit and attracted works entries from both Alfa Romeo and Maserati. In the opening laps Luigi Villoresi (4CL) battled for the lead, but then Farina (Alfa Romeo) went ahead; when the leaders stopped to refuel, Alfa Romeo pit-work was slicker, Farina's car was stationary for only 24 seconds, Villoresi's for more than twice as long and by the end of this 244 mile race he had been passed by other Alfas driven by Biondetti and Trossi. The second works Maserati with Cortese at the wheel retired. There were sixteen private Maseratis entered in this race and at the wheel of one of these was a notable star of later days, Alberto Ascari, who drove his now elderly 6CM into eighth place. Eleven days later the Targa Florio was again held as a closed-circuit race at Palermo. The only works cars entered were the 4CLs of Villoresi and Cortese and these took the first two places, the winner averaging 88.41mph.

## Post-War Motor Racing Revival: The 4CL, 1946

Despite the ravages of war and occupation, motor racing was under way again on the European mainland soon after the cessation of hostilities, both Alfa Romeo and Maserati had their cars ready for the 1946 season and a number of new 4CLs had been built. Since pre-war days only minor changes had been made to the specification, there was now an external oil cooler, a larger carburetter air scoop and a new scoop to cool the magneto. Although Officine Alfieri Maserati no longer raced a works team as such, Modena was well represented by the Scuderia Milano which had several 4CLs and entered them for a number of leading drivers.

The first race of the 1946 season was the Nice Grand Prix held on 22 April over 65 laps of a 1.9 mile circuit; this was a true road course through the streets of the town with a few straw bales and rows of chestnut fencing to protect spectators and nothing round the lamp-posts to protect either driver or street furniture in the event of a collision. Scuderia Milano fielded three 4CLs for Luigi Villoresi, Franco Cortese and for the team's patron, Arialdo Ruggeri, and also brought along an old 6CM for 'Fi-fi' Etancelin. The great Tazio Nuvolari would have driven one of the cars but for the fact that his wife was ill. There had been difficulties over admitting an Italian team into France and the Milano transporters were late through customs with the result that these Maseratis had very little practice. Another 4CL was driven by Frenchman Mazaud who lost his life at Nantes later in the year. Mazaud was supposed to have favoured the wrong side during the hostilities and a number of French drivers said that they would not compete if he was allowed to run. Eventually—and, perhaps, rather surprisingly in view of the understandably high feelings that ran when the word 'collaborator' was mentioned—the dispute was settled over a glass of wine and everyone started the race. The main

opposition to the Maseratis came from Raymond Sommer with a 3 litre Tipo 8C-308 Alfa Romeo and Louis Chiron, who had not driven a single-seater since his bad crash with a Mercedes in the 1936 German Grand Prix, now at the wheel of a works-supported 4,500cc Lago-Talbot.

The three four-cylinder Maseratis of the Milano team were on the front row of the grid. At the fall of the flag Villoresi went straight into the lead and while 'Gigi' pulled away from the rest of the field, Sommer, who had started from the back of the grid because of fuel-feed trouble in practice, was rapidly making up ground. Chiron's Talbot was running badly and was constantly in and out of the pits for plug changes. Cortese retired with supercharger trouble, Etancelin abandoned the 6CM that had sounded rough since the start of the race, Mazaud retired his 4CL with gearbox trouble and Harry Schell, his elderly 6CM decorated by the stars and stripes on either side of the scuttle, went through the straw bales on one of the slow corners and abandoned the car after valiant efforts to restart it on the handle. When Villoresi stopped at the pits to refuel, the car was stationary for three minutes and Sommer took the lead. By the time he was back in the race, Villoresi was ninety seconds behind, but driving superbly he made up all the lost ground, passed Sommer and at the finish was a clear lap ahead. The Delahayes of Chaboud and Grignard took third and fourth places and Cortese, who had relieved Ruggeri at the wheel of the other surviving Milano car, finished fifth ahead of Chiron's Talbot.

Three weeks later the Marseilles Grand Prix was held over the difficult 2.5 mile Prado street course that incorporated eight corners (three of them hairpins) and a fast, half-mile straight. As at Nice, Scuderia Milano was out in force with three 4CLs for Nuvolari (who had not raced since the 1939 Belgrade Grand Prix), Sommer and Ruggeri, and they were now joined by the Swiss-based Autosport team which fielded two 4CLs for de Graffenried and Basadonna. Mazaud, Enrico Platé, Schell and Raymond Sommer were entered with private Maseratis and there was a strong entry of Delahayes. The race was run in two 30 mile qualifying heats and an 80 mile final. In the first heat Mazaud rocketed off the line, Ruggeri made a leisurely start, but the Italian caught and passed the French privateer, only to retire with a sheared supercharger drive. Mazaud won the heat, leading home three Delahayes, with Schell fifth and Basadonna sixth. Sommer, with his private 4CL, was away first in the second heat, while fifty-six-year-old Nuvolari muffed his start and almost stalled. The great Italian soon made up lost ground, however, was fifth at the end of the first lap, took the lead and set a new lap record

of 63·34mph before retiring with valve trouble. Sommer went on to win the heat with ease from Platé and de Graffenried.

Despite the fact that he had not finished in his heat and that his car was, as the team manager expressed it so delightfully, 'in a state of reduced mechanical efficiency', Ruggeri was allowed to run in the final. With so many of the faster contenders out because of mechanical troubles, the final devolved into a boring procession with Sommer running away from the rest of the field to score an easy victory at 58·40mph. Enrico Platé finished second, a lap in arrears, and Ruggeri and de Graffenried took fourth and fifth places behind Grignard's Delahaye. After the race Sommer took Nuvolari round with him on his lap of honour, Raymond operating the pedals and waving his arms and Tazio steering and shaking his legs! The following weekend Sommer won the minor 88 mile Grand Prix de Fôrez with his 4CL, over a minute ahead of Louveau's Maserati and with Chaboud's Delahaye in third place.

The first post-war motor race had been held in the Bois de Boulogne in Paris in 1945 and this successful meeting was repeated on 30 May of the following year, but over a different course. Again there were three 4CLs from Scuderia Milano, driven by Nuvolari, Sommer and Ruggeri, opposition came from Mazaud's Maserati, Wimille (Alfa Romeo 8C 308), the usual Delahayes and Lago-Talbots and T. A. S. O. Mathieson with his ex-Birkin 8C-3000 two-seater Maserati. Sommer led the race initially, but then spun and stalled at the chicane; Wimille took the lead and although Sommer succeeded in restarting his car and rejoining the race, he retired with mechanical trouble. The leading Alfa was now completely unchallenged, Chiron's Talbot finished almost a lap behind and next across the line were the Maseratis of Ruggeri and Louveau which had been rather indifferently driven—this was a difficult, twisting course on which a well-driven Voiturette should have had the legs of the more cumbersome Formula A cars.

Nine days later motor racing again took place in Paris, but this time over a difficult 3·75 mile circuit through the streets of the suburb of St Cloud. A rather incredible feature of this course was a tunnel half-a-mile in length, fortunately lit by public lighting, which the cars entered at well over 100mph. Scuderia Milano fielded 4CLs for Nuvolari, Sommer and Ruggeri, an Autosport 4CL was driven by Basadonna, Mazaud was at the wheel of his private car and Mathieson drove his old straight-eight. The real sensation of the race was, however, the team of Alfa Romeo 158s which were making their first post-war appearance in the hands of Giuseppe Farina and Jean-Pierre Wimille. The race started on rain-

soaked roads and Wimille went straight into the lead, chased hard by Sommer with Farina in third place. Farina passed Sommer on lap 10, the Maserati went ahead again and then the Alfa retired with clutch trouble. It was not long before Wimille's car succumbed to the same trouble and Sommer assumed a lead that he never lost, despite Chiron (Talbot) trying hard to get to grips with the Maserati in the closing laps of the race. Mazaud took third place, soundly trouncing Ruggeri's quasi-works car, and Mathieson finished fifth ahead of Chaboud's Delahaye.

Originally to be held as a national race, the Perpignan Grand Prix on 30 June was elevated to international status at the last moment, but there were few foreign entries. This race, run over 57 laps of a very tortuous 1.6 mile circuit was won by Wimille with his 3 litre Alfa Romeo, but the private Maseratis of Louveau and Raph took second and third places. The organisation of Grand Prix racing was still a French monopoly and a fortnight later the Albi Grand Prix was run over the triangular 5.5 mile Les Plâques circuit, with difficult fast bends, a level crossing to negotiate and a long tree-lined straight. Apart from Leslie Brooke's ERA and David Hampshire's ex-Seaman Delage, the entry was all-Maserati. Scuderia Milano, whose cars arrived too late for official practice, fielded 4CLs for Nuvolari and Villoresi, and Ruggeri was entered with the team's 6CM. For some reason the private Maseratis of Louveau and Sommer bore Scuderia Milano insignia, Reg Parnell was at the wheel of his ex-Wakefield 4CL (now painted British racing green) and other Maseratis were driven by Achard, Platé, Raph and Wormser. Before the race the radiator of Ruggeri's car was transferred to that entered for Nuvolari which was taken over by Ruggeri, and Nuvolari raced a car borrowed from Enrico Platé, who was a non-starter.

The race was run in two 16 lap heats with the winner decided on the aggregate of times, but because of their mechanical problems neither Ruggeri nor Villoresi ran in the first heat and there was a long argument between entrant and organisers before Nuvolari was allowed to start with the Platé car. Sommer led away from Parnell, Louveau and Nuvolari, whose car was running roughly and blowing fumes back into the cockpit. After only three laps Sommer was out of the race because of supercharger trouble, both Nuvolari and Raph passed Louveau and when Parnell retired with magneto trouble, *Il Mantovano* risked a pit stop for a plug change. Raph fell back because of gearbox trouble and at the flag Nuvolari led from Louveau, Raph, Wormser and Brooke. Although they stood no chance of gaining a good place on aggregate, both Villoresi and Ruggeri started in the second heat. 'Gigi' went straight into the lead,

drawing further and further away from Nuvolari, Raph, Ruggeri and Louveau, and Parnell stopped out on the course to repair his magneto which was still giving trouble. At the finish Villoresi was over a minute ahead of Nuvolari, who was followed across the line by Louveau, Brooke and Raph. On aggregate Nuvolari was the clear winner and this was the last victory in his long and distinguished career. Louveau, Raph and Wormser took second, third and fourth places. Only a few seconds after he had been presented with the winner's wreath, Nuvolari collapsed, the result of the very hot condition in which the race had been run and exhaust fumes blowing back into the cockpit.

The following weekend the motor racing circus was at Geneva for the Grand Prix des Nations, one of the season's most important and prestigious races. The course was a 1.83 mile street circuit with all the usual town hazards of tramlines, lamp-posts and kerbs; it incorporated a section of road with a barrier down the middle and cars passing in both directions, and an extremely slow artificial chicane to keep down speeds. This was Alfa Corse's second race of the 1946 season and four Alfa 158s were driven by Farina, Trossi, Varzi and Wimille. Scuderia Milano entered 4CLs for Nuvolari, Sommer and Villoresi and the entry was completed by a large number of other private Maseratis, four ERAs and David Hampshire's elderly Delage. The race was run in two 32 lap heats and a 44 lap final.

In the first heat, run on a wet track, the Alfas of Wimille and Varzi led away from Bira and Peter Whitehead (ERAs), but by the end of the first lap Villoresi was through to third place ahead of Bira and Parnell—already the Alfas were half-a-mile ahead of the rest of the field and not only were they faster than the Maseratis, but they were conspicuously more stable under acceleration and braking. By lap 20 Wimille had lapped everyone except Varzi and Villoresi, and by the end of the heat Parnell was the only other driver not to have been lapped twice. In the second heat Nuvolari came round in the lead at the end of lap 1, but Farina was hot on his heels and gesticulating furiously. Farina passed Nuvolari's Maserati on the next lap, Trossi went through into second place on lap 9 and at the end of this lap a very disgruntled Nuvolari threw his goggles into the Scuderia Milano pit as he passed. At the end of the heat the leading positions were unchanged and de Graffenried (Maserati) took fourth place.

Although the Maserati drivers knew only too well that their cars were no match for the Alfettas, they were determined to make life for the 158 drivers in the final as difficult as possible. Sommer, whose Maserati



had finished sixth in heat one, and Nuvolari held fourth and fifth places ahead of the slowest Alfa of Count Trossi on the first lap, and Villoresi was worrying Trossi every inch of the way. When Villoresi tried to out-brake Trossi on the first lap, a brake grabbed and the Maserati mounted the pavement and collided with a lamp-post; in avoiding Villoresi's car Parnell spun off and was unable to restart—later he discovered that the throttle rod had come off its spindle. Trossi succeeded in passing both Nuvolari and Sommer, but Varzi fell right to the tail of the field after making several pit stops for plug changes. Shortly after Wimille had lapped Nuvolari, at the chicane the 'Flying Mantuan' deliberately rammed the leading Alfa which spun off and stalled, rejoining the race in third place. Sommer, who had been passed by Nuvolari, retired with engine trouble and at the chequered flag the Alfas of Farina, Trossi and Wimille led home the Maseratis of Nuvolari and de Graffenried, Bira's ERA and Varzi's Alfa.

Next on the calendar was the rather parochial Nantes Grand Prix, run on a very narrow 2.55 mile circuit and with many of the corners having a steep adverse camber. Because of its inherent dangers, Wimille criticised the circuit strongly and his apprehensions proved well-founded. During the race Mazaud lost his life while trying to overtake Louis Gerard's sports Delage. The Maserati went out of control and rolled end over end, flinging out the unfortunate driver. Gerard was not considered blameless and his licence was suspended. The race was won by Raph's 4CL Maserati at an average of 64.30mph and Levegh's Lago-Talbot took second place.

On 1 September the Turin Grand Prix was held on the 2.9 mile Valentino Park circuit, a course near the River Po and characterised by a succession of corners of varying difficulty. The main contestants were five Alfa Romeo 158s driven by Count Felice Trossi, Achille Varzi, Giuseppe Farina, Jean-Pierre Wimille and head tester Consalvo Sanesi; four 4CLs from the Scuderia Milano were handled by Tazio Nuvolari, Raymond Sommer, Franco Cortese and Aialdo Ruggeri. In practice Ruggeri appeared with an experimental twin-stage supercharged 4CL, but this did not run in the race. Turin was another race dominated by the Alfettas and Varzi and Wimille led throughout to win from Sommer's Maserati. Nuvolari stopped at the pits to have a broken shock-absorber replaced and retired when his car lost a wheel; at the time the Maserati was travelling flat-out along a stretch of the course running beside the river and he was very lucky (and skilful!) to bring the car to rest without incident. Cortese and Ruggeri also retired and two of the Alfas were

eliminated. Chaboud finished fourth with his Delahaye, Enrico Platé's private Maserati took fifth place and in sixth place came Trossi's Alfa which had been plagued by gearbox trouble.

Three weeks later the Milan Grand Prix was run on a slow and tortuous 1.7 mile course in the Parco Sempione. Alfa fielded cars for Trossi, Varzi, Farina and Sanesi and Scuderia Milano again entered four 4CLs driven by Nuvolari, Villoresi, Sommer and Cortese. Louis Chiron, who usually drove a Lago-Talbot, appeared at this race with a 4CL on loan from Scuderia Milano and there were four other privately entered Maseratis in the race. It had been rumoured that Maserati were building a new six-cylinder 1,500cc car with four valves per cylinder and twin-stage supercharging, and what could have been this car appeared in practice. It looked very much like a 4CL, but sounded different and lapped rather slower. This was another race run in two heats (each of twenty laps) and a final (thirty laps), and it was another race dominated by the Alfa Romeo team.

In the first heat the Alfas of Varzi and Trossi led across the finishing line from the Maseratis of Nuvolari and Villoresi. 'Gigi' was racing against doctor's orders, as he had not yet fully recovered from the injuries suffered in his crash at Geneva. The Alfa of Farina led throughout on the road in the second heat, but Farina was penalised one minute for jumping the start and this demoted him to third place behind Sanesi and Sommer.

While the Alfas cantered round at the front of the field in the final—and their drivers had the time and inclination to indulge in inter-team squabbles—the Maseratis were driven at their hardest in their drivers' efforts to maintain contact with their Milanese rivals. Trossi, Varzi and Sanesi took the first three places for Portello, but Farina retired in a pique of temper because he had been signalled from the pits to let Trossi win. The great Italian was sacked from the Alfa Romeo team because of this incident and did not race again until 1948. After a race-long struggle, Villoresi pipped Sommer for fourth place by the very narrow margin of a fifth of a second. The only other finisher in this race was Baron Emmanuel de Graffenried with his Ecurie Autosport 4CL.

In the first heat, fifty-four-year-old Tazio Nuvolari had driven magnificently, but that he was a very sick man was plain for all to see. He had finished the heat steering his Maserati with his left hand and with his right he had held a blood-stained handkerchief to his mouth. He had started in the final, but felt so ill that he was forced to retire after only three laps.

There were two more single-seater races before the European season came to an end. On 3 October the Grand Prix du Salon was held over 80 laps of the 1.97 mile course in the Bois de Boulogne in Paris. The Alfa Romeo team did not enter this race, but three Maserati 4CLs from the Scuderia Milano and driven by Sommer, Louveau and Ruggeri faced the usual private Maseratis and unsupercharged Delahayes and Lago-Talbots. The race was started on a wet track which gradually dried out and, as it did so, the race devolved into a rather tedious procession. Raymond Sommer scored an easy victory for Scuderia Milano from private Maserati driver Raph, Pierre Levegh (Lago-Talbot) and Milano team-mate Louveau. Ruggeri retired after a series of pit stops for work on a very rough-running engine.

The final race of the season was the Penya Rhin Grand Prix held on the Pedralbes circuit in Barcelona on 27 October. Villorresi led the race with a Tipo 8CL Maserati entered by Scuderia Milano until engine trouble necessitated a pit stop. He rejoined the race, but failed to make it to the finish. Reg Parnell's 4CL was another victim of engine trouble and the race was won by private owner Pelassa with a 4CL from the similar Autosport-entered car of Basadonna.

## Scuderia Ambrosiana to the Fore: The 4CL, 1947

A team of Scuderia Milano 4CLs was shipped out to the Argentine to compete in the series of races held early in 1947 during the South American summer. The first of these was the 87 mile Rosario Grand Prix on 2 February and in this race Villoresi with a 4CL was beaten into second place by Achille Varzi's pre-war 3 litre 8C-308 Alfa Romeo. Local driver Oscar Galvez with an Alfa that was similar, apart from a 3.8 litre engine, finished third. The first Peron Cup race was held a week later over fifty laps of the 1.5 mile Costanera circuit at Buenos Aires and Villoresi won the race at 69.92mph from the Alfas of Varzi and Chico Landi. Six days later a second Peron Cup race was held over the same circuit and Villoresi was again the winner, averaging 69.50mph and leading home Pessatti (Alfa Romeo) and Palmieri (Milano 4CL).

The principal entrant of the 1,500cc sixteen-valve cars in 1947 European races was Scuderia Ambrosiana, of which Count Johnny Lurani was patron. Although there had been a change in the racing regulations so that the capacity limits were now 1,500cc supercharged (the former Voiturette maximum) and 4,500cc unsupercharged (the former capacity limit for unsupercharged Grand Prix cars), the net effect of the changes was merely to outlaw the 3 litre supercharged cars such as the Tipo 8CL Maserati and the Tipo 8C-308 Alfa Romeo. During the year certain changes were made to the 4CLs, but at the beginning of the season the cars were as raced in 1946.

It was all the more interesting, therefore, to read the comments of Reggie Tongue, the first 4CL private owner, in the May 1947 issue of *Motor Sport*:

It was a beautiful little car and never gave the slightest trouble, at the same time doing all that was asked of it. The Maserati was obviously built for a purpose and fulfilled its object. It was designed for long-distance road

racing. . . . Consequently it galls me considerably to see people using these cars for short sprints and hill climbs. The car is long for its size and type, and has a poor steering lock, while the steering is very high-g geared for the long straights used in most Continental races (which can be taken at 150mph) and is totally unsuited in my opinion for the type of event referred to, and for which it was not designed. . . . I would . . . like to comment upon three essentials to the racing driver—road-holding, braking and steering. All these points were *par excellence*. The steering at high speeds was minutely accurate and, due to the independent suspension, was entirely free from shock transmission. It was, however, poor and heavy on sharp corners at low speeds. Of course, you cannot have it both ways.

The braking was as good as could possibly be obtained, particularly when slowing down from high speeds, with a smoothness which imparted great confidence to the driver. There was never any tendency for the brakes to grab on, as on many racing cars I have known.

The suspension was excellent and gave the driver the most comfortable ride possible, which is a great help in a long race.

The gear-change, however . . . was difficult, with the lever between the driver's legs and tucked under the steering wheel, where it was rather inaccessible. The rest of the car, however, was beautifully laid out, the oil tank acting as a stiffener to the chassis, the fuel tank being the tail complete, and the seating position most excellently placed—the last-named I mention, in passing, to show how the car was planned from the word go.

The first race of the 1947 European season was the Pau Grand Prix on 7 April and in this 190 mile street race motorcycle champion Nello Pagani with a 4CL was the winner at 51.95mph from Pierre Levegh's Delage and another Maserati driven by Louveau. In this race Scuderia Milano patron Ruggeri crashed badly and fractured both legs. Three weeks later Luigi Villoresi drove an Ambrosiana Maserati in the Perpignan Grand Prix, setting fastest lap of the race and leading the field until mechanical trouble intervened. After the retirement of the Italian car, the race was won by Eugène Chaboud with his ex-Louis Chiron single-seater Lago-Talbot. Next on the calendar was the Jersey International Road Race run over 160 miles of a 3.2 mile circuit at St Helier which featured a long, almost straight stretch along the promenade of St Aubin's bay and, inland, a number of difficult corners linked by a shorter, but still fairly fast straight. Among a host of Maserati entries, three were Scuderia Milano cars driven by Sommer, Pagani and Chiron and the first-named's car was fitted with twin-stage supercharging, the first time that this had been used on a 4CL in a race; twin-stage supercharging was later fitted to most cars.

Sommer led initially, but then Bira went ahead with his bizarrely painted private blue and yellow 4CL. Pagani retired his car with super-

charger trouble, Bira was delayed by a tyre failure, and then his car, too, succumbed to trouble with the supercharger, and Sommer's latest Maserati was eliminated by a broken chassis. Parnell now led and he went on to win the race at 85.42mph, a lap ahead of Louis Chiron. There was, however, a great deal of confusion as to who had won the race, for in the later stages Parnell had made several pit stops to take on extra oil and the official scoreboard, on which the Milano team was relying instead of keeping their own lap-chart, showed Chiron in first place until shortly before the finish. Scuderia Milano lodged a formal protest, but this was rejected.

In the Marseilles Grand Prix on 18 May the private Maseratis of Parnell and Connell retired and the race was won by Chaboud's Lago-Talbot with Enrico Platé's 4CL in second place. A week later Bira's Maserati was the sole representative of the marque in the Grand Prix des Frontières, so-called because the 6.5 mile circuit over narrow and bumpy roads in and near Chimay in Belgium was very close to the border with Luxembourg. The Siamese driver won the race from the elderly Type 51 Bugatti of Peter Monkhouse. In the 227 mile Nîmes Grand Prix held on 1 June the winner was Villoresi with an Ambrosiana car and Reg Parnell took third place behind Chiron's Lago-Talbot.

The first post-war Swiss Grand Prix was held at Bremgarten on 8 June and as the race attracted the works Alfa Romeo 158s, making their first outing of the season, the Maseratis, which included five Scuderia Milano cars driven by Sommer, Chiron, Pagani, Grieco and 'B. Bira', were outclassed. Sommer's car had twin-stage supercharging which was the work of Mario Speluzzi, technical adviser to the Scuderia Milano, and Villoresi's Ambrosiana car had twin-stage supercharging fitted at the works. In the first 20 lap heat the highest-placed Maserati was that driven by Pagani, which finished fourth behind the Alfas of Varzi and Trossi and Mays's ERA. Wimille and Sanesi took the first two places for Alfa in the second heat, ahead of the Maseratis of Villoresi, Chiron and Sommer. Most experts agreed that the Alfettas were the fastest 1,500cc cars ever raced—in their latest form even faster than the 1939 W.165 Mercedes—and, as expected, they also dominated the 30 lap final of the race. Wimille, Varzi and Trossi took the first three places, but Sommer with his Milano Maserati beat Sanesi for fourth place. Villoresi, Pagani (who had stopped at the pits to have his broken aero-screen replaced by a piece of cardboard), 'B. Bira' (who had stopped for a plug-change) and de Graffenried finished sixth, seventh, eighth and ninth. Of this race, John Eason Gibson wrote, 'if only the Scuderia Milano prepared

their cars a bit better, they might have a chance of getting in among the Alfas . . .’

Three weeks later the Belgian Grand Prix, again the first of the post-war series, was held at Spa-Francorchamps and the Alfettas finished 1-2-3. At the end of the first lap Sommer’s Maserati was in second place behind the Alfa of Achille Varzi and the courageous French driver retained third place ahead of the Alfa of Count Trossi until he retired with a broken chassis on lap 12. Of the other Maseratis in the race, de Graffenried’s broke a piston and the car of Swiss driver and pre-war Mercedes team-member, Christian Kautz, burst an oil pipe. Another Maserati development was seen at the Grand Prix de la Marne at Reims on 6 July and at this race Alberto Ascari, number two in the Ambrosiana team, appeared at the wheel of the first of the 4CLT cars, the existing model with a tubular, instead of channel-section, chassis. Villoresi and Ascari retired and this 248 mile race was won by Kautz’s Maserati from a Lago-Talbot driven by Louis Chiron.

At the Albi race Levegh, Raph, Connell, Villoresi, Louveau and Parnell all drove sixteen-valve Maseratis. Brooke’s ERA led initially, but Villoresi went ahead on lap 4 and Levegh forced his way through to second place two laps later. For some obscure reason the Ambrosiana pit miscalculated the fuel consumption of Villoresi’s car and he ran out of fuel on the course; Brooke retired his ERA with low oil pressure, Levegh’s Maserati succumbed to valve trouble and the race was won by Louis Rosier’s Lago-Talbot which led home a diminutive 1,100cc unblown Simca-Gordini driven by Raymond Sommer. The same day at Bari, the principal Maserati drivers were Nuvolari and Brazilian Chico Landi. Tazio retired, Landi was delayed by plug trouble and Grieco with a Scuderia Milano car finished third behind a brace of works Alfas.

Shortly afterwards Scuderia Ambrosiana scored a fine victory in the Nice Grand Prix. Sommer with a Milano twin-stage supercharged Maserati led in the early laps with Villoresi and Ascari, but the French ace’s car caught fire out on the circuit. In blazing hot sunshine he pushed it back to the pits where he slumped, exhausted, over the tail of the Maserati. Eventually he rejoined the race, but retired with engine trouble. ‘Gigi’ took the lead on lap 23 and retained it for the remaining 77 laps of this race, which was run in exceptionally torrid conditions, to win at 64.05mph. Ascari’s car developed a bad engine misfire and by the chequered flag it had fallen back to fourth place behind one of the surprisingly quick 1,100cc Simca-Gordinis driven by Wimille and Fred Ashmore’s elderly ERA.

At Strasbourg Villoresi was challenged only by Louis Chiron, who was at the wheel of Raph's Ecurie Napthra Course Maserati. Chiron's gear-lever broke while he was in hot pursuit of the Italian and Villoresi went on to win the race at 68·92mph and set fastest lap at 75·76mph. The only other car to finish on the same lap was the Lago-Talbot of Giraus-Cabantous. Louveau took fourth place and Levegh and Raph, sharing a car, finished sixth. Ascari was eliminated by valve failure.

The Comminges Grand Prix held on the St Gaudens circuit on 10 August was described by *The Autocar* as 'a shocking race' and with good reason. During the motorcycle races in the morning three riders were killed and in the Grand Prix a car ran into a crowd of spectators, killing six. Champion motorcycle racer Dorino Serafini, now at the wheel of a Maserati 4CL, had his steering column come adrift when travelling at around 120mph; the car rebounded from tree to tree, came to rest a crumpled heap of metal and caught fire. The driver escaped with burns and head injuries to become, in due course, Ferrari's chief tester and a works driver. Joe Ashmore crashed Parnell's Maserati. The latter stages of the race were disrupted by a violent hailstorm falling on one part of the circuit only—shades of Spa-Francorchamps. During this storm, race-leader Villoresi crashed and Ascari fell back to the tail of the field with ignition trouble. This race, perhaps better described as an ordeal, was won by Chiron's Lago-Talbot, a couple of lengths ahead of Yves Giraud-Cabantous with a similar car. De Graffenried finished fifth with a very sick 4CL and Ascari took seventh place.

Bira was the only leading Maserati contender to run in the British Empire Trophy race held in the Isle of Man over a difficult 3·88 mile road circuit that had last been used in 1936. The Siamese driver led initially, but he was far from happy with the handling of his 4CL and rapidly fell back. At the end of this 155 mile race the ERAs of Bob Gerard and Peter Whitehead took the first two places and Ansell's Maserati crossed the line in third spot. Bira finished a disappointing fifth.

On 7 September Alfa Romeo took the first four places in the Italian Grand Prix run over a tortuous 1·75 mile circuit around the site of the Milan fair on the outskirts of the city (Monza had not yet recovered from the ravages of its wartime use as a vehicle park). Fourteen Maseratis were entered, including Ambrosiana 4CLT cars for Villoresi (twin-stage supercharged) and Ascari and Milano cars, twin-stage supercharged, for Bira and Sommer and, single-stage, for Ruggeri. Ascari held third place ahead of Sanesi for many laps, but after a succession of pit stops to secure



the fuel tank, which almost necessitated a complete body rebuild, he finished fifth, six laps in arrears, behind four Alfas. Bira's car expired on the first lap, the engine of Chiron's Maserati disintegrated, Sommer was another early retirement because of lubrication problems and Villorresi, who held second place for the first four laps, eventually retired with brake trouble. Swiss privateer de Graffenried, highly regarded as a 'coming man', was in fourth place when forced to retire with steering problems. Pesci, who usually raced a Fiat 500, took ninth place with the Scuderia Milano's ancient 6CM car.

In 1947 the French Grand Prix was held on a rather unusual circuit at Lyons on which the cars started half-way along a dual carriageway, rounded a hairpin bend at the end of the straight and then proceeded down the other side of the dual carriageway, taking another hairpin bend to eventually come back along the side of the road on which they had started. The race was won by Chiron's Lago-Talbot from Louveau's Maserati. The two 4CLT Ambrosiana cars retired with engine trouble, as did de Graffenried, though both Villorresi and the Swiss driver led the race briefly. Of de Graffenried's pit stop, 'Sammy' Davis wrote, 'de Graffenried's mechanics refilled with the largest, most inconvenient funnel that has ever failed to fit a filler'. Levegh's Maserati went out of control on the straight and swerved through the straw bales, killing two spectators and injuring fifteen others. It seems that the accident was caused by a broken crankshaft.

The final Formula 'A' race of the season was the 181 mile Lausanne Grand Prix held on 5 October. This was won by Villorresi, who led home Wimille's Simca-Gordini and de Graffenried's Maserati. Ascari retired with a broken brake-pipe while leading the race. Reg Parnell drove a Scuderia Milano 4CLT with single-stage supercharger, but the car was very badly prepared. Even before the start oil from the reservoir in the chassis tubing was leaking out and after struggling gamely with a car that was both braking and steering badly, Parnell was forced to retire a little before half-distance.

For Maserati, the season had proved very much a repetition of 1946; when the Alfas were absent, the Maseratis dominated, but when the Alfas were running, the 4CLs, despite the introduction of twin-stage supercharging, were no match for their much more powerful and far better organised Milan rivals.

## A New Maserati Model: The 4CLT/48 'San Remo', 1948

Once again there was a series of races in South America early in 1948 and Villoresi travelled out to compete with an Ambrosiana 4CL. Also competing in these races were two 4CLs bought by the Automobile Club of the Argentine for Juan Fangio and Oscar Galvez to drive. The first races were the Peron Cup events held at Palermo Park, Buenos Aires, in two qualifying heats and a final. The first 45 mile heat was won by Villoresi and in the final, run over a distance of 75 miles, Villoresi was again the winner at an average of 63.19mph from the Tipo 8C-308 Alfa Romeo of Chico Landi and a private 4CL driven by Fernandez. In the second final Villoresi was the winner once more and led home Galvez, who in this race was at the wheel of an 8C-308 Alfa, and Raph with a 4CL.

The Grand Prix of the City of Mar del Plata, run over a distance of 92 miles the following weekend, was won by Nino Farina with an 8CL Maserati, Varzi's Tipo 12C-312 Alfa running in 4.6 litre form finished second and the highest placed 4CLs were those of Galvez and Fangio in third and fourth places. The next race was the Rosario Grand Prix and in this Villoresi took third place behind Wimille's 1,220cc Simca-Gordini and Landi's 3 litre Alfa. In the final race in the series, the Sao Paulo Grand Prix in Brazil, the Maseratis failed to feature in the results.

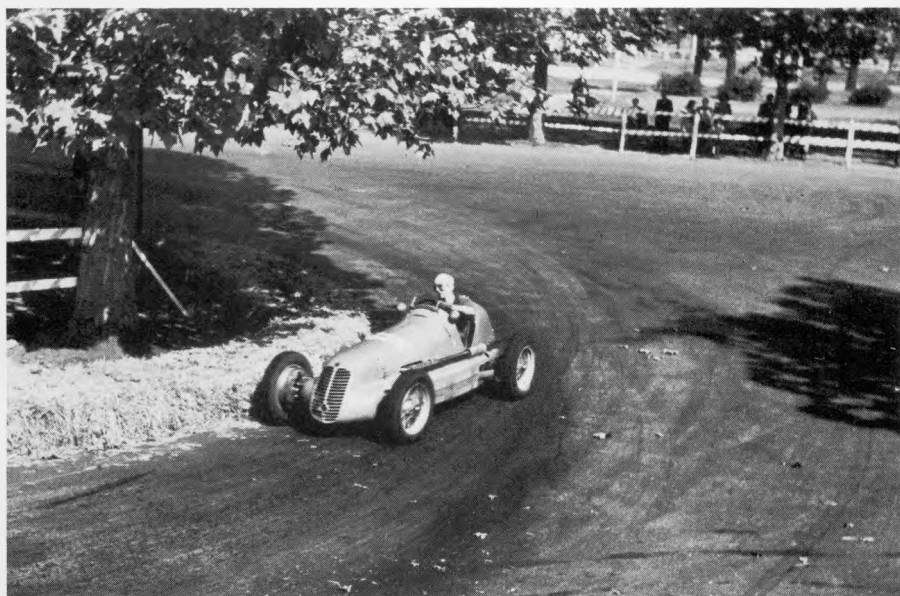
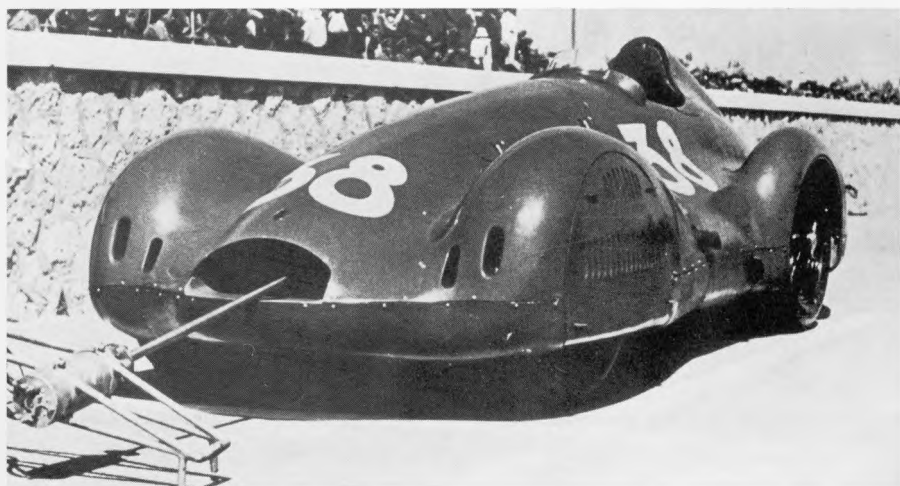
There were no changes to the Maseratis for the beginning of the European season and the first race was the 187 mile Pau Grand Prix which Nello Pagani won for Modena for the second year in succession, followed across the line by the Lago-Talbots of Giraud-Cabantous, Pozzi and Rosier. On 29 April the Jersey International Road Race attracted a strong entry of Maseratis and ERAs. In practice, Villoresi's Scuderia Ambrosiana car was plagued by oil pump trouble and although this was cured, the car retired early in the race with gearbox trouble,

despite frantic work on the transmission shortly before the start. Bira led the race from Parnell, both drivers at the wheel of 4CLs, but the British driver and Bob Gerard with his ERA swept by the Siamese while he was in the pits making an inordinately long stop for fuel and tyres. Parnell was forced to make an unscheduled pit stop because of tyre trouble, and so Gerard won the race, with George Abecassis's elderly 6CM Maserati in second place. The sixteen-cylinder Maseratis of Parnell, Bira and Ansell finished third, fourth and fifth.

Two major Continental races followed. In the Grand Prix des Nations, held at Geneva over a street circuit of just under two miles in length, the winner was Nino Farina at the wheel of a twin-stage supercharged, tubular-chassis Maserati and Emmanuel de Graffenried finished second. Third place went to Raymond Sommer with a 2,000cc sports Ferrari running in racing trim. Villorosi retired his Scuderia Ambrosiana car with engine trouble. The same two Maserati drivers were to the fore in the first post-war Monaco Grand Prix and Farina scored an easy win at 59.61mph from the new Lago-Talbot of Louis Chiron and de Graffenried. Villorosi battled with Farina in the opening laps, but was forced to make a pit stop with mechanical trouble; he rejoined the race, worked his car back to fifth place and then stopped again to hand over to Ascari, rapidly becoming the more senior Ambrosiana driver, whose car had already expired with a broken oil pump. By the chequered flag Ascari was unable to improve on fifth place. Only two sixteen-valve Maseratis, those of Reg Parnell and Bob Ansell, ran in the 1948 British Empire Trophy race in the Isle of Man. Both drivers led the race (Ansell, albeit briefly), but both retired. Ansell's engine put a rod through the side and, because of fuel-feed problems with the auxiliary tank, Parnell's car stopped out on the circuit on its last lap. The race was won by Geoffrey Ansell's ERA.

At the San Remo Grand Prix in June Maserati revealed the completely revised 4CLT/48 model. This was the first new model to appear from the Modena factory since the departure of the Maserati brothers. The engine was largely unchanged, but twin-stage supercharging, first seen in 1947 races, was standardised. The two superchargers were mounted one above the other at the front of the engine; the mixture was fed into the right-hand side of the lower supercharger and then transferred to the upper supercharger by an external manifold on the left-hand side. Power output in this form was 260bhp at 7,000rpm. A small change was the transfer of the oil cooler from the right-hand side of the body to a position behind the radiator. The familiar four-speed synchromesh gearbox was

*Plate 21* This remarkable device was the streamlined 4CL driven by Luigi Villorelli in the 1939 Tripoli Grand Prix. Said to be capable of 170 mph, it retired on the first lap with gearbox trouble; *Plate 22* Early post-war appearance: Luigi Villorelli and his 4CL in the 1946 Milan Grand Prix.





*Plate 23* Reg Parnell in the 1948 Jersey Road Race leads the winner, Bob Gerard (ERA). Parnell's 4CL was delayed by tyre trouble and finished third; *Plate 24* Baron Emmanuel de Graffenreid on his way to victory in the 1949 British Grand Prix with his Plate-entered 4CLT/48.

retained, but to allow for the lower build of the new chassis a train of gears in front of the differential housing stepped the transmission line up to the correct height.

A tubular chassis developed from that seen in 1947 was used; this was based on two 4in diameter main tubes, sloping upwards from the rear engine bearer to the front suspension and, at the rear, passing under and extending beyond the rear axle. There were tubular cross-members and, as before, the oil tank beneath the driving seat provided additional stiffening for the frame. Perhaps the most striking feature of the 4CLT/48 was the new front suspension; although the existing wishbone layout was retained, the torsion bars were replaced by coil springs which were mounted at an angle of 43 degrees. At the rear, a rigid axle and quarter-elliptic springs were retained, but the springs were now slightly longer and splayed out more. Newer and much neater bodywork was fitted and the car was distinguished by a shorter, flatter version of the familiar Maserati grille.

In the San Remo race there were sixteen starters and the opposition to the new cars entered by Scuderia Ambrosiana for Ascari and Villoresi included 4CL Maseratis driven by Nino Farina, Luigi Fagioli and 'B. Bira'. Farina led the race until lap 28 when broken throttle linkage caused retirement. Ascari and Villoresi took the first two places, but neither's car was completely *au point*, Ascari's finishing with a very oil-streaked bonnet and Villoresi's making two enforced pit stops. 'B. Bira' ran out of fuel and pushed his car across the line into sixth place.

The next race for the new Maseratis was the Swiss Grand Prix at Bremgarten on 4 July. This was a tragic race, for Achille Varzi crashed his Alfa Romeo with fatal results in practice and on the second lap of the race Christian Kautz (Maserati) collided with a tree, suffering injuries to which he succumbed; two other Maserati drivers, de Graffenried and Fagioli, were involved in Kautz's accident, but the latter rejoined the race and carried on until his car retired with piston trouble. The Alfas of Wimille and Trossi took the first two places, but Farina had held second place until his Maserati retired with engine trouble and Villoresi finished third with his 'San Remo', as the new model was now known, ahead of Sanesi's Alfa Romeo. Ascari brought the other Ambrosiana 4CLT/48 home in fifth place.

Following Varzi's death, Alberto Ascari was offered a drive in the Alfa Romeo team at the French Grand Prix at Reims and so only one Ambrosiana car, for Villoresi, was fielded at this race. For several laps 'Gigi' hung on to the tail of the Alfa driver who was usually his team-

mate, but then he was forced to stop at the pits several times for plug changes and his car fell back to the tail of the field. The great Tazio Nuvolari relieved Villoresi and, despite not having practised, he was soon lapping as fast as 'Gigi'. Before the finish he handed the Ambrosiana car back to Villoresi, who took seventh place behind three Alfas and three Lago-Talbots. The 'Flying Mantuan' pronounced the 4CLT/48 to be the best Maserati he had ever driven. Of the other Maserati drivers in this race, Sommer retired with engine failure on only the second lap, de Graffenried survived only ten laps more and Pagani, too, failed to finish.

In the Comminges Grand Prix Villoresi scored a victory against negligible opposition at an average of 93.40mph and set fastest lap at 97.38mph; Lago-Talbots took the next three places. During August the Zandvoort Grand Prix, the inaugural race at the Dutch circuit, was organised by the British Racing Drivers Club. The race was run in two heats and a 104 mile final. Parnell's 4CL won the first heat and 'B. Bira's' the second; in the final the 3.4 litre unblown Alfa Romeo of Tony Rolt almost vanquished the Maseratis, finishing a bare length behind Bira and defeating Parnell. British driver Leslie Brooke was invited to handle an Ambrosiana Maserati in the Albi Grand Prix and the second of the team's cars was driven, as usual, by Villoresi. Both Ambrosiana drivers won their qualifying heats and in the final Villoresi led initially, stopped for a plug change and Brooke went ahead. Brooke was slowed by a broken oil pipe, Villoresi pushed the lap record up to 104.42mph in his efforts to make up lost ground and swept back into the lead. Brooke fought back, re-passed Villoresi, but lost the lead in an off-course excursion and later retired with engine trouble. At the fall of the flag Villoresi was a minute ahead of Chiron's Lago-Talbot.

By the Italian Grand Prix detail modifications had been made to the valve timing and supercharging of the 4CLT/48s and in this race, held on a twisting circuit in Valentino Park, Turin, four 'San Remos' were entered for Villoresi, Ascari, Brooke and Parnell. Older 4CL cars were driven by Taruffi, Cortese and de Graffenried. In addition to opposition from three Alfas, the Maseratis faced a strong team of three of the new V-12 Ferraris which were making their race début. Wimille at the wheel of the latest Alfa Romeo led throughout this miserably wet race, but the other two Milan entries and two of the Ferraris retired. After a race-long battle Villoresi took second place ahead of Sommer's Ferrari; the Maserati was, however, running very roughly and it is doubtful whether it could have survived much longer. Ascari finished fourth, Parnell took fifth place despite the loss of use of his clutch, de Graffenried came home

ninth with his 4CL, and, after a succession of troubles including loss of oil pressure and spinning and stalling, Brooke took eleventh and last place.

Reg Parnell entered a 4CLT/48 at the opening Goodwood meeting on 18 September and won two very short races. On 2 October the first British Grand Prix was held on the new 3.67 mile Silverstone former airfield circuit. In the absence of entries from Ferrari and Alfa Romeo, the 239 mile race was Maserati-dominated, and the unblown Lago-Talbots, which were able to run through the race without refuelling, were disappointingly slow. The Ambrosiana drivers duelled for the lead and at the end of the race Villoresi was fourteen seconds ahead of Ascari. Bob Gerard finished third with his ERA, ahead of Rosier's Talbot. 'B. Bira' now had a new 4CLT/48 car, but it was off-form and he drove a fine race with an ailing car to take fifth place.

A fortnight later the three Italian marques met up again in the 312 mile Monza Grand Prix held on the newly reopened Milan circuit. The race proved another demonstration of Alfa Romeo supremacy and the 158s took the first four places in the order Wimille—Trossi—Sanesi—Taruffi. None of the Ferraris survived and Ascari took fifth place for Maserati. Of the other Maserati drivers entered in this race, Villoresi went out with transmission trouble, Parnell retired with engine failure and Brooke's car succumbed to over-heating and fuel-feed problems. Ashmore brought his Maserati home in ninth place. The final race of the 1948 season was the Penya Rhin Grand Prix held on the Pedralbes street circuit at Barcelona. The race was again contested by Ferrari, but again all the Maranello cars retired and Maserati dominated the results. Villoresi won the race for the Ambrosiana team at 89.44mph, but he was hard pressed by Parnell who took second place and whose pit-work was rather more efficient. Brooke crashed his Maserati and Ascari retired with supercharger trouble.



## Fighting a Losing Battle: The 4CLT/48, 1949

During the winter months, Ascari and Villoresi competed with a brace of Ambrosiana 4CLT/48 cars in the South American races. The first of these was the 108 mile International Grand Prix of Juan D. Peron held on the Palermo Park Circuit on 30 January. It was in practice for this race that the great Alfa Romeo driver, Jean-Pierre Wimille, driving a Simca-Gordini, collided with a tree and was fatally injured. Ascari led throughout to win at 70.77mph, forty seconds ahead of Villoresi, and with Oscar Galvez's Alfa 8C 308 in third place. A week later an identical race, but with the title of the International Grand Prix of Dona Eva Duarte de Peron (the dictator's wife), was held over the same circuit. The race started in heavy rain and although Ascari went ahead at the start, both he and Villoresi retired. Fangio, with a new 4CLT/48 belonging to the Argentine Automobile Club, finished second to Galvez's Alfa after an off-course excursion and a glancing collision with a tree. The next race in the series was the Rosario Grand Prix, another rain-soaked race, in which victory went to Farina's 2 litre supercharged Ferrari at the very low speed of 48.25mph; the 'San Remo' Maseratis of Parnell and Ascari took second and third places. The final event in the series was the Mar del Plata Grand Prix on 27 February. The Maseratis of Ascari and Villoresi retired and victory went to the similar car of Juan Fangio, who led home 'B. Bira's' Maserati and Galvez's Alfa Romeo.

The results of the 1948 season had shown that the 4CLT/48 was no more a match for the Tipo 158 Alfa Romeo than had been its predecessor; although the 4CLT/48 was faster and handled better than the 1947 cars, development work on the Alfettas had ensured that the performance differential between the two marques remained constant. As far as the rest of the opposition was concerned, the Maserati was substan-

tially faster than the ponderous French Lago-Talbot, whose only 'edge' lay in its ability to run through long races without refuelling stops; on the strength of Maranello performances towards the end of the 1948 season, it seemed that the 'San Remo' and the new Ferraris had similar performances, although the V-12 car as yet lacked reliability. Alfa Romeo withdrew from racing before the start of the 1949 season and Formula 1 in 1949 devolved into a duel between Ferrari and Maserati.

After they had appeared for the team in the South American races, Ascari and Villoresi left Scuderia Ambrosiana to drive for Ferrari, and the *Commendatore's* astute move in signing up these drivers at one and the same time provided him with two leading *pilotes* and greatly weakened the Maserati opposition. In 1949 Scuderia Ambrosiana fielded cars for Reg Parnell and Fred Ashmore, but Leslie Brooke and David Murray (the latter had bought Parnell's old 4CL) also drove for the team on occasions. Perhaps the strongest Maserati team was Squadra Achille Varzi, an Argentine Automobile Club team named in memory of the famous Italian driver, which fielded blue and yellow 'San Remos' for Juan Fangio and Benedictos Campos, but this team returned to South America before the end of the European season. 'B. Bira' and de Graffenried joined forces under Enrico Platé's banner and at some races Giuseppe Farina drove a car provided by Scuderia Milano.

The first race of the European season was the San Remo Grand Prix run on 3 April in two 45 lap heats and with the results decided on the aggregate. The Maseratis were unchallenged and Fangio, Bira, de Graffenried and Campos took the first four places. A fortnight later Fangio won the Pau Grand Prix from other Maseratis driven by de Graffenried and Campos. When not required by Ferrari, Luigi Villoresi continued to drive Maseratis and he appeared at the wheel of one of these cars in the Jersey Road Race which was held for the third year in succession on the 3.2 mile St Helier road circuit. Other 'San Remos' were driven in this race by 'B. Bira', de Graffenried, Parnell and Ashmore. The start of the race was delayed because of mist drifting in from the sea and rain fell continuously throughout the 55 laps. Chiron (Lago-Talbot) led initially, but soon fell back, and then Villoresi went ahead until his car developed ignition trouble and slowed off. 'B. Bira' took the lead, but when his Maserati began to misfire, he was passed by Bob Gerard whose ERA stayed in front until the end of the race. De Graffenried finished second and 'B. Bira' took fourth place after a succession of pit stops. There was a Maserati landslide in the Grand Prix du Rousillon held on a street circuit at Perpignan on 8 May and Fangio,

'B. Bira', Campos, de Graffenried, Pagani and Villoresi took the first six places.

The second British Grand Prix was held at Silverstone on 14 May. Since 1948 a revised 3 mile circuit had been adopted, incorporating the entire perimeter road of the airfield and with a slow 20 to 25mph chicane at Club corner. A strong entry of Maseratis appeared, but the retirement rate was high. Villoresi led with his 4CLT/48 until the first refuelling stops and retired soon afterwards with run bearings. 'B. Bira' then went ahead and stayed in front until he overshot a corner and buckled the front of his car against a concrete marker tub. Now Parnell's Maserati assumed the lead, but when his car ran into mechanical trouble he was passed by de Graffenried and at the chequered flag the Swiss driver was just over a minute ahead of Bob Gerard's evergreen ERA.

On 26 May Ashmore finished third in the British Empire Trophy race behind the ERAs of Bob Gerard and St John Horsfall. Parnell retired his 4CLT with a seized supercharger drive. While these drivers were competing in the Isle of Man, 'B. Bira' and de Graffenried were travelling north to compete in the Swedish Summer Grand Prix held on the Skarpnack Airfield circuit. There was no opposition in this 46.5 mile 'sprint' and they took the first two places ahead of a Kaiser-based Special.

The first clash between the Maseratis and the Ferraris came on 19 June in the Belgian Grand Prix, where the Modena entries included a car driven by the great Nino Farina. It was not, however, to be a Maserati race, for Villoresi took the lead for Ferrari on the first lap, Fangio retired on that lap and Farina crashed seven laps later. When the Ferraris stopped to refuel, Rosier's Lago-Talbot forged ahead, the blown cars were unable to make up the deficit and the French car/driver combination won by a margin of fifty seconds. The highest placed Maserati was Ashmore's car in sixth place, two laps behind the winner. Before his crash Farina turned in the fastest lap of the race at 101.64mph, fractionally slower than Wimille's fastest ever 1,500cc lap set with an Alfa in the 1947 race.

A fortnight later the two Italian marques met up again in the Swiss Grand Prix run on the fast and dangerous 4.5 mile Bremgarten circuit. In practice, Farina was fastest with his 4CLT in 2min 50.4sec (95.26 mph), 'B. Bira' was 2.8 seconds slower and the best Ferrari could manage was third fastest by Ascari in 2min 54.7sec. Ascari, however, went straight into the lead at the start of the race, hotly pursued by 'B. Bira's' Maserati. Farina began to speed up after a slow start, passed the Siamese driver and had closed right up on Ascari when his engine went sick on lap 9;

after a pit stop Farina rejoined the race in fifteenth place, but he failed to make it to the finish. Once again Nino derived some consolation from setting fastest lap; at Bremgarten his speed was 95·00mph. None of the other Maseratis was in the picture at the finish, the Ferraris took the first two places and third and fourth were the Lago-Talbots of Etancelin and Sommer which had run through the race without refuelling. The highest placed Maserati was 'B. Bira's' car in fifth position, de Graffenried was seventh, Parnell finished eighth after a slow race with a sick engine, and Ashmore took eleventh and last place.

The Albi Grand Prix, held a week later, was fought out between the Maseratis and the Lago-Talbots. The regulations of the French Championship, in which Albi was a round, would not permit the race to be run in two heats, so the organisers, apparently obsessed with the idea of having two sets of results, prefaced the race with a 5 lap event to settle places on the starting grid. This was won by Fangio at 100·90mph, but even this 'sprint' proved the downfall of two of the Maseratis; the car driven by Villoresi in 1948, now with Parnell at the wheel, retired with valve trouble and 'B. Bira's' car was eliminated by a split induction pipe—but both drivers succeeded in getting their cars repaired in time to run in the main race. The two Scuderia Argentina cars went straight into the lead at the start of the race proper, Fangio heading Campos, and with Farina in third place. On his second lap, Fangio, who was already regarded as a very polished and accomplished driver, turned in fastest lap at 102·17mph and he was soon well clear of the rest of the field. Farina moved ahead of Campos, who fell out with mechanical trouble, but when Nino stopped to refuel after fifteen laps, his car refused to start on the handle and as push-starts were forbidden in this race, he had no alternative but to retire. Fangio was now completely unchallenged and went on to score a fine victory at 98·19mph. In second place was 'B. Bira' who had an eventful race. While holding third place the Siamese driver had overshot a corner in the village of St Juery, clobbered the straw bales and he then rejoined the race in sixth place. He quickly began to pick up places again and succeeded in displacing from second place Rosier, who was forced to stop at the pits every five laps for new goggles because of an oil leak on his Lago-Talbot. Other Maseratis driven by de Graffenried, Brooke and Murray finished fourth, seventh and eighth.

In 1949 the French Grand Prix was held as a sports car race on the St Gaudens circuit, but on 17 July the AC de Champagne organised a 310 mile Formula One race at Reims which was given the title of First

Grand Prix of France (which it was not, as races bearing this name had been run in 1911-13 and 1934-5). The Maseratis faced strong opposition in this race from both Ferrari and Lago-Talbot. At the start, an excess of wheelspin slowed Fangio's getaway and Villoresi's Ferrari headed the field on the first lap. Fangio came through to the front on lap 2 and he and Villoresi battled for the lead for three laps until 'Gigi' retired with a seized front brake. Now Campos passed his Argentinian team-mate and the two 4CLTs pulled away from the rest of the field which was led by 'B. Bira'. Murray retired his Maserati with piston failure and Parnell was slowed by a drop in oil pressure which eventually caused his retirement. Although the Scuderia Argentina cars were clearly faster than any of the opposition, both retired with engine trouble and the Siamese prince assumed a lead which he lost to Louis Chiron's Lago-Talbot during his second fuelling stop. Chiron was running through the race without a stop, but Peter Whitehead, motoring superbly with his private Ferrari, surged past both Maserati and Lago-Talbot to take the lead. Eleven laps from the finish, after the best drive in his career, the English privateer lost the use of all gears but fourth and fell back to finish third behind Chiron and 'B. Bira'.

The Zandvoort Grand Prix on 31 July attracted strong entries from Maserati, Ferrari and Lago-Talbot. This race was run in two heats, each of 63 miles, and a final of 104 miles, and throughout the day there was a cold wind, continuous rain and mist blowing in from the North Sea. Villoresi (Ferrari) won the first heat from Farina, whose 4CLT was misfiring badly, and 'B. Bira' and in the second heat Parnell was the winner for Maserati with Ascari, whose Ferrari was blowing oil fumes back into the cockpit, in second place. At the start of the final Farina and Parnell jumped the flag and each was subsequently penalised a minute. These Maserati drivers led on the first lap, but Ascari and Villoresi came through to head Farina, 'B. Bira', de Graffenried and Parnell. De Graffenried passed 'B. Bira' and only five laps from the finish Ascari's Ferrari lost a wheel. At the finish, with corrections for the penalties, Villoresi was the winner from de Graffenried, 'B. Bira', Farina, Etancelin (Lago-Talbot) and Parnell.

On 20 August the first *Daily Express* Trophy race was held at Silverstone, where the course had been slightly shortened by the deletion of the chicane used at the Grand Prix in May. There was again a hard-fought battle between Maserati and Ferrari, but, as at Zandvoort, this race was run in two heats and a final, the supercharged cars did not need a refuelling stop and the Lago-Talbots, unable to 'cash in' on their

fuel economy, were out of the picture. In the first 20 lap heat 'B. Bira' drove a polished race to beat Ascari's Ferrari into second place and Parnell finished third. Farina tweaked the tail of the prancing horse in the second heat, beating Villoresi, and de Graffenried took third place. In the final Ascari led almost all the way, but after a poor start Farina came through to the front to do battle, sometimes getting past Ascari on Hangar straight, but being repassed on acceleration out of Club corner. When a newspaper, blown by the wind, wrapped itself round Farina's head, he lost control, thumped the straw bales and rejoined the race with an eight-second deficit; Ascari now had the race in his pocket and at the finish was 1.8 seconds ahead of the *Dottore*, who in turn led Villoresi across the line by a margin of 34.6 seconds. De Graffenried finished fourth, Peter Walker took a fine fifth place with the ill-fated E-type ERA and 'B. Bira' was sixth. Parnell retired his Maserati with loss of oil pressure. A week later Farina compensated for his defeat at Silverstone by winning the Lausanne Grand Prix, held over 181 miles of a difficult street circuit, from Ascari's works Ferrari. De Graffenried finished third with his Maserati ahead of a 2,000cc unsupercharged Formula 2 Ferrari driven by Franco Cortese.

A new Maserati development was seen at the Italian Grand Prix, which in 1949 returned to its true home at Monza. The organisers had offered a prize of six million lire (£3,000) starting money to any entrant of two new cars. Ferrari had risen to the occasion by producing two much revised V-12 cars and Scuderia Milano entered modified 4CLT cars which bore their own name instead of that of their maker. The Milanos featured much improved brakes and engines modified by Mario Speluzzi; these had originally been used to power speedboats that had captured the world records in the 1,500cc class and were said to develop 306bhp at 7,000rpm. The Milanos were driven by Nino Farina and Piero Taruffi.

Unfortunately for supporters of the Trident, the new Ferraris, with twin overhead camshafts per bank of cylinders and twin-stage superchargers, proved much faster than the Milanos. Ascari and Villoresi seared away from the rest of the field with Farina in third place; after only eighteen laps the temperamental Nino withdrew in a pique because his car was not fast enough to beat the Ferraris (a similar act had previously resulted in his being sacked from the Alfa Romeo team), but if he had carried on, he would almost certainly have finished second because Villoresi retired with mechanical trouble. 'Fi-fi' Etancelin, driving a very steady race with his Lago-Talbot, took second place ahead of 'B. Bira'

(who finished with the cockpit of his car almost awash with oil) and de Graffenried. The casualty rate amongst the Maseratis was high; Rol retired with engine trouble, David Murray crashed, and Campos was eliminated by a broken connecting rod; even de Graffenried had been slowed by a drop in oil pressure and Taruffi, with the second of the Milanos, was seventh after a succession of pit stops.

The final race of the 1949 European season was the Masaryk Grand Prix held on 25 September on a shortened version of the famous Brno circuit in Czechoslovakia. Farina and Parnell crashed their Maseratis on the first lap, 'B. Bira' crashed two laps later whilst leading the field and Louis Chiron retired his new Maserati with clutch trouble. Peter Whitehead came through to win the race from Etancelin's Talbot and at the finish the highest placed Maserati was Louveau's 4CL, which took fifth spot.

## The 'San Remo' in Decline: The 4CLT/48, 1950-1

### THE 1950 RACING SEASON

For the winter series of races in South America the Maserati concern produced a batch of 4CLT engines enlarged in capacity to 1,720cc, but even with extra power the 'San Remos' could not cope with the 2 litre supercharged Ferraris that dominated the series. The first race was the Juan D. Peron Grand Prix on the Palermo Park circuit on 18 December 1949. The Ferraris took the first four places and the Maseratis of localman Froilan Gonzalez and 'B. Bira' trailed home fifth and sixth. On 8 January 1950 the Dona Eva Duarte de Peron Grand Prix was held on the same circuit, but over a slightly shorter distance. The Ferraris enjoyed another landslide, taking first, second and fourth places, with Bucci's elderly Alfa Romeo third and Bonetto (with the modified Milano car), Farina, Parnell and 'B. Bira' occupying fifth, sixth, eighth and ninth places. A week later Taruffi scored Maserati's best result in the series by taking third place behind two Ferraris in the Mar del Plata Grand Prix and other 4CLT/48s driven by Chiron, de Graffenried and Clemente Biondetti finished fourth, fifth and sixth. The final round was the Rosario Grand Prix on 22 January and here the only Maserati in the first six was Parnell's car, which took fourth place.

As the 1948 season had progressed and the Ferraris increased in speed and reliability, so Maserati successes had diminished. The new four-cam, twin-stage supercharged Ferraris were substantially faster than their 'San Remo' rivals and by the end of the year it had been only too obvious that the Modena team would be right out of the picture in future races unless a new model was produced. Apart from the Milano referred to below, there was no Maserati developments of importance for 1950 and



the return to racing of Alfa Romeo with more powerful versions of the 158 cars and an exceptionally strong team of drivers consisting of Farina, Fangio and Fagioli, coupled with the introduction and steady development of a new unsupercharged Ferrari, ensured that Maserati successes were limited to minor races.

Changes to the steering linkage and the substitution of a Weber down-draught twin-choke carburettor resulted in the blue and yellow cars raced by the Scuderia Argentina being typed the 4CLT/50 and these were driven by Juan Fangio (when not appearing for Alfa Romeo), Froilan Gonzalez, Alfredo Pian and, very occasionally, Nello Pagani. It is believed that the Argentina cars were rather more powerful than others and developed some 280bhp. The works sometimes fielded two cars for Louis Chiron and Franco Rol, Enrico Platé continued to enter cars for those very successful drivers, 'B. Bira' and Baron Emmanuel de Graffenried, and Reg Parnell and David Hampshire raced under the Scuderia Ambrosiana banner.

The most interesting Maserati development came from Arialdo Ruggeri's Scuderia Milano, which produced a new car that bore little resemblance to the original 4CLT. The Speluzzi-modified engine with a very large single Roots-type supercharger and, later in the season, a new cylinder head having eight plugs fired by twin magnetos driven from the rear of the camshafts, developed 320bhp at 7,000rpm. There was a new tubular chassis with front suspension by double wishbones and torsion bars as on the original 4CL and at the rear a de Dion axle was used; the final drive was mounted on the chassis frame and the rear suspension incorporated a transverse leaf spring. Enormous new hydraulic brakes were fitted and the body was slightly lower, with a flatter, more oval grille, similar to that used on the later works A6SSG cars. The new Milano was not ready at the beginning of the European season and was first raced at the Grand Prix des Nations at the end of July.

The first races of the European season were the Pau Grand Prix and the Goodwood meeting, both of which were held on Easter Monday, 10 April. In the 193 mile Pau race Juan Fangio dominated with his Argentina car and after a gruelling three hours of racing won from Villorezi's single-stage supercharged Ferrari. If Pau was one of the year's most tiring races, the Richmond Trophy at Goodwood was one of the least strenuous, a mere eleven laps of the Sussex circuit, albeit run in rain and high winds; Parnell and de Graffenried took the first two places in the 11 lap Richmond Trophy race ahead of the ERAs of Brian Shawe-Taylor and Graham Whitehead. Six days later the only Alfa

Romeo entered, driven by Juan Fangio on the Portello team's return to racing, won the San Remo Grand Prix from the Ferrari of Luigi Villoresi. In third place came the Maserati of Argentinian driver Alfredo Pian, and Franco Rol and Louis Chiron finished fifth and sixth with their 4CLTs behind Vallone's Ferrari.

The first round in the newly inaugurated Drivers' World Championship was the British race at Silverstone on 13 May, a race that in 1950 was given the title of European Grand Prix. Ferrari did not enter and the Alfa Romeos took the first three places. Until half-distance 'B. Bira' led the rest of the field with his 4CLT, but then fell back, and eventually retired with fuel-feed problems. Emmanuel de Graffenried retired his Maserati with a broken connecting rod and Chiron's car went out with a broken oil pipe. Only eight days later the second round in the Championship was held at Monaco. This was the famous race in which Farina spun his Alfa on the second lap, Gonzalez's Maserati ran into the stricken Portello car and in all nine cars were involved in the multiple pile-up. Because so many of the faster cars were eliminated, the slow Maseratis came through to achieve reasonable placings and Chiron and 'B. Bira' finished third and fifth. Next came the Swiss Grand Prix, the third round in the Championship and held as usual at Bremgarten. Bonetto drove the less highly modified of the Milano cars, but it was hopelessly slow in practice. In the race 'B. Bira', soaked in oil from a bad leak, finished fourth and Bonetto took fifth place. At the Milano's refuelling stop the car apparently suffered a fuel pressure explosion which wrecked the pit, but the driver was able to carry on!

Eleven days later the British Empire Trophy race was held on the Douglas circuit in the Isle of Man. A light drizzle at the start of the race turned the circuit, already well-coated with rubber and oil from the preceding Manx Trophy event, into a skating rink. On only the second lap 'B. Bira' spun and was rammed by David Murray's Maserati; both cars, together with Kelly's old six-cylinder car which was also involved in the incident, were eliminated. On that lap Parnell took the lead with his 'San Remo', but he fell back because of clutch trouble to finish sixth, and at the finish of this 140 mile race de Graffenried was in third place behind the ERAs of Gerard and Harrison. Maserati failed to feature at all in the results of the Belgian and French Grands Prix, both races in the Drivers' Championship; at Spa all the marque's leading exponents were conspicuous by their absence and at Reims Gonzalez (piston trouble with his Scuderia Argentina car), David Hampshire (no oil pressure), Chiron (piston failure), Rol (piston failure), Parnell (piston

failure) and Bonetto (engine trouble with the Milano car) all retired. In both of these races Alfa Romeo took the first two places.

On 9 July the Bari Grand Prix was held on the Lungomare circuit and the Alfas of Farina and Fangio took the first two places. The best Maserati performance was sixth place by four-times Mille Miglia winner Clemente Biondetti. David Hampshire with a 4CLT Maserati set fastest lap in practice for the Jersey Road Race at 94.12mph, improved on this in the race with a lap at 94.43mph, but then retired with valve trouble. The race was won by Peter Whitehead's private single-stage supercharged Ferrari, and the Maseratis of Parnell and de Graffenried took second and third places. The Swiss driver lost second place because he made two refuelling stops to Parnell's one. 'B. Bira' retired with super-charger failure.

Four days later the Albi race was held on the Circuit des Plâques with the results decided on the aggregate of two 94 mile heats. Fangio with his Scuderia Argentina car set the pace in the first heat and was leading easily when his car caught fire on the last lap. Petrified lest the fuel tank should explode, he gritted his teeth and determined to carry on to the finish. Just before the finishing line he was passed by Raymond Sommer's Lago-Talbot and the Argentinian abandoned the 'Maser' while it was still moving at a fair lick. He was unable to run in the second heat, but had the small consolation of having set a new lap record of 106.63mph. Gonzalez won the second heat which gave him second place on aggregate behind Rosier's Talbot. The results for the other Maserati drivers were rather confusing, for Pagani was sixth (finishing well down the field in both heats), Farina seventh (retiring in the first heat and finishing third in the second), de Graffenried ninth and Fangio, despite having run in only one heat, was classified eleventh.

A week later the first Dutch Grand Prix was held at Zandvoort, an artificial circuit set among the sand-dunes on the coastline near Haarlem. Maseratis were driven by Fangio, Gonzalez, Parnell, 'B. Bira', Platé and Murray, but the race proved a Lago-Talbot benefit. Fangio led initially, but fell back with shock-absorber trouble and retired, again with the consolation of having set a new lap record, of 83.50mph. Sommer had taken the lead with one of the unblown French cars, but retired with valve trouble while holding first place. Rosier's Lago-Talbot then went into the lead while the supercharged cars were refuelling and at the end of this 90 lap race took the chequered flag after a non-stop run ahead of the Ferraris of Villorresi, Ascari and Whitehead. The Maseratis of 'B. Bira' and Murray finished fifth and sixth, several laps behind the winner.

Gonzalez's Maserati had held the lead briefly before its first refuelling stop, but caught fire when it stopped for the second time; after the flames had been doused and the 'Pampas Bull' had changed his scorched trousers for a new pair, he rejoined the race to finish at the tail of the field. Platé's Maserati was eliminated by engine trouble and Parnell retired with back axle failure.

Alfa Romeo took the first three places in the Grand Prix des Nations at Geneva, most of the Maseratis, including the new and highly modified Milano, retired and the highest placed of the Modena cars was Chiron's in sixth place. In August Bonetto drove (and retired with) the Milano car at Pescara; on the measured kilometre of the Montesilvano straight Bonetto's car was timed at 152.9mph compared with 192.5mph for Fangio's winning Alfa (a fair indication of how outclassed the Maseratis now were) and 132.9mph for Schwelm's sports Jaguar XK120. The *Daily Express* Trophy Race at Silverstone was another Alfa Romeo benefit, but Parnell finished second to Farina's 158 in his heat—in the final he retired with fuel-feed trouble. It was at this race that the BRM made its début with Raymond Sommer at the wheel, but failed to leave the start because of drive-shaft trouble. Sommer, one of the most successful and forceful drivers of Maseratis in post-war days, lost his life in September when he crashed his 1,100cc Cooper-JAP in a small national French race at Cadours in the Haut Garonne.

The Italian Grand Prix devolved into a fierce duel between the blown Alfas and the latest unsupercharged Ferraris, and with Farina's Alfa leading home the Maranello entry shared by Ascari and Serafini. In comparison with these cars the Maseratis were so slow that they were hardly competing in the same race. Emmanuel de Graffenried took sixth place, but the other five Modena cars, including Comotti's Milano, all retired. At Goodwood at the end of September 'B. Bira' finished second to Parnell with the BRM in the 12 lap Goodwood Trophy, but a fist-waving de Graffenried, off-form and unhappy on the rain-soaked Sussex circuit, was beaten into fourth place by Gerard's ERA. Earlier in the day 'B. Bira' and de Graffenried were second and third to the BRM in the 5 lap Woodcote Cup race. The final race of the season was the Penya Rhin Grand Prix held on the very fast, but bumpy Pedralbes street circuit at Barcelona. Alfa Romeo did not enter this race, the BRMs ran but retired, Ferraris took the first three places and the highest placed Maserati was de Graffenried's car in fifth position.

## THE 1951 RACING SEASON

The complete failure of the Maserati company to continue development of the four-cylinder cars and, in particular, their failure to produce a new and more competitive power unit, had resulted in the cars being nothing more than also-rans in 1950 races in which they faced opposition from the ever-improving Alfa Romeos and Ferraris. By 1951 the cars were completely eclipsed, their best performances were a win and a third place in non-Championship races, a couple of wins in minor British 'sprints' and in Championship racing the best that Modena could manage was a seventh place at Bremgarten by that one-time great driver Louis Chiron. Development of the once-promising Milano had been abandoned with the sole success to its credit a win in the Freiburg hill climb by German driver Paul Pietsch.

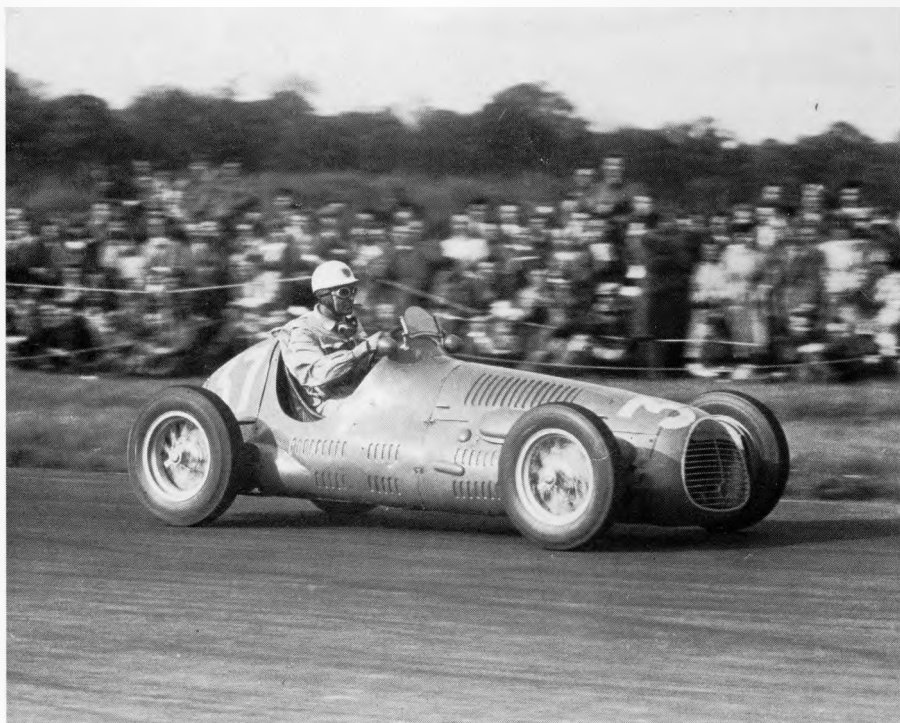
Even in the Argentine races at the beginning of the year the cars failed to feature in the results. Both of the Peron Cup races were won by Gonzalez's 2 litre supercharged Ferrari, followed home by a brace of work-entered 1939 Grand Prix Mercedes. In the first of these races on 18 February Pian took fifth place and in the second race a week later Jorge Daponte finished fourth.

The first races of the European season were on Easter Monday. In the 188 mile Pau Grand Prix, Giuseppe Farina brought his 'San Remo' home in third place, three laps behind Villoresi's winning Ferrari and the Lago-Talbot of Louis Rosier. At Goodwood the same day 'B. Bira' appeared with a Maserati 4CLT/48 chassis fitted with a new Osca V-12 4,472cc (78 × 78mm) unsupercharged engine designed and built by the Maserati brothers who had, of course, been responsible for the conception of the chassis. The Siamese driver was no longer racing for Platé, but on his own behalf. He had rushed to the circuit after the car had been completed, but did not reach Goodwood until the morning of the meeting. In his first race, the 5 lap Chichester Cup, he finished third after starting from the back of the grid, but later in the day he won the 12 lap Richmond Trophy, easily drawing away from Parnell's Maserati along the straights, and set a new lap record of 90.38mph.

'B. Bira' then ran his new mount at San Remo, but retired early in the race with a damaged radiator, and in the *Daily Express* Trophy race at Silverstone, finishing third in his heat behind two Alfas; the final of this race was abandoned at six laps because torrential rain had flooded



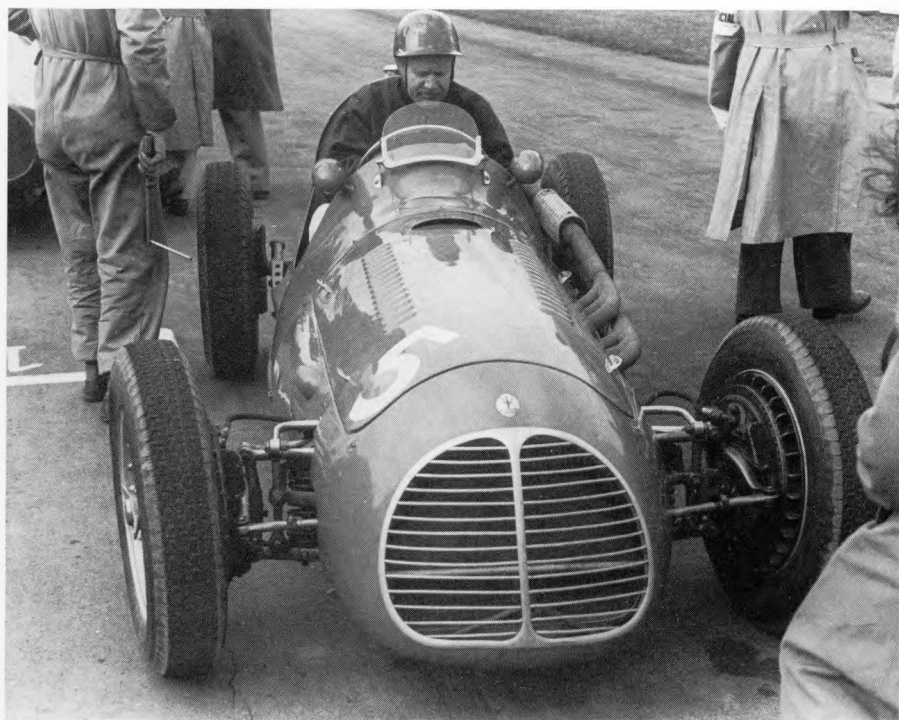
*Plate 25* Bignami, chief mechanic to the Scuderia Argentina, makes final adjustments to Juan Fangio's 4CLT/48 at the 1949 Albi Grand Prix.



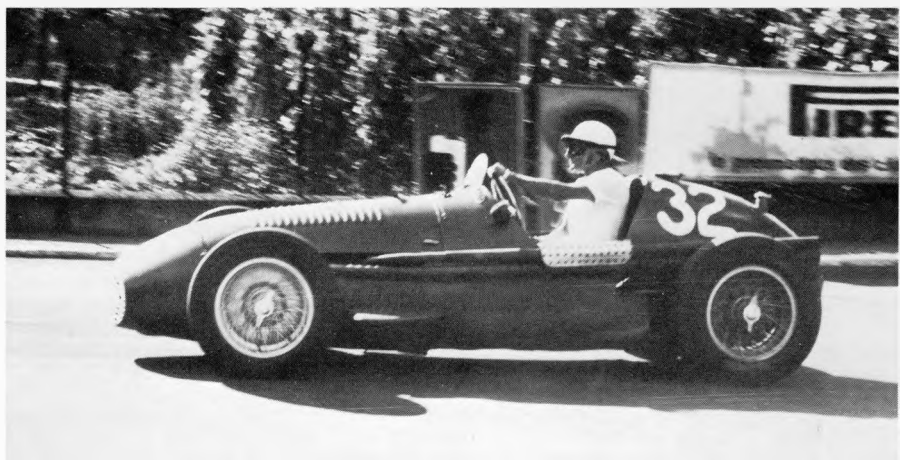
*Plate 26* In 1952 Enrico Platé raced a team of special cars based on the 4CLT/48 chassis. Harry Schell is seen at the wheel of one of them in the *Daily Express* Trophy race; *Plate 27* Giorgi Scarlatti drove this A6GCS into fifth place and a class victory in the 1956 Targa Florio.

