

Carri Collection 1986 Jaguar XK-SS



Autosiaeste

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LE MOT DU PRÉSIDENT

Il semble que la saison qui s'achève vient à peine de commencer. Les activités de cet été ont remporté un succès sans précédent et notre club s'est enrichi d'une quantité de nouveaux membres tous plus enthousiastes les uns que les autres, ce qui laisse présager que l'avenir du club sera encore plus beau et que la relève se prépare pour diriger les activités des années à venir.

Pour le long hiver qui s'amorce, nous essaierons de vous offrir des activités complémentaires, plutôt que d'attendre le printemps comme nous l'avons fait par le passé. Il a longtemps été suggéré que l'aspect technique de l'automobile n'était pas considéré assez souvent et c'est dans cet optique que je suggère qu'on organise des activités de ce genre cet hiver. André Raymond de Saint-Jérôme m'a déjà offert de donner un cours un samedi matin sur "tous les secrets des carburateurs S.U." et j'aimerais avoir l'appui d'autres membres pour organiser d'autres activités techniques. Nous pourrions organiser des conférences sur les lubrifiants et les carburants (qui a un bon tuyau?), l'utilisation des différents outils et leur disponibilité (quelqu'un connaît un représentant dans ce domaine?). Il existe sûrement une foule d'autres sujets qui pourraient être considérés. Il nous faut l'idée, un local approprié, un organisateur responsable et le tour est joué. On reproche souvent le manque de participation, voici une excellente opportunité de faire votre part. Si vous avez des suggestions, faites-en part le plus tôt possible à un membre du comité exécutif et nous ferons tout en notre pouvoir pour vous assister et mener cette tâche à bien.

L'hiver est la période idéale pour tous les petits travaux de restauration, les améliorations indispensables et nécessaires. Tous nous avons un intérêt commun, sachons tous ensemble améliorer nos connaissances et ainsi assurer la survie des européennes d'autrefois, une race qui devient de plus en plus précieuse et qui est, si j'ose dire, presque en voie d'extinction.

Le président,

Pierre-André Ouimet

G Y M K H A N A

Sunday the sixth of June was not a particularly nice day as far as the weather was concerned. Nonetheless, ten of our members showed up for the Gymkhana, held as usual in the Hewitt Equipment Limited parking lot on Trans Canada Highway in Pointe Claire. Another four members turned up as spectators in non-eligible cars.

Because of the uncertainty of the weather which continually threatened rain throughout the whole afternoon, the only event that could be run was the slalom. A tight course was laid out and each entrant was allowed two runs against the clock. The best times are recorded in the results given below.

As the slalom was winding up a light drizzle started so it was decided to call it a day. Most of the participants and spectators repaired to the Holyday Inn on St. Johns Road for a coffee or a beer.

In spite of the weather, all of those present enjoyed themselves and it is hoped that after two years in a row of bad weather for the Gymkhana, the 1983 event will be held under bright sunshine for a change!

This event was capably organized by Bill Smith.

G Y M K H A N A

JUNE 6, 1982

SLALOM RESULTS

<u>ENTRANT</u>	<u>C A R</u>	<u>BEST OF TWO TIMES</u>
1. Bob Shelso	MG-TD	42,4 sec.
2. P.A. Ouimet	Jaguar 340	46,8 "
3. Ron Cook	M.B. 250 SL	49,0 "
4. Léo Nobert	A.H. 3000	52,2 "
5. Gilles Desroches	Citroen 11 BL	52,6 "
6. Robert Neapole	Bentley 3,5L	54,2 "
7. Olivier Janeau	Jaguar XK 120	55,4 "
8. Roy Elliot	Austin Taxi	56,6 "
9. Michel Pouliot	A.H. 3000	59,0 "
10. Ed Richardson	MG D-Type	1'09,0 "

Attended non-eligible car

11. Richard Boudrias
12. Bill Smith (Organizer)
13. Bob McDonald
14. Phil Chartrand

COMMUNIQUÉ

En raison de la nature de sa constitution, notre club a toujours été considéré sur le plan juridique comme étant un groupement de personnes formé pour la poursuite du but commun que nous connaissons tous. Ce groupement, n'ayant aucune personnalité civile est régi par des principes de droit plus ou moins précis qui, entre autres, peuvent mettre en danger son existence. De plus, en l'absence d'une limitation de responsabilité, nous pourrions, en tant que membres, être tenus personnellement responsables des obligations financières ou autres de notre club.

Aux fins de donner un cadre juridique à notre club lui accordant par delà les privilèges de permanence, de limiter la responsabilité de ses membres et d'être régi par des principes assurant la bonne marche de son entreprise, nos administrateurs ont décidé récemment de constituer notre club en corporation.

Nous vous informons que des lettres patentes créant "Enthousiastes des Voitures Européennes d'Autrefois" (version anglaise "Vintage European Automobile Enthusiasts") nous seront accordées fin décembre 1982 sous l'empire de la IIIème partie de la Loi sur les compagnies (Québec), partie régissant les organismes à but non lucratif. En pratique, malgré son nouveau statut juridique, notre club sera régi par un code de règlements généraux, des critères d'adhésion et des normes administratives semblables en substance à ceux ayant prévalu dans le passé.

Lors de la prochaine assemblée annuelle, nos dirigeants nous fourniront toutes les informations à ce sujet.

Marc Bourgeois.

COMMUNIQUE

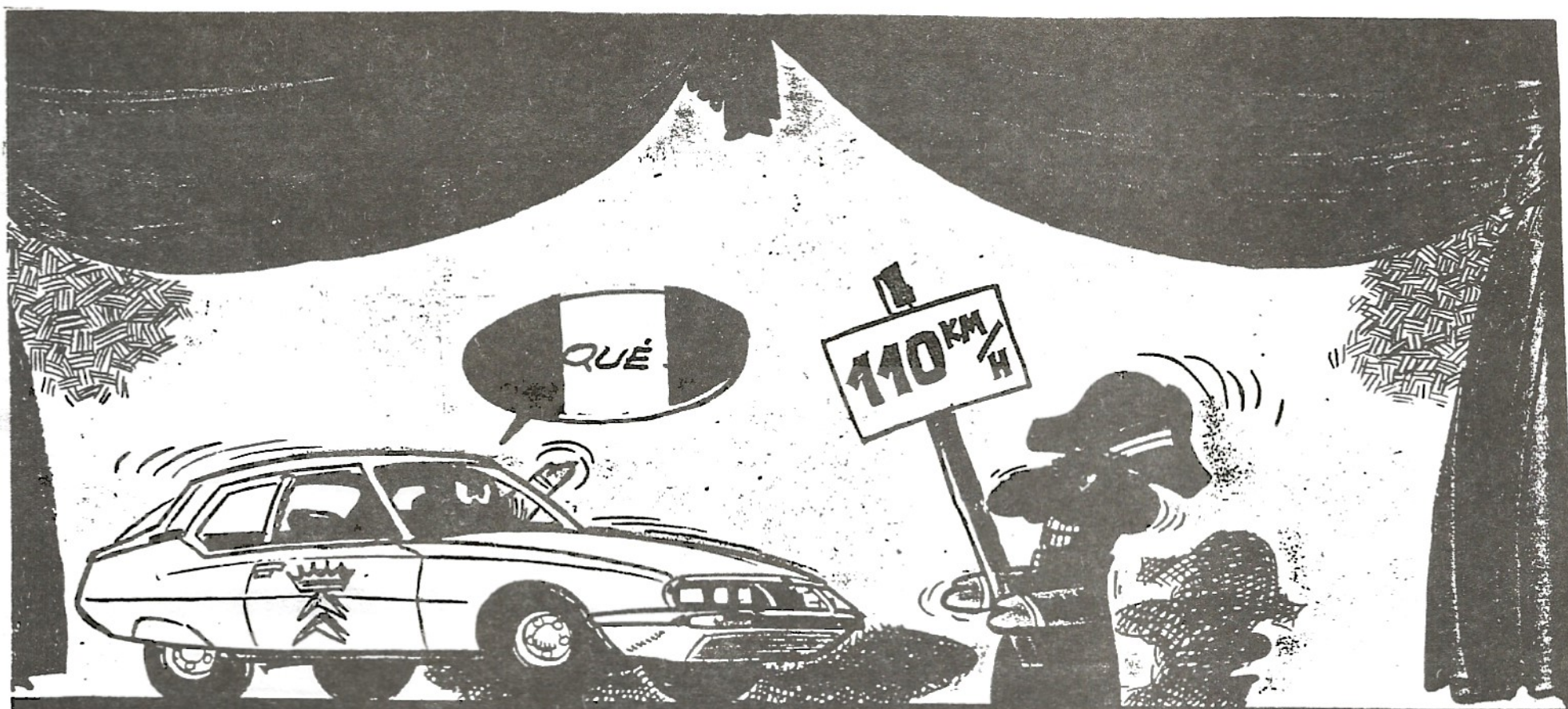
Due to the nature of our Club, from a legal point of view, it has always been considered to be a group of persons formed to pursue the common goal of which we are all aware. This group, not having legal status, is governed by principles of law which tend to be vague, and by reason of which, among other factors, may put the group's existence in danger. Furthermore, in the absence of limited liability, we could, as members, be held personally responsible for the financial or other obligations of the Club.

Our Directors recently decided to incorporate the Club with a view to giving it a legal status, thereby allowing the members the benefits of limited liability and allowing it to be governed within a framework permitting its proper functioning.

Letters Patent constituting "Vintage European Automobile Enthusiasts" ("Enthousiastes des Voitures Européennes d'Autrefois" in its French language version) under Part III of the Companies Act (Québec) governing non-profit organizations, shall be granted towards the end of December of this year. In practice, in spite of its new legal status, our Club shall be governed by a code of General By-Laws, membership criteria and administrative norms similar in substance to those in effect in the past.

At our next annual meeting, the Directors shall provide further information on the subject.

Marc Bourgeois



LA REINE DE FRANCE PARLE ITALIEN

Sa Majesté Citroën parle parisien avec l'accent savoureux de Maserati. Mais le pandore républicain veut lui couper la parole. Son crime ? Rouler exactement au double du 110 dictatorial décrété par les bureaucrates...



LA REVANCHE DES CAMELOTES.

Pauvre Citroën ! C'était bien la peine de se casser le cerveau pour imaginer la super-auto qui croise à 220 avec la désinvolture d'un Boeing stratosphérique...

La limitation de vitesse à 110 lui coupe les ailes. Et pour parcourir sans liberté les routes de la douce France, n'importe quelle camelote à châssis de prisunic fera toujours l'affaire !

Bien sûr, l'ukase ne réduira pas la clientèle des chirurgiens. On se cassera aussi bien la figure à 110, car il y aura toujours des andouilles maladroites et des colériques bilieux pour dépasser en haut de côte et brûler des stops. Il y aura toujours des routes-à-trous « casse-voiture » et des carrefours mal fichus... Mais pour se lisser la bonne conscience, les bureaucrates préfèrent flatter les petites pointures et ceux qui roulent dedans. C'est très populaire, non ? Tenez, moi, par exemple... J'ai un zinc qui fait 180. Eh bien, je suis partisan d'une limitation à 180. Histoire d'embêter tous ces sales veinards qui me dépassent en Ferrari. Na !

IL RESTE L'ART POUR L'ART.

Maigre consolation. C'est comme si on laissait les grosses têtes de la NASA bricoler leurs fusées tout en leur interdisant d'aller sur la Lune...

Et Dieu sait si les ingénieurs Citroën ont carburé pour décrocher la Lune ! Je vous ai déjà chanté les louanges

de cette royale traction-avant qu'est la SM, de sa suspension inégale, de son extraordinaire direction à servo-assistance « pensante », de ses six phares œil de lynx, de sa coque cogitée comme le Concorde. Tout dans le genre génial !

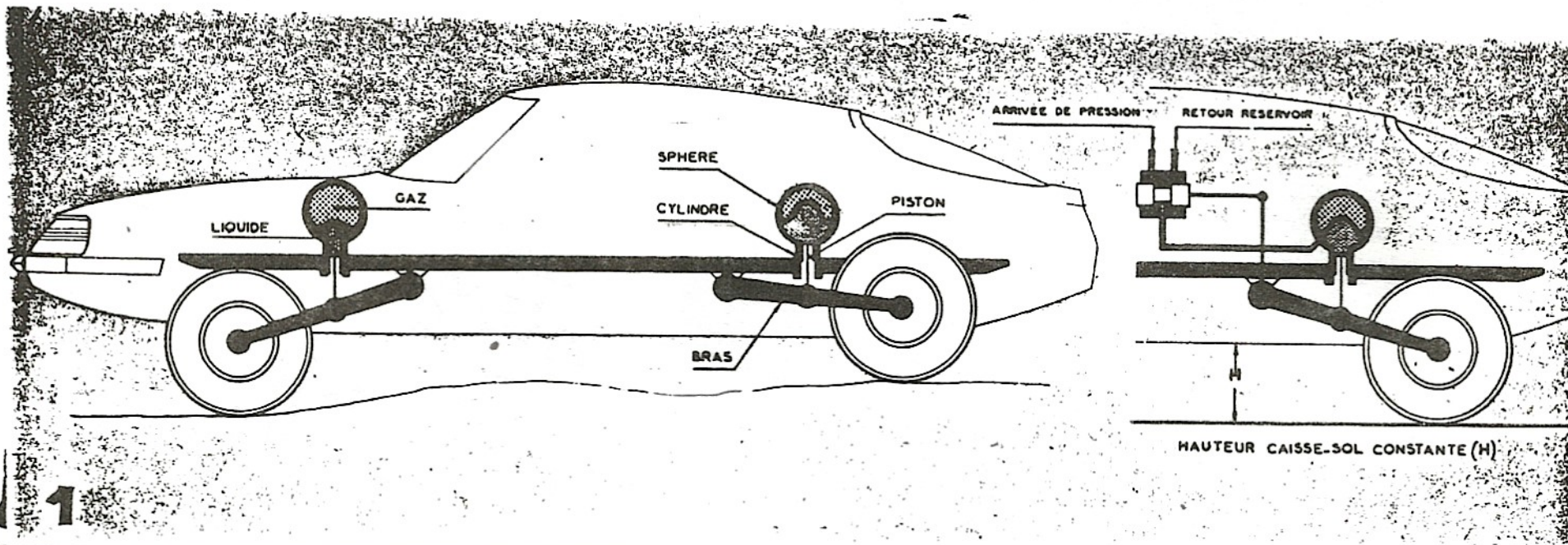
Mais la plus riche idée de Citroën, c'est peut-être d'avoir fusillé son chauvinisme en admettant que l'Italie est aussi un pays civilisé. Avec des ingénieurs qui ont fait des études... et savent que Léonard de Vinci n'était pas un adjudant de carrière.

Question moteurs, on n'est pas champion chez Citroën. Alors on a exploité l'accord avec Signor Maserati pour doter la nouvelle Reine de France d'un très aristocratique moteur italien. C'est ça, l'esprit européen !

Le résultat est excitant à regarder : au bout de la boîte 5 vitesses, on trouve un bijou mécanique qui sent l'italien à plein nez. Grâce à la disposition en V très ouvert (90°) de ses 6 cylindres, le moteur Citroën-Maserati de 2.670 cc. n'a que 31 cm. de long. Le vilebrequin est donc très court et en plus il est porté par 4 paliers vraiment costauds. Les 3 carburateurs double corps Weber et les 4 arbres à cames en tête (2 par bloc de 3 cylindres) ont ce qu'il faut pour libérer des chevaux en pagaille... Mais l'ingénieur Alfieri a sagement limité la puissance à 170 CV DIN à 5.500 tours (180 CV SAE à 6.250 tours). Il y a de la réserve au frigo et la rassurante idée que « ça ne cassera pas ». D'autant plus que la 4^e galope à 28,4 km.-h. aux 1.000 tours et la 5^e à 36,3 km.-h. aux 1.000 tours... Un reposant braquet d'autoroute, quoi !

ET SI ON LUI OPPOSAIT L'ALFA-ROMEO « MONTREAL » ?

C'est vrai ! Reine ou pas Reine, il faut oser contester. Et certains puristes classiques ne s'en privent pas. Le sprint à 220 vaut celui d'une Porsche 911 S, mais la nervosité a une encolure de retard. Et je me demande si, pour 4 millions de francs légers, 170 CV n'est pas un peu avare pour animer 1 450 kg. bien tassés...



