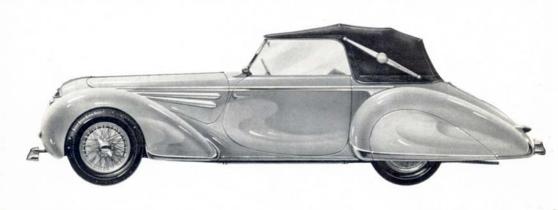
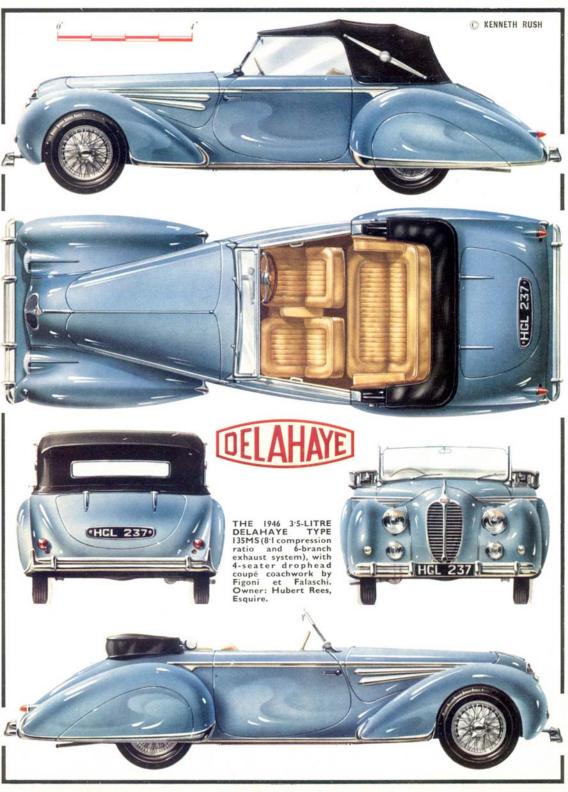
The 3·5-litre Delahaye Type 135



NUMBER 53

RETAIL PRICE
UNITED KINGDOM TWO SHILLINGS
UNITED STATES & CANADA CENTS

PROFILE PUBLICATIONS





Le Mans, 1939: the Competition type 135 driven by R. R. C. Walker and Ian Connell finished in 8th place at 78·338 m.p.h. Walker accelerating through Tertre Rouge. (Photo: R. R. C. Walker Collection by Louis Klemantaski)

Occasionally, rather superior people, by virtue of their ownership of one of the more aesthetic examples of the pre-war motor car, refer to the 4-5-litre Meadows engine which powered such desirable cars as the Invicta and Lagonda, as a rather 'agricultural' unit. Indeed, Ettore Bugatti once alleged that Monsieur Bentley designed very fast lorries. Similarly, it is quite often said that the engines which powered the Delahaye and the Lago-Talbot in France were of plebeian or industrial origin, being direct lineal descendants of their maker's lorry engines.

It may all be true—or at least have in it that substratum of truth which makes it acceptable as true but the fact remains that Anthony Lago used his engine in the years after the last war to show many modern Grand Prix machines exactly what the rear end of the Talbots looked like, and just before the great unpleasantness broke out, the Delahaye proved itself the fastest sporting motor car extant on the occasion of a rather unusual challenge at Brooklands. On that occasion also the word 'sporting' was quite loosely interpreted, one other competitor in the challenge being a 2.9-litre supercharged Alfa Romeo, a slightly de-tuned full Grand Prix racing car. Despite this, the 3.5-litre Delahaye which R. R. C. Walker had recently bought from Count Heyden of Delahayes, driven by Arthur Dobson, was successful in the face of fierce opposition in the shape of Ian Connell's 4-litre Darracq, and Hunter's Alfa Romeo.

As a competitor in international racing on the major circuits of Europe immediately preceding the war, the Delahaye's prowess was never to be taken lightly.

Many motorists today, if they know of the Delahaye at all, think of it as a fairly fast French luxury car which came to the fore for a brief while after the firm merged with Delage in 1935. In fact the name Delahaye goes back as far in time as the history of the motor car.