*On facing page:*

*Plate 28* Early in 1953, de Graffenreid raced this interim car belonging to Enrico Platé. It had the latest engine and chassis modifications but the body was a hybrid between 1952 and 1953 styles; *Plate 29* Froilan Gonzalez drove the new twin-plug A6GCM to a fine second place in the 1952 Italian Grand Prix. He is about to leave the pits after the refuelling stop that cost him victory.







*Plate 30* Froilan Gonzalez at the wheel of his works A6SSG in the 1953 British Grand Prix. He finished fourth after a refuelling stop; *Plate 31* In the 1953 Swiss Grand Prix at Bremgarten, Felice Bonetto took over this A6SSG from Fangio and drove it into fourth place.

the course and the Osca-Maserati had no real chance to show its true form. At the Whitsun Goodwood meeting 'B. Bira' and the Osca met up with Farina's 'San Remo'. He beat Farina into second place in his heat of the Festival of Britain Trophy race, but retired in the final with an engine damaged by oil pump failure. Farina and de Graffenried finished second and third behind Reg Parnell, who was driving Tony Vandervell's 'Thin Wall Special' Ferrari. Because of a ski-ing accident 'B. Bira' only drove the Osca-powered Maserati once more, in the Spanish Grand Prix at the end of the year in which he was an early retirement. This car was purely an interim model and at the Italian Grand Prix in September Franco Rol appeared with the finalised version which featured an engine and chassis both of Osca manufacture.

At the weekend following the Whitsun Goodwood meeting Farina and his 'San Remo' won the Paris Grand Prix held on a 1.6 mile circuit in the Bois de Boulogne from the Lago-Talbot of Gonzalez and Rosier. In a 45 mile race at Boreham on 26 May Reg Parnell finished third behind Dennis Poore's venerable 3.8 litre Alfa Romeo and Tony Rolt's even older Delage, and in July Philip Fotheringham-Parker won a 100 mile national race with a 4CLT/48 from Tyrer's streamlined BMW. The existing Formula 1 was abandoned for Championship racing in 1952 (although it officially remained in existence until the end of the 1953 season), but for Maserati it had come to an end a good twelve months previously. The last international appearance of a 4CLT/48 was at Indianapolis in 1957.

## Six-Cylinder Sports Cars: The A6 and A6GCS, 1947-56

Before severing their connections with the company bearing their illustrious name, the Maserati brothers produced a sports car design that flourished briefly, but was later revived, and in much modified and very highly developed form achieved considerable success in both sports car and Formula 2 racing. The first of the new cars, the Tipo A6, was powered by a six-cylinder engine that had much in common with the pre-war Tipo 6CM Voiturette engine, but it was unsupercharged, and, in this form, featured a single overhead camshaft. The cylinder dimensions were  $66 \times 72.5$ mm, giving a capacity of 1,488cc. There was a cast-iron cylinder block. With a single Weber twin-choke carburetter and a compression ratio of 7.8:2, a power output of 65bhp was developed at 4,700rpm. It seems that this engine was being bench-tested as early as 1945, but the complete car did not appear until the 1947 Geneva Show.

The A6 featured a chassis based on two 3.125in tubular main members with cruciform and lateral cross-bracing. At the front the suspension was by unequal-length double wishbones and coil springs which bedded at their base on to the wishbones and at the top on to a stiffened cross-member. The steering gear operated the tie-rod direct and was placed in front of, instead of behind, the axle. At the rear there was a live axle suspended on coil springs. Transmission was by a dry single-plate clutch, a four-speed gearbox with synchromesh on third and top ratios and via a prop-shaft with two universal joints to a bevel-driven rear axle.

The majority of these cars were fitted with simple and attractive coupé bodywork by Pininfarina and a small number were sold to private purchasers for road use from 1948 onwards. Among owners was Prince Birabongse of Siam ('B. Bira'), a stalwart supporter of the marque, who drove his car to the British Grand Prix in 1949. The maximum speed of

the A6 was said to be 95mph and in the lower ratios it was claimed to be good for 26, 53 and 70mph.

In the 1947 Mille Miglia there appeared another Maserati development, the Tipo A6G, which still retained a single overhead camshaft engine, but with cylinder dimensions of  $72 \times 80\text{mm}$  (giving a capacity of 1,954cc) and a power output of 90bhp at the same engine speed of 4,700rpm. The A6G was said to weigh 1,550lb and it was reckoned to be capable of 115mph. Luigi Villoresi drove this very roughly finished car with coupé bodywork in the 1,000 mile race but retired because of bearing failure. Shortly afterwards Barbieri and Angelini drove what would appear to have been 1.5 litre A6 cars into the first two places in a 62 mile race at Piacenza, in Northern Italy (the race in which the V-12 Ferrari made its début). Barbieri won the 29 mile Circuit of Novara at the end of August and Giovanni Bracco scored wins in the Sassi-Superga and Aosta-Gran San Bernardo hill climbs; almost certainly these drivers were at the wheel of A6G cars.

Yet another development of this new and promising theme was the Tipo A6GCS model which made its racing début at the end of September. At this stage an interpretation of Maserati designations would not be out of place. The 'A' indicated the basic 'family' to which all three (and subsequent) models belonged; the '6' indicated the number of cylinders, while the 'G' represented 'Ghera', meaning that the cylinder block and crankcase were of cast iron. Illogically, the 'G' was retained in the designation of the 1952-3 single-seaters and the A6GCS cars of 1953 onwards, even though these featured aluminium cylinder blocks. The 'C' was for 'Corsa', while the 'S' stood for 'Sport' and the 'M' in the designation of the 1952 A6GCM single-seater indicated 'Monoposto'. The modified 1953 cars were still described by the works as the A6GCM, but usually known as the A6SSG and this designation is used in Chapter 7.

The more powerful A6GCS had the slightly increased engine capacity of 1,978cc achieved by increasing the stroke to 81mm. In this form, on a compression ratio of 12:1, power output was said to be 125bhp at 5,200rpm. When this engine was redesigned for Formula 2 racing for 1952 (see the next chapter), cylinder dimensions of  $75 \times 75\text{mm}$  were adopted, but it is believed that Maserati also built six-cylinder engines of  $76 \times 72\text{mm}$  (1,959cc) in circa 1950. The new car was specifically intended for sports car racing and featured a shorter wheelbase and narrower track than the A6/A6G models.

The chassis based on two main large-diameter tubular members sweeping up over the rear axle was of basically unchanged design. At the front,

the independent suspension was carried on a boxed cross-member. Coil springs and unequal-length wishbones were retained and the latter, like the king posts and forward-facing steering arms, were superb, polished forgings. The rear live axle had an aluminium centre-section and steel axle housings carried on semi-elliptic springs. There was a single radius arm on each side above the axle and the axle was flexibly mounted to the leaf springs by pivoted joints. Houdaille adjustable lever-type shock-absorbers were fitted front and rear and there was an anti-roll bar at the rear only. There were hydraulic brakes with 11.5in drums and 16in Borrani wire wheels. The lightweight, narrow two-seater open body had cycle wings, a single headlamp in the centre of the now traditional Maserati 'apple'-shaped grille, a cutaway side to the driving seat (on the left), no door on the right-hand side and a metal tonneau. It has been estimated that no more than ten of these cars were built.

The début of the A6GCS was in the Circuit of Modena, held on 28 September 1947 on a difficult street circuit, and the cars were driven by Alberto Ascari and Luigi Villoresi. The principal opposition came from Franco Cortese with a 2 litre V-12 Ferrari. Sports cars of any capacity were admitted to the race and a number of drivers of modified 1,100cc Fiats, indignant at having to compete on level terms with cars of 2,000cc and over, staged a strike, refusing to start in the race, and as a result several of them had their licences revoked by the Federation Internationale de l'Automobile. Initially Villoresi led from Cortese and Ascari, but then the Ferrari went ahead and turned in fastest lap in 69.93mph. Shortly afterwards Cortese stopped at the pits because of mechanical trouble, Villoresi's engine started to overheat and Ascari went through into the lead. Cortese rejoined the race, but was forced to stop at the pits again. At Modena the pits were foolishly sited on a curve and as the Ferrari was stopping, Giovanni Bracco at the wheel of a 3 litre Delage was forced to swerve to avoid it; the Delage went out of control, crashing into the packed spectator enclosure. Bracco was flung out into the road, suffering a broken leg and broken ribs, but five spectators were killed and more than fifteen suffered serious injuries. The race was stopped with the leader having covered twenty-four laps and Ascari and Villoresi were awarded first and second places.

A fortnight later the Turin Grand Prix was held in Valentino Park over a distance of 313 miles. Ascari and Villoresi again drove the Maseratis, but the same Ferrari was now handled by Raymond Sommer. Sommer had not scored a win so far in 1947 and at Turin he drove flat-out for victory. The Frenchman steadily drew away from Villoresi, who was also

pulling out an advantage over his team-mate. Unfortunately for Modena both of the A6GCS cars retired with broken gearboxes and Sommer went on to score a fine victory for Maranello.

It was evident from these two races that the V-12 Ferrari and the six-cylinder Maserati were closely matched and it was anticipated that in 1948 Modena would be an active participant in the newly introduced 2,000cc Formula 2 with either the A6GCS or a single-seater version. Instead, Maserati contented themselves with racing the 'San Remo' Formula 1 cars and the appearances of the A6GCS were few and far between.

Three cars driven by Ascari, Amendola and Capelli ran in the Mille Miglia, but none made it to the finish. Ascari led as far as Padua before retiring; Amendola went off the road and his co-driver Bai was killed in the crash. In July a single A6GCS was entered for Villoresi in the Coupe des Petites Cylindrées at Reims, a Formula 2 race with the difference that there was a maximum capacity limit of 1,100cc for super-charged cars (500cc maximum was prescribed by the international regulations). Villoresi battled with Righetti's Ferrari for ten laps, but then retired with mechanical trouble. The most successful A6GCS driver was Bracco who won the 189 mile Dolomite Gold Cup race at Belluna and scored victories in the Corsa Vue des Alpes, Biella-Oropa, Bolzano-Mendola and Aosta-Gran San Bernardo hill climbs. Villoresi also took second place with an A6GCS at Belluna. At the Naples Formula 2 race an A6GCS was entered for Ascari and although he set fastest lap at 63.20mph, he retired with mechanical trouble; this 153 mile race was won by Luigi Villoresi with one of the new Osca cars built by the Maserati brothers at Bologna.

Very little was seen of the A6GCS in 1949-50 and no serious attempt was made to develop it. Piero Carini, better known as an Osca exponent, drove an A6GCS in the 1949 Mille Miglia, but retired. Later in the year he won the Bolzano-Mendola and Susa-Moncenisio hill climbs, while victory in the Aosta-Gran San Bernardo went to Lanza Discoride. In the 1950 Formula 2 Grand Prix des Ramparts at Angoulême the Scuderia Argentina entered a 'San Remo' car powered by an A6GCS engine; it was driven by Juan Fangio who won the race from Simon (Simca) and Froilan Gonzalez (Ferrari). Private owners continued to race the cars in Italian events and the best performances that year were a second place by Bracco in the Dolomite Gold Cup race, a fourth by Musmeci in the Formula 2 Naples Grand Prix and a third by Bruno Ruffo, a former motorcycle world champion, at Lake Garda. Although an im-

proved version of the A6GCS was offered by Maserati for the 1951 season, no further successes were gained until a completely redesigned model with the same designation was introduced in 1953.

In 1952 Maserati had raced the first Formula 2 version of the A6GCS with new chassis and completely revised engine. A year later came the Formula 2 A6SSG with yet another and more powerful version of the six-cylinder engine. The Modena company, well aware that the potential market for sports cars was much greater than that for single-seaters, also produced a two-seater version bearing the designation A6GCS, but, general layout apart, with very little in common with its predecessors. The new car, which was mechanically almost identical to the A6SSG, was one of the most successful models to emerge from the Maserati works, there was a steady demand for the A6GCS, despite a price-tag of £3,235, until it was superseded by the four-cylinder 200S model in 1956 and it scored a great number of successes both in Europe and in minor races in the United States.

The power unit was the Formula 2 six-cylinder engine with light alloy cylinder block and crankcase, dry cast-iron liners forming the cylinder bores, gear-driven twin overhead camshafts, a steel crankshaft running in seven main bearings and nickel-chrome connecting rods with H-section stems. In its 1953 form this engine had cylinder dimensions of  $76.5 \times 72\text{mm}$  (1,985cc) and twin-plug ignition. On the sports version the two 14mm sparking plugs per cylinder were fired by two separate coil ignition systems, with one Marelli distributor driven from the rear of the exhaust camshaft and the other by skew gears from an idler gear on the right-hand side of the nose of the crankshaft (on the Formula 2 engine there were twin magnetos). As on the Formula 2 engine, three twin-choke Weber 40 DCO3 carburettors were fitted, but with the lower compression ratio of 8.5:1 and, running on pump fuel, 165bhp was developed at 6,750rpm.

Transmission was by a dry twin-plate clutch and four-speed gearbox in unit with the engine; second and third ratios featured constant-mesh helical gears and third and top were synchromesh-engaged. The short, stubby, remote-control gearchange was centrally mounted (ie, to the right of the left-hand driving position). Basically the chassis was similar to that of the Formula 2 cars, but wider to take two-seater bodywork. There were two 3in tubular steel main chassis members, tapering inwards and sweeping over the rear axle. At the front there was a fabricated box-section sweeping upwards and with its ends linked by a 2.375in tubular member which located the steering box. In the centre of the

chassis there were two main cross-members of the same diameter and two subsidiary tubular cross-members were used at the rear. Two longitudinal tubular members welded between the front box-section and the first of the main cross-members carried the engine mountings. To this basic structure was welded a subsidiary framework which formed the scuttle and body framework and stiffened the main chassis structure. Tubing of 1in diameter was used for this framework, and the body framework was of  $\frac{1}{2}$ in tubing, welded throughout.

At the front the suspension was by unequal-length double wishbones, coil springs, Houdaille hydraulic shock-absorbers and an anti-roll bar. There was a rigid rear axle, located by tubular radius rods pivoted above its centre at each end and running forward to chassis mounting points and by a cross-braced tubular A-bracket; the legs of the 'A' were frame-mounted and the apex joined the centre of the axle casing by means of a ball and socket. Quarter-elliptic springs were used at the rear, with Houdaille hydraulic shock-absorbers and an anti-roll bar. The brakes were of the hydraulic two-leading shoe pattern with large light alloy drums and cast aluminium backplates, each of the latter having four integral air scoops (two facing to the front and two to the rear). Behind the seats was a large single fuel tank with a capacity of 27.5 Imperial gallons and the oil tank for the dry sump lubrication system was mounted behind the fuel tank. The spare wheel was mounted on top of the oil tank with access through a detachable 'boot lid'. On the production cars the body was a particularly graceful design with smooth, flowing lines and panelled in 14swg light alloy. A full-width perspex screen was fitted. With a dry weight of only 13 $\frac{1}{2}$ cwt, the latest A6GCS had a maximum speed of around 140mph and acceleration to match.

The first of the new cars (chassis number 2039, built in late 1952) combined features of the earlier cars and the later production model. This prototype car was originally fitted with the 1952 engine with dimensions of 75 x 75mm and in sports form said to have a power output of 140bhp. By the time the new A6GCS was first raced, however, the 1953 over-square engine had been substituted. Semi-elliptic (instead of the later quarter-elliptic) rear springs were used and the car featured the 'apple'-shaped grille similar to that of the original A6GCS and flared front and cycle-type rear wings which were welded to the body. The body had cut-away cockpit sides (but small doors were later added) and separate headlamps were mounted on either side of the nose.

This first car was sold to American-resident Dutchman de Koster, who made his *début* with it at MacDill Field in Florida in February



1953. Subsequently de Koster raced the A6GCS with Jorge Daponte as co-driver in the Sebring 12 Hours race, but it retired. This car was then returned to the works for a rebuild. De Koster collected it in time to drive it in the 2 litre Sports Car race preceding the 1953 Dutch Grand Prix. Fangio tried this A6GCS in practice and in the race de Koster finished second to Cliff Davis's Tojeiro-Bristol. The Dutchman and his Maserati then returned to the United States and he drove it in a number of American races during 1953-5. The body style of the later and more streamlined production cars was clearly derived from this first model.

Maserati had a team of cars with the latest full-width bodies completed in time for the Mille Miglia held on 25-6 April 1953 and they were driven in the 1,000 mile race by Musso, Mantovani and Giletti. Luigi Musso crashed while leading the 2 litre class, but Giletti and Mantovani finished sixth and tenth overall and took the first two places in their class. Less than three weeks later the works cars were again in action, in the Targa Florio, held over eight laps of the famous Sicilian 44.7 mile Little Madonie circuit. At this time the race attracted a rather parochial entry. After Piero Taruffi had crashed his new 3 litre V-6 Lancia, victory went to Umberto Maglioli with a similar car and the Maseratis of Giletti and Fangio (the latter had relieved the rather slow Mantovani at half-distance) took second and third places.

In June, Luigi Musso won the 238 mile Perugina Cup race from the works Lancia Aurelia GTs of Piodi and Valenzano. Later the same month Mantovani and Musso took the first two places in the Circuit of Caserta, but the third team car driven by Giletti was delayed by mechanical trouble, lost third place to Bordoni's 2 litre Gordini and eventually crossed the line in seventh place. Works Maseratis were next fielded in the 12 Hours race held at Pescara on 15 August. As faster cars retired, the works A6GCS entries moved up into second and third places. Musso, who was co-driving with his younger brother, heading Mancini/Dal Cin. On the very last lap Musso's engine failed and while he was pushing his car round to the finish, his team-mates snatched second place.

Officine Alfieri Maserati fielded three new cars with 'platform'-style bodies by Vignale in the Nürburgring 1,000 kilometres race at the end of August, but in this race the team was completely out of luck. Nürburgring lap record-holder Hermann Lang and Bertoni retired with engine trouble; Hans Hermann and American Ernest McAfee were disqualified after their car was repaired with a spare part from the pits instead of one carried in the car; and Giletti and Marimon were leading their class

and had set fastest lap in the class at 75.40mph when their engine expired on the last lap, only four miles from the finish.

On 6 September the Supercortemaggiore Grand Prix was held over fifteen laps of an 11 mile course at Merano. Juan Fangio drove a 'Disco Volante' Alfa Romeo with open body and the engine reduced in capacity to three litres to the model's one and only victory, and after the retirement of the complete works Lancia team Mantovani brought an A6GCS across the line in second place. Another A6GCS driven by Giletti finished eighth. One of the first of the new cars in private ownership made its debut at the autumn Goodwood meeting at the end of September. This was the car owned by Sid Greene's Gilby Engineering concern and Roy Salvadori drove the sleek, dark green 'Maser' into sixth place in a 5 lap race for unlimited capacity sports cars. The following weekend the car ran at Castle Combe and Salvadori took second place to Reg Parnell's Aston Martin DB3S in the 10 lap race for sports cars over 1,500cc. For some odd reason this A6GCS ran with the road registration number XMC 601 in 1953 and with the number XEV 601 the following year.

By the Sicilian Gold Cup race, run in two heats and a final (each of 61 miles) at Siracusa on 18 October, A6GCS cars had been delivered to several private owners and three works and four private cars ran in this race. The final was won by Portuguese driver de Oliveira with a Ferrari and Franco Bordoni took second place with his 2.3 litre Gordini; the works Maseratis of Musso and Giletti finished third and fourth.

At the end of the year Swiss driver Baron Emmanuel de Graffenried took an A6GCS to Brazil and won two races. The first of these was the Rio de Janeiro Grand Prix held on 13 December on the incredibly slow and tortuous Gavea circuit. A fortnight later he ran in the Sao Paulo Grand Prix at Interlagos. Local driver Chico Landi took the lead with his 3 litre Ferrari early in the race and as a heavy thunderstorm inundated the circuit, de Graffenried dropped further and further down the field. Then the Swiss driver began to fight back, climbing from fifth to second place, but the rain had stopped, the circuit was drying out and Landi was extending his lead. Unexpectedly, the leader stopped at the pits for new tyres, de Graffenried closed within twenty seconds and when the Ferrari caught fire because of a carburettor leak, the Maserati swept by into a lead that it retained to the chequered flag.

The first appearance in 1954 of a works-entered A6GCS was in the the Buenos Aires 1,000 kilometres race held on 24 January on a 5.89 mile circuit partly formed by roads at the Buenos Aires Autodrome and partly

by the Avenida General Paz, the main road adjoining it. The Maserati was driven by Emilio Giletti and Luigi Musso, but in the face of strong opposition from a works 4.5 litre Ferrari and several privately owned Maranello entries, a team of works Aston Martins and the Ecurie Ecosse C-type Jaguars, the best that Modena could manage was sixth place and fourth in the 3 litre class. Early in 1954 French amateur Simone took an A6GCS to North Africa where he competed at Agadir and Senegal. The Circuit of Agadir held on 28 February embraced separate categories run simultaneously for 1,100cc, 2,000cc and over 2,000cc cars over 30, 40 and 50 laps respectively. In the 2,000cc class Simone took third place behind Picard's Ferrari and the Gordini of Moroccan driver André Guelfi. A week later Simone finished third overall in the two-hour Criterium of Senegal behind the Ferraris of Piero Scotti and Maurice Trintignant.

A single works car driven by Musso and Gatta ran in the Sebring 12 Hours race. The car was never in the picture and succumbed to brake trouble, a common failing on this notoriously hard and abrasive airfield circuit. Salvadori started his season with the Gilby Engineering A6GCS in fine style by winning both the 2,500cc and unlimited capacity sports car races at Castle Combe on 3 April. In the British Empire Trophy race at Oulton Park the following weekend he took second place, despite colliding with the winning Cooper-Bristol of Alan Brown shortly after the start of the 2,000cc heat.

Mainly because each team was preoccupied with its Formula 1 programme, Ferrari, Lancia and Maserati sent only single-car entries to the Tour of Sicily held on 4 April over a 671 mile course round the island. After Umberto Maglioli had crashed his monstrous 4.9 litre Ferrari, the race was won by Taruffi's Lancia. Musso, partnered by Donatelli, finished fourth and won the 2,000cc sports car class, but he had been soundly trounced by Piero Carini's brilliantly driven Alfa Romeo 1900 saloon, which finished second, and by Gerini's 3 litre Ferrari.

Next on the calendar was the Mille Miglia and in the famous 1,000 mile race Maserati fielded a strong team of three cars for Musso, Venezian and Mantovani, the latter's fitted with the 2,493cc Grand Prix engine, in which form it was known as the 250S. In 1953 there had been little opposition in the 2 litre class to the Maseratis, but Ferrari now had ready his four-cylinder 2 litre Mondial model and after the retirement of many of the more powerful cars Vittorio Marzotto drove one of the new Maranello 2 litres into second place behind Ascari's winning Lancia. Luigi Musso, partnered by Zocca, drove fast and hard, but had to settle for

third place, only nine seconds behind his Ferrari rival after twelve hours' racing. Venezian took fifth place, finishing the race with the nose of his car sadly battered and minus the bonnet after an off-course excursion. Mantovani's 2.5 litre car retired early in the race. It seems that in 1954 Musso's car was fitted experimentally with a gearbox having Porsche baulk-ring synchromesh on all four ratios.

In the Naples Grand Prix held as a 3 litre sports car race on the Posillipo circuit on 16 May Musso scored a fine victory with his A6GCS after the retirement of Paolo Marzotto's Tipo 250 MM V-12 Ferrari, and other Maseratis driven by Bellucci and Scarlatti finished third and fourth. The following weekend Swiss privateer Benoit Musy finished fourth overall with his A6GCS and won the 2 litre class of the Grand Prix des Voitures de Series for production sports cars at Spa-Francorchamps. At the end of May three cars were driven in the Targa Florio by Musso, Bellucci and Scarlatti, but it seems that only the first-named was at the wheel of a works entry. Musso led for the first three laps with Taruffi's Lancia hot on his exhausts, but then the Maserati driver stopped at the pits, complaining that he was feeling unwell and wanting to retire. The pit staff persuaded him to carry on, he rejoined the race in second place and at the end of the eight laps of the Little Madonie circuit was seven and a half minutes behind the winner.

Le Mans was dominated by the battle between the 4.9 litre Ferraris and the D-type Jaguars, Bristol 450 coupés took the first three places in the 2,000cc class and the sole works Maserati was never in the running. This A6GCS was driven by the Marquis de Portago and Carlos Tomasi and it is evident that the entry was financed by the Spanish nobleman. The Maserati retired in the early hours of the Sunday morning with loss of oil pressure. Another Italian race followed on 20 June, the Imola Grand Prix held on the newly constructed Autodromo di Imola and limited to sports cars of 1,100–2,000cc. The 3.12 mile circuit, incorporating a large number of fast curves, was made up partly by existing roads along the river Santerno and partly of roads in the Castellaccio municipal park. Although Musso led initially with his works car, the A6GCS lacked the good middle-range torque of the Ferrari Mondials, which were better suited to the characteristics of the circuit, and the Maranello cars of Maglioli and Musitelli came through to take the first two places. Maseratis driven by Musso, Perdida and Bellucci finished third, fourth and fifth. Another, albeit very minor, success was gained the same weekend when Salvadori won the 10 lap sports car race at the Crystal Palace with the Gilby car.

On 27 June the Supercortemaggiore Grand Prix, limited to cars of under 3,000cc, was held at Monza over a distance of a thousand kilometres. A total of five cars appeared under the banner of Officine Alfieri Maserati, three A6GCS models and two 250S cars with 2,493cc engines; only the latter, driven by Fangio/Marimon and Mantovani/Musso, were works cars proper and the 2 litre cars were privately owned models for which the works had accepted responsibility. Neither of the 250S cars was able to match the speed of the latest four-cylinder 3 litre Ferrari Monzas, both retired and the highest placed A6GCS was that driven into seventh place by Perdisa/Giovanardi. Two private A6GCS cars were entered in the Reims 12 Hours race on 4 July, but, again, neither was to the fore and the one car that finished, driven by Tomasi and Lopez, was a rather hopeless fifteenth.

Maseratis appeared in two sports car races held over the weekend of 24-5 July. In the Messina 10 Hours Night race, run over a 4.75 mile circuit in the centre of this seaside resort, Musso's Maserati set fastest lap, but developed a leaking fuel tank and at the end of the race was too far behind to be classified as a finisher. In the Portuguese Grand Prix, run on the Monsanto circuit at Lisbon, Perdisa finished fifth ahead of Duncan Hamilton's C-type Jaguar. Two minor Italian races followed, the Circuit of Calabria in which Musso finished third and won his class, and the Circuit of Senigallia in which he won the separate race for cars of up to 2,000cc. At Senigallia, private owner Musy finished fifth after a collision with Sighinolfi's works Ferrari Mondial, and a week later, on 15 August, he took second place to Alan Brown's Cooper-Bristol in the 2 litre class of a 65 mile race at Zandvoort.

At the Tourist Trophy held on the Dundrod circuit in Northern Ireland on 11 September Officine Alfieri Maserati fielded a trio of A6GCS cars and the private Gilby car was entered for Cliff Davis/Horace Gould. Musso and Mantovani drove a fine race to take third place overall on handicap behind the 750cc DB of Armagnac/Loreau and the 3 litre Ferrari Monza of Hawthorn/Trintignant. Their average speed was fifth fastest and the car was timed over a flying kilometre at 126.6mph. The Bellucci/Scarlati car was eliminated by a broken water pump, the Perdisa/Musy car was disqualified for receiving a push-start after a pit stop and Davis/Gould retired their private entry with transmission trouble.

At the Paris Salon held the following month Maserati unveiled a new and very pretty version of the A6GCS known as the 'Mille Miglia'. This was a sleek fixed-head coupé by Pininfarina, intended to enter

production (in fact, it did not), but still every inch a sports racer, painted Italian racing red with a broad white central stripe, a large bug deflector across the bonnet, a quick-release fuel filler cap in the side of the roof leading to an enormous tank that occupied the entire space behind the seats, and twin exhausts emerging under the left-hand door.

Although the A6GCS continued to be raced in 1955 by both the works and a large number of private owners, it was now rather overshadowed in Europe by the new 300S 3 litre model. In the Buenos Aires 1,000 kilometres race, held on a circuit combining part of the Autodrome and public roads, A6GCS cars were well to the fore. Grandio and Faraoni with their private car took a good third place behind the 4.9 litre Ferrari of Valiente/Ibanez and the 4.5 of Najurieta/Rivero, and de Tomaso/Reyes finished seventh.

For the Ralleye Soleil-Cannes held between 4 and 8 April the Maserati works loaned an A6GCS to Monsieur Guyot and his wife; in the special tests the car impressed greatly and it made equal best times on aggregate in the hill climbs incorporated in the event, winning one and finishing second in the other, but it was late on the road and failed to feature in the results.

Another good result followed in the Mille Miglia and behind the winning Mercedes-Benz 300SLRs of Moss and Fangio and Maglioli's third-place Ferrari, came Giardini with an A6GCS who won the 2 litre sports class. Bellucci with another A6GCS finished ninth overall and second in the class. At the production races at Spa in May the 1,600-2,600cc event was won easily by Musy who finished two laps ahead of the second-place Ferrari. The Bari Grand Prix held on 16 May proved a complete Maserati benefit; not only did Behra and Musso finish first and second in the over 2,000cc category, but in the smaller capacity race the A6GCS cars of Perdisa, Scarlatti and Valenzano finished first, third and fourth.

On 22 May the Sardinia Trophy race was held over a distance of 249.8 miles. The race was run in two stages, with an interval of two hours at Sessari after which the cars departed on the return journey in the order of arrival. The race was won by Sicilian driver Gaetano Starrabbia at the wheel of an A6GCS from Mario Bornigia (Ferrari Monza) and Dan Margulies (in whose C-type Jaguar Graham Hill rode as passenger). In the Imola Grand Prix on 20 June Bellucci held the lead until his A6GCS developed engine trouble and then Cesare Perdisa forged ahead with his 2 litre 'Maser' to win from the Ferrari Mondials of Umberto

Maglioli and Harry Schell. Musso drove a works A6GCS in the Portuguese Grand Prix, but retired when his engine developed an unquenchable thirst for oil. In the Dolomite Gold Cup, held at Belluna, Valenzano crashed his A6GCS and suffered injuries from which he died.

Azzuro Manzini entered his private A6GCS in the *Daily Herald* Trophy race at Oulton Park in August 1955 and was leading the 2 litre class when his car retired with ignition trouble. Overall victory in the race went to Reg Parnell's works Aston Martin DB3S and in the 2 litre class to Peter Scott-Russell's Lotus-Bristol. Shortly afterwards Belgian driver André Loens travelled to Sweden for the races at Skarpnack airfield, near Stockholm, and won both the Formula 3 race with a Cooper and the event for series sports cars with his A6GCS. Loens next entered his Maserati in the last Tourist Trophy to be held on the Dundrod circuit in Northern Ireland and with Joakim Bonnier as co-driver won the 2 litre class, despite mechanical trouble resulting in the Maserati dropping to the tail of the field and finishing a poor eighteenth. Loens and his pale blue A6GCS then travelled to the Castle Combe circuit in Wiltshire where they competed in a 20 lap race for cars of up to 2,000cc; on this tight, short circuit the Maserati was no match for the latest lightweight British cars powered by 1,100cc Coventry-Climax engines and failed to feature in the results.

The last success scored by the A6GCS in 1955 was in the Targa Florio held in October and the final round in the Sports Car Championship. The Mercedes-Benz 300SLRs took the first two places ahead of the Ferrari of Castellotti/Manzon and with another Mercedes fourth, but the Modena cars cleaned up the 2 litre class. Giardini and Manzini finished fifth overall in this 581 mile race, Giuseppe Musso, younger brother of works driver Luigi, co-driving with Rossi took sixth place and other Maseratis finished eighth and ninth.

The new four-cylinder 200S Maserati, the model destined to supersede the A6GCS, had made its début in the Targa Florio and although private owners continued to race the older design, its successes became fewer and fewer. A large number of these cars, many works-prepared, were entered in the Mille Miglia and Giorgio Scarlatti won the 2 litre sports class, but he was well down the field in thirteenth place and finished behind the 1,500cc class-winning Osca and a pair of 1,300cc GT Alfa Romeos. Shortly afterwards, on 20 May, Scarlatti and Olivari took the first two places in the Sardinia Trophy, a race that in 1956 had a capacity limit for sports cars of 2,000cc. Scarlatti also ran well in the Targa Florio, held on 10 June over a distance of 447 miles and not a

round in the Sports Car Championship. The Italian took sixth place on the road, winning his class, but was promoted to fifth place after Cabianca had been disqualified for handing his Osca over to Luigi Villoresi out on the circuit. A large number of six-cylinder Maseratis also ran in the Supercortemaggiore Grand Prix at Monza, a race with a capacity limit of 2,000cc, but none of the A6GCS cars, which included an entry from Scuderia Centro-Sud, featured in the results.

By the latter part of 1956, with more and more of the 200S cars in circulation and some Maserati drivers having switched their allegiance to the 2 litre four-cylinder Testa Rossa model from the rival works at Maranello, the A6GCS was little more than an also-ran. In his report in *Autosport* of the 1956 Paris 1,000 kilometres race which was held the same day as the Targa Florio, Gérard Crombac wrote, 'As was expected, the circuit was littered with elderly 2 litre Maseratis in various stages of disintegration.' This was a fair comment on the depths to which the A6GCS had sunk.

Although the A6GCS achieved no major victories during its career, it was a tough, reliable car, admirably suited to the arduous Italian road races in which it was usually well to the fore and it helped a number of young drivers, notably Musso, Mantovani and Scarlatti, to gain the experience needed before graduating to single-seater racing. Compared with the rival Ferrari Mondial built from 1954 onwards, it was less powerful, fractionally lighter and handled rather better. Its forté was long-distance racing and it was no match for the lightweight British Lister-Bristol or even the 1,100cc and 1,500cc Lotus Mk8 and Mk9 cars in short, 'sprint' events. It was for this reason that the engine from the Gilby Engineering A6GCS was transferred to a Cooper chassis for the 1955 season, but this car, bearing the familiar registration XEV 601, was still no match for Archie Scott-Brown's superbly driven Lister-Bristol. In 1956 the Maserati engine was restored to its original chassis and sold to a British club driver. Several years later it was offered for sale by the Chequered Flag at Chiswick with a price tag of £995, but after that it completely disappeared.

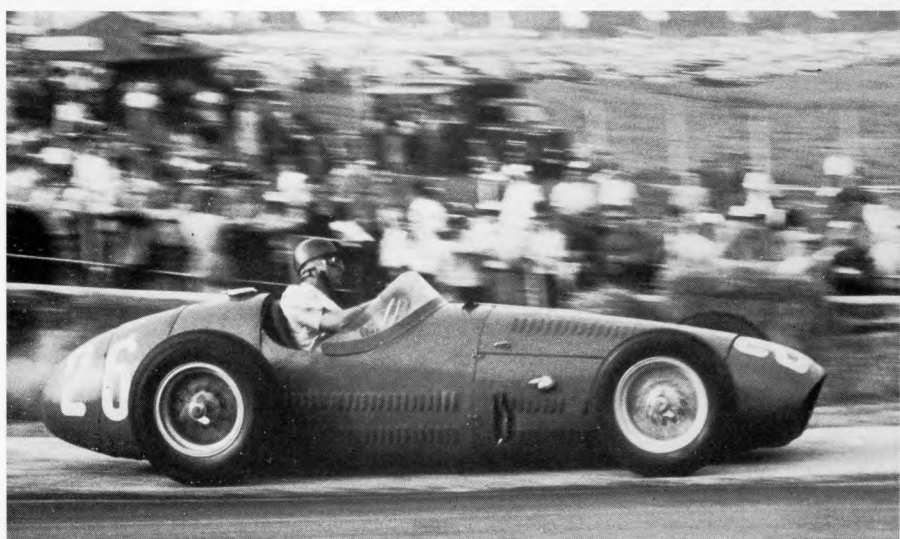
One interesting variant of the A6GCS theme appeared in 1956. That year the Lister concern produced a new car based on their original 1954 MG-powered chassis, but now using an A6GCS engine and Maserati gearbox. During 1956 Scott-Brown and the Lister-Maserati completely dominated the 2 litre category in British sports car races, scoring outright wins at Snetterton and the Brands Hatch International meeting and class wins at the *Daily Express* Silverstone meeting and the *Daily Herald* Trophy



race at Oulton Park. The very light, semi-space-frame Lister with small frontal area and compact dimensions had a top speed of over 130mph and lapped Silverstone only two seconds slower than Fangio's time with a works A6SSG single-seater in the 1953 British Grand Prix.



*Plate 32* An exciting climax to a hard-fought season came in the 1953 Italian Grand Prix. Here Fangio, the eventual winner, holds a narrow lead over the Ferraris of Ascari and Farina, while Marimon's Maserati brings up the rear; *Plate 33* Roy Salvadori at the wheel of the Gilby Engineering 250F at the 1954 *Daily Express* Trophy Race. Note the skull cap worn by Salvadori under his crash helmet.



*Plate 34* Stirling Moss with his private 250F in the 1954 *Daily Express* Trophy Race, in which he retired in the final; *Plate 35* Juan Fangio drove this works-entered 250F to a fine victory in the 1954 Belgian Grand Prix at Spa-Francorchamps.

## Maseratis for Formula 2: The Platé-Maseratis and the A6GCM and A6SSG Cars, 1952-3

It had been only too obvious during the 1950-1 seasons that the 'San Remo' four-cylinder Grand Prix car was now completely uncompetitive and no match for the latest products of Portello and Maranello, and equally obvious that interest in Formula 2, a 'lesser' category of single-seater racing with capacity limits of 2,000cc unsupercharged and 500cc supercharged that had been introduced for the 1948 season, was steadily increasing. The formula was much cheaper than Grand Prix racing as far as initial development and construction costs were concerned and the expenditure involved in fielding a regular team was also much lower. It was a category that was already receiving strong support from private owners and there was potential for the sale of Formula 2 cars.

Omer Orsi decided that the design of a Maserati Formula 2 car should be put in hand and it was through good fortune rather than judgement that the team found that it had evolved a Grand Prix car rather than a design for a less important category of racing. In March 1952, Alfa Romeo confirmed that they were withdrawing from Grand Prix racing, the British contender, the V-16 BRM, was still far from being a raceworthy proposition, and if Grand Prix racing had continued in its existing form it would have been nothing more than a demonstration of Ferrari superiority. One by one the race organisers decided that their round in the Drivers' Championship would be held to Formula 2 rules and this state of affairs existed until the end of the 1953 season when the new 2,500cc Formula 1 came into force.

In its first year the new Formula 2 Maserati was largely experimental and, initially, it was not offered for sale to private owners. One private stalwart supporter of *il tridente* did, however, race Formula 2 Maseratis

throughout the 1952 season and as these represented a separate and distinct branch of Modena development that petered out at the end of their first year, it is more convenient to discuss these before turning to the works cars.

## THE PLATÉ-MASERATIS

For Enrico Platé, Swiss entrant of Maserati cars since early post-war days, the 1951 season had proved utterly abortive and his three drivers, fellow-Swiss Emmanuel de Graffenried, Franco-American Harry Schell and Monégasque Louis Chiron, had achieved no success at all with their 'San Remo' cars. The future, Platé was quite convinced, lay in Formula 2 and in the absence of a Maserati model to suit the formula he was hard put to see how he could carry on racing. After a great deal of thought Platé concluded that it should be possible to rebuild his 'San Remos' as Formula 2 cars and work was put in hand over the winter of 1951-2.

Platé felt that the principal weakness of the Maserati four-cylinder engine was that it was over-stressed, for it had never been designed to withstand the high supercharger pressures to which it was subjected in its later forms. He hoped that with the superchargers removed it would prove much more reliable. The cylinders were bored out to their limit and fitted with oversize liners to give a bore of 90mm, the same as that of the Tipo 500 Ferrari four-cylinder Formula 2 car; combined with the existing stroke of 78mm this gave a capacity of 1,980cc. New crankshaft, connecting rods, pistons and camshafts were used. Once the prototype had performed satisfactorily, Platé had new cylinder blocks cast with these dimensions. Carburation was by two twin-choke Weber 35 DCO instruments which were attached via very short intake pipes. On a compression ratio of 14:1 and running on a fuel mixture of 80 per cent petrol, 10 per cent benzine and 10 per cent alcohol, power output was 150bhp at 7,000rpm.

Because of the space saved by the removal of the twin-stage supercharger, Platé was able to 'cut and shut' the chassis, reducing the wheelbase by five inches. Apart from modified steering geometry and a fuel tank in the tail approximately half the size of the original, the chassis was unaltered. A new, lighter and shorter body was fitted and this was distinguished by a stubbier tail and a new air intake grille with curved, tapering sides.

Throughout 1952 Platé fielded two of his new cars for de Graffenried and Schell, but they proved less reliable than expected and suffered more than their fair share of steering and braking troubles.

The new model made its début in the 1952 Syracuse Grand Prix, but Louis Chiron went off the road in practice with his Platé-entered car, the Maserati caught fire and the driver suffered severe arm and shoulder burns that put him out of racing for the rest of the year. Next came the Pau Grand Prix held on Easter Monday; de Graffenried ran well and was credited with setting third fastest lap, but fell back with a sick engine to finish sixth. Nello Pagani retired the second Platé car with engine trouble. A fourth by de Graffenried followed at Marseilles and in the *Daily Express* Trophy race at Silverstone de Graffenried took third place behind the HWMs of Lance Macklin and Tony Rolt. In the Ferrari-dominated Swiss Grand Prix the Baron took sixth place on home ground. The team came home in the money again at Aix-les-Bains on 8 June and de Graffenried and Schell finished third and fourth behind Jean Behra's winning Gordini and Macklin's HWM. The team missed the Belgian Grand Prix at Spa-Francorchamps and next ran in the Reims Grand Prix, but the cars were completely out-classed on this fast circuit, Schell retired and de Graffenried finished in a poor ninth place.

In 1952 the French Grand Prix was held at Rouen, but here neither Platé car made it to the finish. Schell's car lost every gear in the 'box and he took over de Graffenried's car to retire that without any brakes! Platé fortunes went from bad to worse at the French Grand Prix des Sables d'Olonne; Schell's engine seized up without warning, his car gyrated wildly, was rammed by Ascari's leading Ferrari which was just about to lap him, and in the ensuing mêlée the cars of Farina (Ferrari), Trintignant (Gordini) and Cantoni (Maserati) were also eliminated. The cars were pathetically slow at the British Grand Prix, they started from the back row of the nine-row grid and although both finished, they were at the tail of the field. The team stayed in England for the Boreham International race on 2 August instead of competing in the German Grand Prix the following day. Once again the team was out of luck and achieved no success. Platé's luck improved at Comminges on 10 August and de Graffenried finished fifth. Schell drove a 1,500cc Gordini in this race because of mechanical trouble with his Platé-Maserati.

Another race from which the team was absent was the Dutch Grand Prix, and at La Baule shortly afterwards Schell was eliminated when his car shed a rear wheel. Neither car was fast enough to qualify as a

starter in the Italian Grand Prix at Monza (the same qualification requirement also eliminated the HWM team) and the team now trekked westwards to Cadours, near Toulouse, where it faced private Ferrari and works Gordini opposition. The race was won by Louis Rosier at the wheel of a Ferrari and Schell with a Gordini finished second, but Emmanuel de Graffenried crossed the line in third place with his Platé-Maserati ahead of the HWMs of Giraud-Cabantous and Tony Gaze.

The Platé-Maseratis were not raced after the end of the 1952 season and although they had been no match whatsoever for the faster continental cars, such as the Ferraris that had dominated the year's racing and the Gordinis that were almost as fast, they had at least given Platé and his drivers something to race until the Swiss entrant could buy the new Maserati model. The cars were later used in the film 'Such Men Are Dangerous', in which they appeared as representatives of the mythical marque 'Burano' and it is believed that they still reside under dust covers at a studio in Hollywood.

## THE TIPO A6GCM

Prior to 1957, Maserati design policy was one of evolution and reliance on familiar and well-tested practices rather than one of revolution. The new A6GCM Formula 2 car developed by the works for the 1952 season was every inch a traditional Maserati, with a chassis that owed much to its immediate predecessor, the 'San Remo', and an engine that had been evolved from the very potent A6GCS sports car unit, which in turn owed its ancestry to the 6CM Voiturette of 1936 onwards. The new car was largely the work of designer Alberto Massimino.

The six-cylinder 1,988cc (75 × 75mm) engine featured light alloy construction throughout and there were twin overhead camshafts driven by a train of gears from the nose of the crankshaft. This train of gears also drove the vertical magneto mounted at the front of the engine and the fuel and water pumps. The crankcase was split on the centre-line and the crankshaft ran in seven main bearings. Carburation was by three twin-choke Weber 38 DCO instruments and there was a single plug per cylinder mounted in the centre of each combustion chamber. It is unlikely that power output in original form exceeded 150bhp, but development work boosted this output, still with single-plug ignition, to around 165bhp. The exhaust system consisted of two three-branch manifolds feeding into long, straight pipes. Transmission was by a four-speed gear-

box in unit with the engine and there was a long, cranked, central remote-control gear-change.

In order to keep the width and, thus, the frontal area of the car as small as possible, it was necessary to counteract the extra width of the engine on the right-hand side (on which side were the carburetters, intakes and magneto) by off-setting the engine to the left of the frame so that the prop-shaft ran at an angle to the nose of the final drive which was in the centre of the rear axle. This also assisted in keeping a low seating position. The chassis was a simple chrome molybdenum-steel structure, with X-shaped tubular cross-bracing, and in essence very similar to that of the 4CLT/48. The suspension at the front was by unequal-length wishbones, with open coil springs compressing on to rubber blocks, hydraulic shock-absorbers and a very thin anti-roll bar. The rear suspension was another feature derived from 4CLT/48 practice. There was a rigid axle suspended on splayed quarter-elliptic springs which were attached to brackets below the axle casing and tubular radius rods, hydraulic shock-absorbers and an anti-roll bar behind the axle. The fuel tank was mounted in the tail with the oil tank for the dry sump system bolted directly to it. In appearance the A6GCM resembled the 'San Remo' and was distinguished by a similar air intake, but the new car was lower and had a longer nose cowling. It was a simple, rugged, unsophisticated car, built with the same attitude of mind that was responsible for the rival four-cylinder Ferrari and the British HWM and Connaught Formula 2 cars.

The first car, far from fully developed, was driven by Nello Pagani in the South American races at the beginning of 1952. In the Rio de Janeiro Grand Prix run on 20 January over 75 laps of the 2 kilometre Circuito de Gavea, Pagani finished third behind the V-12 Ferraris of Fangio and Landi. There followed two 30 lap races at the newly opened Buenos Aires Autodrome, but in both of these the new car retired. Pagani was not a driver of such calibre that substantial success in South America was expected, but Maserati was very disappointed with the performance of the A6GCM and a great deal of development work was carried out before it was again raced. Two cars to be driven by Fangio and Gonzalez were entered in the Swiss Grand Prix in May, but the entries were scratched and the A6GCM did not make its European debut until the Autodrome Grand Prix at Monza on 8 June.

At Monza, Maserati entered three cars for Juan Fangio, Froilan Gonzalez and Felice Bonetto. Two cars had been supplied to the private Brazilian Escuderia Bandeirantes and these were driven by Chico Landi



and Gino Bianco. For Maserati the race proved an almost complete disaster. On the previous day Fangio drove a V-16 BRM in the Ulster Trophy race in Northern Ireland and then, after flying to Paris, he drove overnight to Milan. He did not practise at Monza and he was far too tired to race. Starting from the back of the grid and straining to catch up with the leaders Fangio crashed badly at Lesmo corner on only the second lap of the first heat. He had allowed his car to slide wide, it struck a rock-hard straw-bale and went off the track. Fangio was flung out of the car. While the Argentinian, gravely injured, lay by the edge of the track, the cars were passing within a yard of his prone body! Fangio was unconscious for many days, he had broken the vertebrae in his neck and did not race again in 1952.

The other drivers were no match for the Ferrari opposition. In the first heat Gonzalez retired with magneto trouble, Bonetto finished fourth and of the two Brazilians with their beige-painted cars, Landi finished in fifteenth place and Bianco retired. The only Maserati driver in the second heat was Bonetto who held third place until shortly before the finish when his fuel pump failed; he pushed his car across the line to take ninth place in the heat and seventh on aggregate.

The works cars disappeared into limbo for the next couple of months, but the two privately owned models appeared at a few races. At Rouen on 6 July one of the Bandeirantes cars was driven by that veteran *pilote* and local resident 'Fi-fi' Etancelin. The car was down on power compared with the works versions and he finished a poor eighth, defeated by three of the all-conquering Ferraris, three Gordinis and an HWM driven by Peter Collins. Escuderia Bandeirantes next fielded one of their cars in the Grand Prix des Sables d'Olonne the following weekend and here it was driven by Uruguayan Heitel Cantoni. The race was marred by the multi-car accident triggered off by Schell's Platé-Maserati and the Brazilian Maserati was one of the cars eliminated. At the British Grand Prix at Silverstone both of the private cars were entered, but once again they were out of luck, for Cantoni retired with brake trouble and Bianco finished eighteenth.

The works team returned to the fray at the German Grand Prix at the Nürburgring on 3 August. Because of Fangio's accident and the fact that Gonzalez was driving for BRM at Boreham, the Maserati team was desperately short of drivers and was only able to field a single car for Felice Bonetto. Although Bonetto made a good start; he spun off at the first corner, stopped at the pits to change a punctured tyre at the end of the first lap and retired with engine trouble at the end of the second lap

which he completed smoking a pipe. The two Bandeirantes cars also ran in this race, but both, driven by Bianco and Cantoni, showed no real speed and both succumbed to rear axle failure. The Brazilian team did not seem disconcerted by the poor performances of their cars and by the Comminges Grand Prix on 10 August it had acquired a third A6GCM. At the St Gaudens circuit the cars were driven by Chico Landi, Heitel Cantoni and Alberto Crespo. It was the same story as before and all three retired. Next on the calendar was the Championship Dutch Grand Prix at Zandvoort and here the cars were driven by Bianco, Landi and Dutch jet pilot Jan Flinterman. Both Flinterman and Bianco retired, but the Dutchman took over Landi's car to finish ninth. The following weekend a single beige-coloured car was driven in La Baule Grand Prix by Crespo and he took sixth place, the team's best performance in a hopelessly unsuccessful season.

Meanwhile, the works team had been concentrating on preparation of the cars to be fielded in the Italian Grand Prix at Monza on 7 September. It was at this race that Maserati revealed a new twin-plug version of the A6GCM with the valve gear finger pivots moved from inboard to outboard locations and this was claimed to develop 177bhp. Three works cars were entered for Gonzalez, Bonetto and Franco Rol, the latter proving faster in practice than the other driver considered for this car, the German Paul Pietsch. Escuderia Bandeirantes entered their three cars for Bianco, Landi and Cantoni. At this stage in its development the 2 litre Maserati had an insufficiently large fuel tank to run through a full-length Grand Prix without a pit stop and the works drivers had instructions to go flat out in the early stages of the race in the hope of building up a sufficient advantage to be able to stop without losing the lead.

In fact, only Gonzalez was capable of 'tigering' in this way and he accelerated through from the second row of the grid to pull out a steady and increasing lead over Ascari's Ferrari. Gonzalez stopped to refuel and for new rear tyres to be fitted at the end of lap 37, but when he pulled into the pits he had a lead of only 20 seconds and the car was stationary for 55 seconds. While he was in the pits Gonzalez was passed by the Ferraris of Ascari and Villoresi and although he fought back hard, re-passing Villoresi, he was still 78 seconds behind the leader at the end of this 80 lap race. This time difference corresponded to less than the true length of time lost by Gonzalez's stop if slowing-off and building-up speed again are taken into account, and but for this pit stop Gonzalez would surely have beaten the Ferraris. Of the other

Maserati drivers, Bonetto finished fifth, Landi eighth and Cantoni eleventh, but Rol and Bianco retired.

One more race remained to round off Maserati's 1952 season. The following weekend a 100 lap race was held at the Modena Autodrome and Maserati entered cars for Gonzalez and Bonetto, while Bianco and Landi appeared for the Bandeirantes team. Bonetto was a last-minute non-starter because of radiator core plug failure on his car while it was being driven from the works to the circuit. In the opening laps Gonzalez's car was overheating badly, he was forced to stop at the pits for the blanking plate over the air intake to be removed and it looked as though the race would prove another Ferrari walkover. Gonzalez, however, was in a fighting mood, Ascari retired the leading Maranello car and Gonzalez, despite losing the use of third gear, fought his way back to take the lead from Villoresi. Only two laps from the finish Gonzalez was badly baulked at one of the corners by Piero Carini (HWM). Villoresi slipped in front again and despite every effort to get by on the last lap Gonzalez had to settle for second place. Cantoni finished seventh, but Landi retired. Gonzalez was certainly the moral victor in this race and Carini was later subjected to disciplinary action by the Italian Automobile Club.

## THE TIPO A6SSG (THE 1953 A6GCM)

For most of the 1952 season Maserati's Grand Prix efforts had been far from competitive, partly because of a rather half-hearted approach and partly because of a shortage of top-line drivers. Gonzalez's performance at Monza and Modena made it clear that Maserati had a car capable of beating the tough Ferrari opposition and for the coming season Omer Orsi took the team's Formula 2 programme much more seriously. Giaocchino Columbo, one of the greatest of all Italian designers, joined Maserati from Alfa Romeo where he had developed the ultimate versions of the Alfa Romeo 159 (he had also designed the original 1938 Alfetta) and had collaborated in the design of the 'Disco Volante' competition sports car that was yet to be raced. And the result of his work on the A6GCM was a car that was a match for its Maranello rival in every respect except one, roadholding—the 1953 A6SSG version retained a rigid rear axle and at most circuits its cornering power was inferior to that of the Tipo 500 Ferrari.

The engine capacity was slightly increased to 1,997cc with the cylinder

dimensions revised to  $76.2 \times 72$ mm, bigger Weber 40 DCO3 carburettors were fitted and steady development work increased power-output to 190bhp at 8,000rpm. The chassis was modified by the addition of a triangulated structure above the main tubes to stiffen the centre-section of the frame and to provide support for the body. The rear springs were now mounted 'straight' and the rear axle was located by an A-bracket (as on the C-type Jaguar). At the front there was a more substantial anti-roll bar and rotary hydraulic shock-absorbers were fitted. The brakes had heavy cross-ribbing to improve cooling, larger bore exhausts were fitted, the gear-change was now on the left-hand side and operated by a pivoting link arrangement and there were now larger oil and water radiators. The most obvious change was to the body which was now lower and sleeker, with a high tail incorporating a larger fuel tank (and at some races a supplementary tank was fitted to the right of the driver) and an oval air intake with horizontal slats. So like a Ferrari was the new A6SSG that at a distance the only point of distinction was the new grille.

For 1953 Maserati retained the same team of drivers, Juan Fangio, Froilan Gonzalez and Felice Bonetto, while Fangio's protégé, Onofre Marimon, who appeared with a privately sponsored but works-backed car painted in Argentinian blue and yellow colours towards the end of the season, became a member of the works team proper. Belgian Johnny Claes was brought into the team at Spa and after Gonzalez's crash, Hermann Lang was given a drive at Bremgarten. The 1952 works cars were sold off to private owners, but made very few appearances.

At the beginning of 1953 the new cars were not ready and to the Argentinian races Maserati sent a trio of A6GCMs to be driven by Fangio, Gonzalez and fellow-Argentinian Oscar Galvez. The Argentine Grand Prix held on 18 January was now a round in the Drivers' World Championship and the Maseratis faced a full team of works Ferraris. Fangio held second place behind Ascari's Ferrari until his engine blew up and at the end of this three-hour race Gonzalez and Glavez were in third and fifth places. In the Formule Libre Buenos Aires City Grand Prix held on the same track shortly afterwards, the three A6GCMs were again entered, but were at a disadvantage for the Tipo 500 Ferraris were running with 2,500cc engines and Ascari was at the wheel of the latest 4,500cc V-12 car (a development of Ferrari's 1951 Grand Prix car). Ascari retired early in the race, but the results were dominated by the Ferrari 'fours' which took the first three places, followed home by Gonzalez, Manzon (Gordini) and Galvez. Fangio was in sixth place

when throttle trouble forced him to make a pit stop and he rejoined the race to finish ninth.

While development work was progressing at Modena on the A6SSG cars, Swiss entrant Enrico Platé had taken delivery of a new car for Baron Emmanuel de Graffenried to drive. In the races during the early part of the season this car appeared in interim form with the latest A6SSG engine and chassis modifications and a high tail, but with a body style otherwise similar to that of the 1952 cars.

The first race of the European season was the Syracuse Grand Prix on 22 March and although the early part of the race was dominated by the Ferraris, all these retired because of faulty valve springs and de Graffenried came through to win from Louis Chiron's Osca and Rodney Nuckey's Cooper-Bristol. On Easter Monday de Graffenried drove the new Platé car at Goodwood. In the 7 lap Formula 2 Lavant Cup race he was led all the way by Salvadori's Connaught, but the British car's throttle broke on the last lap and de Graffenried took the chequered flag and victory, while Salvadori coasted across the line into second place. The Swiss driver scored another victory in the 5 lap Formule Libre Chichester Cup race and in the 15 lap Richmond Trophy he finished third behind Wharton's BRM and Taruffi's 'Thin Wall' Ferrari.

The Pau Grand Prix was held the same day and the only Maserati entered was Nello Pagani's car which was to the same specification as the Platé car. Pagani drove a slow race to finish seventh. The Platé car next appeared at Bordeaux on 3 May, but in a Ferrari and Gordini-dominated race de Graffenried was never in the picture and retired in the closing stages with half-shaft failure. The following weekend de Graffenried appeared in the *Daily Express* Trophy race at Silverstone and won his heat from Moss's Cooper-Alta and the Autocourse-entered two-tone blue A6GCM Maserati of 'B. Bira'. In the final, de Graffenried battled with Hawthorn's Ferrari until the Platé pit signalled that he had been penalised a minute for jumping the start and an irate baron pulled into the pits to retire. The final was won by Hawthorn from the Connaughts of Salvadori and Rolt, and 'B. Bira' finished fourth.

On the day after the Silverstone race the works A6SSG cars made their début in the Naples Grand Prix held on the hilly, twisting 2.55 mile Posillipo circuit overlooking the bay of Naples. The Maserati drivers were Juan Fangio (whose car was fitted with an extra-large fuel tank extending either side of the driver's seat and a small head-rest) and Froilan Gonzalez; Modena faced opposition from Tipo 500 Ferraris driven by Ascari, Farina and Villoresi. Initially Ascari set the pace,

heading Fangio, Farina, Villoresi and Gonzalez; but then after only ten laps the reigning world champion stopped at the pits because of a broken accelerator. Farina forced his Ferrari past Fangio, the Argentinian was unable to stay with the leader and, although he retained second place until the fall of the flag, he lost more ground when a front tyre punctured and he was forced to stop at the pits for a wheel-change. Gonzalez, whose driving lacked its usual ebullience, finished third ahead of Villoresi and Ascari. In this race there were only eight starters and six finishers. The following weekend de Graffenried and 'B. Bira' ran in the Ulster Trophy race in Northern Ireland, but both retired. Next came the Grand Prix des Frontières at Chimay where the sole Maserati runner was 'B. Bira' with his A6GCM. He retired on the third lap when an off-course excursion bent his Maserati's steering. Another success for the Platé team followed at the end of May when de Graffenried scored an easy win in the Eifelrennen at the Nürburgring.

The first serious clash between Modena and Maranello came in the Dutch Grand Prix at Zandvoort on 7 June. Fangio and Bonetto drove new cars, while Gonzalez was at the wheel of the car driven by Fangio at Naples and de Graffenried (whose car was entered in his own name) drove Gonzalez's Naples entry. Ferraris were entered for Ascari, Hawthorn, Farina and Villoresi and Gordini, Connaught and HWM also fielded works teams. Only a week before the race the circuit had been dressed with a special non-slip tarmac surface, but unfortunately this had already broken up, the cars were showering each other with stones and the track, already very slippery, was made worse by the large quantity of oil dropped in practice by the Maseratis. For the race the Maserati team adopted protective gauze screens which passed in front of the aero-screens and were held in place by the rear-view mirrors.

Ferrari dominated the race from start to finish; Ascari led away and at the first corner Fangio was squeezed out by the Ferraris of Villoresi and Farina and at the end of the first lap he was still fourth, while Gonzalez had made a poor start and was beginning to fight his way back through the field from fourteenth place. By lap 22 he was in sixth place with Hawthorn's Ferrari in his sights, but then the left-hand drive-shaft broke and the Maserati coasted to a halt. Gonzalez walked back to the pits and Bonetto was flagged in for the Argentinian to take over his car. Gonzalez rejoined the race in ninth place, he was now a lap behind Hawthorn and he began a frantic chase after the leaders. Each time his car came out of the hairpin bend after the pits, it was in an opposite-lock slide and once Gonzalez was on Hawthorn's tail, he came out of

this corner steering with his left hand and shaking his right fist at the departing Ferrari. By lap 32 Gonzalez was back on the same lap as Hawthorn and five laps later Fangio retired with rear axle failure. The 'Pampas Bull' caught and passed de Graffenried, spun viciously at the hairpin on lap 48, but accelerated away again furiously and thirty laps later he had made up a complete lap on Hawthorn and was ahead of him in third place. At the chequered flag Gonzalez was still third, but a lap behind the leading Ferraris of Ascari and Farina, and de Graffenried took fifth place behind Hawthorn.

A fortnight later the Belgian Grand Prix was held on the fast and difficult Circuit National de Francorchamps. Officine Alfieri Maserati fielded works cars for Fangio, Gonzalez and Claes (the latter included in the team as a gesture to the Belgians) and de Graffenried and Marimon drove privately entered cars. There was the usual strong Ferrari opposition and the Maranello cars were driven by Ascari, Villoresi, Farina and Hawthorn. Throughout practice the two Italian marques were closely matched, with the Maseratis having the edge in terms of sheer speed and the Ferraris notably steadier and faster through Burnenville and Stavelot. In this race the Maseratis ran with the air intake grilles removed. Fangio took pole position on the grid with a lap in 4min 30sec and Ascari was two seconds slower, flanked on the grid by Gonzalez's Maserati.

And the two Maserati drivers took full advantage of the situation, accelerating into the lead, while a rather intimidated Ascari made a poor start. Gonzalez and Fangio were well clear of the rest of the field at the end of the first lap and by the end of lap 10 Ascari, in third place, was almost a minute behind the leader. This Modena supremacy was not to last, however, for on lap 12 Gonzalez coasted to a halt out at Stavelot with engine failure, at the end of the next lap Fangio retired at the pits with the same trouble and the customary Ferrari domination re-asserted itself. Claes was called in for Fangio to take over and the Argentinian rejoined the race in eighth place. Marimon, who had risen to third place, stopped at the pits to complain that his engine was down on power, but rejoined the race in fourth place, lapping at much reduced speed. Fangio rose to fourth place, but fate struck again on the last lap. The Argentinian lost control on a patch of oil at Stavelot, took to the grass and crashed. The private Maseratis of Marimon and de Graffenried took third and fourth places behind the Ferraris of Ascari and Villoresi.

At the French Grand Prix at Reims Felice Bonetto was again included in the team and as at Spa de Graffenried and Marimon were entered with their private cars. Initially Gonzalez led from Ascari, Villoresi and

Bonetto, but Bonetto spun off at the Thillois hairpin on lap 2, rejoining the race in tenth place, and Gonzalez began to draw away from the rest of the field. On lap 30 Gonzalez, who now led by over twenty seconds, rushed into the pits and the car was refuelled from churns. Gonzalez had started the race with a half-full fuel tank in the hope that with a light load he would be able to pull out a substantial lead, but these were tactics that rarely paid off and they failed at Reims. The Argentinian had built up an insufficient lead and he rejoined the race in the middle of the following pack of cars.

As the race progressed, so Hawthorn and Fangio began to pull away slightly from the rest of the field and were swapping the lead between them. What the Maserati gained in speed, the Ferrari made up on braking, the two cars were so close that they were almost touching. At the end of lap 58, two laps before the finish, Fangio and Hawthorn crossed the line in a dead-heat and, behind them, Gonzalez and Ascari also dead-heated across the line. Still the furious battle was waged, Hawthorn started the last lap with a slight advantage, all the way round the 5.19 mile circuit Fangio's Maserati struggled to get past the Maranello car, but it was still slightly behind as they crossed the line for the last time. In his autobiography, *My Twenty Years of Racing* (Temple Press, 1961) Fangio mentions that Hawthorn's brakes were in better condition than those of his car. However, Fangio now claims (*Fangio*, edited by Denis Jenkinson, Michael Joseph, 1973) that he could not engage first gear after half the race and accordingly Hawthorn was able to accelerate faster out of the Thillois hairpin bend.

After one of the most closely fought races in the history of the sport Gonzalez just pipped Ascari for third place and the Ferraris of Farina and Villoresi were fifth and sixth. De Graffenried took seventh place, two laps in arrears, and Marimon finished ninth after a pit stop for repairs to a leaking oil cooler, holed by a stone thrown up by the back wheels of Ascari's car. On this fast circuit the Maseratis had proved a match for the Ferrari opposition and Fangio had been defeated by only the determination and bravado of the youngest member of Scuderia Ferrari. The next three championship races were on slow- or medium-speed circuits and it did not seem likely that the Maseratis would again get to grips with the Maranello opposition until the Italian Grand Prix at Monza, a circuit of similar characteristics to Reims.

The next round in the championship was the British Grand Prix on the medium-speed Silverstone airfield circuit, its flat, but deceptively difficult corners delineated by oil drums. The works Maseratis were



driven by Fangio, Gonzalez, Bonetto and Marimon and de Graffenried was at the wheel of his private car. From Ferrari came four of the all-conquering Tipo 500 cars for Ascari, Villoresi, Farina and Hawthorn and other works cars were entered by Gordini, Connaught and HWM. Fastest in practice was Ascari who turned in a lap in 1min 48sec (97.57 mph), but Gonzalez was only a second slower for Maserati and the Argentinian's time was equalled by Hawthorn. Fangio completed the front row of the grid with a time of 1min 50sec and this was equalled by Farina.

Fangio led away into Copse at the start of the race, but Ascari forged ahead on that first lap and the reigning world champion was to remain unchallenged throughout the ninety laps of this unexciting race. In a rather unintelligent repeat of the Reims tactics, Gonzalez started the race with a half-full fuel tank and, taking advantage of the better handling qualities of his less heavily laden car, he forged through into second place on lap 2. Fifteen laps later Gonzalez was in the pits, black flagged because the officials alleged that the Maserati was dropping oil. After a flare of tempers and a short argument, Gonzalez was back in the race in fourth place and driving at his hardest. At the end of lap 55 Gonzalez was back in the pits for fuel and oil and after a 41 second stop he rejoined the race in fifth place behind Farina's Ferrari. The Maseratis of de Graffenried and Marimon retired and Gonzalez moved up to fourth place when Villoresi's Ferrari broke its back axle. When Ascari took the flag for his fourth championship race victory of the year, Fangio was a minute in arrears; the other works cars of Gonzalez and Bonetto took fourth and sixth places. The Maserati challenge had proved but a pale shadow of the ferocious attack seen at Reims.

At the end of July the Circuit of Aix-les-Bains was held on a triangular circuit running round the perimeter of Lac Bourget, not far from the Swiss border. Maseratis were driven by Onofre Marimon, who was at the wheel of an all-red works car proper, and de Graffenried. The opposition came from a team of works Gordinis and other serious contenders were Bayol's Osca and Rosier's Ferrari. In the first heat de Graffenried's car deposited its oil all round the circuit, retreated to the pits and then rejoined the race so as to qualify as a runner in the second heat. Marimon was in second place when he spun off at one of the hairpin bends on oil dropped by the Swiss-entered Maserati! De Graffenried retired with engine trouble in the second heat and the winner on aggregate was Elie Bayol with his Osca.

The 14.19 mile Nürburgring twisting, turning, rising and falling through

the Eifel mountains was the most difficult of the European circuits and imposed the most severe test of roadholding and suspension. Whatever disadvantages the Maseratis, handicapped by their rigid rear axles, may have experienced at Silverstone, their difficulties were much greater in the German Grand Prix and their chances of victory were very small. The previous weekend Gonzalez had crashed with a Lancia in the sports car Portuguese Grand Prix and the injuries which he sustained were serious enough to put him out of racing for the rest of the year. So Maserati were a driver short at the Nürburgring and only three works cars for Fangio, Bonetto and Marimon were entered; as usual de Graffenried drove the Platé-entered car. Maserati offered their fourth car to both Hermann Lang and Paul Pietsch, but they declined to drive, as they felt that they had insufficient time in which to accustom themselves to its power and handling characteristics.

At the start of this 18 lap race Fangio out-accelerated the Ferraris away from the grid, but Ascari soon forged ahead, by the end of the first lap he led by ten seconds and Hawthorn was right on Fangio's exhausts. On the next lap Hawthorn pushed Fangio back to third place, but at the end of the lap Ascari crawled into the pits, running on three wheels and a brake drum. Fangio re-passed Hawthorn, but Farina, driving with a mastery that he had not displayed since he left the Alfa Romeo team, passed them both to take the lead. Ascari rejoined the race, and later swapped cars with Villoresi—his new mount expired with engine failure. Marimon's car retired out on the circuit with engine trouble on lap 14, Fangio's car shed its exhaust tail-pipes on this lap and de Graffenried carried on despite losing all his braking power. In the closing laps of the race Fangio was forced to ease off because of the fumes from the broken exhausts and at the chequered flag he was over a minute behind Farina's Ferrari. Bonetto took fourth place, more than seven minutes behind Hawthorn, and de Graffenried finished fifth, two laps behind. Once again the Maserati team had proved itself more than a match for the rest of the opposition, but not capable of taking on Ferrari on even terms.

The works Maseratis did not race again until the Swiss Grand Prix at Bremgarten on 23 August. At this race the cars were driven by Fangio, Bonetto, Marimon and Lang, and de Graffenried appeared as usual at the wheel of the Platé-owned car. One of the 1952 Scuderia Bandeirantes A6GCM cars made an appearance in the hands of Chico Landi. Works Ferraris were driven by Ascari, Villoresi, Farina and Hawthorn. Although Fangio was very much at home on Bremgarten's fast, sweeping curves

and was fastest in practice in 2min 40·1sec, this was not to be a Maserati race.

Fangio took the lead at the start, heading Ascari, Villoresi, Marimon and de Graffenried, but by the end of the first lap Ascari had come through to the front and Hawthorn was lying third. As the race progressed, so Fangio lost more and more ground and at the end of lap 11 he stopped at the pits to take over Bonetto's car. A lap later he was back in the pits again for a wheel-change and then began to slowly climb his way back through the field. On lap 28, by when he had risen to fifth place, the Argentinian's Maserati came past the pits enveloped in a dense cloud of blue smoke, so thick that following cars were forced to ease off and when he stopped at the pits two laps later, the engine was completely wrecked and there were particles of aluminium all over the splash-guard. After a mechanic had taken a quick glance under the bonnet, it was hastily shut and the car was pushed away into retirement. The promising starts made by Marimon and de Graffenried faded out, for both soon fell back and, when well down the field, both retired with engine trouble; at the end of this 65 lap race the Ferraris of Ascari, Farina and Hawthorn were in the first three places and the more sedately driven Maseratis of Bonetto and Lang finished fourth and fifth; Landi retired his A6GCM with gearbox trouble.

On 30 August the Cadours Grand Prix was run in two 15 lap heats and a 30 lap final over a 2·5 mile circuit. Only a small entry was received, Platé's car, driven by de Graffenried, was the sole Maserati entered and this retired in the first heat with rear axle failure. The final was dominated by the works Gordinis which took the first three places.

Monza is a circuit where power is all-important and roadholding less so and the Maserati team was hoping to do well there in the Italian Grand Prix on 13 September. The works cars were driven by Fangio, Bonetto and Marimon, with a fourth car to be shared between two young hopefuls, Luigi Musso and Sergio Mantovani, both of whom were to appear regularly at the wheel of works cars the following year. Baron de Graffenried drove the Platé car and Scuderia Milano fielded A6GCM cars for Landi and 'B. Bira'. Ferrari were out in force at this race with four Tipo 500 cars for the regular quartet consisting of Ascari, Villoresi, Hawthorn and Farina and two brand-new Tipo 553 cars, prototypes for the 1954 season, driven by Piero Carini and Umberto Maglioli. As usual, a large number of the sadly uncompetitive British Formula 2 cars were entered, including works teams from Connaught and HWM and Stirling Moss's fuel-injection Cooper-Alta running on nitromethane. Ascari took

pole position on the grid with a time of 2min 2.7sec (114.86mph), but Fangio was only a half-second slower.

Right from the start of the race the fastest members of the Maserati and Ferrari teams, driving flat-out, swapped the lead time and time again, often several times a lap, Ascari, Farina, Fangio and Marimon all taking turns at heading the field. As the leaders swept round in tight formation, nose to tail, constantly slip-streaming each other, wheels tucked inside the wheelbases of their rivals, occasionally coming into contact, lapping slower cars on either side, the drivers' helmets and screens thickly coated with exhaust dirt and rubber dust, it was clear that the Maseratis were a match for the Ferraris and that a Modena car could well win.

On lap 46 Marimon pulled into the pits, his oil radiator holed by a flying stone, he rejoined the race, stopped again two laps later and then, as the leading trio of Ascari, Farina and Fangio came round, joined up with them again to give support to his team-leader. As the race drew to a close, the Ferraris of Ascari and Farina began to hold on to the first two places more consistently and, try everything he knew, Fangio could not get past them. On the very last lap of this 311 mile race Ascari made a rare error of judgement, his Ferrari spun twice at the final corner, Farina shot on to the grass and Marimon rammed the gyrating Maranello entry; while Farina was struggling to retain control, Fangio steered through the narrow gap on the inside of the corner to score Maserati's one and only championship race win of the season. This was the first time that Fangio had raced at Monza since his terrible crash in 1952 and so his win in the Italian Grand Prix was especially satisfying. The Ferraris of Farina, Villoresi and Hawthorn crossed the line in second, third and fourth places. Of the other Maseratis in the race, the only finishers were the car shared by Mantovani and Musso, which finished seventh, and the A6GCM of 'B. Bira' which took eleventh place.

At the Italian Grand Prix Ferrari had announced that he was withdrawing from racing and although this proved to be a bluff to raise more financial support, there were no Ferraris entered in the Modena Grand Prix, the non-championship race held the following weekend. The result was a Maserati landslide and the works cars of Fangio and Marimon led home de Graffenried's car. Bonetto retired his car with gearbox trouble and another A6SSG, on loan to Emilio Giletti, succumbed to piston failure. Two months later poor Felice Bonetto was killed instantly when he crashed his works Lancia sports car in the Carrera Panamerican Mexico road race.

Although the Maserati team had spent almost the entire 1953 season

struggling to get on to level terms with their Ferrari rivals, the Italian Grand Prix had done much to vindicate their efforts and the latest A6SSG was obviously an excellent basis from which could be developed new cars to comply with the 2,500cc Grand Prix Formula of 1954 onwards. The one major weakness of the A6SSG, its rigid rear axle and, hence, inferior roadholding, was to be eliminated by the introduction of a de Dion rear axle and it was observed at Modena that the Maserati technicians were taking a more than passing interest in the de Dion rear axles of the British Connaughts, cars that were very advanced in chassis design, but with push-rod engines that were sadly deficient in engine power.

## The Early History of a Classic Racing Car: The 250F Grand Prix Car, 1954

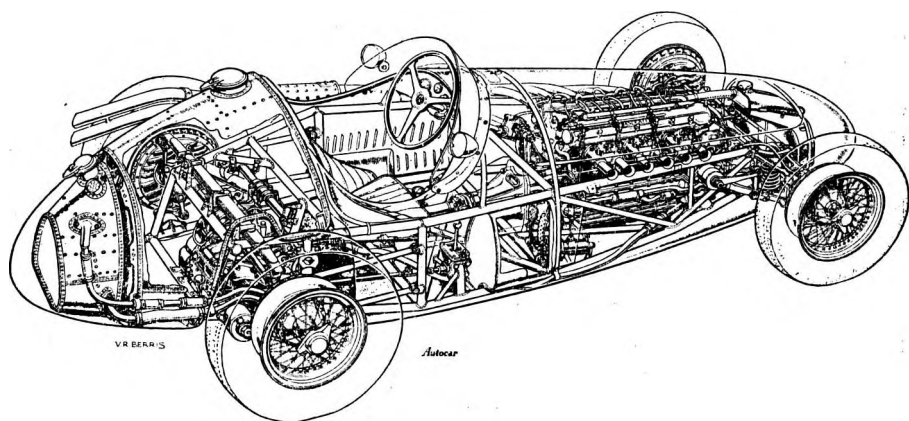
During the years 1952–7 Maserati power in Grand Prix racing rose in a gradual crescendo and culminated with a victory by Juan Fangio in the 1957 Drivers' World Championship. The last of the 1953 Formula 2 Championship races had brought a long-awaited win for the A6SSG 2 litre car and confirmed the wisdom of racing a developed version of this in 1954. The new formula limited the capacity of unsupercharged cars to 2,500cc and that of supercharged cars to 750cc, and so modifications to adapt the design to Formula 1 need not have been extensive. The Maserati engineers, Giaocchino Colombo and Alberto Massimino, had carried out such intensive development, however, that the resemblance of the 250F to its predecessor was limited to basic layout and general appearance.

The six-cylinder engine retained a stroke of 72mm, but the bore was increased from 76.2mm to 84mm, giving a capacity of 2,493cc. The light alloy combined block and crankcase had separate dry liners pressed in from the top and retained by their flange with the cylinder head. An interesting point was that no gaskets at all were used, but jointing compound alone was used for all metal-to-metal joints. The general layout of this engine was particularly neat and well thought out. The twin overhead camshafts were driven by a train of spur gears from the nose of the crankshaft and each camshaft ran in four pressure-fed plain bearings mounted in separate tappet blocks bolted to the head.

There were two valves per cylinder mounted unequally on either side of the vertical centre-line. As on the A6SSG, the exhaust valves were at 41 degrees from the vertical, but so as to have larger diameter inlet valves, these were swung over and were now at 39 degrees from the

vertical. There were twin Marelli magnetos mounted on either side of the engine at the front and driven by an auxiliary shaft from the gear train. An engine-driven vane-type fuel pump was fitted. Carburation was by three twin-choke 42mm Weber horizontal instruments and on a compression ratio of 12.5:1, the claimed power output was 240bhp at 6,500rpm, but it seems that in the early part of 1954 the true output was around 220bhp. There were separate manifolds for cylinder groupings one, two and three, and four, five and six respectively and these converged into tail-pipes at cockpit level.