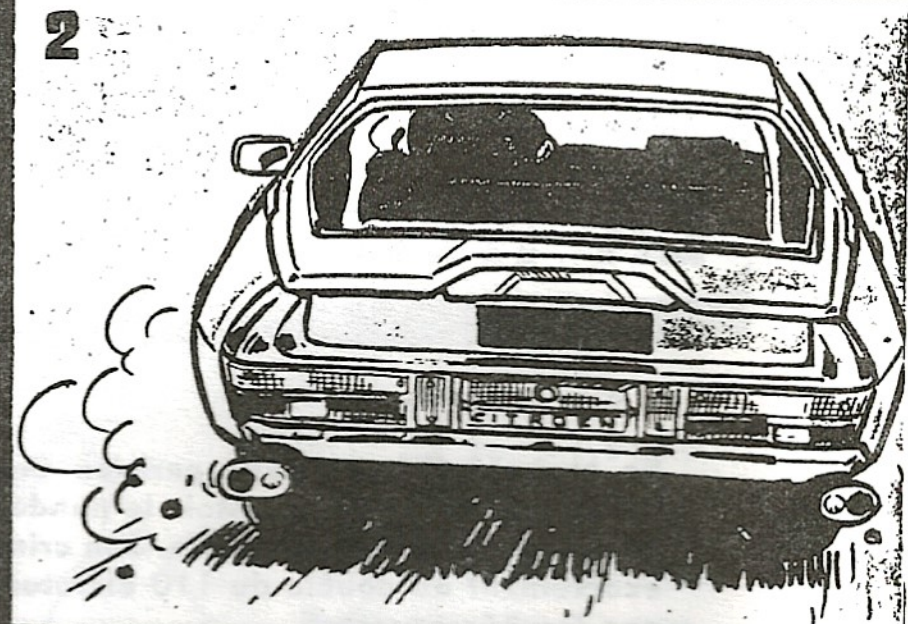
Des chiffres d'usine (Citroën ment rarement à ce sujet) : première à 61, deuxième à 92, troisième à 135, quatrième à 185 et cinquième à 220. Le 100 en 8,9 secondes, et le kilomètre départ arrêté en 30 secondes. C'est précisément ce 30 secondes qui risque de décevoir quand on aura une simple BMW 2002 TI sur la ligne de départ.

On peut aussi rester allergique à la traction-avant pour le beau pilotage à grande vitesse ou préférer une bonne suspension classique qui « téléphone » encore les sensations routières. Enfin, j'aurai l'outrecuidante lèse-majesté de trouver que l'esthétique n'a pas tout à fait la patte d'un Bertone. La poupe, surtout, me semble « chahutée » de ligne. Oh ! je ne parle même pas de mirobolantes Jarama Lamborghini ou de Maserati Ghibli à la beauté diabolique... La comparaison serait injuste !

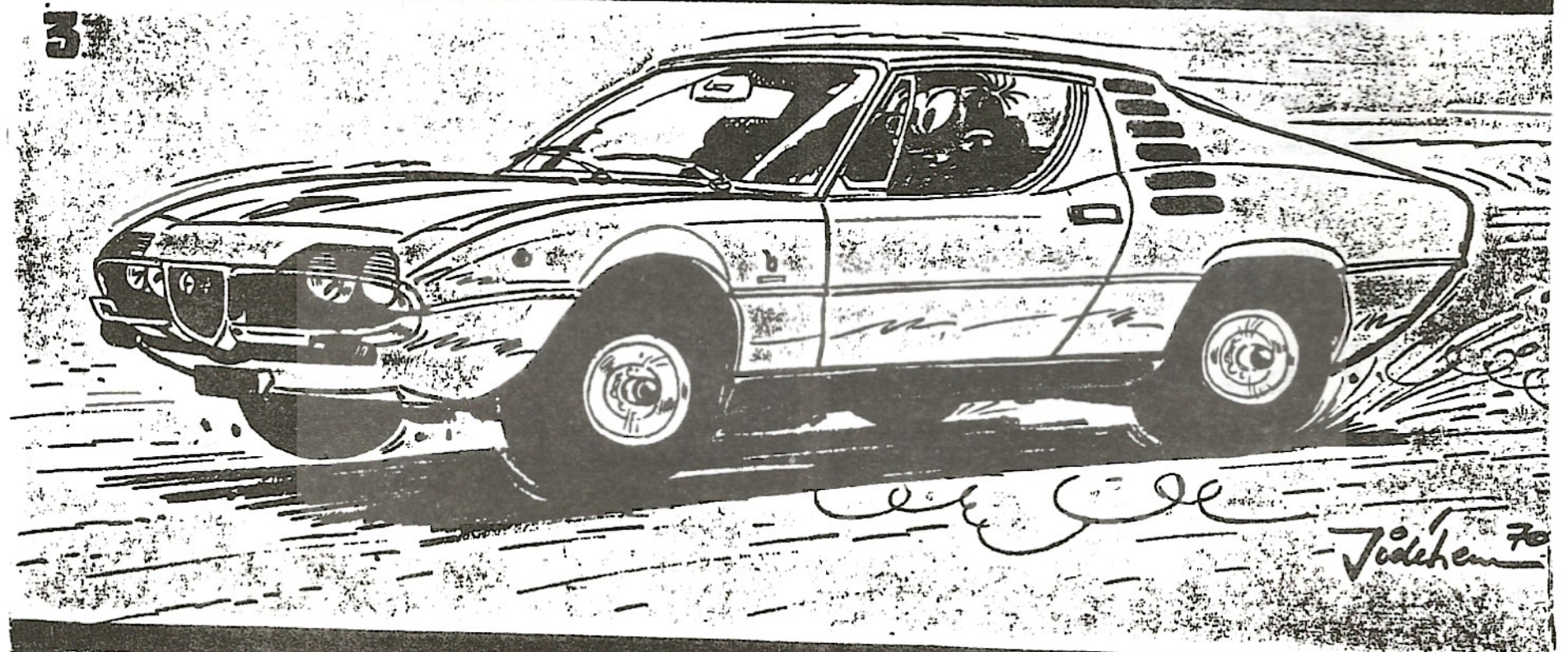
Mais à prix comparable, on osera opposer à la SM Citroën la nouvelle Alfa-Romeo Montréal. Bertone l'avait dessinée pour la « Citadelle du Futur » à l'Expo 1968 du Canada. En 1970, elle devient opérationnelle avec un schéma archi-classique : moteur avant (mais bien centré) et propulsion arrière par « vulgaire » pont rigide (mais léger et correctement guidé).

Le moteur V-8 est directement dérivé du fameux Alfa 33 de compétition. C'est un 2.593 cc., Mais avec son injection électronique Alfa-Roméo Spica, il sort 200 CV DIN ou 230 CV SAE à 6.500 tours. Là aussi, la vitesse atteint les 220 km.-h., mais le kilomètre départ arrêté est promis pour 28 secondes seulement. Il faudra que je vous parle un jour en détail de celle qui fut l'ambassadrice de l'auto européenne sur le continent américain !

STARTER.



- 1: L'INIMITABLE SUSPENSION HYDRO-PNEUMATIQUE DS A ENCORE ÉTÉ AFFÛTÉE POUR LA SM CITROËN
- 2: NE TROUVEZ-VOUS PAS LA POUPE SM, UN PEU COMPLIQUÉE ?
- 3: CRÉÉE PAR BERTONE POUR L'EXPO 1968 MONTREAL EN 68, L'ALFA ROMEO V.8 DEVIENT OPÉRATIONNELLE. UNE BELLE RIVALE POUR LA REINE DE FRANCE



What was that name again?

Austin's little idea was

a big success



By Ronald Hambleton

ONE big box office hit 50 years ago was the talkie remake of Mark Twain's *A Connecticut Yankee*, with Will Rogers as Hank, the American cowboy comedian transported by time-warp back to Camelot, 538 A.D.

In the big rescue scene, Hank and King Arthur, trussed and strung up to be hanged by the cruel Queen Morgan le Fay, are saved in the nick of time by knights in shining armor, riding across the medieval fields in a fleet of 'Baby' Austins.

That was Hollywood's tribute to one of the most popular cars ever built, the apple of Sir Herbert Austin's eye.

He designed it himself, in secret. Every night during the summer of 1920, he would hole up in the billiard room of his home near Birmingham, Eng., sketching out his ideas. Only when they were firm in his own mind, did he bring in a draftsman to help him with detailed drawings.

The 'Baby' Austin was the first car designed for the low-price market. As Austin himself put it, it was "a decent car for the man who can, at present, only afford a motorcycle and side-car." Indeed, he introduced the car in January 1922 to the Birmingham Motor Cycle Club in a speech that was tactless and belligerent. "This," he said, "will knock the motorcycle and side-car into a cocked hat."

Not many agreed. Most motor-ing experts believed that Austin had gone too far in smallness. Even his board of directors were hard to persuade. Yet within five years sales had zoomed from 2,000 to an annual peak of 26,000, and did not drop much below that even during the depression years.

In 1935, the last year of full production before it was phased out, sales were over 27,000. Compare that with the 96,000 combined total of all Morris vehicles, both trucks and cars, sold that same year.

No wonder Herbert Austin looked back on the year 1922 as "an important milestone" in his life, which was already colorful enough.

He was born in 1866 in Buckinghamshire, but when he was still an infant, his father moved to Yorkshire to become the Earl Fitzwilliam's farm bailiff.

As the boy grew up on the farm and went to the local grammar school, he showed a talent for drawing. He always said he could express himself best with a pad and pencil.

First his parents tried him at architecture, then at engineering, but when both ideas petered out, he was sent to Australia to work with an uncle, whose Melbourne company manufactured steel water pipes. From there, Austin jumped to a firm making gas engines and printing presses, ending up at age 22 working for Longlands Foundry, where he became a fully-trained machinist.

It was while he was working as a mechanic on the Longlands' sheep-shearing machine, that he came up with technical improvements so inventive that a competitor, the Wolseley Sheep Shearing Machine Company, lured him away as manager of a branch production plant in—of all places—Birmingham, Eng.

Though he did not realize it, he now had a foot in the door of the automobile industry of the future.

Wolseley, which also turned out bicycle parts and small machine components, put him to work on the first Wolseley car, produced in 1895. He then produced an improved version, which in 1900, won first prize in a 1,000-mile automobile race.

Herbert Austin always had his own ideas about machinery, and maybe he felt that he was becom-

ing too much a corporation man when Vickers bought out Wolseley in 1901.

Though he ran the newly-

"This," he said, "will knock the motorcycle and side-car into a cocked hat."

named Wolseley Tool and Motor Car Company as general manager for four years, he nursed a secret wish to produce a car of his own.

He worked on his plans at home in his bedroom, so confident of success that he actually had working drawings before he had a factory, and bought a factory before he had raised any capital, and moved into it before the deal was closed.

He was clearly in a hurry, and worked—as one employee put it—"like a tornado."

The Austin Motor Company was born in mid-1905, but even so exhibited drawings of a car not yet built at a motor show that November. However, by the following April the car itself was on the road, with Austin himself at the wheel,

in a test run through the countryside.

The factory's 260 workmen produced 120 cars the first year, and by the time war broke out in 1914, there were 2,000 workmen turning out 1,000 cars a year.

Austin went public just before he began re-tooling to make guns, shells and aircraft, feverishly expanding to 22,000 workers.

It was not easy making the transition to peace. In mobilizing his new production facilities, he decided to concentrate on just one

car, the Austin 20, which sold well, but not well enough to offset post-war problems of materials and labor.

There was such a heavy strain on finances, that in 1921 a committee of unsecured creditors banded together to petition that the company be wound up.

It was under that pressure that Austin, alone in his billiard room, sketched the Austin Seven, the baby car that rescued him just as dramatically as it rescued Hank and King Arthur in the 1931 film.

But it was not a quick and easy rescue like in the movies. Even in 1924, with the Austin Seven and the Austin 20 selling well, Austin was still so strapped for money that he made merger overtures to William Morris, a late starter but by then top dog in the British automobile stakes.

The merger talks failed. Austin and Morris were two incompatible personalities, and besides Morris loved his personal freedom too much to merge with anybody.

The two companies did finally come together in 1951 as the British Motor Corporation, but by then Sir Herbert Austin had been dead 10 years, and Morris himself, at 74, was no longer in control of his own Nuffield Corporation. □

RONALD HAMBLETON is a Toronto-based freelance writer.

COMMENTAIRES - DU PRESIDENT

Nous avons besoin de conseils experts pour publication dans L'Autosiate. Qui peut nous éclairer sur les sujets suivants:

- les étapes du remisage d'hiver d'une voiture ancienne.
- comment remettre en marche un moteur arrêté depuis longtemps.
- devrait-on utiliser des huiles synthétiques dans les moteurs anciens; et quoi faire au sujet du super?
- les pneus radiaux, une amélioration pour les voitures anciennes (1955-60).
- les avantages et inconvénients des roues de broche. Quoi faire pour les garder en bonne condition.
- la remise en état des boiseries automobiles ainsi que de la sellerie.
- peut-on récupérer le chrome sur du Musak.

et ceci n'est qu'une partie des problèmes que j'aimerais voir éclaircis. Si vous en avez d'autres laissez-nous le savoir. Qui sait, nous trouverons peut-être la réponse.

Au nom de tous nos membres, je désire souhaiter la bienvenue aux 12 nouveaux adhérents suivants:

Michel Legault
Richard Santandrew
Jean-Marc St.-Georges
Norman Carroll
Nicolas Giguère
Robert Deans

John Whaley
Thierry Sacquement
Jack Keery
Rick Boudrias
Elliott Ettenberg
Tom Merson

et j'espère que ces membres et leurs familles pourront participer pleinement aux activités qui leurs seront proposées en '83.

Pierre-André Ouimet

PAO:ak



ENTHOUSIASTES DES VOITURES
EUROPÉENNES D'AUTREFOIS
VINTAGE EUROPEAN AUTOMOBILE ENTHUSIASTS

STOWE TOUR

Sunday, August 8 started off warm and sunny as seven of our members met at the Eastern Townships toll #1 to journey to Stowe, Vermont to see the Antique Car Club of America Concours and Flea Market. The numbers included Peter Bigney (borrowed MGB), Leon Frechon (JAG XK120), Charles Henstridge (JAG XK120), Jim Roman from Québec City and Calgary (BMW 507), John Nocera (Healey 3000), Bob Shelso (MGTD) and John Smith (Healey 100).

We had a very pleasant drive via a mixture of two-lane and super highways to St. Albans and then Charles Henstridge lead us to Jeffersonville and through Smugglers' Notch.

The timing was excellent as we were able to get parking spaces just beside the Flea Market, and we spent three hours picnicing, viewing the cars and purchasing need parts.

The paddock was filled with about 250 cars on display and the Flea Market was extensive. There was also a display of antique stationary engines and lots of opportunity to just watch the crowd. Also seen at Stowe were Nort Paish, Peter Fletcher and John McFall.

Just prior to departure, Jean Nocera provided valuable help in changing Bob Shelso's tire. Around three o'clock, about half the group went to the town of Stowe; the other half only made it as far as Whiskers where they were seen reclining on deck. A great debate ranged over the merits of Miller versus Bud which was interrupted by a sudden shower. Undaunted, tops were raised and the debate continued.

So enjoyable was the day that one respected senior member forgot to add gas to his car and as a result only arrived home at midnight!

TOURNEE D'ECONOMIE

P.-A. Ouimet

Cette année, la température s'est avérée plus clémente pour cette activité qui réserve toujours une promenade plaisante et des résultats surprenants. Alors que l'an dernier la palme fut remportée par un Nash Métropolitain (toute catégorie) et une Aston-Martine DB3 selon la cylindrée, cette année, la tournée qui nous a mené vers Laval sur le Lac, a vu une chaude compétition entre Ron Cook et Jean Nocera. Mais la technique et la ruse de Jean n'ont pu vaincre l'étincelante performance du "chameau" de Ron Cook qui a parcouru les cinquante kilomètres du trajet avec seulement 2,3 litres d'essence, établissant ainsi une moyenne de 50 milles au gallon au volant de sa Mercedes-Benz 230SL, fraîchement arrivée de Suisse. Serait-ce que le prix du carburant outre-mer leur a fait découvrir de nouvelles façons de sauver de l'essence, toujours est-il qu'il est remarquable, et presque incroyable qu'un tel résultat puisse survenir, mais qui douterait de l'honnêteté d'un de nos participants?