THE VETERAN AND EDWARDIAN DAYS

Like Henry Royce, Walter Bentley and Marc Birkigt, Emile Delahaye was originally a railway engineer, designing rolling stock for the French and Belgian railroads. Like at least two of those three contemporaries he realised that the internal combustion engine was going to be a major factor in the shaping of the future, at a time when few people took it at all seriously, though how 'major' he couldn't possibly then have realised.

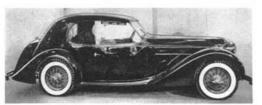
Accordingly, he abandoned the railroads and produced his first motor car in 1895, a car similar in concept to those being produced by Otto Daimler in Germany. They were entered in the 1000 miles Marseilles-Paris race and acquitted themselves with honour. If they had no other claim to a place in history they must be noteworthy as one of the first cars to compete in long-distance races on pneumatic tyres.

In 1897, a short two years later, the old Touraine pottery machine shop, which had watched over the accouchement of this product of a new age and industry, was forsaken, and Delahaye moved from Tours to Paris. It was in the capital that the eyes of France would best be attracted. Close to the Place d'Italie Delahayes remained for rather more than the next half century, and it was there that Delahaye and his associates, Desmarais and Morane, brought Charles Weiffenbach, whose influence was to mould Delahaye policy until the name passed into the byways of motoring memories.

The two-cylinder cars of the last years of the nineteenth century—and they were produced in very



Mrs Rob Walker with her husband's 3:2-litre 1937 'Coupe des Alpes'. Body (probably) by the Carlon Carriage Co. (Photo: R. R. C. Walker Collection)



An unusual 2-door saloon-coupé on the Delahaye 135 chassis at the 1938 Paris Salon. 'Vutotal' coachwork by Henri Labourdette et Cie. (Photo: Autoca)

considerable numbers—gave way to larger fourcylinder cars in 1903, and with their passing Delahaye himself faded from the scene. The challenge of the twentieth century was to be met by Desmarais, Morane and, increasingly, by Charles Weiffenbach.

As the years passed the cars evolved but slowly and conservatively, with the occasional flash of genius which was never too deeply subinerged in the earlier years.

In 1907 came a shaft-driven car as an alternative to the then more normal chain drive. Five years later—and quite a long time before Lancia and Ford thought of the idea—came a V-6-cylinder engined car, with the cylinders arranged in a 30°V. This was the Type 44, a contemporary of the type 32, whose engine was also used to power the light lorries of the French Civil Service. The original basis of 'Truth' must out!

During the first World War Delahaye built thousands of lorries for the Ministry of War, the most famous being the type 59; and of such stamina were these aged warriors they could still be seen carrying fantastic loads across the plains of France even after the end of the second World War. But though lorries loom large in the Delahaye story, at this time the firm's activities spread in a catholic way over aircraft components, gun parts, mass-produced rifles in vast quantities and a wide variety of stationary engines for war purposes.

THE VINTAGE PERIOD

The waves of post-war progress in the design and evolution of the motor car, engendered by the great advances in the techniques of metallurgy and the development of the internal combustion engine fomented by the pressures of war, seem to have washed over the Place d'Italie, receded, and left little mark. Unlike Bugatti, Hispano, Delage and Isotta-Fraschini

who startled the world markets in 1919 with their advanced new designs, Delahaye resumed the manufacture of passenger cars with what was, in effect, the 1914 type 64 car—a four-cylinder 16 h.p. model with an engine of 80×130 mm, bore and stroke.

Even in 1920, when the first really post-war series of Delahayes were announced—the types 82 and 84—they were uninspiring, though solid and reliable (and very dull) conservative means of transport, and remained the backbone of the company's ouptut until 1928. Yet these were years of rapid evolution elsewhere, seeing a change from the Edwardian concept of motoring to the age of elegance which—in the luxury car market at least—was to burst across the motoring firmament during the early and mid-1930s.

If the Delahaye approach to resurgence of design following the end of the first World War had been conservative, its attitude to the rapidly changing face of the motor car during the opening years of the third decade of the twentieth century was disastrous. During the Kaiser war the company had shown a catholic adaptability to the calls made upon it. Now it appeared to have fallen between the two stools of ultra-conservatism on the one hand and a frenetic attempt upon the other to meet the transient needs of the day with cheaplooking, nasty little motor cars with something of the transatlantic appeal, but really having the virtues of neither the old nor the new.