The power was transmitted through a dry multi-plate clutch with light alloy housing and the combined gearbox and final drive unit was mounted on cross-members at the rear of the chassis. There were four constant-mesh forward gears with engagement by dog clutches and the final drive incorporated a ZF-type limited slip differential. The input bevels and the output spur gears were available as sets in five different ratios and provided a total of twenty-five different overall ratios.



A major improvement in the design was the introduction of a de Dion rear axle in place of the rigid axle used on the 1952-3 cars. The de Dion tube passed in front of the final drive housing and was located laterally by a pivot block sliding in a channel plate bolted to the housing. Suspension at the rear was by a transverse leaf spring and there were Houdaille vane-type shock-absorbers. At the front, the suspension consisted of phosphor-bronze bushed wishbones machined from steel forgings and having lengths of 6.5in (upper) and 11in (lower) used in conjunction with coil springs. The lower ends of the coil springs were mounted on a

forged steel cross-member bolted to the lower wishbones. An anti-roll bar was connected by drop links to the lower wishbones and Houdaille shock-absorbers were also used at the front.

Space-frame construction was still something of a novelty in 1954 and it had been adopted by Maserati for the first time. The main basis of the 250F chassis was formed by two 40mm side-members on each side, with the lower members sweeping upwards front and rear. There were spacing struts on each side, two tubular cross-members at the front, two at the rear of the engine compartment, and four at the rear to carry the final drive unit. Additional cross-tubes ran across the floor of the engine and driving compartments.

Hydraulic brakes with 13.4 × 2in drums were fitted and there were centre-lock wire wheels on Rudge-type spline hubs. A light alloy fuel tank with a capacity of approximately 44 gallons (Imperial) was mounted in the tail of the car, but, if required, a supplementary tank could be fitted in the side-members between the gear-lever and the control pedals. From mid-1954 onwards the oil tank was located in the tail and bolted to the back of the fuel tank, but it was originally installed at the front of the car underneath the carburetters.

The first 250F was tested at Modena Autodrome in December 1953 and at this time it was claimed to have a maximum speed of 174mph at 7,400rpm. In its original form the 250F had a radiator grille of the type used on the A6SSG. In the Argentine the works cars ran without grilles and with large supplementary holes cut in the tops of the nose cowlings. A wire-mesh grille superimposed by a large Maserati trident badge was adopted early in the European season, but cars were often raced without the badge in place. Maserati had intended to sell the new model to private entrants, but not to run a works team as such. After its success in the Argentine the team changed its mind about entering factory cars and this partly explains its driver difficulties in 1954.

It was because of Maserati's strong trading connections with the Argentine and the close links between Fangio and the Modena team that three cars were sent to compete at Buenos Aires in January 1954. Juan Fangio drove 250F (chassis number 2505) in the Argentine Grand Prix, while fellow-Argentinian Onofre Marimon was entered with car 2502. A third works entry was a 250F-engined A6SSG driven by Luigi Musso.

The Argentine Grand Prix, the first round in the Drivers' World Championship, was held on 17 January as a three-hour race over a 2.215 mile circuit at the Buenos Aires Autodrome. For the first hour the race was dominated by the works Tipo 625 Ferraris and Fangio



held fourth place. When the first of a series of heavy rain showers soaked the circuit, the whole face of the race changed. In the Maserati pit the mechanics hastily cut a set of anchored rain tyres, Fangio stopped for these to be fitted and rejoined the race to gain the lead. Ferrari team manager Nello Ugolini lodged a protest on the grounds that five instead of the permitted three mechanics had worked on the Maserati when its wheels were changed and, on the assumption that his protest would be upheld, the Maranello cars were slowed off. The protest was rejected and Fangio scored an easy victory from the Ferraris of Farina and Gonzalez; Marimon retired with transmission trouble, but the privately entered 250F-engined A6SSGs of Harry Schell, 'B. Bira' and Emmanuel de Graffenried finished in sixth, seventh and eighth places.

Both works Maseratis were eliminated in the Buenos Aires City Grand Prix, a Formule Libre race held over the same circuit a fortnight later. Fangio's car ran particularly badly; throughout practice it was plagued by rear axle trouble, at the start of the race it was running on only five cylinders and, after a pit stop for a change of plugs, Fangio retired on lap 9 with rear axle failure. In practice Marimon had crashed his 250F and for this race he took over Musso's A6SSG. Marimon failed to complete a single lap, as he went off the track at the first corner and damaged his car too badly to continue. The third works Maserati in this race was driven by Jorge Daponte and it was his car that caused the death of faithful Maserati supporter Enrico Platé. Daponte's 250F-engined A6SSG was travelling at speed when it hit a patch of oil, went into a wild slide and struck the Swiss entrant who was standing in front of de Graffenried's pit. The race was won by Maurice Trintignant at the wheel of a Tipo 625 Ferrari entered by Ecurie Rosier. Roberto Mieres with his A6SSG/250F took an excellent second place and Schell and 'B. Bira' finished fourth and seventh.

Encouraged by the promise of full factory support, there was a steady queue of customers for the 250F which had a price tag of the equivalent of £5,000. During the 1954 season new cars were delivered to Siamese driver 'B. Bira' (chassis number 2504, the same as that of the old 250F-engined A6SSG raced by him in South America and subsequently broken up), Sidney Greene of Gilby Engineering who already owned an A6GCS sports model (2507), Stirling Moss (2508) and the Owen Organisation (2509). Although the chassis numbers of the cars built in 1954 ran up to 2514, 2501, 2502 and 2504 duplicated the numbers assigned in 1953 to A6SSG chassis, there were no cars built bearing chassis numbers 2503 and 2510 (the A6SSG cars bearing these numbers continued to be

raced by, respectively, Harry Schell and Emmanuel de Graffenried) and the total number of 250Fs built that year amounted to twelve cars. Generally the team was well satisfied with its new model and only minor changes, including slight lengthening of the frame, were made before the start of the European season.

The first European race was at Siracusa where works cars were entered for Onofre Marimon and Sergio Mantovani. Marimon chased Farina hard, setting fastest lap of the race at 99.36mph, and he closed within thirteen seconds of the race leader before his car expired with mechanical trouble. Mantovani took third place behind the works Tipo 625 Ferraris of Farina and Trintignant. The sole works Maserati at Pau on Easter Monday was driven by Marimon, but his car was rammed on the starting grid by Farina's Ferrari and this accident resulted in failure of the de Dion tube when he was running strongly in third place. Schell's A6SSG/250F, painted in French racing blue, was an early retirement, but Roberto Mieres with his similar car painted in Argentinian blue and yellow colours took third place behind Behra's Gordini and Trintignant's Tipo 625 Ferrari.

On the same day Roy Salvadori drove the Gilby Engineering Maserati on its début at Goodwood. In the main event, the 21 lap Richmond Trophy race, there was a tremendous battle between Wharton (BRM V-16) and Salvadori. Although Wharton could 'out-drag' the Maserati along the straights, time and time again Salvadori closed right up on braking. On lap 19 Wharton slid sideways at Lavant corner, the green Maserati rammed the sixteen-cylinder BRM and both cars spun off. Salvadori was out of the race with a stalled engine, but Wharton rejoined the race to win from McAlpine's 2 litre Connaught. Greene entered a protest on the grounds that Salvadori had been excessively baulked by Wharton, but this was rejected by the stewards.

Moss took delivery of his new car only four days before its first race at Bordeaux, and after testing it at the Modena Autodrome he had a frantic rush to get the 250F to the circuit in time. At Bordeaux Moss drove a steady and cautious race to finish fourth behind a trio of Ferraris. Of the A6SSG/250F cars entered in this race, Mieres's failed to start after a practice accident, Schell's retired with a burst clutch-housing and 'B. Bira's' was eliminated by trouble with the lubrication system.

Both Moss and Gilby Engineering entered their 250Fs in the *Daily Express* Trophy race at Silverstone in May. Moss retired with failure of the de Dion tube, the Achilles' heel of the 250F, when holding second place in the final behind Gonzalez's works Tipo 625 Ferrari, and Salva-

dori finished tenth after a pit stop to sort out a jammed throttle linkage. The highest-placed Maserati driver was Mieres who brought his A6SSG/250F across the line in fourth place.

Mantovani and Marimon were entered by the works at the Bari Grand Prix the following weekend. The race on the Lungomare circuit was dominated by the works Ferraris which Gonzalez and Trintignant drove into the first two places, Behra was third for Gordini and Marimon finished a none too satisfactory fourth after stops for extra water and fuel. The private A6SSG cars of Schell and 'B. Bira' took fifth and sixth places, but both Mantovani and Mieres retired.

In the Aintree '200' race, the inaugural meeting at the Liverpool circuit and the only race to be run there in an anti-clockwise direction, Moss took the lead in the final when Collins's Ferrari 'Thin Wall Special', the most powerful car racing at this time, was slowed by wet ignition and at the end of this rain-soaked, miserable race the Maserati was almost a minute ahead of Parnell's private Tipo 625 Ferrari. What was in England the Whitsun weekend saw Maseratis in action at several different circuits. Salvadori and the Gilby car stayed in England; on the Saturday they won two 10 lap races at Snetterton and on the Monday they finished second in both the 5 lap Formula 1 race and the 15 lap Formule Libre race at Goodwood.

Abroad events of greater importance were held and Sunday 6 June was the date of both the Rome Grand Prix on the very fast Castelfusano circuit and the Grand Prix des Frontières at Chimay in Belgium. In the Italian race Maserati fielded three of the latest cars for Marimon, Mantovani and Musso, Moss appeared with his private car and works-supported A6SSG/250F cars were driven by Mieres and Schell. In the absence of the works Ferrari team, the race was a complete Modena benefit and Marimon led almost throughout to win from Schell and Mantovani. Moss was a comfortable, relaxed second until transmission trouble intervened near the finish and he coasted across the line to take sixth place. And no sooner had Marimon's 250F taken the chequered flag than the oil tank split! There were only nine starters at Chimay and after a dice with Pollet's Gordini in the opening laps, 'B. Bira' scored an easy victory from Pilette's Gordini.

As the season progressed, so the intensity of the competition increased and although no new models appeared at Spa-Francorchamps, two of the four works Ferraris were latest, stubby-looking 553 'Squalos', and these were driven by Farina and Gonzalez. Works 250Fs were handled by Fangio, who had not competed since the Argentine races, Marimon

and Mantovani. Moss appeared with his private car and 'B. Bira' had now taken delivery of his new 250F; he found that the handling of the longer-chassis, de Dion axle 250F was very different from that of his earlier car and he spent much of practice familiarising himself with his new mount. The only A6SSG/250F entered was Mieres's works-supported car. The field was limited to fifteen starters and the other accepted entries were three works Gordinis and the Ecurie Francorchamps Ferrari driven by Jacques Swaters.

The outright circuit record at Spa stood to the credit of Juan Fangio with an Alfa Romeo 159 1.5 litre supercharged car at 4min 23sec and had been set in the 1951 Belgian Grand Prix. Ferrari was well satisfied with Gonzalez's practice lap in 4min 23.6sec, but in the cool of the evening, just as the first day's practice session was coming to an end, Fangio, driving the 250F on its absolute limit and taking it up to 8,100rpm, turned in a brilliant lap in 4min 22.1sec. When the car returned to the pits, the brakes were red hot, oil was leaking from almost every joint, the engine was enveloped in heat haze and it seemed as though this 250F would need a complete rebuild before the race! Neither of these very fast times was bettered during the final practice session on the Saturday.

At the start of the race Fangio made a poor getaway and was overtaken by a number of cars further back on the grid so that at the end of the first 8.716 mile lap of this fast and difficult circuit the Ferraris of Farina and Hawthorn led the Maseratis of Fangio and Marimon. Marimon stopped at the pits at the end of this lap for a plug change and retired with engine trouble two laps later. Already there had been the drama of Mieres's Maserati catching fire as the cars streamed away at the start because a mechanic had not shut the fuel filler cap properly and fuel had splashed on to the exhaust pipes. And Gonzalez also retired at the end of that lap with engine trouble. On lap 3 Fangio slipped into the lead at Malmedy and he stayed in front for the remainder of the race except for a short time after his visor strap had broken. In the closing stages settling of the rear leaf spring was causing the tail of the leading Maserati to ground on the bumpier parts of the circuit and the car was trailing its fuel tank retaining strap. After the retirement of Farina with engine trouble and Gonzalez had taken over Hawthorn's Ferrari (the English driver had been overcome by fumes from a leaking exhaust), Trintignant finished second ahead of Moss.

Stirling Moss had driven an immaculate race, as both he and 'B. Bira' had been forced to restrict their revs to 7,600 compared with the

8,000rpm that the works drivers were using. Neither of these private owners had a spare engine and Moss was hoping to make his car last several races without a major engine overhaul. In addition he had lost all his oil pressure in the closing laps, but had pressed on hoping that nothing would break. 'B. Bira' took sixth place and Mantovani was seventh and last after three pit stops for plug changes. 'Following' the field in this race, but not actually competing, was de Graffenried at the wheel of an A6SSG bearing the badge of the fictitious marque, the Burano. It was acting as a camera car for the film 'The Racers'.

A fortnight later the streamlined Mercedes-Benz W.196 cars made their début at Reims and as Fangio had contracted to drive the German cars, Maserati were now without a top-line driver. Gianni Lancia came to the rescue by releasing his drivers Ascari and Villoresi, for, despite much testing, the Turin team's D.50 Grand Prix car was still far from raceworthy. Maserati were rather short of 250Fs at Reims and they borrowed Moss's car for Villoresi to drive; Moss was at the wheel of a works D-type Jaguar in the 12 Hours Sports Car race preceding the Grand Prix and could not drive in both races. Private 250Fs were entered for 'B. Bira', Ken Wharton (who was making his début with the Owen Organisation car) and Roy Salvadori (with the Gilby car). In addition, Roberto Mieres and Harry Schell drove their 250F-engined A6SSG cars. Fangio with the W.196 Mercedes was easily fastest in practice in 2min 29.4sec and Kling with his W.196 fractionally faster than Ascari (they recorded 2min 30.4sec and 2min 30.5sec respectively); to achieve his place on the front row of the grid Ascari had been forced to take his 250F up to 8,200rpm. Next fastest were Gonzalez ('Squalo' Ferrari) in 2min 30.6sec and Marimon in 2min 31.6sec.

At the start Fangio and Kling shot into the lead, while Ascari made a poor start and in his efforts to stay with the leaders blew up his engine on the first lap. Indeed the very fast pace of the two leading Mercedes caused all the works Ferraris to blow their engines in vain pursuit of the German cars and Herrmann's Mercedes retired with a broken piston after setting a new lap record of 121.38mph. The numerous Maserati retirements included Marimon (gear-selector trouble), Salvadori, Wharton (with prop-shaft trouble which had plagued his car throughout practice), Schell and Mieres. 'B. Bira' and Villoresi took fourth and fifth places, several laps behind the leaders, but the Siamese driver had forfeited a sure third place to Manzon's private Ferrari by running out of fuel in the closing stages of the race and having to make an unscheduled pit stop. The Italian team returned home in a chastened mood and

Maserati were well aware that they would have to pull out all the stops if they were to have any chance of defeating the German opposition which was even stronger than had been expected.

The Rouen Grand Prix was held only a week after the Reims race; the works Ferrari and Gordini teams competed at Rouen, but Officine Alfieri Maserati had decided to give this race a miss. The winner was Maurice Trintignant with a works Tipo 625 Ferrari, but he was followed across the line by 'B. Bira' and Roy Salvadori with their private 250Fs.

Despite the respite gained by missing the Rouen race, the works Maserati team (who brought with them Mieres's works-prepared car) arrived too late for official practice at the British Grand Prix at Silverstone because their transporters had gone to the wrong port. Mieres was at the wheel of the 250F-engined A6SSG driven by Daponte at Rouen because his own car had been wrecked in a transporter crash. A special practice session was arranged for the Italian cars, but this did not count for positions on the grid and they had to start right from the back. In practice, Fangio with his Mercedes was fastest in 1min 45sec, the Tipo 625 Ferraris of Gonzalez and Hawthorn were a second slower and Moss completed the front row of the grid with a time of 1min 47sec. For this race Maserati had requested Moss to drive at his hardest on the understanding that the factory would foot the bill for mechanical breakages. On the eve of the race, while the Modena mechanics panicked and flapped, Moss's mechanic, Alf Francis, worked on his car quietly and efficiently, but with frequent interruptions to give advice to his harassed Italian comrades who had too little time in which to do too much work.

At the end of the first lap of the race Gonzalez and Hawthorn led from Fangio, Moss, Behra and Marimon—the last-named was the sensation of the lap as he had managed to overtake nineteen cars in his fight from the back of the grid. Fangio passed Hawthorn on lap 5 and Moss slipped into third place seven laps later. Already Ascari was in trouble and had stopped at the pits to complain about the steering of his Maserati. This stop cost *il campianissimo* two minutes and a full lap while the mechanics investigated his complaint and then tried to convince him that nothing was amiss. Ascari accelerated out of the pits in a flurry of wheelspin and rejoined the race driving at his hardest. Hawthorn repassed Moss and it was not until lap 34 that Stirling was clear of the works Ferrari.

It was conspicuous that Ascari was changing into top gear much closer to *The Motor* bridge at the end of the pits straight than any other driver and he was showing a complete lack of sympathy for the mechanics of

his car; because of a dropped valve he coasted to a halt just past the pits on lap 22. Even before Ascari had reached the Maserati pit, Bertocchi had displayed the 'come in' signal to Villoresi and as 'Gigi' passed, he and Ascari exchanged understanding nods. On lap 41 Ascari again retired, this time with a broken connecting rod and the tachometer 'tell-tale' recording an ominous 8,200rpm. And the apocryphal tale goes that Ascari, swinging his familiar blue crash helmet, nonchalantly strolled back into the pits to enquire, 'Any more Maseratis?' Even if there were, it is doubtful whether the team manager would have allowed Ascari to drive it, for in his near-desperate efforts to live up to his position as reigning world champion, he had cost the Maserati team three engines in two races!

On lap 55 Moss passed Fangio's Mercedes, which was now looking battered from contact with the many oil drums lining Silverstone's corners, was occasionally jumping out of gear and was leaking oil over its unfortunate driver. Poor Salvadori, who had dropped from ninth to twentieth place earlier in the race because of a pit stop to repair his 250F's fuel tank, now retired with a fractured gearbox oil pipe. On lap 58 Hawthorn's Ferrari went ahead of the ailing Mercedes. After a brilliantly smooth and well-judged race the unlucky Moss retired ten laps from the finish with that far too common Maserati weakness, failure of the de Dion tube. Marimon now passed Fangio's Mercedes so that he finished third, but a lap behind the leading Maranello cars. For Ferrari the race was a magnificent 'come-back' triumph and for Maserati it was not too disappointing. So impressed was Orsi by Moss's performance that the Englishman was invited to join the works team, and Marimon's drive from the back of the grid, during which he never exceeded 7,500rpm, was the best in his career.

A week later the Caen Grand Prix was held over a completely flat circuit in the centre of this town in western France and known appropriately as La Prairie. The race witnessed a close duel between the solitary works Tipo 625 Ferrari of Maurice Trintignant (a resident and later the mayor of Caen) and the private 250F Maserati of Stirling Moss which finished three seconds in arrears. 'B. Bira' finished fourth behind Behra's Gordini, his 250F sounding very rough, and Schell retired when the flywheel of his 250F/A6SSG disintegrated and a piece of metal entered one of his toes.

The German Grand Prix at the Nürburgring was marked by the appearance of a new version of the Mercedes-Benz W.196 with unstreamlined bodywork and three of these rather more functional cars were

entered for Fangio, Kling and pre-war Mercedes Grand Prix driver Hermann Lang. Hans Herrmann drove one of the original *Stromlinienwagen*. Ferrari continued to rely on the Tipo 625 cars, which was logical enough after their unexpected victory at Silverstone, and there was a stronger entry of 250Fs than had been seen previously. Moss was driving for the works team for the first time, but he was at the wheel of his own car which had been hastily repainted red, though retaining a green nose band. Ascari did not drive, which was perhaps just as well after his atrocious efforts at Reims and Silverstone, and other works Maseratis were entered for Luigi Villoresi, Onofre Marimon and Roberto Mieres. In fact the cars driven by both Mantovani and Mieres were their own property. The three cars driven by Villoresi, Marimon and Mieres had the new lubrication system with the oil tank mounted in the tail instead of below the carburetters; this resulted in a lot of untidy external piping, but it succeeded in reducing the oil temperature and, thereby, frothing of the oil. Mieres (chassis number 2512) and Marimon (2514) had brand-new cars with heavily riveted fuel tanks.

During the second day's practice thirty-year-old Marimon crashed badly just before the Wehrseifen bridge, six miles after the start, and suffered injuries from which he died shortly afterwards. By this time Maserati regarded Marimon as the team's number one driver and as soon as he received news of this tragedy Omer Orsi, who was in the Argentine, cabled that the works cars should be withdrawn from the race. The death of this very able and popular young driver cast a shadow of gloom over the race and his fellow-Argentinians were particularly affected. Moss, Mieres and Mantovani decided to run as private entrants, but the English driver retired with engine trouble on lap 2 and Mieres was eliminated on the following lap because of a fuel leak. The race was dominated by the Mercedes of Fangio and Kling which finished first and fourth, with the Ferraris of Gonzalez/Hawthorn and Trintignant second and third; Mantovani drove a steady race to take fifth place.

The car Villoresi should have driven at the Nürburgring appeared the following Saturday at the *Daily Dispatch* meeting at Oulton Park in Cheshire; here it was handled by Moss who arrived too late to practise, but, starting from the back of the grid, he came through to win the 100 mile Gold Cup race from Parnell's private Ferrari and the 55 mile Formule Libre event from Bob Gerard's elderly, but very swift Cooper-Bristol. Disaster struck Salvadori's 250F in the Formula 1 race when the throttles jammed open, the ignition cut-out switch failed to operate and the car slammed into one of the many trees lining the course. Fortunately



the driver was uninjured, but the Maserati's frame and front suspension were badly bent and the car had to be sent back to Italy for a rebuild.

Originally it had been intended to hold both a Formula 1 race and a 12 hours' sports car race at Pescara over the weekend of 14-15 August, but finally the Automobile Club of Pescara concentrated on only the racing car event which was held over sixteen laps of the arduous 15.84 mile road circuit. The entry of thirteen cars included five Maseratis, with Moss and Musso at the wheel of works entries. Maglioli's works Ferrari non-started because of engine trouble. As was usual at Pescara, the race was run in the morning because the afternoon sun was too hot for racing. By the second lap Moss, whose 250F had been completely rebuilt since the German Grand Prix, had pulled out a thirty-second lead over 'B. Bira's' private car, but two laps later he was eliminated by a broken oil pipe in the gearbox circulation system. 'B. Bira' lost his lead to Musso on lap 7 when his exhaust tail-pipes broke off and he stopped to retrieve them. Although the Siamese driver, despite hot exhaust fumes blowing in his face, was lapping much faster than Musso, he was now too far behind to regain the lead and at the end of the race he was still almost three minutes behind the young Italian. Third and fourth places went to Schell and Daponte with their A6SSG/250F cars.

Of the sixteen cars entered in the Swiss Grand Prix at Bremgarten, near Berne, the weekend after Pescara, five were Maseratis. Works cars were handled by Moss, Mieres, Mantovani and Schell, who was having his first drive with a de Dion axle car and his 250F, like that of Stirling Moss, was fitted with a right-hand accelerator instead of the usual central pedal so that there would be a spare car in reserve for the new team leader. Only the cars driven by Mieres and Schell had the rear-mounted oil tank. The fifth Maserati entry was the Owen Organisation car driven by Ken Wharton and extensively modified since its last outing at the British Grand Prix. It had now been fitted with Dunlop magnesium-alloy disc wheels (similar to those used on the Jaguar D-type) and Dunlop disc brakes, shorter exhaust tail-pipes had been substituted, the oil tank had been transferred from beneath the carburettors to alongside the driver and the body had been painted an attractive shade of olive green.

Fastest in practice at Bremgarten were Gonzalez with a Tipo 625 Ferrari in 2min 39.5sec and Fangio with an unstreamlined Mercedes in 2min 39.7sec. Moss with his usual Maserati was third fastest in 2min 41.4sec and the Modena team was optimistic about its chances in this race. With less than a third of the race run, however, Moss, then in fourth place, began to drop back because of falling oil pressure and he

retired on lap 22. The cause of the trouble was failure of the oil pump. He was unable to take over Schell's car because the Franco-American retired a lap later with the same trouble. Once again Fangio won the race for Mercedes, with Gonzalez's Ferrari in second place and Herrmann with another Mercedes third. The Maseratis of Mieres and Mantovani finished fourth and fifth, and in sixth place came Wharton. The latter's car, which had been bought to give the Owen Organisation something competitive to race while the new Formula 1 BRM was being developed, was still sounding extremely healthy at the finish and it was the car's first satisfactory performance since its acquisition by the team.

The Monza race was held only two weeks later and both Ferrari and Maserati were anxious not to suffer yet another defeat at the hands of Mercedes, especially on home territory. The Maserati team was in a frenzy of activity, as they had a total of seven entries to look after. Moss was once again at the wheel of his own car which now had the rear-mounted oil tank, while Villoresi was at the wheel of a works car. Entered by the works, but owned by their drivers, were the cars of Mantovani, Musso and Mieres. In addition French driver Louis Rosier, usually seen at the wheel of a very tired 1952 Tipo 500 Ferrari with the 2,500cc Tipo 625 engine, had borrowed a works 250F pending his purchase of an ex-works car and this had been hastily painted dark blue. Rosier had engine trouble in practice and was loaned another, red 250F, for the race. The works were also looking after the 250F-engined A6SSG of the Argentinian amateur, Jorge Daponte. The cars driven by Villoresi, Mieres, Musso and Rosier had the latest riveted alloy fuel tanks. Musso's car was tried out with a new exhaust system that was intended to give more power at the top end of the range; instead of the two three-branch manifolds feeding into twin tail-pipes, there was a single, large-bore tail-pipe. This was transferred to Villoresi's car later in practice, but not used in the race.

Having made a pathetic showing at Reims and Silverstone, Ascari, again released by Gianni Lancia, decided to try his hand with a Ferrari at Monza. The Maranello cars were a mixed bag of 625s with a solitary 'Squalo' for Gonzalez. Of the Mercedes entries, Fangio and Kling were back at the wheel of *Stromlinienwagen*, while Herrmann had a car with exposed wheels. As only one second separated the fastest drivers in practice, Fangio (1min 59.0sec), Ascari (1min 59.2sec), Moss (1min 59.3sec), Kling (1min 59.6sec) and Gonzalez (2min 0.0sec), it was clearly going to be a close and exciting race.

At the start the two Mercedes streamliners went into the lead, Kling

heading Fangio, followed by Moss and Ascari, but both Ascari and Gonzalez slipped past Moss and these three drivers became involved in a very close and intense fight. On lap 5 Kling overdid it at the Curva Grande, went off the circuit and rejoined the race behind Fangio, Gonzalez, Ascari and Moss, and on the following lap Ascari sailed past Gonzalez and Fangio to take the lead. Soon the 1952-3 world champion had built up a lead of six seconds over Fangio, and Kling was passed by Villoresi's Maserati. Gonzalez fell out with a broken gearbox on lap 17, Fangio had now closed up again on Ascari and lap after lap these two drivers swapped the lead. Moss was holding a comfortable third place with Villoresi fourth, but both Maserati drivers decided to have a go and by lap 40 Villoresi and Moss were in second and third places behind the leading Ferrari.

It was obvious that the two Maseratis were among the fastest cars on the course, but it was equally obvious that there was a lack of team discipline in allowing two cars to risk mechanical failure in attempts to gain the lead. Three laps later the inevitable happened and Villoresi, who had driven his best race for several years, retired after taking his engine up to 8,800rpm, a burst of over-exuberance which wrecked the clutch. Moss seized the lead on lap 45, but two laps later Ascari was back in front. When Ascari retired with a dropped valve on lap 49, the Englishman was completely unchallenged and by lap 68 the Maserati had a twenty-second lead. Then disaster struck. Moss pulled into the pits because the oil pressure was sagging on corners, more oil was poured into the tank and Moss restarted in second place behind Fangio. The suction pipe from the rear-mounted tank had cracked at its flange with the tank; as a result air was sucked into the lubrication system ruining the bearings and at the end of lap 71 Moss stopped his car just before the finishing line so that he could push it across at the end of the race. In the meanwhile, Mantovani, who had come up through the field and was duelling with Hawthorn for second place, suffered a broken de Dion tube and was forced to coast round until the finish of the race. The Maserati challenge which had seemed so powerful had disintegrated completely and Fangio enjoyed an easy and unexpected win from Hawthorn's Ferrari. After the race Fangio was the first to acknowledge that Moss was the moral victor and deserved to have won this, the hardest fought of the season's races.

Before the final championship race of the year there were a number of minor international races in which private Maseratis competed. The Circuit of Cadours, held at this town near Toulouse, attracted only one



*Plate 36* With the Gilby Engineering 250F, Roy Salvadori took second place in the 1955 *Daily Express* Trophy race at Silverstone; *Plate 37* At Aintree in 1955 this works 250F was driven by Luigi Musso, who chased the Mercedes driven by Taruffi for much of the race and finished fifth. Note the absence of louvres on the 1955 cars.



*Plate 38* Stirling Moss led the 1956 British Grand Prix with this works car until engine trouble caused his retirement; *Plate 39* Jean Behra in practice for the 1956 Italian Grand Prix with his new and as yet unpainted 'off-set' 250F.

works team, Gordini, and Rosier took third place with his newly acquired 250F behind the Paris-built cars of Behra and Pilette. On 18 September Salvadori drove the Gilby car at the Half-Litre Club's Crystal Palace meeting, but retired with what was said to be half-shaft failure—a statement belied by the tachometer 'tell-tale' which indicated 8,200rpm. A Formula 1 race was held the following day on the Avus track, notorious for its steeply banked north curve, so that the Mercedes-Benz team could give a demonstration for the citizens of Berlin. The W.196 entries took the first three places and the two private Maseratis entered were out of luck. Rosier retired with a broken drive-shaft only three hundred yards from the starting line and Schell crawled round to finish last, his car throwing up a shower of sparks from the rear end and emitting weird clanking noises.

The Maseratis of Moss, Rosier and Salvadori, the latter's car rebuilt since its Oulton Park prang, ran at the International Goodwood meeting held on 25 September, but the unlucky Owen car non-started after mechanical trouble in practice. Moss scored a comfortable victory in the 21 lap Goodwood Trophy race, twenty seconds ahead of Peter Collins with the new 2,500cc version of the 'Vanwall Special', and with Salvadori third. Rosier was a rather hopeless eighth, beaten by a quartet of underpowered 1953 British 2 litre cars. In the 10 lap Woodcote Cup Formule Libre race Moss could manage no higher than third place behind Collins with the 4,500cc 'Thin Wall Special' Ferrari and Wharton's V-16 BRM. Even so, he beat the 'Vanwall Special' enthusiastically driven in this race by Ferrari-man Mike Hawthorn. Salvadori finished fifth ahead of Bob Gerard's Cooper-Bristol.

A week later there was an international meeting at Aintree, where races were now run in a clockwise direction. Maserati 250Fs were driven by Moss, Mantovani and Salvadori and Harry Schell appeared with his 1953-4 car. The Owen Organisation car non-started yet again. The 17 lap, 51 mile *Daily Telegraph* Trophy race was won by Stirling Moss with a fourteen-second lead over Hawthorn's 'Vanwall Special'. Schell finished third, Mantovani fourth and Rosier took sixth place behind Pilette's well-driven Gordini. The Formule Libre race over the same distance was contested by the survivors from the Formula 1 race together with the Mk II short-chassis BRMs of Ken Wharton and Ron Flockhart and the 'Thin Wall Special' driven by Peter Collins. After Collins's engine had developed a misfire, Moss went into the lead and won from Mantovani by a margin of ten seconds. Flockhart was third for BRM, Pilette (Gordini) was fourth, Salvadori fifth and Rosier was beaten into

eighth place by Beauman's 2 litre Connaught and Gerard's Cooper-Bristol. Wharton's BRM collided with Schell's Maserati, eliminating both cars, and Hawthorn retired an overheated 'Vanwall Special' after an off-course excursion had blocked off the air flow to the radiator with earth and grass. Moss also set a new circuit record of 89.55mph, and as he had won the 500cc race earlier in the day with a Cooper-Norton, this victory completed a 'hat-trick'.

The Spanish Grand Prix, held on the Pedralbes circuit through the streets of Barcelona, saw the début of the Lancia D.50 cars of very advanced specification which included a V-8 four overhead camshaft engine set at an angle in the frame of which it formed an integral stressed member, and much more compact dimensions and lower weight than any of their rivals. At long last, after many months of development work, these cars were considered raceworthy and in the hands of Ascari and Villoresi they were fastest and fifth fastest in practice with times of 2min 18.1sec and 2min 21.0sec. The other serious opposition for Maserati came as usual from Mercedes, who fielded two cars with exposed wheels and one with streamlined bodywork, and Ferrari who entered only two cars as neither Farina nor Gonzalez was fit enough to drive. Trintignant had a Tipo 625 car with 'Squalo' engine and Hawthorn was at the wheel of the latest version of the 'Shark' with coil spring front suspension, the first Ferrari to be so fitted.

Modena entered a strong team of five cars for Moss, Mantovani, Mieres, Musso and Schell and a brand-new car that had been exhibited at the Paris Salon was brought along as a spare. The new car was to normal mechanical specification except that the plumbing for the rear-mounted oil tank was much neater; the delivery and return pipes were encased in a conduit and passed through the base of the riveted aluminium fuel tank. This car could be distinguished by the lack of the usual bodywork louvres and openings in the side to let out under-bonnet air. It had been agreed that if this car was not needed by the works, it would be driven in the race by Spaniard Francesco Godia-Sales. Private Maserati entries came from 'B. Bira', Ecurie Rosier, the Owen Organisation (Wharton was, as usual, nominated as driver of this car) and Baron Emmanuel de Graffenried, whose A6SSG/250F was driven by both himself and prospective purchaser, Ottorino Volonterio.

By a supreme effort Fangio achieved a practice time of 2min 19.1sec which put him on the front row of the grid alongside Ascari and they were joined on the front row by Hawthorn and Schell, both of whom recorded laps in 2min 20.6sec. Schell's performance was exceptionally

and unexpectedly good and he had agreed with the Maserati team manager that he would start the race with a half-full fuel tank and endeavour to break up the opposition. Moss was rather off-form following a practice crash. His own car had not been ready at the start of practice, so he had gone out in the spare car; this was fitted with the usual central accelerator and while sorting out a spin Moss trod on the accelerator instead of the brake and crashed, crumpling the nose of the 250F. Two other British drivers had shunts in practice, Hawthorn and Collins, and the latter damaged the 'Vanwall Special' too badly for it to be repaired in time to run in the race.

Because of last-minute adjustments to his car, Villoresi joined the starting grid just before the flag fell and 'Gigi' retired with brake trouble after only two laps. Ascari and Schell roared away from the rest of the field which was led by a tightly grouped bunch of runners consisting of Hawthorn, Trintignant, Fangio and Moss. Ascari drew into the Lancia pit on lap 9, restarted to complete one slow lap and then retired his D.50 with what was said to be clutch trouble. By lap 20 Trintignant led narrowly from Schell and Hawthorn and the same lap saw the retirement of a rather unhappy Moss with oil scavenge pump failure. Schell continued to drive at his hardest, swapping the lead with Hawthorn from lap to lap, but then he spun, denting the tail of his Maserati, and dropped back to fourth place. The Franco-American retired with a seized gearbox on lap 29, having done all that the works had asked of him. Trintignant made a pit stop to deal with a broken gearbox oil feed and although he rejoined the race, he retired on lap 48. With barely a third of this 80 lap race completed, Hawthorn led comfortably from Fangio and the Maserati of young Luigi Musso was holding a steady third place.

Fangio's Mercedes began to run roughly and litter thrown down by the Spanish crowd and sucked into the intakes of the cars was causing many of them to overheat. The race devolved into a rather dull procession, but in the closing laps Fangio's car developed an oil leak which was spraying over the driver's arm and shoulder and the Mercedes was noticeably slowing. Fangio pressed his car to the limit, but the exhaust note became flatter and flatter and the driver and car more and more oil-streaked. Six laps from the finish he lost second place to Musso, two laps from the flag Hawthorn lapped the Mercedes and Musso lapped it on his last circuit. Of the other 250F drivers in this race, Mieres finished fourth, Godia-Sales sixth, Rosier seventh, Wharton eighth and 'B. Bira' was ninth and last. Mantovani had gone up an escape road when his brakes locked up and he retired two laps later when the tail of his Maserati



was damaged in another off-course incident. De Graffenried's car retired with mechanical trouble.

Once again in 1954, as in 1953, Maserati had shown that on most circuits their cars were as fast as their rivals' and Musso's fine performance at Barcelona augured well for both the team and the driver himself. Although 1954 was very much a Mercedes year (they had won four out of the six championship races which they had entered), Maserati had little cause for dissatisfaction. Like Ferrari they had won two championship races, albeit the first two of the year when they still had the services of Fangio and the opposition was less intense, but the 250F had all the required speed without the mechanical complexities of the Mercedes, it handled better than either the Mercedes or the Ferraris, and the team's lack of success after Moss became a works driver could be attributed to the failure of minor components rather than to any inherent weaknesses in the design.

## A Year of Disappointment: The 250F Grand Prix Car, 1955

At the end of the 1954 season Stirling Moss and his mechanic Alf Francis were conducting fuel injection experiments in conjunction with the works (a summary of the many modifications made to Moss's car is given at the end of this chapter) and Maserati felt that in Moss they had found a worthy team leader and successor to Juan Fangio. It came as a tremendous blow to Modena when Moss signed up to drive for Mercedes-Benz, and Maserati had to scratch around to find a new number-one driver. The team signed up Jean Behra, former Gordini team leader, who had announced that he would be driving for Maserati as long ago as the 1954 Cadours meeting. Behra was a courageous and determined driver, but he was certainly not in the same class as Moss and Maserati's chances of doing well in 1955 were now much reduced. The other regular Maserati drivers in 1955 were the ever-improving, dark, lithe Luigi Musso, Sergio Mantovani and Argentinian Roberto Mieres.

Changes to the 250F for 1955 were few, but a five-speed gearbox was introduced and the cars raced by the works had bodywork without louvres, as seen at Barcelona in 1954. A single large-bore exhaust tail-pipe was initially adopted at some circuits, but later used at all. Only three cars (chassis numbers 2515, 2516 and 2518) were completed during the year and in 1955 no new cars were sold to private owners.

Maserati's first victory of 1955 was in the Formule Libre New Zealand Grand Prix, a 204 mile race at Ardmore Airfield, which 'B. Bira' won with his private 250F from Tipo 625 Ferraris powered by 3 litre Monza sports engines driven by Peter Whitehead and Tony Gaze. Reg Hunt took fifth place with the A6SSG/250F formerly raced by Harry Schell.

It was expected that the winner of the Argentine Grand Prix would come from either Mercedes-Benz or Lancia; the Mercedes were driven

by Fangio, Moss and Kling and the Lancias by Ascari, Villoresi and Castellotti. Out of twenty-two starters, nine were Maseratis and works-entered cars were driven by Behra, Mantovani, polo ace Menditeguy, Mieres, Musso and Schell (several of these drivers owned the cars they were racing). Yet practice over the 2.43mile Buenos Aires Autodrome revealed that it would be a very close race indeed for there were four different makes on the front row of the starting grid. Gonzalez (Tipo 625A Ferrari) took pole position with a time of 1min 43.1sec (an unofficial lap record), Fangio and Ascari were half a second slower and Behra completed the front row with a time of 1min 43.8sec.

Even by Argentinian standards the race was held in exceptionally hot conditions and only two local drivers, Juan Fangio and Roberto Mieres, were able to drive the full length of the race without relief. All three Lancias retired; Ascari spun off the track while leading the race, Villoresi retired out on the circuit with mechanical trouble and then took over Castellotti's car, but crashed into a wall. With Ascari out of the race and Mieres delayed in the pits by a faulty fuel pump, Fangio was unchallenged for the lead and won at an average of 77.51mph from the Ferrari Tipo 625A shared by Gonzalez, Trintignant and Farina. This race was very much a test of endurance for the drivers rather than the cars. If the race conditions had been more temperate there is little doubt that victory would have gone to Ferrari or Maserati, for on this course both Italian marques were faster than the Mercedes—the Ferrari which took second place lapped for much of the race faster than the winner, but suffered long delays during driver changes. Of the Maserati drivers, Mieres had the speed and endurance to win and he led the race for a short while, but eventually finished fifth after his ten-minute pit stop. Maseratis shared by Schell/Behra and Musso/Mantovani were placed sixth and seventh.

Lancia returned to their headquarters in Turin instead of competing in the Formule Libre Buenos Aires City Grand Prix, but otherwise the main contenders were as in the first race. The event was held over a 2.92 mile permutation of the Autodrome roads and the results were decided on the aggregate of two 30 lap heats. In this race Mercedes had a considerable advantage as they were using alcohol-burning versions of the 3 litre 300SLR sports engines and the German cars took first, second and fourth places on aggregate with Trintignant's Ferrari third. The best that Maserati could manage was fifth (Behra), sixth (Menditeguy), seventh (Schell) and eighth (Mantovani)—a consistent, but none too impressive performance!

The European 'curtain-raisers' before the first championship race at Monaco were largely dominated by the Lancia and Maserati teams. To the Gran Premio del Valentino held at Turin on 27 March, Maserati sent a strong team of three 1955 cars for Jean Behra, Sergio Mantovani and Luigi Musso, a 1954 car for Roberto Mieres and a spare. 'B. Bira' and Louis Rosier entered their usual private cars. From Lancia there was a strong entry of three of the very impressive and now much improved D.50 cars for Ascari, Villoresi and Castellotti. Although the new 'Super-Squalo' Ferrari appeared in practice at Turin, it was withdrawn from the race and Tipo 625A cars were driven by Farina, Trintignant and Schell, together with de Portago's semi-works car. In practice, Mantovani crashed badly and the terrible misfortune of having a leg amputated above the knee brought his very promising racing career to an end. For the race his place in the team was taken by young Cesare Perdisa. Musso, Mieres and Behra held the first three places in the opening laps of the race, on lap 6 both Ascari and Behra forged ahead of Mieres and seven laps later Behra was out of the race because of a broken de Dion tube. On the same lap and for the same reason Perdisa retired. Ascari closed right up on the leading Maserati of Musso and when he spun off on lap 22, the Lancia driver was unchallenged. Mieres held on to his second place and at the end of this 90 lap race he was 27 seconds behind the winner. Rosier and 'B. Bira' took sixth and eighth places.

There were two international meetings held on Easter Monday, the Pau Grand Prix and the Goodwood races. At Pau, works cars were entered by Maserati, Lancia and Gordini. From Modena came three cars driven by Behra, Musso and Mieres. Behra's car was fitted with a modified cylinder head featuring slightly inclined inlet ports, larger valves and three, larger, Weber 45 DCO3 twin-choke carburetters having larger and longer unequal-length intake pipes which resulted in a large bulge in the bodywork. Power output in this form was said to be 260bhp. Private 250Fs were driven by Rosier and André Simon who had bought ex-works 1954 car 2505. Lancias were entered for Ascari, Villoresi and Castellotti. The race settled down to a steady but rather unexciting procession, with Ascari leading Behra, Castellotti, Mieres and Villoresi, but on lap 90 of this 110 lap race Ascari stopped at the pits to replace a broken hydraulic brake line. Behra inherited the lead and crossed the line a minute ahead of Castellotti's Lancia. Mieres finished third, Villoresi was fourth and Ascari rejoined the race to take fifth place ahead of the private Maseratis of Simon and Rosier. It was noticeable at this race that the Lancias were faster through the corners, but Behra's Maserati

with the new cylinder head had better torque in the medium rev-range and was faster along Pau's short straights.

The Pau race was marred by a fatal accident on lap 29 when Mario Alborghetti, a very inexperienced driver, went off the road and crashed into the straw bales, killing himself and injuring nine spectators. His car, the Arzani-Volpini, was of especial interest as it was a rebuild of one of the old Maserati-Milano cars. Engine capacity had been increased to 2,498cc (94 × 90mm), four single-choke Weber carburetters were fitted and power output was said to be 220bhp at 6,500rpm; the four-speed gearbox was in unit with the final drive. Double wishbone and torsion bar front suspension and trailing link and transverse leaf spring independent rear suspension were featured. The car was financed by Count Volpi, later of ATS and Serenissima fame. The Arzani-Volpini appeared again in practice at Monza later in the year, but failed to start in the race.

The Goodwood meeting attracted few continental entries, but this was partly compensated for by the first race appearance of the new streamlined Formula 1 Connaught in the hands of Tony Rolt. The Formule Libre Chichester Cup race was won by Peter Collins with the Mk II lightweight BRM, the private Maseratis of Salvadori and Moss took second and third places and Rolt was fourth with the Connaught. Although his car was handling badly on experimental Dunlop tyres, Moss led the Formula 1 Richmond Trophy race until forced to retire with fuel injector pump trouble. Salvadori then went into the lead with the Gilby Maserati and scored an easy victory from Beauman's 2 litre Connaught.

A fortnight later the works Maseratis and Ferraris appeared at the Bordeaux Grand Prix. The cars were those used at Pau, but the 250Fs driven by both Behra and Mieres had the latest cylinder head and larger carburetters. Both cars had equal-length intake pipes and while the carburetters were separated from the cylinder block by a rubber block to absorb vibration on Mieres's car, on Behra's car they were mounted rigidly and directly. The third works car, driven by Musso, had the original cylinder head and smaller carburetters. Private 250Fs were driven by Moss (whose car had reverted to Weber carburetters since the Goodwood meeting), 'B. Bira', Rosier and Simon. The Ferraris were Tipo 555 'Super-Squalos' driven by Farina and Trintignant and Maranello also brought the Marquis de Portago's Tipo 625A car. In all there were only twelve starters in this race.

Despite valiant efforts by the Ferrari drivers, practice was Maserati-

dominated, Behra, Musso and Moss occupied the front row of the grid and the race followed a very similar pattern. Initially Behra led from Musso and Moss, but the British driver gradually fell back because of trouble with his Dunlop disc brakes and both of the works Ferraris retired. As the race progressed Moss's brake troubles cured themselves and, after settling a battle with fellow private 250F owner Simon, he chased after the leaders; he was then forced to stop at the pits for a broken fuel tank retaining strap to be replaced by wire and by the time he had rejoined the race, he was nearly three laps in arrears. Moss then began to chase through the field again, regaining two laps on the leading trio of Maseratis driven by Behra, Musso and Mieres, reducing the lap record to 1min 20.9sec (67.96mph) and finishing fourth, a lap in arrears. While Moss's brilliant driving was relieving the tedium of an otherwise dull procession, Rosier retired with gear-change trouble, Simon's car blew up its engine and 'B. Bira' lost a lot of time in the pits with brake trouble. The Siamese driver rejoined the race to finish sixth and last behind Manzon's Gordini.

The weekend of 7-8 May was another with two international race meetings, the *Daily Express* Trophy Race at Silverstone and the Naples Grand Prix. The Silverstone race on the Saturday proved to be one of the most exciting races held in Britain that year. It witnessed the first serious clash between the fastest private Maseratis driven by Stirling Moss, Roy Salvadori, Peter Collins (with the Owen Organisation car) and 'B. Bira' and the new breed of British Grand Prix cars. The British contingent consisted of the streamlined Connaughts of Jack Fairman and Kenneth McAlpine and the Vanwalls of Mike Hawthorn and Ken Wharton. Other and less competitive Maseratis were driven by Louis Rosier and André Simon. In the opening laps the British and Italian cars were closely matched and Salvadori and Collins led from Fairman, Hawthorn, Moss and McAlpine. Fairman set a lap record of 97.57mph for Connaught and Salvadori subsequently improved on this with a lap of 98.48mph.

So hot was the pace that several of the most competitive cars had soon fallen by the wayside. Moss retired on lap 10 with engine trouble, Hawthorn, his legs soaked from oil leaks, retired five laps later, Fairman disappeared on lap 27 when his Connaught's throttle linkage broke and McAlpine was eliminated by fuel-feed problems. Wharton was in and out of the pits with the second of the Vanwalls, but then, at long last, the British car began to run properly. While trying to turn in some good lap times to impress the crowd, Wharton lost control at Copse corner, hit a concrete-based marker, a broken half-shaft flailed through the fuel

tank and the car came to rest a blazing wreck. Wharton suffered a broken wrist and extensive burns and the Vanwall was a write-off. Lap after lap Collins had been trying to overtake race leader Salvadori, but the driver of the Gilby-entered car held him off until lap 35 when Pete forged ahead into a lead that he never lost. At the end of this 60 lap race Collins with the Owen Maserati was 39 seconds ahead of Salvadori and other Maseratis driven by 'B. Bira', Simon and Rosier took third, fourth and fifth places. Collins's race average of 95.94mph was the highest ever recorded at the Silverstone circuit.

At the Naples Grand Prix, held the following day on the very difficult Circuit of Posillipo, a true road course running through a suburb of the city, works entries came from Lancia and Maserati. The Modena team fielded cars for Behra, Mieres and Musso and cars from the Turin team were driven by Ascari and Villoresi. Although most of the private entrants had favoured the Silverstone race, Ottorino Volonterio appeared with his ex-de Graffenried A6SSG/250F, there were a couple of old Ferraris and Ted Whiteaway ran his Alta-engined HWM. Ascari went straight into the lead at the start of the race and led throughout. Of the works Maserati drivers, Musso held second place behind Ascari for the full sixty laps, but Behra, after passing Villoresi, lost five laps in the pits while a rear hub was changed (it was damaged by a collision with a kerb) and rejoined the race to finish fourth. Mieres retired because of an oil leak. Volonterio was seventh—thirteen laps in arrears—and poor Whiteaway covered only eighteen laps with his HWM because of persistent and apparently incurable fuel-feed trouble.

The Monaco Grand Prix, held on 22 May over one of Europe's most difficult and testing circuits, had been restored to the calendar for the first time since 1952, when it had been run as a sports car race. Four works Maseratis were fielded for Behra, Mieres, Musso and Cesare Perdisa, but the odds against a Maserati victory were overwhelming. Mercedes-Benz W.196 cars were driven by Fangio and Moss (both were entered with new extra-short wheelbase versions) and, after Herrmann had crashed in practice, André Simon was co-opted into the team to drive a normal medium-chassis car. Lancia had four cars for Ascari, Villoresi, Castellotti and the veteran Monégasque driver Louis Chiron. Ferraris were driven by Farina, Trintignant, Schell and Frère/Taruffi. Other, but less competitive, works entries came from Gordini and Vanwall and private Maseratis were fielded by Louis Rosier and Stirling Moss, whose car was to be driven by Lance Macklin. Both Macklin and Whiteaway with his HWM failed to qualify as starters. In practice,

Ascari and Fangio were joint fastest in 1min 41.1sec, and Behra, fastest of the Maserati drivers, was on the second row of the grid with a time of 1min 42.6sec.

The early laps of the race were led by the Mercedes of Fangio and Moss with Ascari, Behra and Castellotti in hot pursuit. On lap 35 Castellotti had to stop at the pits for a wheel-change after clouting a kerb and Behra called in at the pits with a very rough running engine on lap 42. Mieres was in fourth place and Perdisa had worked his 250F up to fifth place ahead of Villoresi's Lancia. The junior member of the team was flagged into the pits for Behra to take over his car and the Frenchman rejoined the race in seventh place, while Perdisa took over Behra's car. Lap 50 saw the retirement of the leading Mercedes of Fangio with transmission trouble and Mieres retired his Maserati fifteen laps later with a broken differential. Moss survived in the lead until lap 81 when his Mercedes broke its engine and, on the same lap, Ascari, who was unaware that he was now leading the race, had a brake lock up on the approach to the chicane, shot through the straw bales and sandbags and plunged into Monte Carlo harbour; the driver was safely rescued, apparently unhurt apart from a broken nose. Trintignant's Ferrari now led the race from Castellotti and Behra, but Behra retired Perdisa's Maserati with a broken engine, while Perdisa with Behra's car finished third. There were no other Maserati finishers.

On 26 May there occurred a tragedy that had a major effect on the pattern of Grand Prix racing for the rest of the season. Ascari was killed while trying out a sports Ferrari during practice for the Supercortemaggiore Grand Prix at the Monza Autodrome. His car left the course for no apparent reason on a bend that was taken almost flat-out. Perhaps Ascari was more shaken by his Monaco crash than he had thought, perhaps an unsuspecting workman had crossed the track, perhaps it was because he was not wearing his 'lucky' blue crash helmet (he had borrowed Castellotti's helmet) or, perhaps, as Enzo Ferrari suggested in his memoirs, he had suffered a nasal embolism—all these theories have been put forward as the cause of the accident. Lancia immediately withdrew from racing, shocked by the death of the 1952-3 world champion, but it was also true that their financial predicament was precarious in the extreme and it later became known that the team could no longer afford to continue Grand Prix racing. In July the Lancia D.50 cars were handed over to Enzo Ferrari, who raced them under his own name.

The Albi Grand Prix, held on 29 May on a shortened version of the famous tree-lined course, attracted works entries from only the hope-



lessly uncompetitive Gordini team. Private Maserati drivers took the first three places in the order André Simon, Louis Rosier and Horace Gould. Gould, often called 'the Gonzalez of the West Country', had considerable experience at the wheel of a Cooper-Bristol and had now bought the 250F previously raced by 'B. Bira'.

At the Belgian Grand Prix held at the Circuit National de Francorchamps there were only fifteen invited entries. Maserati fielded works cars for Behra, Mieres, Musso and Perdisa and there were the private 250Fs of Rosier and Johnny Claes with the Moss car (but the latter non-started after his engine blew up in practice). Mercedes entered three unstreamlined cars for Fangio, Moss and Kling, and Ferrari fielded 'Super-Squalos' for Farina, Trintignant and Belgian driver/journalist Paul Frère. Single works cars were entered for Hawthorn by Vanwall and for Castellotti by Lancia. In view of the Turin team's official attitude to racing, Castellotti's car was ostensibly a private entry, but it had full works support including a spare car and several mechanics. The failure of the second Lancia entry to appear and the non-appearance of the Gordini team reduced the number of starters to thirteen. During Friday evening's practice Castellotti set fastest lap in 4min 18.1sec, half a second faster than the next man, Fangio (Mercedes), and 5.5sec faster than Behra, quickest of the Maserati drivers, could manage. It seemed that on this circuit the Frenchman was not really happy and his lap times were far less competitive than expected. Saturday's practice was washed out by continuous rain and there was no chance for anyone to beat Castellotti's time.

The Mercedes of Fangio and Moss led throughout the race, hotly pursued in the opening laps by Castellotti. On lap 16 Castellotti retired out at Malmedy corner with gearbox trouble and at the end of this 36 lap race the Ferrari 'Super-Squalos' of Farina and Frère were in third and fourth places. In the opening laps Behra battled for fourth place with Kling and the two Ferrari drivers, but on lap 4 he lost control on the left-hand bend before the final hairpin, the Maserati spun, bounced from bank to bank and came to rest in the ditch on the right-hand side of the circuit. Behra returned to the pits on foot and Mieres was called in to hand over to the Modena team-leader. Behra rejoined the race in ninth place and by the chequered flag he had climbed back through the field to finish fifth. Musso finished seventh behind Trintignant's Ferrari, Perdisa drove a gentle race as he was still learning this difficult circuit and took eighth place, and Rosier with his private car was ninth and last.

Shortly afterwards there occurred the greatest disaster in the history of motor racing. During the Le Mans 24 Hours race Pierre Levegh's works Mercedes-Benz 300SLR left the road at a point opposite the pits and plunged into the spectator area, killing eighty-one spectators and injuring many more. Panic measures, partly due to a press that was very hostile to motor racing, resulted in the cancellation of the French, German, Swiss and Spanish Grands Prix. Motor racing was never again held in Switzerland and there was not another Spanish Formula 1 race until 1967. The only remaining championship races in 1955 were therefore, the British, Dutch and Italian Grands Prix.

The Dutch Grand Prix was held only a week after Le Mans and there was a small and very select entry of sixteen cars. The only absentees among the works teams were Lancia and Vanwall and the British team's number one driver, Mike Hawthorn, had returned to Scuderia Ferrari. The Vanwall had proved far less competitive than both *le patron* Tony Vandervell and Hawthorn had expected and they had agreed that their contract should be dissolved. Another new member of the Ferrari team was Castellotti and both these drivers, together with Trintignant, were at the wheel of Tipo 555 cars. Mercedes W.196 cars were entered for Fangio, Moss and Kling and in contrast to these, the most competitive of the entries, there were works Gordinis driven by Robert Manzon, Jacques Pollet and Portuguese driver Hermanos da Silva Ramos. Modena fielded three works 250Fs for Behra, Mieres and Musso and private cars were driven by Louis Rosier, Horace Gould (his ex-'B. Bira' car was entered in the name of Gould's Garage) and Peter Walker (with the Moss car). At this race Behra was feeling none too fit, as the previous weekend he had been knocked down in the pits at Le Mans by a French DB car and although he had no broken bones, he had been badly bruised and shaken.

Fangio and Moss led throughout the 100 laps of this 2.6 mile circuit, but the Maseratis of Musso and Behra proved faster than both Kling's Mercedes and the works Ferraris. Kling retired the third of the Stuttgart entries when he spun off on lap 24 at one of the fast curves at the back of the circuit. Musso drove a superb race to finish third, the only driver on the same lap as the leaders, Mieres was fourth and a none too happy Behra took sixth place behind Castellotti after a pit stop to complain that there was something wrong with the rear suspension of his car. Despite the Mercedes domination of this race, it was Mieres who set fastest lap (a new lap record) in 1min 40.9sec (92.96mph). Of the private Maserati drivers, the sole finisher was Rosier who took ninth place.

Walker lasted only two laps with the Moss 'Maser' before this succumbed to wheel bearing failure and Gould, his car still painted in 'B. Bira's' blue and yellow colours, had an exciting race, indulging in a wild spin at the hairpin, before retiring his car with a cracked gearbox casing.

There was an interval of a month before the next Formula 1 race, the British Grand Prix, which was held for the first time on the flat, characterless, slow, 3 mile Aintree circuit in the shadow of Liverpool's grime and dirt. Of a total of twenty-four runners, a third were Maseratis. Officine Alfieri Maserati fielded a trio of 1955 cars for Behra, Musso and Mieres, together with a 1954 car for André Simon who was a last-minute replacement for Perdita. Only Mieres's car was fitted with the new five-speed gearbox. Private Maseratis were driven by Peter Collins (with the Owen Organisation car), Roy Salvadori, Lance Macklin (with Moss's car) and Horace Gould. In the hope that it would dispel the bad luck that had haunted the car all season, Moss's car was no longer green, but had been repainted an insipid grey colour with just the faintest hint of a green tone. Works Mercedes were driven by Fangio, Moss, Kling and Piero Taruffi, the works Ferraris (all of the Tipo 625A variety) by Hawthorn, Trintignant and Castellotti and Gordinis by Manzon, da Silva Ramos and Mike Sparken. The British contribution to the entry list consisted of the works Vanwalls of Harry Schell and Ken Wharton, the works streamlined Connaughts of Fairman and McAlpine (but because of mechanical trouble Fairman's car non-started), the similar, but private cars of Tony Rolt/Peter Walker (a version with unstreamlined bodywork entered by Rob Walker) and Leslie Marr, and Jack Brabham's basically sports Cooper with Bristol engine (this was said to be enlarged to 2.2 litres, but was in fact the standard 2 litre unit).

On this circuit there were definite hopes that the Maseratis would be able to compete on even terms with the Mercedes-Benz; Behra joined Moss and Fangio on the front row of the grid and the cars of Mieres, Simon and Musso were faster than all the Ferraris (as was Schell's Vanwall). But despite these hopes the race provided yet another demonstration of Mercedes superiority and Moss and Fangio led for the full ninety laps, with the difference that at this race Moss crossed the finishing line first. The other Mercedes entries of Kling and Taruffi finished third and fourth, but these drivers did not have such an easy time, for Behra held third place ahead of Kling until his engine expired in a cloud of blue smoke on lap 10 and Mieres was ahead of Taruffi's car until his 250F burnt a piston. Musso took fifth place, having himself led Taruffi for much of the race. Simon's car succumbed to gear-selector

trouble. The sole private Maserati driver to finish was Macklin who took eighth place, eleven laps behind the winner, after spinning off and walking back to the pits to fetch two mechanics to push-start his car. Salvadori was eliminated by gearbox trouble, on Collins's car the clutch failed and Gould's car ran out of brakes. The only Ferrari to finish was Hawthorn's, taken over later in the race by Castellotti, which was sixth.

There was now no championship race until the Italian Grand Prix in September and while the works team took a breather, private Maserati owners were appearing in minor British races. On 30 July the International Trophy race, run in two 10 lap qualifying heats and a 15 lap final, was held at the short, but interesting 1.39 mile Crystal Palace circuit in South London. The final was fought out between Mike Hawthorn at the wheel of Moss's Maserati—one of the only three races in which Mike drove a Modena car—and Schell with his Vanwall. Hawthorn crossed the line less than two seconds ahead of Schell, and Salvadori with the Gilby car, which was running minus its streamlined tail following a practice accident, finished third.

On the Bank Holiday Monday Salvadori drove the Gilby car in the Rochester Trophy race run at Brands Hatch in two 15 lap heats. Roy was off-form in the first heat, finishing a poor fourth, but he won the second heat and took third place on aggregate behind Gerard's Cooper-Bristol and Alan Brown's 2 litre Connaught. At the Scottish Charterhall circuit the following weekend, the Winfield Joint Committee held the *Daily Record* Trophy race and here Bob Gerard, normally seen at the wheel of his own incredibly quick Cooper-Bristol, was given a drive at the wheel of the Moss 'Maser'. Gerard won the race from the similar cars of Gould and Rosier and shared with Rosier a new lap record of 85.92mph. This was Gerard's first and last race with a foreign car.

A week later a Formula 1 race was held at Snetterton, in Norfolk. Private 250Fs were driven by Moss, Salvadori, Gould, Rosier and Volonterio (with the ex-de Graffenried 250F/A6SSG) and these faced Peter Walker with the Rob Walker Connaught, the works Connaughts of Fairman and Oliver, the Vanwalls of Schell and Wharton and Brabham with his streamlined Cooper-Bristol. The Vanwalls dominated the race, which was run on a wet track, and Schell and Wharton led throughout to take the first two places ahead of a none too well Moss who was led for much of the way by Brabham's diminutive and rather odd-looking streamlined Cooper. These were followed across the line by Salvadori and Rosier. Of the two Vanwalls only Schell's car ran in the 20 lap Formule

Libre race and another non-starter was the Moss Maserati. Schell led the race until a leaking fuel tank caused his retirement and the battle for the lead was then fought out between Walker (Peter) with the Walker (Rob) Connaught and Salvadori with the Gilby Maserati. In his efforts to pass the Connaught, Salvadori spun off on lap 19 and rejoined the race to finish over fifty seconds behind the dark blue British car.

The new 2.5 litre four-cylinder BRM was due to make its début at the international Aintree meeting on 3 September, but the oil scavenge pump failed in practice, oil was sprayed over the back tyres, Collins went off the track and the car was withdrawn from the race. So the *Daily Telegraph* Trophy race was fought out between the Maseratis of Moss, Salvadori and Gould (he was at the wheel of a 1954 car loaned by the works while the engine of his own car which had broken at Snetterton was being repaired) and the works Connaught of Reg Parnell. Although the three Maseratis were fastest in practice, Parnell led the race with Moss in hot pursuit until his 250F's engine broke on lap 13 and the Connaught's engine ran a big end on the last lap but one. A surprised Salvadori found himself the winner from Gerard (Cooper-Bristol) with Gould in third place. In the Formule Libre race, Peter Collins led throughout with his V-16 supercharged BRM and, despite spinning at Melling Crossing and rejoining the race in last place, Salvadori climbed back through the field to finish second.

On 11 September the Italian Grand Prix was held on the newly rebuilt combined road and track circuit at Monza which had a length of 6.214 miles and incorporated two steeply banked curves. At this race Maserati followed the trend set by Mercedes-Benz and Connaught and produced a streamlined car. This was chassis number 2518 and the body was virtually standard 250F with pontoons between the front and rear wheels and full-width nose and tail sections. This new car was driven by Jean Behra, while normal 250Fs were entered by the works for Musso, Mieres, Carlos Menditeguy and Peter Collins, who was being given a try-out with the team with a view to signing him up for the 1956 season. At this race all the 250Fs had wider front brake drums and all except Menditeguy's car had slightly downdraught carburettors. They were fitted with the exhaust arrangement whereby the two manifolds fed into a single large-bore tail-pipe and there were larger fuel pumps driven by belts from the prop-shaft. Larger perspex windscreens were fitted and all the cars had five-speed gearboxes. The only private Maseratis entered were the Moss car for John Fitch, who drove for Mercedes-Benz in the 1952 Carrera Panamericana Mexico and the 1955 Le Mans, Tourist

Trophy and Targa Florio races, and a works-owned car loaned to Horace Gould.

Mercedes-Benz had announced that they would be withdrawing from racing at the end of the season so this was their last Grand Prix—much to the relief of the Italian teams. Long-chassis *Stromlinienwagen* were driven by Moss and Fangio, while Kling had an exposed-wheel, long-chassis car and Taruffi an exposed-wheel, medium-chassis car. Ferrari had intended to run both the Lancia D.50s and the latest versions of the 'Super-Squalo' which had benefited from the attentions of former Lancia technician Alberto Massimino. However, the Belgian Englebert tyres used by the Ferrari team and fitted to the Lancias at Monza were overheating and throwing treads as a result of the strains imposed by the bankings. Ferrari was forced to scratch the D.50s from the race and while Villoresi and Farina became spectators, Castellotti, Hawthorn, Trintignant and Maglioli all drove 'Super-Squalos'. Other works entries came from Vanwall and Gordini and one of the Paris team's cars was the new straight-eight model driven by Robert Manzon.

In practice the streamlined Maserati failed to prove as competitive as the team had hoped and Behra's best lap in 2min 50.1sec was only fifth fastest, 3.6sec slower than pole position-man Fangio had recorded and only a second faster than Mieres with his standard 250F. Initially, the Mercedes held the first four places in the race, Castellotti was fifth and the Maseratis were right out of the picture. After a bad start Musso had climbed from fourteenth to sixth place and was well ahead of team leader Behra by lap 7. He now began to catch Castellotti's well-driven Ferrari, overtook him for fifth place on lap 16, was re-passed two laps later and swept back in front again on lap 18. Moss stopped at the pits at the end of lap 18 for a shattered aero-screen to be replaced and his chase back through the field came to an abrupt end when his eight-cylinder engine blew up at the Curva del Vialone on lap 28. Now Musso was slowing with gearbox trouble and when he retired on lap 32 he had dropped back to seventh place. Kling retired on the next lap with a broken gearbox and behind the two surviving Mercedes of Fangio and Taruffi the order was now Castellotti, Behra and Hawthorn. Collins had retired with engine trouble, grounding on the banking had worn a hole in the crankcase of Gould's Maserati and put him out of the race, and Mieres had dropped back with a very rough-running engine. As Behra started the fiftieth and final lap of the race, the engine of the streamlined car sounded atrocious and he limped across the finishing line to take fourth place with his Maserati enveloped in a cloud of blue smoke from a burnt

piston. Menditeguy finished fifth ahead of Magioli, Mieres was seventh and Fitch with the Moss Maserati took ninth place, four laps behind the winner.

Three minor races rounded off the 1955 Formula One season. On 24 September the Gold Cup race was held at Oulton Park and both Maserati and Ferrari sent teams to compete at Britain's most testing and only true road circuit. The Maserati and Ferrari transporters had motored together from Paris, but there had been a severe jolt to their camaraderie when the Maserati van wrecked its grille and one of its headlamps against that of Ferrari, which had braked rather sharply. Two works 250Fs were entered for Stirling Moss at the wheel of the car Mieres had driven at Monza and Luigi Musso with his own Monza car. Moss had stepped into the breach to take the place of Jean Behra who had been badly injured in a practice crash at the Tourist Trophy race in Northern Ireland. Private Maseratis were driven by Gould (still with a works car on loan) and Salvadori. For the first time the Lancia D.50s were raced under the Ferrari banner and these were driven by Hawthorn and Castellotti, while de Portago was at the wheel of his semi-works Tipo 625A. Vanwalls were driven by Harry Schell and young Irishman Desmond Titterington, Peter Collins appeared with the new BRM and Connaught B-series cars were entrusted to Jack Fairman, Reg Parnell (both with works cars, but Parnell's was a new unstreamlined version), Peter Walker (Rob Walker car) and Leslie Marr. Although Castellotti and Hawthorn led at the start, Moss was in front by Lodge corner and stayed in front until the chequered flag at the end of lap 54. In second place was Hawthorn with the Lancia, Titterington finished third for Vanwall, Parnell's Connaught took fourth place and Salvadori was fifth. Musso was in second place when gearbox trouble enforced his retirement six laps from the finish, Collins's BRM retired with what was believed to be loss of oil pressure (in fact the gauge itself had failed), Schell was eliminated by a broken half-shaft and Gould's Maserati lost its oil pressure.

The following weekend there was an international meeting at the Castle Combe circuit in Wiltshire. In the 101 mile Avon Trophy race for Formula 1 cars the only Maserati runners were Gould, Salvadori, Collins and Rosier. Harry Schell won the race for Vanwall, twenty seconds ahead of Horace Gould and Gerard's Cooper-Bristol finished third ahead of Salvadori, who was slower than usual because of a broken bone in his foot. Rosier retired his 250F with collapsed rear suspension and Collins, who started from the back of the grid after missing practice, had worked

his way up to second place when the engine blew up on lap 11. The last race of the day was the *Empire News* Trophy, a Formule Libre race over the same distance. Schell was again the winner, beating the V-16 BRM of Ron Flockhart into second place. This was the last occasion on which the Owen Organisation raced the sixteen-cylinder car. Only two Maserati drivers ran, Salvadori and Les Leston with the Moss Maserati. Leston was beaten into fourth place by Gerard with the Cooper-Bristol and an off-form Roy was a rather hopeless sixth. On 10 October the Australian Grand Prix, a Formule Libre race, was held at Port Wakefield. Reg Hunt with his newly acquired ex-works 250F took second place to Jack Brabham's Cooper-Bristol.

The final event of the season was the Syracuse Grand Prix held on 23 October. Maserati fielded a full team of cars, with normal bodies for Musso, Villoresi, American Carroll Shelby and Luigi Piotti (the latter two drivers were being given 'try-outs') and the streamlined car for Harry Schell. On paper at least the race should have proved a Maserati walk-over for the only works teams to oppose Modena were Connaught, who entered the new unstreamlined car for young dental student Tony Brooks, and a streamlined car for Les Leston, and Gordini who fielded a six-cylinder car for Manzon and the excruciatingly slow straight-eight for Jacques Pollet. Private Maseratis were driven by Horace Gould, Roy Salvadori, Louis Rosier and Ottorino Volonterio. Siracusa was a difficult circuit, roughly triangular in shape, with two slow corners, a very tight hairpin bend and fast straights. For much of its length it was lined by solid walls, giving little margin for error, and the race was run in an anti-clockwise direction. Good acceleration and braking were all-important and it was not the sort of circuit on which an inexperienced driver could be expected to do well.

Connaught missed the first day's practice, but on the Saturday the skill of Brooks and the speed of the Connaught were sensational and with a practice time of 2min 5.4sec the young Englishman took a place on the front row of the grid, alongside the Maseratis of Luigi Musso (2min 3.6sec) and 'Gigi' Villoresi (2min 4.7sec). On the first lap of the race the Maseratis of Musso, Villoresi and Schell led from the Connaughts of Brooks and Leston. Leston spun on the second lap, dropped down the field and three pit stops for plug changes later in the race put him right out of the running. But Brooks, driving in his first Formula 1 race, had the bit between his teeth; on lap 4 he passed Schell, two laps later he was in second place ahead of Villoresi and he began to chase after the race leader. Now Brooks forced the green Connaught into the lead and



although Musso went ahead again, the English driver was soon back in front and began to pull out a lead. Musso chased the Connaught hard, but his brakes were beginning to play up and at the end of this 70 lap race he was fifty seconds in arrears. Of the other Maserati finishers, Villoresi, Gould, Schell, Shelby and Piotti took third, fourth, fifth, sixth and seventh places, Scarlatti's elderly 2 litre Ferrari was eighth and Leston, with the streamlined Connaught, finished ninth and last. Rosier's car was retired with a recurrence of its rear suspension trouble and Salvadori was eliminated by a leaking fuel tank, almost certainly the result of an earlier off-course excursion.

The year 1955 was one of the least successful in post-war Maserati racing history and, like Ferrari, the team had possessed neither the drivers nor the organisation to match the skill and efficiency of Mercedes-Benz. The final blow in a dismal year had been the defeat at Siracusa by a comparatively unknown car and a completely unknown driver. Maserati fortunes were, however, to improve considerably over the next two seasons.

## Modifications to the Moss Maserati

After Stirling Moss left the Maserati team at the end of the 1954 season, he continued to drive his private car when his commitments with Mercedes-Benz permitted and also loaned it to a number of other drivers. Over the winter of 1954-5 a large number of modifications were made to the car and in its modified form it was the most interesting and fastest 250F, but also one of the least reliable. The most important modification to the car was the substitution of SU fuel injection for the Weber carburettors normally fitted. It may be recalled that Moss had used this system with unexpectedly satisfactory results on his Cooper-Alta at Monza in 1953. Much of the development work to adapt the system to suit the Maserati was carried out in the SU company's experimental department. There was a fabricated steel induction trunk with a diameter of 4.5in and at the forward end of this was mounted a 3.5in butterfly valve. Fixed at the rear end of this main tract were the temperature bulb and manifold pressure connection required to overcome the straight-line delivery characteristics of the pump delivery plungers. These two connections were arranged to affect the lateral position of the internal 'Z' shaft which controlled the stroke of the delivery plungers, thereby making the system sensitive to speed and density of induction air. Indi-

vidual pipes from the main trunking swept down to each induction port, these having welded-on bosses tapped to carry the injection nozzles which projected through into the cylinder head inlet ports. The injection pump, fed with fuel from the standard vane-type pump, was mounted on the tappet block on the exhaust side and was driven by a quill shaft from the camshaft. The fuel from the pump was supplied to each injector nozzle through Bundy tubing.

In 1954 form with three 42mm Weber carburetters and a fuel containing 50 per cent methanol, the engine of the Moss car developed approximately 215bhp at 7,000rpm. With the same fuel and with the fuel injection system a maximum power output of 232bhp at approximately 7,200rpm was achieved, but this was accompanied by a power loss between 4,500 and 6,000rpm, which meant a fall-off in acceleration. By increasing the methanol content of the fuel to 85 per cent, power output rose to over 250bhp, but accompanied by the same power loss in the middle range and an increase in fuel consumption which would have necessitated a pit stop in a long race. As peak power was only developed for short periods on winding circuits, and under these conditions real punch in the middle speed ranges was essential, the advantages of the fuel injection system were marginal and it was abandoned on the Moss Maserati after the Easter Goodwood meeting. The SU fuel injection system was also tried on the prototype Connaught B-series Formula 1 car, but this team switched to Weber carburetters in 1955 because the injection pump control unit was incapable of dealing with the conditions brought about by an unsupercharged engine with a very large valve overlap.

Like the Owen Organisation car, the Moss 250F was fitted with Dunlop disc brakes and magnesium-alloy wheels, which gave a saving in unsprung weight of 7lb per wheel. The booster pump for operating the disc brakes was mounted on the left-hand side of the gearbox and was driven off the primary shaft. These conversions proved a complete success and, unlike the Connaught team who found that Dunlop discs tended to lock up viciously at awkward moments, the Maserati's brakes gave no trouble.

## A Maserati Renaissance: The 250F Grand Prix Car, 1956

At the end of the 1955 season Mercedes-Benz withdrew from racing and so two of the world's leading drivers, Juan Fangio and Stirling Moss, were faced with the problem of finding new teams to drive for. For the first and only time in his career Fangio signed up to drive for Ferrari. Maserati were only too anxious to have the services of Stirling Moss as team leader again, but before making any decision Moss tried all three British contenders, BRM, Connaught and Vanwall, at Silverstone. Although Moss lapped with the Vanwall in 1min 46.9sec, fractionally faster than Salvadori's 2,500cc lap record set with his Maserati in the 1955 *Daily Express* Trophy race, he was convinced that he could turn in better times with a Maserati. Shortly afterwards Stirling, his father Alfred Moss, and his manager Ken Gregory entertained seventeen journalists at the Royal Automobile Club. When dinner was over, Moss said that he thought that the Maserati team had the best chance of winning the World Championship in 1956 and that he had been offered the chance of returning to the team as number one driver. He then told the journalists of his tests at Silverstone and the times he had recorded, but added that he thought that he could do better with a Maserati. Which team, he then asked the assembled company, did they think he should join? Nine journalists voted in favour of Maserati and not long afterwards Stirling signed up again with the Modena team. Luigi Musso had now joined the Ferrari team, but both Jean Behra and Cesare Perdisa remained with Maserati.

For the start of the 1956 season wider brake drums were adopted on the 250F and these featured larger and deeper stiffening cross-ribs that facilitated cooling. The five-speed gearbox was now fitted as standard, as was the large-bore single exhaust pipe. Although no new cars were completed in time for the Argentinian races at the beginning of the year, in April chassis number 2519 was delivered to Luigi Piotti, in March 2520

was sold to Australian Stan Jones (famous for his very potent Maybach Special), during the early part of the year 2521, 2522 and 2523 were completed for the works team and a number of modified cars followed later in 1956. After Piotti had driven 2511 in the Argentine races, this car was sold to Scuderia Centro-Sud, run by Signor Gugliemeno Die, the Maserati agent for the south of Italy, and was usually driven by Luigi Villoresi. Car number 2515 was sold to the Scuderia Guastalla, run by Franco Cornacchia, one-time Ferrari entrant and Maserati agent for the north of Italy. This car was usually driven by Gerino Gerini who had performed well with Maserati sports cars. Over the winter months the Gilby car was completely rebuilt at the works.

In mid-December the works Maseratis, together with those to be fielded by the Italian private entrants, had been shipped from Genoa for the South American races. The Owen Maserati was, however, flown to the Argentine at a cost of £1,000. The private Moss Maserati had been sent to New Zealand to compete in that country's Formule Libre Grand Prix at Ardmore on 7 January. Moss won the race from the Ferraris of Tony Gaze and Peter Whitehead, but he crossed the finishing line with fuel gushing from a fractured fuel-line and it is unlikely that he could have completed another lap. The leak had started forty miles before the finish and Moss had driven for the remainder of the race with fumes blowing in his face. Fourth place went to Leslie Marr at the wheel of his streamlined B-series Connaught fitted with a Jaguar D-type engine.