Parmi les autres performances intéressantes, notons celle de Léon Fréchon qui au volant d'une XK 120 (semblable, mais non-identique à celle de D&D Marquis) consommait 5,4 litres, soit près de 25 milles au gallon avec une voiture dont la réputation n'a jamais été l'économie. Le clan des Healey s'est aussi bien comporté et tout comme l'année dernière, les MG-T ont fermé la marche.

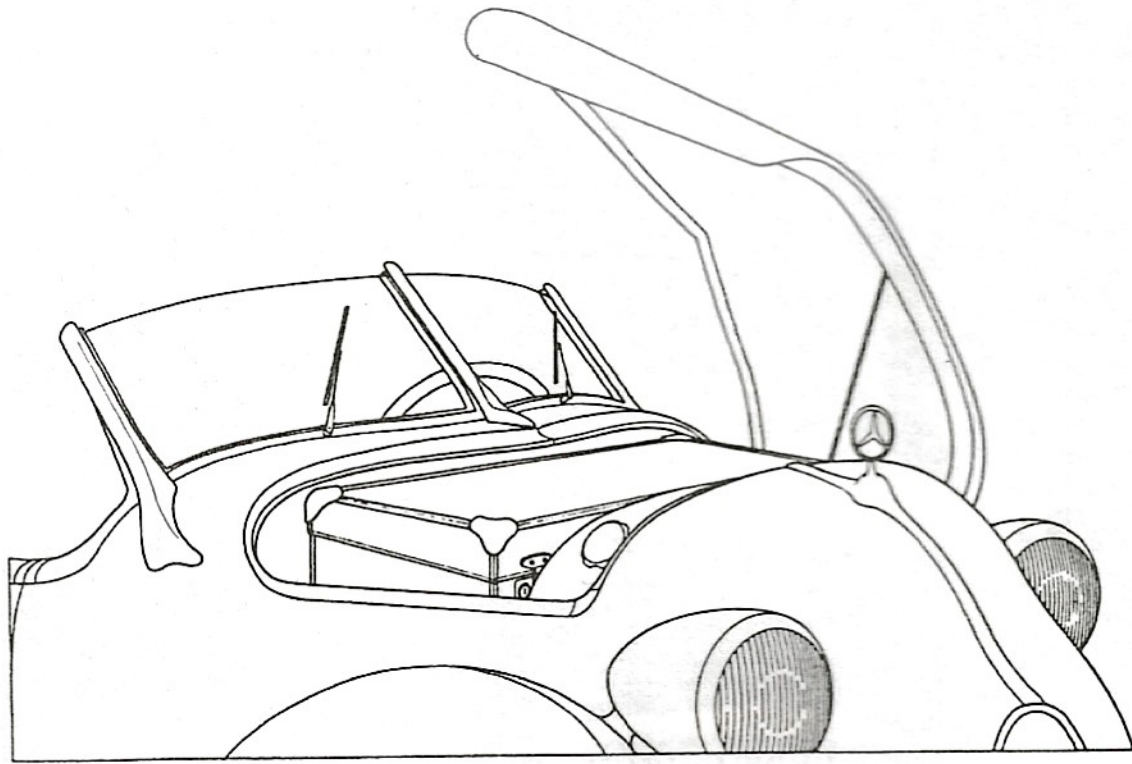
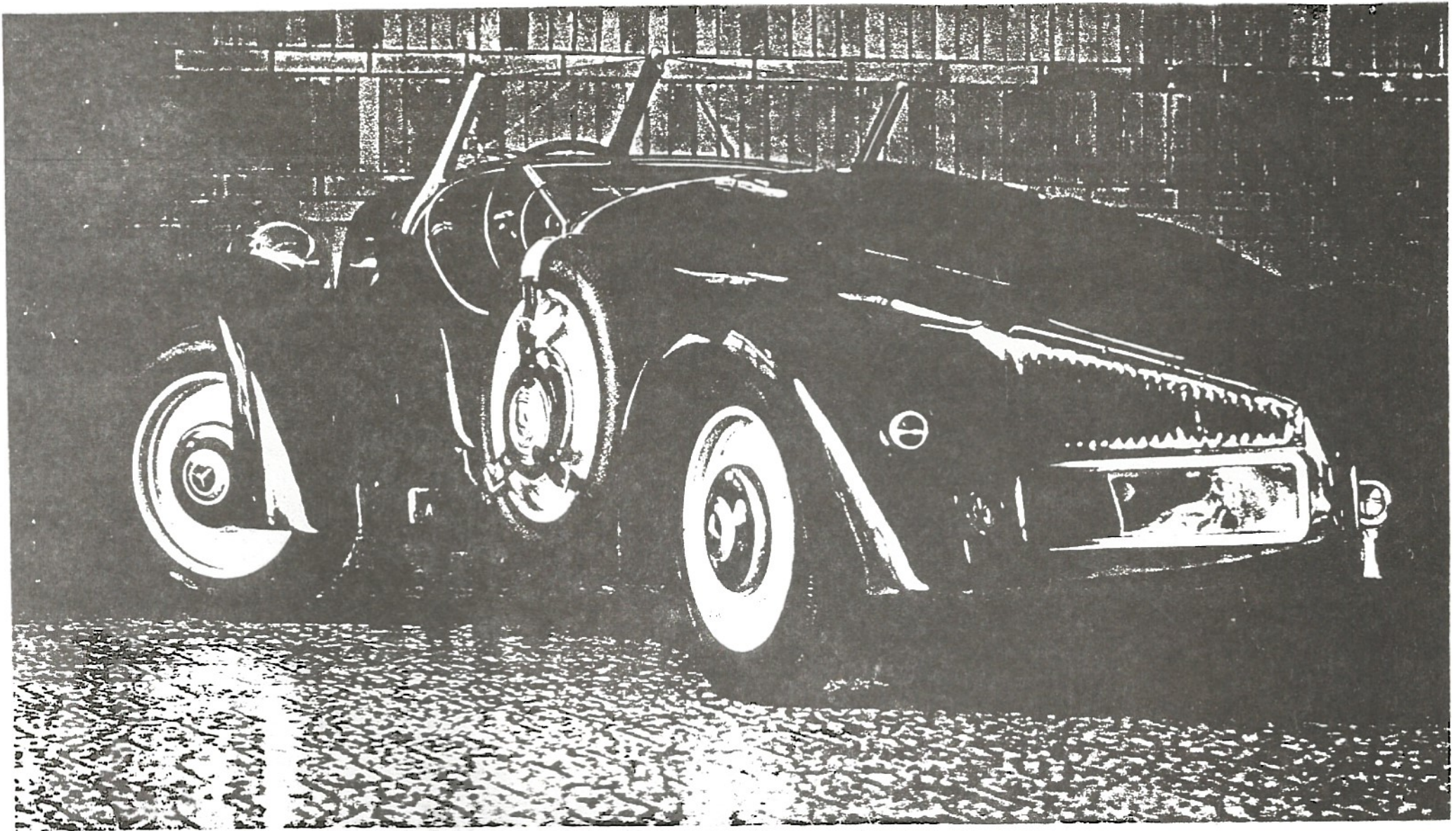
Une soirée amusante qui prouve que l'art de conduire, les bons ajustements et beaucoup de chance peuvent amener des résultats intéressants. Reste à voir qui pourra, l'an prochain battre 2,3L pour 50 km.

Voici les résultats dans l'ordre:

		L/50km	mL gas/cc
1. Ron Cook	M-B 250 SL	2,3L	92
2. Jean Nocera	A-H 3000	3,65	125
3. Léon Frechon	Jaguar XK120	5,4	157
4. Howard Cohen	Jaguar E-Type 4,2	6,7	158
5. Léo Nobert	A-H 3000	5,1	175
6. Peter Bigney	A-H 100-6	5,8	220
7. David Laidley	SS I	7,0	263
8. Gilles Desroches	Citroen 11 BL	5,65	296
9. D&D Marquis	Jaguar XK120 DHC	11,0	320
10. Marc Bourgeois	MG TF 1250	6,9	552
11. John Lumsden	MG TC	7,55	604

L'indice mL/cc est obtenu en divisant la consommation par la cylindrée exacte de la voiture. On peut ainsi dire que cet indice exprime que la Mercedes de Ron a utilisé l'équivalent en essence de 92% de sa cylindrée, Jean, 125% etc...

Donc, hors de tout doute, Ron Cook est le double vainqueur cette année. Et que la pratique continue...

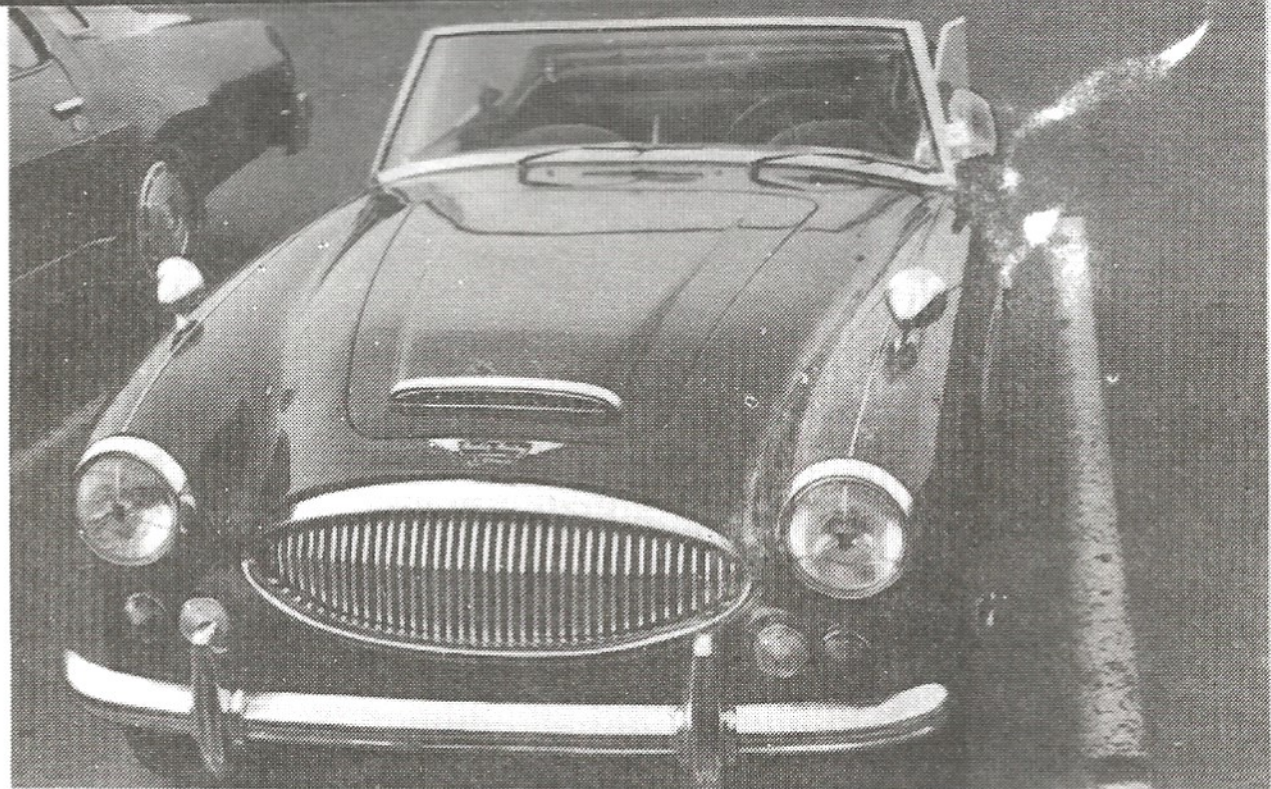
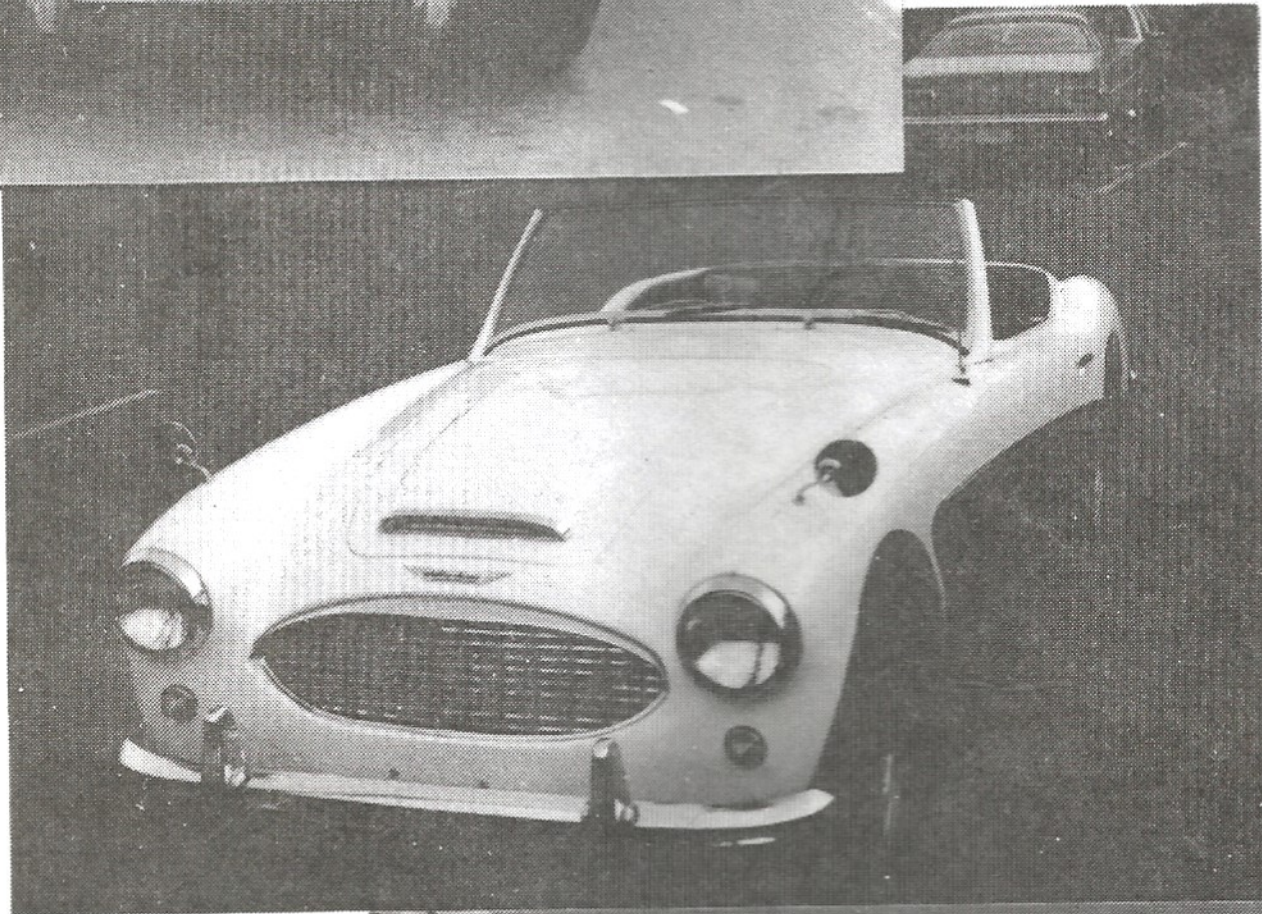