Perhaps the diverse interests of the company, now closely associated with Chenard et Walcker, helped it through this period—a period which was spelling disaster to many producers elsewhere of infinitely better motor cars than Delahaye. Whatever the reason, however, this final phase of an over-long period of complete lack of imagination was to prove the turning-point in the history of the House of Delahaye.

Perhaps the first intimation of the company's complete change in its approach to design which the motoring public were to receive was the introduction, for 1934, of a car utterly unlike any earlier Delahaye.



An elegant 4-door saloon by Latourneur et Marchand on the Delahaye type 135 chassis at the 1938 Paris Salon.

(Photo: Autocar)

Spoiled only by the wheels—a very handsome Henri Chapron coupé in ivory and black, on the 1939 type 135 Delahaye chassis. A similar car with fixed-head coachwork behind.

(Photo: Autocar)





Essence de Vitesse!: a sleek and attractive 2-seater coupé by Figoni et Falaschi on the 1937 Type 135 chassis.



THE 'SUPERLUXE'

This was the Delahaye 'Superluxe'. It came in three variants, one four-cylinder and two six-cylinder models all with the same engine dimensions of 80 × 107 mm. The chassis were completely modern with independent front suspension, a four-speed manual, or optional Cotal electro-magnetic gearbox and—for the first time in many years—coachwork with very considerable eye-appeal. The larger six-cylinder car was in effect the prototype of the later Delahaye 135.

It is problematic that, had his car appeared at the time it did, with no outside circumstances to influence its appeal to the luxury class of sporting motorist, it could unaided have captured enough of a fairly restricted market to have made its mark. I think it is fair to say that the merger of Delage with Delahaye in 1935 produced for the new company a ready market of buyers—perhaps already shrinking in numbers—but a market demanding performance coupled with comfort and elegance of a high degree, which could not satisfy its needs in the France of 1934 and 1935 except with the exorbitantly costly Hispanos or the new Bugatti type 57, and this was then just too new to have

been able to prove that a type 57 Bugatti was not necessarily a Bugatti racing car in evening dress.

And so it was that, almost within months of its appearance, the soignée silk-lined cloak of elegance, worn so gracefully by Delage for so long, fell upon the waiting shoulders of the 135 Delahaye.

THE TYPE 135

To introduce the new cars to an entirely new buying public, one of the larger six-cylinder Superluxe cars fitted with a streamlined body was sent to Montlhéry near Paris. It broke eighteen world and international class records. A little later it won the Alpine Cup, and gave one variant of the model its new type name, the Type 'Coupe-des-Alpes'.

Initially Count Heyden, and later Selbornes of Park Street, Mayfair, in London, were the English concessionaires of the Delahaye. An excellent sales campaign and intriguing model names, such as 'Competition type 135' and 'Coupe-des-Alpes', brought the cars to the notice of the sporting motoring public, and their performance and impeccable manners did the rest so far as England was concerned.



Sisters under the skin: the Dreyfus/Stoffel Delahaye type 135 chases Gérard's 3-litre Delage at Le Mans in 1937. The cars finished 3rd and 4th respectively. (Photo: Motor)

During 1935 the design was overhauled in the light of trials and racing experience, and in this year also the vast fund of experience which Delage had gained in these fields was made available to Delahaye as a result of the industrial merger of the two companies.

If the extraordinarily high degree of engineering quality manifest in earlier Delage motor cars was not to be found in the new Delahaye, there was more than enough of it present to stand competition from any contemporary French competitor, with the reasonable exception of Hispano-Suiza, who in any event were not —at least from the point of view of cost—really competitors in the same market.

By 1936 the outline pattern of the tapestry of future events was clear to see, and that section of the European motoring public whose interests were focused on fast and luxurious motor cars were looking hard at the new Delahaves.

There were two models available, and one of them, the 3.5-litre car, now of 84×107 mm. bore and stroke, was to remain, with not very significant changes, the backbone of the Delahaye programme until production ceased upon the German occupation of France in 1940.