Moss then flew to the Argentine to join the works Maserati team at the Buenos Aires Autodrome. Here Ferrari's former team manager Nello Ugolini was making his first appearance for Maserati and a very strong team from Modena faced an even stronger one from Maranello. Four works 250Fs were entered for Moss, Behra, Menditeguy and Gonzalez, who was racing for the first time since the 1955 Argentine races. Roberto Mieres had apparently fallen out with the team over the remuneration his services were worth and this fast and able driver, looking very long-faced, was wandering around the paddock looking for a drive. Piotti's car was also entered under the works banner, Gerini was at the wheel of the Guastalla entry and Mike Hawthorn, who had signed up with BRM for 1956, appeared at the wheel of the Owen Organisation's disc-braked 250F.

Ferrari was now racing the Lancia D.50 cars and at Buenos Aires Maranello produced a very mixed assortment of Lancias and 'Super-Squalos'. Juan Fangio was at the wheel of a much-modified Lancia, Musso had a slightly modified Lancia, Castellotti a standard D.50, while

Olivier Gendebien was given an ill-handling experimental contraption that combined the 'Super-Squalo' chassis with the Lancia engine, and Peter Collins drove a standard 'Super-Squalo'. Although the Maseratis had more power than in 1955 and were burning a fuel mixture containing a percentage of oxygen-bearing chemicals, they seemed to lack the speed of the Lancia-Ferraris in practice and it may well be that the drivers were deliberately taking things easy. After a series of progressively faster laps, Fangio took pole position on the grid and set an unofficial lap record with a time of 1min 42.5sec (85.20mph), Musso and Castellotti were both 2.2sec slower and the fastest Maserati driver was Behra in 1min 45.1sec. As the mechanics pushed the cars out on to the grid, Moss's foot was run over by his own 250F and he drove in the race in considerable pain.

Musso led away from Gonzalez's Maserati at the start, Gonzalez took the lead on the first lap and then Menditeguy came through to the front. On lap 25 Gonzalez retired with valve trouble, two laps later Castellotti retired his Lancia-Ferrari and shortly afterwards a trailing Fangio swapped his ailing Maranello entry for Musso's fit car. Now Menditeguy led from Moss, Fangio and Behra with the three Maseratis in an apparently overwhelmingly strong position. But on lap 42 Menditeguy missed a gear, spun off the track, hit a fence and just ducked in time to avoid being decapitated by a strand of wire at neck height. Moss's car had begun to run rough and he lost a short-lived lead, falling back behind Fangio and Behra and retiring to be taken off to hospital for attention to his injured foot. Fangio maintained the lead until the end of this three-hour race, having covered 98 laps and Behra finished second for Maserati, just over 24 seconds behind. In third place was Hawthorn who had driven a steady, unspectacular race with the Owen Maserati and the Guastalla car, driven by both Gerini and Brazilian Chico Landi, finished fourth. Although Maserati had yet again failed to win, the race had shown that the 250F was still very much a match for the Ferrari-entered opposition and the team's chances of success during the season were very good.

In 1956 the Gran Premio de la Ciudad de Buenos Aires was run on the 2.6 mile Mendoza Autodrome, some 650 miles to the west of Buenos Aires and not far from the border with Chile. The circuit was laid out in the foothills of the Andes at a height of 2,200ft above sea level, an altitude which caused carburation problems and especially bothered the Modena cars. The same Maseratis ran in this race as in the World Championship Grand Prix, but Gonzalez had dropped out of the team

and his place was taken by another local driver Pablo Gullé; the Guastalla car was driven by Landi. In an effort to improve reliability the 250Fs were run on a more normal alcohol fuel mixture. Early in the race the Lancia-Ferraris led in the order Fangio, Castellotti and Musso and although Musso crashed and Castellotti retired with a holed radiator, Fangio stayed in front to win from the Maseratis of Moss, Behra and Menditeguy. The 250Fs were only too obviously down on power and were never able to challenge for the lead. Landi finished seventh, Gullé eighth, Hawthorn, after a pit stop to sort out trouble with the front suspension, ninth and a very slow Luigi Piotti tenth. Even if victory had eluded the team, there could hardly have been a more convincing display of reliability, for not a single Maserati entry had retired.

The first race of the European Formula 1 season was on Easter Monday at Goodwood where Moss drove a new works car (2522) fitted with experimental fuel injection. This system consisted of six intake pipes, each with a vertical tubular throttle slide, and, on the exhaust side of the engine, an in-line OM/Bosch injection pump driven by chains and sprockets from the timing gears. The injection pipes were linked to injector nozzles which were mounted on the tops of the air intake tubes, between the slide throttle and the inlet valve. A sliding rack, controlling the stroke of the six pump plungers, moved in conjunction with the air throttle slides by links from the throttle rod to a cam-wheel which operated a spring-loaded plunger coupled to a pump slide. Although power output was increased (as with the SU system tried the previous year on Moss's own car), the torque range was more limited and the advantages of the system were marginal. It was not a system favoured by Moss at all.

Despite the presence of three of the latest works unstreamlined 'Syracuse' Connaughts and the two works BRMs (both of which retired), the Formula 1 Richmond Trophy race proved a Maserati benefit. Archie Scott-Brown led, despite Moss's strenuous efforts to get by, until a leaking camshaft cover caused a serious oil loss. Moss forged ahead on lap 16, and on the following lap this Connaught was out of the race with a broken crankshaft. When the flag fell after 32 laps Moss was over a minute ahead of Salvadori with the Gilby Maserati, the works Connaughts of Les Leston and Bob Gerard were third and fourth and Reg Parnell finished fifth with Rob Walker's Connaught.

In practice for the Goodwood race Moss had lapped as fast with his ageing private car as he had with the latest works fuel-injection model, and this was one of a number of factors which caused Maserati to decide to give the Syracuse Grand Prix a miss and concentrate on development

testing for the season's more serious races. Jean Behra, however, lived very close to the Syracuse circuit, he was most anxious to drive in this race and eventually persuaded the works to send a single car for him. This was the old chassis, 2501, retained primarily for testing purposes, but for this race it was fitted with the latest fuel-injection engine. Opposition came from a strong team of Lancia-Ferraris and a brace of Syracuse Connaughts, but neither of the British cars could match the lap times set by Tony Brooks with a similar car the previous year. Behra retired early in the race with a broken oil pipe, Castellotti crashed his Lancia-Ferrari and both Connaughts, driven by Desmond Titterington and Piero Scotti, retired. The Maranello cars of Fangio, Musso and Collins took the first three places, followed home by Villoresi with the Centro-Sud car and Gerini with the Guastalla car; Piotti took seventh place behind the Gordini of Robert Manzon. Gould retired his car on the first lap with transmission failure. The West Country driver had now purchased car number 2514 and his original ex-Bira car had been sold to Bruce Halford, who first raced it at Aintree the following weekend.

Although billed as the Aintree International '200' race, this event, held over 67 laps (201 miles) of the Liverpool circuit, was sadly lacking in continental entries and the only foreigner to run was Louis Rosier with his 1954 Maserati. The works Vanwalls non-started because of what Tony Vandervell described as 'mechanical confusion' and the main contenders were the works BRMs of Mike Hawthorn and Tony Brooks, works Connaughts driven by Archie Scott-Brown (unstreamlined 'Syracuse' car) and Desmond Titterington (with a 1955 streamliner), Reg Parnell with Rob Walker's Connaught and the Maseratis of Stirling Moss (whose car was now running with wire wheels and drum brakes), Bruce Halford, Australian Jack Brabham (who had acquired the Owen Organisation's car) and Rosier. Fastest in practice was that effervescent driver Archie Scott-Brown, who was so very quick, despite the major handicap of an unformed right hand, and his best lap in 2min 3.8sec was two-tenths of a second faster than the lap record set by Moss with a Mercedes in the 1955 British Grand Prix. The Maseratis of Moss and Salvadori were joint fourth fastest in 2min 6.6sec.

The race was one of attrition and a victory for Moss by default, for his ageing 250F lacked the speed of the quickest British contenders which set the pace before succumbing to mechanical failures. Scott-Brown led away from the start, then Hawthorn went ahead only to retire on lap 5 with a complete loss of braking power. Salvadori, in fifth place, retired with engine failure on the next lap and Parnell was eliminated by over-

heating. Scott-Brown stayed in front until lap 14 when piston failure brought his fast run to an end. Now Brooks with the surviving BRM held what appeared to be an unassailable lead over Moss, and Titterington with the streamlined Connaught was trailing badly in third place. But the BRM began to slow because of brake trouble and Moss drew nearer and nearer the dark green car and when Brooks pulled into the pits, the Maserati swept by into the lead. Gerard retired his evergreen Cooper-Bristol with a seized engine, Halford lost control of his Maserati and wrapped it round a wall at Waterway corner (necessitating its return to Modena for a rebuild) and Titterington crashed his Connaught when the brakes failed. Brooks rejoined the race, but at the chequered flag he was a lap behind Moss. Brabham took third place and Rosier was fourth despite a pit stop to investigate a smoke trail that was traced to a leaking camshaft cover. This was the only race in which Brabham finished with his ex-Owen Organisation car and he reckoned that it was in such atrocious condition that it would cost more than he could possibly afford to put it right.

Maserati had entered the *Daily Express* Trophy race on 5 May, but, in fact, works cars appeared at neither Silverstone nor the Naples Grand Prix held the following day. So Stirling Moss was free to drive one of Tony Vandervell's gloriously sleek Vanwalls in the British race and, despite the presence of two Lancia-Ferraris driven by Fangio and Collins, Moss took the lead after the retirement of Hawthorn's BRM to score a fine victory at a record average of 100.47mph. The only Maseratis entered in the race were the private cars of Salvadori, Brabham and Rosier. Salvadori held second place behind Moss, battling to hold off Scott-Brown's Connaught, until the left-hand rear wheel locked up at Stowe corner because of seizure of the outer hub ball races, the car smashed through the retaining fence and overturned against the bank. The driver escaped with minor injuries, but another 250F joined the queue for rebuilds at Modena. Brabham's car was black-flagged for trailing oil and Rosier finished sixth, beaten by Moss, a trio of Connaughts and Gerard's Cooper-Bristol.

It was much the same story at Naples the following day where the Lancia-Ferraris of Musso and Castellotti retired and victory went to an outsider, the venerable works six-cylinder Gordini of Robert Manzon. The Frenchman was followed across the finishing line by the private Maseratis of Gould and Gerini (the latter with the Guastalla car) and Volonterio took fifth place with his 250F-engined A6SSG. Spanish driver Godia-Sales had ordered a new car, but this was not yet ready and so



for the Naples race he was loaned chassis number 2501, fitted with a normal Weber-aspirated engine. Villoresi hit a kerb with the Centro-Sud car while trying to pass Manzon's Gordini and retired with damaged steering and Godia, holding third place, went sideways into a tree and buckled the chassis of his borrowed car.

Since the Argentine races the Maserati factory had been in a state of confusion, trying to complete a large number of orders for sports cars and at the same time competing in both sports car and Grand Prix racing. The unsatisfactory showings in sports car races are narrated in another chapter and because of the confusion at the works the Modena team had withdrawn from the Syracuse, Silverstone and Naples races. Behra had only succeeded in forcing Modena's hand and making them send a car for him to drive at Siracusa by indicating that if a 250F was not forthcoming, they could find another team driver. It was, in all these circumstances, something of a surprise that a full team of very well prepared cars should be entered at Monaco, the first European race counting towards the World Championship.

To this race Maserati brought a total of four cars including a spare. Moss drove car 2522 fitted with a four-speed gearbox and a new cylinder head with 10mm instead of the usual 14mm sparking plugs. As a spare for practice, the British driver had a car with experimental fuel-injection engine and he was also able to try Perdisa's car which was fitted with a right-hand instead of the usual central throttle so that if necessary Moss could take it over during the race. Perdisa's car was the team's old friend, 2501, while Behra's car (fitted with the usual central throttle) was 2521, which had not been raced before; both of these cars were to standard 250F specification. Menditeguy was not in the team, as he had crashed badly at Sebring and put himself out of racing for the rest of the year. Private Maserati entries came from Gould, Rosier and Monégasque veteran Louis Chiron, who was at the wheel of the Scuderia Centro-Sud car. It was certainly not to be Chiron's race for he ran the bearings on the Centro-Sud car by persistently over-revving; he was then loaned the works spare car, but within a few laps of starting to practise with this, he over-revved again and put a con-rod through the side of the crank-case! At this point Maserati called enough and Chiron became a non-starter.

Other works entries at Monaco came from Ferrari with modified Lancias for Fangio, Castellotti, Collins and Musso, Vanwall with cars for Schell and Trintignant, BRM with cars for Hawthorn and Brooks, and Gordini who brought two eight-cylinder and one elderly six-cylinder

car to be shared out between Manzon, Bayol, Pilette and da Silva Ramos. Both BRMs were withdrawn after engine troubles in practice and of the Gordinis, one of the eight-cylinder cars was not raced, but a second six-cylinder appeared; the straight-eight was driven in the race by Bayol (to be relieved by reserve driver Pilette) and the 'sixes' by Manzon and da Silva Ramos. Fangio was fastest in practice in 1min 44.0sec, but Moss was alongside him on the grid with a time of 1min 44.6sec. Castellotti completed the front row with a lap in 1min 44.9sec.

At the start Moss and Castellotti were away first, Moss shut the door on the Lancia-Ferrari at the hairpin and driving superbly, fast and relaxed, pulled away into a lead that he maintained throughout the 100 difficult laps of this tortuous circuit. Not that he had made no mistakes, for on different laps he managed to clout the wall in the tunnel and hit the wall by the harbour front, fortunately without damaging the 250F. Moss's car did, however, finish the race with a crumpled nose and a bonnet that was tending to lift because of a broken catch. This damage happened on lap 87 when Moss was about to lap Perdisa who was already many laps in arrears. The junior member of the Maserati team, who had been plagued by locking brakes since the start of the race, over-braked in his anxiety to let the leader through and Moss's Maserati ran into the tail of the slower car. Behra drove a sensible, steady race, well up with the leaders for most of the way, to take third place, a lap in arrears, and Perdisa finished seventh, fourteen laps in arrears, but a lap ahead of Gould's private car. Fangio, having battered his own Lancia-Ferrari bodily and mechanically, took over Collins's mount to finish second and Castellotti came in fourth with Fangio's ailing heap. Three works Maseratis had started this race, all three had finished, two of them in first and third places and it seemed that Modena's fortunes were enjoying a well-deserved renaissance.

On Whit Monday the London Trophy Formule Libre 'sprint' race was held at the Crystal Palace circuit. The only true Formula 1 cars entered were the Maserati of Stirling Moss and Rob Walker's Connaught driven by Reg Parnell, the rest of the field consisting of Paul Emery's 2,500cc Alta-engined Emeryson 'special', the usual collection of British Formula 2 cars dating back to 1953 and Bill Moss with the original ERA, R1A, now in its twenty-second year of racing. In the first heat a playful Moss 'battled' with Emery to entertain the crowds, allowing the Emeryson to go ahead on three different laps and at the end of the heat Moss was three seconds ahead with Gerard's Cooper-Bristol in third place. Reg Parnell lost control of Walker's Connaught at Tower Bend when his

Dunlop discs played one of their nasty tricks and locked up; the car hit the retaining bank, turned over and a burst fuel tank sprayed the spectators with alcohol. Moss was again the winner in the second heat, reducing the lap record to 62.60sec (79.94mph), Emery finished second and George Wicken (Cooper-Alta) took third place after the retirement of Gerard's Cooper with engine trouble.

Next on the calendar was the Belgian Grand Prix, held on Europe's finest and one of its fastest road circuits, the 8.76 mile Circuit National de Francorchamps set in the gentle pine-clad slopes of the Ardennes and combining fast and difficult curves with the long Masta straight and the very slow and very tight La Source hairpin bend just before the pits. Here a number of new Maserati developments were to be seen. Stirling Moss drove car 2501, which had once again been completely rebuilt, and the modifications were such that it was only too obvious that the Maserati engineers had been having a close look at Vanwall practice. This car was now fitted with a long, tapering nose and a cockpit with high sides and a wrap-round perspex windscreen. It also had the radiator mounted nearer the front and there was a ducting arrangement so that the hot air emerged through a slot in the bonnet and none entered the cockpit or engine compartment. In practice Moss tried this car with both carburetter and fuel-injection engines and decided to use the former in the race. The fuel-injection system had been modified so that the injectors were screwed into the cylinder wall below the exhaust ports. This engine developed a rather greater power than the standard unit, power that could be fully exploited on the fast Spa course, but it had the major drawback that the fuel consumption was too high for the car to be able to run through the race without a pit stop.

Behra drove a standard 250F fitted with the 10mm sparking plug engine used by Moss at Monaco and Perdisa was at the wheel of 2522. As a spare car, the team had 2523 which also had a long, tapering nose with a ducted radiator, but the radiator header tank was mounted on the bulkhead. Because of BRM's mechanical troubles, Mike Hawthorn was without a drive and it was hoped that he would turn out at the wheel of a Maserati at Spa. Unfortunately, Ferrari thought that Mike was to drive for him and threatened to make a complaint to the Federation Internationale de l'Automobile if Hawthorn appeared for Maserati. To avoid any further arguments Hawthorn turned tail and returned to England!

At this race privately entered cars were driven by Luigi Villoresi (who had been loaned Piotti's works-supported car), Horace Gould and Louis

Rosier. In addition, Francesco Godia-Sales had taken delivery of his new car, 2524, which was to standard specification apart from I-section instead of the usual oval-section wishbones. The Spaniard was another driver who was being looked after by the works team and when he had blown up in practice the works 'hack' engine fitted as a temporary measure to his new car, he was loaned the works spare.

Ferrari had brought along five of the modified Lancias and while three of these were driven by regular members of the Scuderia, Fangio, Collins and Castellotti, two were spare because of Musso's accident in the Nürburgring 1,000 kilometres race and Hawthorn's return home. So Belgian Frère was brought into the team and the fifth car, hastily painted yellow, was driven by fellow-countryman André Pilette and entered in the name of the Équipe Nationale Belge. Vanwall fielded two cars for Schell and Trintignant and there was a single Connaught 'Syracuse', owned and driven by Sicilian Piero Scotti, but entered in the name of Connaught Engineering Ltd. The existing lap record at Spa stood to the credit of Fangio who had recorded a lap in 4min 20.6sec in the 1955 race with his Mercedes; in practice for that race, however, Castellotti (Lancia) had turned in a lap in 4min 18.1sec. These times were smashed in practice in 1956, first by Moss who lapped in 4min 14.7sec and then by Fangio with the staggeringly quick times of 4min 10.4sec and 4min 9.8sec. Although lap times were expected to be faster because of minor improvements to the circuit, Fangio's lap, over ten seconds faster than the lap record, was so quick that the timekeepers almost disbelieved their own stop-watches.

Heavy rain fell on the Sunday morning and the track was still very damp at the start of the race. While Moss accelerated away into the lead with the Lancia-Ferraris in hot pursuit, building up an advantage of four seconds by the end of the second lap, several drivers were already in trouble. On the first lap Scotti slid sideways at Burnenville because of Connaught's only too familiar trouble of locking Dunlop discs and, in avoiding him, Godia-Sales went off the road and crashed. This was the second race in succession in which the Spaniard had crashed a Maserati! Scotti stopped at the end of the lap for attention to his brakes and after trailing at the tail of the field, retired on lap 11 with loss of gearbox oil pressure. Horace Gould retired his private Maserati out on the circuit with a seized gearbox on lap 3.

Fangio, having now forced his way past team-mate Castellotti, closed right up on the leading Maserati and on lap 5 passed Moss to take the lead. In terms of sheer speed the Maserati was still no rival for the

Maranello V-8s and although Moss tried hard to hang on to the tail of the Lancia-Ferrari, he soon fell back and by the end of lap 10 he was eight seconds behind. As Moss crossed L'Eau Rouge bridge shortly after the start of the eleventh lap, the revs suddenly soared as the transmission failed, the Maserati started to weave and, because the hub-shaft had sheared between the bearings at the end of the de Dion tube, the left-hand rear wheel complete with hub and brake drum detached itself. Moss allowed the Maserati to coast to a halt and, without even bothering to inspect the car and apparently completely unshaken by his alarming incident, he sprinted back up the hill to the pits to take over Perdisa's car. On the same lap Castellotti retired with transmission trouble and by the time Moss was back in the race he was in sixth place behind Fangio, Collins, Behra, Frère and Schell. Now a lap in arrears, Moss was too far back to make any impression on the leading Lancia-Ferraris, but he pressed on at his hardest, putting himself back on the same lap as Collins and setting a new lap record of 4min 14.7sec (124.02mph).

On lap 24 Fangio retired with transmission failure, Peter Collins assumed a lead which he retained until the chequered flag at the end of lap 36, and Paul Frère moved up into second place ahead of Behra whose car was slowed by engine trouble caused by a water leak. By the finish Moss, after one of the hardest drives in his career, was in third place, ahead of Schell's Vanwall, and Villorosi finished fifth. Poor Behra, his engine running rougher and rougher and sounding noisier and noisier, dropped back to finish seventh, three laps in arrears but ahead of Rosier's Maserati. Perhaps the most significant finisher was the Vanwall which had displayed speed enough to match the 250F, but not as yet the road-holding. On the Masta straight Schell had been able to pull away from Moss's 250F, but as the cars entered the difficult Stavelot curve Schell was forced to back off and let the Maserati whistle by.

On 23 June the British Automobile Club held their midsummer meeting at Aintree and the main race of the day was the 34 lap Aintree '100' Formula race which attracted a very parochial entry. With the withdrawal of Brooks's BRM with valve trouble after less than two hours at the circuit during practice, the number of starters was reduced to eight; Maseratis were driven by Gould and Halford, Scott-Brown drove a works Connaught, Gerard had his Cooper-Bristol, Emery was entered with the Emeryson and there were three 2 litre Connaughts, one of which was driven by Roy Salvadori as the Gilby Maserati was not yet repaired. Scott-Brown cantered round in the lead until lap 9 when oil splashing out of the breathers worked its way on to the exhaust and rear tyres and



*Plate 40* 1957 World Champion Juan Fangio in that year's Italian Grand Prix, in which he took second place; *Plate 41* In the 1957 Monza race Jean Behra battles with the ill-handling V-12 car.



*Plate 42* Masten Gregory at the wheel of the Scuderia Buell-entered 'piccolo' Maserati in the 1958 Italian Grand Prix; *Plate 43* The lightweight 250F-based Tec-Mec completed by Valerio Colotti in late 1959.

almost blinded the driver with oil smoke. The dull procession continued with Gould, slowing in the closing stages of the race because of a low fuel level, leading home Bob Gerard whose Cooper-Bristol had lost its oil pressure. A cautious Halford took third place and Salvadori was fourth with his 2 litre Connaught.

The same weekend the 2 litre sports car Supercortemaggiore Grand Prix was held at Monza and Maserati's efforts to cope at this race with their own works cars and those entered by private owners (there were twenty-eight Maserati entries at Monza) reduced the racing department to a state of complete and utter confusion. As a result the cars that ran at the French Grand Prix at Reims on 1 July were hastily prepared and far from *au point*. The team had taken the dust covers off 2518, the streamlined car, and this was now fitted with the fuel-injection engine and Dunlop disc brakes. A five-speed gearbox was needed for Reims, but this could not be used in conjunction with a servo, necessary with disc brakes, and without this the brake pressure needed to retard the car was greater than any of the drivers could comfortably exert. So the streamlined car was not used in the race and its eventual fate was to be destroyed in a fire at the Modena works. Moss drove the same car as at Spa, 2501, fitted with a carburettor engine and normal 250Fs were handled by Behra, Perdica and Piero Taruffi. Perdica's car was fitted with a fuel-injection engine and the normal 250Fs had a lip added across the top of the front air intake to scoop in more air. The private Maserati drivers were Francesco Godia-Sales (at the wheel of his own car now fitted with a new engine), Luigi Villorosi with Piotti's car, Louis Rosier and André Simon.

There were a number of interesting entries at Reims besides the usual Lancia-Ferraris driven by Fangio, Collins, Castellotti, de Portago and Gendebien. In practice Ferrari tried out a streamlined version of the Lancia-Ferrari, but this proved rather unstable and was not raced. Reims also saw the one and only race appearance of the Type 251 Bugatti, the work of Giaocchino Colombo who had been responsible for the initial development of the 250F. The Bugatti was of a very unconventional design and featured an in-line eight-cylinder engine mounted transversely at the rear and with de Dion axles front and rear. Maurice Trintignant had been released by Vanwall to drive the new car from Molsheim. Particularly impressive in practice were the Vanwalls driven by Schell and Hawthorn, the latter released by BRM who were missing yet another race because of mechanical troubles, and the Acton cars were fourth and fifth fastest. Lancia-Ferraris occupied the three positions on the front row of the grid



and the fastest Maserati driver was Behra with sixth quickest time of 2min 27·8sec.

At the start the Maseratis of Moss and Villoresi refused to fire and while Moss's car was pushed up the road past the front row of the grid, thereby delaying the start until it had fired, Villoresi's car was still being pushed backwards and forwards when the flag fell and joined the race after the other eighteen cars had disappeared into the distance. In this race the Maseratis were completely outpaced by both the Lancia-Ferraris and Schell's Vanwall. Schell blew up the engine of his own car and took over Hawthorn's; he brought the sleek green car up through the field to battle for the lead with the Maranello cars until the fuel-injection linkage fell apart, Moss was in eighth place for Maserati when the gear-lever broke and he came into the pits to retire at the end of lap 11; Perdisa, whose car had been trailing smoke from an oil leak dripping on to the exhaust manifold, was called in for Moss to take over. The cockpit of Perdisa's car was almost awash with oil and after this had been swabbed out and the fuel tank of this very thirsty fuel-injected car had been topped up, Moss rejoined the fray a lap in arrears. Towards the end of the race Fangio stopped at the pits for a split fuel line to be repaired and so Jean Behra, who had driven a steady race without ever being able to challenge the leaders, finished third behind the Lancia-Ferraris of Collins and Castellotti. Fangio took fourth place and Moss, sitting in a cockpit full of oil, stopped at the pits for the tank from which it had escaped to be replenished and then carried on to take fifth place, two laps in arrears. The private cars of Rosier and Godia-Sales finished sixth and seventh ahead of Gordinis of da Silva Ramos and Manzon. Taruffi's car retired with an engine power loss and Villoresi's 250F ran out of brakes. At Reims, the team's fortunes sunk to their lowest point in the 1956 season, partly because the 250F was never at its best on a high-speed circuit and partly because of the poor and hasty preparation of the cars.

The teams now travelled to Silverstone for the British Grand Prix. There was no sign of the long-nose car fielded at Spa and Reims and all the works 250Fs were of the normal type. The works cars were as usual driven by Moss, Behra and Perdisa. In the absence of a restriction on the number of entries accepted, private Maseratis were out in force and were driven by Godia-Sales, Villoresi (with Piotti's car), Umberto Maglioli (who had not been seen at the wheel of a Grand Prix car since 1955 when he drove for Ferrari and who was now entered by Scuderia Guastalla), Roy Salvadori with the now rebuilt Gilby car, Horace Gould, Bruce Halford, Jack Brabham and Louis Rosier. Ferrari fielded the usual

Lancia-based cars for Fangio, Collins, Castellotti and de Portago and there were eight-cylinder Gordinis for Manzon and da Silva Ramos.

Facing this strong continental onslaught was a contingent of British cars that, on paper at least, looked almost as strong. Works Vanwalls were driven by Schell, Trintignant and Froilan Gonzalez who had flown specially from Argentina for this race, BRMs were entered for Hawthorn, Brooks and Flockhart (the first time the Bourne team had started in a race since the *Daily Express* Trophy in May), and Connaughts were fielded by the works for Scott-Brown, Jack Fairman and Desmond Titterton. On this circuit the Maseratis were a match for the Maranello opposition and Moss took pole position on the grid with a lap in 1min 41sec. Alongside him were Fangio (1min 42sec) and Hawthorn and Collins (both of whom had recorded 1min 43sec). But the sensation of practice was Roy Salvadori, who celebrated his return to Maserati motoring by throwing the Gilby car through Silverstone's corners with great élan to record 1min 44sec—this put him on the second row of the grid with the Vanwalls of Schell and Gonzalez, all three cars having recorded identical times.

At the start the two BRMs of Hawthorn and Brooks accelerated away into the lead, Brooks making a brilliant start from the third row of the grid, while Gonzalez's Vanwall jerked forward a few feet and then was out of the race with a broken half-shaft. The dark green cars from Bourne dominated the opening laps, but Fangio moved into second place on lap 6 and Moss held fourth place ahead of Collins and Salvadori. Roy was driving an immaculate race and on lap 8 slipped by Collins to take fifth place. On that lap Fangio spun and restarted in sixth place behind Collins. The Vanwalls of Schell and Trintignant were right out of the picture and were eventually to retire with fuel-feed blockages caused by the lining of the fuel tanks dissolving, and on only the second lap Flockhart had retired his BRM with engine trouble.

Now Moss and Salvadori began to claw their way to the front and by the end of lap 16 Moss led from a slowing Hawthorn and Salvadori; on that lap Scott-Brown's seventh-place Connaught lost a wheel at Becketts. A very disappointed Hawthorn pulled into the pits to retire because of grease leaking out of a transmission joint at the end of lap 23 and the two superb-sounding, beautifully handling 'Masers' were steadily pulling away from Fangio's hard-driven, untidily cornering Lancia-Ferrari. Brooks stopped at Club Corner with throttle linkage trouble, bodged a repair and made his way back to the pits where nearly ten minutes were lost while a more permanent repair was carried out. Not

long after Brooks had rejoined the race the throttle stuck open at Abbey curve, the BRM hit the earth bank and burst into flames; the car was burnt out and Brooks suffered a broken jaw and facial injuries.

The two Maseratis circulated in the lead, well clear of the rest of the field, until the fuel tank retaining strap broke on Salvadori's car and began to trail behind; the Gilby car came into the pits on lap 50 and by the time he was back in the race, Roy had dropped to fourth place behind Fangio and Collins. After only four more laps poor Salvadori was out of the race with engine trouble and de Portago and Behra, whose engine was very much down on power, had risen to fourth and fifth places. At the end of lap 63 Collins retired his Lancia-Ferrari with loss of oil pressure, took over de Portago's car and rejoined the race in fourth place behind Behra. That it was not to be a Maserati day became only too clear when Moss, who had already made a brief stop to take on extra oil, stopped at the pits with ignition trouble and rejoined the race in second place behind Fangio. Collins was now beginning to catch the rough-running 250F, Moss stopped again for oil and on lap 94 retired out on the circuit with gearbox trouble. So, at the end of this 101 lap race, the Lancia-Ferraris of Fangio and Collins took the first two places, followed home by Behra, Fairman with the sole surviving Connaught and the 250Fs of Gould, Villoresi, Perdisa and Godia-Sales. Silverstone so nearly brought Moss another well-deserved World Championship race victory and it seemed as though Ferrari had won by sheer weight of numbers rather than by out-performing their Modena rivals, two of the Maranello cars had retired and a third, Castellotti's car, was pushed across the line into tenth place, to all intents and purposes out of the race. But the real hero of the race was Roy Salvadori who had held second place with his private car ahead of Fangio for so many laps and if any driver deserved a seat in a works team, it was he.

The German Grand Prix at the difficult and suspension-damaging Nürburgring was another race in which the Maserati team hoped to do well, for the 14.19 mile circuit in the Eifel mountains was one on which good roadholding and cockpit skill were at a premium, and Maserati's slight power deficiency compared with their Maranello rivals put them at no real disadvantage. Modena entered normal works cars for Behra and Perdisa, but Moss drove the long-nose car he had used at Spa and also had for training 2523, the other long-nose car seen at Spa which had now been rebuilt with a new chassis frame. In addition, a very strong contingent of private Maseratis was entered; Harry Schell was at the wheel of the Centro-Sud car (Vanwall had not entered this race), Maglioli drove

for Guastalla and Villoresi for Piotti; Salvadori, Gould, Halford, Godia-Sales and Rosier were at the wheel of their usual cars and the organisers had even accepted an entry from Volonterio with his ancient A6SSG/250F. Lancia-Ferraris were entered for Fangio, Collins, Castellotti, Musso and de Portago and there were eight-cylinder Gordinis for Manzon and Pilette. Gould and Halford showed exceptional keenness and for several days before official practice started they flogged their private touring cars round and round the Nürburgring in an attempt to familiarise themselves with this difficult circuit. The Lancia-Ferraris of Fangio and Collins were easily fastest in practice and none of the Maserati drivers could approach their times. The Modena cars were, however, almost completely trouble-free in practice, although they were grounding on some of the worst bumps and the front suspensions had to be set up to give greater ground clearance. Perdica crashed his Tipo 150S in the sports car race preceding the Grand Prix and although he was apparently unhurt, he felt rather too shaken to drive and his place in the works team was taken at the last minute by Maglioli, which meant that the Guastalla car was a non-starter.

The fastest Lancia-Ferrari drivers had the edge in this race, but the Maseratis were well in the fight for much of the race and in terms of numbers dominated the results. Fangio took a lead on the first lap that he was to hold for the twenty-two laps of the race. All round the first lap Moss chased Collins hard for second place, while he was being worried by Castellotti until the Italian spun off at the Karussell and rejoined the race in fifteenth place. Now Behra was fourth and he was under pressure from Salvadori who was driving as brilliantly as he had at Silverstone. Among those to stop at the pits at the end of the first lap were Villoresi, who wanted a change of plugs, and Horace Gould, whose throttle linkage had come to bits out on the circuit and who had bodged a repair with a safety-pin borrowed from a female spectator! The two Lancia-Ferraris continued to lead, with Moss in third place, now apparently unable to get to grips with the Maranello cars, and the race was rapidly turning into a dull procession, to be disrupted only by retirements. At the end of lap 3 Salvadori brought his 250F into the pits with low oil pressure, packed his grip and departed for Brands Hatch where he was due to drive a Cooper the following day. And at the end of the following lap Maglioli retired his works car with seized steering and Gould dropped out with sagging oil pressure.

The outright circuit record at the Nürburgring had stood since 1939 to the credit of Hermann Lang with a Mercedes-Benz W.163 super-

charged 3 litre car in 9min 52.2sec, but this race saw this seventeen-year-old record well and truly shattered, first by Fangio with a lap in 9min 48.1sec, then by Collins (9min 47.6sec) and Moss (9min 46.6sec) and by Fangio again with a lap in 9min 45.5sec. Castellotti retired his V-8 car with magneto failure and took over Musso's and at the end of lap 9 a nearly unconscious Collins, overcome by fumes from a split fuel line, pulled into the pits and Moss was now in second place ahead of Behra, de Portago, Castellotti (with Musso's car), Halford and Schell. When Collins had recovered, he took over de Portago's car and started off in chase of Behra, but both he and Castellotti overdid things in their efforts to make up lost ground, Castellotti spinning off and stalling on lap 13 and Collins spinning his new mount irretrievably into the undergrowth two laps later. Fangio had finally reduced the lap record to 9min 41.6sec and was over twenty seconds ahead of Moss. Schell's Maserati had expired with a broken water pump, Villoresi retired out on the circuit with engine trouble and Halford, having risen to fourth place, was black-flagged and disqualified for receiving outside help to regain the track after spinning off. At the chequered flag Fangio and the Lancia-Ferrari, which only too easily dominated this race, were thirty-eight seconds ahead of Moss. Behra, in third place, was followed home by the private Maseratis of Godia-Sales, Rosier and Volonterio and there were no other finishers.

There were very few minor Formula 1 races during the 1956 season in which the private owners could show their paces, but one such race was the Caen Grand Prix held on La Prairie circuit on 26 August. In this 153 mile race, run on a circuit round the perimeter road of the town's horse racing course, private Maseratis driven by Schell (the Centro-Sud car), Salvadori, Rosier and Gould faced four Gordinis and several older and less competitive cars. Salvadori went straight into the lead at the start, setting a new lap record of 91.35mph on his second lap, and stayed in front until a violent rainstorm soaked the already oil and rubber-coated circuit. The British driver spun off and stalled, eventually rejoining the race to finish third behind Schell and Simon at the wheel of a Gordini.

After their experiences at Spa and Reims, Maserati knew only too well that their cars were out-paced by the Lancia-Ferraris on fast circuits and could foresee that the same thing would happen again in the Italian Grand Prix on the high-speed Monza course. In an effort to remedy this situation Maserati produced two new cars of revised design in the short interval between the German and Italian races. Another inducement was a substantial prize offered by the organisers to any Italian manufacturer racing a new design. Although the new cars were still no match in terms

of sheer speed for the Lancia-Ferraris, the main aims, to lower the centre of gravity and to reduce the frontal area, were achieved. The tubular welded steel space-frame followed the same general design as that of earlier 250Fs and the suspension design was unchanged. The engine, however, was now angled in the frame so that the nose of the crankshaft pointed towards the right-hand front corner of the car and the input housing of the five-speed gearbox was redesigned so that the propshaft entered the bevel housing further to the left. The result was that the line of the transmission ran across the car at an angle. A major advantage of this arrangement was that the driver's seat could be mounted on the undertray alongside the prop-shaft. The driver was, therefore, lower in the car by about eight inches and, by mounting the steering box on the main cross-member behind the engine instead of on top of the clutch housing, the line of the steering column and of the bonnet were also lowered. A new fuel tank which formed the driver's headrest was mounted on rubber blocks and secured by spring-loaded bolts. There was a long, tapering nose and the carburetter intakes were mounted in a long, tubular duct on the bonnet. The nose panels were quickly detachable so that the cars would fit into the team's transporter. The new cars were given chassis numbers 2525 and 2526.

These new cars, which were first seen in practice unpainted, were driven by Moss and Behra, while Villoresi drove 2501 and Maglioli was at the wheel of 2522. Perdisa had still not recovered from his accident at the Nürburgring which had proved to be more serious than at first thought and was out of the team for the time being. The Scuderia Guastalla car was driven by Gerini, Baron Emmanuel de Graffenried appeared with the Centro-Sud car and other private 250Fs were driven by Roy Salvadori, Bruce Halford, Francesco Godia-Sales and Luigi Piotti. From Ferrari came five definite entries for Fangio, Collins, Castellotti, Musso and de Portago and, but for a practice crash, von Trips would also have appeared with the team's spare car. Vanwall fielded three cars for Schell, Trintignant and Piero Taruffi, three beautifully turned-out Connaught 'Syracuse' cars were driven by Jack Fairman, Les Leston and Ron Flockart (the latter deputising for Scott-Brown, who was not allowed by the Italian authorities to take part in this race because of his disability) and Gordini completed the entry list with three of his uncompetitive blue cars.

In practice the new cars failed to prove as fast as Maserati had hoped and, in addition, Behra's car showed a tendency to boil away its water. Although the Lancia-Ferraris were quickest over the 6·214 mile combined road and banked track circuit, as in 1955 when Ferrari had first entered

the V-8 cars, the Englebert tyres were giving trouble and throwing treads. This year there was no question of scratching them from the race and substituting 'Super-Squalos' and the Maranello drivers were simply keeping their fingers crossed and hoping for the best. Fangio was fastest in practice in 2min 42·6sec and he and team-mates Castellotti and Musso occupied the front row of the three by three grid. On the second row was Taruffi's Vanwall which had recorded 2min 45·4sec and alongside him the Maseratis of Behra and Moss with times of 2min 45·6sec and 2min 45·9sec respectively.

At the fall of the flag Musso led away from Castellotti and Fangio and then came Moss and Collins. Schell's Vanwall whistled through from the fourth row to mix it with the leaders and at the end of the first lap the order was Castellotti—Musso—Fangio—Schell—Collins—Moss. Already it was only too obvious that the Maseratis would only come to the front if and when the Lancia-Ferraris ran into tyre trouble. And this was not long in coming for Musso and Castellotti were engaged in a neck and neck flat-out battle based on personal rivalry and a desire to emulate their heroes, Farina and Ascari, and at the end of only lap 5 both were in the pits for new tyres. Now Moss led from Fangio, Schell and Collins. Schell brought the Vanwall through to battle for the lead and as Moss and the Franco-American swapped places several times a lap, the two steadier members of the Ferrari team settled down to wait and watch, hoping that their tyres would not fail. Musso and Castellotti were rapidly making up lost ground, but on lap 11 Castellotti spun off and wrecked his car when a tyre burst. Schell was now well and truly in the lead, consistently holding off the new Maserati, Fangio was right on Moss's tail, Behra was fourth, Musso was fifth and Collins was back in seventh place after he had stopped to replace a burst tyre.

On lap 18 Fangio pulled into the pits with the front wheels awry and the mechanics began to replace a broken steering arm. Now rain began to fall, Schell eased off during this short shower and Moss went into the lead. Behind Schell the order was now Musso—Behra—Collins—Maglioli—Flockhart—Godia-Sales. Five laps later Behra pulled into the pits to retire with magneto trouble, and as the car was being pushed away it was discovered that the fuel tank had split. Maglioli was called in for Behra to take over, but after only a lap the Frenchman was back in the pits for the bonnet to be re-fastened—Maglioli had been cheerfully driving with it undone and not worrying about it lifting at speed. Schell had started the race with a half-full tank, he stopped to refuel on lap 28, but after only four more laps the Vanwall was out of the race with trans-

mission trouble. Moss still led, driving coolly and calmly with the furious Musso in hot pursuit, Collins was third and Flockhart, through consistency and lack of trouble rather than speed of his Connaught, a steady fourth. When Collins stopped for a tyre change on lap 35, Fangio took over the third-place Maranello car and Behra worked his ex-Maglioli 250F up to fourth place ahead of Flockhart only to retire out on the circuit with steering box failure.

Although Moss seemed all set for victory, his usual bad luck reared its ugly head on lap 45, the engine of his 250F cut out at the Lesmo curves because the car had run out of fuel and the Englishman coasted towards the pits with very little hope of reaching them. The next car on the scene was Piotti's Maserati and the private 250F driver, rapidly summing up the situation, nosed behind Moss's car and shunted it so that it started to roll back towards the pits. By the time he reached the pits road, Moss had the fuel filler open, 25 litres of fuel were sloshed in and he rejoined the race, now in second place behind Musso's Lancia-Ferrari. Just when it seemed the young Italian had the race in the bag, there was another twist of fate, but this time in Moss's favour. Three laps from the finish the left-hand steering arm on Musso's car broke on the finishing straight, a tyre burst and the car, completely out of control, slithered across the track towards the pits, coming to rest only inches from the pit counter. Moss went on to score his second World Championship race victory of the season, just under six seconds ahead of the Lancia-Ferrari shared by Collins and Fangio. And after the race was over it was discovered that only about two pints of fuel were left in the Maserati tank, insufficient to complete another lap; when more fuel was poured in, it ran straight out of the bottom of the tank which had split, just as had Behra's earlier in the race. Flockhart finished third, a lap in arrears, with his Connaught 'Syracuse'. Of the other Maserati finishers, Godia-Sales took fourth place, Piotti was sixth, de Graffenried seventh, Gerini tenth and Salvadori eleventh and last after two pit stops caused by a leaking cockpit auxiliary fuel tank.

Although the Italian Grand Prix was the last championship race of the season, it was not quite the end of Maserati single-seater activities. On 14 October there was a 15 lap race for Formula 1 cars at the Kent Brands Hatch circuit. Here Salvadori's and Halford's Maseratis faced four works Connaughts. Salvadori took third place behind the 'Syracuse' cars of Scott-Brown and Lewis-Evans and the other two Connaughts driven by Leston and Fairman beat Halford into sixth place. Maserati sent two works cars to the Formule Libre Australian Grand Prix held over eighty



laps of the 3.1 mile Albert Park, Melbourne, circuit on 2 December. Moss scored an easy victory with 2501 and Behra, whose car (chassis number 2523) was fitted with a Tipo 300S sports car engine, took second place. Third was Peter Whitehead's Ferrari 'Super-Squalo' with Tipo 860 3.4 litre sports car engine and the private 250Fs of Reg Hunt and Stan Jones finished fourth and fifth. Ken Wharton drove Jack Brabham's Maserati, but spent most of the race in the pits, and Kevin Neal crashed his ex-Hunt, ex-Schell and allegedly ex-Fangio A6SSG with 250F engine.

The 1956 season had been Maserati's most successful since pre-war days. Moss had won two championship races and had taken second place in another, Behra was second in the Argentine and third in the French, German and Italian races. In the World Championship Moss had gained second place with 27 points to the 30 of Fangio. Maserati were still far from satisfied, however, as their main aim was to defeat their national rivals, Ferrari, and this they had never done. Over the winter months work progressed steadily at Modena on a completely new engine that was never to fulfil its promise and a much improved version of the 250F that was to achieve all that Maserati could possibly hope for.

## Maserati's Finest Season: The 250F Grand Prix Car, 1957

In 1957 Maserati's racing programme reached an all-time peak of activity, it proved the team's most successful year, but it was also their most expensive. In addition to fielding a full team of much improved 250F Grand Prix cars, Modena was working hard to develop the new V-12 Grand Prix engine and was racing the monstrous and monstrously expensive Tipo 450S V-8 sports cars. In an effort to rationalise the team's various activities and to overcome the confusion and inefficiencies that had affected the team's prospects at certain races in 1956, a separate customer workshop was set up to deal with cars raced by private owners. In Formula 1 Maserati concentrated on racing cars of settled specification and experimental work was conducted on cars other than the regular team 250Fs.

For 1957 Stirling Moss left Maserati's Grand Prix team to drive Tony Vandervell's Vanwalls, but he appeared at the wheel of a works 250F in the Argentine races at the beginning of the season as the British team did not race until the Syracuse Grand Prix in April. After an unhappy season with Ferrari in 1956, Juan Fangio returned to the Maserati team. The great Argentinian was at the peak of his powers and his consistently brilliant driving, matched by the basic good handling characteristics of the 250F chassis, resulted in a car/driver combination that was unbeatable until the Vanwall found its form in mid-season. Fangio was particularly happy to sign up again with the Maserati team of which he wrote in his memoirs, *My Twenty Years of Racing* (Temple Press, 1961), 'I was very pleased to be racing for Count Orsi and his son Omer, two great gentlemen whose correctness and courtesy could only be compared with the invariably proper attitude of the Mercedes and Alfa Romeo directors . . .' Jean Behra remained with the team and the other works drivers were Carlos Menditeguy, now fully recovered from his bad accident, and Harry

Schell, who had joined Maserati after two seasons with the promising, but as yet unreliable, Vanwalls.

Maserati designer Giulio Alfieri, who was head of the technical department, was well satisfied with the way in which the two new off-set cars with smaller frontal area had performed at Monza in 1956, but he regarded these as an interim model and the new cars built for 1957 were much improved. Although the general layout of the 1956 cars was retained (except that the 1957 cars did not have the angled engine and off-set transmission), there was a new multi-tubular space-frame of much smaller diameter tubing and with the more important corners between the main tubes reinforced by tubular struts. This new chassis was both lighter and stronger than that used in 1956. Apart from the fact that one of the 1957 cars had experimental welded tubular wishbones instead of the usual forged components, the suspension and transmission were unchanged. The only modification of importance to the familiar six-cylinder engine was that the trumpets of the Weber carburettors were now enclosed in a sealed aluminium box which was fed with air by a very prominent tubular intake on the right-hand side of the bonnet.

As on the experimental 1956 cars, the steering box was mounted on the chassis frame instead of on the clutch housing as this gave better insulation from engine vibrations. New and even wider and stiffer brake drums were fitted and these had cooling cross-ribs grouped in threes and lacked the air-deflector plates mounted on the outsides of the drums of the 1956 cars. The latest cars looked sleek, low and purposeful, with a distinctively tapering nose, many more body louvres than on the 1956 cars, a bulbous, riveted-alloy rear tank forming a headrest (and with the oil tank as usual behind the fuel tank) and scuttle-top air intakes to cool the driver's feet. Three of these cars, 2527, 2528 and 2529, were built.

Of the 1956 works cars, 2521 was sold to John du Puy and 2522 to Scuderia Centro-Sud. This team retained its older car, 2511, and as the new car could not be delivered in time, borrowed 2505, André Simon's old car, for the Argentine races. Scuderia Guastalla had withdrawn from racing and their car was eventually acquired by Ottorino Volonterio; Horace Gould, Bruce Halford, Francesco Godia-Sales and Luigi Piotti retained their existing cars. No new 250Fs were built for sale to private owners and, indeed, on occasions, owners found difficulty in persuading the works to supply spares!

The most exciting Maserati development for 1957 was, however, the new V-12 car (known at the factory as the *dodici*) which first appeared at Siracusa in April. The Maserati design office had started work on a

successor to the 250F in 1956 and this had originally been planned as a horizontally opposed twelve-cylinder engine for which a new chassis would be built. As 1956 drew to a close much of the work on the engine had been completed, but it was realised that there was very little time to build a new chassis and that this was an expense that the team would do well to avoid with so many costly projects already under way. Although it was not a practical proposition to instal a flat-twelve engine in the existing chassis, the 250F chassis could be modified to take a V-12 engine and it was decided to redesign the engine as a 60 degree V-12.

This new engine, which had a capacity of 2,490cc ( $68.7 \times 56\text{mm}$ ), had twin overhead camshafts per bank of cylinders driven by a very elaborate train of gears from the front of the crankshaft. The fuel, water and oil pumps were also driven from the front of the crankshaft. The deep crankcase extended upwards to surround the pressed-in cylinder liners and there were separate cylinder heads. Lubrication was by a dry sump system. Originally it had been intended to mount six normal Weber twin-choke carburetters in the vee of the engine, but there was insufficient room and the problem was overcome by using inlet ports that rose vertically from the valves and emerged alongside the centrally located sparking plugs; between each pair of camshafts were installed three specially made Weber twin-choke carburetters which were given the designation 35 IDM. Ignition was by twin plugs per cylinder and as it was not possible to manufacture magnetos suitable for this engine, there was a separate Marelli motorcycle-type coil for each plug, with special distributors having twelve sets of contacts mounted at the front of each inlet camshaft. The V-12 model was known as the 250F T2.

During initial testing the engine was developing around 300bhp and although it was clearly going to prove very competitive in terms of sheer power, and prolonged and stress testing had revealed that it was a very reliable unit, there was a perceptible time lag on sharp opening of the throttle before the power came in and the power curve in the middle rev range was far from satisfactory. It was, however, hoped that the power curve problem would be solved by a new five-speed gearbox on which first gear would be fully usable and not just for starting. The first chassis adapted to take the V-12 engine was 2523 and the most extensive modifications to this affected the steering. A new steering box was mounted behind the radiator on a tubular superstructure and the steering column passed down the vee of the engine (on the 250F there was a drag-link alongside the engine). A larger radiator was fitted and to accommodate this there was a larger nose cowling. The wider 1957 250F brake

drums were used, there were two air scoops on the bonnet top (one taking air to each row of carburettors) and the car could easily be distinguished by two long exhaust pipes running along each side.

On the day before the Argentine Grand Prix, the Formule Libre New Zealand Grand Prix was held on the Ardmore circuit, and as this was followed by several other races which now form part of the Tasman series, these are more conveniently described together before discussing the Buenos Aires races. At Ardmore on 12 January the private Maseratis of Horace Gould, Stan Jones and Bib Stillwell (who had acquired Hunt's car) faced the 'Super-Squalo' Ferraris of Reg Parnell and Peter Whitehead and the ex-Rosier 4,500cc 1951 Ferrari with later body driven by Ron Roycroft. Roycroft led initially, but was passed by the 'Super-Squalos' which finished in the first two places and then Stan Jones went into third place with his 250F and stayed there until the finish. Gould retired his car after missing a gear (the tachometer 'tell-tale' showed 9,000rpm) and Stillwell's car was also eliminated by engine trouble. Another 250F due to run in this race was du Puy's car which was to have been driven by Ken Wharton, but poor Ken crashed his Ferrari Monza with fatal results in the sports car race preceding the Grand Prix.

In the Lady Wigram Trophy race at Christchurch on 26 January the only 250F driver was Horace Gould, but the race was run in excessively hot conditions which were more than the West Countryman could stand; his driving became more and more erratic and he eventually retired suffering from heat exhaustion. The race was won by Whitehead with his 'Super-Squalo'. The final round in the New Zealand Road Racing Championship was a 102 mile race on the Ryal Bush circuit at Invercargill. The race was again dominated by the Ferraris of Whitehead and Parnell, but Gould finished third with his 250F. On 4 March, a mere three months after the 1956 race, the 1957 Australian Grand Prix was held on the 2.2 mile Caversham circuit, near Perth. The only Maserati entered was Stan Jones's car, running with a 3 litre Tipo 300S engine, and although he finished first on the road, time-keeping confusion resulted in his subsequent demotion to second place behind Davison's Tipo 625 Ferrari.

Modena sent a total of four cars to the Argentine and in the championship race at the Buenos Aires Autodrome the latest 250Fs were driven by Fangio, Moss and Behra, while Menditeguy drove car 2501. Scuderia Centro-Sud entered Harry Schell in their own car and Joakim Bonnier, making his Grand Prix début, with the older, borrowed car. The only other private entrant was Piotti with his own, works-backed 250F.

Opposition came from a strong team of six Lancia-Ferraris driven by Collins, Hawthorn, Castellotti, Musso, Perdisa and Gonzalez, who was making yet another rare return to motor racing. Moss made fastest time in practice in 1min 42.60sec, an official lap record, and he was joined on the front row of the grid by team-mates Fangio and Behra and Castellotti's Maranello entry.

Although the Lancia-Ferraris put up a good show in the early stages of this three-hour race, Fangio and Behra came through to take the first two places ahead of Menditeguy and Schell with his Centro-Sud car. The highest placed Lancia-Ferrari was that of Gonzalez, taken over during the race by de Portago, which finished fifth. Only a few hundred yards after the start the accelerator broke on Moss's car and after a long delay while it was repaired Moss rejoined the race to finish eighth, seven laps in arrears, but with the slight consolation of setting fastest lap in 1min 44.70sec. With works cars in the first three places and the Lancia-Ferraris soundly trounced, the results could hardly have been more satisfactory for Maserati and it seemed that the latest 250F was a much improved car.

In 1957 the Buenos Aires City Grand Prix returned to its proper venue, but the circuit used at the Autodrome was a slower one than that on which the championship Grand Prix was held and the results were decided on the aggregate of two 30 lap heats. Officine Alfieri Maserati fielded the same cars and drivers, but the older Centro-Sud car was handled by Alessandro de Tomaso (he had driven the team's elderly four-cylinder Ferrari in the championship race) and Giorgio Scarlatti was at the wheel of Piotti's car. The race was run in excessively and enervatingly hot weather which particularly affected Moss and Collins in the first heat, the former retiring his car and the latter handing his Lancia-Ferrari over to Masten Gregory and then, after taking a breather, relieving von Trips. Fangio won this heat from team-mate Behra, the Lancia-Ferraris of Castellotti, Hawthorn and Musso finished third, fourth and fifth and Menditeguy took sixth place. Hawthorn led the opening laps of the second heat, but then Fangio and Behra came through into the first two places which they held until an inspired Peter Collins, now apparently having adjusted himself to the temperature, forced his Lancia-Ferrari past them both and the Kidderminster driver retained the lead until the chequered flag. A third works Maserati shared by Menditeguy and Moss finished sixth in this heat. Fangio and Behra took the first two places on aggregate ahead of the Lancia-Ferrari driven in the first heat by Musso and in the second by Collins. Shortly afterwards Fangio scored a victory in the Boa Vista Grand Prix, a Brazilian 68 mile

Formule Libre race, from other Maseratis driven by Munaron and Machado.

The first Formula 1 race of the European season was the Syracuse Grand Prix held on 7 April and Maserati brought three cars to this race, the V-12 model in the form already described, one of the latest lightweight cars, 2528, for Jean Behra and the 1956 car, 2501, for Harry Schell. During the first day's practice Behra tried hard with the V-12 car, but found that its pick-up out of corners was disappointingly sluggish and he soon abandoned it in favour of the lightweight six-cylinder model. Both Schell and Scarlatti tried the V-12 car on the second practice day, but neither made much headway and the original intention of letting Scarlatti drive it in the race was abandoned. Private Maserati owners were out in force at Siracusa; Scuderia Centro-Sud fielded both of their cars, the later model, 2522, for Piero Taruffi and 2511, appropriately painted white, for one-time Mercedes-Benz works driver Hans Herrmann; Piotti and Godia-Sales appeared with their works-supported cars and Bruce Halford was still driving his elderly 1954 car, 2504. At this race opposition to the Maseratis came from two works Lancia-Ferraris driven by Collins and Musso, Vanwalls driven by Moss and Brooks, and Connaughts entered for Ivor Bueb, Jack Fairman, Les Leston and Peter Walker (the latter with Rob Walker's car). During practice Leston's car (the actual 1955 Syracuse winner) was very extensively damaged when a universal joint on the right-hand drive-shaft broke, the drive-shaft flailed through the fuel tank and the car burst into flames and crashed into a wall.

Just before the start of the race Behra's car was overheating badly, although the team was not sure why, and so he and Schell swapped cars. Unfortunately the chassis on Schell's car had broken on the rear left-hand side, so the Maserati challenge had faded even before the flag fell. Schell retired the overheating 1957 car after only two laps with what was later discovered to be a seized water pump, and Behra retired at the end of lap 19 after falling way behind the leaders because of a pit stop for the brakes to be adjusted. Moss led the race with his Vanwall until he was forced to stop at the pits for a split fuel-injection pipe to be replaced and he rejoined the race to finish third behind the Lancia-Ferraris of Collins and Musso. The only Maserati finisher was Taruffi, who drove a steady race to take fourth place ahead of Bueb's Connaught and the Formula 2 Coopers of Brabham and Wicken.

The Pau Grand Prix, which in 1956 had been cancelled on safety grounds in the panic following the Le Mans tragedy, had now been restored to the calendar and both it and the international Goodwood

meeting were held on Easter Monday. At the Sussex circuit the only Maserati entered was the Gilby car, completely overhauled for 1957, but with its better days behind it, and this was driven by Formula 3 man Jim Russell now that Salvadori had joined the works BRM team. In a field dominated by British cars, many of which were hopelessly unreliable even in this short 32 lap race, Russell plodded round to finish fifth, two laps in arrears. The race was won by Lewis-Evans with the new 'toothpaste-tube' Connaught after the works Vanwalls and the fastest Connaught driven by Scott-Brown had fallen by the wayside.

In the absence of works Ferraris and Vanwalls the Pau race proved a complete Maserati benefit. Only one works car for Jean Behra was entered, but there were even more private cars than seen at Siracusa. Scuderia Centro-Sud fielded their newer car for Harry Schell and the older example, with the suitable addition of a blue stripe on the white paintwork, for American sports car driver Masten Gregory. Godia-Sales, Gould, Halford and Piotti had their usual cars and the ranks of the 250F drivers were swelled by two 'unknowns', R. Bourelly with the ex-Rosier car and Barthe with the ex-Simon car. Opposition to the Maseratis came from four works Gordinis, two Connaughts driven by Leston and Bueb and Maurice Trintignant with the old four-cylinder Ferrari that had belonged to Louis Rosier, but now confusingly belonged to Marc Rozier. Of the sixteen cars to practise, only fourteen were allowed to start and Barthe and Burgraff (eight-cylinder Gordini) were eliminated as the slowest in practice. For Behra the race was little more than a joy-ride and over the now completely resurfaced circuit he pulled further and further away from the rest of the field to win by two laps from Schell with the Centro-Sud car. Bueb and Leston finished third and fifth for Connaught, Trintignant held a gallant fourth place with his ancient Ferrari until the oil pressure sagged and in fourth place at the chequered flag was the other Centro-Sud Maserati driven by Gregory who had performed very well in his first Grand Prix.

Maserati did not enter the Naples Grand Prix run on the Posillipo circuit on 28 April and the race was dominated by Ferrari, the Lancia-based cars of Collins and Hawthorn taking the first two places and Musso finishing third with the brand-new Formula 2 car. Horace Gould finished fourth for Maserati, despite a valve breaking off at the head and the car running on five cylinders for the last two laps. Gregory was fifth with the newer of the Centro-Sud cars, Halford took sixth place and in seventh spot was Bellucci with a 2 litre sports Maserati. After only four laps Volonterio retired his ex-Guastalla car with water in the cylinders.



At the Monaco Grand Prix on 19 May, the first championship race of the European season, Maserati turned up with five superbly prepared cars. Spear-heading the attack were the three lightweight cars driven by Fangio, who was racing for the first time since the South American events, Menditeguy and Schell. Jean Behra was out of the team because of injuries suffered in a road accident. A fourth 250F entered by the works was 2501 which was driven in practice by Hans Herrmann and Giorgio Scarlatti and in the race by the Italian, who was the faster of the two. The team also brought along the V-12 car, 2523, now fitted with the new five-speed gearbox which had been tried out in the V-12 sports car driven in the Mille Miglia by Herrmann and a modified exhaust system with two pipes per bank of cylinders, a pair emerging on each side of the car, and terminating in megaphone ends just ahead of the rear wheels. Although this exhaust increased the power at high revs, it did little to help pick-up out of corners; all four Maserati drivers tried the V-12 car during practice, but it was only too obviously a tremendous handful. Only Fangio, by dint of sliding the car into corners, with the clutch out and the engine running at 6,000rpm, and then letting the clutch in with a tremendous bang which accelerated the V-12 sideways up the road, could achieve respectable lap times. Once again the V-12 was a non-starter. At Monaco, private Maseratis were driven by Masten Gregory (with the older Centro-Sud car), Gould, Simon and Piotti, but the latter two drivers failed to qualify as starters.

Opposition at this race came from a strong team of Lancia-Ferraris driven by Collins, Hawthorn, Trintignant and von Trips, there were Vanwalls with special short noses to reduce the risk of accidental body damage driven by Moss and Brooks and rather less serious entries came from BRM for Salvadori and Flockhart, Connaught (the team's last race before withdrawing for financial reasons) for Lewis-Evans and Bueb and a combined works and Rob Walker entry of rear-engined Coopers for Brabham (whose car had a 2 litre engine) and Leston (with a 1.5 litre engine). Salvadori failed to qualify as a starter. After Brabham had crashed in practice he took over Leston's car and the 2 litre engine was transferred to this.

Moss with the Vanwall went straight into the lead at the start of the race, heading Fangio and Collins, but Collins took second place on the first lap and three laps later Hawthorn passed Menditeguy to hold fifth place behind Brooks. At the chicane on that lap the whole face of the race changed and what seemed to have the makings of a runaway Vanwall victory turned into a Fangio benefit. Moss overshot his braking

point, hit the barricade and poles flew all over the track. Collins desperately tried to avoid the stricken Vanwall, but hit the barricade on the harbour side of the track. Both Fangio and Brooks succeeded in avoiding the stricken cars, but Hawthorn hit a rear wheel of Brooks's almost stationary Vanwall, the left-hand front wheel was torn off the Lancia-Ferrari and the Maranello car slid up the tail of its stable-mate. Three of the leading contenders were out of the race, what had been a close fight became a procession, and with Brooks settling for a safe second place rather than trying to challenge the leader, Fangio was able to cruise on for the remaining ninety-six laps to score his second World Championship race victory of the season. Menditeguy rose to second place when von Trips handed his Lancia-Ferrari over to Hawthorn for a short while, but retired when he spun off at the chicane; Schell had already retired at the pits with a broken king-post; and Scarlatti's works car, taken over by Schell, was eliminated when it lost all its oil. As a result of these retirements Gregory, with the Centro-Sud car, was in third place at the chequered flag, ahead of Lewis-Evans with the well-driven 'tooth-paste-tube' Connaught, Trintignant's Lancia-Ferrari and Brabham's Cooper-Climax.

The cancellation of the Belgian and Dutch Grands Prix for financial reasons, together with the gradual disappearance of the less important Formula 1 races, resulted in a lull in Formula 1 racing until July, but there was one race at the end of June in which Maserati almost competed. This was the Monza 500 Miles race held in three heats over the banked track and intended to provide a match between the best and fastest of the Indianapolis cars and their European counterparts. Certainly for the European teams to compete with the Americans on level terms would have required the construction of special cars, something which in itself negatived the motive behind holding the race, and any hope of a serious match was lost when the race was boycotted by the leading European drivers, who claimed that it was dangerous. For this race Maserati produced the V-12 chassis used at Monaco, now fitted with the 3.5 litre V-12 Mille Miglia engine, a set of Halibrand magnesium-alloy disc wheels grafted on to standard Maserati hubs, special 7.60 x 18in Firestone track tyres and a modified bonnet without air scoops, but with gauze-covered slots over each row of carburetters. Jean Behra drove the car in practice, but it handled atrociously because of the large-section tyres and was withdrawn. A version of the Tipo 450S sports car, fitted with a 4.2 litre version of the V-8 engine, also appeared, but this had to be withdrawn because of steering problems and a split rubber gaiter on a rear universal

joint which caused the pot-joint to seize up (the trouble that had plagued the team at Le Mans).

In 1957 the French Grand Prix was held on the magnificent 4.06 mile Circuit des Essarts on the outskirts of Rouen, a fairly fast circuit, but one characterised by its lack of real straights and its preponderance of fast curves and downhill bends that tested a driver's ability to the full. From Maserati came the three lightweight cars for Fangio, Behra and Schell, while Menditeguy, whose driving at Monaco had been considered rather wild, was relegated to the 1956 car, 2501. A modified version of the V-12 car also appeared, based on a new chassis, 2530. This was generally similar to the lightweight 1957 250F chassis, but with spur gears behind the clutch to lower the crankshaft line of the V-12 engine and with the steering box mounted on a tubular structure as on the original V-12 car. A riveted fuel tank with headrest was fitted, there was a long, tapering nose cowl, an aluminium tray surrounding the vertical carburettor intakes was used as a heat-shield from the engine and in place of the original air scoops on the bonnet, there were two sunken ducts. Giorgio Scarlatti was at Rouen as reserve driver in case the V-12 car should actually be raced. Because of the strict limit on the number of runners at this race, the only private Maserati driver to appear was Horace Gould at the wheel of his usual car.

Lancia-Ferraris were entered for Collins, Hawthorn, Musso and Trintignant, and because Moss was suffering from a nose infection and Brooks had not yet recovered from a crash with an Aston Martin at Le Mans, the Vanwalls were driven by Salvadori and Lewis-Evans. BRM entered cars for Flockhart and Mackay-Fraser and there were Coopers driven by Brabham and Macdowell. Through the combination of the 250F's good balance and handling characteristics, the masterful driving of Fangio who was flinging both the 250F and the V-12 through Rouen's difficult bends in high-speed power slides, and the sheer determination of Behra, Modena completely dominated practice with the two leading Maserati drivers making fastest times and Luigi Musso, at the peak of his form, alongside them on the front row of the grid with his Lancia-Ferrari. Although it had shown much more promise than hitherto, the V-12 car was again left unraced.

After a long hold-up on the grid because the engines of several cars refused to fire quickly, Musso led away from Behra and Fangio. By lap 4, Fangio was in front and was pulling away from Musso, Collins, Behra and Schell. Collins passed Musso, but fell back again with gearbox trouble and all the while Fangio was disappearing further and further

into the distance, progressively lowering the lap record, his mastery of the difficult circuit a delight to watch as he thrust the 250F through the corners, balancing the power with steering lock and placing the car within inches of the kerb. At around lap 60 there were signs of activity in the Maserati pit and the Ferrari team concluded—quite wrongly—that Fangio's driving style was causing excessive tyre wear and that he was going to stop for the back wheels to be changed. Musso was urged on from the Ferrari pit, the young Italian finally reduced the lap record to 2min 22.4sec and then two laps later he spun at the Nouveau Monde hairpin bend. But Musso's efforts were all in vain, Fangio failed to make the expected pit stop and at the chequered flag was over fifty seconds ahead of the Italian. Other Lancia-Ferraris driven by Collins and Hawthorn finished third and fourth.

Of the other Maserati finishers in this race, Behra was an unhappy fifth, soaked with oil from a leaking engine which had finally expired so that he was forced to push the car across the line, and Schell was sixth, an overheating engine forcing him to coast along the downhill sections of the course—by the finish his engine sounded very rough. Menditeguy had been thoroughly piqued at being demoted to driving the 1956 car and his attitude was reflected in his handling of the car, which was careless and erratic. After taking to the grass on numerous occasions, he drove over an earth bank, tearing away the oil pipes underneath the engine and carrying on until the engine, deprived of lubricant, blew up. Gould was eliminated early in the race when his Maserati's back axle suddenly seized up and he was rammed by Brabham's Cooper.

The weekend after the Championship Grand Prix at Rouen, the Automobile Club de Champagne, the organisers of the Grand Prix when it was held at Reims, had their own non-championship race on the very fast circuit near the cathedral city. After the ravages of Rouen the Maserati team was rather short of cars and while two of the lightweight cars were returned to the factory for preparation for the Silverstone race, Fangio drove what was basically one of the 1956 Monza cars, Schell handled Fangio's now rather tired Rouen-winning car and Behra was at the wheel of 1956 car, 2501. On the third practice day at Reims the Modena team produced a brace of hastily prepared V-12 cars. One of these was the original Syracuse and Monaco car, 2523, now converted back to 2.5 litre form and the other was a further new model with lightweight chassis based on one of the 1956 Monza cars and with offset transmission. Behra drove the new car in practice, but after only a few laps a piston failed and the car was pushed away. So Menditeguy drove the original car on

the V-12's first race appearance. A very strong contingent of private Maseratis appeared at this race; these were driven by Joakim Bonnier (with the ex-Simon car), Ivor Bueb (Centro-Sud car 2522), Godia-Sales, Gould, Gregory (Centro-Sud car 2511), Halford, Piotti and Volonterio. The last-named non-started, however, because of mechanical trouble. As at Rouen, the main opposition came from the Lancia-Ferrari and Vanwall teams and the British cars were again driven by Salvadori and Lewis-Evans.

Although it had been expected that the Lancia-Ferraris, the engine characteristics of which were well suited to the high-speed, flat-out nature of the Reims circuit, would dominate practice, Fangio and Behra, trying their hardest, were first and third fastest, sandwiching the Vanwall of Lewis-Evans on the front row of the grid. The young Welshman, who had now familiarised himself with the very sensitive handling characteristics of the Vanwall, made a brilliant start and soon pulled clear of Musso who, in turn, had the edge over Fangio. From lap 20 of this 61 lap race the gap between the Vanwall and the pursuing Lancia-Ferrari decreased as an oil leak from the engine of the British car was seeping into the cockpit, blowing over Lewis-Evans's goggles and gloves and compelling him to ease up. On lap 34 Musso went by into first place. Fangio, whose Maserati had been chased hard by Hawthorn until the British driver's Lancia-Ferrari succumbed to engine trouble, was now caught by team-mate Behra and the two Maserati drivers began to scrap and swap places. Fangio and Behra swept by poor Lewis-Evans, but on lap 57, as Fangio braked for the Thillois hairpin, his 250F's brakes locked up, the World Champion aimed his car at what looked like inoffensive straw bales, but they concealed an earth bank and the Maserati came to rest with smashed front suspension and nose. Musso took the chequered flag over twenty-five seconds ahead of Behra, with Lewis-Evans third, Schell fourth and Salvadori in fifth place with the other Vanwall. Of the other Maseratis to be classified, Gould came home sixth, just pipping Gregory who had stopped three laps before the finish because of low oil pressure and pushed his car across the line. Fangio was classified eighth, even though his car lay stricken out on the circuit, and Bueb, Piotti and Halford took ninth, tenth and eleventh places. After stalling at the start Menditeguy had gone well with the V-12 car until it burnt a piston just before half-distance.

Only another week elapsed and the Maseratis were in action again at the European Grand Prix at Aintree. Here the three lightweight cars were entered for Fangio, Behra and Schell and Menditeguy drove 2501.

At this race private Maseratis were rather thin on the ground, but Gould and Bonnier were entered with their own cars and Ivor Bueb drove the Gilby car which was making only its third appearance of the season. However, Gould non-started because of an injured foot. Vanwall fielded three of their sleek green cars for Moss, Brooks (who was still not completely fit) and Lewis-Evans, from Maranello came Lancia-Ferraris for Collins, Hawthorn, Musso and Trintignant, BRMs were driven by Fairman and Leston and the field was completed by three Coopers, including Bob Gerard's car with his special 2,246cc Bristol engine mounted at the rear of a Formula 2 chassis. Practice was dominated by the Vanwalls and the Maserati of Jean Behra, and Moss and Brooks sat on either side of the Frenchman on the front row of the grid. At this circuit Fangio appeared to be off-form and rather half-hearted in both practice and the race.

From a smooth and well-organised start Moss pulled away into the lead from Behra, and Fangio soon dropped back to the middle of the field. At the end of lap 22 Stirling pulled into the Vanwall pit, the engine of his car sounding very rough, and Behra went by into the lead, pursued by Hawthorn's Lancia-Ferrari. Moss took over Brooks's Vanwall on lap 26 and rejoined the race in ninth place. Schell stopped at the pits to complain that his car was overheating, rejoined the race, but retired with water pump failure on lap 39. Moss, now eighth, swept by Menditeguy (who later retired with prop-shaft trouble) for seventh place and began to chase after Fangio. Although the Vanwall was making up ground at a tremendous rate, Behra's lead seemed secure and it looked as though Maserati had the race in the bag. Moss took sixth place from Fangio (who retired with engine trouble on lap 49), passed Musso and moved up to fourth place when Collins retired his Lancia-Ferrari with a water leak. Moss now closed up on team-mate Lewis-Evans in third place and although it seemed that the two Vanwalls would pass Hawthorn, Behra had quickened his pace and seemed as uncatchable as ever. Just as Moss was about to pass Lewis-Evans, a valve failed on Behra's Maserati and wrecked the engine, debris was spread over the track, Hawthorn punctured a tyre on Maserati engine fragments and the Vanwalls were now in first and second places. Although Lewis-Evans later stopped out on the circuit with throttle linkage trouble, rejoining the race to finish seventh, Moss went on to score Britain's first major Grand Prix victory since Segrave's win with a Sunbeam at Tours in 1923. While Vanwall rejoiced, the Maserati team grimaced. Of the six Modena cars that had started the race, the sole finisher was Bueb's rough-running, unhealthy Gilby

car which took eighth and last place, nineteen laps behind the winner.

Maserati now concentrated on preparing their cars for the German Grand Prix and, despite considerable pressure from Behra and Schell, firmly refused to let either have a works car for the Caen Grand Prix held the weekend after the Aintree race. Behra made arrangements to drive a BRM and won the race with this, while Schell, after the ex-Rosier Maserati which he had borrowed from Bourelly had broken a piston in practice, persuaded Raymond Mays to let him drive the spare BRM. Schell held second place until the Bourne car blew up its engine. Roy Salvadori finished second with a works 2 litre Cooper-Climax and the private Maseratis of Halford, Bonnier, Gould and Piotti finished third, fourth, fifth and sixth. The same day as the Caen race there was a 15 lap Formule Libre event at Snetterton, in Norfolk. The only Formula 1 car entered was the Gilby Maserati, now driven by young Keith Greene, son of the team's *patron*; he took fourth place behind Scott-Brown's sports Lister-Jaguar and a brace of Formula 2 Coopers.

By the German Grand Prix at the Nürburgring Menditeguy had fallen out with the Maserati team (he was dissatisfied with the preparation of the cars he was given to drive) and he had returned to the Argentine in a huff. His place was taken by Giorgio Scarlatti, a much steadier and more responsible driver, and at the German race he handled 2501, while the regular trio of Fangio, Behra and Schell drove the lightweight cars. Scuderia Centro-Sud entered Gregory with 2511 and Herrmann with the white-painted 2522, Godia-Sales appeared with his usual car (but with the bonnet painted 'Spanish' yellow to comply with a requirement that cars ran in their national colours) and after the BRM team had scratched because of a lack of drivers, Gould and Halford took their places with their usual cars. The Vanwalls were handling atrociously on their first visit to this car-breaking circuit and so the race was a straight fight between Modena and Maranello, the latter having entered V-8 cars for Collins, Hawthorn and Musso.

At this race Maserati decided to start their cars with half-full fuel tanks and when they came in to refuel at half-distance the rear wheels would be changed if necessary. The idea was that without full tanks, which adversely affected handling, the cars could be driven hard from start to chequered flag. Although this sort of strategy sounds fine in theory, it rarely works in practice and experience has shown that a driver cannot usually build up a big enough lead to make a pit stop without losing it again. And it is certain that but for Fangio's brilliance the plan would have misfired in 1957. The Lancia-Ferraris of Hawthorn and Collins led

initially, but Fangio soon went ahead; he was consistently lowering the lap record and when he stopped at the pits at the end of lap 12 he had a lead of 28 seconds. Refuelling the car and changing the rear wheels took 52 seconds and with slowing off for the stop and restarting Fangio lost another 25 seconds or so. It seemed that his chances of catching Collins and Hawthorn, who were way out in front and taking turns at leading, were very slim.

During the first three laps after his pit stop Fangio made no impression on the Lancia-Ferraris, but then he speeded up, progressively lowering the lap record still further. By the end of lap 20 he had reduced the record to 9min 17.4sec, bettering his own record set in the 1956 race by 24.2sec, and he was right on Collins's tail. On the next lap Fangio passed both Ferrari drivers and Hawthorn hit a grass bank as he instinctively moved out of the way. After the race Hawthorn commented that if he had not moved out of the way he was sure 'the old bugger would have run right over me'. Although Hawthorn chased the Argentinian all the way until the chequered flag fell at the end of lap 22, he was unable to get to grips with the Maserati. This was one of the finest drives in Fangio's career. Musso (Lancia-Ferrari) and Moss (Vanwall) took fourth and fifth places. All the other Maserati drivers were out of the picture in this race; Behra fell back to finish sixth, Schell was seventh, Gregory eighth and Scarlatti tenth behind Brooks's Vanwall.

An interesting additional championship race in 1957, that did much to compensate for the cancellation of the Belgian and Dutch races, was the Pescara Grand Prix run on 18 August over an arduous 15.9 mile circuit on the Adriatic coast of Italy that incorporated a mountainous stretch of difficult twists and turns, up and down hill, and the long and very fast Montesilvano straight, the whole consisting of normal roads with the usual roadside hazards. The same four works Maseratis with the same drivers as at the Nürburgring were entered, but the team also brought along the latest V-12 car. This was driven in practice by both Fangio and Behra, but the time it lost through the twists and turns of the mountainous part of the circuit it was unable to make up on the straights and once again it was decided not to race the car. Scuderia Centro-Sud entered their usual pair of cars for Gregory and Bonnier, and Godia-Sales, Gould, Halford and Piotti drove their own 250Fs. Ferrari had decided to give this race a miss, but after he had been harangued by long-distance telephone calls from Musso trying to persuade him to change his mind, he relented and a single V-8 car was sent along for the slim Italian to drive. Vanwalls were driven by Moss, Brooks and Lewis-Evans and the



entry of sixteen cars was completed by the Formula 2 Coopers of Salvadori and Brabham.

The circuit was one with which most of the drivers were unfamiliar and Fangio with a borrowed Lancia, Behra with a Porsche battered by a collision with two lorries en route to the circuit, and Scarlatti with a very pristine Lancia Aurelia GT, covered many laps in private practice in an effort to learn it. Fangio took pole position on the grid with a lap in 9min 44.6sec and he was joined on the front row by Moss (with a lap in 9min 54.7sec) and Musso (10min dead). Because of the intense heat of the midday sun, the start was set for 9.30am and it was reckoned that the eighteen laps would be completed before the day was at its hottest.