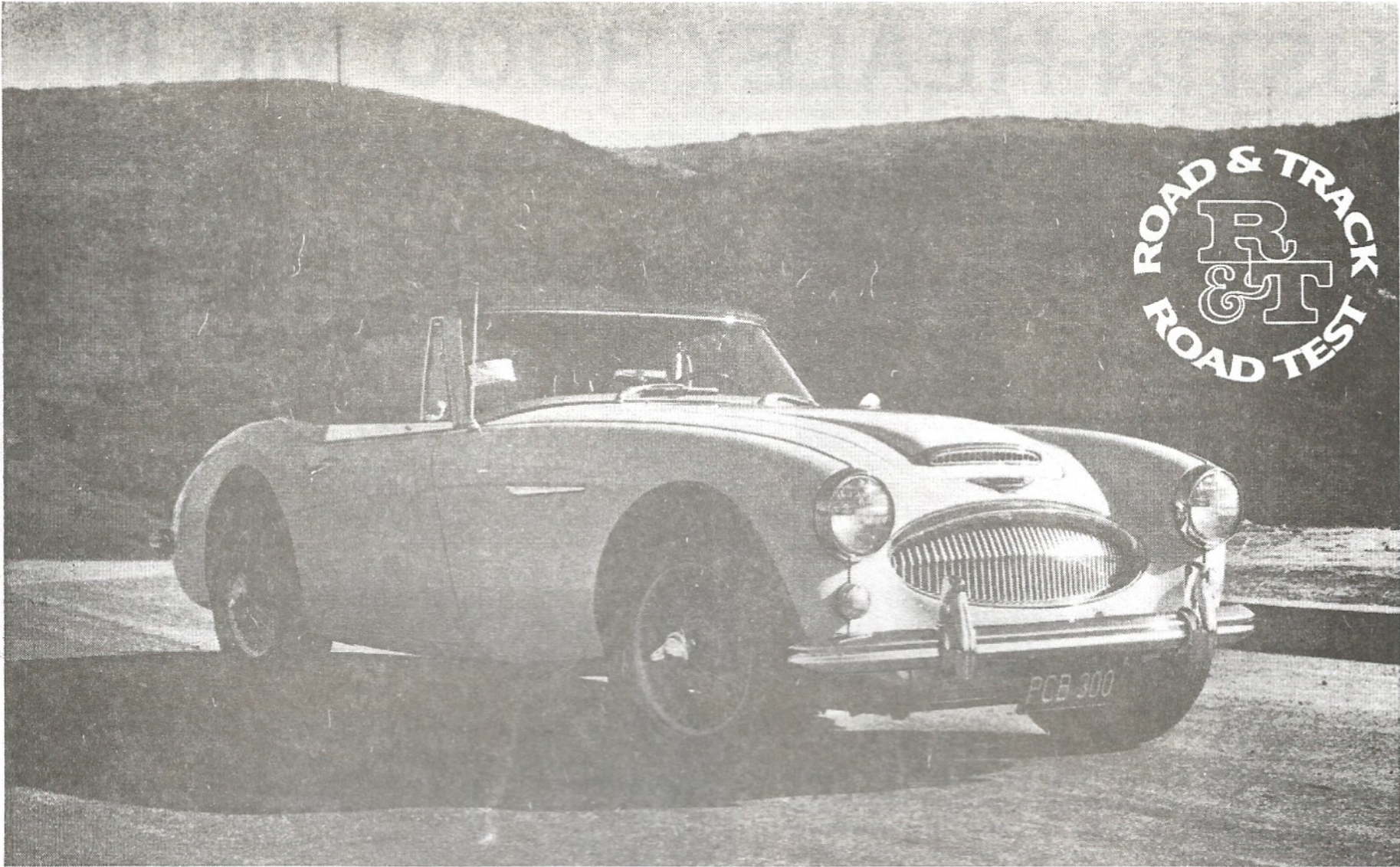
The rear-engined 150H Mercedes-Benz (top) is an oddity of 1934-35, and a forgotten one at that. Only 25 were made, though at least 6,500 of the touring 130H and 170H sedans and cabrio-limousines found buyers between 1934 and 1939. This odd creature resembled a long-tailed, notchback Volkswagen, though the engine was a water-cooled L-head four and hung over the rear "axle" at the end of a central backbone frame with all-independent suspension. Hatch space under the short hood (bottom left) was very limited, and a standard suitcase just would not

fit, so the manufacturers offered a special fitted suitcase.



"Two of these just fell out of the car."





AUSTIN-HEALEY 3000 MK III

Reprint from 1965 Road & Track

The latest model has an additional 11 bhp, a bit of tarting up and still retains that classic cowl shake



TEN YEARS AGO, the Austin-Healey 100 was first introduced to the American market. The man behind it was Donald Healey, who had previously built a limited quantity of very advanced and successful sports cars using Riley engines. The demise of the Riley and the many problems confronting the small manufacturer caused Healey to seek an easier way of making a living, so he sold the Austin company on the idea of using production Austin parts to build a sports car aimed specifically at the American market. The result was the Austin-Healey 100, which has been gradually updated during the ensuing years to become the Austin-Healey 3000 Mk III Sports Convertible.

In its original form, the Healey was a conventional low-priced sports car, which offered the fast and responsive rag-top-and-flapping-side-curtains type of driving demanded by the enthusiast of the day. Its 4-cyl engine was lusty and reliable, its 3-speed and overdrive transmission was a novelty and, even if the car did have some extremely annoying faults, at least it provided enjoyable and exciting driving at a time when the Detroit product was nothing short of ghastly.

In its 1964 form, the Healey is a much more refined car although it retains many of the characteristics of the original version, both desirable and undesirable. The major changes consist of a general tarting up of the interior, which now has walnut veneer on the instrument panel and much more luxurious finish and detailing throughout. The top is good by sports car standards because it can be erected from inside the car, and it is secured by two over-center clamps on the windshield pillars. The windows are of the wind-up variety so that the car

is well weatherproofed for the winter, at least in some climates.

BMC discarded the 4-cyl engine in 1956, substituting its rugged Six in the Healey, and this power unit has undergone a number of changes over the years so that it is now rated at 148 bhp. This is an increase of 11 bhp over the MK II version of the car, and the extra power is obtained from a different camshaft and the use of two 2-in. HD-8-SU carburetors. These carburetors require a lot of choke when starting from cold, and even then there is a tendency to spit back if too much throttle is used during the long warm-up period the engine seems to demand.

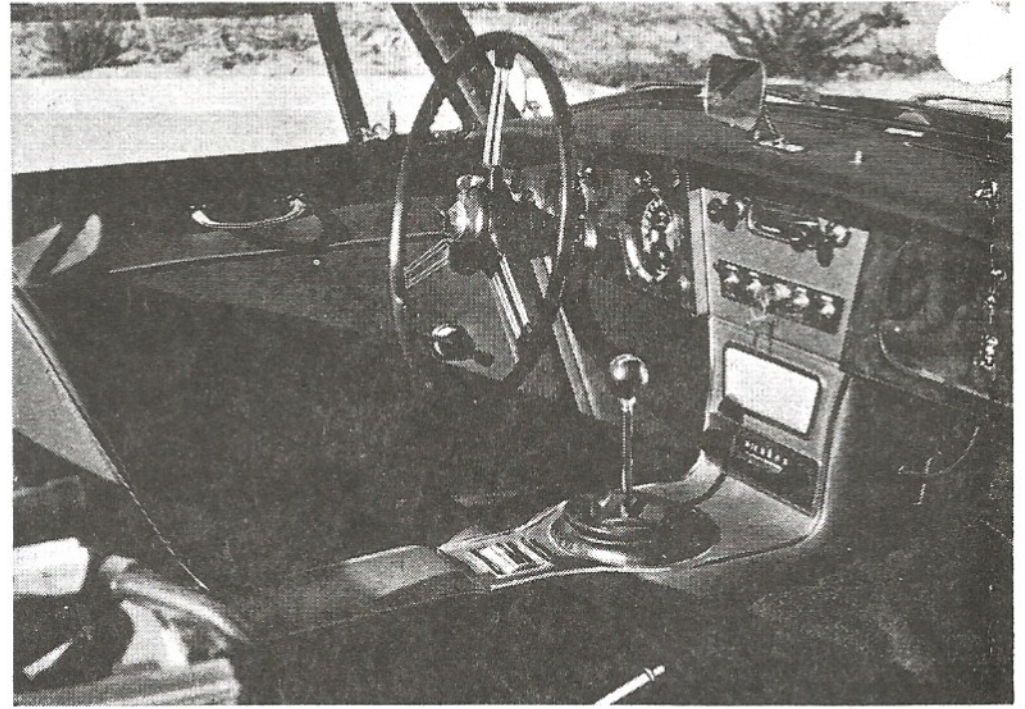
Another relatively insignificant but worthwhile improvement ➡➡➡

AUSTIN-HEALEY 3000

AT A GLANCE...

Price as tested	\$3828
Engine	6 cyl, ohv, 2912 cc, 148 bhp
Curb weight, lb.	2650
Top speed, mph	116
Acceleration, 0-60 mph, sec.	9.8
Passing test, 50-70 mph, sec.	5.7
Average fuel consumption, mpg	19

AUSTIN-HEALEY 3000 MK III



concerns the rear suspension. Here the chassis frame has been curved to allow for additional axle movement, and springs of a lower rate are used. In order to control the movement of the axle more positively, it is now located by twin radius arms, and the results of these modifications are a better ride, improved handling and increased ground clearance.

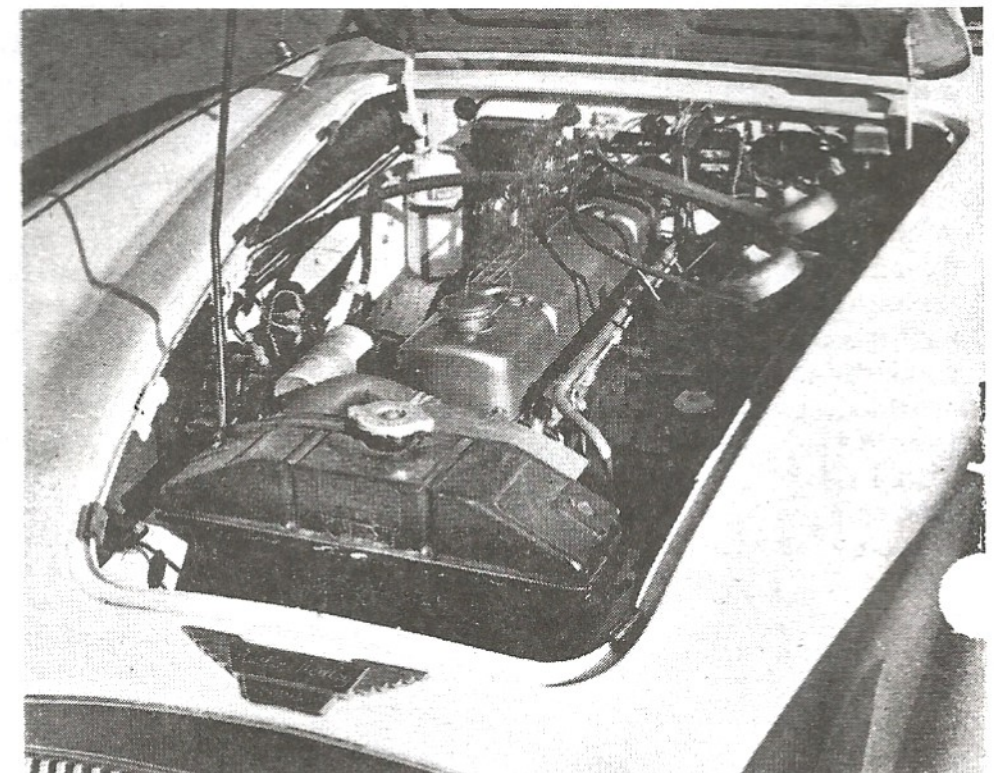
Despite improvements to the rear suspension, the ride and handling of the Healey are still in the classic sports car tradition of the early '50s, before people like Chapman and Cooper had got in on the act. The ride is firm and there is some chassis flexing evident from the authentic cowl shake which occurs on any but the smoothest surfaces. In common with the rigidly sprung cars of the time, the road-holding of the Healey is quite good on smooth surfaces, but a fast turn on a poor surface may produce surprises, because the rear end has a tendency to jump and skip over bumps.

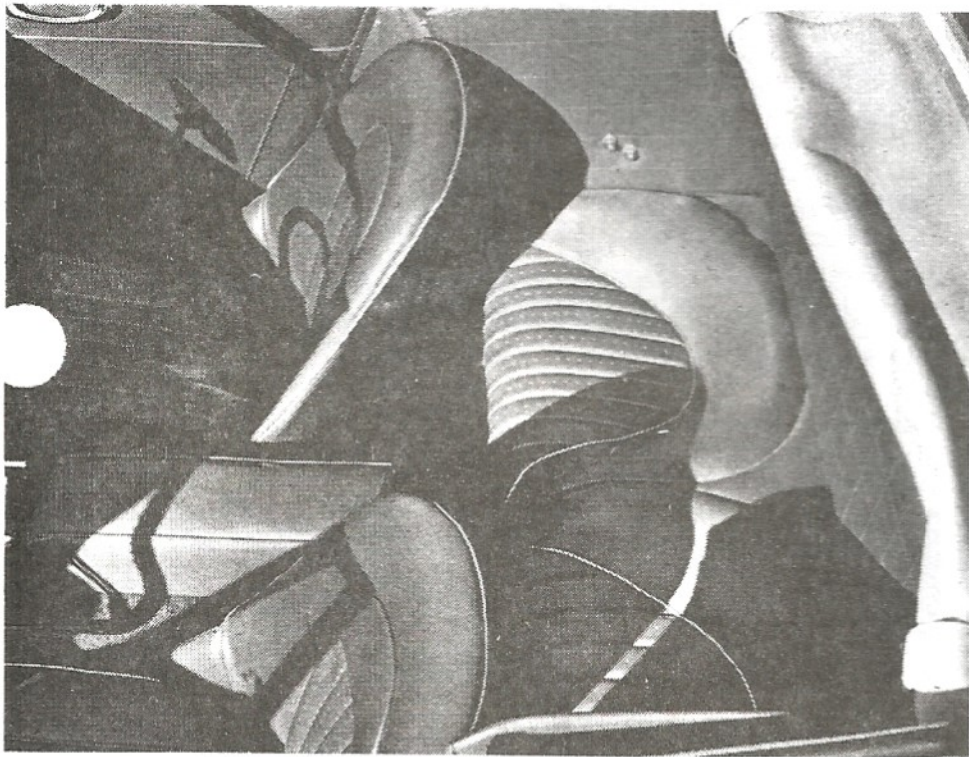
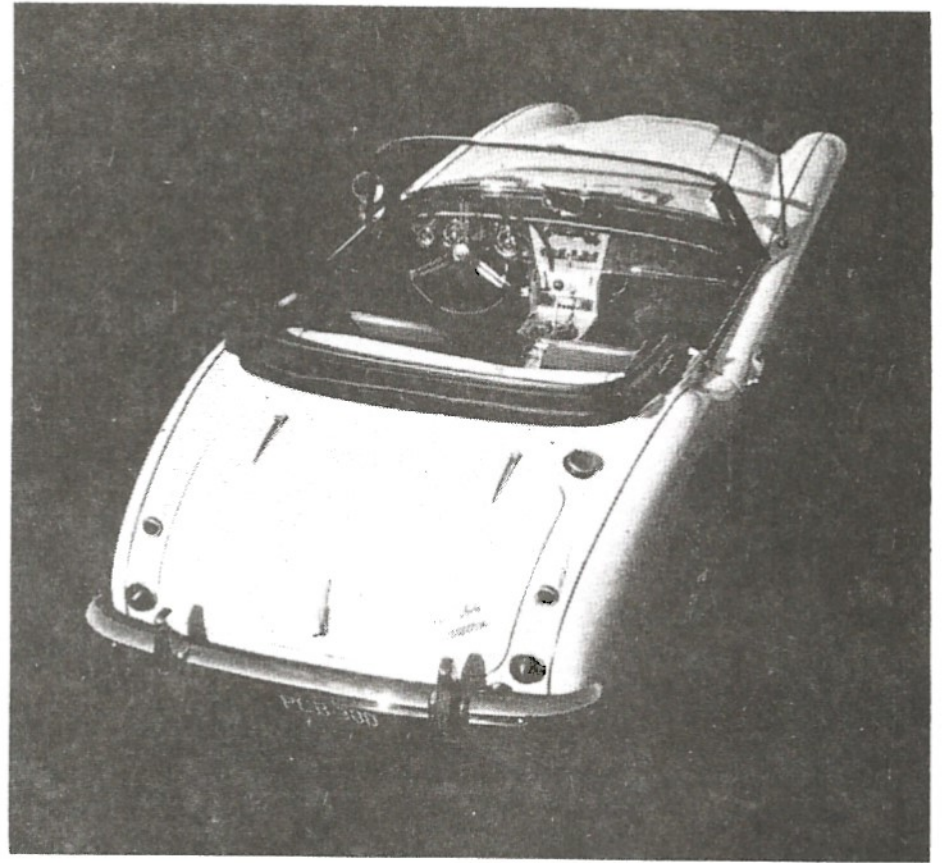
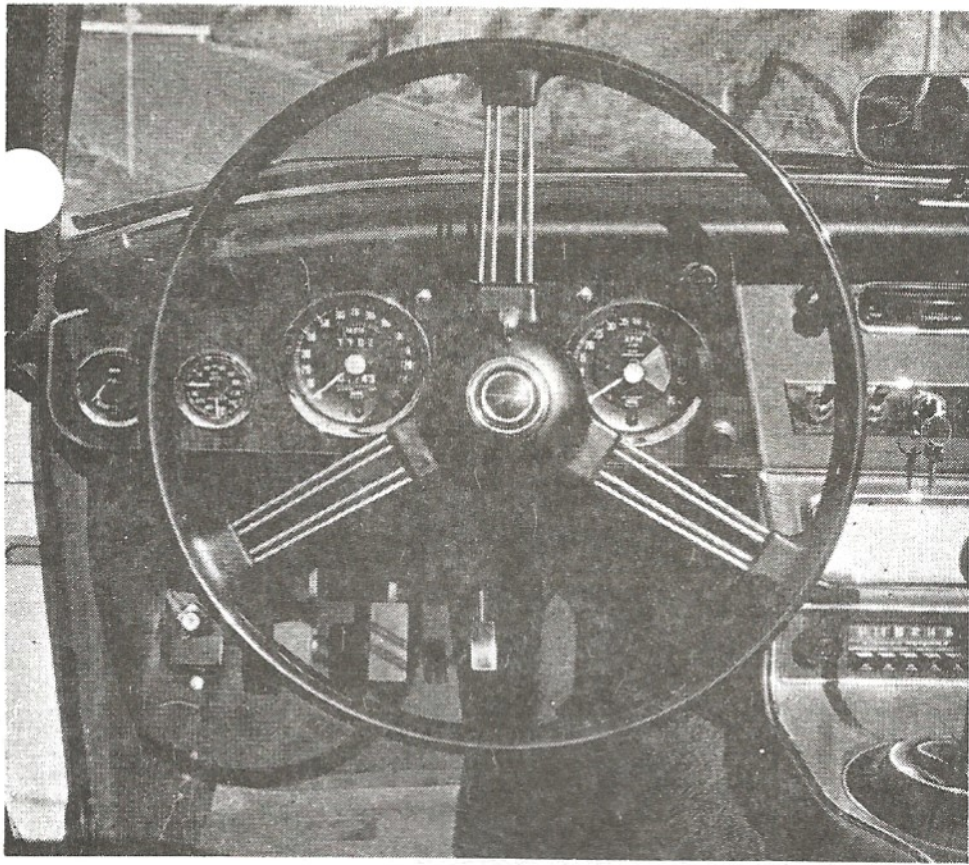
Under normal conditions, the Healey has slight understeer, but plenty of throttle opening in a corner will change this to oversteer, and the tail can be hung out a long way with delicate throttle control. However, one should select the road surface rather carefully before experimenting because any irregularity will throw the car off its line, and a wet surface tends to make the handling treacherous.