Both cars embodied basically the same engine, in

different stages of tune, one being of 3.2 litres capacity (80 \times 107 mm.) and the Competition 135 of 3.5 litres (84 \times 107 mm.). It was a six-cylinder unit of monobloc construction, with two push-rod-operated overhead valves per cylinder in a detachable head. The 3.2-litre chassis (Coupe-des-Alpes) developed some 120 b.h.p. and the 'competition' chassis 160 b.h.p. at 4,200 r.p.m., and gave a facile maximum speed of 115 m.p.h. A very stiff crankshaft was carried in four main bearings, but despite this the motor was surprisingly smooth and free from vibration throughout its entire speed range. There was an excellently designed induction system supplying the mixture to the cylinders by three carburettors.

Transmission was by a plate clutch and either a manual four-speed synchromesh box, or a Cotal electro-magnetic gearbox, and open propeller shaft to a rear axle with a final drive ratio—as standard—of 3.42 to 1.

A very firm eye was kept upon weight in every part of both these cars, and the chassis was a light but rigid box section frame sprung independently in front by transverse leaf springs and radius arms, and by semi-elliptics in the rear. Brakes were large diameter (14 in.) drums, mechanically operated. Total dry weight in

The reputation in the making: 1936 French Grand Prix, where the new type 135 finished 2nd, 3rd, 4th and 5th. Divo watches a Hudson burn out. (Photo: Motor)



coupé form of the Coupe-des-Alpes model was some 2,750 lb. and acceleration achieved as a result of the power-to-weight ratio from zero to 60 m.p.h. was fractionally over 13 seconds. Maximum speed was 100

m.p.h.

The manners of both cars at high speeds were, like those of most French cars of quality, above reproach, achieved by a combination of a very rigid chassis frame, excellent suspension and precise and sure steering with a very high geared ratio—for a fast touring car—of 13 turns, lock to lock.

Bodies of very considerable elegance were designed for both chassis by the best French coachbuilders: Chapron, Franay, Figoni et Falaschi, Letourneur et Marchand and Saoutchik, and in England by Carlton.

Gone were the days of the independent radiator poised precisely over the front axle. Indeed, the days of the front axle were almost past, but, until the outbreak of war at least, Delahayes were styled with long slender bonnets, with the Delahaye shield-shaped 'radiator' grille balanced in front of the suspension units and flanked in almost every case-no matter who built the bodies—by long low streamlined front wings completely divorced from the coachwork as such.

This was the age of the personal car, and the vast majority of Delahayes were fitted with low-slung fixed and drop-head coupé bodies featuring faired rear ends which continued the line of the elegant front wings. Wheels-almost invariably-were Rudge Whitworth with centre lock hubs secured by eared knock-on type

nuts. Wheel diameter was 17 inches.

When production of the cars was re-commenced after the war in 1946, Phillipe Charbonneaux designed coachwork produced by Delahaye themselves and introduced the new narrow grille for the 'radiator' motif. At this time there was a marked swing in coachwork design which strove to emulate the then almost universal transatlantic trend. This manifested itself in over-wide bodies extending partially over both front and rear wheels, with the consequent disappearance of 'wings' as such, and in the wide elliptical air intakes-with or without chromium teeth in frontnecessary to lighten the too solid masses of coachwork.

As a trend it was strenuously resisted by most of the

more famous coachbuilders and by 1949 the bodies on the 3.5- and 4.5-litre cars were almost indistinguishable from the very elegant examples of the immediate pre-1939 period.

With the succès-fou which attended the introduction of the 'Superluxe' models in 1934, Charles Weiffenbach realised that, with the complete reversal of appeal from the staid motor cars of the 1920s to his new models whose appeal lay in a finely balanced mélange of luxury and performance, the 'performance' aspect at least had to be proved before a knowledgeable buying public would take his cars to their hearts.

Initially, successes were gained by these models in the Alpine Trials, and on minor circuits such as Algiers and la Marne, and a 3-2-litre car driven by Michel Paris and Marcel Mongin finished 5th in the

Le Mans race in 1935.

They won the Monte Carlo Rally in 1937, and again in 1951, on the latter occasion with a 4.5-litre type 157

With the introduction of the 'Competition' model in 1936 Delahayes were entered in the French Grand Prix—run that year as a Sports Car race—and finished most impressively in 2nd, 3rd, 4th, and 5th places, yielding victory only to Ettore Bugatti.