From a chaotic start—in which a mechanic was scooped up on the bonnet of Gould's Maserati—Musso with the solitary Ferrari accelerated into the lead and stayed in front until Moss took the lead on the second lap. After Musso's V-8 car had expired in the mountains on lap 10, Fangio ran second, but he was completely outdriven by the Vanwall team-leader and at the chequered flag, after three hours of arduous racing, was three minutes behind Moss. Schell took third place, Gregory was fourth with his Centro-Sud car, Lewis-Evans was fifth for Vanwall and Scarlatti, after stopping at the pits with a very flat-sounding engine and clutch trouble, rejoined the race to take sixth place. On the first lap Gould had rammed some straw bales and retired at the end of the lap, Piotti was already so far behind that he decided to pull out of the race, Behra was in fourth place on lap 3 when his engine lost all its oil through a broken pipe, Bonnier went out with engine failure on lap 5, Halford's Maserati broke its transmission on lap 9 and Godia-Sales's car broke its engine on the same lap. Another magnificent victory for the Vanwall team that the Italians had never taken seriously and a severe reverse for Modena!

Next on the calendar was the Italian Grand Prix held on the road circuit only at Monza, but, nevertheless, a circuit on which very high lap speeds were attained. Maserati were now only too well aware that the 250F could no longer match the speed of the vastly improved Vanwalls and the one car that could, the V-12, was still far from fully developed. While Fangio and Schell drove the usual lightweight cars and Scarlatti was at the wheel of 250I, it was decided to take a gamble and Behra was entered with the latest V-12 car.

The V-12 car was chassis 2531 with offset transmission and it had been extensively tested and developed prior to the Monza race. The engine was fitted with 14mm sparking plugs which gave better results than the

earlier 10mm plugs, a carburettor shield was fitted (as on car 2530), there were long, slim exhaust pipes merging into single pipes sweeping over the rear wheels (as at Siracusa and believed to improve pick-up from low engine speeds) and there was a horizontal baffle in the radiator air intake which could be adjusted to deflect more air to water or oil radiator as required. The only major chassis modification was that the steering box was now mounted on the chassis frame by the upper right-hand front wishbone and the steering column was universally jointed to run from the bulkhead across the right-hand cylinder head.

At Monza, private Maseratis were driven by Masten Gregory (Centro-Sud car 2511, now painted blue with white stripes), Joakim Bonnier (Centro-Sud car 2522, now painted silver with a blue and yellow stripe down the centre of the bonnet, fitted with a 1957 type body with a long nose and high cockpit sides and a new engine), Godia-Sales (appearing as at the Nürburgring as a works entry), Gould, Halford (who had borrowed de Puy's car and repainted it red with a green bonnet flash to match his own car), Piotti and Volonterio (who shared his car with Simon). The Vanwalls were driven as usual by Moss, Brooks and Lewis-Evans and Lancia-Ferraris by Collins, Hawthorn, Musso and von Trips.

That the Vanwalls had the upper hand was only too obvious in practice, but the real sensation was Lewis-Evans whose lap in 1min 42.4sec neither of the other and more experienced Vanwall drivers could better. The three sleek green cars were joined on the front row of the grid by Fangio's Maserati which was fourth fastest in 1min 43.1sec. During practice both Fangio and Behra drove the V-12, cornering in long slides with the rear wheels spinning and the revs screaming. That the V-12 was still a terrible handful was beyond doubt, but Behra's best lap in 1min 43.9sec (fractionally bettered by Fangio) was fifth fastest. Shortly before the start of the race an Italian priest, wearing an official Maserati armband, took photographs of the cars and then gave them a benediction!

The early laps of the race witnessed a bitter struggle between the Italian red of Modena and the British racing green of Park Royal. Moss led initially, Behra, the V-12 engine screaming raucously, shot past Moss on the back straight on lap 4. Moss went back in front on the next lap and three laps later Fangio whistled through into the lead. Moss fought back, went by Fangio and then Brooks passed them both. Next to lead was Lewis-Evans, but it was obvious that such a furious pace must result in mechanical casualties. The first in trouble was Brooks, who pulled into the pits at the end of lap 19, rejoining the race a lap in arrears after a jammed throttle had been rectified. Four laps later Lewis-Evans

stopped with cylinder head trouble, and although he rejoined the race four laps in arrears only Moss was left to fight it out with the Maseratis. The fight came to an end when Behra stopped at the end of lap 27 for new rear tyres and for the fuel tank of the voraciously thirsty V-12 to be topped up. He rejoined the race in fifth place, the wheels spinning furiously as he accelerated down the pits road. Moss was now steadily drawing away from Fangio, who had reconciled himself to sitting back and waiting for something on the Vanwall to break. Piotti's pathetically slow car had retired after only two laps and on lap 31 Bonnier, realising that the new engine fitted to his car was beginning to stiffen up, decided to call it a day. Schell stopped at the pits to complain about an oil leak; this was cured and before he rejoined the race the rear tyres were changed as a precautionary measure.

By lap 40 of this 87 lap race Moss had pulled out a lead of over seventeen seconds, Fangio was then forced to stop for new rear tyres and by the time he was back in the race he was almost a lap in arrears. The V-12 Maserati was running hotter and hotter, Behra stopped twice to take on extra water and he finally retired the car with internal engine damage on lap 50 after a very convincing display of its potential. Schell, who had retired because the oil leak had started again, took over from Scarlatti and Halford retired his car with a split valve cap. Still the leading Vanwall lapped consistently and without trouble, on lap 77 Moss stopped for the nearside rear tyre to be changed and for the oil to be topped up and while he was in the pits, Fangio, who had now been lapped, put himself back on the same lap as the leader.

At the end of the race Moss was still over forty seconds ahead of Fangio, and third-place man von Trips (Lancia-Ferrari) was two laps in arrears. After another smooth, consistent drive in which he benefited from the retirement of faster cars, Gregory took fourth place, the works car shared by Scarlatti and Schell finished fifth and Godia-Sales, Gould and Volonterio/Simon took ninth, tenth and eleventh places. Once again the Modena cars had been soundly trounced by Moss and the Vanwall, but despite the victories scored by Stirling at Aintree, Pescara and Monza, Juan Fangio won his fifth World Championship with 40 points to the 25 scored by Moss and 16 of Ferrari driver Luigi Musso. And at long last Maserati had defeated their Italian rivals, Ferrari, for throughout the year the Maranello cars had been down on power and they had failed to win a single World Championship race.

Although the championship races were over, three Formula 1 events of varying importance were still to be held. A bare week after the Italian

Grand Prix, the *Daily Express* Trophy was run at Silverstone. This race had been postponed from its usual date in May because of the post-Suez crisis petrol rationing in the United Kingdom which, it was thought, would adversely affect spectator attendances. The only works team to support this race was BRM, whose cars dominated both the two 15 lap heats and the 35 lap final. In the first heat the private Maseratis of Gregory (at the wheel of 2511 with a works-loaned engine tuned to run on fuel with a nitromethane additive), Gould and Halford finished in third, fourth and fifth places, and in the second heat the 250Fs of Bonnier and Bueb (the latter at the wheel of the Gilby car which was now running rather better) took second and third places. It was much the same story in the final, the BRMs of Behra, Schell and Flockhart were followed home by the Maseratis of Bonnier, Gregory, Gould and Halford and Bueb took ninth place behind Salvadori's Formula 2 Cooper-Climax.

Only a week later the Modena Grand Prix was run at the Modena Autodrome, a flat, rather uninteresting 2.306 kilometre circuit running round the perimeter of a private airfield and used extensively for testing purposes by both Maserati and Ferrari. Here Maserati fielded lightweight cars for Behra and Schell and the works 'hack' for Scarlatti. The team also brought along the Monza V-12, now fitted with a larger radiator and a header tank behind the engine. The car was tried by Schell and Scarlatti with both the long, thin exhausts and the short megaphones, but it was a bit out of its depth on this tight little circuit and was not raced. Bonnier and Gregory had fallen out with the Centro-Sud team, so Horace Gould drove the single car entered. This was 2511, but after the clutch failed the team hastily produced 2522 for the Bristolian to drive. Gould loaned his own car to Colin Davis, son of the famous Bentley driver, 'Sammy' Davis. As a result of engine trouble in practice, Gould's car ran with the engine from Bonnier's Maserati (at this race Bonnier was driving for BRM). The only other private Maserati entered was Halford's car. The most interesting cars at this race were the new, enlarged-capacity versions of the V-6 Ferrari Formula 2 model, prototypes of the cars to be raced by Maranello in 1958, and these were driven by Collins and Musso. The Modena race was run in heats, each of forty laps, with the final result decided on the aggregate of the times. In each heat Behra, Musso, Schell, Collins and Scarlatti took the first five places and these were therefore the positions on aggregate.

The final Formula 1 race of the 1957 season was the Moroccan Grand Prix held on the Ain-Diab 7.618 kilometre circuit laid out in the scrubby, sandy wastes near Casablanca. If the 1957 race proved a success, it was

hoped to hold a World Championship race the following year. Here Maserati fielded a full team of cars with Fangio, Behra and Schell driving the usual lightweight trio and Scarlatti at the wheel of 2501 (which, however, to satisfy customs requirements for this one race bore the chassis number 2526). The latest V-12 car was again brought along, but it proved unsuited to the circuit and was not raced. The only private Maserati drivers in this race were Godia-Sales and Jean Lucas, who appeared at the wheel of de Puy's little-raced car, 2521. Maserati faced strong opposition from Ferrari (again with two of the enlarged V-6 cars), Vanwall, BRM and Cooper, but a bout of influenza affected several of the drivers and while Moss was forced to scratch from the race, Fangio and Hawthorn ran feeling far from fit.

Although Behra took the lead at the start, he was passed by Collins on the first lap and then came Brooks, Lewis-Evans and Fangio. When Collins spun off, Behra assumed the lead, but he was chased hard by Brooks until the Mancunian's Vanwall pulled into the pits with a rough-sounding engine. Fangio passed Lewis-Evans and held second place behind his French team-mate until he ran out of road and buckled the nose cowling of his 250F against the straw bales. After a pit stop for the car to be checked over and a new rear tyre to be fitted, the Argentinian rejoined the race in sixth place. Behra, too, stopped for the left-hand rear tyre to be changed, but he rejoined the race without losing the lead. At the end of this 55 lap event Behra was still thirty seconds ahead of Lewis-Evans, Fangio took fourth place behind Trintignant's BRM and other Maseratis driven by Schell, Godia-Sales and Scarlatti finished fifth, sixth and seventh.

At the end of 1957 it seemed that Maserati would phase out the very successful, but now rather outdated 250F which had brought the team so much success over a four-year period and that in 1958 Modena would race a full team of the V-12 cars. However, when the accountants at Modena totted up the cost of the season's racing, took into account the heavy development costs incurred in respect of the V-12 car and the V-8 sports model, and looked at the unpaid debts in the Argentine where the company had strong trading interests (a direct repercussion of the fall in 1955 of dictator Juan Peron), Maserati concluded that they could no longer afford to field a full works team and regretfully withdrew from both Formula 1 and sports car racing. The racing department was closed, development work now proceeded on only a very limited scale, and the team's fortunes rested with private owners for whose benefit a small competition workshop was retained.

## The Decline of a Classic Racing Car: The 250F Grand Prix Car, 1958–60

### THE 1958 RACING SEASON

During the remaining three seasons of the 2,500cc Grand Prix Formula, the 250F continued to play an important, albeit, declining role, especially so during the 1958 season following the début of the new lightweight 'piccolo' version. Private owners still regularly raced the earlier cars, although few successes came their way, and the most active among the privateers was Scuderia Centro-Sud.

In January 1958 Ross Jensen, at the wheel of his ex-Moss car, finished second to Jack Brabham's Cooper-Climax in the New Zealand Grand Prix at Ardmore and second to Archie Scott-Brown's Lister-Jaguar in the Lady Wigram Trophy race at Christchurch. On the first of the following month he won the Dunedin Trophy race, beating Brabham into second place.

Juan Fangio's racing manager, Marcello Giambertone, hired two of the 1957 lightweight cars for the Argentine races at the beginning of the 1958 season and these were entered in the name of Scuderia Sudamericana for Fangio and Carlos Menditeguy. The third lightweight car (chassis number 2527) had already been sold to racing motorcyclist Ken Kavanagh, but he agreed to let Jean Behra drive it in the Argentine Grand Prix. Apart from alterations to the carburation and compression ratio necessary to induce the 250F engine to run on the now compulsory 'Avgas' 130 octane aviation fuel, the cars were virtually unchanged. Older 250Fs were driven by Godia-Sales, Gould and Schell (the last-named was at the wheel of a Centro-Sud car).

Although the Maseratis had the power and the speed to match the Ferraris, at the Buenos Aires Autodrome tyre failures proved to be the

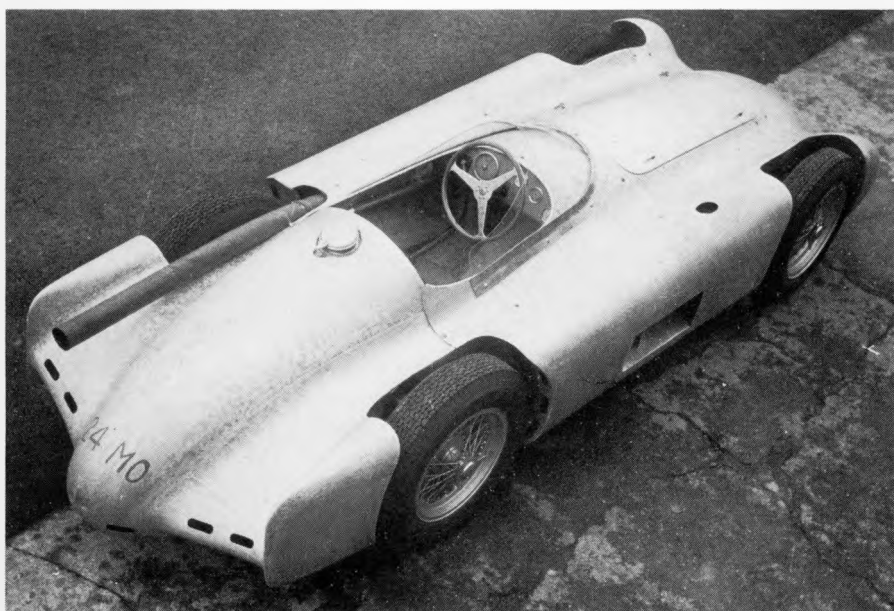
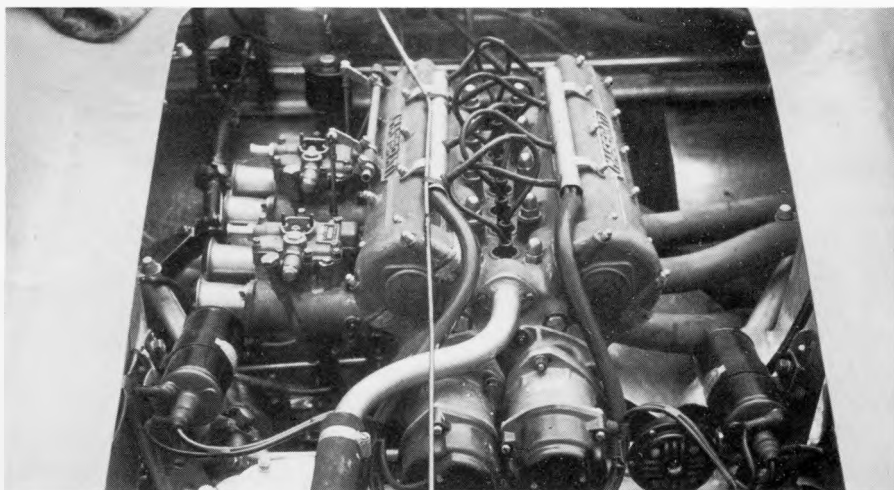
downfall of the Modena cars. Fangio led initially, but fell back after a pit stop for new rear tyres and because his engine was overheating to finish fourth behind Moss's astonishingly quick 2 litre Cooper-Climax and the V-6 Ferrari Dinos of Musso and Hawthorn. Behra, Schell, Menditeguy, Godia-Sales and Gould took the next five places.

A fortnight later, the Buenos Aires City Grand Prix, a Formule Libre race, was run in two 30 lap heats over a longer 2.9 mile circuit at the Autodrome. Although Fangio and Menditeguy drove the same cars, most of the other Maserati drivers had changed mounts. Kavannagh appeared at the wheel of his own car, the Centro-Sud cars were driven by Behra and Mieres and Bonnier had bought Godia-Sales's car on the understanding that the Spaniard would drive it in the first heat and its new owner in the second heat. The two Sudamericana cars ran on a stock of nitromethane oxygen-bearing fuel left over from the 1957 race.

Because of a misunderstanding as to the time of the start of the race, neither Behra nor Menditeguy had reached the circuit when the grid formed up and their places were taken by Godia-Sales (with Menditeguy's car), Scarlatti (with Behra's) and Bonnier drove the Spaniard's. When the two latecomers eventually arrived, there was a series of pit stops while the rightful drivers took their places. Kavannagh's car was running very roughly and he retired early in the heat. At the finish of the first heat Fangio was in second place and after Hawthorn's Ferrari had broken a drive-shaft on the starting grid, Fangio scored an easy win in the second heat from team-mate Menditeguy. The results on aggregate were: 1st, Fangio; 2nd, Musso (Ferrari); 3rd, Godia-Sales/Menditeguy; 4th, Scarlatti/Behra; 5th, Bonnier/Godia-Sales; 6th, Froilan Gonzalez (Chevrolet-engined Ferrari).

By the start of the European season in April Giorgio Scarlatti had taken delivery of the 1957 lightweight car 2529 and Godia-Sales had acquired 2528; two of the V-12 cars had now been rebuilt with six-cylinder engines, the original car (2523) for the Italian girl, Maria-Teresa de Filippis, and 2526 for 1957 350cc World Motorcycle Champion Keith Campbell. Campbell and Halford (the latter still with his now ancient car, 2504) ran without success at the Easter Goodwood meeting and shortly afterwards private Maserati owners were out in force at the Syracuse race. This race was dominated by the sole works Ferrari, one of the new Dino 246 cars driven by Luigi Musso, but Bonnier with his ex-Godia-Sales car, Godia-Sales with his new acquisition and Horace Gould with his original car took second, third and fourth places.

Campbell, Halford and Kavannagh ran their cars in the Aintree '200'



*Plate 44* The four-cylinder 200S engine with twin-plug ignition and two twin-choke Weber carburettors, seen at the 1956 Supercortemaggiore Grand Prix; *Plate 45* Following in the wheel-tracks of Mercedes and Connaught, Maserati built this streamlined car in 1955.





*Plate 46* Stirling Moss and Denis Jenkinson on the starting ramp at Brescia in the 1956 Mille Miglia. The car is the 3 litre six-cylinder model; *Plate 47* Jean Behra at the wheel of the second-place 300S in the 1957 Buenos Aires 1,000 Kilometres race.

race the following weekend, but all three retired. The *Daily Express* Trophy race at Silverstone the following month was another Ferrari benefit and Peter Collins's Dino led home Salvadori's Cooper-Climax; Masten Gregory, maintaining the excellent form that he had displayed throughout 1957, finished third with his Centro-Sud car. None of the other Maserati drivers was in the picture and Halford, Wolfgang Seidel (Centro-Sud entry) and Kavannagh finished at the tail of the field in sixteenth, seventeenth and eighteenth places.

That Maserati was a waning power in Grand Prix racing was only too obvious at the Monaco Grand Prix where there were only two Modena cars among the sixteen starters and both were at the back of the grid. It was much the same story at Zandvoort where Maseratis were driven by Bonnier, Gregory and Scarlatti. Stirling Moss's Vanwall dominated the race and the sole Modena finisher was Bonnier in tenth place. In the Belgian Grand Prix at Spa-Francorchamps three cars were entered by Scuderia Centro-Sud for Gregory, Seidel and Maurice Trintignant (the last-named was at the wheel of Gerini's car which had been loaned to the Italian team). Trintignant finished in seventh place, with Bonnier ninth and Maria-Teresa de Fillipo tenth and last.

Maserati was no more officially represented at the Belgian race than at any other during 1958, but a prominent sight in the paddock at Spa was Modena's large blue and yellow transporter and head mechanic Bertocchi and team manager Ugolini, like anxious parents, were there to keep an unofficial, but watchful eye on the team's latest Formula 1 development. This was the new and so-called 'piccolo' 250F/3 car with 1.5in shorter wheelbase and a reduction in weight of some 160lb. There was a smaller and lighter gearbox with a higher first gear that could be used at slow corners and not merely for starting. The brakes were larger, the front suspension featured fabricated tubular wishbones and larger coil springs in unit with Girling dampers and the rear suspension now incorporated Koni dampers. According to one authority the 'piccolo' was fitted with a 2,473cc (80 × 81mm) engine and with three Weber 45 DCO carburettors and a compression ratio of 11:1 was said to develop 270bhp at 7,500rpm.

The project had been financed by the American enthusiast, Temple Buell, who proposed running a team of two cars once the model had been fully sorted. The 'piccolo' had been tested by Bertocchi at Modena and it was rumoured that Fangio would be arriving at Spa to drive the new car. It did not run in the race and the only driver allowed to try it was Masten Gregory who did a few test laps. What was significant was that

the new car was fitted with a right-hand accelerator and the day after the Belgian race Stirling Moss drove the 'piccolo' and the new 3 litre V-12 sports car at the Nürburgring. Moss's fastest lap in 9min 25sec was eight seconds slower than Fangio's lap record set with the 1957 light-weight 250F. Masten Gregory also drove the single-seater at the Nürburgring.

At the end of June 1958, the Automobile Club of Italy again organised a 500 mile race, run in three heats, on the banked Monza track. The European drivers now appreciated that the financial benefits of running in this race more than out-weighed their prejudices and the opposition to the Indianapolis cars was much stronger with new cars from both Ferrari and Maserati. Modena's contribution was the 'Eldorado', financed by Signor Zanetti of the Eldorado ice cream company. The basis of the car was a new space-frame constructed from oval and round tubes and of very great rigidity. At the front there was double wishbone and coil spring front suspension from the 450S sports car (with stronger steering arms and track-rods) and at the rear a rather more robust version of the familiar 250F de Dion axle with twin Houdaille dampers on each side. The power unit was the 450S, reduced in capacity to 4,190cc to comply with Indianapolis regulations to which the race was run and tuned to run on alcohol fuel. Fuel injection was tried in practice, but the car ran in the race on the usual four twin-choke Weber carburetters.

This engine was mounted nine centimetres to the left of the centre-line of the car and drove through an open prop-shaft to a special two-speed gearbox mounted at the rear. The drive was then taken through a right-angle by a pair of bevel gears, and a pair of straight-cut gears took the drive up from the output shaft to the height of the axle. There was no differential and drive to the rear wheels was taken through universal joints and very heavy-section half-shafts. The driver was seated alongside the prop-shaft and the gear-lever was mounted high up on the left-hand side. The brakes were 1957 250F and the Maserati hubs had been modified to take Halibrand magnesium-alloy wheels with six-pin drive fitting. Although the basic lines were similar to those of the 250F, there was a large tail-fin; the car was painted an immaculate white.

At Monza the new Maserati was driven by Stirling Moss. He failed to impress in practice, lapping at 164mph (eleventh fastest) and in the first heat he finished fourth, two laps in arrears. In the second heat Moss speeded up as the heat progressed, moved up to second place, but fell back to finish fifth because of tyre trouble. At the beginning of the third heat Moss lost nearly half a lap while he struggled to engage first gear,

but then began to make up ground. On lap 44 the Eldorado's steering failed, the car rammed the retaining wall at the top of the banking and then spun down the banking, the right-hand wheels and suspension smashed. Moss was lucky to escape from this most unpleasant accident with nothing worse than a shaking.

The following year Bertocchi and the Eldorado sailed to the United States with a view to running at Indianapolis. A number of leading American drivers promised to test the car at the Hosier Bowl, but in fact none was seriously interested or kept his word. In an effort to qualify the car, a very inexperienced driver was asked to handle the Eldorado, but he was unable to achieve a sufficiently high lap speed. Bertocchi tested the car himself at Indianapolis and in all it covered 600 miles at an average of 134mph which would have been high enough to place it in the first four if it had run in the race. The Eldorado was later sold in Brazil, but it has now been brought back to Europe by Colin Crabbe of Antique Automobiles.

The 'piccolo' version of the 250F made its début in the French Grand Prix at Reims at the beginning of July 1958; it was entered by Scuderia Buell and was driven by Juan Fangio in what was to prove to be his last race. For the Reims race Bonnier borrowed Scarlatti's car, loaning his own to Phil Hill, Gerini was at the wheel of the car he had bought from Piotti (2519), the two Centro-Sud cars were painted blue and white, fitted with smaller fuel tanks as on the 'piccolo' and driven by Americans Carroll Shelby and Troy Ruttman, and Godia-Sales had his usual 1957 car. Mike Hawthorn led throughout the race with his Ferrari Dino to score his second championship race victory at Reims, while Fangio battled for second place with the two works BRMs and Moss's Vanwall until he stopped at the pits to complain to Bertocchi about gear-selector trouble. The Argentinian rejoined the race to finish fourth behind Hawthorn, Moss and von Trips (Ferrari). It was obvious that the new Maserati was no real match for the latest Ferraris and Vanwalls and but for Fangio's superlative driving would have finished well down the field. Of the other 250F drivers, Hill, Bonnier, Gerini and Ruttman finished seventh, eighth, ninth and tenth.

For Maserati it was back to the tail of the field at the British Grand Prix at Silverstone where the only Maseratis to run were Gerini's car and a Centro-Sud car for Shelby; Gerini retired and Shelby finished in ninth and last place. The Buell car was entered at this race, but the entry was apparently not accepted. The Caen Grand Prix was held the following weekend and although the race was won by Moss with a 2.2 litre Cooper-

Climax, the Maseratis of Bonnier and Halford finished second and third after the retirement of the works BRMs.

The only Maseratis at the German Grand Prix were Scarlatti's 1957 car which had now been bought by Joakim Bonnier and a Centro-Sud car for Hans Herrmann, and both retired. An addition to the championship series in 1958 was the Portuguese Grand Prix held on the Boavista circuit through the streets of Porto. At this race the first Scuderia Buell car appeared in the hands of Carroll Shelby and Cliff Allison took over the Centro-Sud car after crashing his works Lotus in practice; Bonnier drove his 1957 car and Maria-Teresa de Filippis drove Gerini's car after crashing her usual mount. None of the Maseratis finished the race, but Shelby was particularly unlucky, for he was holding a good sixth place two laps from the finish when locking brakes caused him to spin off.

The Buell team brought both of their blue and white cars to the Italian Grand Prix; the later car had Houdaille shock-absorbers at the front only, but the other car had them front and rear. Only one Buell car was entered in the race and this was driven by Masten Gregory, who was racing for the first time since a crash at Silverstone in July with the Ecurie Ecosse Lister-Jaguar. Five other Maseratis were entered: Scuderia Centro-Sud entered one of their own cars for Shelby and Gerini also ran under this team's entry; Bonnier fielded his ex-Scarlatti car for Hans Herrmann and his ex-Godia-Sales car for Giulio Cabianca, and de Filippis was back at the wheel of her own car which had been repaired at the works. After their own car developed mechanical trouble in practice, Centro-Sud borrowed Kavannagh's car from the works. Once again only the Buell car ran well and it was the only Maserati to survive to the finish, but it failed to feature in the results. Gregory drove magnificently and he was in fourth place when he began to feel the strain of racing for the first time since his accident; he stopped at the pits and handed the car over to Shelby who kept the 'piccolo' in fourth place until the chequered flag. Unfortunately, the organisers ruled that as Shelby had not been passed by the scrutineers to drive this car, it should be excluded from the results.

The Moroccan Grand Prix held on 19 October was the final round in the World Championship and Buell entered the first of his cars for Masten Gregory; at this race the 'piccolo' was fitted with a vee-shaped nose cowl to take a new vee radiator, but in fact this was not ready in time. Centro-Sud entered Shelby with one of their own cars and Gerini with his, but Shelby failed to arrive at the circuit and his place was taken by Wolfgang Seidel. Bonnier was driving for BRM and entered his

earlier car for Herrmann. Despite a terrible ride caused by shock-absorber trouble, Gregory drove another steady, consistent race to finish sixth, Herrmann took ninth place and Gerini was thirteenth.

The Buell cars were then shipped out to compete in the New Zealand Grand Prix held early in 1959. In this race they were driven by Carroll Shelby and local man Ross Jensen; Shelby had a severe attack of leg cramp and stopped at the pits to hand over to Harry Schell who brought his car across the line in fourth place and Jensen finished fifth. Temple Buell realised that he was unlikely to achieve much success with his 250Fs during the coming season's European racing and took the opportunity of selling the cars in New Zealand. Subsequently he restricted his competition efforts to entering Ferrari sports cars.

## THE 1959 RACING SEASON

By 1959 the 250F had almost completely disappeared from World Championship racing, although the cars continued to win prize money in minor events and Scuderia Centro-Sud raced their cars until they had taken delivery of new rear-engined Cooper chassis in which they installed 2.5 litre four-cylinder Maserati engines basically similar to those used in the Tipo 60 and 61 'Bird-cage' sports cars. A similar car was fielded by British entrant Tommy Atkins for Roy Salvadori and others.

There were no Argentine races in 1959 and the first Formula 1 event of the year was the Richmond Trophy race at Goodwood on Easter Monday. Jack Fairman trailed round at the tail of the field with a Centro-Sud car, Scarlatti retired with gearbox trouble and both Kavannagh and da Silva Ramos (Centro-Sud entry) crashed. Three weeks later the Portuguese former Gordini driver made up for his error at Goodwood by bringing his Centro-Sud car across the line in the Aintree '200' race in fourth place behind the Ferraris of Behra and Brooks and McLaren's Cooper-Climax.

A 250F did not appear in a championship race in 1959 until the French Grand Prix at Reims in July where Centro-Sud arrived with the former Maserati transporter, a number of former works Maserati mechanics, Maserati-engined Coopers for Colin Davis and Ian Burgess and their 250Fs for new South American drivers d'Orey and Bayardo (the latter was so slow in practice that he was not allowed to start). Scarlatti and Dutchman Count Carol Godin de Beaufort also drove 250Fs in this race. It was all rather hopeless on this very fast circuit and in a race hard-

fought between the works Ferraris and Coopers neither of the Maserati-powered Coopers finished and the 250Fs trailed round, rather wearily, at the tail of the field; Scarlatti, de Beaufort and d'Orey finished in eighth, ninth and tenth places. Only d'Orey drove a 250F in the British Grand Prix at Aintree and he crashed. At Monza, Cabianca drove Ottorino Volonterio's beautifully turned-out ex-Guastalla car, but its smart finish did nothing to enhance its performance and it finished fifteenth and last.

On 12 December the first Formula 1 United States Grand Prix was held at Sebring and Fritz d'Orey appeared with the Tec-Mec, a very light, short-wheelbase version of the 250F that had been completed by former Maserati designer, Valerio Colotti, at his own Studio Tecnica Meccanica. This car, originally ordered by Scarlatti, indicated the direction in which Maserati Formula 1 development would have progressed had the team not withdrawn from racing, but by the time it was ready to race it had been rendered obsolescent by the latest designs from Maranello, Surbiton and Hornsey. The Tec-Mec was slow in practice at Watkins Glen and it retired in the race. It was later acquired by Tom Wheatcroft, meticulously rebuilt and with Tony Merrick at the wheel appeared in a few Vintage Sports Car Club races. It now forms part of Wheatcroft's permanent exhibition of racing cars at Donington Park.

## THE 1960 RACING SEASON

By the start of the 1960 season the successes of the 250F were little more than a memory and not a single car appeared in the European rounds of the World Championship. At the beginning of the year Johnnie Mansel (with the ex-Moss car) and Arnold Glass took fifth and sixth places in the Cooper-dominated New Zealand Grand Prix. Five 250Fs driven by Scarlatti, Munaron, Stefano, Chimeri and Creus ran in the Argentine, but not one of these cars made it to the finish in this eighty-lap race. Shortly afterwards four 250Fs appeared in the Buenos Aires City Grand Prix which was held at Cordoba that year. The retirement rate in this race was high and the 250Fs of Gino Munaron and Ettore Chimeri came through to finish in third and fourth places. This was the last occasion in the seven-year history of the 250F that one of these cars finished in the first three in an international race. When American Bob Drake drove his lightweight 1957 car into thirteenth place in the 1960 United States Grand Prix at Riverside Raceway, the 250F became the

only model to have competed in the first and last races of the 2,500cc Grand Prix Formula.

The 250F was one of the greatest racing cars of all times, it was at the forefront of international racing for four consecutive seasons, and it won eight championship races. It was simple, relatively unsophisticated, immensely tough and with very predictable handling; it could withstand the hardest driving of the fastest drivers and the worst abuses of the slowest. In the early 1960s, 250Fs continued to be raced in Australia and New Zealand and, for several years highly coveted collectors' cars, they have formed the backbone of the Vintage Sports Car Club Historic Racing Car class. On some circuits, running on modern tyres, they have lapped faster than they did in the hands of Fangio and Moss and so many of these cars have been in circulation that it has been necessary to make new spares!



## Chasing the Sports Car Championship: The 300S, 1955–8

Despite its very considerable success in the 2 litre class and its popularity with private owners, the A6GCS was not powerful enough to be a serious contender for victory in Sports Car Championship races. This situation was rectified by the introduction of the 300S which was a direct successor to the A6GCS and a logical development from it.

In the 1954 Mille Miglia and Supercortemaggiore races Maserati fielded modified versions of the A6GCS with 2,493cc engines and known as the Tipo 250S. The next stage in development was the construction of an oversquare 2.8 litre engine with dimensions of 89 × 75mm. This engine failed to develop the anticipated power and so the Maserati engineers tried again. The outcome was a 2.8 litre engine with cylinder dimensions of 81 × 90mm and a power output of 280bhp on alcohol fuel. This engine was installed in one of the Supercortemaggiore cars, and during testing Villoresi lapped Monza in 1min 59sec, a time approaching the outright circuit record. Later in 1954, Maserati built a 3 litre engine with dimensions of 92 × 75mm, but again the oversquare dimensions proved unsatisfactory and the power output on pump fuel was only 225bhp at 6,000rpm. Maserati then reverted to the second of the 2.8 litre engines and a 3 litre long-stroke derivative of this was selected to power the new 300S competition car.

First announced in December 1954, the 300S closely followed the specification of the 250F Grand Prix car. The existing 250F cylinder bore of 84mm was retained, but the stroke was increased from 76.2 to 90mm, giving a capacity of 2,993cc. Apart from a lower compression ratio of 8.5:1 and slight changes to the cylinder head so that the car would run happily on pump fuel, the only significant modification to the engine was the provision of a starter motor. Power output in 3 litre sports form was 250bhp at 6,500rpm compared with the 240bhp at 7,200rpm of the

250F. It should be remembered that both of these power outputs were claimed figures and there is evidence to suggest that the true outputs were rather lower.

The chassis frame, as with the 250F, was based on twin parallel side-members, but with additional and well-braced outrigger tubing extending the chassis to full width. Wheelbase and track were identical to those of the 250F within a fraction of an inch and the suspension design was the same: at the front by unequal-length double wishbones and coil springs and at the rear by a de Dion axle and transverse leaf spring. The same four-speed gearbox in unit with the final drive was used. Right-hand drive steering was fitted (the A6GCS had left-hand drive) and the much smoother and sleeker body was reminiscent of Ferrari practice. The prototype 300S had the trident badge in the centre of the air intake, but the cars were usually raced without this in place. There were large exits in the sides of the body ahead of the doors to release underbonnet heat and, before the 300S was raced, supplementary air intakes in the nose to cool the front brakes and a streamlined headrest were added.

Throughout its career the 300S was popular with drivers, for its handling and traction were beyond reproach, but at a time when the principal opposition came from the Mercedes-Benz 300SLR, the D-type Jaguar and, from 1956 onwards, V-12 Ferraris ranging in capacity from 3.4 to 4.1 litres, it was simply not fast enough to achieve substantial success. A comparison of fastest lap times and speeds over a flying kilometre of the Mulsanne straight in the 1955 Le Mans race makes this only too obvious:

	<i>Fastest lap</i>	<i>Maximum speed</i>
Jaguar D-type 3.4 litre (Hawthorn/Bueb)	4min 6.6sec	175.27mph
Mercedes-Benz 300SLR 3 litre (Fangio/Moss)	4min 7.8sec	168.09mph
Ferrari Tipo 121 six-cyl 4.4 litre (Castellotti/Marzotto)	4min 10.2sec	181.15mph
Maserati Tipo 300S 3 litre (Valenzano/Musso)	4min 21.0sec	153.85mph
Aston Martin DB3S 3 litre (Collins/Frère)	4min 25.1sec	145.36mph

The first of the new cars were ready to race in March 1955 and the Tipo 300S made its racing début simultaneously in North Africa and the United States. In the Dakar Grand Prix, held over a distance of 228 miles at the capital of Senégál, new recruit to the Maserati works team Jean

Behra went straight into the lead at the start of the race; he was passed by Piero Carini's Ferrari on lap 12 and retired soon afterwards with transmission trouble, a malady with which Behra as an ex-Gordini driver was only too familiar. Carini won the race from Rosier (Ferrari) and Duncan Hamilton (Jaguar).

The same day at Sebring, in Florida, Briggs Cunningham, whose 1,500cc Osca had won the race in 1954, fielded what was to all intents and purposes a works 300S for Valenzano/Perdisa and a second 300S was entered by Bill Spear for himself and Johnston. Cunningham had in fact hedged his bets and the race was won by his D-type Jaguar driven by Hawthorn/Walters from the Ferrari Monza of Phil Hill and Carroll Shelby; the Maseratis performed with great reliability and Spear/Johnston (the bonnet of whose car was not even opened during the twelve hours of the race) finished third and Valenzano/Perdisa fourth.

At the beginning of April was that now almost forgotten race, the Tour of Sicily, an arduous 671 mile event round the perimeter of the island. Piero Taruffi won the race for Scuderia Ferrari with one of the new six-cylinder 3.7 litre cars and another Ferrari driven by Umberto Maglioli finished second. The 300S Maseratis of Luigi Musso and Vittorio Marzotto (the latter's was a private entry) took third and fourth places. Next came the Mille Miglia and in a race dominated by the struggle between Mercedes-Benz and Ferrari, the Maserati effort was over-shadowed. The team fielded a single 300S for Cesare Perdisa and he briefly held third place before retiring with engine trouble. A fortnight later the 300S scored its first victory. The race was the Bari Grand Prix, a 172 mile event run at night at this seaport on the Adriatic coast of Italy. Piero Taruffi led the race until loss of oil pressure forced him to retire his works six-cylinder Ferrari. Then Behra went into the lead and won the race from team-mate Musso with another 300S and Masten Gregory (Ferrari Monza).

As usual, there was a capacity limit of 3,000 in the Supercortemaggiore Grand Prix held over a distance of 1,000 kilometres at Monza on 29 May. Ferrari was forced to rely on the older and slower Tipo 750S Monza cars and the result was a closely fought battle between the teams from Maranello and Modena. Maserati fielded a trio of 300S cars for Behra/Musso, Mieres/Perdisa and Valenzano/Bordoni. Before the start there was a minute's silence in memory of the great Italian driver Alberto Ascari who had lost his life during practice for this race. Hawthorn initially led for Ferrari, Behra stayed hot on his exhausts and went ahead when '*le papillon*' stopped to hand the Monza over to co-driver Maglioli.

The duel lasted the full 160 laps of the race and at the chequered flag Behra was a mere seventeen seconds ahead of the Ferrari. Mieres/Perdisa finished third, but Bordoni crashed his 300S when a brake locked up.

Two of the cars raced at Monza appeared a fortnight later at Le Mans where they were driven by Behra/Musso and Mieres/Perdisa. Both entries retired with transmission trouble. The Mercedes team was withdrawn after Levegh's crash which cost the lives of more than eighty spectators and the D-type Jaguar of Hawthorn/Bueb went on to score a hollow victory. On 26 June a works 300S was driven by Jean Behra in the Portuguese Grand Prix at Porto. At the start of the race Duncan Hamilton accelerated into the lead with his D-type Jaguar, but the British car was no match for the superb handling characteristics of the Maserati over the difficult Boavista street circuit and on the second lap Behra assumed a lead that he never lost; he finished a lap ahead of Gregory's Ferrari Monza and Hamilton took third place. Next came the Messina 10 Hours Night Race in which the highest placed 300S was the car driven by Mieres and Bordoni into fourth spot behind two Ferraris and an A6GCS 2 litre Maserati. Musso retired his 300S with engine trouble. Another race on Portuguese soil was the Lisbon Grand Prix held on the 3.35 mile Monsanto circuit. Private owner Benoit Musy retired his new 300S with brake trouble, but fellow-Swiss driver Emmanuel de Graffenried took second place with his 300S behind the winning Ferrari of Masten Gregory.

Maserati's next outing in a sports car race was in the Swedish Grand Prix at Kristianstad on 7 August. In the face of very strong opposition Jean Behra with the sole works 300S drove well to take fourth place behind the Mercedes of Fangio and Moss and Castellotti's 4.4 litre Ferrari. Benoit Musy finished fifth with his private car. Six weeks later two works cars ran in the Tourist Trophy, a round in the Sports Car Championship over the Dundrod road circuit in Northern Ireland. This was another race in which the results were dominated by Mercedes-Benz and the 3 litre cars from Untertürkheim took the first three places. Behra crashed badly with one of the Maseratis near Leathemstown, suffering severe arm injuries and losing part of an ear. The other 300S shared by Musso, Behra and Bordoni finished a none too satisfactory fifth behind the Aston Martin DB3S of Peter Walker and Dennis Poore.

The final round in the Sports Car Championship was the Targa Florio held in October and to this race Maserati sent a single 300S for Musso and Luigi Villoresi, who was racing for the first time since Ascari's death (he had practised at the Italian Grand Prix, but did not run in the race). At one stage in the Sicilian race the Maserati held fifth place, but it

retired with a broken back axle on lap 5. In November the first Venezuelan Grand Prix was held over 85 laps of a 4 kilometre circuit at Caracas. Despite a great deal of confusion over the results because of time-keeping errors, Fangio with a 300S was the clear winner, two laps ahead of a 3 litre Ferrari driven by the Marquis de Portago. Musso had led the race during the early laps, but later retired with mechanical trouble, and sixth place went to another 300S driven by Villoresi and Mieres.

The works Maseratis stayed in South America to compete in the Buenos Aires 1,000 Kilometre race on 29 January 1956. Despite a strong entry of works Ferraris, two of which were the very potent, but difficult-handling 4.9 litre cars, the race was won by the 300S of Stirling Moss and Carlos Menditeguy, which took the lead after 68 of the 106 laps of the 5.89 mile circuit. Third place went to another 300S driven by Jean Behra, now fully recovered from his lurid crash in Northern Ireland, and Froilan Gonzalez, which followed home a 3.4 litre four-cylinder Ferrari. Behra returned across the Atlantic to drive a 300S in the Agadir Grand Prix in Morocco at the end of February; he was comfortably leading the race when the Maserati's steering failed and he spun off the road, fortunately without damaging either himself or the car. Shortly afterwards the Frenchman took third place in the Dakar Grand Prix in Senégel, a race won by Ferrari driver Maurice Trintignant whose race average of 123.50mph was at that time the fastest ever recorded in a sports car event.

Behra had hoped to drive a car with the latest 3.5 litre engine at Dakar, but it had already been shipped to the United States for the Sebring 12 Hours race in which it was not, in fact, used. In the Florida race works 300S cars were driven by Behra/Taruffi and Menditeguy/Perdisa. Argentinian polo expert Carlos Menditeguy crashed badly at the Esses and suffered grave injuries that kept him out of racing for the rest of the season. The other car never ran as well as expected and finished a poor fifth, a disappointing result after the promise shown by the team at Buenos Aires. The race was won by a Ferrari driven by Fangio and Castellotti.

In the Tour of Sicily Piero Taruffi, the winner of the 1955 race, drove a 300S, but he was beaten into second place by a margin of 53 seconds by Peter Collins at the wheel of a Ferrari. The following weekend Swiss privateer Benoit Musy was in England to compete in the British Empire Trophy at Oulton Park; he won the heat for large-capacity sports cars, defeating the D-type Jaguars of Flockhart, Bob Berry and Ninian Sanderson and setting a new class lap record of 85.68mph, but his engine blew

up in the final. This was run on a handicap basis and was won by Stirling Moss with a 1,500cc Cooper-Climax. Musy's car had been repaired by the following weekend's Aintree meeting where it was driven by that great British driver, Ken Wharton, but he could manage no better than sixth place in the 10 lap sports car race.

Much of Maserati's efforts in sports car racing in 1956 were concentrated on the Mille Miglia, but these efforts were largely frustrated because the team was so hard pressed to complete the large number of orders received for the new Tipo 150S sports cars and by the pressures of Formula 1 racing. In practice for the 1956 thousand-mile race Stirling Moss, partnered by Denis Jenkinson, covered two full laps of the circuit, the first with a Zagato-bodied A6G 2 litre Grand Touring car and the second with an A6GCS sports car fitted with a 250F Formula 1 engine and de Dion rear axle.

Moss's race car was the new 3.5 litre model derived from the 300S, but with most engine components completely new. The 3,485cc (86 × 100mm) engine, said to develop 270bhp at 5,800rpm, was based on new castings and featured horizontal (instead of slightly downdraught) carburettors and the magnetos driven from the rear of the camshafts. There was a pair of step-down gears behind the clutch which lowered the line of the prop-shaft and reduced its speed, and instead of being mounted on the side of the differential, as on the 300S, it was in front of the axle-line and had five fully usable gears. The multi-tubular space-frame was new and of rather different layout. At the front the suspension was similar to that of the 300S, but with additional telescopic shock-absorbers, and there was completely new rear suspension. The de Dion tube, mounted on an extension below the tube, was located vertically by the central guide of the tube running in the rear cross-member instead of on the final drive casing. There was a 40 gallon fuel tank in the tail and an 18 gallon tank in the cockpit on the left-hand side (right-hand steering was again featured).

Moss indicated that he would prefer to drive the familiar 300S model because the new car was untried, but Bertocchi was very anxious to run the 3.5 litre version. A second 3.5 should have been driven by Taruffi, but he flatly refused to have anything to do with it and insisted on driving a 300S. In the race Moss found that the new car was suffering from front-end lift, which a lip added to the bottom of the radiator intake at the last moment had failed to cure. The real trouble with the handling was that the latest rear suspension was such a vast improvement that the front suspension was now totally inadequate. Moss attained speeds of

close to 160mph (the car was geared for 165mph) and he was holding second place behind Musso's Ferrari when the front wheels lost adhesion in heavy rain near Rieti (on the westward run between Pescara and Rome) and he crashed. The 300S cars driven by Taruffi and Perdisa were for this race fitted with large fuel tanks on the passenger side of the cockpit. Taruffi crashed when his brakes failed and Perdisa retired. The subsequent history of the car raced by Moss in the 1956 Mille Miglia is discussed in the next chapter.

At the *Daily Express* meeting at Silverstone on 5 May the Swiss driver Musy ran his private 300S, but despite a first-lap multiple crash which eliminated the D-type Jaguars of Titterington and Sanderson and the Aston Martins of Parnell and Collins, the best that he could manage was fifth place. On 20 May Musy scored a victory in the Grand Prix des Frontières, held over a distance of 149 miles at Chimay, from Hamilton's Jaguar D-type and Graham Whitehead's Aston Martin.

Maserati entered a trio of 300S cars in the Nürburgring 1,000 Kilo-metre race, the first in the series since 1953, which was held at the end of May. The Modena cars were driven by Moss/Behra, Taruffi/Schell and Perdisa/Manzon. Opposition came from a strong team of works Ferraris and also from the British Jaguar and Aston Martin teams. Moss built up a lead of 25 seconds before handing over to Behra, but the Frenchman had not been at the wheel long when the rear transverse leaf spring tore away from its mounting and the car had to be retired. The Perdisa/Manzon car was already out of the race because a shock-absorber link had broken. Moss and Behra were switched to the remaining 300S which was in third place, Behra brought it through to second spot before handing over to Moss who rejoined the race 66 seconds behind the leading Ferrari of Fangio, and Moss began to gain on the Argentinian at the rate of six seconds a lap. When Fangio stopped for the Ferrari's fuel tanks to be topped up, the Maserati went through into the lead, and at the flag Moss was 26 seconds ahead. This was only Maserati's second ever Sports Car Championship race victory.

In 1956 the Targa Florio was not a round in the Sports Car Championship and Maserati contented themselves with sending a single 300S to Sicily for Piero Taruffi, who was one of the most experienced and still one of the fastest drivers in traditional Italian road races. The works Ferraris ran into mechanical troubles and Taruffi was in second place behind Maglioli's 1,500cc Porsche when he was delayed by a broken fuel tank mounting. He rejoined the race to finish third, but the second-place Osca of Giulio Cabianca was disqualified and Taruffi was promoted to

second place. On the same day, 10 June, the Paris 1,000 Kilometres race was held on a 4.83 mile circuit at Monthéry. The race was completely dominated by the new 300S belonging to Louis Rosier which he had entered for himself and Jean Behra, and they averaged 93.30mph to win the race from the Ferraris of Schell/Lucas and Trintignant/Picard. A week later Musy drove his 300S into third place in the Porto Grand Prix behind the Ferraris of de Portago and Phil Hill.

Two non-championship, but, nevertheless, very interesting French races followed. At Reims, there were two 12 Hours races held the same weekend as the French Grand Prix, one for cars of up to 1,500cc and one for cars over this capacity. The larger-capacity race was dominated by the works D-type Jaguars which took the first three places. Two Maseratis were entered in this race. The 3.5 litre car that should have been driven by Taruffi in the Mille Miglia had been bought by Luigi Piotti and at Reims he entered it for himself and Umberto Maglioli. Prince Metternich entered a rather inadequately prepared 300S for himself and Ken Wharton. The race started at midnight and at the end of the first hour Maglioli was in fifth place with the 3.5 litre car; soon afterwards rain began to fall and in these conditions the car proved so unstable that it had to be withdrawn. The Metternich-entered car retired because of a broken propshaft.

A week later the 203 mile Rouen Grand Prix was held for sports cars of up to 3,000cc. A strong entry was attracted from Ferrari, Aston Martin and Maserati who brought along two 300S models for Behra and Perdisa. Benoit Musy, Francesco Godia-Sales and Peter Whitehead entered private 300S cars. Perdisa led initially, then Behra went in front. The Frenchman set a hot pace until a stone flung up by a rear wheel of a car he was lapping damaged a shock-absorber, the Maserati's handling deteriorated and Behra fell back to finish third behind Castellotti's four-cylinder Ferrari and Moss's Aston Martin DB3S. Perdisa retired because of propshaft failure and Whitehead also retired. Musy took eighth place and Godia-Sales was fifteenth. Another, albeit minor success followed in the sports car race at the British Grand Prix meeting; Moss won this 73 mile event with a works 300S at 93.94mph from Salvadori's works Aston Martin.

On the day following the Silverstone meeting Benoit Musy won a 94 mile race at les Sables d'Olonne in France from a 2 litre A6GCS driven by André Loens, one-time Formula 3 exponent. The works Maseratis appeared a week later in the Bari Grand Prix run over a very difficult 5.55 kilometre street circuit. There was only one works Ferrari



driven by Alfonso de Portago and the only competitive British car was Duncan Hamilton's D-type Jaguar. Stirling Moss led throughout the 124 miles with his works 300S, but this tortuous circuit was well-suited to the 2 litre cars, of which the first five in their own race were admitted to the larger capacity event, and 200S Maseratis driven by Behra and Perdisa took second and third places in the main race. Fourth was Taruffi's works 300S, while the private cars of Musy and Bordoni sandwiched Hamilton's sixth-place Jaguar, a most unsuitable car for such a difficult circuit.

Because of modifications to the circuit as a result of the 1955 disaster, the Le Mans race was postponed until the end of July. The organisers had also imposed their own rather weird regulations whereby there was a capacity limit of 2,500cc for prototype cars, of cars above this capacity a production run of fifty should have been laid down or be proposed to be laid down, and, in addition, there were strict fuel consumption regulations. The British Jaguars and Aston Martins qualified as production cars, but although there were more 300S cars in the hands of private owners than there were Aston DB3Ss, the 300S did not so qualify. Because of these special regulations the race was not a round in the Sports Car Championship; to have competed would have necessitated the construction of special 2,500cc cars for the one race (Ferrari built a trio of special 'Testa Rossa' cars with 1955 Tipo 625 Formula 1 engines) and Maserati decided to give the race a miss.

Maserati was, however, represented in this race by two Paris-built cars. The French Talbot company headed by Antoine Lago was hoping to start production of a car based on a simple tubular ladder-type chassis and powered by a French-built version of the Maserati 250F Grand Prix engine. Talbot had agreed not to build 2 or 3 litre cars and Maserati had agreed not to build 2.5 litre cars. At Le Mans two cars with very pretty bodies of typical Lago-Talbot style and with 250F engines and A6GCS four-speed gearboxes supplied by Modena were entered for Behra/Rosier and Zehender/Jean Lucas. Goffredo Zehender, the veteran Italian racing driver who had raced Alfa Romeos and Maseratis in pre-war days, was now working as competitions manager at the Suresne works and was responsible for this latest project. Lucas went off the road with his car at Mulsanne early in the race, while the second car survived until just after midnight when rear axle failure caused its retirement. One of these cars, sponsored by André Dubonnet of aperitif fame, and with a new body by Campana of Modena, appeared at Le Mans the following year and was to be driven by Bruce Halford and Franco Bordoni; it failed to leave



*Plate 48* Stirling Moss at the wheel of the second-place 200S in the 1956 Supercortemaggiore race; *Plate 49* The unraced V-12 3 litre car tested by Stirling Moss at the Nürburgring in 1958.



*Plate 50* The Tipo 450S with Costin-styled body driven by Stirling Moss at Le Mans in 1957;  
*Plate 51* The Tipo 61 'Bird-cage' car of the Camoradi team, driven to victory in the 1960  
 Nürburgring 1,000 Kilometres race by Moss and Dan Gurney.



*Plate 52* One of the Briggs Cunningham Tipo 63 Maseratis with rear-mounted V-12 3 litre engine that ran at Le Mans in 1961; *Plate 53* In 1962 the Scuderia Serenissima Repubblica di Venezia fielded this Tipo 64 car for Davis and Abate in the Targa Florio. Note that this version had ducts to cool the rear brakes and disc wheels.



*Plates 54 and 55* Two views of the modified Tipo 151 car, in unfinished state, that was fielded at Le Mans in 1964. It was at the wheel of this car that Lloyd Casner was killed in the 1965 Le Mans Test Weekend.

the start-line because of clutch trouble. Equally doomed was the production Maserati-engined Talbot which failed to progress beyond the prototype stage.

Although Ferrari had the Sports Car Championship in the bag, there was one final round, the Swedish Grand Prix, still to be run. To this race Maserati brought the new Tipo 450S car (which ran in practice only) and three 300S models with which it was proposed to ring the changes with the drivers as the need arose. At this race Musy's private car ran as a works entry and Godia-Sales entered his car for himself and Joakim Bonnier. One of the works cars was eliminated on the first lap of the race; Ron Flockhart's Ecurie Ecosse-entered Jaguar locked its brakes and Taruffi was unable to avoid running his works 300S into the back of the British car. As the race progressed Modena fortunes went from bad to worse. Godia-Sales went off the road, retrieved his car from the undergrowth and handed over to Bonnier, but this 'Maser' soon expired with mechanical trouble; Musy's car was eliminated by gearbox failure.

Moss moved up into the lead ahead of Peter Collins (works Ferrari), but not long after he had handed his car over to Jean Behra, it was delayed by brake trouble. The surviving Maseratis were now fifth (Villoresi/Schell) and sixth (Moss/Behra) and it was decided to switch Moss to the leading car. After a chaotic pit stop with the mechanics getting in each other's way, fuel slopping all over the car and the road and a mechanic tripping over a jack, Moss accelerated away and began to make up lost ground.

Now Behra came in to hand his brakeless 300S over to Villoresi; while this was being refuelled, petrol was splashed about again, some spilt on to the hot exhausts and the car went up in flames. Although the fire was soon brought under control, with most of the pit staff as well as the car covered in foam, the fuel tank had split and this 300S was retired. Moss was still in fifth place when his brakes failed completely and the car shot down an escape road and out of the race. All in all the race had proved one of the most pathetic displays in Maserati history and one could not help feeling that someone should have lent Nello Ugolini a copy of Aston Martin chief John Wyer's book *Motor Racing Management*. The works Ferraris took the first three places in this race ahead of the private D-type Jaguar of Peter and Graham Whitehead. In the Sports Car Championship Maserati took second place with 18 points to the 24 gained by Ferrari.

In October the Coupe du Salon race was held on a 3.9 mile combined road and track circuit at Montlhéry and this short, 24 lap race cost the lives

of two leading Maserati privateers. Benoit Musy, at the wheel of a new Tipo 200S Maserati in this race, went over the edge of the banking and crashed eighty feet to his death, while poor Louis Rosier, driving a Ferrari, overturned on the first lap and lingered three weeks in Arpajon hospital before succumbing to his injuries. Godia-Sales with his 300S won this rain-soaked race from Duncan Hamilton (Jaguar D-type) and Jean Behra (Maserati-powered Lago-Talbot).

At the end of October Behra and Schell took the first two places in the Rome Grand Prix, a one-hour race at the Castelfusano circuit. This was another race marred by a bad accident, Luigi Villorosi's crash with a 300S, as a result of which the veteran Italian did not race again. Maserati again competed in the Venezuelan Grand Prix and Stirling Moss with a 300S won the race from Fangio's Ferrari.

At the end of the year Maserati sent out a team of cars to compete in Australia, two 250Fs to run in the Australian Grand Prix and two 300S cars to run in the Australian Tourist Trophy race. The latter was run on 25 November over 32 laps of the Albert Park circuit in Melbourne. This 3.125 mile circuit, consisting of a mixture of fast and slow curves with no real straight as such (although one long, curving section was known as 'Repcos straight') was regarded by Moss as one of the best he had driven on, but with the proviso that he thought that parts of the course were excessively bumpy. Moss and Behra drove their 300S cars to easy first and second places at Albert Park ahead of Ken Wharton's Ferrari Monza.

After the Australian race the two 300S cars were sold to local drivers, a fate also suffered by the car driven by Moss at Caracas. In the case of the Venezuelan race-winner this was more than a little inconvenient as Moss was entered to drive it in the 210 mile Nassau Trophy race in the Bahamas on 9 December. Private owner Bill Lloyd (Moss's co-driver with the winning Osca at Sebring in 1954) stepped into the breach, however, and loaned him his 300S. Moss won the race with the borrowed car from the Ferraris of Masten Gregory and the Marquis de Portago.

Maserati's first sports car race of the 1957 season was the Buenos Aires 1,000 Kilometre event, the first round in the championship and now run on a 6.294 mile course at the Costanera circuit (used for single-seater racing before the Autodrome was completed), but taking in a long straight with the cars passing on either side of a central barrier. On the straight, speeds of around 150mph were attained, but the circuit was very bumpy and many critics regarded the course as dangerous for both drivers and spectators. Because of the high speeds attained in practice

the race directors decided at the last moment to erect a diamond-shaped chicane mid-way down the main straight at exactly the same point from which a circular island had been removed only a week before to make the course faster! After the retirement of the new 450S which he was sharing with Fangio, Moss switched to the 300S entered for Behra and Mendiéguy. Despite furious driving he was unable to catch the leading Ferrari of Gregory/Perdisa/Castellotti/Musso and took second place a little over a minute in arrears. Piotti was still persevering with his 3.5 litre car and, with local driver Bonomi sharing the wheel, took fifth place.

In February the first Cuban Grand Prix was held over a 3.47 mile circuit at Havana incorporating a long, fast stretch along the sea-front. Because of a New York dock strike, many of the entries failed to arrive and there was a scramble to find a suitable mount for the race. Fangio drove a works 300S, Harry Schell borrowed a 300S from Brazilian driver Pinheiro Pines and Moss drove a borrowed 200S 2 litre model. Fangio moved up into the lead when de Portago's Ferrari was delayed in the pits because of a fractured fuel line and he went on to win this 500 kilometre race at an average of 98.36mph. Moss retired his 2 litre Maserati with low oil pressure and then took over Schell's 300S, only to be eliminated by engine failure.

Because Maserati were not entirely confident of the reliability of the new 4.5 litre V-8 cars, the familiar 3 litre models were also fielded in many of the season's races. At Sebring in March the 4.5 of Fangio and Behra scored a convincing victory, but the winners were well backed up by Moss and Schell who brought their 3 litre car across the line in second place, two laps in arrears. Another 300S was entered for Carroll Shelby and Roy Salvadori, but this car was disqualified; a minimum of twenty laps had to be covered between refuelling stops, but because of a miscalculation the car was refuelled a couple of laps too soon.

Although Maserati's main effort in the Mille Miglia was concentrated on 450S cars for Moss and Behra, the team also entered two other contenders for outright victory. German Hans Herrmann drove a 300S chassis fitted with an experimental 3.5 litre V-12 engine (based on the Grand Prix V-12 castings, but with an enlarged bore of 73.8mm and stroke of 68mm) developing 330bhp at 7,700rpm and a new five-speed gearbox with all five ratios fully usable (intended for use in the V-12 Formula 1 car). Herrmann ran well, but just before he reached Ferrara, in the north-east of Italy and not so very far from the start, he holed the sump and was forced to retire. Giorgio Scarlatti drove a 300S fitted with the larger 450S front brakes. The 300S lacked the power to challenge the



fastest Ferraris and Scarlatti took fourth place behind two of the Maranello sports racers driven by Taruffi and von Trips and a GT Ferrari driven by Olivier Gendebien.

A total of four cars appeared under the works banner at the Nürburg-ring 1,000 Kilometre race; in addition to two of the 450S cars, the works entered the 300S with 450S brakes driven by Scarlatti in the Mille Miglia and at this race Godia-Sales's private 300S ran as a works car. In practice the team also ran the experimental 3.5 litre V-12 car. The race proved a complete débâcle for Maserati, it witnessed an unexpected defeat of Ferrari and it provided a surprise win for the Aston Martin DBR1 of Tony Brooks and Noel Cunningham-Reid. Moss took the lead with his 4.5 on lap 8, but only a lap later this Maserati shed a wheel and spun into a ditch. When Schell brought his 4.5 in for fuel and new rear tyres, Fangio (who was to have co-driven with Moss) took the wheel instead of Herrmann. Scarlatti now co-drove the works 300S with Bonnier. Moss relieved Fangio at the wheel of the surviving 450S, which was now in third place, but this was soon out of the race because of a loose oil tank.

Now Moss took over the 300S from Scarlatti, but it was handling atrociously and Stirling soon brought it back for Bonnier to take over. In an effort to salvage something from the wreckage, Godia-Sales's car, now with Horace Gould at the wheel and in eleventh place, was called in; Moss took the wheel and began one of his familiar chases through the field. By three-quarters' distance he had risen to sixth place and Fangio took over later in the race to bring the 300S through to finish fifth behind the winning Aston Martin, the Ferraris of Collins/Gendebien and Hawthorn/Trintignant and the Porsche of Maglioli/Barth. The other 300S, also driven by Schell, fell further and further back, eventually finishing thirteenth.

In June a minor success was scored in the Portuguese Grand Prix held on the Monsanto circuit at Lisbon, and in this race Fangio and Menditeguy took first and third places with 300S cars, sandwiching Masten Gregory's Ferrari. At Le Mans the Maserati challenge failed yet again and in this race Jaguar D-type cars took the first four places; of the Maserati entries one was a 300S driven by Scarlatti/Bonnier, and this succumbed to clutch failure. A single 300S with new large-diameter exhaust system and 450S front brakes backed up the 4.5 litre cars in the Swedish Grand Prix at Kristianstad in August. In the race the 300S was shared by Bonnier, Scarlatti, Schell and Moss and finished third overall.

The Venezuelan Grand Prix was a round in the 1957 Sports Car

Championship, but this 1,000 kilometre race held early in November proved disastrous for Maserati. Both 4.5s were eliminated in crashes and the 300S of Tony Brooks/Joachim Bonnier was also destroyed in a crash. At the end of the year there were two Brazilian sports car races. The first of these was the Interlagos Grand Prix on 1 December which Fangio won with a 300S. A week later he drove the 3 litre car to a second victory in the 68 mile Rio de Janeiro Grand Prix held on the very slow Boa Vista circuit.

Maserati withdrew from racing at the end of 1957, but 300S cars continued to be raced by private owners; they were no match for the new Ferrari V-12 Testa Rossa cars developed during 1957 to comply with the 3,000cc capacity limit that came into force for 1958 and they soon disappeared from the racing scene. Development work continued at the Modena factory during 1958 and Maserati produced a new car that combined a slightly modified version of the 300S chassis with a 3 litre development of the V-12 Grand Prix engine. Although this car was never raced, it was tested at the Nürburgring by Stirling Moss in June 1958.

A last works appearance by the 300S cars was in the 150 mile Villa Real race in Portugal on 13 July 1958. Moss and Behra took the first two places with their works cars, followed home by Godia-Sales with his private 300S. In August of that year Moss borrowed a 300S from the works and drove it to victory in a 150 kilometre race at Karlskoga in Sweden. The following weekend he appeared with the same car at the Roskilde Ring in Denmark. This event was run in six heats, three on Saturday 16 August and three the following day. In the first race Moss's Maserati retired with engine trouble, so for the second and third races on the Saturday he borrowed the 2 litre Maserati-engined JBW belonging to Brian Naylor and drove this to victory in both events. By the Sunday, a replacement engine had been fitted to his own car and by the end of the day he had reduced his deficit to Swedish driver Gunnar Carlsson at the wheel of a Ferrari Monza to less than a second.

## Four-Cylinder Sports Cars: The Tipo 150S and 200S Cars, 1955–7

The two new sports cars announced by Maserati at the end of 1954 graphically illustrated the company's policy of gradual evolution in design and development. Neither featured any radical design changes and both were direct developments of the 250F Grand Prix car. The 300S, which made its race début in March 1955, was basically an enlarged version of the 250F and the 150S, the development of which was rather more protracted, was in essence a four-cylinder version of the 250F.

Maserati were always interested in the sale of competition cars to private owners, like Porsche (who introduced their Typ 550 Spyder in 1954) they had noticed the absence of a competitive car in the 1,500cc class other than the Osca, and work on a new contender in this class started in the early part of 1954. Early experiments were conducted with a 4CLT/48 engine with the blower removed and subsequently a completely new engine was tested in a chassis with a live rear axle. By April 1955, the first car had been completed, but preoccupation with the works Grand Prix cars and development and production of the 300S resulted in little time being devoted to the 150S and this was not raced until the newly inaugurated Nürburgring 500 Kilometres event held on 28 August.

The 150S was a traditional Maserati through and through. Its four-cylinder engine had a capacity of 1,484cc (81 × 72mm) and the specification included twin overhead camshafts driven by a train of gears from the front, two valves per cylinder, twin sparking plugs per cylinder and two twin-choke Weber carburettors. Light alloy construction was used throughout the engine, the crankshaft ran in five main bearings and there was the usual Maserati dry-sump lubrication with a rear-mounted oil tank. Because of its very oversquare cylinder dimensions, the engine would

run freely up to 8,000rpm (at which engine speed 135/140bhp was developed according to the fuel used) and it could be safely taken up to 8,500rpm.

Transmission was by a dry multi-plate clutch, and a four-speed gearbox with Porsche baulk-ring synchromesh on all forward ratios in unit with the final drive assembly and mounted on the rear of the chassis frame. Because of the position of the input shaft of the gearbox the engine was mounted slightly to the left of the centre-line of the chassis. The drive to the rear wheels was by double universally jointed drive-shafts. The basis of the chassis consisted of two large-diameter oval-section tubular members with smaller-diameter round-section tubes used to carry the rear suspension and the body. At the front there were the usual Maserati double wishbones and interspersed coil springs, large vane-type shock-absorbers and an anti-roll bar. A de Dion layout was adopted at the rear with the tube located by a central sliding pivot mounted below the level of the tube itself (as on the Lancia D.50); the four-leaf transverse spring passed under the final drive assembly and vane-type shock-absorbers were also used at the rear. Very large hydraulic brakes, similar to those of the 250F, were fitted, and there were 16in Borrani wire wheels.

The bodywork was very similar in style to that of the 300S and there was right-hand steering and a central gear-change. A heavily riveted aluminium fuel tank with a capacity of approximately 25 Imperial gallons was mounted in the tail, but for long-distance racing a supplementary seat-shaped tank covered with rubber could be installed in the cockpit in place of the passenger seat. This arrangement was adopted at the Nürburgring. The exhaust system consisted of long twin tail-pipes running along the outside of the body on the left-hand side and terminating just ahead of the rear wheel.

Some interesting performance figures for the 150S were published in *Motor Racing* for January 1956 and they appear to be reasonably accurate. It was said that the car driven by Behra at the Nürburgring with a 4.75:1 rear axle ratio could attain a speed of 131mph at 8,000rpm and it was considered that with a higher 4.2:1 axle ratio the 150S would be capable of attaining 140mph.

On the début of the 150S Officine Alfieri Maserati brought along two examples. One of these was fitted with a rigid rear axle and quarter-elliptic springs. This was probably the original development car. The other, driven by Jean Behra in the race, was fitted with what was to become the standard de Dion rear end layout. The opposition in this race, which was limited to cars of 1,500cc, was very strong and included

twelve Porsche Spyders and four of the very potent six-cylinder EMW cars from East Germany. Behra headed the long line of cars drawn up for the Le Mans start in order of practice times and had lapped the 14.19 mile circuit in 10min 27.2sec (the outright unofficial record stood to the credit of Juan Fangio with a Mercedes W.196 Grand Prix car in 9min 33.3sec). Next fastest was Edgar Barth with an EMW in 10min 29.5sec and every other driver was at least 25 seconds slower.

Behra made a slow start, the Porsche 550s of von Frankenberg and Linge took the lead, but the French Maserati driver forged ahead just before the end of the first lap. Although Barth succeeded in keeping the Maserati in his sights until he retired his EMW with a broken crankshaft, the rest of the field was completely outpaced. The 150S, circulating with complete reliability and sounding like a Grand Prix car in miniature, led for the remaining twenty-one laps to cross the line almost two minutes ahead of von Frankenberg's Porsche. It seemed that at last Zuffenhausen had met its match in the 1,500cc class. Behra averaged 77.11mph (higher than the average speed of de Graffenried's A6SSG 2 litre Maserati in the 1953 Eifelrennen) and he set a new class lap record of 10min 39.7sec.

The 150S was not raced again in 1955, but at the Targa Florio, the last round in the 1955 Sports Car Championship and held very late in the season on 16 October, a new four-cylinder Maserati made its race debut. This was the 200S, identical to the original car apart from an enlarged engine of 1,994cc (92 × 75mm) with a power output of 175bhp at 7,500rpm and a five-speed gearbox. The 200S was intended as the successor to the A6GCS and it was hoped that it would prove more competitive against the Ferrari Mondial in short circuit than had its predecessor.

Two of these cars were driven in the Sicilian race by Bracco/Bordoni and Mancini/Musy; the former entry was a works car, but the latter came from Tony Parravano. Bracco crashed his car badly in practice and it only made the start after extensive work in a local repair shop. The 200S cars were also out of luck in the race, for the Bracco/Bordoni car crashed yet again and while Musy was at the wheel of the Parravano entry, an oil pipe broke and the loss of oil resulted in run bearings. The 2 litre class in this race was won by the A6GCS of Giuseppe Musso/Rossi.

By 1956 production of both four-cylinder models was well under way (although the 200S did not replace the A6GCS immediately and the six-cylinder cars were fielded by the works in the Mille Miglia) and cars were delivered to many private owners during the year. Few changes

were made on the production cars, but the bodywork had been slightly reprofiled and the nose treatment was a little smoother.

At the Buenos Aires 1,000 Kilometres race held on 29 January local drivers Alejandro de Tomaso and Tomasi drove a Tipo 150S to a class win and fourth place overall ahead of a number of larger-capacity cars. This race was a complete Maserati benefit, for the works 300S entries took first and third places.

The first European appearance of a four-cylinder Maserati in 1956 was in the 671 mile Tour of Sicily held on 8 April. In this exciting high-speed lap of the island a works 200S was entrusted to Giuseppe Musso, younger brother of Grand Prix ace Luigi. To quote Denis Jenkinson (*Motor Sport*, May 1956), 'Young Giuseppe Musso arrived at the start in a terrible flap, shot up the starting ramp at speed and knocked all the officials for six. Brother Luigi thumped him hard and produced a degree of calm.' And it was not as though the younger Musso was completely inexperienced, for he was in his third season of Italian sports car racing. Giuseppe Musso failed to make it to the finish and although his fate is unrecorded, it is more than likely that he crashed on one of the narrow and tortuous roads making up this long, difficult course.

The Mille Miglia was held in Italy over the weekend of April 28-9 and while several four-cylinder Maseratis were running in the 1,000 mile race, in Britain one of the first of these cars in private ownership made its début. The lucky owner was Brian Naylor, the venue was Charterhall in Scotland, and the brand-new, bright red 150S won the sports car race for cars of up to 2,700cc from Campbell Blair's Cooper-Bristol and Ron Flockhart's Austin-Healey 100S. Naylor was soon to discover, however, that the 150S was too heavy for British 'sprint' racing and it proved no match for the lighter, superior-handling Climax-powered Cooper and Lotus opposition.

In the epic Italian road race the new Maseratis were rather less successful and despite the works entry of a 200S for Bellucci, the more familiar six-cylinder models took the first two places in the class; Bellucci ran well in the opening stages of the race, but was forced to retire when water in the brakes rendered them totally ineffective. Works Maserati Grand Prix driver Jean Behra made his Mille Miglia début with a 150S, finishing twentieth overall and second in the 1,500cc sports class to Giulio Cabianca's Osca. The courageous little French driver's performance was far more meritorious than it sounds. He was running very strongly in the class and looked a likely winner when a rear brake pipe split; Behra pressed on until all the fluid had escaped and with it went the braking power. He

stopped at a garage, made up a new pipe and fitted it himself (all the mechanics were away watching the race!) and eventually rejoined the fray after a stop lasting 45 minutes. Five private 150S cars were also entered in this race, but none finished far up the field.

At the Nürburgring 1,000 Kilometres race held on 27 May a works 150S was entered for Pilette and Giardini, but the strong opposition in the class included works entries from Porsche and the East German AWE team. A second Maserati 150S had been entered, but failed to start after breaking its front suspension in practice. The car that started was withdrawn early in the race after one of the Weber carburettors had sheared its mounting studs. Victory in the 1,500cc class went to the Porsche of Herrmann/von Frankenberg (sixth overall) from the AWE of Barth/Rosenhammer (seventh). Although a works Maserati 300S won the race after many trials and tribulations, the 1956 Nürburgring 1,000 Kilometres event vividly illustrated the poor preparation of many Maserati works entries in 1956 because the team was so over-stretching its resources in trying to compete in Grand Prix racing, two classes of sports car racing *and* devoting time to the preparation of private owners' cars.

Four private 150S cars were entered in the Paris 1,000 Kilometres race at the Montlhéry Autodrome on 10 June, but for much of the race the class was led by the new twin-cam Gordini of Loyer/Rinen. The class was eventually won by the private Porsche Spyder of Goethals/Harris and the best performance from Modena was a class fourth and twelfth overall by Cornet/Mougin. It was rapidly beginning to look as if the 150S Maserati was too heavy compared with its rivals, despite Behra's brilliant performance at the Nürburgring in 1955. Another defeat followed a week later in the 92 mile City Cup race at Oporto; the winner was Roy Salvadori with a works 1,500cc Cooper-Climax and, soundly thrashed, private 150S owners Mascarenhas and Cornet crossed the line in fifth and sixth places.

One of the more interesting sports car races was the Supercortemaggiore Grand Prix with a capacity limit of 2,000cc and held over a distance of 1,000 kilometres on the full Monza circuit on 24 June. Scuderia Ferrari entered a team of their four-cylinder 'Testa Rossa' cars for Collins/Hawthorn (the latter was originally entered to drive a Lotus-Climax), Fangio/Castellotti and Gendebien/de Portago. In addition, twelve Ferraris were privately entered. A total of twenty-eight Maseratis was fielded, but only one of these was a 200S; in addition, eight Tipo 150S models were entered under the mantle of Officine Alfieri Maserati. Maserati produced new 200SI with chassis built of lighter-section tubing;

the body was longer and lower with an extended nose cowling housing a ducted radiator and the oil tank which had the filler and dip-stick accessible through a hole in the body. This car was fitted with a de Dion axle and five-speed gearbox. Unfortunately the new Tipo 200SI was written off by Giuseppe Farina in practice; the veteran Italian driver lost control at a corner on the road circuit, rebounded off the straw bales and rolled the Maserati. An older car with quarter-elliptic rear suspension and rigid axle (similar to that of the spare car at the 1955 Nürburgring race), but with the latest, lower body, was substituted. Unfortunately it was conspicuously slower than the car crashed by Farina.

Maserati were rather short of drivers at this race, partly because Jean Behra was in hospital for a minor operation, and partly because Farina had been taken to hospital following his crash with a broken collar bone, cuts and bruises. Eventually it was decided to pair Moss with Piero Taruffi in a 1,500cc car, while Cesare Perdisa would share the 2,000cc entry with Bellucci.

From the fall of the flag Peter Collins dominated the race for Scuderia Ferrari, pulling further and further away from the opposition. Ferrari team-mate Juan Fangio was left on the line with an engine that refused to fire and when he did eventually get it going, it became obvious that although he would soon gallop through the rest of the field, Collins, partnered by Mike Hawthorn, would prove uncatchable unless mechanical trouble intervened.

On only the first lap Moss retired his Maserati when the prop-shaft broke and flailed its way through the reserve fuel tank mounted on the passenger side of the cockpit. Perdisa was in second place when he stopped to refuel and Moss instead of Bellucci took over the 200S. Despite Moss's hard driving, he was unable to make any impression on the leading Ferrari and at the end of this 100 lap race the order was Ferrari (Collins/Hawthorn)—Maserati 2 litre (Perdisa/Moss)—Ferrari (Fangio/Castellotti) and the highest placed 150S Maserati was the eighth-place car of Simon/Taruffi which had been soundly trounced in its class by the Osca of Luigi Villoresi and Umberto Maglioli.

It was at about this time that Maserati purchased a Lotus Eleven, the very light British sports/racing car usually powered by a Coventry-Climax 1,100cc or 1,500cc single-cam engine. The Italian team had purchased the car to study its lightweight space-frame construction from small-diameter tubing and hoped that they would learn sufficient to build lighter versions of their own sports/racing cars. At Modena, the Lotus



was fitted with a Tipo 150S engine and it was tested at Monza in this form; although it cornered superbly, it weaved badly along the straight and the Maserati engineers never got to the bottom of the trouble. Nevertheless, the lessons learned from a close study of the Lotus chassis were later incorporated in the 'Bird-cage' cars of 1959 onwards.