At low speeds the steering is comparatively heavy, but it lightens as the speed increases and the car holds its line accurately at normal cruising speeds, although there is a tendency for the rear end to twitch on rougher surfaces.

Due to the improved rear suspension and the slight rearward weight bias, one can apply a surprising amount of power when coming out of a slow turn without any tendency for the car to break away, lift its inside rear wheel, or lose traction. The Austin-Healey is no sluggard on the road, but one has to work hard and use some skill and experience to extract the maximum from it.

Although the car has an adjustable steering column, it is difficult for tall drivers to accommodate themselves comfortably, as a glance at the Driver Comfort Rating on the data panel will show. Apart from the driver and passenger seats, there is accommodation for two children behind, or, alternatively, one adult can be carried for short trips. This space can also be used to supplement the limited trunk space, which is almost entirely filled by the spare wheel and the battery. The controls are a mixture of ancient and modern. The transmission, in particular, needs updating because 1st is unsynchron-





ized, noisy and difficult to select, and the synchronization of the other three gears leaves a lot to be desired. On the other hand, the shifting of the overdrive is very fast and smooth, although the positioning of the control switch makes it hard to locate in a hurry.

The overdrive operates on 3rd and high so that in effect the car has 6 speeds. Although this would seem to provide a ratio for any occasion, there is actually an excessive gap between 2nd and 3rd, which is accentuated by the fact that if the overdrive switch is in the overdrive position, the overdrive ratio will be selected automatically as soon as one shifts up from 2nd to 3rd, thereby increasing the gap.

The clutch is a great improvement over previous Healey models and, in fact, over the majority of sports car clutches. It is of the diaphragm type, and its action is light and smooth in direct contrast to the early Healey units, which were very heavy and fierce, and had an annoying habit of breaking their linkages. The car is equipped with disc brakes at the front and drums at the rear and the brakes are generally very good, although the pedal pressure required is high despite the use of a booster in the system.

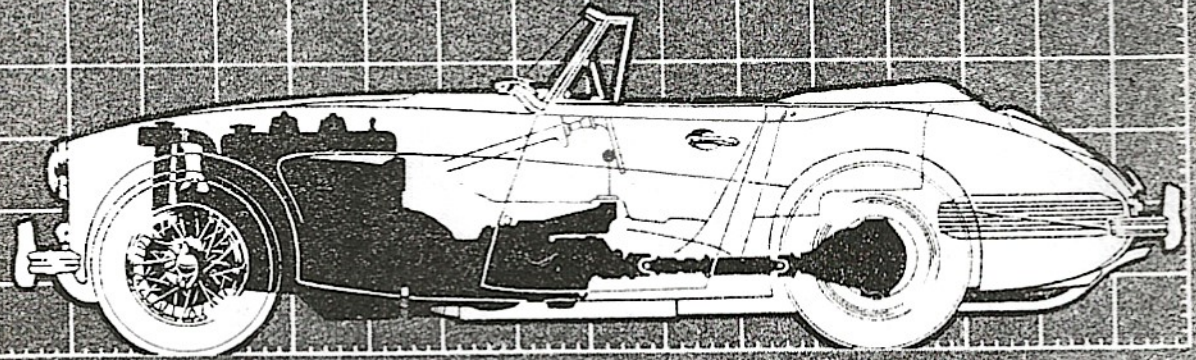
One of the most noticeable features of the Healey is the unduly high noise level, which commences at about 3000 rpm and makes normal conversation impossible by 4000 rpm. It takes the form of a loud roar which is a mixture of engine, fan, transmission, carburetor, and exhaust noises, and one can't help feeling that a lot of it could be eliminated by better attention to insulation. The noise coupled with the rather uncomfortable driving position and the stiff suspension makes the car tiring to drive on a long trip. The level of exhaust noise has been reduced by the addition of a pair of supplementary mufflers located transversely at the rear of the car. However, the eternal Healey problem of low ground clearance remains, and the primary mufflers are still located beside the left frame rail where they are far too low and consequently extremely vulnerable.

The Austin-Healey is now in its 12th year, which is a long span in an age of rapid automobile development. It has served its purpose well both on road and track, and as recently as 1962 a Healey got as high as 8th place at Le Mans before piston failure put it out. However, the existing model appears to have reached the point of honorable retirement, and perhaps BMC will soon come up with a worthy successor after starting from scratch with a clean sheet of paper.



ROAD TEST

AUSTIN-HEALEY 3000



SCALE: 1/4" = 1" OVERALL

PRICE

List price \$3699
 Price as tested \$3828

ENGINE

No. cylinders & type ... 6 cyl, ohv
 Bore x stroke, in. 3.28 x 3.50
 Displacement cc 2912
 Equivalent cu in 177.7
 Compression ratio 9:1
 Bph @ rpm 148 @ 5250
 Equivalent mph 123
 Torque @ rpm, lb-ft. 165 @ 3500
 Equivalent mph 82
 Carburetors, no. & make ... 2 SU
 No. barrels & dia. 1-2 in
 Type fuel required premium

DRIVE TRAIN

Clutch type, single plate, diaphragm
 Diameter, in. 9.5
 Gear ratios: o'drive (0.82) 3.21:1
 4th (1.00) 3.91:1
 3rd (1.31) 5.12:1
 2nd (2.06) 8.05:1
 1st (2.88) 11.3:1
 Synchronesh on top 3
 Differential type hypoid bevel
 Ratio 3.91:1
 Optional ratio 3.55:1

CHASSIS & SUSPENSION

Frame type... separate ladder type
 Brake type disc/drum
 Swept area, sq in. 383
 Tire size... Dunlop RS-5 5.90 x 15
 Steering type cam & lever
 Overall ratio 15:1
 Turns, lock to lock 3.0
 Turning circle, ft. 36.0
 Front suspension: independent with
 A-arms, lever shocks, coil springs.
 Rear suspension: live axle with
 semi-elliptic springs, lever
 shocks, Panhard rod.

ACCOMMODATION

Normal capacity, persons 2
 Occasional capacity 3
 Seat width, front, in. 2 x 17.5
 Rear 2 x 16
 Head room, front/rear ... 35.5/28.0
 Seat back adjustment, deg. ... none
 Entrance height, in. 44
 Step-over height 14.5
 Door width, front 26.5
 Driver comfort rating:
 For driver 69-in. tall 85
 For driver 72-in. 65
 For driver 75-in. tall 45
 (85/100, good; 70/85, fair;
 under 70, poor)

GENERAL

Curb weight, lb 2650
 Test weight 3020
 Weight distribution (with
 driver), front/rear, % ... 47/53
 Wheelbase, in. 92.0
 Track, front/rear 48.7/50.0
 Overall length, in. 157.0
 Width 60.0
 Height 50.0
 Frontal area, sq ft 16.7
 Ground clearance, in. 4.5
 Overhang, front/rear 25/41
 Departure angle (no load), deg. 14
 Usable trunk space, cu ft. 2.3
 Fuel tank capacity, gal 14.4

INSTRUMENTATION

Instruments: fuel, oil pressure,
 water temperature, 140 mph
 speedometer, 7000 rpm tachom-
 eter.
 Warnings lights: high beam, igni-
 tion, turn signals.

MISCELLANEOUS

Body styles available: roadster as
 tested.

ACCESSORIES

Included in list price: overdrive,
 wire wheels, heater, windshield
 washers, full instrumentation,
 adjustable steering column, seat
 belt anchors.
 Available at extra cost: seat belts,
 tonneau cover.

CALCULATED DATA

Lb/hp (test weight) 20.4
 Cu ft/ton mi 86.7
 Mph/1000 rpm (overdrive) ... 23.3
 Engine revs/mi 2560
 Piston travel, ft/mi 1490
 Rpm @ 2500 ft/min 4280
 Equivalent mph 100.3
 R&T wear index 37.9

MAINTENANCE

Crankcase capacity, qt. 7.5
 Change interval, mi. 3000
 Oil filter type full flow
 Change interval, mi. 5000
 Chassis lube interval, mi. 3000
 Tire pressure, front/rear, psi. 20/25

ROAD TEST RESULTS

ACCELERATION

0-30 mph, sec 3.6
 0-40 mph 5.1
 0-50 mph 7.0
 0-60 mph 9.8
 0-70 mph 13.0
 0-80 mph 17.1
 0-100 mph 27.4
 Passing test, 50-70 mph 5.7
 Standing 1/4 mi 17.4
 Speed at end, mph 82

TOP SPEEDS

Overdrive (5000), mph 116
 4th (5500) 101
 3rd (5500) 81
 2nd (5500) 51
 1st (5500) 36

GRADE CLIMBING

(Tapley data)

Overdrive, max gradient, % 9
 4th 12
 3rd 17
 2nd 27
 1st off scale
 Total drag at 60 mph, lb 95

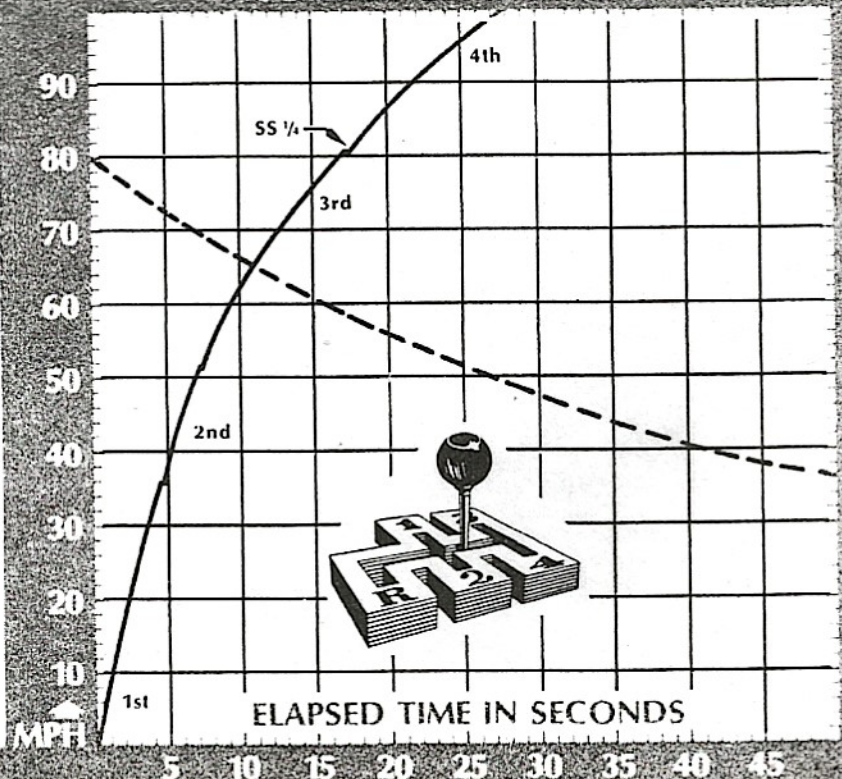
SPEEDOMETER ERROR

30 mph indicated actual 30.0
 40 mph 40.2
 60 mph 60.0
 80 mph 79.1
 100 mph 98.7

FUEL CONSUMPTION

Normal driving, mpg 16/21
 Cruising range, mi. 230/302

ACCELERATION & COASTING



UNE PREMIÈRE SORTIE REMARQUÉE

C'est avec une foule gigantesque et parmi plus de cent voitures anciennes que John Keery a participé à une première activité du E.V.E.A. Participation remarquée il s'en faut, car c'est à lui et à son épouse Claire..., et leur MG-TC évidemment, qu'a été octroyé le premier prix du concours d'élégance (catégorie européenne) qui a eu lieu sur un site restreint mais pittoresque de Saint-Bruno. Nous étions les hôtes du V.A.Q. qui a vraiment fait les choses en grand. Des trophées (près ou plus de cinquante) pour les trois premiers de chaque catégorie, des facilités adéquates un kiosque central avec mégaphone, une organisation qui était tout à fait rodée.

La température s'est jointe à l'enthousiasme de nombreux participants et spectateurs, capricieuse comme une voiture ancienne, elle nous a servi quelques grains de pluie mais a rapidement fait amende honorable et ainsi la journée s'est passée en beauté.

Il est toujours agréable d'élargir nos horizons et de pouvoir cotoyer des mordus de voitures qui nous sont moins familières. Des plus rares aux plus criardes des fifties, toute l'histoire automobile était disponible à celui qui voulait apprendre et les heureux qui ont questionné ici et là au hasard de leurs rencontres avec les Vaquistes ont apprécié les atouts et les charmes des belles américaines.

Dans la catégorie des européennes, on a pu assister à une chaude lutte qui a prouvé que si les membres du E.V.E.A. sont de vrais enthousiastes, il demeure qu'en matière de restauration, les Vaquistes s'y connaissent bien aussi. A preuve, les deuxième et troisième places furent accordées

à Michel Alarie (MG-TD) et Mario Boies (Hillman), deux membres du club hôte. Il faut toutefois admettre que les plus beaux spécimens de nos membres manquaient malheureusement à l'appel, mais comme Pierre de Coubertin l'a toujours dit, c'est la participation qui compte.