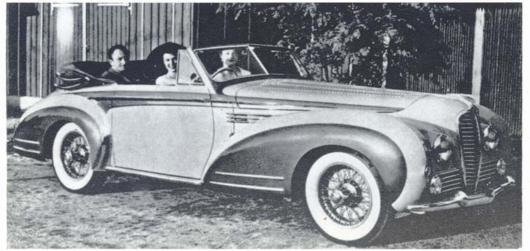
This defect, however, they were to avenge quite drastically the following year in the Prix-de-Million challenge at Montlhéry with the new 4.5-litre V-12-

cylinder car.

THE 4.5-LITRE V-12

Impressed by the success of his type 135, but realising its limitations in the international competition field, then dominated by the immensely powerful multicylinder German G.P. cars developing up to 600 b.h.p., Weiffenbach asked Jean François, his designer, during the late summer of 1936, to produce a really fast competition car, imposing only the stipulation that it should at the same time be a car capable, in slightly de-tuned form, of carrying the sumptuous coachwork with which the name Delahave had now become associated. Jean François roughed out the new design whilst on holiday, and by early 1937 the first three cars were

'For the first time in many years, coachwork with considerable eye-appeal . . .'-an early 'Coupe des Alpes' 3-2-litre Delahaye of 1935, with coachwork by Henri Chapron. (Photo: Gabriel)





1948 Coupé by the Dutch coachbuilder, Pennock, on the 135 chassis. Much of the grace of earlier years is gone. . . . (Photo: Hubert Rees)

ready for the circuits.

The car had a V-12-cylinder o.h.v. engine with dual magneto ignition and three Stromberg carburettors,

and produced upwards of 250 b.h.p.

In an attempt to inspire French manufacturers to produce a car capable of challenging with success the then domination of European racing by Germany, the French Government offered a prize of a million francs for the manufacturer producing a car capable of beating the best time established by the Germans on a 125-mile course at Montlhéry.

Entries had to be registered by 31st August 1937. Three makers submitted cars: Bugatti a supercharged straight-8 of 4·5-litres; the French Government's own sponsored, but short-lived S.E.F.A.C., and Delahaye

with the 4.5-litre V-12. Delahaye captured the million francs prize with a new record of 146.654 k.p.h. at the first attempt.

Not unnaturally this most impressive motor car was destined to eclipse the smaller six-cylinder type 135, particularly as the international formula for 1938 permitted unsupercharged cars of 4·5 litres to compete on the circuits with the 3-litre blown Grand Prix cars, but as yet the 135 still had very considerable fire.

THE TYPE 135 IN COMPETITION

1936 was to be the last year of the Tourist Trophy race on the Ards circuit at Newtownards in Ulster. It was banned following the many fatal accidents attending

The late J. G. Fry at Poole, 1939.

(Photo: Louis Klemantaski)





The 135 Competition Delahaye, bought by R. R. C. Walker from Count Heyden, driven by G. Jason-Henry at Goodwood.

(Photo: Guy Griffiths)

the Riley's crash that year, but before the curtain came down, Selbornes, the English concessionaires for Delahaye, entered a team of cars. Their luck of the Grand Prix de France failed them, due largely it is said to the fact that the drivers failed to take their practice for this most difficult circuit seriously, but Lebegue returned the fastest lap for the course on the day of the race and the lap record for the circuit at 85.52 m.p.h., and the Martin/Brunet car finished in 8th place.

The following year, 1937, this race was run on the new T.T. circuit at Donington Park, near Nottingham. A lone entry from Delahaye finished in 5th place driven by Marcel Mongin and Joseph Paul. At Le Mans the same two drivers finished in second place, improving on the 1935 average speed put up by the 3-2-litre car by 10 m.p.h., their average for the 1979 miles being 82-47 m.p.h., Dreyfus and Stoffel taking 3rd place at an 80-9 m.p.h. average.

Returning to Le Mans the following year, Delahaye finished impressively in 1st, 2nd, and 4th places, the winner's speed being fractionally slower than that of Mongin and Paul's previous year's second place. The winning car, driven by Chaboud and Tremoulet, averaged 82·35 m.p.h. for the 1976 miles covered in the twenty-four hours.