On 22 July the Maserati team was out in force at the Adriatic seaport of Bari for the Grand Prix which was run over an exciting, tortuous 5.55 kilometre street circuit that started on the harbour front, incorporated a short straight and then twisted and turned its way back to the seafront again. The Bari Grand Prix was run in two parts, a 27 lap 2,000cc race starting at 10am and a 36 lap unlimited capacity race to which were admitted the first five finishers in the morning's race.

The 2,000cc race was completely dominated by the works Tipo 200SI entries of Behra and Perdisa which finished first and second ahead of Giulio Cabianca's 1,500cc Osca and Gino Munaron's Ferrari Testa Rossa. Both of these works Maseratis had the latest low, sleek bodywork with ducted radiator and five-speed gearbox; Behra's car had a de Dion rear axle and the oil tank mounted in the cockpit, while Perdisa's had a rigid rear axle and the oil tank in the nose. The main race proved another Maserati benefit in the absence of works Ferrari opposition and Moss scored an easy victory with a Tipo 300S car; over this course the 2 litre cars were only marginally slower and Behra and Perdisa finished second and third overall ahead of the 300S cars of Taruffi and Musy.

Maserati decided to miss the Le Mans race, postponed in 1956 until the end of July, thereby conserving their energies for the German Grand Prix held the following weekend. One private Maserati, a Tipo 150S, did run at the Circuit de la Sarthe and, remarkably, survived the twenty-four hours to finish ninth overall, but well out of the picture in its class. As Denis Jenkinson commented in *Motor Sport*, 'The Bourillot/Perroud Maserati actually lasted 24 hours, but maybe because clutch slip was limiting them to 6,000rpm.'

Prior to the German Grand Prix on 5 August there was a 7 lap race for sports/racing cars of up to 1,500cc and Maserati entered two Tipo 150S cars with de Dion axles and five-speed gearboxes for Stirling Moss and Jean Behra. The opposition included four works Porsche RS cars and a brace of Cooper-Climax cars from the Surbiton works. Although Moss was fastest in practice, he was unable to stay with the Porsche driven by Hans Herrmann and finished second, a little over three seconds in arrears, but twelve seconds ahead of Salvadori's Cooper; Jean Behra finished a poor sixth. Apparently the Maseratis were badly undergeared

and Moss was attaining 7,900rpm in top gear along the straights and was still unable to match the less powerful Cooper's speed.

On 19 August the Pescara Grand Prix was held as a 224 mile race for sports cars of up to 2,000cc. Once again no works Ferraris were entered and the early laps of the race were Maserati-dominated. Behra and Taruffi with works Tipo 200SI cars seared into the lead, but Behra lost a lap because of mechanical problems and Taruffi, partly overcome by fumes from a leaking exhaust manifold, failed to realise on the last 15.9 mile lap that Robert Manzon (Gordini) was closing on him rapidly; at the very last corner the French car swept into the lead and Taruffi was just under a second behind at the chequered flag. Behra finished a poor fourteenth, but with the consolation of having set fastest lap.

One of the most successful Maserati 'privateers' had been Swiss ex-racing motorcyclist Benoit Musy who had scored a whole string of successes with both A6GCS and 300S cars. Just before the Coupe du Salon race at Montlhéry in October he took delivery of a new 200S. He was fastest in practice with his new car over the combined road and track circuit and he was leading the race on a rain-soaked track when a tyre burst and he lost control on the banking; the Maserati shot over the edge of the banking, collided with a wall and rebounded into the transporter belonging to Louis Rosier (it was a sad irony that Rosier himself was mortally injured in this race). The Swiss driver was killed instantly.

Another Maserati victory followed in the one-hour Rome Grand Prix held over the 4.09 mile Castelfusano circuit near Ostia, Rome's famous lido, on 21 October. With 200SI cars Jean Behra and Harry Schell completely dominated the 2,000cc race. It is, however, interesting to note how much less competitive was the Tipo 150S than the larger four-cylinder model. Jean Behra was entered in the 1,500cc race at Rome with a 150S, but it was so slow in practice compared with the Cooper-Climax and Osca opposition that he decided not to run.

At the 1957 Buenos Aires 1,000 Kilometres race Maserati revealed yet another development of the four-cylinder sports car theme. This was the Tipo 250S with a 2,489cc (86 × 96mm) engine mounted in the 200S chassis. During practice the new prototype turned in some excellent lap times and with Fangio at the wheel it was faster on the first day than all the works 3.5 litre V-12 Ferraris. It was, however, considered too new and untried to run in the race proper.

While Taruffi with a Maserati 300S and Gendebien at the wheel of the new competition Ferrari V-12 Europa coupe battled for outright victory in the 1,000 kilometre Tour of Sicily on 14 April, there was an

equally bitter struggle for a win in the 2 litre class between Giorgio Scarlatti at the wheel of a 200SI and Munaron with his Testa Rossa Ferrari. In the early stages of the race Munaron went ahead, while Scarlatti took to the ditch and wrote off the left-hand side of his 'Maser'. The Maserati driver kept going at his hardest, however, and at the end of this arduous race finished third overall behind Gendebien and Taruffi, winning the 2 litre category and beating his Maranello rival by around 40 seconds, a very narrow margin after so many hours of racing.

The 1957 and last ever Mille Miglia 1,000 mile road race proved a great disappointment for Maserati. Apart from Moss's early exit from the race with the big 4.5 litre Maserati that was expected to head the overall results, the Maserati challenge faded in the 2,000cc sports class, a category which it was anticipated that Maserati would dominate. Franco Bordoni headed the class until his car developed gearbox trouble, Bellucci's car broke an oil pipe and Pagliarini went off the road and wrecked his 200S. The class was won by Munaron's Ferrari Testa Rossa which finished eighth overall.

During the remainder of the 1957 season Maserati were too preoccupied with their Formula 1 programme and their abortive chase of the Sports Car Championship with the big 4.5 and 3 litre cars to race the four-cylinder models, and at the end of the year the team withdrew from racing. Although the four-cylinder sports Maseratis achieved far less success than their makers anticipated, the 200S had its moments of glory and this engine in developed form powered the 'Bird-cage' series of cars built from 1959 onwards. Brian Naylor, one of the first Tipo 150S private owners, transferred the engine to a Lotus Eleven which he raced with success, and later fitted this car with a 2 litre Maserati engine. During 1959-60 the Scuderia Centro-Sud raced Cooper chassis powered by Maserati 2.5 litre four-cylinder engines and a few Formula 1 entrants during 1961-2, including the Equipe Nationale Belge team which raced Emeryson cars, relied on the Tipo 150S engine in developed form. None of these entrants achieved much success, but more successful were a number of British sports car competitors who raced rear-engined Cooper Monaco chassis with Maserati 2.5 litre engines. Perhaps the ultimate in Maserati-powered hybrids was the Cooper chassis with Maserati V-8 4.5 litre engine fielded by C. T. Atkins for Roy Salvadori in a number of races during the 1964 season.

## The Fastest Sports Cars: The Tipo 450S, 1956–7

With a mere 260bhp at the disposal of its 3 litres the Tipo 300S sports car had proved no match in 1955 for the latest products of Coventry, Maranello and Stuttgart. It was, however, a car of undoubtedly strong appeal to drivers as far as roadholding, tractability and general 'feel' were concerned. At the beginning of 1956 the Modena factory put in hand two new sports car projects from which it was hoped that there would emerge a car with really competitive, race-winning performance, but retaining the virtues of the 300S.

The first of these projects was the 3.5 litre six-cylinder model referred to in Chapter 23. Although the engine of this car was of completely new construction, it followed the basic design of the 300S. It was a simple and straightforward project for a flexible racing factory and two cars had been completed by the Mille Miglia race held at the end of April 1956. The second project, the Tipo 54 or 450S, was much more complex, it took much longer to develop and if it achieved but limited success, it was certainly one of the fastest cars ever to emerge from the Maserati factory. The 450S represented a complete break from existing Modena design practice and it was the first V-8 car built by Maserati for twenty-two years. Although the twin overhead camshaft cylinder head for each block of four cylinders had much in common with that of the familiar Tipo 200S four-cylinder sports car, development was protracted and over a year elapsed before the 450S was ready to race.

Concurrently with the engine development programme Maserati were working on a new chassis derived from that of the 300S. The chassis was ready first and was used for the two 3.5 litre models. The front suspension and general layout of the chassis were almost identical to that of the 300S, but the rear end had been completely redesigned. There was a new five-speed gearbox with its shafts in line with the axis of the car

and this was mounted in front of and in unit with the final drive. The tube of the de Dion rear axle ran across the chassis behind the axle (instead of in front as on the 300S) and was located by a guide fixed to the chassis frame (instead of to the final drive casing). The rear suspension still incorporated a high-mounted transverse leaf spring and twin-radius rods located the rear axle assembly. The whole chassis was, however, of much tougher and rather heavier construction and incorporated heavier-section chassis tubing and much stronger half-shafts and suspension components.

The two 3.5 litre cars built with this new chassis should have been driven in the Mille Miglia by Moss and Taruffi. The 'silver fox' elected to drive a 300S and although Moss agreed to drive one of the new cars, he crashed early in the race. This car was largely untested before the start, its handling was far from right (mainly because the new rear suspension was much superior to the original suspension retained at the front) and because of the increased weight it was, in the words of Denis Jenkinson, 'not as fast as a good 3 litre'. The first car that should have been driven by Taruffi was later completed and sold to Luigi Piotti. It ran in a number of races during 1956, but failed to achieve any success. The chassis of the car crashed by Moss was rebuilt with double wishbone and coil spring front suspension of completely new geometry.

By the end of May 1956 the first castings for the 450S V-8 engine were leaving the foundry. This 90 degree unit, which was of light alloy construction throughout, had a capacity of 4,477cc (93.8 × 81mm). The twin overhead camshafts per bank of cylinders were driven by a train of gears from the nose of the crankshaft. The inlet ports were in the centre of the vee of the engine and carburation was by four Weber twin-choke 45 IDM instruments. There were two sparking plugs per cylinder; one set of plugs was fired by a magneto driven from the gear train of the left-hand bank of cylinders and the other by a pair of coils and a distributor driven from the right-hand gear train. Two ignition systems were used because the chances of both breaking down during a race were extremely slight. The exhaust pipes fed into twin tail-pipes on each side and these led into small expansion boxes and exit pipes immediately ahead of the rear wheels.

The maximum power output of this monstrous engine was around 420bhp, and of this aspect of the 450S Denis Jenkinson wrote in *Motor Sport*:

It [the 450S] is known affectionately by all at Maserati, and most of Modena, as the 'quattro mezzo' and the sound of its thundrous exhaust note as it is



*Plate 56* At Le Mans in 1962 Maserati-France entered this Tipo 151 4 litre V-12 coupé for Maurice Trintignant and Lucien Bianchi; *Plate 57* Final competition Maserati: the Tipo 65 car with rear-mounted V-8 engine driven at Le Mans in 1965 by Siffert and Neerpasch.



*Plate 58* Early production model: the A6G 2 litre of 1954, seen here with coachwork by Zagato; *Plate 59* Serious production of touring cars started with the 3500 Gran Turismo of 1956 onwards; this example is fitted with an open body by Carrozzeria Touring.

run on the test-bed causes most of Modena to give knowing smiles for it is many years since 400bhp have been absorbed by the German-built water-dynamometer used at Maserati . . . It is well capable of going up to 7,200rpm but at 6,800rpm it reaches the limit of the dynamometer, so that Maserati can only make an estimate of the ultimate power, for at 6,800 there is no sign of the power curve falling off.

Without doubt the V-8 engine of the Tipo 450S was one of the finest technical achievements of the Maserati factory and its combination of brute power with the potential in later years for development as a relatively refined and modulated touring engine was almost unique. In terms of both power and development potential it represented a fine match for the rival V-12 products of the Ferrari factory at Maranello and it was a tragedy that its racing career was so short-lived.

In appearance, the 450S looked like a larger, beefier version of the 300S and its two-seater body followed typical Italian sports/racing practice. There were slots in the rear wheel arches which served the dual function of allowing air to cool the tyres and enabling the driver and passenger, should one be carried, to keep an eye on the rear tyre treads. As with all later sports Maseratis right-hand drive was fitted. The main fuel tank was mounted in the tail, but there was a supplementary tank on the left of the gearbox/final drive unit; to the right of this unit was the oil tank for the dry-sump lubrication system.

The maximum speed of a car of this calibre is almost a matter of pure speculation, but Denis Jenkinson made some interesting comments on this aspect of the 450S. He wrote that during testing of the No 4 car, the example crashed by Behra in training for the Mille Miglia, it was timed at 293kph (approximately 181mph). This car was fitted with the supplementary two-speed gearbox referred to below. 'Getaway from stand-still on a high bottom gear, with a rather fierce clutch, is anything but easy and is rather slow,' wrote Jenkinson, 'but once the clutch is home and the revs build up black lines appear on the road behind the rear wheels, starting as a soft grey colour and turning jet black as the engine gets up around 5,500rpm. Even with this sort of standing start it is possible to do 0-100mph in an easy 11sec., but the real surge of acceleration is in the 80mph to 170mph range.'

By August 1956 the first of the 4.5 litre engines was ready and it was installed in the rebuilt chassis that Moss had driven in the Mille Miglia. The car appeared in practice for the Swedish Grand Prix at Kristianstad and at this stage in its career it retained a 300S body (which resulted in a bulge in the bonnet over the carburettors that was almost as high as



the windscreen) and four short stub exhausts emerging each side just behind the front wheels. The plumbing for the oil tank gave trouble and flooded the rear of the car with oil, but, otherwise, it proved trouble-free. Most members of the Maserati team drove the car, it was lapping very fast, but because near-enough standard 300S brakes had been retained, it proved difficult to retard.

The Maserati technicians returned to Modena with a lot of useful information and by the end of the year the 450S had been thoroughly sorted. It now had a new chassis frame of neater construction, a new body and much improved brakes with larger, heavily ribbed drums. The first car with the new chassis, which was regarded by the works as the third of the series (ie, counting from the 1956 Mille Miglia cars onwards) was sold to Californian entrant Tony Parravano together with three V-8 engines, two of which had been reduced in capacity to 4,190cc ( $93.8 \times 75.8$ mm), developing 425bhp on alcohol fuel, so that they could be used at Indianapolis. The fourth car was retained for use by the works team.

This was shipped out to the Argentine to compete in the Buenos Aires 1,000 Kilometres race held on 20 January 1957 and in this race, the first round in the Sports Car Championship, it was driven by Juan Fangio and Stirling Moss. The 450S was the fastest car in the race—substantially faster than the 3.5 litre V-12 Ferraris which formed the principal opposition—and motoring well within its performance limits it cantered away from the opposition. Unfortunately the clutch-operating mechanism failed and although Fangio stayed in front making clutchless gear-changes, the strain proved too much for the gearbox and the car had to be retired. The race was won by a Ferrari shared by Gregory, Perdisa, Castellotti and Musso.

The next outing for the 450S was in the 12 Hours race at Sebring on 23 March and here the drivers were Fangio and Jean Behra. Once again the opposition consisted mainly of Ferraris, in the form of two new works cars with 3.8 litre four overhead camshaft V-12 engines and two single-cam per bank 3.5 litre models. The Ferraris were plagued by tyre and brake troubles; even when running well they could not match the lap speeds of the 450S and the new Modena car scored an easy victory from the 300S of Moss and Harry Schell and a D-type Jaguar driven by Hawthorn and Bueb.

It seemed that Maserati had built a real winner, but unfortunately once the European racing season was under way Modena racing plans went sadly awry. Maserati now started preparation work for the Mille

Miglia, a fifth chassis was almost ready and eight V-8 engines had been manufactured. On its return from Sebring the winning car was given a change of axle ratio, otherwise it required no attention and Behra roared off on a test run over the mountains to Siena and back. This arduous test was completed without any failure and shortly before Easter Behra covered 300 test miles over the road circuit at Modena. Next came a testing session at the Nürburgring and a week before the Mille Miglia Behra went off to cover a complete practice lap of the 1,000 mile course. After about 400 miles of hard driving the centre locating bolt on the rear transverse leaf spring sheared, the first failure since the Argentine race. The spring slid sideways and gashed a tyre and brake drum. Behra repaired the car at the roadside and on his return to the factory the spring location was modified to prevent a recurrence of this failure.

At the same time another and more major modification was made to the car. Specifically for use in the Mille Miglia a supplementary two-speed gearbox was mounted between the clutch and the normal gearbox in place of the usual reduction gears. This supplementary gearbox was operated by a push-pull control protruding from the bulkhead and its purpose was to enable the driver to select either a set of high ratios or a set of low ratios. Of this device Jenkinson wrote:

The idea being the high set, with a maximum of 185mph, could be employed from Brescia to Pescara, then the low set with a maximum of 160mph could be used for the mountains . . . In practice, it was found that it could also be used as a sixth gear, going through the five speeds in the rear gearbox and then changing up into high on the two-speed gearbox. This resulted in the most phenomenal acceleration from zero right up to 160mph reached in low fifth, and then the subsequent surge forward when changing into high fifth was more than the designers ever anticipated.

Moss took the modified car out on test in the mountains and on its return it was stripped down and fitted with a new engine. The fifth car was completed and also tested by Moss. He found that the brakes tended to overheat after fast descents and so two inlets were let into the nose to cool the front brakes and the rear brakes were cooled from large-bore flexible pipes leading from scoops on either side of the body.

It was intended that Moss and Behra should drive the cars in the Mille Miglia and it seemed that the team's chances of victory were excellent. On the Friday before the race, however, Behra was out testing with the fourth car and travelling at around 150mph when a large lorry blocked the road. The Frenchman was unable to avoid a collision, the front of the Maserati was wrecked and Behra suffered an injured wrist

and severe cuts and bruises. So only the one car driven by Moss, with Jenkinson again acting as navigator, started the race. Moss was eliminated from the race only seven miles from the start when the brake pedal broke off; fortunately he was able to stop the car safely. This, the last Mille Miglia, was won by veteran Italian driver Piero Taruffi with a Ferrari.

The next round in the championship was the Nürburgring 1,000 Kilometres race to which the Maserati team brought a total of five cars. Heading the Modena attack were the two 450S cars; the front of the car crashed by Behra in practice for the Mille Miglia had been cut away and a new front section welded on, but the only work needed on the car driven by Moss in that race was a change of axle ratio. To back up the 4.5 litre cars there were two 300S models entered in the name of Officine Alfieri Maserati, the car with 450S brakes driven by Scarlatti in the Mille Miglia, and Godia-Sales's own car which was in standard trim. In practice the team also tried out the experimental 3.5 litre V-12 car driven by Herrmann in the thousand-mile race. The Maserati drivers were Fangio, Moss, Schell, Herrmann, Bonnier, Scarlatti, Godia-Sales and Horace Gould. Under the race regulations, any pair of drivers could be switched to another car during the race, a situation that resulted in confusion with no one outside the teams concerned knowing precisely who was supposed to be driving any particular car.

At the Le Mans start the two 4.5 litre Maseratis headed the long row of starters lined up in order of practice times and the fastest practice laps for both had been achieved by Fangio. Schell took the first turn at the wheel of the faster of these and Moss drove the other 4.5. At the start Brooks (Aston Martin DBR1) went straight into the lead, followed by Schell, and Moss was left on the grid trying to fire his refractory V-8 engine. When the engine did fire, Moss was quickly away and soon began to make up lost ground. He was fifth at the end of the first lap and by lap 8 had swept through the field to take the lead from the green Aston. Only two laps later the leading Maserati disappeared out on the circuit; a half-shaft had broken, the shaft, hub, brake drum and wheel parted company with the car and Moss spun out of the race. On lap 11 Schell brought his second-place 4.5 into the pits to refuel and it rejoined the race with Fangio at the wheel. While this Maserati was stationary, the Ferraris of Collins and Hawthorn went by into second and third places. Fangio seemed unable to make much impression on the leaders, but moved up into third place when Collins stopped to hand over to Gendebien. Shortly afterwards Fangio brought the 450S into the pits

because the oil tank had worked loose. Two laps were lost while the car was repaired and now Moss took the wheel, rejoining the race in seventeenth place. After only one more lap, however, Moss was back in the pits because the oil tank had worked loose again and the car was retired. Tony Brooks and co-driver Noel Cunningham-Reid went on to win the race with their Aston Martin from the Ferraris of Collins/Gendebien and Hawthorn/Trintignant. This was to prove the first of three successive Aston Martin victories in the Nürburgring 1,000 Kilometres race.

The fourth 450S (that is, chassis number 6) was sold to American millionaire Jim Kimberley and a fifth and very special car was built for the Le Mans 24 Hours race, the next round in the championship, which was held in June. This was a 'one-off' coupé, the body of which had been designed by Frank Costin, designer of the Grand Prix Vanwall body and early Lotus bodies. It had very clean, smooth, curvaceous, aerodynamic shape and the aerodynamics were so good that there was no need for windscreen wipers. The body was built in Italy by the Zagato coachbuilding concern, but it was a rush job, shoddily finished and, as a result of misinterpretation of Costin's drawings, with the ventilation openings, etc, in the wrong places. The result was not only that the car had an ear-deafening, fume-filled interior, but because of the constructional errors the car was not able to pull more than 6,200rpm in top gear instead of the usual 7,000rpm. The coupé was entered for Stirling Moss and Harry Schell and although Moss held second place for a short while, the car was delayed by a long pit stop while an oil pipe was replaced and it was subsequently retired because a rear universal joint seized. Maserati also entered a normal open 450S for Jean Behra and André Simon. Simon was leading the race with the open car when the same trouble occurred, the steel ring retaining the universal joint shot off and holed the fuel tank. Victory went for the third year in succession to a Jaguar D-type.

Despite the many misfortunes suffered by the 4.5 and its very unimpressive record of one victory in five races, Maserati persevered with the design for they knew that basically they had a winner. The car was unmatched as far as performance was concerned and the basic running gear rarely gave trouble. Apart from the Le Mans coupé, which had been a rather expensive mistake, the car's failures could all be attributed to defects in minor components. This was partly because Maserati's resources were taxed to the limit in 1957 by the problems of running both full Formula 1 and sports car teams and by their efforts to develop simultaneously new cars for both categories of racing.

The last European round in the Sports Car Championship was the six-hour Swedish Grand Prix held over a narrow, bumpy 6.537 kilometre circuit at Kristianstad. To this race Maserati brought two 4.5 litre cars and a 300S. One 4.5 was the Le Mans coupé now fitted with the normal open bodywork and the other car had a 'Mille Miglia' supplementary two-speed gearbox. The ex-Le Mans car suffered from gear-selector problems in practice and its handling seemed inferior to that of its sister 4.5. Nevertheless, the big Maseratis dominated practice and headed the line-up for the Le Mans start. The faster Maserati, that with the supplementary two-speed 'box, started the race with Behra at the wheel and Moss started with the other car.

Initially Hawthorn's 4.1 litre Ferrari led the race, but Moss went ahead on lap 6 and Behra moved into second place nine laps later. With three-quarters of an hour's racing completed the two Maseratis were lapping in close formation and taking turns at leading the race. At the end of the second hour Moss handed the leading car over to Schell and when Behra stopped at the pits half an hour later, Moss took over this 450S, which was now leading the race. Shortly afterwards Schell went past the pits with a grinding noise emanating from the Maserati. He stopped next time round and it could be seen that the drive-shaft grease-retaining seal had split, just as at Le Mans, and the universal joint had seized up. Happily for Modena the other 4.5 enjoyed a trouble-free race and Moss and Behra scored a fine victory at an average of 97.98mph from the Ferrari of Phil Hill/Peter Collins and the 300S Maserati shared by Bonnier/Scarlati/Schell/Moss (the last-named had taken the wheel in the closing stages of the race and brought the car through from fifth place).

With one round to go, the outcome of the Sports Car World Championship was still undecided and Maserati, who had never won it, were prepared to throw everything into the arena in an effort to gain the championship for the first time. Events were to prove, however, that the effort was greater than even Officine Alfieri Maserati could afford. The final round was the Venezuelan Grand Prix held at Caracas on 3 November and to this race Maserati brought two 4.5 litre cars, the V-12 3.5 litre and a 300S (almost certainly the car raced at Le Mans). In addition, Temple Buell entered his 4.5 for Masten Gregory and Dale Duncan (the latter deputising for Fangio who initially experienced trouble in obtaining a visa and then succumbed to influenza). It seems that all three 4.5s were fitted with supplementary two-speed gearboxes.

Team manager Ugolini brought together a fine team of drivers com-

prising Moss, Behra, Schell, Bonnier, Scarlatti and Tony Brooks and he was proposing to ring the changes with these, using Moss as the king-pin of the team's efforts. The principal opposition came from Ferrari, the championship leader, who entered two of the 4.1 litre V-12 cars and two 3 litre models. As expected, the 4.5 litre Maseratis were fastest in practice, Moss took the leading position on the line-up for the Le Mans start with a lap in 3min 41.1sec (100.40mph) and Behra was 1.2sec slower. The V-12 car broke its transmission in practice and had to be posted as a non-starter.

At the start Moss was out-sprinted by Hawthorn, the 450S fired and stalled immediately and Stirling was left frantically pressing the starter button while the works 4.1 Ferraris led away from Gregory with the private 450S. Brooks's 3 litre Maserati was also left on the line with an engine that was reluctant to fire. Gregory, one of the most exuberant and 'hairy' of drivers, roared past the Ferraris to take the lead on the first lap, but before the end of the next lap he clipped a sandbag at the roadside and the car flipped at around 80mph, trapping the driver. It seems that Gregory's life was saved only because he had insisted on the eve of the race that his car be fitted with a roll-over bar. Collins now led with his 4.1 Ferrari and Behra was second for Maserati. Moss was roaring through the field, making up time lost at the start, and had soon fought his way to the front. Collins tore off his exhaust system on a sandbag dislodged and hurled into the road by a crashing Porsche and when the Kidderminster driver stopped at the pits, the order was Maserati—Ferrari—Maserati—Ferrari and it seemed that Modena was well on the way to clinching the championship title.

But the ill-fortune that had plagued the 4.5 for much of the 1957 season returned at Caracas to wreck the team's championship hopes. Moss was travelling at around 160mph on the main straight when an AC-Bristol driven by an American amateur pulled across the road in front of him. Stirling had no chance of avoiding the slower car, the Maserati struck the AC which reared up into the air, smashed into the top of a lamp-column and broke into two; Moss's Maserati went into a wild slide and Stirling struggled with the wheel for almost half a mile before he could bring it safely to rest. Moss returned to the pits on foot just as the surviving 4.5 was being refuelled. Behra climbed into the car, pressed the starter and the Maserati burst into flames. Guerrino Bertocchi, enveloped in flames, retained the presence of mind to turn an extinguisher over the high-pressure fuel system before dowsing his own burning hair and clothing. Behra scrambled out of the car to escape with

burnt arms and neck. The 4.5 was speedily extinguished by the efficient Caracas fire brigade, it was largely undamaged and Moss was hustled into the driving seat, while Behra and Bertocchi were taken off to hospital.

The next incident in the saga of Maserati misfortunes at Caracas is best told in the words of the late Peter Collins who was still leading the race with his Ferrari, 'Moss [was] going past the pits doing an extraordinary dance-act on the seat. Eventually he pulled in and it turned out that they had put out all the fire, except that on the seat, which was still going strong. Stirling had burned the back of his pants, and retired with a painfully burnt bottom.' Once the fire had been finally extinguished, Harry Schell took the wheel of the 4.5, rejoining the race in third place. The final Maserati disaster came when Schell was lapping Bonnier's 3 litre car through a fast curve. A rear tyre burst on the 300S and it skidded sideways into Schell's 4.5. Both cars went off the road. The 300S hit a concrete lamp-column, instinctively the driver jumped out of the cockpit and seconds later the top of the column collapsed on to the driving seat, completely wrecking the car. Schell's car bounced off another lamp-column, burst into flames and smacked into a concrete wall. Schell suffered burnt arms and face. With all the works Maseratis out of the race, the Ferraris went on to take the first four places, Collins/Phil Hill with their 4.1 leading home Hawthorn/Musso with a similar car. Ferrari took the championship with 30 points to the 25 of Maserati.

At Caracas, Maserati lost cars worth more than £20,000. Although the Federation Internationale de l'Automobile imposed a 3 litre capacity limit for Championship Sports Car races in 1958 onwards, the 450S cars would have sold readily in the United States and the money received would have helped finance Maserati's 1958 programme, which was to be based on a V-12 3 litre model. Maserati's already precarious financial position was worsened by the difficulty of obtaining settlement of large debts in the Argentine following the fall of the Peron regime and the team decided to withdraw from racing altogether. The 450S was one of the greatest sports cars of post-war years and it was a great pity that its racing career was so brief. Developments of the V-8 engine were later used to power production Maseratis and 'Bird-cage' competition cars built to run at Le Mans in the early 1960s.

## The 'Bird-Cage' Maseratis, 1959-65

When Maserati withdrew from racing at the end of the 1957 season, the company had too long a racing tradition and enjoyed building and racing cars too much to give up the sport altogether. Development of competition cars continued on a limited scale in 1958 with the light-weight 'piccolo' version of the 250F and the V-12 sports car based on the Tipo 300S chassis. It soon became evident that the 'piccolo' was no match for the latest Ferrari Dinos and Vanwalls and with Temple Buell's loss of interest the project was abandoned. There was every possibility that the V-12 sports car would prove a match for the Ferrari V-12 Testa Rossa and Aston Martin DBR1 cars that were dominating sports car racing now that there was a 3,000cc capacity limit, but the 300S chassis was now rather long in the tooth, with only a very limited racing life ahead of it, and the V-12 engine cost too much to build for the cars to be sold to customers at an economic price.

That there was a ready market for reasonably priced competition sports cars Maserati knew from their experience with the A6GCS and 200S 2 litre models and so Ing. Alfieri, Maserati's chief engineer, returned to the drawing-board to produce a car that would both be competitive and capable of sale at a reasonable price. The result was the Tipo 60, a car that was in some ways very conventional and in others very unorthodox. The most striking feature of the car was the chassis which was constructed from a multiplicity of small-diameter tubes welded together to form a frame that combined strength with exceptional lightness and with additional strengthening provided by the lower body panels. Although there were almost as many nick-names for this original method of construction as there were tubes in the chassis, the name 'Bird-cage' was that usually applied to these cars. At the front suspension was by double wishbones and coil springs and at the rear by a de Dion axle and transverse leaf spring.

The power unit of the first model was the familiar four-cylinder 200S



unit, but according to Maserati with slightly different cylinder dimensions of  $93.8 \times 72\text{mm}$ , giving a capacity of 1,990cc. On a compression ratio of 9.8:1, a power output of 200bhp was developed at 7,800rpm. In order to reduce frontal area this engine, mounted at the front of the chassis, was canted at an angle of 45 degrees to the right. Transmission was by a dry multi-plate clutch and five-speed gearbox in unit with the final drive. Dunlop disc brakes were fitted at all four wheels. The first car was fitted with a very neat and unremarkable body hugging the mechanical components closely, with a simple oval air intake, either side of which small lamps were enclosed in plastic fairings.

In order to attract customers for the Tipo 60, Maserati had to display its potential and, for the first time since 1958 and possibly for the last time in the company's history, a race entry was made in the name of Officine Alfieri Maserati. The race was the Coupe Delamare Deboutville, a 35 lap event for sports cars of up to 2,000cc at Rouen in July 1959, and the driver was Stirling Moss who had always enjoyed excellent relations with Maserati and was delighted to try out their latest product. Moss was fastest in practice and of the race *Motor Sport* wrote, 'Moss toured round and built up a comfortable lead, for, with all due respect to the rest of the drivers, the whole lot put together could barely equal him for driving skill, and the Maserati was more than a match for any 2 litre Lotus.' At the chequered flag Moss was 43 seconds ahead of the Lotus 15 driven by Alan Stacey. Later in the year Govoni drove the Tipo 60 in the Pontedecimo-Gioir hill climb and set fastest time of the day, defeating Scarlatti's Ferrari Dino V-6.

The Maserati factory was well satisfied with the performance of the new car and the next stage in development, which appeared later in 1959, was the Tipo 61 car, a serious challenger for victory in the Sports Car Championship with a four-cylinder engine increased in capacity to 2,890cc ( $100 \times 92\text{mm}$ ) and developing 250bhp at 6,500rpm. Delivery of the first two cars was made in time for them to compete at the Nassau Speed Week held in the Bahamas in December 1959. One car, entered by Lloyd Casner for Carroll Shelby, retired with mechanical trouble, while the other, driven by Gaston Andrey, was chasing after second place when it was eliminated in a minor collision.

Lloyd 'Lucky' Casner, a car dealer from Miami, was so impressed by the performance of his car that he decided to go ahead with a full team for the 1960 season. The team was called the Camoradi team (from Casner Motor Racing Division), three more cars were ordered, and arrangements were made with Maserati that the cars should be

works-prepared and supported. In the meanwhile the first white and blue car was entered in the Buenos Aires 1,000 Kilometres race which had been restored to the calendar after a year's interval. For 1960 the Commission Sportive Internationale had stipulated that cars should be fitted with windscreens at least 25 centimetres in height and provided with luggage accommodation. The first of these rules was much criticised because of the virtual impossibility of keeping such a screen clear of dirt and flies at racing speeds. Originally the Tipo 61s were fitted with normal high screens through which the drivers had to see as best they could.

At Buenos Aires the Tipo 61 was driven by Masten Gregory and Dan Gurney and it impressed with its acceleration, its braking power and its high cornering power. In practice Gurney was second fastest, a second slower than Phil Hill with a works Testa Rossa Ferrari. Gurney led away from the Le Mans start and built up a convincing lead which was retained until the Maserati's second pit stop. During his second spell at the wheel, however, Gurney retired the car with gearbox trouble. The works Ferraris of Phil Hill/Cliff Allison and Wolfgang von Trips/Richie Ginther took the first two places in this race. At the end of February Stirling Moss drove a Camaradi Tipo 61 to victory in the 162 mile Cuban Grand Prix.

Because of a stipulation that all entrants at Sebring had to use Amoco fuel (this firm was sponsoring the race), no works Ferraris were entered and it looked as though the Camoradi 'Bird-cages', three of which were entered, would have things very much their own way. Not one Tipo 61, however, made it to the finish. In practice, the car entered for Rathmann and Koehne blew up its engine and non-started. Stirling Moss co-drove a Camoradi car with Dan Gurney, setting fastest lap of the race in 94.48mph and drawing out an enormous lead; four hours from the finish, with a four-lap lead, this Maserati succumbed to rear axle failure. The third Camoradi car was entered for Gregory and Shelby, but this retired early in the race because of a broken piston. In addition to the Camoradi cars two Tipo 61s were entered by that great enthusiast, Briggs Cunningham. The car shared by Causey and Steer was in third place only half an hour before the finish when its rear axle failed and the fifth Maserati driven by Hansgen/Crawford was in third place when Crawford went off the road and got the car bogged down in sand; it was eventually dug out and rejoined the race, but it too succumbed to transmission trouble. The race was won by a 1,600cc Porsche driven by Olivier Gendebien and Hans Herrmann.

Both Casner and the Maserati engineering staff were thoroughly de-

pressed by the way the cars had performed at Sebring and Alfieri set to work to remedy the defects. The con-rods were strengthened and the final drive and the gearbox internals were redesigned. Originally the Camoradi team had entered the Targa Florio, but had scratched from the Sicilian race after the Sebring débâcle. By the end of April the first of the Camoradi cars had been modified, and although Alfieri and Bertocchi insisted that it was now strong enough to survive ten laps of the Little Madonie course, Casner was not convinced. Eventually the car appeared in Sicily in the hands of two Italian drivers, Umberto Maglioli and Nino Vaccarella. For the first four laps the well-driven Maserati held second place and then Vaccarella moved up into the lead ahead of the Porsche of Bonnier and Herrmann. Two laps from the finish the Sicilian lawyer ran out of fuel in the mountains, spectators found some petrol for him and he rejoined the race. Although it was not realised until later, the fuel tank had been damaged by a flying stone and half-way round a bend the petrol-starved engine cut out, Vaccarella lost control and crashed. The Porsche won the race from the Ferrari of von Trips and Phil Hill.

Next on the calendar was the Nürburgring 1,000 Kilometres race in which two Camoradi cars were driven by Stirling Moss/Dan Gurney and Masten Gregory/Gino Munaron. In atrocious weather, with drizzle at the start and mist that gradually thickened until visibility was reduced by rolling banks of fog to less than a hundred yards, Moss soon built up a good lead over the rest of the field and by the third lap Gregory was in second place. The leading car's race was, however, far from trouble-free and after twenty laps Gurney brought it into the pits with a broken oil pipe, the apparent result of excessive oil pressure caused by the low temperature in which the race was run. During a stop lasting 5min 16sec the pipe was replaced and a blanking strip was fitted over the intake to raise the engine temperature. Gurney rejoined the race in fourth place and 4min 35sec behind the leading Ferrari. Turning in what was perhaps the finest drive of his career in the most appalling weather conditions, Gurney was back in the lead by lap 29 and a lap later he brought the 'Maser' into the pits to refuel and for Moss to take the wheel. Gurney's goggles had been smashed by a flying stone and for two laps he had driven without any protection for his eyes. Moss rejoined the race in third place, recaptured the lead and at the end of this 44 lap race was a little over two minutes ahead of the second-place Porsche of Bonnier/Gendebien. The second Camoradi car had fallen back as the race progressed and at the finish it was in fifth place behind the Ferrari shared by

Allison/Mairesse/von Trips/Phil Hill and the Porsche of Herrmann/Trintignant.

Despite a very strong challenge from the Maseratis, the Le Mans 24 Hours race proved a Ferrari benefit and the rather ugly Testa Rossas (they were almost as ugly as the Tipo 61s, which is saying something) driven by Frère/Gendebien and Ricardo Rodriguez/Pilette took the first two places ahead of an ex-works Aston Martin DBR1 driven by Jim Clark and Roy Salvadori.

At this race the car driven by Masten Gregory and Chuck Daigh was fitted with a new, long tail to improve aerodynamics at high speed and an interesting windscreen arrangement designed to circumvent the fatuous windscreen regulations. On this Maserati the windscreen was extended down to almost the nose of the car, giving a very clear view of the mechanics, and thereby possessing the necessary depth to comply with the letter of the regulations and yet with its effective height low enough for the driver to be able to look over it in the traditional manner. With this car Gregory simply ran away from the rest of the field, but trouble struck at the first change of drivers; the engine refused to fire and after a long delay the trouble was traced to a broken wire in the starter motor. Twelve laps had been lost by the time the car rejoined the race and although Gregory and Daigh fought hard to make up lost ground, the engine eventually blew up during the night hours. The car driven by Scarlatti and Munaron retired in only the second hour of the race when Munaron noticed smoke in the cockpit and stopped on the Mulsanne straight to investigate the trouble. Because of starter motor failure he was unable to fire the engine and was forced to abandon the car. The third Tipo 61 driven by Casner and Jeffords made a slow start, it was delayed by starter trouble (but not for long because the mechanics now knew what to look for) and retired with sand in the transmission after an off-course excursion into a sand-bank.

Although the 1960 season, the Nürburgring victory and wins by Cunningham-entered cars in American races apart, had been disappointing for Maserati and Casner, both were determined to persevere in 1961. Alfieri was planning a much improved car inspired, like so many other rear-engined cars, by the successes of the British Formula 1 Coopers. The original method of construction was retained for the chassis, the front suspension design was largely unchanged, but the new car, the Tipo 63, featured independent rear suspension by coil springs and wish-bones. By December 1960 a Tipo 63 powered by the four-cylinder engine was being tested by Giorgio Scarlatti, but Alfieri was working on an

even faster version powered by a revised and enlarged version of the 1957 V-12 Grand Prix engine. Thoroughly impressed by the new car, Count Volpi's Scuderia Serenissima Repubblica di Venezia ordered two Tipo 63s and both Casner and Cunningham took delivery of cars.

There was no Buenos Aires race in 1961 and the first round of the championship was at Sebring in March. A total of six Maseratis from three American stables ran in this race, but not a single 3 litre made it to the finish. The Tipo 61 of Stirling Moss and Graham Hill (a Camoradi entry) was left on the line at the start with a flat battery. Six minutes were lost while the trouble was resolved, but Moss, driving with his usual vigorous determination, had brought his front-engined car through to second place by the end of the second hour; only three laps after Graham Hill had taken the wheel, the exhaust manifold broke and Hill, his feet roasted by the heat and his head dazed by exhaust fumes, was forced to retire. Moss was then switched to the Camoradi Tipo 63 of Gregory/Casner; he took it over in ninth place and brought it through to seventh before retiring it with broken rear suspension.

Of the two Cunningham 3 litre entries, the Tipo 61 driven by John Fitch and Dick Thompson survived for less than three hours before the transmission broke, and his Tipo 63 entrusted to Walt Hansgen and Bruce McLaren lasted until half-distance when the engine expired in a cloud of blue smoke. Cunningham also entered a 2 litre Tipo 60 car for himself and Bill Kimberly and this car finished eleventh after delays while the exhaust system was repaired. A fifth Tipo 61 was entered by Rallye Motors for Causey/Steer, but this never ran well and eventually succumbed to engine trouble. Not every journalist approved of the Tipo 63 and in his report of the Sebring race Gregor Grant wrote, 'Looking closely at the "Bird-cage", I reckon that if Lotus or Cooper were to produce such a contraption, they would be laughed out of existence!'

The next round in the championship was the Targa Florio and in this 447 mile race three Maseratis were entered: two Tipo 63s from Scuderia Serenissima and Boffa's private Tipo 60 2 litre which had enjoyed a good measure of success in Italian national races and which he shared in the Targa Florio with Todaro. Of the Serenissima cars, that shared by Magioli and Scarlatti featured a headrest and tail-fin, Borrani disc front wheels and Dunlop disc rear wheels, while the newer car driven by Vaccarella and Trintignant lacked headrest and tail-fin, but sported spoked front wheels and Dunlop alloy disc rear wheels. Opposition came from strong Ferrari and Porsche teams, and none of the Maserati drivers could match the hot pace set by the race leaders. Vaccarella/Trintignant

took fourth place and Maglioli/Scarlatti finished fifth. The Boffa/Todaro Tipo 60 burst the pipe leading to its oil radiator, spun on its own oil and, as it crawled away to retire, left a trail of oil along the road on which several other drivers spun.

At the Nürburgring the Camoradi team contented itself with the entry of a single Tipo 61 which looked rather scruffy and was unchanged from the previous year apart from increased camber on the rear wheels and wider rims; this was driven by Casner/Gregory. The Serenissima team brought along both of their Tipo 63 cars, together with a strong contingent of mechanics from the Maserati works, and the rear-engined cars were driven by Trintignant/Maglioli and Scarfiotti/Vaccarella. Since the Targa Florio, a number of changes had been made to these cars, including the adoption of new rear suspension wishbones which improved the geometry, Borrani wire wheels and glass windscreens.

Once again weather conditions were atrocious and rain and snow turned the circuit into a skating rink and ruined visibility. In the first six during the opening laps, the Camoradi car seemed nevertheless unlikely to repeat its 1960 victory; as faster cars fell by the wayside, however, the Tipo 61 gradually moved to the front of the field, it took the lead on lap 25 and it stayed in front for the remaining nineteen laps. Neither of the Serenissima cars handled well and on lap 17 Maglioli brought his car into the pits and complained of transmission toughness. While he sat unhappily in the rain and sleet, the mechanics investigated the rear of the car; the final drive casing had split and lost all its oil, and this Tipo 63 was pushed away into retirement. Later in the race the wheel of the remaining Tipo 63 was shared by Trintignant. Although 'Trint' went off the road and buckled the 63's nose, this car held third place until four laps from the finish when it retired with final drive failure. Second and third places in this race went to the Ferraris of Ricardo and Pedro Rodriguez and of Ginther/Gendebien/von Trips.

Shortly afterwards the Rouen Grand Prix was run as a sports car race in two two-hour heats. In the absence of works sports car teams, Lloyd Casner and the Tipo 61 scored another victory, averaging 92.25mph and leading home the Ferrari 250 GT Grand Touring cars of Willy Mairesse and André Simon.

There were no Camoradi cars at Le Mans and at the Sarthe circuit the trident was represented by the Cunningham and Serenissima teams. Cunningham fielded Tipo 63 cars for Hansgen/McLaren and Thompson/Pabst. Both cars had V-12 engines and could be distinguished from the four-cylinder model by two large exhaust pipes poking out through either

side of the tail. The Hansgen/McLaren car had cylinder dimensions of  $70 \times 64\text{mm}$ , while those of the Thompson/Pabst car were  $75 \times 56\text{mm}$ . In addition, Cunningham entered a Tipo 60 2 litre car with a long tail as used on the 61s at Le Mans in 1960. The Serenissima contribution was a V-12 Tipo 63 car with cylinder dimensions of  $68 \times 68\text{mm}$ . There was no obvious explanation for these differences in cylinder dimensions, but both teams regarded their Tipo 63s as experimental and were not expecting to achieve any success.

When the flag dropped, Thompson's car refused to start, but the engine was eventually induced to fire after Bertocchi had operated the throttles by hand. That the V-12 engined Tipo 63 had a competitive performance soon became apparent and Hansgen was in third place after two and a half hours' racing, when he lost control in the wet at Tertre Rouge and crashed. Both of the other Tipo 63s were plagued by overheating, but the Thomson/Pabst car survived to finish fourth behind a trio of Ferraris. Cunningham and Kimberly brought their 2 litre car home in eighth place.

Ferrari had now won the Sports Car Championship, although there was still one round to be run, the Pescara Four Hours race, which counted for half-points only. At this race the Maseratis were out in force. Casner appeared with one of his Tipo 61 front-engined cars and Boffa drove his Tipo 60 2 litre. The most interesting Maseratis, however, came from Scuderia Serenissima. One of the four-cylinder Tipo 63 cars was driven by Vaccarella, but Bonnier was at the wheel of what was to all intents and purposes a works development car, 'being fussed over by factory engineers and mechanics'. This car, the Tipo 64, was fitted with rear suspension comprising a de Dion rear axle, long struts running backwards and inwards at an angle of 45 degrees from the lowest point of the hub carrier to a pivot point below the centre of the de Dion tube and, in these struts, coil springs. The coil springs were compressed by the struts shortening as the wheels rose because of the geometry of the radius arms locating the ends of the de Dion tube.

The Pescara race was run on Tuesday 15 August, a national religious holiday, and as it was intended that it should be over before the heat of the day was at its zenith, the start was timed for 9am. At the Le Mans start, which with typical Italian punctuality was eighteen minutes late, Casner was first away with the front-engined Camoradi car and at the end of the first arduous 15.9 mile lap he was in second place behind Ginther's rear-engined Dino 246 Ferrari. Both of the Serenissima cars were in trouble at the start because their engines refused to fire and they

eventually got away after the rest of the field had departed. Bonnier retired early in the race when his V-12 car broke a half-shaft, but Vaccarella motored magnificently with the four-cylinder and at the end of the hour he was in third place behind Casner and Ginther (who had lost time by stopping at the pits to complain about the Ferrari's handling). The two rear-engined cars passed Casner, but Vaccarella retired on the eighth lap with engine failure and, then, shortly after Ginther had handed over to co-driver Baghetti, the Ferrari retired with collapsed rear suspension. Casner was now completely unchallenged, but on lap 14 he collided with a slower car that he was lapping, the Maserati rolled over after hitting the bank, trapping the driver who was badly burned by hot oil escaping from the oil tank. At the end of this four-hour race the Ferrari Testa Rossa of Bandini/Scarlatti led from the Porsche of Orthuber/Barth and Boffa's Maserati. Later in the year Gaston Andrey drove his Tipo 61 into third place in the Nassau Trophy race in the Bahamas.

At the end of 1961 the existing 3 litre Sports Car Championship was superseded by a new Prototype Championship with, in its first year only, a capacity limit of 4 litres. Although Casner had lost all interest in the rear-engined Maseratis, examples were raced in 1962 by both the Cunningham and Serenissima teams. At the Sebring race Briggs Cunningham fielded a V-12 Tipo 63 'Bird-cage' for Walt Hansgen and Dick Thompson, and a Cooper 'Monaco', a successful sports racer based on the Formula 1 Cooper chassis of 1959-60, with a Maserati engine (almost certainly a four-cylinder 2,500cc unit) for Bruce McLaren and Roger Penske. From Scuderia Serenissima came a four-cylinder Tipo 63 which was driven by Nino Vaccarella and Carlo Mario. Vaccarella retired this car with gear-selector problems early in the race and the Hansgen/Thompson car was eliminated by collapsed rear suspension. Despite running out of brakes, McLaren and Penske brought their Cooper-Maserati through to finish fifth.

Yet another version of the 'Bird-cage', the Tipo 64, appeared at the Targa Florio in May. This car, entered by Scuderia Serenissima for Carlo Abate and Colin Davis, had slight chassis modifications and featured the 70 × 64.4mm version of the V-12 engine. Abate drove the car for the first three laps, but on his first lap at the wheel Davis ran into trouble. He was slowed by steering trouble and while he was motoring slowly back to the pits to retire, the engine cover came open and banged on the road. He completed the lap steering with one hand and holding the engine cover with the other.

At the Nürburgring 1,000 Kilometres race held later in May Casner



entered his old Tipo 61, now fitted with a new body, for himself and Masten Gregory. The car was accepted by the organisers as a Grand Touring Prototype and after overheating and other problems it finished nineteenth on the road. It also apparently won its class, but as there were eleven classes, this did not mean very much.

Although Casner and other drivers continued to race their cars in suitable events—the Camoradi Tipo 61 appeared at Brands Hatch as late as August 1963—the racing career of both the front-engined and the early rear-engined ‘Bird-cage’ cars was to all intents and purposes over. In all around six Tipo 60s, something over twenty Tipo 61s and six Tipo 63s were built and the front-engined cars had a very modest price tag, equivalent to about £3,900, or £4,400 delivered in the United States (compared with around £6,000 for a Lotus 19 in America). They were among the fastest sports cars of their time and the Tipo 61 was of sufficiently simple mechanical concept for the works to be able to develop it quickly, and for private owners to maintain it satisfactorily. The rear-engined cars had, however, required a much more intensive and costly development programme than Maserati were prepared to undertake.

At Le Mans in 1962 another new line of Maseratis appeared, Grand Touring Prototypes that were very different from their ‘Bird-cage’ predecessors, but which for purposes of convenience are usually regarded as being members of the same family. The new model, the Tipo 151, featured a front-mounted engine. This was clearly a retrograde step, but Maserati were able to resolve handling problems much more speedily than with a rear-engined design. The power unit was a modified version of the 1957 Tipo 450S, reduced in capacity to 3,944cc ( $91 \times 75.8$ mm) to comply with the 1962 regulations. With twin overhead camshafts per bank of cylinders, twin-plug ignition and four twin-choke Weber carburettors 360bhp was developed at 7,000rpm. Transmission was by a five-speed all-synchromesh gearbox in unit with the final drive.

The chassis was a much simpler design than that of the ‘Bird-cage’ cars proper and was constructed from large-diameter tubes. At the front, suspension was by unequal-length wishbones and coil springs, while at the rear there was a de Dion axle, twin trailing arms and coil springs. The de Dion axle had a sliding trunnion mounted centrally at the rear of the final drive unit to provide lateral location, and separate arm sections at either end of the de Dion tube gave greater roll resistance and a limited degree of independent movement. The body was a stark coupé with a long, tapering nose. In practice the cars appeared at the Sarthe circuit with perspex covers over the bonnet-top air intakes, but metal cowlings

were adopted for the race. During testing, one of the Tipo 151 cars had been timed at 188mph and they were among the most powerful cars entered in the race.

Two of the new cars were entered by Briggs Cunningham for McLaren/Hansgen and Thompson/Salvadori, but Salvadori found difficulty in squeezing himself into the Maserati's cramped cockpit and switched to Cunningham's E-type; his place was taken by Kimberly. A third Tipo 151 was entered by Maserati-France (the marque's French agents) for Maurice Trintignant and Lucien Bianchi. Casner also entered his Tipo 61, but it non-started.

In practice the Tipo 151s were attaining over 180mph on the Mulsanne straight, but the drivers were far from happy with the handling through the curves. None of the three cars made it to the finish, but at different times each was well up with the leaders. The first to be eliminated was the Thompson/Kimberly car which held second place early in the race; with just over five hours' racing completed Thompson lost control at the 'Esses' and crashed, and the car caught fire and was destroyed. The red-painted Maserati-France car was in a collision with a bank and damage to the left-hand rear suspension resulted in excessive tyre wear and the Maserati's eventual retirement. The McLaren/Hansgen car was the only Tipo 151 to survive beyond half-distance; it was delayed by tyre trouble, but it had climbed back to fifth place when it was eliminated by a burnt piston a little after 5am on the Sunday morning.

Although no other entrant of Maseratis persisted with their cars after the end of the 1962 season, Colonel Simone of Maserati-France had his car rebuilt for the 1963 Le Mans race with a shorter wheelbase, modified rear suspension and an enlarged engine of 4,941.3cc (94 × 89mm) developing 430bhp at 7,000rpm. The car was driven in the 24 Hours race by André Simon, veteran *pilote* of a private 250F in the halcyon 1950s, and Lloyd Casner. Simon led the race for the first hour, fell back, and then handed the Tipo 151 over to Casner who was in front again by the end of the second hour. Not long afterwards, with a short, but gallant drive under its wheels, the big Maserati retired with engine trouble.

Shortly afterwards both Simon with the Maserati-France car and Casner with his old Tipo 61 ran in a 25 lap race for prototypes at Reims. Simon went off the road on the first lap and Casner's car expired with mechanical trouble. At the Guards Trophy race at Brands Hatch on August Bank Holiday Monday, the Maserati-France car was driven by Lucien Bianchi; it trailed round well down the field, quite unsuited to such a tight course, and finished a poor thirteenth.

The Maserati-France Tipo 151, with only very slight modification, reappeared at Le Mans in 1964 and on this occasion it was driven by Maurice Trintignant and André Simon. It was fastest along the Mulsanne straight at a speed of 191.30mph, but retired early in the race because of electrical trouble. The same drivers handled this car in the Reims 12 Hours race, but yet again it retired, with ignition trouble, after prolonged efforts to induce it to run properly.

At the Le Mans Test Weekend in 1965 poor Lloyd Casner lost his life when he crashed at the wheel of the Maserati-France Tipo 151. Colonel Simone was still determined, however, to have a crack at Le Mans and between 1 May and the 24 Hours race in June a new car was built in France to the design of Maserati chief engineer Giulio Alfieri. This final competition Maserati, the Tipo 65, had a multi-tubular space-frame constructed from tubing of even smaller diameter than that of the original 'Bird-cage' cars. Suspension was by double wishbones and coil spring/damper units at the front and by double wishbones and longitudinal torsion bars at the rear. The V-8 engine had a capacity of 5,046cc (95.1 × 89mm) and with Lucas fuel injection developed the very competitive power output of 430bhp at 6,500rpm. Transmission was by a five-speed all-synchromesh gearbox and the body was a very aerodynamic open two-seater.

Although very great care was taken in the construction of the new car, it was, undeniably, a rush job, taking only thirty-five days from start to finish and there was insufficient time for adequate testing. At Le Mans, it was driven by Jo Siffert and Jochen Neerpasch, but the handling was bad at high speeds and on the first lap of the race the Tipo 65 ran out of road and damaged its radiator. Shortly afterwards it was driven at Reims by Trintignant and Simon, but yet again retired soon after the start. On this sad note the racing history of Maserati-built cars came to at end.

## The Production Cars

In pre-war days Maserati had concentrated on the manufacture of single-seaters, few sports cars had been built and there was no such animal as a production road-going Maserati. This was a situation which the Orsi family was anxious to remedy and a first tentative step towards building production road cars had been taken with the introduction of the early post-war 1,500cc A6G model. The evolution of the six-cylinder Maserati engine has been discussed in earlier chapters; it suffices to say here that by 1954 the A6GCS was in series production for competition use and its potential as the basis for a successful Gran Turismo car was patent.

During 1954 Officine Alfieri Maserati built both a 'Mille Miglia' version of the A6GCS with Pininfarina coupé body (but this did not progress beyond the prototype stage) and a prototype production car known as the A6G 2000. The latter featured a chassis with the wheelbase lengthened to 8ft 4.4in, front and rear track widened to 4ft 5.5in, and the chassis frame fitted with outriggers to take more spacious bodywork. The competition six-cylinder engine was retained, but was fitted with single-plug ignition and a single twin-choke Weber carburetter; according to Hans Tanner (*Motor Racing*, December 1954), the compression ratio was reduced to 7.5:1 and the power output was 140bhp—but other, reliable sources quote a compression ratio of 8:1 and a power output of 125bhp. The suspension was changed in detail only and a 15.5 Imperial-gallon fuel tank was fitted. The earliest cars were fitted with Pininfarina bodies, but because of this company's commitments elsewhere, notably to Ferrari, it was unable to undertake the building of the production bodies. The prototype car was fitted with a standard Maserati four-speed gearbox having synchromesh on third and top gears only, but the production cars had a gearbox with Porsche baulk-ring synchromesh on all ratios. The price was quoted as £2,470 in Italy, compared with £3,235 for the competition model.

Mainly because of the company's pre-occupation with a very intensive

racing programme and the demand for the competition sports cars, Maserati never built many of these delightful little GT cars, although they were listed until 1957; in 1956, for example, the scheduled output was 100 cars, but it is likely that far less than this number was completed that year. Both open and closed coachwork was available, and the coach-builders used by Maserati included Allemano, Frua and Zagato.

In a short article in *Motor Racing*, Hans Tanner gave an account of a drive with the prototype car in Paris:

There is a noticeable difference between this car and the normal sports 2 litre, which requires real driving in traffic and which must be constantly kept at 4,500rpm minimum, otherwise it has acceleration rather similar to a second-hand double-decker bus. The acceleration of this touring car is instantaneous, it permits easy and quick passing in heavy and close traffic.

Through the Bois de Boulogne with its many curves and corners the car gave a wonderful impression of roadholding at speed; it might have been on rails. The extra length of the chassis seems to have given the car even better roadholding than the 2 litre sports.

. . . Over a high speed run for about 100 miles, during which 118mph was reached several times, the car averaged 19mpg, so that it can be fairly estimated that the consumption is between 19 and 24mpg. The fact that 118mph indicated was reached compares favourably with the makers' claimed speed of 122mph for the car.

Tanner quoted the following acceleration times:

0-40mph	5sec	0-70mph	13sec
0-50mph	7.5sec	0-90mph	22sec
0-60mph	10sec		

It was a great pity that so few of the magnificent GT cars were built, for it would seem that they were very much a match in terms of both performance and handling for such vaunted contemporaries as the Colombo V-12 Ferraris and the Aston Martin DB2-4.

Without doubt it was an even greater pity that Maserati's next GT project never progressed beyond the prototype stage. This was a smaller, more compact car powered by a detuned version of the Tipo 150S, 1,484cc four-cylinder engine, and with a chassis very similar to that of Maserati's smallest competition model. With 8.5:1 compression ratio and ignition by coil and distributor (in place of the magnetos of the competition car) 130bhp was developed at 7,500rpm. The four-speed gearbox was mounted in unit with the engine and had Porsche baulk-ring synchromesh on all ratios. The hydraulic brakes had drums with

radial fins. The first prototype was fitted with a convertible body designed by Frua, but constructed by Fantuzzi. Maximum speed was reckoned to be in the 125–30mph range. According to one source several of these cars were built and during the 1960s one was offered for sale in *Motor Sport*.

The first Maserati production car to be built in substantial numbers was the 3500 GT, which made its début at the 1957 Geneva Salon. This desirable and very swift motor car was powered by a 3,485cc (86 × 100mm) engine directly developed from that fitted to the car driven by Stirling Moss in the 1956 Mille Miglia. In detuned form for road use the compression ratio was 8.5:1, three twin-choke Weber carburettors were fitted and the claimed power output was 230bhp at 5,500rpm. Maximum speed was said to be 144mph and this figure was substantiated by road tests of later production versions. The first prototype was fitted with a sleek coupé body by Allemano.

During 1958 the first production batch of 3500 GT with bodies by Allemano and Carrozzeria Touring was completed and around one hundred cars were built in 1959. Girling disc brakes on the front wheels were adopted in 1960 and discs on all four wheels were introduced for 1962; in addition, from 1962 onwards, Maserati offered the 3500 GTI version with Lucas fuel injection and a power output of 235bhp at 5,500rpm. Maserati was the first Italian manufacturer to offer fuel injection on a production car.

Because the monstrous 450S sports cars had been eligible for only one season of championship racing before a capacity limit of 3 litres was imposed, the model had been written off by most critics as an expensive white elephant. But Giulio Alfieri gradually evolved a refined Grand Touring Car from the raucous, immensely powerful, difficult handling 450S and the last production Maseratis, the Bora and Kham-sin, were still powered by engines directly developed from the 1957 V-8 model.

In 1957 Maserati enthusiast Temple Buell urged the factory to build him a touring car based on the V-8 sports model, but initially both Omer Orsi and Alfieri were convinced that the noise generated by the gearbox and final drive of the 450S would be intolerably high for a road-going car. Development was eventually put in hand in the early part of 1958 and the car was completed in the latter part of the year.

Few changes were made to the standard 450S chassis apart from increasing the wheelbase from 7ft 8in to 8ft 6in. The 4,477cc engine was slightly detuned to develop 380bhp at 7,200rpm, the standard competition 45 IDM carburettors were retained and the engine was distin-

guished by a crackle-black finish (a feature adopted on all production Maseratis). Modifications were made to the gearbox so that it was much quieter than that of the sports car and there was a smaller multi-plate clutch. A smaller 37 gallon fuel tank was fitted and there were 16in (instead of 17in) rear wheels. The body, built by Fantuzzi, closely followed the design of Frank Costin's Le Mans coupé, but, because of the increased wheelbase, it was longer and roomier.

In the January 1959 issue of *Motor Racing* Hans Tanner gave an account of a ride in the 5 litre Maserati with chief tester Guerrino Bertocchi at the wheel. Tanner's accounts of drives with Bertocchi usually contained lurid descriptions of near misses at high speed. That Bertocchi was a very fast driver is undeniable, but if he drove with as much elan as Tanner suggests, it seems improbable that he could have survived so long!

To quote Tanner:

The engine started with a muffled roar, there being large silencers built into the exhaust pipes, plus a great deal of noise insulation between engine and cockpit. Nevertheless the big V-8 could not be denied and clanks and rumbles shook the car. The acceleration was frightening with the engine note rising quickly to a crescendo, accompanied by a turbine-like whine from the gearbox . . . The already impressive front of the car rises up as the back drops under acceleration and the wheels bite in. Almost immediately, it's time to change gear and change again . . . The steering was very direct and I had the feeling that a violent sneeze would send the car off the road on the other side. The gearbox was wonderfully smooth and easy to operate . . . Bertocchi decided that spells of up to 155mph were enough, as it was a slightly more difficult task to stop the car from a maximum speed of 175mph than it was from 150mph.

On the return trip the crowds were out cheering and waving as if it were their beloved Mille Miglia all over again. I had a brief glimpse of a couple of motorcycles in the ditch, with mud-spattered riders too busy gaping to wipe off the mud, and a farmer trying frantically to get his horse and haycart out of a vineyard back on to the road . . .

It has been said that this fantastic car, which was finished in impressive black and chromium, was based on the actual 1957 Le Mans coupé and this may well be so. It was very much a 'one-off' job and was subsequently sold in the United States.

The striking black 5 litre Maserati coupé was a direct link between the 1957 competition cars and a true production car powered by the V-8 engine which was exhibited at Turin in 1959. The 5000 GT was based on the successful 3.5 litre chassis and was fitted with a very handsome, aggressive coupé body by Carrozzeria Touring. Engine capacity was in-

creased to 4,935.33cc (98.5 × 81mm) and on a compression ratio of 8.2:1 the V-8 engine in touring form developed 340bhp at 6,000rpm. In late September 1961 Maserati held a press conference at Modena at which they revealed an improved version of the 5000 GT with Lucas fuel injection (in this form power output was 325bhp at 5,500rpm), Girling disc brakes front and rear and a very neat coupé body by Allemano. Very few 5000 GT cars were built and it is doubtful if total production exceeded thirty-five examples.

In *Motor Racing* for February 1960 Hans Tanner recounted a drive with Bertocchi in one of these cars along the Autostrada near Modena:

‘Not too fast now, Signor Bertocchi’ said the man at the toll gate. ‘Never fear’ was the reply and off we set at 79.5mph in first gear. After the 5 litre was nice and warm we decided to take some times. I clocked the first kilometre at 168mph and the second at 172.4mph. With a fair amount of traffic and slowing down to overtake, we averaged 153mph from Modena to Bologna, taking a bare 6 minutes 50 seconds to cover the 28 kilometres . . .

Tanner rounded off his report on the 5000 GT with the masterly understatement that ‘At 170mph the car seems to be doing 90mph and I feel that without a skilful driver at the wheel this effect could be disastrous.’

Maserati introduced a revised six-cylinder car in 1963 known as the 3500 GTI ‘Sebring’. The engine and gearbox were largely unchanged, but the wheelbase was shortened by four inches and the body was a more compact Vignale 2 + 2 coupé, distinguishing features were the four headlamps and Borrani knock-on wire wheels with light alloy rims. In the United Kingdom the ‘Sebring’ sold for a little over £5,000, and air conditioning was available for £308 extra.

John Bolster’s road test of the ‘Sebring’ was published in *Autosport* in September 1963 and his comments make interesting reading:

The ‘Sebring’ is a luxury car and is not light in consequence [26cwt], but the twin-cam aluminium engine produces enough power to give it a lively performance. The gear ratios are ideal, and though the box seems rather ‘unfriendly’ at first, it becomes easy to handle with practice. It responds best if the lever is not held too tightly and is allowed to line itself up as it enters each gear position. The maxima on the five gears are impressive indeed!

The engine may be run for long periods at 5,000rpm and taken up to 6,000rpm for a short burst. As 5,000rpm on fifth gear is equal to 124mph, one has a fine motorway cruising speed at one’s disposal. The makers claim a maximum speed of 146mph, and though I was not able to achieve



this, it must be emphasised that I retained the ordinary tyre pressures throughout my test, nor is my measured strip of road of unlimited length. At 136.3mph the engine was turning at 5,600rpm, and as it peaks at 5,500rpm this was a satisfactory speed.

The power unit gives plenty of torque and accelerates quite briskly on the high fifth gear. The direct fourth is better employed, however, for driving at less than 100mph. All the gears are quiet in operation and third may be used for miles on winding roads or in traffic.

... Pressed hard on the corners of the Oulton Park circuit, the Maserati tended to oversteer, but some attention to tyre pressures may have corrected this. It was extremely controllable and some fast laps were achieved. On the road, one does not notice this characteristic [the oversteer] except on wet surfaces, when the rear end sometimes tends to break away fairly sharply.

The disc brakes are very powerful indeed and demand only moderate pedal pressure. In wet weather, they should be applied at fairly frequent intervals to dry them out, or uneven retardation may occur.

Fuel consumption worked out at 14-18mph and Bolster achieved the following acceleration times:

0-30mph	3.4sec	0-80mph	14.2sec
0-50mph	6.2sec	0-100mph	21.6sec
0-60mph	7.6sec	0-120mph	30sec
Standing quarter-mile, 16.4sec			

Bolster summed up this product of Modena with the words: 'The Maserati Sebring is a superb example of an ultra-high-performance luxury two-seater. Long distances on fast roads are its *métier*, and as it pulls up at its destination at the end of a day, it still looks beautiful though covered in the dust of several countries.' These are sentiments with which the writer entirely agrees. The Sebring is now a neglected classic and a sound example can be acquired for as little as £500-£600.

Exciting new design trends and a complete revitalisation of Maserati's production car policy were the key-notes of the company's stand at the 1963 Turin show. Two new production models, both with coachwork designed by Frua, were displayed and both were destined to enjoy a long production life. In production form the coachwork for both cars was built by Vignale.

As eventual successor to the Sebring, Maserati exhibited the Mistrale in drophead coupé form and subsequently added a fixed-head coupé version to the range. This model had coachwork very similar to that designed by Frua for the British AC '428' 7 litre Ford-powered luxury car. Although the chassis was very similar to that of the Sebring and

the Turin car was exhibited with the usual 3.5 litre six-cylinder engine, it later became available in 3.7 litre 245bhp and 3.9 litre 255bhp forms. With 3,692cc ( $86 \times 106\text{mm}$ ) engine the Mistrale had a claimed maximum speed of 155mph.

The other new design was much more innovative in concept; this was the Quattroporte, a four-seater, four-door 130mph-plus saloon powered by a much revised version of the company's famous V-8 engine. As fitted to the Quattroporte, this had a capacity of 4,136cc ( $88 \times 85\text{mm}$ ), four Weber twin-choke carburettors mounted in the vee of the engine and on a compression ratio of 8.5:1 developed 255bhp. Transmission was by either a ZF five-speed all-synchromesh manual gearbox, or by Borg-Warner three-speed automatic. The general layout of the chassis and front suspension was similar to that of earlier Maseratis, but at the rear there was a de Dion axle with twin radius arms on each side and a central Watts linkage. Claimed maximum speed for the Quattroporte was 143mph.

Despite a re-vamp for the 1967 season that included the adoption of twin circular headlamps (in place of the original square lamps) to permit the fitting of quartz-iodine lamps, the introduction of air conditioning and a revised interior with mahogany facia, the Quattroporte never sold as well as anticipated and examples can now be picked up at almost giveaway prices.

Claimed to be the world's fastest production car with a maximum speed of 174mph, the Ghibli with coupé body designed by Guigario and built by Ghia was introduced at the 1966 Turin Show. The Ghibli was a pure two-seater with long, sweeping bonnet and long, 'chopped' tail and it represented Italian styling at its most graceful and distinctive; it proved to be one of the best-selling of Maserati models despite a very high price tag (the 1972 British price was over £9,000). Despite the installation of the four overhead camshaft V-8 engine in a choice of 4.7 and 4.9 litre forms (power output was around 300bhp), it is doubtful if the Ghibli was capable of more than about 160mph. In chassis design the Ghibli was very conservative, almost archaic, and at the rear there was a live axle suspended on semi-elliptic springs.

At the 1968 Turin Show Maserati exhibited the Simun, a very handsome four-seater coupé by Ghia, featuring an upswept waistline over the rear wheels, a long tail and four retractable headlamps. Mechanically the Simun was very similar to the Quattroporte and used the same 4.2 litre V-8 engine. It did not enter production.

As successor to the now ageing six-cylinder Mistrale, the Modena

company introduced the Indy with the choice of 4.2 or 4.7 litre V-8 engines at the 1969 Geneva Show. Rather surprisingly Maserati still retained a live rear axle on this model. Coachwork designed by Vignale was a very elegant, very smooth, two-door, four-seater coupé with retractable headlamps. With the 4.9 engine the Indy was claimed to have a maximum speed of 160mph and be capable of a 0-100mph time of under eighteen seconds. The Indy remained in production until the company's financial collapse in 1975.

The Indy was the first new Maserati model to appear following the acquisition of the Modena company by the French Citroen concern in 1969. At this time Michelin tyres and Fiat jointly owned Citroen; Fiat also owned 50 per cent of Ferrari, so it was interesting to speculate on the relations of these two erstwhile racing rivals and virtually impossible to unravel the legal complexities entwining the different companies!

At the time of the Citroen take-over, Maserati chief engineer Giulio Alfieri was working on the design of a new luxury car to be powered by a 5.5 litre flat-twelve engine which, it was hoped, would snaffle part of the Rolls Royce market. Citroen's principal interest in Maserati was as a source of high-performance engines to power its proposed luxury car. The Citroen luxury car was the SM6, which entered production in 1970 with a Maserati-designed and built V-6 engine of 2,670cc (87 × 75mm) and incorporated a number of Alfieri's ideas for his proposed flat-twelve design. With twin overhead camshafts per bank of cylinders, three twin-choke Weber carburettors and a 9:1 compression ratio the SM6 engine developed 180bhp. The adoption of fuel injection for 1972 boosted output to 188bhp, but the Maserati engine was also now much more accelerative and much smoother. Hydraulically powered brakes, steering and seat adjustment were features of the SM6 and 'cross-pollination' between the two marques resulted in the adoption of these features on later Maserati models.

In 1972 Maserati commenced production of the Bora mid-engined coupé of which *Motor* commented, the Bora 'hides beneath its elegant monocoque shell a lot of Citroen plumbing. Despite some unusual Franco-ophile refinements, though, the Bora is what you might term modern Modenese of traditional ancestry . . .'

Power unit of this very modern coupé styled by Giugiaro and engineered by Giulio Alfieri was the now traditional V-8 four-cam Maserati engine in 4,719cc (93.9 × 85mm) form and with four Weber 42 DCFE/14 carburettors developing 310bhp (DIN) at 6,000rpm. Transmission was by the usual ZF five-speed gearbox. The rather too firm front and rear suspen-

sion was independent by coil springs and wishbones with telescopic dampers and an anti-roll bar. Rack and pinion steering was fitted (not power-assisted and very heavy at low speeds), but the Citroen high-pressure hydraulic system was used to power the Girling ventilated disc brakes, the popping up and down of the headlamps and the adjustment of the pedal assembly and seat.

Maserati claimed a maximum speed of 170mph, but *Motor* testers considered that this claim erred very much on the optimistic side—170mph corresponded with 6,250rpm, 250rpm above the maximum permitted engine speed.

Directly derived from the Bora was the smaller-capacity Merak which made its début at the 1972 Paris Salon. The Merak was Maserati's answer to the ever-increasing demand for a smaller-capacity high-performance GT car; the 'trail-blazer' in this category had been the rear-engined Porsche 911, which entered production in 1965, and subsequent contenders for a share of this market were the Ferrari Dino and Lamborghini V-6 Urraco.

In chassis design the Merak was almost identical to the Bora and retained the same chassis platform, wheelbase, suspension, bonnet, doors and Citroen-powered braking system. The power unit, however, was the SM6 V-6 enlarged in capacity to 2,965cc (91.6 × 75mm), fitted with three Weber twin-choke carburettors and developing 190bhp (DIN) at 6,000rpm. Transmission was by the Citroen SM four-speed gearbox. Because the V-6 engine was shorter than the V-8 used in the Bora, it was possible to extend the cockpit towards the rear of the car to provide two occasional seats. The rear of the Merak was distinguishable from its bigger sister by a flat rear decking in place of the glassed slope of the Bora's tail.

Although the Merak sold at a considerably lower price than other models in the Maserati range, the only possible saving on cost lay in the use of the V-6 engine, which was built in much larger quantities than other Maserati units. It is doubtful, however, whether the company made any profit at all from sales of the Merak.

Despite a much lower power output the Merak was only 3cwt lighter than the Bora (the smaller car tipped the scales at 27.3cwt) and the performance figures obtained by *Motor* for their road test, published in April 1974 make interesting reading. The equivalent times obtained by *Motor* with the Bora are given in parentheses:

0-30mph	2.6sec (2.5)	0-80mph	12.3sec (9.9)
0-40mph	4.3sec (3.3)	0-90mph	15.6sec (12.4)
0-50mph	5.5sec (5.1)	0-100mph	19.9sec (14.7)

0-60mph	7.5sec (6.5)	0-110mph	25.2sec (17.9)
0-70mph	8.0sec (9.7)		
Standing quarter-mile, 15.7sec (14.6)			

On paper, the Merak seemed rather underpowered, but in fact its performance was adequate if not scintillating; it was slower than the 911S and Dino, but faster than the Alfa Romeo Montreal. Maximum speed was about 140mph and in the *Motor* test the overall fuel consumption worked out at 13.2mpg.

By 1975 the Maserati range consisted of two mid-engined cars (Bora and Merak), two traditional front-engine, rear-wheel-drive designs (Indy and Khamsin) and a new SM6-engined Quattroporte. The Quattroporte had not yet entered production and production of the Khamsin had barely started when financial disasters overtook the Modena company.

The Khamsin, which had been exhibited in prototype form at Turin in 1972, was intended as a more compact two-plus-two design than the Indy; it featured independent rear suspension and more fashionable wedge styling.

In common with the Indy, the Khamsin was powered by the 4,930cc (93.9 × 89mm) version of the V-8 engine; four Weber 42 DCF/41 twin-choke carburettors were fitted and power output was 316bhp (DIN) at 5,500rpm. There was the usual choice of a ZF five-speed manual gearbox or Borg-Warner three-speed automatic. Suspension was independent front and rear; twin wishbones, coil springs, telescopic dampers and an anti-roll bar were used at the front, while the rear suspension was similar, apart from the fitting of two coil-spring/damper units each side. Both the ventilated disc brakes and the rack and pinion steering were fitted with the Citroen power system.

Bertone designed and built the all-steel monocoque body of dramatic styling, but lacking in practicality as lack of headroom and legroom made the seats virtually unusable. The automatic Khamsin had a maximum speed of around 140mph and 0-60 acceleration in just under eight seconds. Price on the British market was £12,928, including taxes.

The SM V-6 engine was also supplied to Guy Ligier to power the Ligier JS2 built by his small company at Vichy. The JS2 was first exhibited at the 1971 Paris Salon and in production form was powered by the 2,965cc engine used in the Merak. Two of Ligier's three-car entry at Le Mans in 1975 were Cosworth DFV-powered, but the 1972-4 competition cars and the third entry at Le Mans in 1975 all had Maserati V-6 engines.

By the middle of 1975 some 125 production JS2 coupés with chassis

designed by Michel Tétu (formerly of Charles Deutsch and Matra) and glass-fibre body styled by Frua had been built. These were distributed and financed by the Citroen sales network and Citroen also financed Ligier's racing programme. Citroen's involvement with Ligier arose from his own financial difficulties. It had been the intention to transfer SM6 production in its entirety to the Ligier works at Abrest, near Vichy, in the latter part of 1975. Instead, however, following the take-over of Citroen by Peugeot and a fall-off in demand for the SM6 (linked to world economic conditions and not peculiar to Citroen), production of this very sophisticated car was abandoned altogether.

The collapse of SM6 production had already been preceded by graver events at Modena. At an extraordinary general meeting of the Maserati company at the end of May 1975, Monsieur Driex, the company's French managing director (and a Citroen appointee) announced that in 1974 Maserati had made a loss of £2.5 millions. Since the merger with Citroen in 1969, the Modena factory had been considerably enlarged, primarily to permit large-scale production of the V-6 engine used to power the SM6. Reduced demand for the SM6 and the consequent reduced production of Maserati engines was the main cause of the company's financial difficulties.

Largely at the instigation of Peugeot, owners of the whole Citroen-Maserati conglomerate, it was decided to close the Modena factory and lay off the 800 specialised workers. No one wanted to see Maserati die, least of all Argentine-born Alejandro de Tomaso; apart from the fact that de Tomaso had raced a 150S in 1956 and had considerable affection for the marque, he had considerable manufacturing experience. He had sold to Ford and subsequently bought back the design rights to the de Tomaso Pantera (a direct competitor with the Maserati V-8s) and he owned the Benelli and Moto Guzzi motorcycle factories. At the time of writing, de Tomaso was striving to raise the capital for a take-over bid and Peugeot had agreed to a temporary stay of execution.

With financial assistance from the Italian government de Tomaso succeeded in his bid to rescue Maserati, but his take-over was followed by the departure of most of the company's technical staff and a virtual cessation of production of the traditional high-quality high-performance cars in favour of low-powered commercial tricycles.