Des potins à retenir de cette journée: Gilles Desroches a enfin montré le fruit de son récent voyage en France: une Citroen 15 CV à malle plate en excellent état de route; Léo Nobert a toujours des problèmes avec tous ses véhicules mais nous promet que tout sera prêt pour le printemps... ou presque; Jean Nocera, bon prince et vrai enthousiaste, a même accepté de devenir membre du V.A.Q. et de payer sa cotisation de 20\$, une erreur technique qui fut d'ailleurs rectifiée; la victoire de John Keery fut fêtée au champagne mais personne ne sait qui l'a bu ou quand car, lors de l'adjudication des trophées, elle était vide depuis longtemps... serait-ce qu'il y eut un accord préalable avec les juges? et la magnifique Rolls de Michael Green fut classée dans la catégorie des classiques et non des européennes.... comment comprendre vraiment pourquoi le système américain prévalait ; vous voulez une cire rapide et bien faite? demandez à Daniel et Danielle Germain, à leur arrivée sur le site, tout l'appareillage fut sorti sur le champ et en moins de deux tout était fait, peut-être à classer dans les bonnes adresses! Et Philippe Chartrand a eu tellement de travail qu'il a dû demander l'aide de confrères du V.A.Q pour activer le jugement du groupe d'européennes. Mais une photo vaut mille mots: voyez plutôt!

Pierre-André Ouimet

INSURANCE FOR ANTIQUE OR
CLASSIC AUTOMOBILES

Bob Neopole recently asked me to inquire about the underwriting criteria for automobiles less than 25 years old. I should mention first that the "25 year age" in itself is not of primary importance. The underwriters will look at the entire risk presented to them. They will examine every car and then decide whether it meets their criteria. A 1965 Chevy II will *not* get the same interest as a 1965 XKE. There is a difference between a 4 door hardtop and a sports car. In short, the car has to be a special interest car. Some of the guidelines the underwriters use to accept our automobiles are:

1. The car should be used for club activities only, therefore mileage should not exceed 2000 m.
2. "Souped up" automobiles are usually not acceptable.
3. At least one colour photo is essential. No protection will be given until this is submitted to the insurers.
4. An ordinary automobile application together with a separate questionnaire for antique cars has to be submitted.

The questionnaire asks for:-

- a) The type of automobile
- b) Present value
- c) Date of purchase
- d) Value on date of purchase
- e) Description of condition
- f) Where stored when not in use

As far as the value of automobiles are concerned, the insurer has a list of approximate values and will therefore compare the given value with their list. Should there be any great discrepancy, it will be re-negotiated with the applicant.

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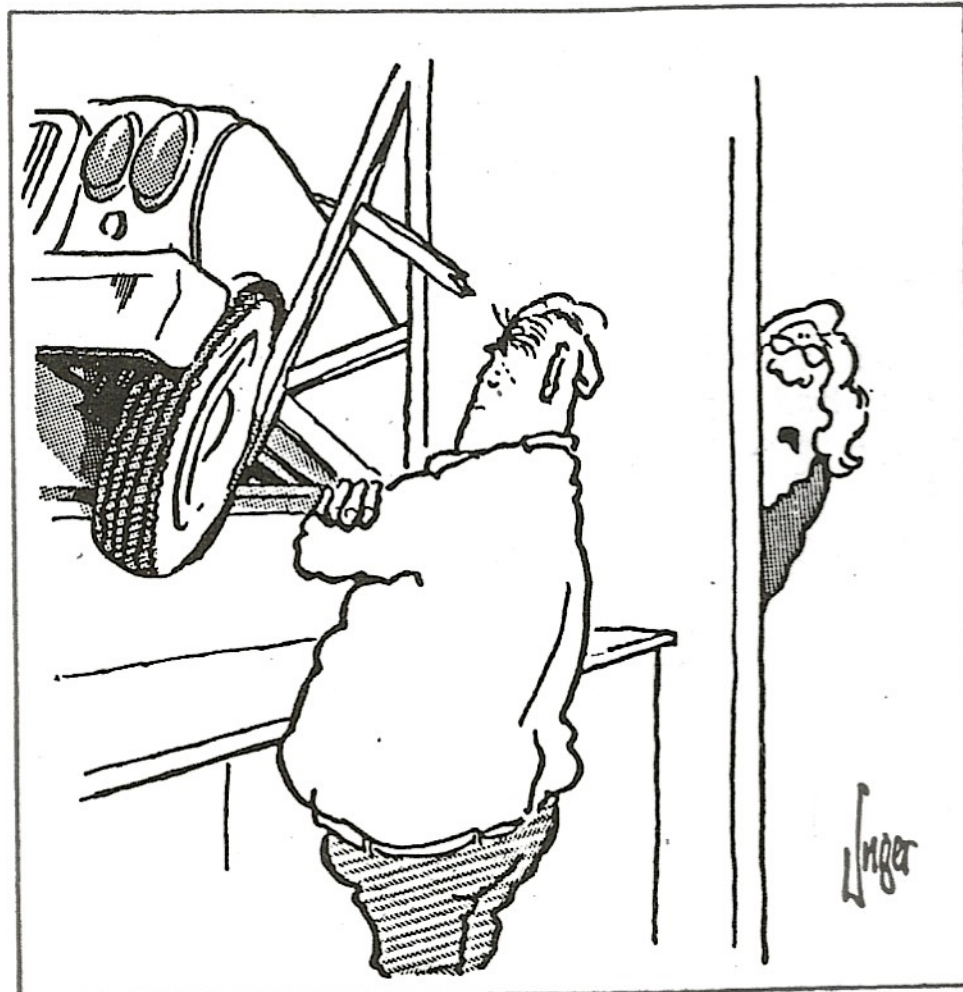
The condition of the car can of course also be described variously. Insurers use the following phrases:-

1. Excellent - meaning a car recently restored and usually considered mint.
2. Good - meaning a car with older restoration or in perfect original condition.
3. Fair - meaning a car being presently restored or in good unrestored condition.

Others will have difficulties obtaining any protection.

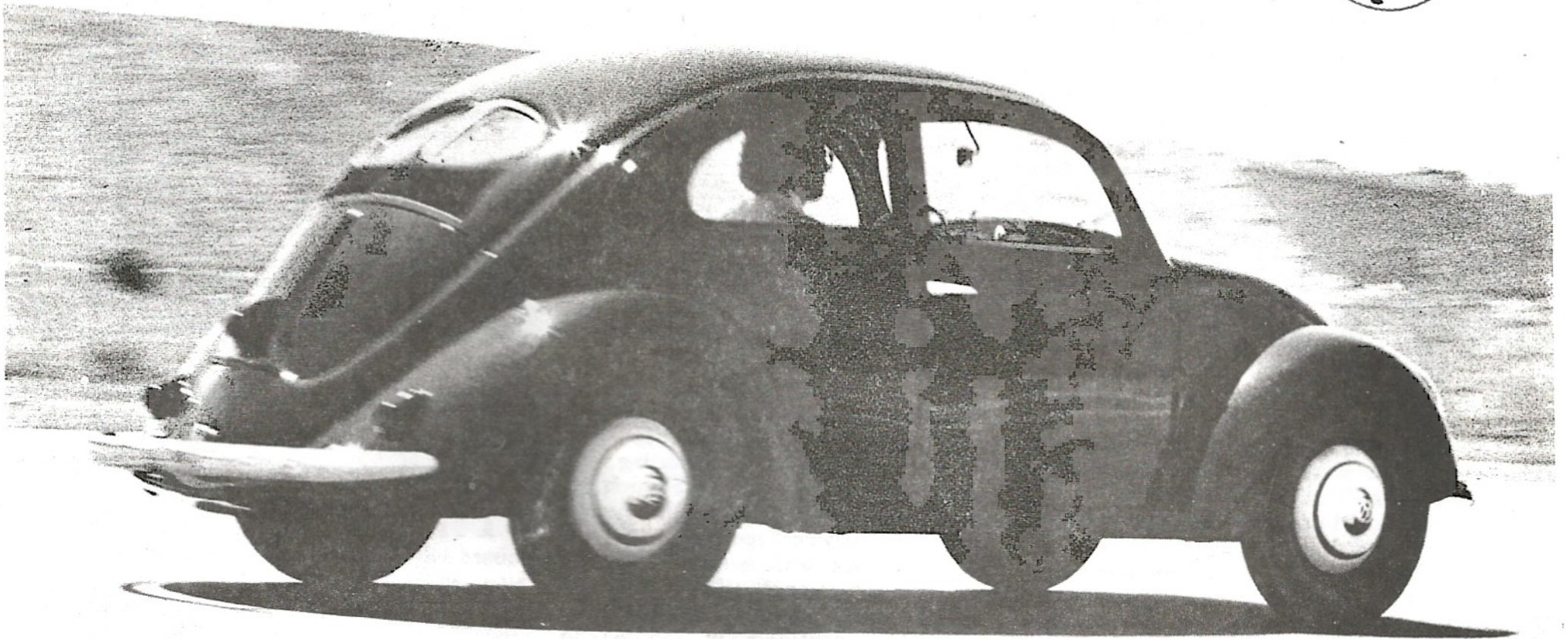
The liability premiums in most cases are extremely low (\$15. 1st car, \$10. 2nd car and \$5. each additional car). Protection against damage to the automobile (collision, fire theft etc) is available with a \$25. deductible and a rate of \$10. per \$1.000 value.

The only insurer used in our area for this type of protection is the ZURICH Insurance Company. They are represented by many brokers who will be glad to assist you further.



"I'll leave you to park the car, I'm going to bed."

The VW exerted a tremendous influence on the American driving public and on Detroit. It put the small car in demand for the first time ever in this country. It showed that little cars don't have to be flimsy, that quality doesn't have to be expensive, that honesty in auto design can be the best policy.



by Dan R. Post

SPLIT-WINDOW VOLKS

LATE IN NOV. 1930, a small notice appeared in the *Stuttgarter Zeitung* announcing a new engineering development company: Dr.-Ing. h.c. Ferdinand Porsche, G.m.b.H., Konstruktionsburo fur Motoren-, Fahrzeug-, Luftfahrzeug- and Wasserfahrzeugbau.

The public took little notice, but in the next few months, Porsche and his staff would create the basic small car design that was ultimately to affect the life of every German *Burger* from that day to this one; also quite a few Americans.

Dr. Porsche had long yearned for his own independent firm and knew he'd have to put together a good staff. He'd held discussions in 1929 with his friend at Austro-Daimler, Karl Rabe, and Rabe

agreed without hesitation to join Porsche as head designer. He and Porsche then brought in Adolf Rosenberger, an auto racing enthusiast and experienced businessman, to take care of the financial end of the venture.

Porsche's staff was soon complete—nine men in all, including Joseph Kales, an expert on aircooled engines who'd previously worked for Tatra and Skoda; Erwin Komenda, the body designer who eventually styled the postwar Porsche 356 sport car; Porsche's son Ferdinand (Ferry); Karl Frohlich, specialist for gearbox development; his personal driver, Goldinger; and a tightly knit trio of additional engineers and designers who followed him from Steyr and Austro-Daimler: Josef Mickle, Xaver Reimspiess, and Josef Zahradnik.

The Porsche engineering offices opened their doors officially at Kronenstrasse 14 in Stuttgart on Dec. 1, 1930. Dr. Porsche began numbering his projects with the numeral seven. The most important design to emerge from this early period was

Project 12, which became—in time—the Volkswagen Beetle.

Porsche personally favored large cars, but he'd long been intrigued by the problems of small-car design. In the mid-1920s, he had seen and would be greatly influenced by the ideas of a young Bohemian engineer who was then studying in Vienna—Bela Barenyi. Barenyi's original layout of the mid-1920s anticipated the VW's engine, engine placement, chassis design, and body configuration.

In Europe in 1931, motorcars were still largely rich men's toys. Even in the best of pre-Depression years, the average European's income was lower than the average American's. Ford put the U.S. on wheels, but no one had yet done that for Europeans. So as Dr. Porsche pondered a car for the masses, he realized it would have to be light, simple, easy to produce in great numbers, roadable and durable enough to suit the roads on the Continent which, at that time, still reflected the horse and wagon. The famous German *Auto-*

About the author: Dan Post is a pioneer auto editor and book publisher. His *The Classic Cord*, *Model T Ford in Speed and Sport*, and *Rolls-Royce, the Living Legend* have become classics in their own rights. This article is based on his 1966 book, *Volkswagen, Nine Lives Later*, available for \$25 from Post Era Books, 125 S. First Av., Arcadia, Calif. 91006.

bahnen were still a number of years away.

Porsche decided to go to a rear engine in order to avoid using a long driveshaft. He also did it to save weight, give passengers more interior spaciousness, and to allow easier mass production. But to fight tail-heavy weight distribution, the engine had to be light. Aluminum and magnesium castings gave him his light weight and also allowed air-cooling, which did away with the radiator and any worries of freezing in winter (most Europeans didn't have garages and weren't likely to get them). An Opposed 4, with its short crankshaft, seemed the logical answer. This type of engine, too, could be easily integrated with an aluminum-cased transaxle assembly.

The use of a conventional frame was out of the question: too high, heavy, and space-consuming. So he settled on a platform chassis with outriggers from a central backbone and an integral floor. Suspension would be by swing axles in the rear, with transverse torsion bars front and rear. The Beetle was beginning to take shape.

Porsche began trying to sell his ideas to various German automakers, and word soon spread through the industry that he had an interesting new design in Project 12. Due to the Depression, business everywhere was in a serious slump, but even so, Porsche picked up an important contract from the Wanderer Company in Chemnitz. Wanderer later became one of four firms to organize as Auto Union. Porsche sold Wanderer first on his Project 7, which Wanderer eventually put into production in 1.7- and 2-liter form.

At the same time, Porsche's organization also developed a larger, streamlined, very advanced 3.25-liter front-engined prototype for Wanderer—a fastback 2-door that Wanderer did not accept. This 3.25-liter, one-off prototype became Porsche's personal car, and he drove it for many years. Its body lines served as inspiration for his next project, which involved Zundapp.

Dr. Fritz Neumeyer, head of the Zundapp Motorcycle Co. in Nuremberg, felt the urge to diversify, so he directed Porsche to build three small-car prototypes. Instead of using an aircooled Flat 4, though, either Neumeyer or Porsche evolved the idea to try a radial, water-cooled 5 in the rear.

The Zundapp protos looked very much like sawed-off versions of Porsche's personal Wanderer 3.25. They were built after hours in total secrecy. Zundapp supplied most of the mechanical parts, while the Stuttgart coachbuilding firm, Reutter, put together the aluminum-over-wood bodies. The three Zundapp *Volksautos*, as they were called, were ready for testing in Apr. 1932.

Initial trials showed up a number of major flaws. Transmissions and torsion bars broke on several occasions. The radial engines overheated and proved hard to work on. At that point, Zundapp's future looked rosier in motorcycles, so Neumeyer, in order to terminate his agreement with Porsche ahead of time, released all rights to the *Volksauto* to its creator. This meant that Porsche was free to go ahead with Project 12 for other clients.

AFTER LOSING Zundapp's backing, Porsche approached NSU, another German motorcycle firm. Porsche showed drawings and models to NSU's managing director, Fritz von Falkenhayn, but suggested replacing the Radial 5s with Flat 4s. Herr von Falkenhayn agreed to finance and test three more prototypes. Porsche revised his Type 12 design extensively, renaming it Type 32. Prototype construction got under way in Jan. 1934.

Meanwhile two very strange happenings befell Dr. Porsche. First, largely on the strength of Porsche's success in designing racing cars, the Russian government invited him on a personal, 3-week guided tour of the U.S.S.R.'s major factories and technical centers. The Russians wined and dined Porsche, rolled out every available red carpet, and treated him with the greatest courtesy. Porsche felt the tour might end with the Bolsheviks inviting his engineering firm to bid on some specific contract; perhaps a "people's car" or something to do with auto racing. Nothing, though, could have been further from the Russians' mind.

Instead, at the tour's end, the Russian government announced that it wanted Porsche to accept the title "State Designer and Engineer of the U.S.S.R.". He was to be in charge of all engineering and technical projects for the entire nation. He could name his own price and terms. Porsche politely declined and boarded the next train back to Germany.