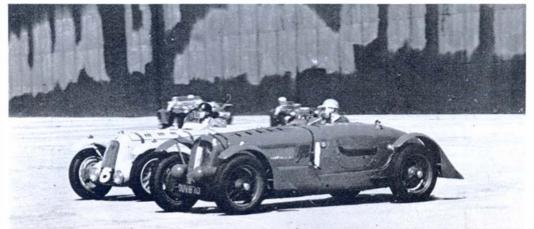
The type 135 as a competition car was now becoming a little long in the tooth, and was having to yield pride of place to the 4·5-litre V-12, but in 1939 it again finished at Le Mans in 6th, 8th and 11th places and set a new lap record at 96·7 m.p.h. Very surprisingly the same car, rising like the phoenix from the ashes of its former glory, ten years later in 1949 (when the larger V-12s had been laid aside as altogether too costly) the type 235 Delahaye, essentially the pre-war type 135 competing with designs fifteen years younger, such as Ferrari, ran again at Le Mans and finished very creditably in 5th, 9th and 10th places.

HIGH SPEED, ELEGANCE AND COMFORT

Reading of this successful competition record it might reasonably be assumed that the Delahaye 'Profile' was one portraying a lean and hungry racing machine, bred for international competition, and in which the only sort of driver who would be at home in the car would be the die-hard sporting driver to whom performance was all things.

Nothing could possibly be further from the truth. For every car seen parked on the concourses of the great circuit meetings, scores could be seen any day parked in the Rue de Rivoli, the Champs Elysées and around the Etoile district of Paris, or scattered in any

Arthur Dobson, in Rob Walker's Competition type 135, neck-and-neck with Ian Connell's 4-litre Darracq on the Brooklands' Mountain Circuit in the 1939 'Fastest Road Car Race', which he won. (Photo: Louis Klemantaski)





One of the last of the 135s; a 1950 Type 135M coupé by Figoni et Falaschi. (Photo: Hubert Rees)



A 1951 close-coupled coupé by Selborne, originally owned by Alexander Korda, the film director. (Photo: Hubert Rees)





Monte Victor: R. Lebegue's 'Competition' type 135 which won the 1937 Rallye Monte-Carlo. (Photo: Motor)

of the Mediterranean resorts. Surprisingly, one could park a car in Paris then.

Their coachwork was the quintessence of elegance. It did not have perhaps the restrained elegance of the earlier Delage and Hispano or the English Rolls, but it was neither 'phony nor flashy'. This phrase was one of the 'up-to-the-minute' interpretations of Figoni et Falaschi proffered by those super-elegant motor car salesmen in their casually smart suits and regimental or old school ties who, in the 1930s, inhabited the Great Portland Street and Warren Street districts of London.

The very appearance of the cars gave an immediate impression of high speed, but of high speed with a very high degree of comfort. No coachbuilder or manufacturer would dare to put such a body on to a car incapable of living up to its appearance. These bodies built by firms such as Franay, Chapron and other equally famous French coachbuilders did for the cars what Schiaparelli, Worth and Patou did for the cars' owners, for perhaps not too surprisingly, despite their impressive performance, a high proportion of Delahaye 135s were owned by women.

Looking back I would hesitate to say that the Frenchwoman of the 1930s was better dressed than her English or American counterpart, but unquestionably the approach to achieve the effect was completely different. Whe the couturières did for M'mselle

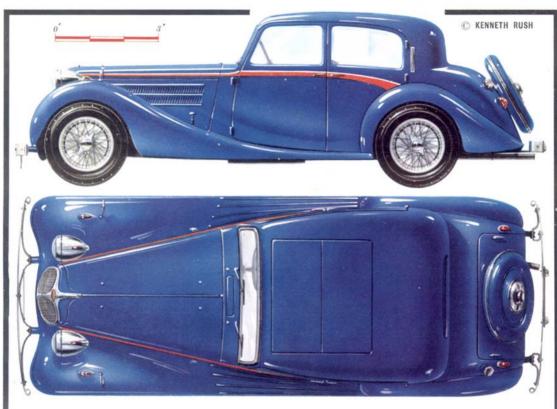
napron, Franay and their contemuries did for the Delahaye, and n the two were seen together—as were seen and almost invariably as ners—at the many *Concours* egance throughout Europe, they not lightly forgotten.

at times change, and by the early sthere was no place left in France's lomy—and few elsewhere in ppe—for the almost fabulous thaye type 175S, the then current itre car. Their cost and running ness priced them right out of narket.

eluctantly, Delahaye were now entrating more and more on their mercial vehicles (almost full e!) and on cross-country vehicles he French army.