The first real fruits of de Tomaso's influence were seen at the 1976 Geneva Show where Maserati exhibited the 'Kyalami', an 'up-market' version of the de Tomaso 'Longchamps' 2+2 coupé with a 4,136cc V-8 Maserati engine having new cylinder heads and crankshaft and developing

265bhp. A ZF 5-speed gearbox and power-steering were fitted. In Italy the price was around £12,000, some 10 per cent dearer than the V-8 Ford-powered 'Longchamps'. At this time there were rumours that Maserati would soon be introducing a new four-door model.

Although production of Maserati cars was now very small indeed, the marque had at least completed its half-century without ceasing the manufacture of cars altogether.



*Plate 60* One-off; a special 5000GT model with V-8 engine and touring coachwork. This car was built in 1959; *Plate 61* A later, 1961 version of the 3500GT with Vignale coachwork.





*Plate 62* High-performance saloon: the 4.2 litre V-8 Quattroporte seen in 1966 form; *Plate 63* One of the most successful production Maseratis, the 4.7 litre V-8 Ghibli with Ghia body. This is an early example built in 1967.

## Author's Note

In writing this book I have been greatly indebted for the help which I have received from the Maserati factory, from Maserati drivers past and present and from Maserati owners. I do regret that considerations of length have necessitated the exclusion of a number of fascinating personal anecdotes and stories from the great racing days of the Maserati team.

As far as written sources are concerned, I have been heavily dependent for material in Chapters 8 and 25 on articles in *Motor Sport* by Denis Jenkinson. I have frequently referred to back numbers of *Autocar*, *Auto-course*, *Autosport*, *Motor*, *Motor Racing*, *Motor Sport* and *Road and Track* and I am deeply indebted to Guy Griffiths for the generous and unfettered use of his motoring library which is so much more extensive than my own.

If it were to be suggested that I have written a history of Maserati cars with an Anglo-Saxon orientation, it would be an allegation that I could not completely deny. In particular I have referred to the performances of 250F cars in minor British races in the 1950s, for this was the heyday of one of the greatest ever racing cars. For reasons of length I have deliberately omitted references to Maserati performances in many minor Italian races in the 1930s and in American sports car races in the 1950s.

Likewise, reasons of space have forced me, reluctantly, to omit descriptions of Maserati light trucks and motor cycles of the 1950s and to ignore the use of Maserati engines in hydroplanes. I concluded that the use of Maserati four-cylinder engines in Cooper and Emeryson chassis during 1959-61 and the supply of Maserati V-12 engines for the Cooper Grand Prix cars of 1966-7 did not form part of the mainstream of history of Maserati cars.

Now that the ownership of the Maserati factory has changed hands for the third time, it is to be hoped that the Modena works will continue to build, if only in very small numbers, the impressive high-performance touring cars for which Maserati has achieved such a distinguished reputation during the last twenty years.

## Appendix 1: Specifications of Maserati Cars 1926-75

<i>Model</i>	<i>Year intro</i>	<i>Type</i>	<i>No of cyl</i>	<i>Capacity (bore × stroke)</i>	<i>Power output</i>	<i>Wheelbase ' "</i>	<i>Front track ' "</i>	<i>Rear track ' "</i>	<i>Weight lb</i>	<i>Max speed mph</i>	<i>Notes</i>
TIPO 26	1926	2 seat racing	8	1,492cc (60 × 66mm)	120bhp at 5,300rpm	8 8·00	4 4·25	4 5·00	1,591	100	
TIPO 26B	1927	2 seat racing	8	1,980cc (62 × 82mm)	145bhp at 5,300rpm	8 8·00	4 4·25	4 5·00	1,591	125	
8C-1100	1929	2 seat racing	8	1,078cc (51 × 66mm)	100bhp at 5,500rpm	8 2·00	4 4·50	4 5·25	1,768	115	Also raced in sports form
8C-1500	1929	2 seat racing	8	1,492cc (60 × 66mm)	120bhp at 5,000rpm	8 4·50	4 4·50	4 5·25	1,768	125	
V4	1929	2 seat racing	16	3,958cc (62 × 82mm)	300bhp at 5,200rpm	8 11·75	4 5·00	4 5·75	2,166	160	
8C-2500	1930	2 seat racing	8	2,495cc (65 × 94mm)	185bhp at 5,500rpm	8 8·00	4 4·00	4 5·25	1,768	135	
8C-2800	1931	2 seat racing	8	2,795cc (68 × 94mm)	198bhp at 6,000rpm	8 8·00	4 4·00	4 5·25	1,792	140	
V5	1932	2 seat racing	16	4,905cc (69 × 82mm)	330bhp at 5,200rpm	8 11·75	4 5·00	4 5·75	2,180	170	
8CM-3000	1933	Monoposto	8	2,992cc (69 × 100mm)	220bhp at 5,500rpm	8 4·75	4 4·00	4 3·00	1,657	150	Two cars built with 3 litre engine and 8C-2800 chassis

TIPO 34	1934	Monoposto	6	3,326cc (84 × 100mm)	260bhp at 5,000rpm	8 4.75	4 4.00	4 3.00	1,650	160	1935 cars had 3,729cc (84 × 112mm) engine
TIPO V-8RI	1936	Monoposto	8	4,788cc (84 × 108mm)	320bhp at 5,300rpm	9 0.00	4 5.00	4 5.75	1,547	170	1935 cars had 4.2 litre engine
TIPO 8CTF	1938	Monoposto	8	2,992cc (69 × 100mm)	360bhp at 6,000rpm	8 10.75	4 4.50	4 5.25	1,724	175	
TIPO 8CL	1940	Monoposto	8	2,978cc (78 × 78mm)	420bhp at 6,800rpm	9 1.50	4 4.50	4 5.25	1,724	185	
4CTR-1100	1931	2 seat	4	1,088cc (65 × 82mm)	105bhp at 5,500rpm	7 10.25	3 11.00	3 11.00	1,360	115	2 seat racing
4C-1100	1932	Monoposto	4	1,088cc (65 × 82mm)	105bhp at 5,500rpm	7 10.25	3 11.00	3 11.00	1,215	115	Also raced in sports form
4C-1500	1932	Monoposto	4	1,496cc (69 × 100mm)	130bhp at 5,600rpm	7 10.25	3 11.00	3 11.00	1,215	125	
4C-2000	1933	Monoposto	4	1,969cc (80 × 98mm)	155bhp at 5,500rpm	7 10.25	3 11.00	3 11.00	1,275	135	
4C-2500	1934	Monoposto	4	2,483cc (84 × 112mm)	175bhp at 5,300rpm	7 10.25	3 11.00	3 11.00	1,285	140	
6CM	1936	Monoposto	6	1,493cc (65 × 75mm)	155bhp at 6,200rpm	8 1.75	3 11.00	3 11.00	1,435	135	
4CM	1937	Monoposto	4	1,496cc (69 × 100mm)	150bhp at 6,000rpm	8 1.75	3 11.00	3 11.00	1,400	135	Also produced in 1,088cc (65 × 82mm) form
4CL	1939	Monoposto	4	1,489cc (78 × 78mm)	220bhp at 8,000rpm	8 2.00	4 1.00	4 2.00	1,400	145	
4CLT/48	1948	Monoposto	4	1,489cc (78 × 78mm)	260bhp at 7,000rpm	8 2.00	3 11.50	4 1.50	1,400	150	Also produced in 1,720cc form for 1950
A6	1947	Sports	6	1,488cc (66 × 72.5mm)	65bhp at 4,700rpm	8 4.00	4 2.00	4 1.00	1,720	90	

<i>Model</i>	<i>Year intro</i>	<i>Type</i>	<i>No of cyl</i>	<i>Capacity (bore × stroke)</i>	<i>Power output</i>	<i>Wheelbase</i> "	<i>Front track</i> "	<i>Rear track</i> "	<i>Weight</i> lb	<i>Max speed</i> mph	<i>Notes</i>
A6GCM	1952	Monoposto	6	1,988cc (75 × 75mm)	177bhp at 8,000rpm	7 6.00	4 2.00	4 2.00	1,400	150	
A6SSG	1953	Monoposto	6	1,988cc (76.2 × 72mm)	190bhp at 8,000rpm	7 6.00	4 2.00	4 2.00	1,400	155	
A6GCS	1953	Sports	6	1,988cc (76.2 × 72mm)	165bhp at 6,750rpm	7 7.00	4 3.00	4 0.00	1,500	140	
250F	1954	Monoposto	6	2,494cc (84 × 75mm)	240bhp at 7,200rpm	7 5.00	4 2.50	4 0.75	1,386	165	
300S	1955	Sports	6	2,993cc (84 × 90mm)	250bhp at 6,500rpm	7 7.00	4 3.00	4 1.00	1,600	155	Also built in 3,485cc (86 × 100mm) form in 1956
150S	1955	Sports	4	1,484cc (81 × 72mm)	140bhp at 8,000rpm	7 1.00	4 1.00	3 11.00	1,290	140	
450S	1957	Sports	8	4,477cc (93.8 × 81mm)	420bhp at 6,800rpm	7 10.00	4 5.00	4 3.00	1,675	185	
TIPO 61	1960	Sports	4	2,890cc (100 × 92mm)	250bhp at 6,500rpm	7 2.50	4 1.50	3 11.25	1,260	160	Also built from 1959 with 2 litre engine as TIPO 60
TIPO 63	1961	Sports	12	2,989cc (70 × 64mm)	320bhp at 8,500rpm	7 4.00	4 0.00	4 0.00	1,639	170	Rear-engined. Also built with 4 cylinder engine
TIPO 151	1962	Sports	12	3,996cc (91.6 × 75.8mm)	360bhp at 7,000rpm	8 4.50	4 1.20	4 0.50	1,920	190	Front-engined
TIPO 151	1963	Sports	12	4,941cc (94 × 89mm)	370bhp at 6,000rpm	7 10.00	4 5.75	4 4.00	2,250	190	Front-engined
TIPO 65	1965	Sports	12	5,046cc (95.1 × 89mm)	430bhp at 6,500rpm	8 0.00	4 8.00	4 6.80	2,112	190	Rear-engined

A6G	1954	GT	6	1,988cc (76.2 × 72mm)	125bhp at 6,500rpm	8 4.40	4 5.50	4 5.50	N/A	120	
3500 GT	1958	GT	6	3,485cc (86 × 100mm)	230bhp at 5,500rpm	8 6.00	4 6.25	4 5.50	2,800	140	Available with coupé or drop-head body
SEBRING	1963	GT	6	3,485cc (86 × 100mm)	235bhp at 5,500rpm	8 8.50	4 6.75	4 5.50	2,940	135	
QUATTRO- PORTE	1963	Saloon	8	4,136cc (88 × 85mm)	260bhp at 5,500rpm	8 10.25	4 6.75	4 7.00	3,580	130	
MISTRALE	1963	GT	6	3,692cc (86 × 106mm)	245bhp at 5,500rpm	7 10.50	4 6.75	4 5.50	2,800	150*	Available with coupé or drop-head body and with 3.5 and 3.9 litre engines
GHIBLI	1966	GT	8	4,719cc (93.9 × 85mm)	310bhp at 6,000rpm	8 6.25	4 10.00	4 8.75	3,080	160*	Also available with 4.9 litre engine
INDY	1969	GT	8	4,719cc (93.9 × 85mm)	290bhp at 5,500rpm	8 9.50	4 9.00	4 9.00	3,410	160*	Also available with 4.2 litre engine
BORA	1972	GT	8	4,719cc (93.9 × 85mm)	310bhp at 6,000rpm	8 6.50	4 9.75	4 9.00	3,420	160*	
MERAK	1972	GT	6	2,965cc (91.6 × 75mm)	190bhp at 6,000rpm	8 6.50	4 9.75	4 9.00	3,065	140*	
KHAMSIN	1974	GT	8	4,930cc (94 × 89mm)	320bhp at 6,000rpm	8 4.50	4 8.50	4 9.75	3,810	140*	

\* Estimated as opposed to manufacturer's claimed maximum speed

## Appendix 2:

### The Evolution of the Straight-Eight Cars

*NOTE: in this and each of the following two appendixes, the specification of a major Maserati model is given in detail and the evolution of the design family of which it is a member is traced.*

#### The Tipo 8CM Grand Prix Car (1933)

##### ENGINE

<i>No of cylinders:</i>	eight in line
<i>Capacity:</i>	2,992cc (69 × 100mm)
<i>Valves:</i>	two per cylinder
<i>Valve actuation:</i>	twin overhead camshafts driven by a train of gears from the nose of the crankshaft
<i>Crankshaft:</i>	with the throws in two sets of four and the two sets at right-angles; crankshaft ran in four plain outer bearings and a central roller-type bearing
<i>Carburation:</i>	single Weber carburetter and two-vane Roots-type supercharger compressing at 11½lb psi
<i>Ignition:</i>	single plug per cylinder in the centre of the cylinder head and Scintilla magneto
<i>Compression ratio:</i>	6.5:1
<i>Power output:</i>	210bhp at 5,500rpm (increased to 225bhp for 1934)

##### TRANSMISSION

<i>Clutch:</i>	dry multi-plate
<i>Gearbox:</i>	four-speed 'crash'-type bolted to the crankcase
<i>Final drive:</i>	prop-shaft enclosed in torque tube

##### CHASSIS

<i>Frame:</i>	Elektron bronze channel-section ladder-type
<i>Front suspension:</i>	semi-elliptic springs and Hartford shock-absorbers
<i>Rear suspension:</i>	semi-elliptic springs and Hartford shock-absorbers
<i>Brakes:</i>	hydraulic with 15.5in Elektron drums and Elektron brake shoes
<i>Fuel capacity:</i>	35 gallon tank in tail

##### DIMENSIONS

<i>Wheelbase:</i>	8ft 4.75in
<i>Front track:</i>	4ft 3in
<i>Rear track:</i>	4ft 3in
<i>Body width:</i>	3ft 1in

*Maximum height:* 2ft 9in  
*Ground clearance:* 7in  
*Weight:* 1,657lb (dry)

### *Evolution of the Straight-Eight Cars*

May 1926	Début of the original Tipo 26 of 1,492cc (60 × 66mm) and developing 120bhp at 5,300rpm in the Targa Florio.
April 1926	Début of the Tipo 26B car of 1,980cc (62 × 82mm) and developing 145bhp at 5,300rpm in the Targa Florio.
April 1929	Appearance of an improved car, the 8C-1500, in the Monaco Grand Prix. The engine was largely unchanged, but the wheelbase was shorter.
April 1929	Appearance of the new 8C-1100 with a capacity of 1,078cc (51 × 66mm) and a power output of 100bhp at 5,500rpm.
July 1929	Début of the V4 'Sedici Cilindri' car powered by two 2 litre engines in the Circuit of Cremona.
April 1930	At the Targa Florio, Maserati entered the new 8C-2500 car with a capacity of 2,495cc (65 × 94mm) and a power output of 185bhp at 5,500rpm.
September 1931	Début at the Monza Grand Prix of the 8C-2800 with 2,795cc (68 × 94mm) engine developing 198bhp at 6,000rpm.
April 1932	Début of an even faster version of the 'Sedici Cilindri' in the Rome Grand Prix. This version was the V5 with two 2.5 litre engines.
March 1933	In the Tunis Grand Prix, Fagioli drove one of only two Tipo 8C-3000 cars with the usual Maserati two-seater body and 2,992cc (69 × 100mm) engine developing 210bhp at 5,600rpm.
March 1933	In the same race, Sommer drove a Tipo 8CM-3000 car with the same engine as the 8C, but new single-seater body.
April 1934	Début at Monaco of the 1934 version of the Tipo 8CM-3000 with wider chassis to facilitate compliance with 750Kg Formula.
April 1934	Whitney Straight appeared with the first of three 8CM-3000 cars raced by his team. These cars were extensively modified by Reid Railton and featured strengthened chassis, suspension modifications, pre-selector gearbox and lighter bodywork.
September 1934	In the Italian Grand Prix, Nuvolari drove the new Tipo 34 Maserati, which combined the 8CM chassis with a six-cylinder 3.3 litre engine.
April 1935	At Monaco, Zehender drove a version of the 8CM with the engine enlarged to 3.2 litres and fitted with torsion bar front suspension.



## Appendix 3:

# The Evolution of the Four-Cylinder Voiturettes

## The Tipo 4CLT/48 Grand Prix Car (1948–50)

### ENGINE

<i>No of cylinders :</i>	four in line
<i>Capacity :</i>	1,490cc (78 × 78mm)
<i>Valves :</i>	four per cylinder
<i>Valve actuation :</i>	twin overhead camshafts driven by a train of gears from the nose of the crankshaft
<i>Crankshaft :</i>	running in three main bearings; crankcase formed by two magnesium castings with transverse stiffening webs; H-section machined connecting rods (tubular connecting rods on 4CL)
<i>Carburation :</i>	single Weber twin-choke carburetter; primary Roots-type supercharger at front of crankshaft and secondary supercharger mounted above it, both running at crankshaft speed (Memini carburetter and single-stage supercharger on 4CL)
<i>Ignition :</i>	single plug per cylinder and Scintilla magneto driven from the front of the crankshaft
<i>Compression ratio :</i>	6:1
<i>Power output :</i>	260bhp at 7,000rpm (220bhp at 8,000rpm for 4CL)

### TRANSMISSION

<i>Clutch :</i>	dry multi-plate
<i>Gearbox :</i>	four-speed bolted to the crankcase and with a central ball-type lever
<i>Final drive :</i>	live rear axle with two steel axle tubes bolted on to an alloy casing enclosing the bevel gears; a train of gears mounted at the front of the differential housing stepped the transmission line to the correct height

### CHASSIS

<i>Frame :</i>	two main parallel 4in tubes sloping upwards at the front and passing under the rear axle and with two large-diameter transverse tubes adjacent to the rear spring mountings and cross-braced by two tubes in X-formation; fuel tank supported by parallel bars extending to the rear; small-diameter cross-tubes ahead and to the rear of the engine crankcase
<i>Front suspension :</i>	lower wishbones and upper single arm with an extension of the latter compressing the inclined coil springs; Houdaille vane-type shock-absorbers (unequal-length wishbones and torsion bars on the 4CL)
<i>Rear suspension :</i>	rigid axle suspended on quarter-elliptic springs

*Steering:* double drop arm and separate drag link for each wheel  
*Brakes:* hydraulic two-leading shoe with stiff light alloy brake shoes

#### *DIMENSIONS*

*Wheelbase:* 8ft 2.5in  
*Front track:* 3ft 11.5in (4ft 1in, 4CL)  
*Rear track:* 4ft 1.5in (4ft 2in, 4CL)  
*Dry weight:* 1,420lb (dry)

#### *Evolution of the Four-Cylinder Voiturettes*

1931	Appearance of the first four-cylinder Maserati, the 1,088cc (65 × 82mm) Tipo 4CTR-1100 with two-seater bodywork.
1932	Appearance of the Tipo 4C-1100, technically similar to the original car, but fitted with single-seater bodywork.
1932	Appearance of enlarged version of the four-cylinder model, the 4C-1500 with 1,496cc (69 × 100mm) engine.
August 1933	At the Nice Grand Prix, Maserati revealed a further four-cylinder model, the 4C-2000 with 1,969cc (80 × 98mm) engine.
April 1934	At the Monaco Grand Prix, Taruffi drove the new 4C-2500 car with engine of 2,483cc (84 × 112mm).
August 1937	In an effort to match the performance of the British ERAs, Maserati introduced the Tipo 4CM which combined an improved version of the 1,496cc engine with the Tipo 6CM chassis (introduced with six-cylinder engine in 1936).
May 1939	Début of Maserati's exciting new 4CL model with four-valve-per-cylinder 'square' 1,490cc (78 × 78mm) engine.
June 1947	At the first post-war Swiss Grand Prix two different twin-stage supercharged 4CL cars were entered; Sommer drove a car with supercharging evolved by Mario Speluzzi and Villoresi drove a car with works-designed supercharging.
July 1947	Ascari drove the first tubular-chassis 4CLT car in the Grand Prix de la Marne.
June 1948	Appearance at the San Remo Grand Prix of the extensively revised 4CLT/48 car.
September 1949	Appearance at the Italian Grand Prix of the 4CLT/48 modified by Mario Speluzzi and entered as the 'Milano'.
December 1949	For the winter races in South America Maserati evolved a 1,720cc (78 × 90mm) version of the 4CLT/48.
April 1950	Slightly modified car entered at Pau by the Scuderia Argentina; this variant was known as the 4CLT/50.
July 1950	At the Grand Prix des Nations, Scuderia Milano entered a completely revised version of the 4CLT/48 with twin-plug engine, new tubular chassis and de Dion rear axle.

## Appendix 4:

# The Evolution of the Post-War Six-Cylinder Cars

### The A6GCS Sports Car (1953–6)

#### ENGINE

<i>No of cylinders:</i>	six in line
<i>Capacity:</i>	1,988cc (76.2 × 72mm)
<i>Valves:</i>	two per cylinder
<i>Valve actuation:</i>	twin overhead camshafts driven by a train of spur gears from the nose of the crankshaft
<i>Carburation:</i>	three horizontal twin-choke Weber 40 DCO3 instruments
<i>Ignition:</i>	twin plugs per cylinder and twin coils and distributors
<i>Lubrication:</i>	dry sump
<i>Power output:</i>	165bhp at 6,750rpm

#### TRANSMISSION

<i>Clutch:</i>	dry multi-plate
<i>Gearbox:</i>	four-speed and reverse in unit with the engine and with constant-mesh second and third ratios and synchromesh on third and top
<i>Final drive:</i>	straight-cut pinion and gears; hypoid bevel final drive with alloy casing; axle tubes bolted on either side of the housing

#### CHASSIS

<i>Frame:</i>	two main steel tubes of 3.15in diameter, sweeping inwards at the front and up and over the rear axle; two main 2.375in central cross-members, two subsidiary cross-members at the rear, X-shaped tubular cross-bracing under cockpit and fabricated box-section at the front
<i>Front suspension:</i>	unequal-length double wishbones, coil springs, Houdaille vane-type dampers and anti-roll bar
<i>Rear suspension:</i>	rigid axle suspended on quarter-elliptic springs and located by tubular radius rods and cross-braced tubular A-bracket; Houdaille vane-type dampers and anti-roll bar
<i>Steering:</i>	worm and sector box with double universally jointed steering column passing on left-hand side of engine above exhaust manifolds
<i>Brakes:</i>	hydraulic two-leading shoe in 13in light alloy drums with transverse ribbing at the front and circumferential ribbing at the rear; shrunk-in ferrous liners
<i>Wheels:</i>	wire-spoke, centre-lock, 16in on Rudge-type hubs with 6.00 front and rear tyres
<i>Fuel capacity:</i>	27½ gallon tank in tail

## *DIMENSIONS*

<i>Wheelbase:</i>	7ft 7in
<i>Front track:</i>	4ft 3.3in
<i>Rear track:</i>	4ft 0in
<i>Ground clearance:</i>	5.875in (according to loading)
<i>Weight:</i>	1,520lb (dry)

## *Evolution of the A6GCS*

March 1947	The A6 with 1,488cc (66 × 72.5mm) engine was exhibited at the Geneva Salon.
June 1947	Villoresi drove the A6G with 1,954cc (72 × 80mm) engine, still in single-cam form, in the 1947 Mille Miglia. This car was fitted with coupé body.
September 1947	Début of the 1,978cc (72 × 81mm) single-cam 125bhp two-seater A6GCS sports in the Circuit of Modena.
December 1952	Maserati revealed the revised A6GCS with 1,988cc (75 × 75mm) twin-cam engine developing 140bhp.
April 1953	Début of the 'standard' A6GCS with 1,988cc (76.2 × 72mm) engine in the Mille Miglia.
August 1953	At the Nürburgring, Maserati entered a team of A6GCS cars with bodywork styled by Vignale.
April 1954	In the Mille Miglia, an A6GCS with 2,493cc engine and typed the Tipo 250S was driven by Mantovani.
October 1954	At the Paris Salon, Maserati exhibited the 'Mille Miglia' coupé version of the A6GCS with body by Pininfarina and the prototype A6G Grand Touring car with body by Frua.

## The A6GCM and A6SSG Formula Two Cars

<i>ENGINE</i>	<i>A6GCM (1952)</i>	<i>A6SSG (1953)</i>
<i>No of cylinders:</i>	six in line	six in line
<i>Capacity:</i>	1,988cc (75 × 75mm)	1,988cc (76.2 × 72mm)
<i>Valves:</i>	two per cylinder	two per cylinder
<i>Valve actuation:</i>	twin overhead camshafts driven by a train of spur gears from the nose of the crankshaft	twin overhead camshafts driven by a train of spur gears from the nose of the crankshaft
<i>Carburation:</i>	three horizontal twin-choke Weber 38 DCO <sub>3</sub> instruments	three horizontal twin-choke Weber 40 DCO <sub>3</sub> instruments
<i>Ignition:</i>	originally single plug and single magneto (but from 1952 Italian Grand Prix twin plug and twin magneto)	twin plugs per cylinder and twin Marelli magnetos
<i>Lubrication:</i>	dry sump	dry sump
<i>Power output:</i>	165bhp to 7,000rpm (later increased to 177bhp)	190bhp at 8,000rpm
<i>TRANSMISSION</i>		
<i>Clutch:</i>	dry multi-plate	dry multi-plate

**Gearbox:** four-speed and reverse constant-mesh in unit with the engine  
**Final drive:** straight-cut pinion and gears; the line of the open prop-shaft was lowered by spur reduction gears on the nose of the bevel housing. The axle tubes were bolted on either side of the housing

## CHASSIS

**Frame:** two parallel tubes of chrome molybdenum steel of 3.15in diameter with X-shaped tubular cross-bracing. The A6SSG had an additional triangulated structure above the main tubes to stiffen the centre-section of the frame and to form a support for the body

**Front suspension:** unequal-length double wishbones, coil springs compressing against rubber blocks, Houdaille vane-type dampers and anti-roll bar

**Rear suspension:** rigid axle suspended on quarter-elliptic springs, splayed outwards on A6GCM, but redesigned as straight extensions of the tubular frame on the A6SSG. The springs were connected to the frame through light alloy castings which also formed outriggers for the radius arms mounted above the springs. Rear axle located by A-bracket on A6SSG

**Steering:** worm and sector box with long push-pull rod which ran along the right-hand side of the engine crank-case. The rod was connected to a centrally mounted bell-crank with two half-track rods to the wheels

**Brakes:** hydraulic two-leading shoe in 13in light alloy drums with shrunk-in ferrous liners and with transverse finning at the front and circumferential finning at the rear

## DIMENSIONS

**Wheelbase:** 7ft 6in  
**Front track:** 4ft 2in  
**Rear track:** 4ft 2in

## *Evolution of the Formula Two Cars*

January 1952 Appearance in South America of the first, as yet far from developed, A6GCM car with 1,988cc (75 × 75mm) engine.

June 1952 Début at the Autodrome Grand Prix of the works team of A6GCM cars.

September 1952 At the Italian Grand Prix, Maserati revealed a new version of the A6GCM with twin-plug engine developing 175bhp.

March 1953 At Siracusa, Enrico Platé entered an interim car with 1953 engine and earlier-style body.

May 1953 Début of the works 1953 A6SSG cars with 1,988cc (76.2 × 72mm) engine in the Naples Grand Prix.

## The 250F Grand Prix Car

<b>ENGINE</b>	<i>six-cylinder (1954)</i>	<i>twelve-cylinder (1957)</i>
<b>No of cylinders:</b>	six in line	twelve in 60° vee layout
<b>Capacity:</b>	2,493cc (84 × 72mm)	2,490cc (68.7 × 56mm)
<b>Valves:</b>	two per cylinder	two per cylinder
<b>Valve actuation:</b>	twin overhead camshafts driven	twin overhead camshafts per

	by a train of spur gears from the nose of the crankshaft	bank of cylinders driven by a train of spur gears from the nose of the crankshaft
<i>Carburation :</i>	three horizontal twin-choke Weber 42 DCO <sub>3</sub> instruments	six downdraught twin-choke Weber 35 IDM instruments
<i>Ignition :</i>	twin plugs per cylinder and twin Marelli magnetos	twin plugs per cylinder fired by separate coils and two 12-contact distributors
<i>Lubrication :</i>	dry sump	dry sump
<i>Power output :</i>	240bhp at 6,500rpm	310bhp at 10,000rpm

## TRANSMISSION

<i>Clutch :</i>	dry multi-plate	dry multi-plate
<i>Gearbox :</i>	four-speed and reverse constant-mesh in unit with the final drive	five-speed and reverse constant-mesh in unit with the final drive
<i>Final drive :</i>	straight-cut pinion and gears, ZF limited slip differential and drive taken from Hooke-type universal joints on either side of the differential by short shafts terminating in pot-type joints splined to the wheel hubs	

## CHASSIS

<i>Frame :</i>	Multi-tubular-type with two widely spaced 40mm side-members on each side, lower tubes sweeping upwards at front and rear, with spacing struts, two cross-tubes at the rear of the engine compartment and cross-bracing tubes on the floor of the engine compartment and cockpit	
<i>Front suspension :</i>	unequal-length double wishbones, coil springs, Houdaille vane-type dampers and anti-roll bar	
<i>Rear suspension :</i>	de Dion axle with the tube running in front of the gearbox/final drive unit and located by central sliding guide and twin forward-facing radius arms on each side running to the chassis frame; transverse leaf spring running above the rear axle and Houdaille vane-type dampers	
<i>Steering :</i>	worm and sector box mounted on clutch housing behind engine	worm and sector box mounted on chassis by top of right-hand suspension
<i>Brakes :</i>	hydraulic two-leading shoe in 13.4in light alloy drums with shrunk-in ferrous liners and with transverse cooling fins.	
<i>Wheels :</i>	wire-spoke centre-lock, 16in on Rudge-type hubs with 5.50 front and 7.00 rear tyres	
<i>Fuel capacity :</i>	44 gallon tank in tail and supplementary 5 gallon tank mounted between gear-lever and control pedals	

## DIMENSIONS

<i>Wheelbase :</i>	7ft 5.75in
<i>Front track :</i>	4ft 3.2in
<i>Rear track :</i>	4ft 1.2
<i>Ground clearance :</i>	4.3in (approx)
<i>Weight :</i>	The 1954 six-cylinder car with 10 gallons of fuel, 4.5 gallons of oil and water weighed 1,659lb, but no figure is available for the twelve-cylinder models

## *Evolution of the 250F*

December 1953	The original 250F with an air intake grille similar to that of the A6SSG was tested at Modena Autodrome.
January 1954	The 250F made its race début—and won—in the Argentine Grand Prix.
August 1954	At the German Grand Prix, new cars appeared with repositioned oil tanks mounted in the tail and heavily riveted fuel tanks.
October 1954	Appearance at the Spanish Grand Prix of the 1955 car without louvres in the bodywork and with revised piping for the rear-mounted oil tank.
April 1955	At the Pau Grand Prix there appeared the first car with the new large-port cylinder head, larger 45 DCO3 carburettors and a claimed power output of 260bhp.
July 1955	Mieres's car at the British Grand Prix was fitted with a new five-speed gearbox.
September 1955	The new streamlined version of the 250F was driven by Jean Behra in the Italian Grand Prix.
April 1956	Appearance at the Easter Goodwood meeting of a works car fitted with OM/Bosch fuel injection.
June 1956	At the Belgian Grand Prix, Maserati introduced cars with long, tapering noses, ducted radiators and high cockpit sides.
September 1956	Appearance at Monza of a new version with the engine angled in the frame, offset prop-shaft and smaller frontal area.
January 1957	Appearance in the Argentine Grand Prix of the 'lightweight' car with new multi-tubular frame that was stronger, weighed less and had smaller frontal area.
April 1957	Maserati ran in practice at the Syracuse Grand Prix the first V-12 car based on chassis 2523.
May 1957	At Monaco, the V-12 car ran in practice only with a new five-speed gearbox of which all five ratios were fully usable.
June 1957	Maserati revealed in practice for the Monza 500 Miles race a new car consisting of chassis 2523 with the 3.5 litre V-12 engine raced in the Mille Miglia by Hans Herrmann.
July 1957	Another version of the V-12 with a chassis newly constructed appeared in practice at Rouen. At Reims the following weekend, the original V-12 made its race début with Carlos Menditeguy at the wheel.
September 1957	A further development of the V-12 with newly constructed chassis, offset engine, 14mm (instead of 10mm) sparking plugs, long slim exhaust pipes and repositioned steering box was raced by Jean Behra in the Italian Grand Prix.
June 1958	In practice for the Belgian Grand Prix there appeared the shorter, lighter 'piccolo' version of the 250F.
July 1958	Juan Fangio drove the 'piccolo' on its racing début and his last racing appearance in the French Grand Prix, finishing fourth after a pit stop.
November 1959	In the United States Grand Prix at Sebring, the final version of the 250F, the 'Tec-Mec', which was completed in Valerio Colotti's Studio Tec-Mec, made its one and only international racing appearance.

## Appendix 5:

### The 250F Production History

**2501:** This was originally the number of the 250F-engined A6SSG driven by Roberto Mieres in the early part of the 1954 season. It was allocated subsequently to the first 1955 model that was shown at the 1954 Paris Salon and driven in the Spanish Grand Prix by Francesco Godia-Sales. It appeared at Spa in 1956 with a long, tapering nose and a high-sided cockpit reminiscent of Vanwall practice. It was raced as the fourth-string car in 1957 by Carlos Menditeguy and Giorgio Scarlatti. It is now in the Turin Museum.

**2502:** New car completed in time to run in the 1954 Argentine Grand Prix. It was driven during the early part of the year by Onofre Marimon and Sergio Mantovani and was probably later broken up.

**2503:** 1953 A6SSG with 250F engine raced by Harry Schell during the 1954 season. For 1955 it was sold in Australia to Reg Hunt. It was crashed by Kevin Neal in the 1956 Australian Grand Prix. The number was not allocated to a 250F.

**2504:** In the early part of the 1954 season 'B. Bira' drove a 250F-engined A6SSG bearing this chassis number. In June 1954, the Siamese driver took delivery of a new 250F with the same chassis number and the A6SSG was broken up. In 1955 this 250F was acquired by Horace Gould, who sold it to Bruce Halford the following year.

**2505:** New car for the Argentine races in 1954 and driven to victory by Fangio at both Buenos Aires and Spa. Later in the year it was driven by Roberto Mieres, Luigi Musso and Harry Schell. For 1955 it was sold to André Simon and it was acquired by Joakim Bonnier for 1957.

**2506:** This 250F was completed in June 1954 for Onofre Marimon. It was probably the car driven by Louis Rosier in the 1954 Italian Grand Prix, it was subsequently acquired by him and raced regularly until his death in the 1957 Paris 1,000 Kilometres race. It is now in a museum at Lyon.

**2507:** The first 250F to be delivered to a private owner; Gilby Engineering received this car in time for Roy Salvadori to drive it at the Easter Goodwood meeting and he raced it regularly until the end of the 1956 season. During 1957 this car was driven by Jim Russell, Ivor Bueb and Keith Greene. In around 1960 the author saw 2507 for sale at Performance Cars at Brentford with a price tag of £950, and it is now in Portugal.

**2508:** Delivered to Stirling Moss in time for him to drive it in the Bordeaux Grand Prix in May 1954. He continued to race it after becoming a works Maserati driver, under the banner of Officine Alfieri Maserati in 1954 and as a private entrant in 1955-6. In 1956 it was sold in New Zealand, but was later re-imported into the United Kingdom by Alan Bateman. It is now in the United States.

**2509:** Delivered to the Owen Organisation in time for Ken Wharton to drive it in the French Grand Prix in July 1954. In 1955 it was driven for Owen by Peter Collins (who won the *Daily Express* Trophy at Silverstone) and in early 1956 by Mike Hawthorn (who finished third in the Argentine Grand Prix). It was then sold to Jack Brabham



who raced it in a few British events before taking it to Australia where he sold it. Chris Amon gained his early racing experience in New Zealand with this car. It is now in a private collection in New Zealand. This car was extensively modified by the Owen Organisation and featured Dunlop magnesium-alloy wheels and disc brakes.

**2510:** This was a 1953 A6SSG with 250F engine raced by Emmanuel de Graffenried during 1954 and then acquired by Ottorino Volonterio. It later passed into the hands of a Swiss hill-climber.

**2511:** Completed in August 1954 for Sergio Mantovani, for whom it was entered as a works car, although, strictly speaking, his own property. It was loaned to Luigi Piotti for the 1956 Argentine races and then sold to Scuderia Centro-Sud. For Centro-Sud it was driven by Luigi Villoresi, Umberto Maglioli, Harry Schell, Emmanuel de Graffenried and Masten Gregory. Now owned by Cameron Millar.

**2512:** Completed for the 1954 German Grand Prix. In practice for this race it was crashed by Marimon, who was killed, the only fatality at the wheel of a 250F. It was rebuilt and driven for the works in 1955 by Roberto Mieres and Cesare Perdisa.

**2513:** A chassis-less engine acquired by Tony Vandervell through the agency of Stirling Moss in December 1954 for design study purposes. It was sold in New Zealand in 1957.

**2514:** Completed in time for Luigi Musso to drive in the Italian Grand Prix in September 1954 and with this car he took second place in the Spanish Grand Prix that year. It was at the wheel of this car that Sergio Mantovani crashed badly in practice for the Valentino Grand Prix in March 1955. It was rebuilt, loaned to Horace Gould to drive in the *Daily Telegraph* Trophy at Aintree in September 1955, and was subsequently purchased by him. It was later fitted with a 1957 body and, in the ownership of H. C. Spero, was the first 250F to appear in VSCC events, initially masquerading as a 1953 car to comply with the club's eligibility rules. It was later raced by Neil Corner and Tom Rose.

**2515:** New works car for the 1955 season; for 1956 it was acquired by Scuderia Guastalla and driven by Gerino Gerini and Chico Landi. In 1957 it was bought by Ottorino Volonterio and it is now in Tom Wheatcroft's collection at Donington.

**2516:** New works car for the 1955 season, sold at the end of the year to Australian Reg Hunt and later acquired by Stillwell. Now owned by Cameron Millar.

**2517:** Chassis number not allocated.

**2518:** Streamlined car driven by Behra in the 1955 Italian Grand Prix and by Harry Schell at Siracusa. It appeared in practice at Reims in July 1956 with Dunlop disc brakes and was destroyed later that month in a fire at the factory.

**2519:** Supplied new in April 1956 to Luigi Piotti, who raced it until the end of the 1957 season; in 1958 it was sold to Gerini, who raced it at Monza with a new high-tail body similar to that of the 'piccolo' cars.

**2520:** Supplied new in March 1956 to Stan Jones in Australia, who achieved many successes with it in Australian and New Zealand races.

**2521:** Works car completed in May 1956 and driven by Behra into third place at Monaco. For 1957 it was sold to John du Puy, but it was written off by Jean Lucas at Casablanca that year.

**2522:** Works car completed in March 1956 and driven by Moss to victory at Monaco. It was sold to Scuderia Centro-Sud for 1957 and was driven by Harry Schell, Masten Gregory, Hans Herrmann, Joakim Bonnier and Horace Gould. It appeared at Monza in 1957 with new 1957-style body. It is now owned by Cameron Millar.

**2523:** Works car completed in April 1956. It was originally based on the chassis of the Gilby car that had been replaced during a rebuild at the works. It ran at Spa in 1956 with a long, tapering nose and a ducted radiator and it was rebuilt with a new chassis in August 1956. At the end of the year it was shipped to Australia and was driven

by Jean Behra into second place in the Australian Grand Prix. It was then sold to Australian Doug Whiteford. In 1957 the old chassis was used for the first V-12 car which made its début at Siracusa and it was subsequently driven in the Reims Grand Prix by Carlos Menditeguy. For the 1958 season this chassis was rebuilt with a 250F six-cylinder engine for Maria de Filippis.

**2524:** Delivered new to Francesco Godia-Sales in time for the 1956 Belgian Grand Prix, but non-started because of engine trouble. The Spaniard first drove the car in the 1956 French Grand Prix. It was purchased by Joakim Bonnier in time to drive it in the 1958 Buenos Aires City Grand Prix. Subsequently it was sold in the United States.

**2525:** Works car with offset engine and smaller frontal area that appeared at Monza in 1956 and was driven to victory by Stirling Moss. It was subsequently sold to Tony Parravano. It was later owned by Hexagon Motors.

**2526:** Works car with offset engine and smaller frontal area that appeared at Monza in 1956, where it was driven by Jean Behra. It was retained by the works for 1957 and driven by Fangio in the Reims Grand Prix. The chassis number was also allocated to the second of the V-12 cars built in 1957 and which incorporated certain components from the original 2526. For 1958 it was rebuilt as a standard six-cylinder car with straight engine and transmission line and sold to motorcycle racer Keith Campbell. The car was bought from Campbell's executors by Richard Bergel and Lord Angus Clydesdale.

**2527:** Lightweight works car that first appeared in the 1957 Argentine Grand Prix. Fangio drove it to victory in the Argentine and Buenos Aires City Grands Prix and it was driven into third place at Pescara by Harry Schell. For 1958 it was acquired by motorcycle racer Keith Kavanagh.

**2528:** Lightweight works car that first appeared in the 1957 Argentine Grand Prix. Behra drove it into second place in the Argentine and Buenos Aires City Grands Prix and won at Pau, Modena and Casablanca. It was driven by Carlos Menditeguy in the 1958 Argentine races and was then acquired by Francesco Godia-Sales. It was raced in historic racing car events by Charles Lucas (in 1967 it lapped Silverstone at 101.12mph) and is now owned by Neil Corner.

**2529:** Lightweight works car that first appeared in the 1957 Argentine Grand Prix. It was driven by Moss in the Argentine and Fangio drove it to victory at Rouen and the Nürburgring and finished second with it at Pescara and Monza; Harry Schell drove it into third place at Modena. In the 1958 Argentine races it was driven by Fangio (who won the Buenos Aires City Grand Prix) and it was then sold to Giorgio Scarlatti.

**2530:** Lightweight version of the V-12 car that first appeared in practice for the 1957 French Grand Prix at Rouen.

**2531:** Version of the V-12 car with lightweight chassis and offset transmission which first appeared at Monza in 1957, where it was driven by Behra.

**2532:** First of the 1958 'piccolo' cars that appeared in practice at Spa and was driven by Juan Fangio at Reims.

**2533:** 'Piccolo' car delivered to Temple Buell in time for Carroll Shelby to drive it in the Portuguese Grand Prix. Sold in New Zealand after the 1959 New Zealand Grand Prix.

**2534:** 'Piccolo' car delivered to Temple Buell in time for the 1958 Italian Grand Prix. Sold in New Zealand after the 1959 New Zealand Grand Prix.

## Appendix 6:

### Maserati Competition Performances, 1926-65

*NOTE: for reasons of space and the sheer impossibility of tracing the fate of every international race entry, the results listed are limited to (a) works entries in international events and (b) private owners who achieved success in international events. It should be remembered that often works entries were private owners running under a 'flag of convenience' and sometimes private entries were really works cars. Works entries are indicated by an asterisk.*

#### *Racing Cars*

#### Straight-Eight and Other Grand Prix Cars (1926-48)

##### 1926 (Tipo 26)

2 May	Targa Florio (Madonie, 336 miles)	A. Maserati/ G. Bertocchi*	9th (1st in 1,500cc class)
5 September	Italian Grand Prix (Monza, 373 miles)	A. Maserati* E. Materassi*	Ret (supercharger) Ret (supercharger)

##### 1927

6 March	Tripoli Grand Prix (Mellaha, 262 miles)	A. Maserati*	3rd (1st in 1,500cc class, Tipo 26)
24 April	Targa Florio (Madonie, 336 miles)	A. Maserati* E. Maserati*  A. Maggi*	3rd (Tipo 26B) Ret (front axle, Tipo 26) Ret (broken chassis, Tipo 26)
6 August	Coppa Acerbo (Pescara, 317 miles)	A. Tonini	2nd (Tipo 26)

##### 1928

28 March	Circuit of Pozzo (193 miles)	A. Maggi	2nd (Tipo 26)
1 May	Targa Florio (Madonie, 336 miles)	E. Maserati*	Ret (Tipo 26B)
4 August	Coppa Acerbo (Pescara, 317 miles)	E. Maserati*	1st in 1,500cc class
9 September	European Grand Prix (Monza, 373 miles)	A. Maggi* A. Maserati*	5th (Tipo 26B) 6th (Tipo 26B)

##### 1929

24 March	Tripoli Grand Prix (Mellaha, 260 miles)	B. Borzacchini*	2nd (Tipo 26B)
21 April	Bordino Grand Prix (Alessandria, 159 miles)	B. Borzacchini* E. Maserati*	2nd (Tipo 26B) 3rd (Tipo 26B)
4 May	Targa Florio (Madonie, 336 miles)	B. Borzacchini* E. Maserati*	Ret (Tipo 26B) Ret (Tipo 26B)

1 July	Circuit of Cremona (125 miles)	E. Maserati* B. Borzacchini/ A. Maserati*	3rd (Tipo 26B)
15 September	Monza Grand Prix (Monza, 62 mile final)	A. Maserati*	Ret (V4) Ret (V4)
<i>1930</i>			
23 March	Tripoli Grand Prix (Mellaha, 65 miles)	B. Borzacchini* L. Arcangeli*	1st (91.05mph, V4) 2nd (Tipo 26B)
12-13 April	Mille Miglia (1,018 miles)	L. Arcangeli*	Crashed (Tipo 26B)
4 May	Targa Florio (Madonic, 336 miles)	E. Maserati* B. Borzacchini* L. Arcangeli* L. Fagioli*	8th (8C-2500) 11th (8C-2500) Ret (8C-2500) Ret (8C-2500)
18 May	Circuit of Caserta (189 miles)	L. Fagioli*	4th (Tipo 26B)
25 May	Rome Grand Prix (Tre Fontana, 162 miles)	L. Arcangeli*  L. Fagioli*	1st (83.60mph, 8C-2500) Ret (Tipo 26B, rear axle)
30 May	Indianapolis 500 Miles race	B. Borzacchini*	V4 (Ret, electrics)
3 August	Coppa Ciano (Leghorn, 139 miles)	L. Fagioli*	1st (54.47mph, 8C-2500)
17 August	Coppa Acerbo (Pescara, 159 miles)	A. Varzi*  E. Maserati*	1st (75.37mph, 8C-2500) 2nd (V4)
24 August	Circuit of Avellino (186 miles)	L. Fagioli*	1st (54.54mph, 8C-2500)
7 September	Monza Grand Prix (149 mile final)	A. Varzi*  L. Arcangeli* E. Maserati* L. Fagioli*	1st (93.48mph, 8C-2500) 2nd (8C-2500) 3rd (V4) 4th (8C-2500)
5 October	Spanish Grand Prix (San Sebastian, 323 miles)	A. Varzi*  A. Maggi*	1st (86.82mph, 8C-2500) 2nd (8C-2500)
<i>1931</i> (8C-2500 except where indicated)			
10 May	Targa Florio (Long Madonie, 363 miles)	C. Biondetti* L. Fagioli* R. Dreyfus*	Crashed Crashed Unclassified
7 June	Rome Grand Prix (Littorio, 149 miles)	E. Maserati*  R. Dreyfus* C. Biondetti*	1st (94.65mph, V4) 2nd 3rd (Tipo 26B)
21 June	French Grand Prix (Montlhéry, 10 hours)	C. Biondetti/ Parenti* R. Dreyfus/ P. Ghersi* L. Fagioli/ E. Maserati*	3rd  8th Ret (brakes)
5 July	Marne Grand Prix (Reims, 248 miles)	R. Dreyfus*	2nd
19 July	German Grand Prix (Nürburg- ring, 255 miles)	R. Dreyfus* L. Fagioli*	Ret (engine) Crashed
2 August	Coppa Ciano (Leghorn, 135 miles)	L. Fagioli*	3rd

6 September	Monza Grand Prix (149 mile final)	L. Fagioli*	1st (96·60mph, 8C-2800)
		R. Dreyfus*	Ret (engine, 8C-2800)
27 September	Czechoslovakian Grand Prix (Brno, 308 miles)	L. Fagioli*	Crashed (8C-2800)

1932 (8C-2800 except where indicated)

3 April	Tunis Grand Prix (Carthage, 292 miles)	L. Fagioli*	Ret (supercharger)
17 April	Monaco Grand Prix (Monte Carlo, 195 miles)	L. Fagioli*	3rd
24 April	Rome Grand Prix (Littorio, 149 mile final)	L. Fagioli*	1st (98·59mph, V5)
16 May	Nîmes Grand Prix (126 miles)	R. Dreyfus	2nd
5 June	Italian Grand Prix (Monza, 5 hours)	L. Fagioli*	2nd (V5)
		A. Ruggeri*	8th
17 July	German Grand Prix (Nürburg-ring, 354 miles)	A. Ruggeri*	Ret
23 August	Circuit of Avellino (155 miles)	L. Fagioli*	3rd
4 September	Czechoslovakian Grand Prix (Brno, 308 miles)	L. Fagioli*	2nd
11 September	Monza Grand Prix (149 mile final)	L. Fagioli*	2nd (V5)
		A. Ruggeri*	9th
25 September	Marseilles Grand Prix (Miramas, 250 miles)	L. Fagioli*	6th (V5)
		A. Ruggeri*	Ret

1933 (8CM except where indicated)

26 March	Tunis Grand Prix (Carthage, 292 miles)	G. Zehender	3rd
		L. Fagioli (8C)*	Ret (magneto)
23 April	Monaco Grand Prix (Monte Carlo, 195 miles)	L. Fagioli (8C)*	Ret (magneto)
7 May	Tripoli Grand Prix (Mellaha, 244 miles)	H. R. Birkin (8C)	3rd
		G. Campari (8C)*	Ret (oil tank)
11 June	French Grand Prix (Montlhéry, 311 miles)	G. Campari (8C)*	1st (81·52mph)
9 July	Belgian Grand Prix (Spa, 370 miles)	T. Nuvolari	1st (89·23 mph)
16 July	Coppa Ciano (Leghorn, 149 miles)	T. Nuvolari	1st (54·18mph)
		G. Campari (8C)*	3rd
6 August	Nice Grand Prix (199 miles)	T. Nuvolari	1st (64·56mph)
13 August	Coppa Acerbo (Pescara, 190 miles)	T. Nuvolari	2nd
		P. Taruffi*	3rd
		G. Campari*	Crashed
10 September	Italian Grand Prix (Monza, 311 miles)	T. Nuvolari	2nd
		G. Zehender	3rd
		P. Taruffi*	Ret (broken wheel)

1934 (8CM except where indicated)

28 April	JCC International Trophy (Brooklands, 262 miles)	W. Straight	1st (89·62mph)
		Hon B. E. Lewis (8C)	2nd
20 May	Casablanca Grand Prix (Anfa, 237 miles)	P. Etancelin	2nd

3 June	Montreux Grand Prix (186 miles)	P. Etancelin	2nd
10 June	Picardy Grand Prix (121 miles)	B. Falchetto	1st (79·24mph)
23 June	British Empire Trophy (Brooklands, 300 miles)	W. Straight	2nd
15 July	Vichy Grand Prix (two 44 mile qualifying heats and 88 mile final)	W. Straight P. Etancelin	2nd 3rd
22 July	Coppa Ciano (Leghorn, 149 miles)	T. Nuvolari	3rd
22 July	Dieppe Grand Prix (two 1 hour heats and 2 hour final)	P. Etancelin Earl Howe	1st (75·16mph) 3rd
22 July	Albi Grand Prix (Les Plâques, 166 miles)	R. E. L. Featherston- haugh (8C-2500) H. C. Hamilton R. Sommer	1st (88·95mph) 2nd 3rd
29 July	Belgian Grand Prix (Spa, 370 miles)		
15 August	Coppa Acerbo (Pescara, 321 miles)	T. Nuvolari	2nd
19 August	Nice Grand Prix (199 miles)	P. Etancelin	2nd
26 August	Comminges Grand Prix (St Gaudens, 239 miles)	G. Zehender W. Straight	2nd 3rd
9 September	Grand Prix de France (Montlhéry, 55 miles)	B. Falchetto	1st (86·93mph)
30 September	Circuit of Masaryk (Brno, 308 miles)	T. Nuvolari (Tipo 34)	3rd
14 October	Circuit of Modena (80 miles)	T. Nuvolari (Tipo 34)	1st (67·31mph)
21 October	Circuit of Naples (124 miles)	T. Nuvolari	1st (57·06mph)
28 October	Algiers Grand Prix (Bouzerea, aggregate of two 75 mile heats)	G. Soffietti	3rd
27 December	South African Grand Prix (East London, 91 miles)	W. Straight	1st (95·68mph)
<i>1935 (8CM except where indicated)</i>			
10 February	Norwegian Grand Prix (Lake Bogstad, 93 miles)	H. Ruesch	3rd
24 February	Pau Grand Prix (138 miles)	G. Soffietti	3rd
3 May	Tunis Grand Prix (Carthage, 313 miles)	P. Etancelin (Tipo 34)	3rd
23 June	French Grand Prix (Montlhéry, 311 miles)	G. Zehender (Tipo 34)	3rd
6 October	Coppa Michele Bianchi (Cosenza, three 32 mile heats and 48 mile final)	P. Gherzi E. Bianco (4C-1500)	2nd 3rd
<i>1936 (8CM except where indicated)</i>			
1 March	Pau Grand Prix (172 miles)	P. Etancelin (V-8R1)	1st (51·00mph)
4 April	British Empire Trophy (Donington, 255 miles)	R. Seaman	1st (66·33mph)
<i>1937 (8CM)</i>			
14 August	Crystal Palace Cup (30 miles)	'B. Bira'	2nd
28 August	JCC 200 Mile race (Donington)	'B. Bira'	2nd

<i>1938 (8CTF)</i>			
15 May	Tripoli Grand Prix (Mellaha, 326 miles)	F. Trossi*	Ret (engine)
31 July	Coppa Ciano (Leghorn, 146 miles)	G. Zehender* F. Trossi*	Ret (engine) Ret (engine)
14 August	Coppa Acerbo (Pescara, 257 miles)	F. Trossi/ L. Villoresi*	Ret (engine)
11 September	Italian Grand Prix (Monza, 261 miles)	F. Trossi* G. Zehender*	5th Ret (engine)
22 October	Donington Grand Prix (250 miles)	L. Villoresi*	Ret (engine)
<i>1939 (8CTF)</i>			
31 May	Indianapolis 500 Miles race	W. Shaw	1st (115.04mph)
23 July	German Grand Prix (Nürburg- ring, 312 miles)	P. Pietsch* L. Villoresi*	3rd Ret (damaged fuel tank)
<i>1940 (8CTF)</i>			
31 May	Indianapolis 500 Miles race	W. Shaw	1st (114.28mph)
<i>1946</i>			
31 May	Indianapolis 500 Miles race	T. Horn (8CTF)	3rd
25 August	Circuit des Trois Villes (Lille, 157 miles)	R. Sommer/ H. Louveau (8CL)	1st (64.33mph)
<i>1948 (8CL)</i>			
25 January	Mar del Plata Grand Prix (92 miles)	G. Farina	1st (66.47mph)

## 6CM Voiturette

<i>1936</i>			
14 June	Eifelrennen Voiturette race (Nürburgring, 170 miles)	C. F. Trossi A. Tenni	1st (69.90mph) 2nd (4C)
28 June	Milan Grand Prix (Parco Sempione, 65 miles)	C. F. Trossi E. Villoresi	1st (55.97mph) 2nd
2 August	Coppa Ciano Voiturette race (Leghorn, 65 miles)	C. F. Trossi	1st (67.39mph)
15 August	Coppa Acerbo Voiturette race (Pescara, 96 miles)	C. F. Trossi	2nd
<i>1937</i>			
18 April	Circuit of Turin Voiturette race (Valentino, 73 miles)	R. Dreyfus*	2nd
25 April	Circuit of Naples Voiturette race (Posillipo, 76 miles)	C. F. Trossi	1st (51.40mph)
9 May	Tripoli Voiturette race (Mellaha, 277 miles)	R. Dreyfus* F. Cortses F. Severi	1st (107.90mph) 2nd 3rd
25 May	Targa Florio (Palermo Park, 195 miles)	F. Severi G. Lurani E. Bianco*	1st (66.00mph) 2nd 3rd
1 June	Avus Voiturette race (84 miles)	E. Plate E. Teagno	2nd 3rd

13 June	Florence Grand Prix (144 miles)	R. Dreyfus* C. F. Trossi* E. Bianco*	1st (70·16mph) 2nd (4CM) 3rd
20 June	Milan Grand Prix (Parco Sempione, 75 miles)	E. Siena A. Marazza F. Cortese	1st (61·24mph) 2nd (4C) 3rd
27 June	Picardy Grand Prix (Peronne, 91 miles)	R. Dreyfus* J. P. Wakefield	2nd 3rd
25 July	San Remo Grand Prix (Ospedaletti, 35 miles)	A. Varzi A. Dusio G. Rocco	1st (60·09mph) 2nd 3rd
2 August	JCC International Trophy (Brooklands, 204 miles)	J. P. Wakefield	2nd
15 August	Coppa Acerbo Voiturette race (Pescara, 96 miles)	G. Rocco E. Bianco* F. Cortese	1st (77·59mph) 2nd 3rd
11 September	Phoenix Park Formule Libre race (100 miles)	J. P. Wakefield	2nd
19 September	Circuit of Lucca (88 miles)	C. F. Trossi  L. Villoresi G. Rocco	1st (58·31mph, 4CM) 2nd 3rd
26 September	Circuit of Masaryk Voiturette race (Brno, 91 miles)	L. Villoresi L. Hartmann	1st (77·60mph) 3rd (4CM)
16 December	Rand Grand Prix (Lord Howe circuit, 121 mile handicap)	G. Lurani	3rd
<i>1938</i>			
1 January	South African Grand Prix (East London, 198 mile handicap)	E. Siena	2nd
15 January	Grosvenor Grand Prix (Capetown, 203 mile handicap)	P. Taruffi L. Villoresi	2nd 3rd
15 May	Tripoli Grand Prix (Voiturette class, Mellaha, 326 miles)	P. Taruffi G. Rocco G. Lurani	1st (109·88mph) 2nd 3rd (4CM)
24 May	Targa Florio (Palermo Park, 107 miles)	G. Rocco G. Raph L. Villoresi	1st (71·02mph) 2nd 3rd
10 July	Albi Grand Prix (Les Plâques, aggregate of 221 miles)	L. Villoresi G. Soffietti	1st (90·20mph) 2nd
13 August	Coppa Acerbo Voiturette race (96 miles)	L. Villoresi P. Pietsch N. Barbieri	1st (81·48mph) 2nd 3rd
21 August	Prix de Berne (Bremgarten, 95 miles)	A. Hug  E. Bianco	1st (81·88mph, 4CM) 2nd (4CM)
11 September	Milan Grand Prix (Monza, 109 miles)	A. Hug	3rd (4CM)
18 September	Circuit of Modena Voiturette race (109 miles)	F. Cortese* A. Hug	1st (63·15mph) 2nd (4CM)

## 4CL, 4CLT and 4CLT/48

*1939*

6 May	JCC International Trophy (Brooklands, 202 miles)	R. Tongue	3rd
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7 May	Tripoli Grand Prix (Mellaha, 244 miles)	F. Trossi* L. Villoresi* F. Cortese*	Ret (engine) Ret (gearbox) Ret (engine)
14 May	Targa Florio (Favorita Park, 142 miles)	L. Villoresi* P. Taruffi*	1st (84.78mph) 2nd
28 May	Naples Grand Prix (Posillipo, 153 miles)	J. P. Wakefield P. Taruffi* F. Cortese*	1st (63.66mph) 2nd 3rd
11 June	Picardy Grand Prix (Peronne, 91 miles)	J. P. Wakefield	1st (82.06mph)
9 July	Coupe du Commission Sportive (Reims, 186 miles)	J. P. Wakefield	2nd
16 July	Albi Grand Prix (Les Planques, 221 miles)	J. P. Wakefield R. Tongue	1st (93.91mph) 2nd
30 July	Coppa Ciano (Leghorn, 216 miles)	F. Cortese* P. Taruffi*	2nd 4th
13 August	Coppa Acerbo (Pescara, 224 miles)	L. Villoresi* F. Cortese*	Ret Ret
<i>1940</i>			
12 May	Tripoli Grand Prix (Mellaha, 244 miles)	L. Villoresi* F. Cortese*	2nd Ret
23 May	Targa Florio (Favorita Park, 142 miles)	L. Villoresi* F. Cortese*	1st (88.41mph) 2nd
<i>1946</i>			
22 April	Nice Grand Prix (134 miles)	L. Villoresi	1st (64.86mph)
12 May	Marseille Grand Prix (Prado, two 30 mile heats and 60 mile final)	R. Sommer E. Platé	1st (58.40mph) 2nd
19 May	Grand Prix de Forez (88 miles)	R. Sommer H. Louveau	1st (68.00mph) 2nd
30 May	Paris Cup (Bois de Boulogne, 93 miles)	A. Ruggeri	3rd
9 June	St Cloud Grand Prix (112 miles)	R. Sommer R. Mazaud	1st (67.99mph) 3rd
30 June	Perpignan Grand Prix (91 miles)	H. Louveau G. Raph	2nd 3rd
14 July	Albi Grand Prix (Les Plâques, aggregate of two 89 mile heats)	T. Nuolari H. Louveau G. Raph	1st (91.57mph) 2nd 3rd
28 July	Nantes Grand Prix (115 miles)	G. Raph	1st (64.30mph)
1 September	Turin Grand Prix (Valentino Park, 174 miles)	R. Sommer	3rd
6 October	Coupe du Salon (Bois de Boulogne, 159 miles)	R. Sommer G. Raph	1st (71.75mph) 2nd
27 October	Penya Rhin Grand Prix (Pedralbes, 194 miles)	G. Pelassa — Basadonna — Puigpalu	1st (80.25mph) 2nd 3rd
<i>1947</i>			
2 February	Rosario City Grand Prix (Buenos Aires, 87 miles)	L. Villoresi	2nd
9 February	Peron Cup race (Buenos Aires, 75 miles)	L. Villoresi	1st (69.92mph)
15 February	Peron Cup race (Buenos Aires, 75 miles)	L. Villoresi — Palmieri	1st (69.50mph) 3rd

7 April	Pau Grand Prix (190 miles)	N. Pagani H. Louveau	1st (51·95mph) 3rd
8 May	Jersey Road Race (St Helier, 160 miles)	R. Parnell L. Chiron	1st (84·52mph) 2nd
18 May	Marseilles Grand Prix (Prado, 191 miles)	E. Platé	2nd
25 May	Grand Prix des Frontières (Chimay, 81 miles)	'B. Bira'	1st (82·13mph)
1 June	Nîmes Grand Prix (227 miles)	L. Villoresi R. Parnell	1st (62·10mph) 3rd
6 July	Marne Grand Prix (Reims, 247 miles)	C. Kautz	1st (95·80mph)
13 July	Bari Grand Prix (Lungomare, 166 miles)	N. Grieco	3rd
20 July	Nice Grand Prix (198 miles)	L. Villoresi	1st (64·64mph)
3 August	Strasbourg Grand Prix (192 miles)	L. Villoresi	1st (68·92mph)
21 August	British Empire Trophy (Douglas, 155 miles)	R. E. Ansell	3rd
5 October	Lausanne Grand Prix (180 miles)	L. Villoresi	1st (63·92mph)
<i>1948</i>			
17 January	Buenos Aires City Grand Prix (Palermo Park, two 45 mile heats and 75 mile final)	L. Villoresi	1st (63·19mph)
25 January	Mar del Plata Grand Prix (92 miles)	O. Galvez	3rd
1 February	Rosario Grand Prix (87 miles)	L. Villoresi	3rd
14 February	Buenos Aires City Grand Prix 2 (Palermo Park, two 45 mile heats and 75 mile final)	L. Villoresi G. Raph	1st (67·07mph) 3rd
20 March	Pau Grand Prix (187 miles)	N. Pagani	1st (53·07mph)
29 April	Jersey Road Race (St Helier, 176 miles)	R. Parnell	3rd
2 May	Grand Prix des Nations (Geneva, 147 miles)	G. Farina E. de Graffenried	1st (61·38mph) 2nd
16 May	Monaco Grand Prix (Monte Carlo, 195 miles)	G. Farina	1st (59·61mph)
27 June	San Remo Grand Prix (Ospedaletti, 178 miles)	A. Ascari L. Villoresi C. Bucci	1st (58·22mph) 2nd 3rd
4 July	Swiss Grand Prix (Bremgarten, 181 miles)	L. Villoresi	3rd
1 August	Commings Grand Prix (St Gaudens, 205 miles)	L. Villoresi	1st (93·40mph)
7 August	Zandvoort Grand Prix (two heats and 108 mile final)	'B. Bira' R. Parnell	1st (73·25mph) 3rd
29 August	Albi Grand Prix (Les Planques, 189 miles)	L. Villoresi	1st (99·88mph)
2 October	British Grand Prix (Silverstone, 239 miles)	L. Villoresi A. Ascari	1st (77·28mph) 2nd
31 October	Penya Rhin Grand Prix (Pedralbes, 194 miles)	L. Villoresi R. Parnell	1st (89·44mph) 2nd
<i>1949</i>			
30 January	Juan D. Peron Grand Prix (Palermo Park, 108 miles)	A. Ascari L. Villoresi	1st (70·77mph) 2nd

6 February	Dona Eva Duarte de Peron Grand Prix (Palermo Park, 90 miles)	J. M. Fangio	2nd
13 February	Rosario Grand Prix (87 miles)	R. Parnell	2nd
27 February	Mar del Plata Grand Prix (92 miles)	A. Ascari	3rd
3 April	San Remo Grand Prix (Ospedaletti, 178 miles)	J. M. Fangio	1st (68·87mph)
		'B. Bira'	2nd
		J. M. Fangio	1st (62·87mph)
		'B. Bira'	2nd
18 April	Pau Grand Prix (189 miles)	E. de Graffenried	3rd
		J. M. Fangio	1st (52·70mph)
		E. de Graffenried	2nd
		B. Campos	3rd
28 April	Jersey Road Race (St Helier, 176 miles)	E. de Graffenried	2nd
8 May	Grand Prix du Roussillon (Perpignan, aggregate of two 79 mile heats)	J. M. Fangio	1st (61·74mph)
		'B. Bira'	2nd
		B. Campos	3rd
14 May	British Grand Prix (Silverstone, 300 miles)	E. de Graffenried	1st (77·31mph)
26 May	British Empire Trophy (Douglas, 105 miles)	F. Ashmore	3rd
29 May	Swedish Summer Grand Prix (Skarpnack, 46·5 miles)	'B. Bira'	1st (53·01mph)
		E. de Graffenried	2nd
10 July	Albi Grand Prix (Les Plâques, 186 miles)	J. M. Fangio	1st (98·19mph)
		'B. Bira'	2nd
17 July	Grand Prix de France (Reims, 310 miles)	'B. Bira'	2nd
31 July	Zandvoort Grand Prix (two 63 mile heats and 104 mile final)	E. de Graffenried	2nd
		'B. Bira'	3rd
20 August	<i>Daily Express</i> Trophy (Silverstone, two 60 mile heats and 90 mile final)	G. Farina	2nd
28 August	Lausanne Grand Prix (182 miles)	G. Farina	1st (65·81mph)
		E. de Graffenried	3rd
11 September	Italian Grand Prix (Monza, 313 miles)	'B. Bira'	3rd
<i>1950</i>			
15 January	Mar del Plata Grand Prix (95 miles)	P. Taruffi	3rd
10 April	Pau Grand Prix (193 miles)	J. M. Fangio	1st (58·40mph)
16 April	San Remo Grand Prix (Ospedaletti, 187 miles)	A. Pian	3rd
21 May	Monaco Grand Prix (195 miles)	L. Chiron	3rd
15 June	British Empire Trophy (Douglas, 140 miles)	E. de Graffenried	3rd
13 July	Jersey Road Race (St Helier, 176 miles)	R. Parnell	2nd
		E. de Graffenried	3rd
17 July	Albi Grand Prix (Les Plâques, aggregate of two 94 mile heats)	J. F. Gonzalez	2nd
<i>1951</i>			
26 March	Pau Grand Prix (188 miles)	G. Farina	3rd
20 May	Paris Grand Prix (Bois de Boulogne, 200 miles)	G. Farina	1st (67·30mph)

## Platé-Maserati, A6GCM (1952) and A6SSG (1953)

1952

20 January	Rio de Janeiro Grand Prix (Gavea, 124 miles)	N. Pagani*	3rd
9 March	Peron Cup race (Buenos Aires Autodrome, 88 miles)	N. Pagani*	Ret
16 March	Peron Cup race (Buenos Aires Autodrome, 99 miles)	N. Pagani*	Ret
10 May	Daily Express Trophy race (Silverstone, two qualifying heats and 102 mile final)	E. de Graffenried (Platé)	3rd
8 June	Circuit d'Aix-Les-Bains (123 miles)	E. de Graffenried (Platé)	3rd
8 June	Autodrome Grand Prix (Monza, aggregate of two 137 mile heats)	F. Bonetto* J. F. Gonzalez* J. M. Fangio*	7th Ret (magneto) Crashed
3 August	German Grand Prix (Nürburg- ring, 255 miles)	F. Bonetto*	Ret (engine)
7 September	Italian Grand Prix (Monza, 313 miles)	J. F. Gonzalez* F. Bonetto* F. Rol*	2nd 5th Ret
14 September	Modena Grand Prix (143 miles)	J. F. Gonzalez*	2nd
14 September	Circuit de Cadours (two 38 mile qualifying heats and 75 mile final)	E. de Graffenried (Platé)	3rd

1953

18 January	Argentine Grand Prix (Buenos Aires Autodrome, 3 hours)	J. F. Gonzalez* O. Galvez* J. M. Fangio* (all A6GCM)	3rd 5th 9th
1 February	Buenos Aires City Grand Prix (Buenos Aires Autodrome, 117 miles)	J. F. Gonzalez* O. Galvez J. M. Fangio* (all A6GCM)	4th 6th 9th
22 March	Syracuse Grand Prix (268 miles)	E. de Graffenried	1st (92.07mph)
6 April	Goodwood races: Lavant Cup (17 miles) Chichester Cup (12 miles) Richmond Trophy (36 miles)	E. de Graffenried E. de Graffenried E. de Graffenried	1st (87.63mph) 1st (79.48mph) 3rd
10 May	Naples Grand Prix (Posillipo, 153 miles)	J. M. Fangio* J. F. Gonzalez*	2nd 3rd
31 May	Eifelrennen (Nürburgring, 99 miles)	E. de Graffenried	1st (70.40mph)
7 June	Dutch Grand Prix (Zandvoort, 235 miles)	F. Bonetto/ J. F. Gonzalez* J. F. Gonzalez* J. M. Fangio* O. Marimon*	3rd Ret (drive-shaft) Ret (rear axle) 3rd
21 June	Belgian Grand Prix (Spa, 315 miles)	J. F. Gonzalez* J. M. Fangio* J. Claes/ J. M. Fangio*	Ret (engine) Ret (engine) Crashed

5 July	French Grand Prix (Reims, 312 miles)	J. M. Fangio* J. F. Gonzalez* O. Marimon* F. Bonetto*	2nd 3rd 9th Ret (engine)
18 July	British Grand Prix (Silverstone, 263 miles)	J. M. Fangio* J. F. Gonzalez* F. Bonetto* O. Marimon*	2nd 4th 6th Ret (engine)
2 August	German Grand Prix (Nürburg- ring, 255 miles)	J. M. Fangio* F. Bonetto* O. Marimon*	2nd 4th Ret (engine)
23 August	Swiss Grand Prix (Bremgarten, 294 miles)	J. M. Fangio/ F. Bonetto* H. Lang* F. Bonetto/ J. M. Fangio*	4th 5th  Ret (engine)
13 September	Italian Grand Prix (Monza, 312 miles)	O. Marimon* J. M. Fangio* S. Mantovani/ L. Musso*	Ret (engine) 1st (110.62mph) 7th
20 September	Modena Grand Prix (143 miles)	F. Bonetto* O. Marimon* J. M. Fangio* O. Marimon* E. de Graffenried F. Bonetto* E. Giletti*	Ret (out of fuel) Crashed 1st (76.66mph) 2nd 3rd Ret (gearbox) Ret (engine)

## 250F

1954

17 January	Argentine Grand Prix (Buenos Aires Autodrome, 3 hours)	J. M. Fangio* O. Marimon (A6SSG/250F)*	1st (70.13mph) Ret (transmission)
31 January	Buenos Aires City Grand Prix (Buenos Aires Autodrome, 190 miles)	R. Mieres (A6SSG/250F) J. M. Fangio* O. Marimon* J. Daponte (A6SSG/250F)*	2nd Ret (rear axle) Ret (accident)  Ret (accident)
11 April	Syracuse Grand Prix (268 miles)	S. Mantovani* O. Marimon*	3rd Ret (clutch)
20 April	Pau Grand Prix (3 hours)	R. Mieres (A6SSG/250F) O. Marimon*	3rd Ret (de Dion tube)
23 May	Bari Grand Prix (Lungomare, 207 miles)	O. Marimon* S. Mantovani*	4th Ret
29 May	Aintree '200' race (two qualifying heats and 100 mile final)	S. Moss	1st (77.70mph)
6 June	Rome Grand Prix (Castelfusano, 212 miles)	O. Marimon* H. Schell (A6SSG/250F) S. Mantovani* L. Musso*	4th 2nd 3rd Ret (engine)
6 June	Grand Prix des Frontières (Chimay, 153 miles)	'B. Bira'	1st (98.19mph)

20 June	Belgian Grand Prix (Spa, 315 miles)	J. M. Fangio* S. Moss S. Mantovani* O. Marimon*	1st (115.08mph) 3rd 7th Ret (engine)
4 July	French Grand Prix (Reims, 315 miles)	L. Villoresi* A. Ascari* O. Marimon*	5th Ret (engine) Ret (gear-selector)
11 July	Rouen Grand Prix (Les Essarts, 301 miles)	'B. Bira' R. Salvadori	2nd 3rd
17 July	British Grand Prix (Silverstone, 263 miles)	O. Marimon* A. Vascari* L. Villoresi/ A. Ascari	3rd Ret (engine) Ret (engine)
25 July	Caen Grand Prix (La Prairie, 131 miles)	S. Moss	2nd
7 August	<i>Daily Dispatch</i> Gold Cup (Oulton Park, 100 miles)	S. Moss*	1st (83.48mph)
7 August	Formule Libre race (Oulton Park, 55 miles)	S. Moss*	1st (82.91mph)
15 August	Circuit of Pescara (257 miles)	L. Musso* 'B. Bira' H. Schell (A6SSG/250F)	1st (86.68mph) 2nd 3rd
22 August	Swiss Grand Prix (Bremgarten, 299 miles)	R. Mieres* S. Mantovani* S. Moss* H. Schell*	4th 5th Ret (oil pump) Ret (oil pump)
5 September	Italian Grand Prix (Monza, 313 miles)	S. Mantovani* S. Moss* L. Musso* R. Mieres* L. Villoresi* L. Rosier	9th 10th Ret Ret (damper) Ret (clutch) 3rd
12 September	Circuit of Cadours (two qualifying heats and 75 mile final)		
25 September	Goodwood races: Goodwood Trophy (50 miles)	S. Moss R. Salvadori	1st (91.49mph) 3rd
	Woodcote Cup (24 miles)	S. Moss	3rd
2 October	Aintree races: <i>Daily Telegraph</i> Trophy (51 miles)	S. Moss H. Schell (A6SSG/250F)	1st (85.43mph) 3rd
	Formule Libre race (51 miles)	S. Moss S. Mantovani	1st (85.26mph) 2nd
24 October	Spanish Grand Prix (Pedralbes, 314 miles)	L. Musso* R. Mieres* F. Godia-Sales* S. Moss* S. Mantovani*	2nd 4th 6th Ret (oil pump) Ret (accident)
<i>1955</i>			
8 January	New Zealand Grand Prix (Ardmore, 204 miles)	'B. Bira'	1st (78.75mph)
16 January	Argentine Grand Prix (Buenos Aires Autodrome, 3 hours)	R. Mieres* H. Schell/J. Behra* L. Musso/ S. Mantovani*	5th 6th 7th

		J. Behra*	Crashed
		C. Menditeguy*	Crashed
		S. Mantovani*	Ret
30 January	Buenos Aires City Grand Prix (Buenos Aires Autodrome, aggregate of two 88 mile heats)	J. Behra*	5th
		C. Menditeguy*	6th
		H. Schell*	7th
		S. Mantovani*	8th
27 March	Valentino Grand Prix (Turin, 235 miles)	R. Mieres*	2nd
		J. Behra*	Ret (de Dion tube)
		C. Perdisa*	Ret (de Dion tube)
		L. Musso*	Crashed
11 April	Pau Grand Prix (189 miles)	J. Behra*	1st (62.34mph)
		R. Mieres*	3rd
		L. Musso*	Ret (engine)
11 April	Chichester Cup race (Goodwood, 17 miles)	R. Salvadori	2nd
		S. Moss	3rd
24 April	Bordeaux Grand Prix (188 miles)	J. Behra*	1st (64.65mph)
		L. Musso*	2nd
		R. Mieres*	3rd
7 May	<i>Daily Express</i> Trophy (Silverstone, 176 miles)	P. J. Collins	1st (95.94mph)
		R. Salvadori	2nd
		'B. Bira'	3rd
8 May	Naples Grand Prix (Posillipo, 153 miles)	L. Musso*	2nd
		J. Behra*	4th
		R. Mieres*	Ret (oil leak)
22 May	Monaco Grand Prix (195 miles)	J. Behra/ C. Perdisa*	3rd
		R. Mieres*	Ret (final drive)
		C. Perdisa/ J. Behra*	Ret (engine)
		L. Musso*	Ret (final drive)
29 May	Albi Grand Prix (Les Plâques, 194 miles)	A. Simon	1st (81.60mph)
		L. Rosier	2nd
		H. H. Gould	3rd
5 June	Belgian Grand Prix (Spa, 316 miles)	R. Mieres/J. Behra*	5th
		L. Musso*	7th
		C. Perdisa*	8th
		J. Behra*	Crashed
19 June	Dutch Grand Prix (Zandvoort, 260 miles)	L. Musso*	3rd
		R. Mieres*	4th
		J. Behra*	6th
16 July	British Grand Prix (Aintree, 270 miles)	L. Musso*	5th
		J. Behra*	Ret (engine)
		R. Mieres*	Ret (engine)
		A. Simon*	Ret (gearbox)
30 July	International Trophy (Crystal Palace, two qualifying heats and 21 mile final)	J. M. Hawthorn	2nd
		R. Salvadori	3rd
6 August	<i>Daily Record</i> Trophy (Charterhall, two qualifying heats and 40 mile final)	F. R. Gerard	1st (83.29mph)
		H. H. Gould	2nd
		L. Rosier	3rd
13 August	Snetterton races: Redex Trophy (68 miles)	S. Moss	3rd
	Formule Libre race (68 miles)	R. Salvadori	2nd
3 September	Aintree races: <i>Daily Telegraph</i> Trophy (51 miles)	R. Salvadori	1st (83.72mph)
		H. H. Gould	3rd
	Formule Libre race (51 miles)	R. Salvadori	2nd