The other strange event that befell Porsche took place in Berlin at an engineering confederation meeting in 1933. Adolf Hitler had just come to power and announced his plans to create the *Autobahnen*—the world's most modern network of public highways—and also a *Volkswagen*, or people's car, whose price would be within reach of the average German working man.

At the Berlin engineering meeting, one of Hitler's representatives asked the

confederation to name an engineer who could develop a *Volkswagen**. According to the German auto historian, Erik Eckermann, "Somebody foolish got up and mentioned three names: Joseph Ganz, Edmund Rumpler, and Ferdinand Porsche. There followed an icy silence, because Ganz was a Jew, and so was Rumpler. That left Porsche."

In the autumn of 1933, one of Hitler's closest confidants, Jacob Werlin, who was then with Daimler-Benz, visited Porsche's office in Stuttgart. Through Werlin's influence, Hitler called Porsche to Berlin for a secret meeting. Hitler instructed Porsche at this meeting to prepare a memorandum for the government, describing his ideas of small-car design.

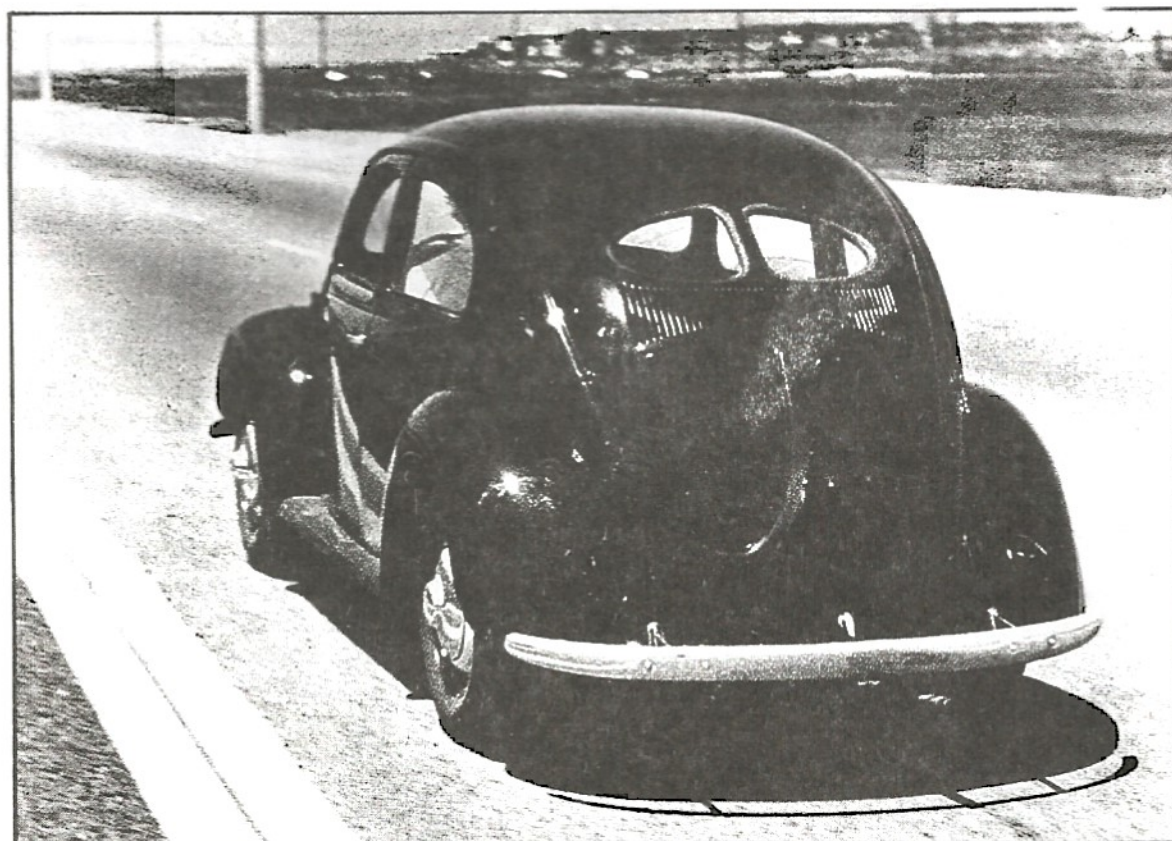
In that same meeting at the Kaiserhof Hotel in Berlin, Hitler expounded his own 5-point concepts of what the *Volkswagen* should be:

- 1) Speed—100 kph (62 mph) cruising.
- 2) Economy—approximately 33 mpg and good economy of repair.
- 3) Space—seating for 4-5 persons. "We cannot separate the children from their parents," said Hitler.
- 4) Aircooling—because of the lack of garages in Germany.
- 5) Price—less than RM 1000 (\$250 U.S. currency).

HITLER MIGHT WELL be called an auto enthusiast of sorts. He rarely missed a Berlin motor show and sometimes attended the Paris and London shows as well. His preference for large, impressive Mercedes wasn't accidental.

Even so, he was a politician first and foremost, and instead of promising a Depression-dazed Germany a chicken in every pot, he promised them a car in

*The word *Volkswagen* means "people's car" in German and, despite being capitalized, is a generic term. It didn't become a trade name until just before WW-II.



Notch beneath 1946 Volkswagen's bumper guides crank. Both the front and rear handles lock. Early VW's nipple hubcaps, which were chromed, and 16-inch wheels are extremely rare today.

Split-Window Volks

continued

every family. He soon began to repeat his *Autobahn* and *Volkswagen* messages so often and in so many forms that he would eventually have to come through with some sort of hardware.

Another favorite promise of *der Fuehrer* was that Germany's prestige would be upheld in international auto competition. This became a further reason for calling Porsche to Berlin. From the same Kaiserhof Hotel meeting came Hitler's commitment to the Nazi-backed Auto Union racing cars, which Porsche had designed on his own initiative earlier in 1933.

Porsche's Auto Union GP car had a 45° V-16 of 6010cc, 520 bhp supercharged, giving a top speed of 182 mph at 4500 rpm. The engine stood at the rear, with suspension via torsion bars, similar to the *Volkswagen*. After Porsche turned over the design, Auto Union built and raced the car. The international racing formula from 1932 to '37 allowed any engine of any size and design so long as the total car, dry and minus tires, didn't weigh more than 1650 pounds. Auto Union continuously improved Porsche's design during those four years and did exceedingly well in Grand Prix and hillclimbing competition on the Continent. Auto Union even brought the car to America for the 1937 Vanderbilt Cup race, which Bernd Rosemeyer won. After 1937, the international GP formula changed and this car was retired.

Porsche, meanwhile, stayed hard at work with his NSU *Volkswagen* project. The three NSU prototypes were larger and roomier than those built for Zundapp, and instead of a platform chassis they used a more conventional box-member frame. With its aircooled Flat 4 in the rear, though, its alloy-cased transaxle, 4-wheel-independent trailing arm torsion-bar suspension, and rounded body, the NSU Type 32 prototypes began to take the shape of the now familiar Beetle.

Designer Erwin Komenda was reputedly responsible for the body styling. The first two NSU prototypes were bodied by Drauz of Heilbronn, using the Weymann technique: artificial leather over a wooden superstructure. The third car had an all-steel body by Reutter.

As an aside, the Reutter-bodied NSU prototype, after extensive manhandling through testing, was mothballed in 1940 in a remote and overgrown shed in the Hohenlohe area of southern Germany. It survived the war, and one day in 1945 an NSU employee unearthed the car, got legal ownership, replaced the broken headlights, battery, and tires, and began driving it, running the odometer up to over 200,000 miles. He eventually sold it to VW, which owns it to this day.

NSU and Porsche tested the three new protos in 1934 and found them quite successful. Excessive engine noise turned out to be the most severe complaint. "It sounds like a worn-out stone crusher," remarked NSU head von Falkenhayn. But it held the road well, was comfortable, and

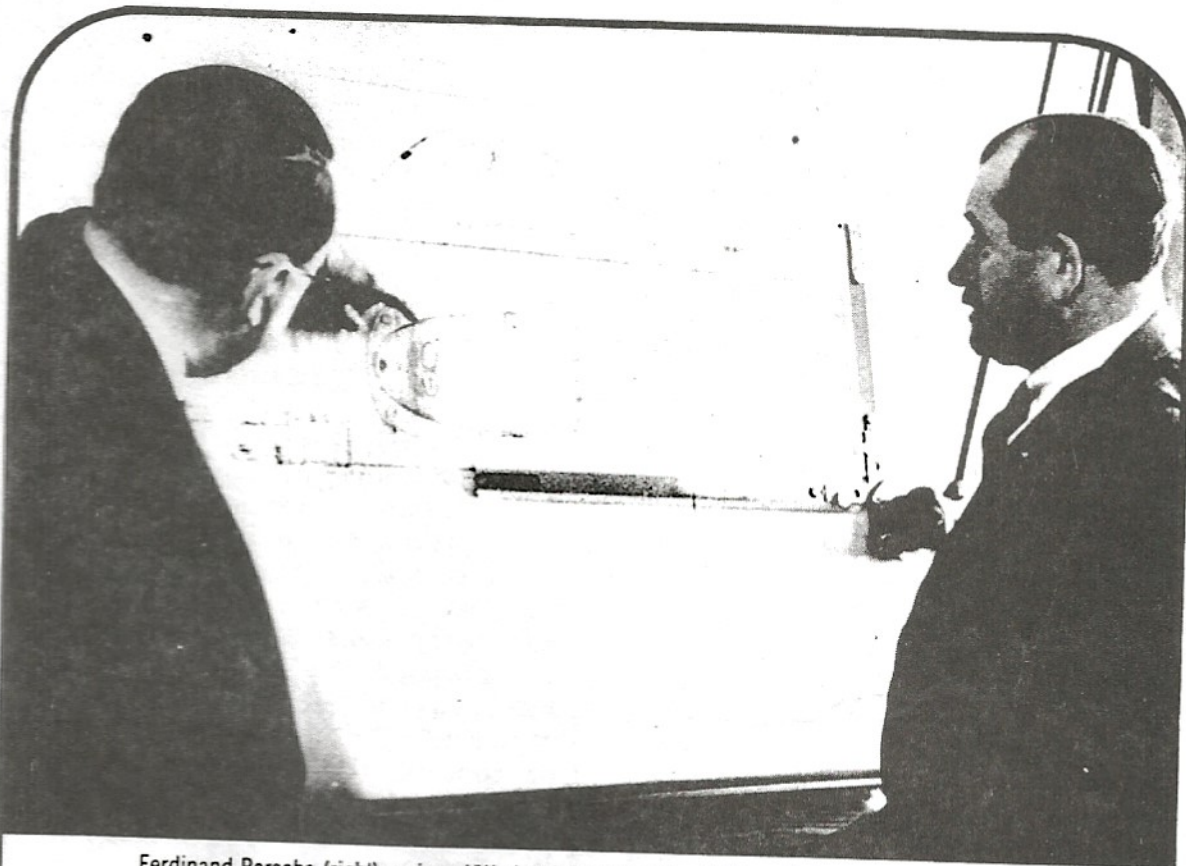
promised inexpensive quantity production.

But even after all that, Porsche's NSU deal came to naught. Reason: Fiat of Italy had entered an agreement with NSU in 1930. NSU agreed to turn its auto department over to Fiat and to build only motorcycles. In return, Fiat would construct a factory in Heilbronn and would make cars there under the name NSU-Fiat. Under this agreement, NSU

had to give up its small-car idea and settle financially with Porsche.

AT THE NEXT Berlin Auto Show in Mar. 1934, Hitler made another of his by-now-ritual political speeches. This time he irrevocably committed himself and the German motor industry to an affordable automobile for the masses.

"It is a bitter feeling to know that millions of good, industrious, and able



Ferdinand Porsche (right) reviews VW sketches in the late 1930s with Karl Rabe, his top aide.

FERDINAND PORSCHE was born on Sept. 3, 1875, in the small Bohemian town of Maffersdorf, now a part of western Czechoslovakia. His father was a master metalsmith.

Young Porsche developed two strong interests: electricity and motorcars. At 17, he built an electric lighting plant in his father's shop, and he earned pocket money by building and installing electric doorbells and telephones in the homes of neighbors and friends.

He apprenticed in his father's shop and later attended the Technische Hochschule (technical institute) in nearby Reichenberg. He designed two electric cars during this period but had no facilities to build them.

In 1893, aged 18, he moved to Vienna, where he finished high school and began to attend classes at the university. He also held down a job with an electrical engineering firm.

Vienna at that time stood out as an important European center of technology, including the then new automotive technology. Porsche got his first chance to observe and study early cars there. He decided that autos were what he wanted to be involved in.

So in 1898, Porsche took a position with Ludwig Lohner, a Viennese coachbuilder who'd just established an automotive department. Porsche became Lohner's chief auto designer.

His first vehicle, the electric Lohner-Porsche chaise of 1900, became Austria's only exhibit in that year's Paris World

Exposition, and it won great praise. Porsche later built a hybrid gasoline/electric version that could do 60 mph in 1901.

Porsche always showed great interest in racing, and in 1906 he became technical director of Austro-Daimler, where he remained for 17 years and developed a number of successful racing models. The Maja series did especially well and won 1-2-3 in the 7-day Prince Henry tour of 1910.

While with Austro-Daimler, Porsche also developed an aircooled Flat 4 for aircraft use. This engine perhaps was to influence his later thinking with the *Volkswagen*'s engine.

After WW-I, Austro-Daimler began to slide. In 1923 Porsche went to Daimler Motoren in Stuttgart, where he built a number of additional successful production and racing models. He received two honorary university degrees during this period.

In 1926, Benz merged with Daimler, and Porsche created the famous Mercedes S, SS, and SSK series. He also began work on a small-car project that eventually became controversial, causing Porsche to leave late in 1928. He joined the Steyr works the next year, engineering a number of 2.0- to 5.3-liter cars. When Steyr's fortunes also became shaky, Porsche resigned. His own engineering firm was then opened in Stuttgart.

Our driveReport tells the rest of the story. After WW-II, Dr. Porsche found himself in the French zone of occupation and was asked to advise on the Renault 4CV. He brought out the Porsche 356 sports car in Mar. 1949 and died on Jan. 30, 1951. □

people are excluded from the...transportation that could become for them a source of unknown joy, especially on Sundays and holidays. The problem is one that will be attacked with courage, boldness, and determination. What cannot be accomplished in one year will, perhaps, be taken for granted in 10 years," orated Hitler.

His words resounded among the working classes as the promise for a brighter future—a change in outlook from defeat and the Depression to hope and prosperity.

But to the *Reichsverband der deutschen Automobilindustrie* (Society of German Automakers), Hitler's words boded confusion. German vehicle manufacturers didn't see how a car could ever be produced inexpensively enough for the middle classes, much less for the great mass of German workers. The RdA regarded Hitler's promises as so much political propaganda, and no one seriously suspected the development of a *Volkswagen* would soon be included in the official Nazi government budget.

Porsche, too, was beginning to wonder whether *der Fuehrer* was simply blowing smoke. The Nazi minister of transport told Porsche after the 1934 Berlin auto show that there would be a delay in the small-car project. For one thing, Porsche had projected his Type 12 at a suggested price of RM 1500 (\$375), which Hitler considered too high. The minister suggested to Porsche that he try to bring down the price.

Werlin re-established contact with Porsche in June 1934, about-facing once again and giving Porsche a definite go-ahead for development. Hitler, he said, would solve the cost problem in an "administrative" way.

Various German automakers were then called on to supply components for a car to be designed specifically by Porsche. Official sponsor of this project was to be the RdA itself—the Society of German Automakers.

Porsche's immediate task was to build another trio of prototypes. The RdA authorized a token budget of RM 200,000 (\$50,000 U.S.), which was totally ridiculous, and to add insult to injury, they stipulated that the prototypes be finished within 10 months. Despite a hopeless outlook, Porsche determined to try; he set up a workshop in his garage in Stuttgart to begin work on "VW Series 3." Actually, what he intended to do was simply refine his design of the Zundapp and the NSU *Volksauto*.

By the time Hitler spoke at the 1935 Berlin auto show, his dream had taken some semblance of form. He talked mostly about Dr. Porsche's progress and gave out tidbits of the car's details—its rear engine, aircooling, etc. And while the usual cheers came from the Nazi party regulars, those inside the German auto industry became more antagonized and antagonistic. As he droned on and on about his favorite project, the word *Volkswagen* became more common. The German people picked up the name and eventually planted it on the car itself.