/ 1952 the only car listed was the

Torquay Rally: Mrs Lace, of Invicta in an unusual 2-seater coupé. (Photo: Montagu Motor Museum)





OELAHAYE

THE 1938 3.5 LITRE DELA-HAYE TYPE 135M, with 4seater pillarless saloon coachwork by the Carlton Carriage Co. Ltd. Owner: Hubert Rees, Esquire.







Renaissance: the 1937 3.5-litre type 135 'Competition' Delahaye at Gransden in 1937.

(Photo: Louis Klemantaski)

type 235 Delahaye—essentially a 1938 type 135 with a Charbonneaux-styled factory-produced body, but still capable of putting 113 miles into the hour in saloon form at Montlhéry. The days of the individually built bodies of Figoni, Letourneur et Marchand, Franay (and of dresses by Worth and Schiaparelli) were fast becoming the stuff of dreams.

In 1954 Delahaye/Delage were acquired by Hotchkiss and very shortly afterwards the entire group were taken over by the Brandt complex and the name of Delahaye, Delage and Hotchkiss went to swell the ever-growing roll of famous names which had become memories.

Memories . . . perhaps, but cherished and notable memories!

O J. R. Buckley, 1967.

SPECIFICATION: DELAHAYE TYPE 135

ENGINE: Six-cylinder monobloc with detachable head. Two overhead valves per cylinder pushrod operated. Crankshaft of 2.5in, diameter carried in four main bearings.

Le Mans, 1939: the Marcel Contet/Robert Brunet type 135 closely pursued by Lord Selsdon in the 4·5-litre Lagonda V-12. (Photo: Motor)



Engine dimensions.
1934 'Superluxe' 80×107 mm. Capacity 3237 cc.
1936 'Coupe-des-Alpes' 80×107 mm. Capacity 3237 cc.
1936 'Competition' 135 84×107 mm. Capacity 3257 cc.
Developed H.P.

Type 135, 130 b.h.p. at 3850 r.p.m. Compression ratio: 7 to 1. Type 135 Competition, 160 b.h.p. at 4,200 r.p.m. Compression ratio: 8-2 to 1.

IGNITION: Single by coil and distributor. **CARBURATION:** 3 × downdraught Solex carburettors.

BRAKES: 4-wheel Bendix mechanical servo. CHASSIS: Box section chassis frame.

SUSPENSION: Front, independent by transverse leaf spring;. Rear, ½-elliptic.

GEARBOX: Cotal electromagnetic 4-speeds and reverse operated from miniature gate on steering column, or 4-speed and reverse synchromesh, to buyer's choice. Ratios: 3-42; 5-60; 7-60 and 11-82 to 1. Speeds on gears at 4,000 r.p.m. (Type 135): Top 100 m.p.h., 3rd 63 m.p.h., 2nd 47 m.p.h., low 29 m.p.h. CLUTCH: Single dry-plate.

REAR AXLE: Spiral bevel with 3.42 to 1 final ratio.

WHEELBASE: 9ft. 8in.

TRACK: Front 4ft. 7in. Rear 4ft. 10in.

GROUND CLEARANCE (chassis): 9in.

WHEELS: Wire wheels 17in. diameter with Rudge Whitworth centre lock hubs. Tyres. 17×6.00.

DRY WEIGHT (coupé): 2,750 lb.

French Grand Prix, 1937: Carriere's 'Competition' type 135 which finished 4th, one lap down. (Photo: Motor)



Printed in England © Profile Publications Ltd., P.O. Box 26, 1A, North Street, Leatherhead, Surrey, England by The Whitefriars Press Ltd., London & Tonbridge, England. U.S. 2nd Class Mailing Rates applied for. Profile Publications Ltd. is a member of the Norprint Division of the Norcors Group with world distribution network, retaining all rights in all languages. North American Import Agency rights delegated to J. W. C. Aeronautica, 7506 Clybourn Avenue, Sun Valley, California 91352; North American Distributive Agency rights vested in the National Aerospace Education Council, 616 Shoreham Building, 806 15th Street N.W., Washington D.C. 20005. Reproduction of, or any part of, this publication is expressly forbidden under the terms of International Copyright Law except as subject to written permission by the Managing Director, Profile Publications Ltd.