11 September	Italian Grand Prix (Monza, 312 miles)	J. Behra* C. Menditeguy* R. Mieres* P. J. Collins* L. Musso* S. Moss* L. Musso* H. H. Gould	4th 5th 7th Ret (engine) Ret (gearbox) 1st (85.94mph) Ret (gearbox) 2nd
24 September	Gold Cup race (Oulton Park, 150 miles)		
1 October	Avon Trophy (Castle Combe, 101 miles)		
10 October	Australian Grand Prix (Port Wakefield, 104 miles)	R. Hunt	2nd
23 October	Syracuse Grand Prix (239 miles)	L. Musso* L. Villoresi* H. Schell* C. Shelby*	2nd 3rd 5th 6th
<i>1956</i>			
7 January	New Zealand Grand Prix (Ardmore, 204 miles)	S. Moss	1st (78.90mph)
22 January	Argentine Grand Prix (Buenos Aires Autodrome, 3 hours)	J. Behra* J. M. Hawthorn J. F. Gonzalez* S. Moss* C. Menditeguy* S. Moss* J. Behra* C. Menditeguy* P. Gullé*	2nd 3rd Ret (engine) Ret (engine) Crashed 2nd 3rd 4th 8th
5 February	Buenos Aires City Grand Prix (Mendoza, 156 miles)		
2 April	Richmond Trophy (Goodwood, 73 miles)	S. Moss R. Salvadori	1st (94.35mph) 2nd
15 April	Syracuse Grand Prix (273 miles)	J. Behra*	Ret (oil pipe)
21 April	Aintree '200' race (201 miles)	S. Moss J. Brabham H. H. Gould G. Gerini S. Moss* J. Behra* C. Perdisa* S. Moss	1st (84.24mph) 3rd 2nd 3rd 1st (64.94mph) 3rd 7th 1st (74.11mph)
6 May	Naples Grand Prix (Posillipo, 153 miles)		
13 May	Monaco Grand Prix (195 miles)		
21 May	London Trophy (Crystal Palace, two 14 mile heats)		
3 June	Belgian Grand Prix (Spa, 315 miles)	C. Perdisa/ S. Moss* J. Behra* S. Moss* H. H. Gould B. Halford J. Behra* C. Perdisa/ S. Moss* S. Moss* J. Behra* C. Perdisa* S. Moss* S. Moss* J. Behra* U. Maglioli*	3rd 7th Ret (lost wheel) 1st (83.08mph) 3rd 3rd 5th Ret (gear lever) 3rd 7th Ret (gearbox) 2nd 3rd Ret (steering)
23 June	Aintree '100' race (102 miles)		
1 July	French Grand Prix (Reims, 315 miles)		
14 July	British Grand Prix (Silverstone, 296 miles)		
5 August	German Grand Prix (Nürburg-ring, 312 miles)		



26 August	Caen Grand Prix (La Prairie, 153 miles)	H. Schell R. Salvadori	1st (80·34mph) 3rd
2 September	Italian Grand Prix (Monza, 311 miles)	S. Moss* J. Behra* U. Maglioli/ J. Behra* L. Villoresi/ J. Bonnier*	1st (129·73mph) Ret (magneto)  Ret (steering)  Ret (engine)
2 December	Australian Grand Prix (Albert Park, 248 miles)	S. Moss* J. Behra*	1st (95·99mph) 2nd
<i>1957</i>			
12 January	New Zealand Grand Prix (Ardmore, 240 miles)	S. Jones	3rd
13 January	Argentine Grand Prix (Buenos Aires Autodrome, 3 hours)	J. M. Fangio* J. Behra* C. Menditeguy* S. Moss*	1st (80·47mph) 2nd 3rd 10th
27 January	Buenos Aires City Grand Prix (Buenos Aires Autodrome, aggregate of two 87 mile heats)	J. M. Fangio* J. Behra* C. Menditeguy/ S. Moss* S. Moss*	1st (73·89mph) 2nd  6th Ret (fatigue)
16 February	Invercargill Trophy (Ryal Bush, 102 miles)	H. H. Gould	3rd
4 March	Australian Grand Prix (Caversham, 154 miles)	S. Jones	2nd
22 April	Pau Grand Prix (188 miles)	J. Behra*	1st (62·80mph)
19 May	Monaco Grand Prix (205 miles)	J. M. Fangio* M. Gregory C. Menditeguy* H. Schell* G. Scarlatti/ H. Schell*	1st (64·72mph) 3rd Ret (spun off) Ret (king-post)  Ret (oil leak)
7 July	French Grand Prix (Rouen, 313 miles)	J. M. Fangio* J. Behra* H. Schell* C. Menditeguy*	1st (100·02mph) 5th 6th Ret (engine)
14 July	Reims Grand Prix (315 miles)	J. Behra* H. Schell* J. M. Fangio* C. Menditeguy (V-12)*	2nd 4th 8th (not running) Ret (engine)
20 July	European Grand Prix (Aintree, 270 miles)	J. M. Fangio* J. Behra* H. Schell* C. Menditeguy* B. Halford	Ret (engine) Ret (engine) Ret (water pump) Ret (prop-shaft) 3rd
28 July	Caen Grand Prix (La Prairie, 188 miles)		
4 August	German Grand Prix (Nürburg-ring, 312 miles)	J. M. Fangio* J. Behra* H. Schell* G. Scarlatti*	1st (88·82mph) 6th 7th 10th
18 August	Pescara Grand Prix (289 miles)	J. M. Fangio* H. Schell* G. Scarlatti* J. Behra*	2nd 3rd 6th Ret (oil pipe)

8 September	Italian Grand Prix (Monza, 311 miles)	J. M. Fangio* G. Scarlatti/ H. Schell* H. Schell* J. Behra (V-12)*	2nd 5th Ret (oil leak) Ret (engine)
22 September	Modena Grand Prix (two 57 mile heats)	J. Behra* H. Schell*	1st (81.09mph) 3rd
27 October	Moroccan Grand Prix (Casablanca, 260 miles)	J. Behra* J. M. Fangio* H. Schell*	1st (112.64mph) 4th 5th

#### 1958

18 January	New Zealand Grand Prix (Ardmore, 150 miles)	R. Jensen	2nd
25 January	Lady Wigram Trophy (Christchurch, 150 miles)	R. Jensen	2nd
1 February	Dunedin Trophy (48 miles)	R. Jensen	1st (65.00mph)
2 February	Buenos Aires City Grand Prix (two 87 mile heats)	J. M. Fangio F. Godia-Sales/ C. Menditeguy	1st (66.31mph) 3rd
8 February	Invercargill Trophy (Teretonga Park, 60 miles)	R. Jensen	1st (67.70mph)
13 April	Syracuse Grand Prix (205 miles)	J. Bonnier F. Godia-Sales	2nd 3rd
3 May	<i>Daily Express</i> Trophy (Silverstone, 146 miles)	M. Gregory	3rd
20 July	Caen Grand Prix (La Prairie, 188 miles)	J. Bonnier B. Halford	2nd 3rd

#### 1960

14 February	Buenos Aires City Grand Prix (Cordoba, 149 miles)	G. Munaron	3rd
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## *Sports Cars* A6GCS

#### 1947

28 September	Circuit of Modena (race stopped at 48 miles)	A. Ascari* L. Villoresi*	1st (67.20mph) 2nd
12 October	Turin Grand Prix (Valentino Park, 313 miles)	A. Ascari* L. Villoresi*	Ret (gearbox) Ret (gearbox)

#### 1948

1-2 May	Mille Miglia (1,133 miles)	A. Ascari*	Ret
11 July	Dolomite Gold Cup (Belluna, 189 miles)	G. Bracco L. Villoresi*	1st 2nd
18 July	Coupe des Petites Cylindrées (Reims, 126 miles)	L. Villoresi*	Ret

#### 1953

25-6 April	Mille Miglia (992 miles)	S. Mantovani* E. Giletti* L. Musso*	6th (1st in class) 10th (2nd in class) Crashed
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14 May	Targa Florio (Little Madonie, 358 miles)	E. Giletti* S. Mantovani/ J. M. Fangio*	2nd 3rd
20 June	Perugina Cup race (238 miles)	L. Musso*	1st (77·23mph)
27 June	Circuit of Caserta (129 miles)	S. Mantovani* L. Musso* E. Giletti*	1st (81·60mph) 2nd 3rd
15 August	Circuit of Pescara (12 hours)	F. Mancini/ S. Dal Cin*	2nd
30 August	Nürburgring 1,000 Kilometre race	E. Giletti/ O. Marimon* H. Herrmann/ E. McAfee* G. Bertoni/ H. Lang*	Ret (engine) Disqualified Ret (engine)
6 September	Supercortemaggiore Grand Prix (Merano, 167 miles)	S. Mantovani* E. Giletti*	2nd 8th
18 October	Sicilian Gold Cup (Siracusa, two heats and final, each 61 miles)	L. Musso* E. Giletti* S. Mantovani*	3rd 4th Ret
13 December	Rio de Janeiro Grand Prix (Gavea, 201 miles)	E. de Graffenried	1st (47·30mph)
27 December	Sao Paulo Grand Prix (Interlagos, 195 miles)	E. de Graffenried	1st (65·60mph)
<i>1954</i>			
24 January	Buenos Aires 1,000 Kilometre race	E. Giletti/L. Musso*	6th
7 March	Sebring 12 Hours race	L. Musso/Gatta*	Ret (brakes)
4 April	Tour of Sicily (671 miles)	L. Musso/ Donatelli*	4th
10 April	British Empire Trophy race (Oulton Park, qualifying heats and 71 mile final)	R. Salvadori	2nd
1-2 May	Mille Miglia (992 miles)	L. Musso/Zocca* B. Venezian/ Orlandi* S. Mantovani (250S)*	3rd (2nd in class) 5th (3rd in class) Ret (engine)
16 May	Naples Grand Prix (Posillipo, 153 miles)	L. Musso* L. Bellucci	1st (63·92mph) 3rd
30 May	Targa Florio (Little Madonie, 358 miles)	L. Musso*	2nd
12-13 June	Le Mans 24 Hours race	A. de Portago/ C. Tomasi*	Ret (engine)
20 June	Imola Grand Prix (159 miles)	L. Musso* B. Venezian*	3rd 9th
27 June	Supercortemaggiore Grand Prix (Monza, 626 miles)	J. M. Fangio/ O. Marimon (250S)* S. Mantovani/ L. Musso (250S)*	Ret Ret
24-5 July	Messina 10 Hours Night race	L. Musso/G. Musso*	Not classified (fuel leak)
1 August	Circuit of Calabria (439 miles)	L. Musso*	3rd (1st in class)
8 August	Circuit of Senigallia (87 miles)	L. Musso*	1st (96·58mph)

11 September	Tourist Trophy (Dundrod, 697 miles)	L. Musso/ S. Mantovani* L. Bellucci/ G. Scarlatti* C. Perdisa/ B. Musy*	3rd (1st in class) Ret (water pump) Disqualified
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## 300S

<i>1955</i>			
23 January	Buenos Aires 1,000 Kilometre race	Grandio/Faraoni	3rd (1st in class)
1 May	Mille Miglia (992 miles)	F. Giardini* L. Bellucci*	4th (1st in class) 9th (2nd in class)
8 May	Belgian Series Sports Car race (Spa, 175 miles)	B. Musy	1st (2,600cc class)
16 May	Bari Grand Prix (2,000cc, 138 miles)	C. Perdisa* G. Scarlatti*	1st (80·22mph) 3rd
22 May	Sardinia Trophy (249 miles)	G. Starrabbia	1st (89·10mph)
20 June	Imola Grand Prix (159 miles)	C. Perdisa*	1st (87·86mph)
17 September	Tourist Trophy (Dundrod, 623 miles)	A. Loens/J. Bonnier	18th (1st in class)
16 October	Targa Florio (Little Madonie, 581 miles)	F. Giardini/ A. Manzini G. Musso/Rossi	5th (1st in class) 6th (1st in class)

<i>1956</i>			
28-9 April	Mille Miglia (992 miles)	G. Scarlatti	13th (1st in class)
20 May	Sardinia Trophy (249 miles)	G. Scarlatti G. Olivari	1st (92·09mph) 2nd
10 June	Targa Florio (Little Madonie, 447 miles)	G. Scarlatti	5th (1st in class)

<i>1955</i>			
13 March	Dakar Grand Prix (228 miles)	J. Behra*	Ret (transmission)
13 March	Sebring 12 Hours race	W. Spear/ S. Johnston P. Valenzano/ C. Perdisa*	3rd 4th 3rd 4th
3 April	Tour of Sicily (671 miles)	V. Marzotto C. Perdisa*	Ret (engine)
1 May	Mille Miglia (992 miles)	J. Behra*	1st (82·02mph)
15 May	Bari Grand Prix (Lungomare, 172 miles)	L. Musso*	2nd
29 May	Supercortemaggiore Grand Prix (Monza, 626 miles)	J. Behra/L. Musso* R. Mieres/ C. Perdisa P. Valenzano/ F. Bordoni*	1st (109·92mph) 3rd Crashed
11-12 June	Le Mans 24 Hours race	J. Behra/L. Musso* R. Mieres/ C. Perdisa*	Ret (transmission) Ret (transmission)
26 June	Portuguese Grand Prix (Porto, 253 miles)	J. Behra*	1st (91·65mph)

23-4 July	Messina 10 Hours Night race	R. Mieres/ F. Bordoni*	4th
		L. Musso/ C. Perdisa*	Ret (engine)
24 July	Lisbon Grand Prix (Monsanto, 186 miles)	E. de Graffenried	2nd
7 August	Swedish Grand Prix (Kristianstad, 130 miles)	J. Behra*	4th
17 September	Tourist Trophy (Dundrod, 623 miles)	L. Musso/J. Behra/ F. Bordoni*	5th
		J. Behra/L. Musso*	Crashed
16 October	Targa Florio (Little Madonie, 581 miles)	L. Musso/ L. Villoresi*	Ret (rear axle)
6 November	Venezuelan Grand Prix (Caracas, 213 miles)	J. M. Fangio* L. Villoresi/ R. Mieres*	1st (81.71mph) 6th
		L. Musso*	Ret
<i>1956</i>			
29 January	Buenos Aires 1,000 Kilometre race	S. Moss/ C. Menditeguy*	1st (96.12mph)
		J. Behra/ J. F. Gonzalez*	3rd
26 February	Agadir Grand Prix (205 miles)	J. Behra*	Ret (steering)
11 March	Dakar Grand Prix (228 miles)	J. Behra*	3rd
24 March	Sebring 12 Hours race	J. Behra/ P. Taruffi* C. Menditeguy/ C. Perdisa*	5th Crashed
8 April	Tour of Sicily (671 miles)	P. Taruffi*	2nd
28-9 April	Mille Miglia (992 miles)	S. Moss/ D. Jenkinson (3.5 litre)* P. Taruffi* C. Perdisa*	Crashed Crashed Ret
20 May	Grand Prix des Frontières (Chimay, 149 miles)	B. Musy	1st (102.82mph)
27 May	Nürburgring 1,000 Kilometre race	P. Taruffi/H. Schell/ S. Moss/J. Behra* C. Perdisa/ R. Manzon*	1st (80.59mph) Ret (shock- absorber)
10 June	Targa Florio (Little Madonie, 447 miles)	S. Moss/J. Behra* P. Taruffi*	Ret (suspension) 2nd
10 June	Paris, 1,000 Kilometre race (Monthéry)	J. Behra/L. Rosier	1st (93.90mph)
17 June	Porto Grand Prix (207 miles)	B. Musy	3rd
8 July	Rouen Grand Prix (203 miles)	J. Behra* C. Perdisa*	3rd Ret (prop-shaft)
14 July	Silverstone race (73 miles)	S. Moss*	1st (93.94mph)
15 July	Les Sable d'Olonne Grand Prix (94 miles)	B. Musy	1st (59.49mph)
22 July	Bari Grand Prix (Lungomare, 124 miles)	S. Moss* P. Taruffi*	1st (81.77mph) 4th

12 August	Swedish Grand Prix (Kristianstad, 1,000 miles)	P. Taruffi* S. Moss/J. Behra* L. Villosesi/H. Schell/ S. Moss*	Crashed Ret (fire)
7 October	Coupe du Salon (Monthéry, 94 miles)	F. Godia-Sales	Ret (brakes) 1st (92.22mph)
21 October	Rome Grand Prix (Castelfusano, 1 hour)	J. Behra* H. Schell*	1st (103.10mph) 2nd
5 November	Venezuelan Grand Prix (Caracas, 213 miles)	S. Moss*	1st (84.25mph)
25 November	Australian Tourist Trophy (Albert Park, 100 miles)	S. Moss* J. Behra*	1st (94.63mph) 2nd
9 December	Nassau Tourist Trophy (210 miles)	S. Moss	1st (96.22mph)

#### 1957

20 January	Buenos Aires 1,000 Kilometre race	J. Behra/ C. Menditeguy/ S. Moss*	2nd
25 February	Cuban Grand Prix (Havana, 313 miles)	J. M. Fangio*	1st (98.36mph)
23 March	Sebring 12 Hours race	S. Moss/H. Schell* C. Shelby/ R. Salvadori*	2nd Disqualified
11-12 May	Mille Miglia (992 miles)	G. Scarlatti* H. Herrmann (V-12)*	4th Ret (engine)
26 May	Nürburgring 1,000 Kilometre race	F. Godia-Sales/ H. H. Gould/ S. Moss/ J. M. Fangio*	5th 1st (86.89mph)
9 June	Portuguese Grand Prix (Monsanto, 185 miles)	J. M. Fangio* C. Menditeguy*	3rd
22-3 June	Le Mans 24 Hours race	G. Scarlatti/ J. Bonnier*	Ret (clutch)
11 August	Swedish Grand Prix (Kristianstad, 6 hours)	G. Scarlatti/ J. Bonnier/ H. Schell/S. Moss*	3rd
3 November	Venezuelan Grand Prix (Caracas, 623 miles)	G. Scarlatti/ J. Bonnier*	Crashed

#### 1958

13 July	Villa Real Grand Prix (150 miles)	S. Moss* J. Behra* F. Godia-Sales	1st (84.73mph) 2nd 3rd
10 August	Cannon race (Ksrlskoga)	S. Moss	1st
16-17 August	Roskilde Ring race (six heats totalling 63 miles)	S. Moss	2nd

## 150S and 200S

#### 1955

28 August	Nürburgring 500 Kilometre race	J. Behra*	1st (77.11mph, 150S)
16 October	Targa Florio (Little Madonie, 581 miles)	G. Bracco/ F. Bordoni*	Crashed (200S)

<i>1956</i>			
29 January	Buenos Aires 1,000 Kilometre race	A. de Tomaso/ Tomasi	4th (1st in 1,500cc class, 150S)
8 April	Tour of Sicily	G. Musso*	Crashed (200S)
28-9 April	Mille Miglia	J. Behra*	20th (4th in 1,500cc class, 150S)
		L. Bellucci*	Ret (brakes, 200S)
27 May	Nürburgring 1,000 Kilometre race	A. Pilette/ F. Giardini*	Ret (carburation, 150S)
24 June	Supercortemaggiore Grand Prix (Monza, 621 miles)	S. Moss/ C. Perdisa*	2nd (200S)
22 July	Bari Grand Prix (2,000cc race, 93 miles)	J. Behra*	1st (78.19mph, 200S)
		C. Perdisa*	2nd
22 July	Bari Grand Prix (Unlimited race, 124 miles)	J. Behra*	2nd (200S)
		C. Perdisa*	3rd (200S)
5 August	Rheinland Cup (Nürburgring, 99 miles)	S. Moss*	2nd (150S)
		J. Behra*	6th (150S)
19 August	Pescara Grand Prix (224 miles)	P. Taruffi*	2nd (200S)
		J. Behra*	14th (200S)
21 October	Rome Grand Prix (Castelfusano, 1 hour)	J. Behra*	1st (103.10mph, 200S)
		H. Schell*	2nd (200S)
<i>1957</i>			
14 April	Tour of Sicily (671 miles)	G. Scarlatti*	3rd (200S)
11-12 May	Mille Miglia (992 miles)	F. Bordoni*	Ret (gearbox, 200S)
		L. Bellucci*	Ret (oil pipe, 200S)

## 450S

<i>1957</i>			
20 January	Buenos Aires 1,000 Kilometre race	J. M. Fangio/ S. Moss*	Ret (gearbox)
23 March	Sebring 12 Hours race	J. M. Fangio/ J. Behra*	1st (85.34mph)
11-12 May	Mille Miglia (992 miles)	S. Moss*	Ret (brake pedal)
26 May	Nürburgring 1,000 Kilometre race	J. M. Fangio/ H. Schell/S. Moss*	Ret (oil tank)
		S. Moss*	Ret (half-shaft)
22-3 June	Le Mans 24 Hours race	S. Moss/H. Schell*	Ret (seized u/j)
		J. Behra/A. Simon*	Ret (u/j failure)
11 August	Swedish Grand Prix (Kristianstad, 6 hours)	S. Moss/J. Behra*	1st (97.98mph)
		S. Moss/H. Schell*	Ret (oil seal failure)
3 November	Venezuelan Grand Prix (Caracas, 623 miles)	S. Moss*	Ret (accident)
		J. Behra/S. Moss/ H. Schell*	Ret (accident)

## 'Bird-cage' Cars (Type indicated in parentheses)

<i>1959</i>			
12 July	Coupe Delamare Deboutville (Rouen, 186 miles)	S. Moss (60)*	1st (95.19mph)

*1960*

28 February	Cuban Grand Prix (Havana, 162 miles)	S. Moss (61)	1st (79·46mph)
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22 May	Nürburgring 1,000 Kilometre race	S. Moss/ D. Gurney (61)	1st (82·77mph)
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*1961*

28 May	Nürburgring 1,000 Kilometre race	L. Casner/ M. Gregory (61)	1st (79·10mph)
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4 June	Rouen Grand Prix (aggregate of two 2 hour heats)	L. Casner (61)	1st (92·25mph)
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15 August	Pescara Four Hours race	M. Boffa (60)	3rd
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# Index

- Agadir, Circuit of: 1954, 170; 1956, 292  
Aintree '200' race: 1954, 202; 1956, 238; 1958, 278-9;  
1959, 285; '100' race, 1956, 244; *Daily Telegraph*  
Trophy, 1954, 213-14; 1955, 228  
Aitken, Hon. P., 111, 113, 117  
Aix-les-Bains Grand Prix: 1952, 181; 1953, 191  
Albi Grand Prix: 1933, 49; 1934, 59; 1935, 101; 1936,  
104; 1938, 116; 1939, 121; 1946, 126-7; 1947, 134;  
1948, 142; 1949, 147; 1950, 154; 1955, 223-4  
Alfa Romeo: *Racing cars*, P2, 17, 18, 19, 20, 21, 22,  
23, 24, 25, 26; *Tipo A*, 19, 35, 51; *8C-2300 Monza*,  
21, 27, 28, 30, 31, 32, 35, 36, 37, 38, 39, 40, 42,  
43, 44, 45, 46, 47, 48, 58, 62, 71; *Monoposto*, 19,  
37, 38-9, 40, 41, 42, 47, 48, 50, 51, 53, 54, 55, 57,  
58, 59, 61, 62, 63, 64, 69, 71, 72, 73, 74, 75, 77, 78,  
79, 81, 82, 83, 85, 86, 89; *Bi-Motore*, 73; *8C-35*,  
89, 90, 91, 92, 161; *8C-308*, 124, 125, 126, 131,  
137, 144, 151; *12C-312*, 115, 137; *Tipo 158*, 116,  
117, 118, 119, 120, 121, 122, 125, 126, 127, 128,  
129, 133, 134, 135, 136, 141, 142, 143, 144, 151,  
152, 153, 154, 186, 203; *Sports cars*, *6C-1500*, 17;  
*6C-1750*, 21, 22, 28; *Disco Volante*, 169, 186  
Alfieri, G., 258, 327, 330, 331, 338  
Algiers Grand Prix, 1934, 69  
Ambrosiana, Scuderia, 107, 113, 114, 133, 134, 135,  
136, 137, 138, 141, 142, 143, 144, 145, 152  
Amilcar cars, 25, 29, 34  
Ansell, G., 135, 138  
Arcangeli, L., 21, 22, 23, 24, 25, 28  
Argentine Grand Prix: 1953, 187; 1954, 199-200;  
1955, 217-18; 1956, 235-6; 1957, 260-1; 1958,  
277-8; 1960, 286  
Arzani-Volpini car, 220  
Ascari, A., 122, 134, 135, 136, 138, 141, 142, 143,  
144, 145, 146, 148, 149, 154, 164, 165, 181, 185,  
186, 187, 188, 189, 190, 191, 192, 193, 194, 195,  
204, 205, 206, 209, 210, 214, 215, 218, 219, 222,  
223, 290  
Ashmore, F., 134, 145, 146  
Aston Martin cars: *DB3S*, 169, 170, 174, 289, 291,  
294, 295, 296; *DBR1*, 266, 304, 322, 327, 331  
Austin cars, 111, 113, 115  
Australian Grand Prix: 1955, 231; 1956, 255-6; 1957,  
260  
Australian Tourist Trophy, 1956, 302  
Autodrome Grand Prix, 1952, 183  
Auto Union cars, 55, 57, 58, 60, 61, 63, 64, 66, 72, 73,  
74, 75, 76, 77, 78, 79, 80, 81, 83, 84, 89, 90, 91,  
92, 94, 95, 112  
Avellino, Circuit of: 1930, 24; 1932, 39  
Avusrennen: 1934, 55; 1935, 73, 74  
Avus Voiturette race, 1937, 108-9  
BRM cars, 155, 179, 184, 188, 201, 213, 214, 220,  
228, 230, 231, 234, 237, 238, 239, 240, 244, 247,  
249, 256, 266, 269, 270, 275, 276, 283, 284  
Balestrero, R., 16, 52, 78, 82  
Bandeirantes, Scuderia, 183, 184, 185, 186, 193  
Bandini, L., 335  
Barbieri, N., 100, 116, 121  
Bari Grand Prix: 1947, 134; 1950, 154; 1954, 202;  
1955, 173, 290; 1956, 295-6, 312  
Beauman, D., 214, 220  
Behra, J., 173, 181, 201, 202, 205, 217, 218, 219, 220,  
221, 222, 223, 224, 225, 226, 228, 229, 230, 234,  
235, 236, 237, 238, 240, 241, 244, 247, 248, 250,  
251, 252, 253, 254, 255, 256, 257, 260, 261, 262,  
263, 264, 265, 266, 267, 268, 269, 270, 272, 273,  
274, 275, 276, 277, 278, 285, 289, 290, 291, 292,  
294, 295, 296, 301, 302, 303, 305, 307, 308, 309,  
310, 311, 312, 313, 319, 320, 321, 322, 323, 324,  
325, 326  
Belgian Grand Prix: 1933, 45-6; 1935, 77; 1947, 134;  
1949, 146; 1953, 190; 1954, 202-3; 1955, 224-5;  
1956, 242; 1958, 281  
Bellucci, L., 171, 172, 173, 263, 309, 311, 314  
Benoist, R., 57, 60, 74  
Bentley cars, 28, 42  
Berne, Prix de: 1934, 63, 101; 1936, 107; 1937, 111-12;  
1938, 117; 1939, 122  
Bertocchi, G., 15, 100, 281, 282, 293, 325, 326, 330,  
342  
Bianco, E., 83, 102, 104, 107, 108, 110, 111, 115, 116,  
118  
Bianco, G., 184, 185, 186  
Biella, Circuit of: 1934, 101; 1935, 73, 102  
Biondetti, C., 21, 28, 29, 30, 45, 52, 55, 58, 63, 116,  
121, 122, 151, 154  
Bira (Prince Birabongse), 82, 89, 90, 103, 104, 107,  
108, 109, 110, 111, 112, 113, 116, 117, 120, 121,  
127, 128, 132, 133, 135, 136, 138, 141, 143, 144,  
145, 152, 153, 154, 155, 156, 161, 162, 188, 189,  
194, 195, 200, 202, 203, 204, 205, 206, 214, 215,  
217, 219, 220, 221, 222, 224  
Birkin, Sir H., 28, 29, 30, 31, 32, 42, 43, 52  
Bjornstad, E., 108, 109  
Boa Vista Grand Prix, 1957, 261-2  
Bologna Speed Trials, 1926, 16  
Bonetto, F., 49, 151, 153, 154, 155, 183, 184, 185, 186,  
187, 189, 190, 191, 192, 193, 194, 195  
Bonnier, J., 174, 260, 268, 269, 270, 271, 273, 275,  
278, 281, 283, 284, 301, 304, 305, 322, 324, 325,  
326, 330  
Bordeaux Grand Prix: 1953, 188; 1954, 202; 1955,  
220-1  
Bordino Grand Prix: 1929, 19; 1931, 27; 1934, 53-4  
Bordoni, F., 168, 169, 290, 291, 296, 308, 314  
Boreham races: 1951, 161; 1952, 181  
Borzacchini, B., 17, 19, 21, 22, 24, 25, 26, 28, 30, 35,  
39, 42, 43, 45, 46, 48, 49  
Bouriat, G., 21, 28  
Bracco, G., 164, 165, 308

- Brabham, J., 226, 227, 231, 238, 239, 248, 256, 262, 265, 267, 272, 277
- Brailhard, Ecurie, 56, 58, 65
- Brands Hatch races: 1955, 227; 1956, 255
- Bremgarten, Prix de, 1938, 117
- Brilli-Peri, Count G., 19, 21
- Bristol 450 cars, 171
- British Empire Trophy: 1934, 54; 1936, 81; 1947, 135; 1948, 138; 1949, 146; 1950, 153; 1954, 170; 1956, 292-3
- British Grand Prix: 1948, 143; 1949, 146; 1950, 153; 1952, 181, 184; 1953, 191-2; 1954, 205-6; 1955, 226; 1956, 248-50; 1957, 268; 1958, 283; 1959, 285
- Brivio, A., 46, 60, 62, 64, 66, 72, 78, 81, 83, 89, 91
- Brooke, L., 120, 126, 134, 142, 143, 145, 147
- Brooklands, Double-Twelve race: 1931, 27-8; August Bank Holiday meeting, 1931, 32; Mountain Championship, 1934, 66
- Brooks, C. A. S., 231, 232, 238, 239, 240, 244, 249, 250, 262, 264, 265, 269, 271, 273, 276, 304, 305, 322, 323, 325
- Brunet, R., 56, 65, 71, 77
- Bueb, I., 262, 263, 264, 268, 269, 275, 289, 291, 320
- Buell, T., 281, 283, 284, 324, 327
- Buenos Aires 1,000km race: 1954, 169-70; 1955, 173; 1956, 292, 309; 1957, 302-3, 313, 320; 1960, 329
- Buenos Aires City Grand Prix: 1953, 187-8; 1954, 200; 1955, 218; 1956, 236-7; 1957, 261; 1958, 278; 1960, 286
- Bugatti cars: Type 35, 15, 16, 17, 18, 21, 22, 23, 24, 25, 26, 27, 31, 115; Type 51, 21, 27, 28, 30, 31, 32, 36, 37, 39, 44, 46, 48, 53, 59, 64, 133; Type 54, 35, 36, 37, 38, 48; Type 59, 49, 51-2, 57, 60, 62, 63, 64, 65, 69, 75, 77, 78, 82, 85, 91, 92; Type 251, 247
- Burgaller, E., 25, 26, 58
- Cabianca, G., 175, 284, 286, 294, 309, 312
- Cadours, Circuit of: 1953, 194; 1954, 210-11
- Caen Grand Prix: 1955, 206; 1956, 252; 1957, 270; 1958, 283-4
- Cafisch, F., 22, 23, 25
- Calabria, Circuit of: 1954, 172
- Campari, G., 17, 22, 23, 24, 25, 28, 29, 30, 37, 39, 42, 44, 47
- Campbell, K., 278
- Camoradi team, 328, 329, 330, 331, 332
- Campione d'Italia race, 1937, 114
- Campos, B., 145, 147, 148
- Cantoni, H., 184, 185, 186
- Caracciola, R., 25, 31, 32, 34, 37, 38, 39, 49, 56, 58, 61, 64, 65, 72, 73, 74, 78, 80, 81, 89, 90, 94, 95, 112, 115, 117, 121
- Carini, P., 165, 170, 186, 194, 290
- Casablanca Grand Prix, 1934, 55
- Caserta, Circuit of: 1930, 22-3; 1953, 168
- Casner, L., 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338
- Castelbarco, Count L., 27, 37, 101, 109, 111
- Castellotti, E., 174, 218, 222, 223, 224, 225, 226, 229, 230, 235, 236, 237, 238, 239, 240, 241, 244, 247, 248, 249, 250, 251, 252, 253, 254, 261, 262, 289, 291, 292, 295, 304, 311, 320
- Castle Combe races, 1955, 230
- Centro-Sud, Scuderia, 235, 240, 250, 252, 258, 260, 262, 263, 265, 268, 270, 271, 273, 277, 278, 281, 283, 284, 285
- Chaboud, E., 124, 125, 126, 129, 132, 133
- Chambost, R., 69, 77, 79, 91
- Charterhall races, 1955, 227
- Chiron, L., 17, 18, 21, 23, 30, 31, 35, 37, 39, 44, 46, 49, 53, 54, 55, 57, 59, 60, 62, 63, 64, 69, 73, 75, 76, 77, 78, 79, 81, 83, 89, 124, 129, 132, 133, 134, 135, 136, 138, 142, 145, 148, 150, 151, 152, 153, 156, 180, 181, 188, 222, 240
- Claes, J., 187, 190, 225
- Collins, P. J., 184, 202, 213, 215, 220, 221, 222, 226, 228, 230, 236, 238, 239, 240, 241, 243, 244, 247, 248, 249, 250, 251, 252, 254, 255, 261, 262, 263, 264, 265, 266, 267, 269, 270, 271, 273, 275, 276, 289, 294, 301, 304, 310, 311, 322, 324, 325, 326
- Colombo, G., 119, 186, 197, 247, 323
- Colotti, V., 286
- Commings Grand Prix: 1933, 47; 1934, 63-4; 1935, 78-9; 1947, 135; 1948, 142; 1952, 181, 185
- Commings Voiturette race: 1931, 100; 1932, 100
- Comotti, G., 55, 63, 64, 79, 82, 115, 155
- Commission Sportive, Coupe de, 1939, 121
- Conelli, Count C., 15, 16, 22
- Connell, L., 110, 133, 134
- Connaught cars, 188, 189, 192, 194, 196, 214, 220, 221, 226, 227, 228, 230, 231, 232, 234, 235, 237, 238, 239, 241, 243, 244, 245, 249, 250, 253, 255, 262, 263, 264, 265
- Constantini, M., 15, 16
- Cook, H., 102, 111
- Cooper cars, 155, 170, 172, 188, 194, 207, 213, 214, 224, 226, 227, 228, 230, 231, 239, 241, 242, 244, 245, 251, 262, 264, 267, 269, 270, 272, 275, 276, 277, 278, 281, 283, 284, 285, 286, 292, 309, 310, 312, 313, 314, 335
- Coppa Acerbo: 1927, 17; 1928, 17; 1932, 39; 1933, 47, 100; 1934, 60-2; 1935, 79; 1938, 90; 1939, 121-2
- Coppa Acerbo Voiturette race: 1930, 99; 1933, 100; 1935, 102; 1936, 104-5; 1937, 111; 1938, 116-17
- Coppa Ciano: 1930, 24; 1931, 32; 1932, 39; 1933, 46; 1934, 58; 1935, 79; 1938, 94; 1939, 121
- Coppa Ciano Voiturette race: 1931, 100; 1933, 101; 1934, 101; 1936, 104; 1938, 116
- Coppa Michele Bianchi, 1935, 83
- Coronation Trophy, Crystal Palace, 1938, 115
- Cortese, F., 108, 109, 111, 112, 115, 116, 118, 120, 121, 122, 123, 124, 128, 129, 142, 149, 164
- Cotton, W., 111, 112
- Coupe Delamare Deboutville, Rouen, 1959, 328
- Cremona, Circuit of, 1929, 19
- Crespo, A., 185
- Crystal Palace Cup: 1937, 111; races, 1955, 227; 1956, 241
- Cuban Grand Prix: 1957, 303; 1960, 330
- Cunningham, B., 290, 330, 331, 332, 333, 334, 335, 337
- Cunningham-Reid, N., 304, 323
- Czaykowski, Count S., 31, 33, 37, 49
- Czechoslovakian Grand Prix: 1930, 26; 1931, 34; 1932, 39; 1935, 81
- DB cars, 172
- Daily Express Trophy race, Silverstone: 1949, 148-9; 1950, 155; 1951, 156-7; 1952, 181; 1953, 188; 1954, 201-2; 1955, 221-2; 1956, 239, 294; 1957, 275; 1958, 281
- Dakar Grand Prix, 1955, 289; 1956, 292
- Daponte, J., 156, 168, 200, 205, 208, 209
- da Silva Ramos, H., 225, 240, 248, 249, 285
- Davis, C., 275, 335
- Deauville Grand Prix, 1936, 91
- de Filippis, M. T., 278, 281, 284
- de Graffenried, Baron E., 108, 109, 111, 116, 117, 124, 125, 128, 129, 133, 134, 235, 136, 138, 141, 142, 145, 146, 147, 148, 149, 150, 152, 153, 154, 155, 169, 180, 181, 182, 188, 189, 190, 191, 192, 193, 194, 195, 201, 204, 214, 216, 222, 253, 255, 291, 308
- Delage cars, 104, 107, 126, 127, 128, 132, 161, 164
- Delahaye cars, 115, 124, 125, 126, 129, 130
- de Paolo, P., 54, 56
- de Portago, Marquis A., 171, 219, 220, 230, 247, 249, 250, 251, 252, 253, 261, 292, 295, 296, 302, 303, 310

- de Tomaso, A., 261, 309, 349  
de Villapadierna, Count, 58, 62, 70, 77, 100  
Diatto cars, 13, 14  
Dieppe Grand Prix: 1934, 59, 100; 1935, 75  
Divo, A., 17, 28, 30  
Dobson, Arthur, 109, 111, 112, 113, 115, 116, 118  
Dobson, Austin, 80, 81  
Dodson, C., 115  
Dolomite Gold Cup: 1948, 165; 1950, 165; 1955, 174  
Don, K., 32  
Donington Grand Prix: 1935, 80; 1937, 112; 1938, 94-5  
Drefus, R., 21, 26, 28, 30, 31, 32, 35, 36, 37, 46, 48, 49, 53, 57, 60, 62, 63, 69, 70, 74, 75, 77, 79, 81, 96, 107, 108, 110  
Duesenberg cars, 40, 48  
Dusio, P., 77, 80, 110  
Dutch Grand Prix: 1950, 154-5; 1952, 185; 1953, 189-90; 1955, 225-6; 1958, 281  
EMW cars, 308  
ERA cars, 65, 66, 76, 80, 89, 90, 91, 92, 101-17, 121, 126, 127, 128, 134, 135, 137, 138, 143, 146, 149, 152, 153, 155  
Eccles, A. H. L., 78  
Eifelrennen: 1934, 55-6; 1935, 72; 1936, 91; 1953, 189  
Eifelrennen Voiturette race: 1934, 101; 1935, 101; 1936, 104  
Embricos, N. S., 103, 104  
Emery, P., 241, 242  
Emeryson cars, 241, 314  
Etancelin, P., 24, 26, 31, 35, 36, 37, 44, 45, 46, 52, 53, 54, 56, 57, 58, 59, 62, 67, 68, 69, 70, 72, 74, 76, 77, 78, 89, 90, 91, 92, 123, 124, 147, 149, 150, 184  
European Grand Prix, Monza, 1928, 18  
Everitt, W., 82, 83, 114, 116  
Eyston, G., 27, 28, 29, 30, 34, 56  
Fagioli, G., 17  
Fagioli, L., 17, 22, 23, 24, 25, 28, 30, 31, 32, 35, 36, 37, 38, 39, 40, 42, 43, 44, 47, 48, 49, 56, 61, 63, 64, 65, 66, 72, 73, 74, 77, 78, 81, 83, 89, 90, 99, 127, 128, 129, 141, 152  
Fairfield, P., 89, 92, 102, 104, 109  
Fairman, J., 221, 226, 227, 230, 249, 250, 253, 255, 262, 269, 285  
Falchetto, B., 37, 56, 58, 65, 71  
Fangio, J. M., 137, 144, 145, 146, 147, 148, 152, 153, 154, 155, 165, 168, 169, 172, 173, 176, 183, 184, 187, 188, 189, 190, 191, 192, 193, 194, 195, 199, 200, 202, 203, 204, 205, 206, 207, 208, 209, 210, 214, 215, 216, 218, 222, 223, 224, 225, 226, 229, 234, 235, 236, 237, 238, 239, 240, 241, 243, 244, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 260, 261, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 276, 277, 278, 283, 289, 291, 292, 294, 302, 303, 304, 305, 308, 310, 311, 313, 320, 322, 324  
Farina, G., 66, 70, 73, 77, 79, 80, 81, 82, 84, 90, 91, 97, 101, 108, 115, 120, 121, 122, 125, 126, 137, 138, 141, 145, 146, 147, 148, 149, 150, 152, 153, 154, 155, 156, 161, 181, 188, 189, 190, 191, 192, 193, 194, 195, 200, 201, 202, 203, 218, 222, 310  
Featherstonhaugh, R. E. L., 52, 54, 59, 82, 83  
Ferrari: *Racing cars*, *Tipo 166*, 138, 149, 151, 154, 165, 183; *Tipo 125*, 142, 143, 144, 145, 146, 147, 148, 149; *Tipo 375*, 187, 260; *Tipo 375 'Thin Wall Special'*, 161, 188, 202, 213; *Tipo 500*, 180, 181, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 232; *Tipo 625*, 199, 201, 202, 203, 205, 206, 207, 208, 209, 214, 217, 218, 220, 222, 223, 226, 260, 263; *Tipo 553*, 194, 202, 203, 214, 215; *Tipo 555*, 222, 224, 225, 229, 235, 236, 260; *Tipo 801 (formerly Lancia D.50)*, 235, 236, 237, 238, 239, 240, 241, 243, 244, 247, 248, 249, 250, 251, 252, 253, 254, 255, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 277, 278; *Sports cars*, *Tipo 375 Plus*, 170, 171, 173; *Tipo 500 Mondial*, 170, 171, 172, 175, 308; *Tipo 750 Monza*, 172, 173, 260, 290, 295, 302; *Tipo 121*, 289, 290, 291; *Tipo 500 Testa Rossa*, 310-11, 312, 314; *Tipo 625 Testa Rossa*, 296; *Tipo 250 Testa Rossa*, 327, 329, 330, 331; *Tipo 250 Europa*, 313; *Dino* 246, 334-5  
Ferrari, Scuderia, 24, 25, 28, 30, 31, 39, 44, 45, 50, 53, 54, 57, 58, 59, 60, 63, 64, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 81, 82, 84, 92, 223, 225, 234, 243, 310  
Fitch, J., 228, 230, 332  
Flockhart, R., 213, 214, 249, 253, 255, 264, 266, 275, 301, 308  
Florence Grand Prix, 1937, 109-10  
Forêt, Grand Prix de, 1946, 125  
France, Grand Prix de: 1934, 65; 1949, 147-8  
French Grand Prix: 1931, 30; 1933, 44-5, 55; 1934, 56; 1935, 74; 1947, 136; 1948, 141-2; 1949, 148; 1950, 153; 1952, 181; 1953, 190-1; 1954, 204-5; 1956, 247-8; 1957, 266-7; 1958, 283; 1959, 285-6  
Frère, P., 222, 225, 243, 244, 289  
Frontières, Grand Prix des: 1947, 133; 1954, 202; 1956, 294  
Furmanik, G., 100, 101, 114  
Galvez, O., 137, 144, 187  
Gaze, A., 182, 217, 235  
Gendebien, O., 236, 247, 304, 310, 313, 314, 323, 329, 330  
Genoa Voiturette race, 1937, 113  
Gerard, F. R., 135, 138, 143, 146, 153, 155, 207, 213, 227, 228, 230, 231, 239, 241, 244, 245, 269  
Gérard, L., 128  
Gerini, G., 170, 235, 236, 238, 239, 253, 255, 283, 284, 285  
German Grand Prix: 1935, 77-8; 1936, 91; 1938, 116; 1939, 95; 1952, 184-5; 1953, 192-3; 1954, 206-7; 1956, 250-2; 1957, 270-1; 1958, 284  
Ghersi, P., 30, 35, 60, 61, 63, 78, 81, 83, 118  
Giardini, F., 173, 310  
Gilby Engineering, 169, 201, 202, 204, 235, 263  
Giletti, E., 168, 169, 170, 195  
Ginther, R., 329, 334, 335  
Giraud-Cabantous, Y., 135, 137, 182  
Girod, A., 71, 76  
Godia-Sales, F., 214, 215, 239, 240, 243, 247, 248, 250, 251, 252, 253, 254, 255, 258, 262, 263, 268, 270, 271, 272, 273, 274, 276, 277, 278, 283, 284, 295, 301, 302, 304, 322  
Gonzales, J. F., 151, 152, 153, 154, 155, 161, 165, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 200, 201, 202, 203, 204, 205, 207, 208, 209, 210, 214, 218, 235, 236, 249, 261, 278, 292  
Goodacre, C., 113  
Goodwood races: 1948, 143; 1950, 152, 155; 1951, 156, 161; 1953, 169, 188; 1954, 201, 213; 1955, 219, 220; 1956, 237; 1957, 263; 1958, 278; 1959, 285  
Gordini cars, 168, 169, 170, 181, 182, 184, 187, 188, 189, 192, 201, 202, 213, 217, 219, 221, 222, 224, 225, 226, 229, 231, 238, 239, 240, 241, 248, 251, 252, 253, 263, 310  
Gould, H. H., 172, 224, 225, 226, 227, 228, 229, 230, 231, 232, 238, 239, 240, 241, 247, 248, 250, 251, 252, 258, 260, 263, 264, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 277, 278  
Greene, S., 169  
Gregory, M., 261, 263, 264, 265, 268, 270, 271, 272, 273, 274, 275, 281, 282, 284, 285, 290, 291, 302, 304, 320, 324, 325, 329, 330, 331, 333, 336  
Grignard, G., 124, 125  
Grosvenor Grand Prix, 1938, 114

- Guastalla, Scuderia, 235, 251, 258  
 Guidotti, B., 22  
 Gurney, D., 329, 330
- HWM cars, 181, 182, 186, 189, 192, 194, 222  
 Hadley, H. L., 111  
 Halford, B., 238, 239, 244, 251, 252, 253, 255, 258, 262, 263, 268, 270, 271, 272, 273, 274, 275, 278, 281, 296  
 Hamilton, D., 172, 290, 291, 294  
 Hamilton, H. C., 52, 54, 55, 56, 58, 59, 60, 61, 63  
 Hampshire, D., 126, 127, 152, 153, 154  
 Hansgen, W., 329, 332, 335, 337  
 Hanson, R., 110, 111, 112, 113, 115, 117  
 Hartmann, L., 58, 76, 78, 79, 80, 104, 111, 112, 115  
 Hasse, R., 91, 112  
 Hawthorn, J. M., 172, 188, 189, 190, 191, 192, 193, 194, 195, 203, 205, 206, 207, 210, 213, 215, 221, 225, 226, 227, 229, 230, 235, 236, 237, 238, 239, 240, 242, 247, 248, 249, 261, 263, 264, 265, 266, 267, 268, 269, 270, 271, 273, 278, 283, 289, 290, 291, 304, 311, 312, 320, 322, 323, 324, 325  
 Henning, C., 95, 97  
 Herrmann, H., 168, 204, 209, 222, 262, 264, 270, 284, 285, 303, 304, 310, 322, 329, 330  
 Hill, G., 173, 332  
 Hill, P., 283, 290, 295, 324, 326, 329, 330, 331  
 Horn, T., 88, 89  
 Howe, Earl, 29, 32, 41, 52, 54, 55, 56, 59, 60, 63, 64, 82, 102, 103, 107, 114, 117  
 Hug, A., 109, 115, 116, 117, 118, 121  
 Hunt, R., 217, 231, 256
- Imola Grand Prix, 1954, 171  
 Imperial Trophy, Crystal Palace, 1937, 112-13  
 Indianapolis 500 Miles race: 1930, 24; 1939, 95; 1940, 96; 1941, 96; 1946, 96; 1947, 97; 1948, 97; 1949, 97; 1950, 97; 1951, 97  
 Interlagos Grand Prix, 1957, 305  
 Invercargill race, 1957, 260  
 Irish Grand Prix, 1931, 28-9  
 Isotta Fraschini cars, 12, 13, 14  
 Itala cars, 23, 29  
 Italian Grand Prix: 1925, 14; 1926, 16; 1931, 28; 1932, 37-8; 1933, 48-9; 1934, 63-5; 1935, 80-1; 1936, 92; 1938, 94; 1947, 135-6; 1948, 142; 1951, 161; 1952, 182, 185; 1953, 194-5; 1954, 209-10; 1955, 228-9; 1956, 252-5; 1957, 272-3; 1958, 284; 1959, 286
- JBW-Maserati car, 305  
 JCC 200 Miles race: 1937, 112; 1938, 117; 1939, 120  
 JCC International Trophy: 1933, 43; 1934, 54; 1936, 90; 1937, 110-11  
 Jaguar cars: *C-type*, 170, 172, 173, 187; *D-type*, 171, 204, 289, 290, 292, 294, 295, 296, 301, 302, 304, 320  
 Jano, V., 19, 27  
 Jersey International Road Race: 1947, 132-3; 1948, 137-8; 1949, 145; 1950, 154
- Karlskoga race, 1958, 305  
 Kautz, C., 102, 103, 104, 134, 141  
 Kavanagh, K., 277, 278, 281, 284, 285  
 Kling, K., 204, 207, 209, 210, 218, 224, 225, 226, 229
- La Baule Grand Prix, 1952, 181, 185  
 Lady Wigram Trophy: 1957, 260; 1958, 277  
 Lancia cars, 168, 169, 170, 193, 195, 204, 214, 215, 217, 218, 219, 222, 223, 224, 225, 229, 230  
 Landi, C., 134, 137, 169, 183, 185, 186, 193, 194, 236, 237  
 Lang, Hermann, 78, 80, 115, 121, 168, 187, 193, 207, 251  
 Lausanne Grand Prix: 1947, 136; 1949, 149  
 Lebègue, R., 96  
 Lehoux, M., 25, 26, 31, 36, 46, 48, 53, 55, 58, 59, 65, 69, 75, 76, 79, 81, 91, 102, 103
- Le Mans 24 Hours' race: 1954, 171; 1955, 225, 289, 291; 1956, 296, 312; 1957, 296-7, 304, 323; 1960, 331; 1961, 333-4; 1962, 337; 1963, 337; 1964, 338; 1965, 338  
 Levegh, P., 128, 130, 132, 134, 135, 136, 225, 291  
 Lewis, Hon. B., 29, 44, 52, 54, 80  
 Lewis-Evans, S., 263, 264, 265, 266, 272, 273  
 Ligier cars, 348-9  
 Lisbon Grand Prix: 1955, 291; Voiturette category, 1932, 100; 1933, 101  
 Lister-Maserati car, 175-6  
 London Grand Prix, Crystal Palace: 1937, 110; 1938, 115-16  
 Lorraine Grand Prix, 1935, 71  
 Lotus cars, 174, 175, 284, 309, 311-12, 314, 328  
 Louveau, H., 125, 126, 127, 130, 132, 135, 136, 150  
 Lucas, J., 276, 296  
 Lucca, Circuit of: 1935, 81-2; 1936, 107; 1937, 112  
 Lurani, Count J., 102, 107, 108, 110, 113, 114, 115, 116
- MG cars, 28, 29, 56, 61, 69, 100, 101, 110, 111, 114, 115  
 Maag, U., 58  
 Mackay Fraser, H., 266  
 Macklin, L., 181, 222, 226  
 Maclure, P., 109, 110, 113  
 Maggi, Count A., 16, 18, 22, 24, 26  
 Maglioli, U., 168, 170, 171, 174, 194, 208, 229, 230, 248, 250, 251, 253, 254, 290, 294, 295, 304, 311, 330  
 Mantovani, S., 168, 169, 171, 172, 175, 194, 201, 202, 203, 204, 217, 218, 219  
 Manzoni, R., 174, 187, 204, 221, 225, 226, 229, 231, 238, 240, 241, 248, 249, 251, 294, 313  
 Marazza, A., 110, 111, 113, 116, 118  
 Mar de Plata Grand Prix: 1948, 97, 137; 1949, 144; 1950, 151  
 Marlmon, O., 168, 172, 187, 190, 191, 192, 193, 194, 195, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 213, 214, 215  
 Marinoni, A., 57, 81  
 Marne Grand Prix: 1933, 45; 1934, 57; 1947, 134  
 Marseilles Grand Prix: 1932, 40; 1933, 48; 1946, 124-5; 1947, 133; 1952, 181  
 Martin, C. E. C., 82, 89, 91, 109, 111, 112, 113  
 Marzotto, P., 171, 289  
 Marzotto, V., 170, 290  
 Masaryk, Circuit of: 1934, 65-6; 1937, 112; 1949, 150  
 Masaryk, Circuit of, Voiturette race: 1932, 100; 1934, 101  
 Maserati, Alfieri, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 33, 40, 99  
 Maserati, Bindo, 11, 12, 13  
 Maserati, Carlo, 11, 12, 13  
 Maserati, Ernesto, 11, 13, 16, 17, 19, 22, 24, 25, 29, 30, 35, 40  
 Maserati, Ettore, 11, 13  
 Maserati, Mario, 11, 12  
 Maserati, Rudolfo, 11  
 Maserati cars: *8-cylinder Racing cars, Tipo 26*, 15-16, Plate 3; *Tipo 26B*, 16-17; *8C-1100*, 18, 99-100; *8C-1500*, 18, Plate 5; *8C-2500*, 20-1, 22, 23, 24, 25, 26, 27-8, 29, 30, 31, 32, 46, 47, 54, Plates 7 and 10; *8C-2800*, 32-40; *8C-3000*, 41-50, 52, 54, 125, Plate 12; *8CM-3000*, 41-50, 52-69, 70-83, 89, 90, 91, 92, 111, 112, 116, 120, Plate 12; *V-8R1*, 75-83, 84-92, Plate 15; *8CTF*, 93-8; *8CL*, 96-8, 130, 137, Plate 20; *8CLT/50*, 97; *Sedici Cilindri cars*, *V4*, 18-19, 20, 21, 24, 25, 29, 30, 37, Plates 6, 8 and 9; *V5*, 38-40, 51, 54, 60, 61; *Tipo 34 6-Cylinder car*, 64, 65, 66, 69, 70-83, 114; Plates 13 and 14; *4-Cylinder Racing cars, ACTR-1100*, 99-101; *4C-1100*, 99-100, 102; *4C-1500*, 100-4, Plate 17; *4C-2000*, 100; *4C-2500*, 83, 100, 101, Plate 16; *4CM*, 107-18; *4CL*, 119-22, 123-30,

# Maserati cars, cont.

- 131-6, Plates 22 and 23; *4CLT/48*, 137-43, 144-50, 151-61, Plates 21, 24 and 25; *6CM Voiturette*, 103-18, 122, 123, 124, 126, 138, Plates 18 and 19; *Formula Two cars*, *A6GCM*, 182-8, 189, 193, 194, 195, Plate 29; *A6SSG*, 186-96, 197, 199, 200, 201, 202, 203, 204, 205, 206, 208, 209, 214, 217, 239, 251, 308, Plates 28, 30, 31 and 32; *250F Grand Prix car*, 197-216, 217-33, 234-56, 257-76, 277-87, *Plates 33, 34, 35, 36, 37, 38, 39, 40, 41, 42 and 45; Eldorado-Maserati*, 282-3; *Sports cars*, *A6*, 162-3; *A6G*, 163; *A6GCS*, 163-76, 288, 291, 293, 295, Plate 27; *150S*, 251, 306-14; *200S*, 174, 308-14, Plates 44 and 48; *250S*, 170, 172, 288; *300S*, 288-305, Plates 47 and 49; *350S*, 293, Plate 46; *450S*, 257, 265, 301, 303, 304, 305, 315-26, Plate 50; *Tipo 60*, 327-8; *Tipo 61*, 328-32, Plate 51; *Tipo 63*, 332-5, Plate 52; *Tipo 64*, 334, 335, Plate 53; *Tipo 65*, 338, Plate 57; *Tipo 151*, 336-7, Plates 54, 55 and 56; *Touring cars*, *A6G 2000*, 339-40, Plate 58; *3500 GT*, 341, 343, Plates 59 and 61; *5000 GT*, 341-2, 343-4, Plate 60; *Mistrale*, 344-5; *Quattroporte*, 345, Plate 62; *Ghibli*, 345, Plate 63; *Simun*, 345; *Indy*, 346; *Bora*, 346-7; *Merak*, 347-8; *Khamzin*, 348; *Kyalami*, 349-50
- Massimino, A., 182, 197, 229  
Materassi, E., 15, 16, 18, 29  
Mathieson, T. A. S. O., 59, 125  
Mays, R., 65, 66, 74, 101, 102, 103, 109, 110, 111, 112, 113, 114, 117  
Mazaud, F., 123, 124, 125, 126  
McAlpine, K., 92, 221, 226  
Menditeguy, C., 218, 228, 235, 236, 240, 257, 260, 264, 265, 266, 267, 268, 269, 270, 277, 278, 292, 304  
Mercedes-Benz cars: *SSK*, 20; *SSKL*, 22, 23, 25, 29, 31, 32; *W.25*, 57, 58, 60, 61, 63, 64, 66, 72, 73, 74, 76, 77, 78, 80, 81, 83, 84, 89, 91; *W.125*, 112; *W.154*, 94, 95, 115, 116, 117, 156; *W.163*, 251; *W.165*, 121; *W.196*, 204, 205, 206, 207, 208, 209, 210, 214, 215, 217, 218, 222, 223, 224, 225, 226, 228, 229, 308; *300SLR*, 173, 174, 225, 289  
Messina 10 Hours' race: 1954, 172; 1955, 291  
Mieres, R., 201, 202, 203, 204, 205, 207, 208, 209, 214, 215, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 228, 229, 230, 235, 278, 290, 291, 292  
Milan Grand Prix: 1936, 104; 1937, 110; 1938, 117-18; 1946, 129  
Milano cars, 149, 150, 151, 152, 153, 154, 155, 156  
Milano, Scuderia, 96, 123, 124, 125, 129, 130, 131, 132, 133, 145, 152  
Mille Miglia race: 1930, 21-2; 1932, 100; 1933, 100; 1934, 101; 1935, 71; 1947, 163; 1948, 165; 1949, 165; 1953, 168; 1954, 170-1; 1955, 173; 1956, 174, 293-4, 308-9; 1957, 303-4, 314, 321-2  
Miller cars, 24, 42, 54, 114  
Minoia, F., 15, 16, 36  
Minozzi, G., 24, 25, 27, 28, 35, 39, 69  
Modena, Circuit of: 1934, 66; 1935, 79; 1936, 107; 1938, 118; 1947, 164  
Modena Grand Prix: 1952, 186; 1953, 195; 1957, 275  
Moll, G., 45, 49, 53, 54, 55, 57, 58, 60, 61  
Mombberger, A., 20, 55, 58, 63, 64  
Monaco Grand Prix: 1929, 19; 1930, 21; 1932, 36; 1933, 43; 1934, 52-3, 101; 1935, 71-2; 1936, 83-5; 1948, 138; 1950, 153; 1955, 222-3; 1956, 240-1; 1957, 264-5; 1958, 281  
Mont Ventoux Hill Climb: 1933, 49; 1934, 65  
Montreux Grand Prix, 1934, 56  
Monza Grand Prix: 1929, 19-20; 1930, 24-6; 1931, 35-6; 1932, 37-8; 1933, 49  
Monza 500 Miles race: 1957, 275-6; 1958, 284-5  
Moroccan Grand Prix: 1957, 275-6; 1958, 284-5  
Moss, S., 173, 194, 202, 203, 204, 205, 206, 207, 208, 209, 210, 213, 214, 215, 216, 217, 218, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 260, 261, 262, 264, 266, 269, 271, 272, 273, 274, 276, 278, 281, 282, 289, 291, 292, 293, 294, 295, 296, 301, 302, 303, 304, 305, 311, 312, 316, 319, 320, 321, 322, 323, 324, 325, 326, 328, 329, 330, 331, 332  
Müller, H., 95, 112  
Murray, D., 145, 147, 148, 150, 153, 154  
Musso, G., 308, 309  
Musso, L., 168, 169, 170, 171, 172, 175, 179, 194, 199, 200, 202, 208, 209, 214, 215, 216, 217, 218, 219, 220, 221, 222, 224, 225, 226, 228, 229, 230, 231, 232, 234, 235, 236, 237, 238, 240, 243, 252, 254, 255, 261, 263, 266, 267, 268, 269, 270, 271, 272, 273, 275, 278, 289, 290, 291, 292, 294, 304, 320, 326  
Musy, B., 171, 172, 291, 292, 293, 294, 295, 296, 301, 302, 308, 309, 312, 313  
Nantes Grand Prix, 1946, 128  
Naples, Circuit of: 1934, 66; 1936, 108; 1938, 118; 1939, 121; 1948, 165; 1950, 165  
Naples Grand Prix: 1952, 171; 1953, 188; 1954, 222; 1956, 239-40; 1957, 263  
Nassau Trophy: 1956, 302; 1961, 335  
Nations, Grand Prix des: 1946, 127-8; 1948, 138; 1950, 155  
New Zealand Grand Prix: 1955, 217; 1956, 235; 1957, 260; 1958, 277; 1960, 286  
Nice Grand Prix: 1933, 46-7, 100; 1934, 62; 1935, 79-80; 1946, 123-4; 1947, 134  
Nimes Grand Prix: 1935, 37; 1947, 133  
Norwegian Grand Prix, 1935, 70  
Nuffield Trophy race, 1937, 109  
Nürburgring Voiturette race, 1932, 100  
Nürburgring 1,000km race: 1953, 168; 1956, 294, 310; 1957, 304, 322-3; 1960, 330-1; 1961, 333; 1962, 335-6  
Nürburgring 500km race, 1955, 307-8  
Nürburgring 1500cc Sports Car race, 1956, 312-13  
Nuvolari, T., 17, 18, 20, 22, 23, 24, 25, 27, 28, 31, 32, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 69, 71, 72, 73, 75, 79, 81, 82, 83, 85, 87, 88, 90, 91, 123, 124, 125, 126, 127, 128, 129, 134, 142  
OM cars, 15, 22, 23, 24  
Orsi, A., 93, 257  
Orsi, O., 93, 179, 206, 207, 257  
Osca cars, 156, 161, 165, 174, 175, 188, 192, 290, 294, 306, 311, 312, 313  
Oulton Park Gold Cup race: 1954, 207-8; 1955, 230  
Pagani, N., 132, 133, 137, 142, 146, 152, 154, 181, 183, 188  
Paris Grand Prix, 1951, 161  
Paris 1,000km race, 1956, 295, 310  
Parnell, R., 110, 126, 127, 130, 133, 135, 136, 138, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 161, 169, 174, 202, 207, 228, 230, 237, 238, 241, 260, 294  
Parravano, A., 308, 320  
Pau Grand Prix: 1935, 70-1; 1936, 82-3; 1938, 115; 1947, 132; 1948, 137; 1949, 145; 1950, 152; 1952, 181; 1953, 188; 1954, 201; 1955, 219; 1957, 262-3  
Penya Rhin Grand Prix: 1934, 56; 1935, 74-5; 1946, 96; 1948, 143; 1950, 155  
Perdisa, C., 171, 172, 173, 219, 222, 223, 225, 226, 234, 240, 241, 242, 244, 247, 248, 250, 251, 253, 261, 290, 291, 292, 294, 295, 296, 304, 311, 312, 320

Peron Cup races: 1948, 97, 137; 1949, 144; 1950, 151; 1951, 156  
 Perpignan Grand Prix: 1946, 126; 1947, 132  
 Perugia Cup race, 1953, 168  
 Pescara Grand Prix: 1954, 208; 1956, 313; 1957, 271-2  
 Pescara 12 Hours' race, 1953, 168  
 Pescara Four Hours' race, 1961, 333-4  
 Petites Cylindrées, Coupe de, 1948, 165  
 Peugeot cars, 26  
 Phoenix Park 1500cc race, 1937, 112  
 Piacenza, Circuit of, 1947, 163  
 Pian, A., 152, 153, 156  
 Picardy Grand Prix: 1934, 56; 1937, 110; 1939, 121  
 Pietsch, P., 78, 81, 95, 116, 117, 156, 185, 193  
 Pilette, A., 213, 240, 243, 251, 310, 331  
 Pintacuda, C., 71, 77, 81, 82, 86, 88, 120, 121  
 Piotti, L., 231, 232, 234, 235, 237, 242, 248, 251, 253, 255, 258, 260, 261, 262, 263, 264, 268, 270, 271, 272, 273, 274, 295, 304, 316  
 Platé, E., 109, 116, 124, 125, 126, 133, 145, 152, 154, 155, 156, 180, 181, 182, 188, 200  
 Platé-Maserati cars, 180-1  
 Pollet, J., 202, 225, 231  
 Poore, D., 161, 291  
 Porsche cars, 294, 306, 308, 310, 312, 330, 335  
 Porto Grand Prix, 1956, 295  
 Porto City Cup race, 1956, 310  
 Portuguese Grand Prix: 1954, 172; 1955, 174, 291; 1957, 304; 1958, 284  
 Pozzo, Circuit of, 1928, 17  
 Premoli, L., 37, 38, 99  
 Prince Rainier Cup, Monaco, 1936, 102  
  
 RAC International Trophy, 1937, 109  
 Railton, R., 52  
 Railton-Terraplane car, 69  
 Ramparts, Grand Prix des, 1950, 165  
 Ramponi, G., 27, 29, 52  
 Rand Grand Prix, 1938, 114  
 Raph, G., 79, 115, 126, 127, 128, 130, 137  
 Rees, N., 52  
 Reims Grand Prix: 1952, 181; 1957, 267-8  
 Reims 12 Hours' race: 1954, 172; 1956, 295  
 Riganti, R., 96  
 Righetti, R., 165  
 Riley cars, 109, 110, 113, 114  
 Rio de Janeiro Grand Prix: 1952, 183; 1953, 169; 1957, 395  
 Rocco, G., 110, 111, 112, 114, 115  
 Rol, F., 97, 149, 152, 153, 161, 185, 186  
 Rolt, A. P. R., 117, 142, 161, 181, 188, 220, 226  
 Rome Grand Prix: 1930, 23; 1931, 29-30; 1932, 37; 1954, 202; 1956, 302, 313  
 Rosa, A., 23, 24  
 Rosario Grand Prix: 1947, 131; 1948, 137; 1949, 144  
 Rosemeyer, B., 78, 80, 81, 85, 86, 87, 88, 112  
 Rose-Richards, T., 59, 101  
 Rosier, L., 134, 143, 146, 147, 154, 156, 161, 182, 209, 213, 214, 215, 219, 220, 221, 222, 224, 225, 227, 230, 231, 232, 238, 239, 240, 242, 244, 247, 248, 252, 290, 295, 296, 313  
 Roskilde Ring race, 1958, 305  
 Rouen Grand Prix: 1952, 184; 1954, 205; 1956, 295  
 Rousillon, Grand Prix de, 1949, 145-6  
 Rovere, G., 70, 72, 79, 83, 102, 103, 104, 108, 110  
 Rubin, B., 42, 44  
 Ruesch, H., 49, 56, 58, 60, 62, 64, 69, 70, 74, 78, 104, 107  
 Ruggeri, A., 123, 124, 125, 126, 127, 128, 130, 132, 135, 152  
 Ruggeri, E., 30, 35, 36, 37, 38, 40, 100  
 Sables d'Olonne, Grand Prix des, 1952, 181, 184; Sports car race, 1956, 295  
 Saint Cloud Grand Prix, 1946, 125-6  
 Salon, Coupe de, 1956, 301-2, 313  
 Salon, Grand Prix de, 1946, 130  
 Salmson cars, 16, 17, 23, 25, 99  
 Salvadori, R., 169, 170, 188, 201, 202, 204, 206, 207, 213, 220, 221, 222, 226, 227, 228, 230, 231, 234, 237, 238, 239, 244, 245, 248, 249, 250, 251, 252, 253, 255, 263, 264, 267, 268, 270, 272, 275, 285, 295, 303, 312, 314, 331, 337  
 Sanesi, C., 128, 129, 133, 135, 141, 143  
 San Remo Grand Prix: 1937, 110; 1948, 138-9; 1949, 145; 1950, 153  
 San Sebastian Grand Prix, 1924, 14  
 Sao Paulo Grand Prix: 1948, 137; 1953, 169  
 Sardinia Trophy: 1955, 173; 1956, 174  
 Scarlatti, G., 171, 172, 173, 174, 175, 232, 261, 262, 264, 265, 266, 270, 271, 272, 274, 275, 276, 278, 281, 283, 285, 286, 303, 304, 314, 322, 324, 325, 331, 333  
 Schell, H., 124, 174, 180, 181, 182, 200, 201, 202, 204, 206, 208, 209, 213, 214, 215, 217, 218, 219, 222, 226, 227, 228, 230, 231, 247, 248, 249, 250, 252, 253, 254, 258, 260, 261, 262, 263, 265, 266, 267, 268, 270, 271, 272, 274, 275, 276, 277, 278, 285, 294, 296, 301, 302, 303, 304, 313, 320, 322, 323, 324, 325, 326  
 Schell, L., 95, 96  
 Scotti, P., 170, 238, 243  
 Scott-Brown, A., 175, 237, 238, 239, 244, 249, 253, 255, 263, 270, 277  
 Seaman, R., 63, 69, 89, 91, 101, 102, 104, 107, 116, 117  
 Sebring 12 Hours' race: 1953, 168; 1954, 170, 290; 1955, 290; 1956, 292; 1957, 303, 320; 1960, 330; 1961, 332; 1962, 335  
 Seidel, W., 281, 284  
 Senegal, Criterium of, 1954, 170  
 Senigallia, Circuit of, 1954, 172  
 Serafini, D., 135  
 Serenissima Repubblica di Venezia, Scuderia, 332, 335  
 Severi, F., 108, 111, 113, 114, 116, 121  
 Shaw, W., 95, 96, 98  
 Shelby, C., 231, 232, 283, 284, 285, 303, 330  
 Shelsley Walsh Hill Climb: 1933, 49; 1934, 56, 65  
 Sicilian Gold Cup race, 1953, 169  
 Sicily, Tour of: 1954, 170; 1955, 290; 1956, 292, 309; 1957, 313-14  
 Siena, E., 52, 53, 54, 72, 79, 81, 83, 110, 114, 115  
 Siena, Scuderia, 52, 53, 55  
 Silverstone Sports car race, July, 1956, 295  
 Simca-Gordini cars, 134, 136, 137, 144, 165  
 Simon, A., 165, 219, 220, 221, 222, 224, 226, 247, 252, 258, 264, 273, 274, 311, 323  
 Snetterton races: 1954, 202; 1955, 227-8; 1957, 270  
 Snowberger, R., 96, 97  
 Soffietti, G., 66, 69, 71, 72, 74, 79, 116  
 Sommer, R., 40, 42, 43, 45, 56, 57, 58, 59, 60, 62, 74, 76, 78, 79, 82, 89, 96, 117, 118, 121, 124, 125, 126, 132, 133, 134, 135, 136, 138, 142, 147, 154, 155, 164, 165  
 South African Grand Prix: 1934, 69; 1938, 114  
 Spanish Grand Prix: 1930, 26; 1933, 49; 1934, 65; 1935, 79; 1951, 161; 1954, 214-15  
 Speluzzi, M., 133, 149  
 Squadra Achille Varzi, 145  
 Staniland, C., 59, 89  
 Straight, M., 69  
 Straight, W., 43, 44, 45, 47, 49, 52, 53, 54, 55, 56, 57, 58, 59, 60, 62, 64, 65, 66, 69, 100, 101  
 Strasbourg Grand Prix, 1947, 135  
 Stuck, Hans, 31, 55, 57, 58, 60, 61, 63, 64, 65, 66, 90, 91  
 Subalpina, Scuderia, 70-83, 84, 101  
 Sunbeam cars, 32, 43

- Supercortemaggiore Grand Prix: 1953, 169; 1954, 172; 1955, 290-1; 1956, 175, 310-11
- Swedish Grand Prix: 1955, 291; 1956, 301; 1957, 304, 322
- Swedish Summer Grand Prix, 1949, 146
- Swiss Grand Prix: 1934, 62-3; 1935, 80; 1936, 91-2; 1939, 95; 1947, 133-4; 1948, 141; 1949, 146-7; 1950, 153; 1952, 181; 1953, 193-4; 1954, 208-9
- Syracuse Grand Prix: 1952, 181; 1953, 188; 1954, 201; 1955, 231-2; 1956, 237-8; 1957, 262; 1958, 278
- Tadini, M., 23, 53, 66, 71, 73, 77, 79, 81, 89
- Talbot cars, 18, 19, 20, 21, 24, 29, 116
- Talbot (Lago) cars, 124, 125, 126, 128, 130, 132, 133, 135, 136, 137, 138, 142, 143, 145, 146, 147, 148, 150, 154, 156, 161
- Talbot-Maserati cars, 296-7, 302
- Targa Florio race: 1925, 15; 1926, 15-16, 1927, 16-17; 1928, 17; 1929, 19; 1930, 22; 1931, 28; 1932, 37; 1937, 108; 1938, 115; 1939, 121; 1940, 122; 1953, 168; 1954, 171; 1955, 174, 291, 308; 1956, 174-5, 294; 1960, 330; 1961, 332-3; 1962, 335-6
- Taruffi, P., 37, 44, 47, 49, 53, 54, 101, 114, 115, 121, 142, 143, 149, 150, 151, 168, 170, 222, 226, 229, 247, 248, 253, 254, 262, 290, 292, 293, 294, 296, 304, 311, 312, 313
- Tec-Mec car, 285
- Tenni, A., 102, 103, 104, 107
- Titterington, D., 230, 238, 239, 249, 296
- Tongue, R., 104, 107, 108, 109, 110, 111, 122, 131-2
- Torino Scuderia, 84, 90, 91, 102
- Tourist Trophy: 1931, 32; 1954, 172; 1955, 174, 291
- Trintignant, M., 115, 170, 172, 181, 200, 201, 202, 203, 205, 206, 207, 214, 215, 218, 219, 220, 222, 223, 224, 225, 226, 229, 240, 243, 249, 253, 254, 263, 264, 266, 269, 276, 281, 296, 304, 323, 331, 332, 333, 337
- Tripoli Grand Prix: 1927, 16; 1929, 19; 1930, 21; 1933, 44; 1934, 54-5; 1936, 90-1; 1938, 94; 1939, 120-1; 1940, 122
- Tripoli Voiturette race: 1937, 108; 1938, 115
- Trois Villes, Circuit des, 1946, 96
- Trossi, Count F., 49, 53, 54, 55, 56, 57, 58, 59, 62, 84, 90, 91, 92, 94, 104, 107, 108, 110, 112, 113, 114, 120, 122, 127, 128, 129, 133, 134, 141, 143
- Tuffanelli, B., 60, 100
- Tunis Grand Prix: 1932, 36; 1933, 42; 1935, 72
- Turin Grand Prix: 1935, 77; 1946, 128-9; 1947, 164-5
- Turin, Circuit of, 1937, 107-8
- Ugolini, N., 200, 235, 281, 325
- Ulster Trophy, 1953, 189
- United States Grand Prix: 1959, 286; 1960, 286
- Vaccarella, N., 330, 332, 333, 335
- Valentino Grand Prix, Turin, 1955, 219
- Valenzano, P., 168, 173, 175, 289, 290
- Vanderbilt Cup race, 1936, 92
- Vandervell, A. G., 161, 225, 238, 239, 257
- Vanwall cars, 213, 214, 215, 221, 222, 225, 226, 227, 228, 229, 230, 234, 238, 239, 240, 243, 244, 247, 248, 249, 250, 253, 254, 257, 262, 264, 265, 266, 268, 269, 270, 271, 272, 273, 274, 276, 281, 283
- Varzi, A., 18, 19, 20, 22, 24, 25, 26, 29, 30, 31, 32, 34, 37, 38, 39, 43, 44, 46, 49, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 66, 69, 71, 72, 73, 78, 79, 80, 81, 83, 89, 90, 91, 110, 127, 128, 129, 131, 133, 134, 137, 141
- Venezian, B., 171
- Venezuelan Grand Prix: 1955, 292; 1956, 302; 1957, 304-5, 324-6
- Veyron, P., 59, 100, 103, 104
- Vichy Grand Prix, 1934, 58-9
- Vila Real race, 1958, 305
- Villapadierna, Scuderia, 75, 77
- Villoresi, E., 103, 116, 117, 118, 120, 121
- Villoresi, L., 95, 96, 97, 104, 108, 109, 110, 111, 112, 113, 114, 116, 117, 118, 120, 121, 122, 123, 124, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 141, 142, 143, 144, 145, 146, 147, 148, 149, 152, 153, 154, 156, 163, 164, 165, 175, 185, 188, 189, 190, 191, 192, 193, 194, 195, 204, 206, 209, 210, 214, 215, 218, 219, 222, 223, 229, 231, 235, 240, 242, 244, 247, 248, 250, 251, 252, 253, 288, 291, 292, 301, 302, 311
- Volonterio, O., 214, 222, 227, 231, 239, 251, 252, 258, 263, 268, 273, 274, 286
- von Brauchitsch, M., 36, 57, 58, 63, 64, 72, 74, 81, 83, 90, 112, 115, 116, 117
- von Delius, E., 78, 92
- von Frankenberg, R., 308, 310
- von Morgen, H. J., 23, 24, 26, 27, 37
- von, Trips, W., 253, 264, 265, 273, 274, 283
- Walters, P., 290
- Wakefield, J., 109, 111, 112, 114, 117, 121, 122
- Walker, P. D. C., 149, 225, 226, 227, 228, 230, 262, 291
- Walker, R. R. C., 226, 227, 228, 230, 237, 238, 241, 262, 264
- Wharton, K., 188, 201, 204, 208, 209, 213, 214, 215, 221, 222, 226, 227, 256, 260, 293, 295, 302
- Whitehead, A. G., 152, 294, 301
- Whitehead, P. N., 109, 112, 113, 127, 135, 148, 150, 154, 217, 235, 256, 260, 295, 301
- Wicken, G., 242, 262
- Williams, W., 21, 30, 31
- Wimille, J.-P., 45, 47, 53, 69, 75, 77, 89, 90, 91, 92, 125, 127, 128, 133, 136, 137, 141, 142, 143, 144, 146
- Zandvoort Grand Prix: 1948, 142; 1949, 148
- Zanelli, J., 25, 26, 91
- Zehender, G., 42, 43, 44, 45, 46, 47, 48, 50, 54, 57, 58, 59, 60, 62, 63, 64, 70, 72, 73, 74, 78, 79, 80, 94, 102, 296
- zu Leinigen, Prinz, 58, 63, 64

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