DR. PORSCHE and his small staff of engineers, including Rabe, Kales, and Ferry, concentrated only on the Volkswagen's technical aspects now, not concerning themselves with politics. Design and construction of the three original protos dragged on beyond the specified 10 months. Porsche, fully aware of the bad feeling his project was causing in the auto establishment, wanted to be sure his VW Series 3 "mules" would stand up when they were handed over to the RdA for testing.

Twenty-eight months after Porsche got the go-ahead, the three cars were presented to the RdA, on Oct. 12, 1936. The industry insiders immediately dubbed these cars "the ugly ducklings."

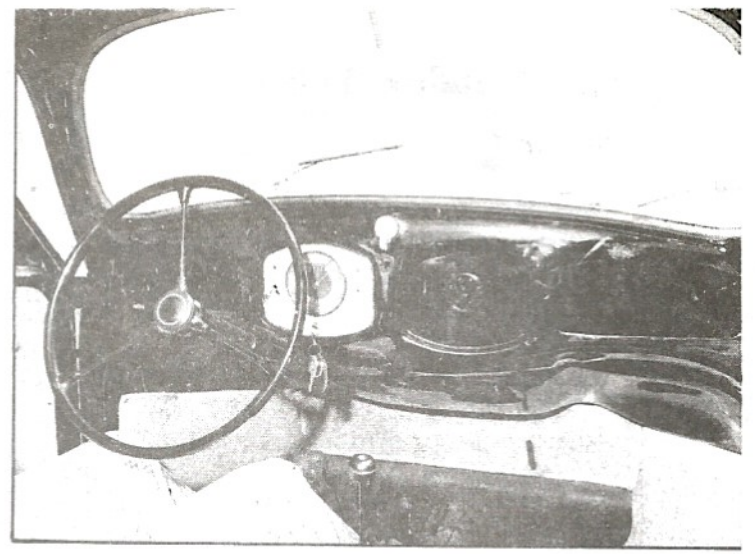
Testing started right away, with around-the-clock runs of 30,000 miles. Emil Vorwig, technical director of the RdA, interpreted the test results thusly: "On the whole, the test cars proved themselves on the 50,000-km trip. The structure proved itself suitable, the faults and shortcomings discovered are not of a basic nature and can presumably be corrected without great difficulty. Certain components, such as the front axle and brakes, require more testing for their further development. Gas and oil consumption falls within acceptable limits. The driving capabilities and characteristics of the car are good. The Volkswagen shows attributes which recommend further development."

One concern, though, was the car's weight. To conform to Hitler's requirement, inexpensive cast iron would have to give way to expensive alloys. It was hard to believe the People's Car could be sold for anything like RM 1000.

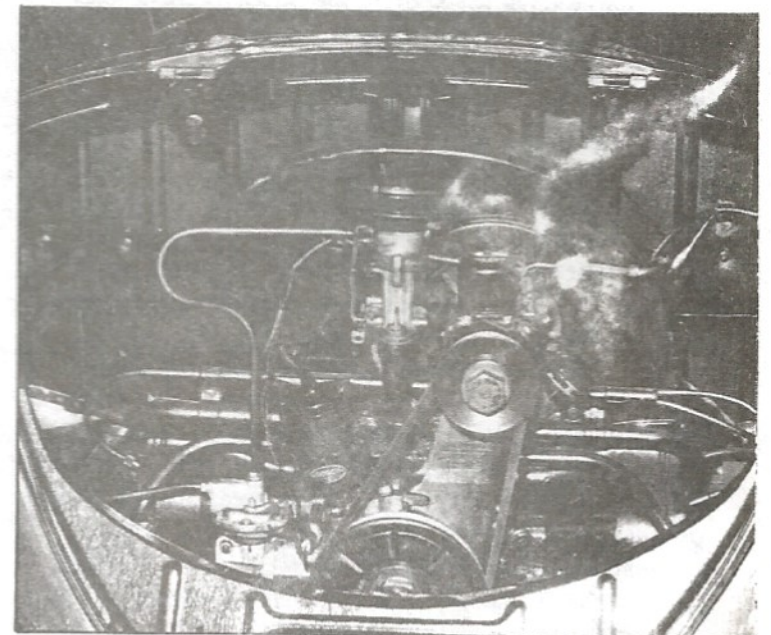
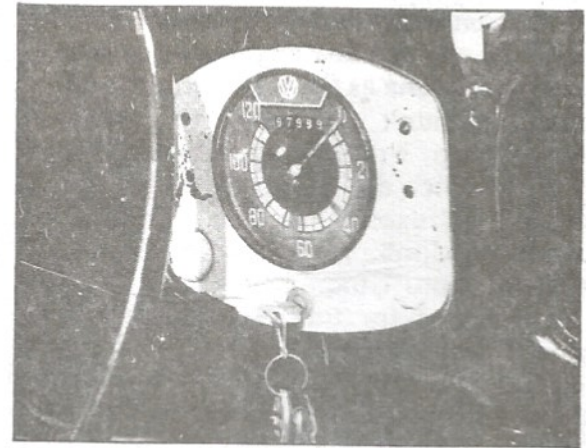
Quite reasonably, too, the German auto industry wanted no further part in the Volkswagen's development. The VW could presumably put a number of them into very uncompetitive circumstances, especially makers of economical small cars. Their reluctance became apparent even to Hitler.

At the 1937 Berlin auto show, Hitler ogled the new models with his entourage of Nazi bigwigs. They stopped at the Opel exhibit and were warmly greeted by Herr von Opel himself, who directed Hitler's attention to Opel's latest projected econocar. A card on the car read RM 1400. Smiling good-naturedly, Herr von Opel said innocently, "This is our *Volkswagen*." Or was it innocently? *Der Fuehrer* couldn't be sure Opel wasn't baiting him. So a few days later, the government passed some new laws restricting the distribution of iron and steel. Although no specific mention was made, every subsequent application by Opel for steel to build the small car was refused, and Opel's RM 1400 "*Volkswagen*" saw very curtailed production.

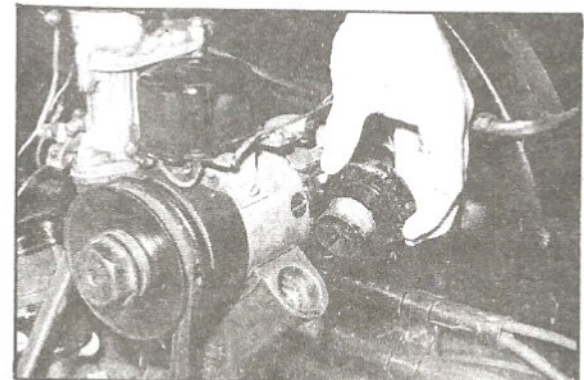
AT THIS POINT, Hitler realized he needed a separate state company to see the Porsche VW Type 3 into production. He and Robert Ley, head of the German labor ministry, discussed all the VW data. A government-owned company was chartered to perfect the VW design and to build factories. The project was financed

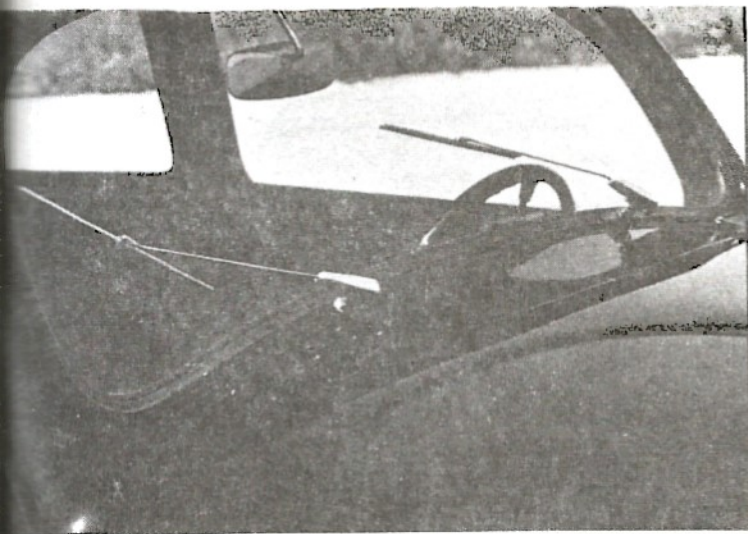


Above: Twin, door-less gloveboxes flank dashboard. Mirror and visors are from 1949 VW. Lever on firewall lowers gas inlet inside the tank to give one more gallon's driving. VW shunned gas gauge until 1962. Instrument panel could be fitted into right-hand pod for British conversions (Wolfsburg was in Germany's British sector after the war). Below: Speedo dominates dash, with two idiot lights on either side plus switches for lights, wipers. Starter button lurks beneath center of dashboard.

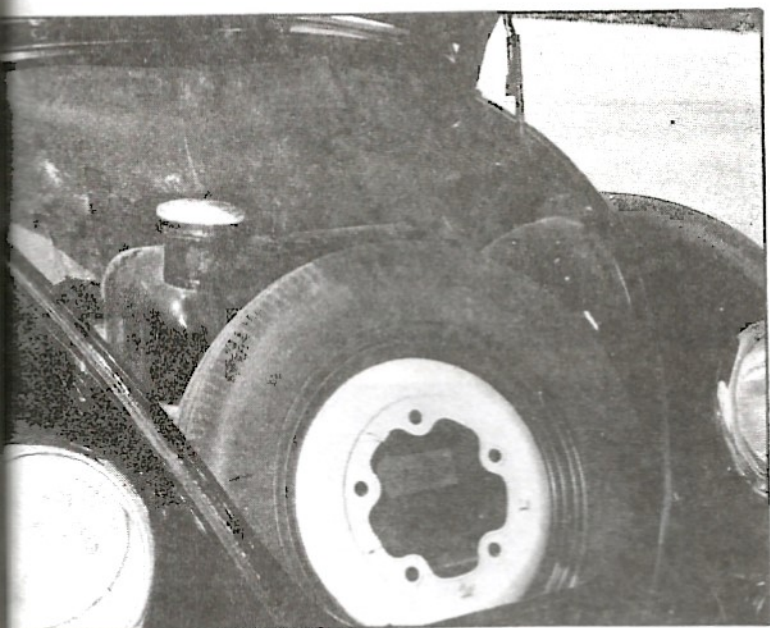
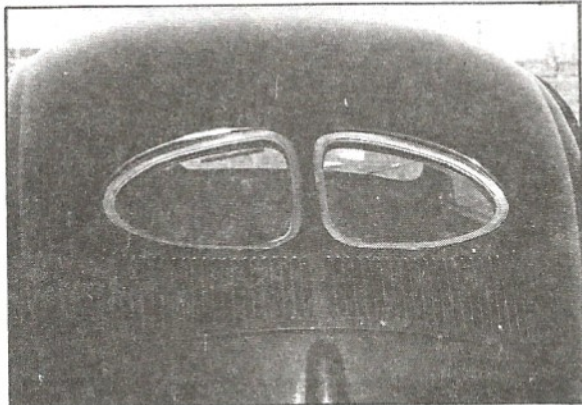


Above: Uninsulated engine compartment and un-tilted body makes for plenty of noise inside car. This 1946 engine delivers 24 bhp. It was raised to 25 the next year, then 30 in 1948 and 36 in 1954. Below: Generator bracket doubles as the oil filler.

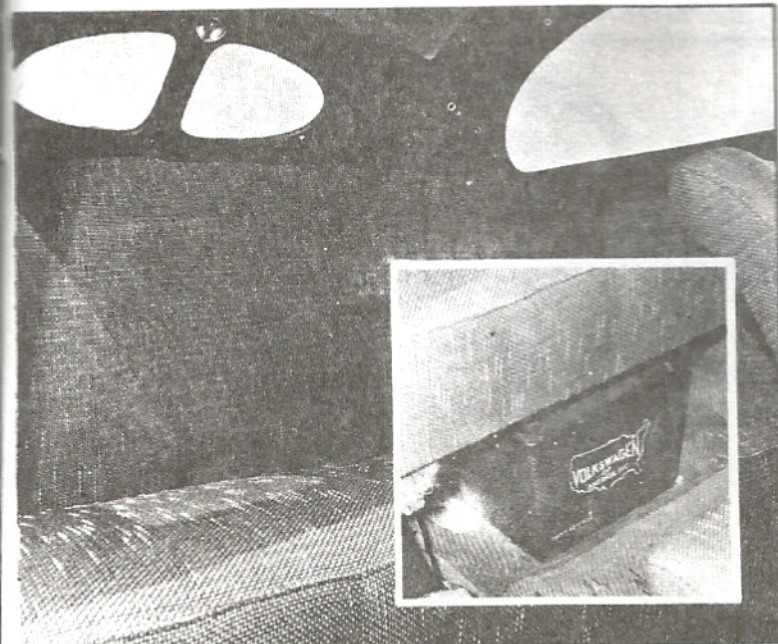




Above: Thick windshield pillars cut front visibility. Below: Nor is it an easy task to see out the back. Huge blind spots were a hazard.



Above: Tall gas tank cuts into cargo space, and hood has to be raised to fill it. Headlights are from later VW. Below: Durable, ugly upholstery material has a certain grip to it, keeps riders from sliding around in turns. Inset: One of the VW's lesser pleasures is checking the battery. Seat bottom lifts for access.



Split-Window Volks

continued

from the treasury of the *Deutsche Arbeitsfront*, the Nazi party labor organization.

Porsche was installed at the helm of the new VW development company in Feb. 1937, with Werlin and Dr. Bodo Lafferentz as board members. Encouraged now for the first time by secure financial backing, Porsche set out to perfect the VW with new vigor.

Thirty ugly duckling prototypes stood ready later that year, thanks to help from the Daimler-Benz shops. This improved design was called the VW Series 30. A crew of 300 German storm troopers, chosen at random, carried out punishing trials of the 30 to uncover flaws as quickly as possible.

The test cars covered a total of 1.2 million miles, all told, under all driving conditions. They swarmed over the newly completed *Autobahnen* and raced around the Alps and Germany's back roads. There was no budget ceiling by this time, and expenditures ran into millions of *Reichsmarks*. The cars themselves, though, emerged from the ordeal in fine fettle. The Volkswagen came through as a producible, practical car.

PORSCHÉ HAD COME to the United States in 1936 to study production methods. He visited, among other places, the Briggs Mfg. Co. in Detroit and most likely talked with John Tjaarda, who'd long been an advocate of rear-engined cars. Porsche also went to Ford. On his next trip to Detroit in 1938-39, he talked with Henry and Edsel. Porsche also began recruiting engineers of German ancestry on this second visit to the U.S. to help set up his factory in Wolfsburg.

Another company Porsche visited was Doman & Marks in Syracuse, N.Y. Doman & Marks formerly were Franklin engineers who were developing aircooled engines independently and who were at that time working on the Airomobile's Flat 4 along with a similar design that later became the White Horse truck engine. Joseph Kales spent 10 days in Syracuse studying fans, shrouds, finning techniques, and head attachments. How much Briggs's body methods and Doman & Mark's aircooling affected Porsche isn't recorded.

The Wolfsburg factory came about in a way that only the Nazi party could perpetrate. Ley and Lafferentz studied maps for the best access by rail and water. Choosing lower Saxony as the general locale, they flew over the area in a light plane, finally pinpointing a 20-square-mile site taking up most of the estate of Count von Schulenburg (and surrounding the 14th-century Wolfsburg castle). This land was unceremoniously confiscated by the Nazis. Hitler attended the laying of the cornerstone on May 26, 1938.

The job of designing the huge plant first was assigned to the architectural department of the University of Braunschweig, but later, through the efforts of Werlin, the project got

reassigned to Peter Koller, an obscure Augsburg city engineer. Consultant to Koller was his teacher and Hitler's favorite architect, inspector-general of building, Albert Speer.

The factory was to be built on a scale unheard of in all Europe. All the resources and energy of the Third Reich went into its construction. The first cars were to be produced by late 1939, with 100,000 slated for 1940 and twice that number for 1941, then soon reaching 450,000 annually "after the coming victory over the plutocrats," said Robert Ley.

Hitler approved Koller's plans early in 1938, and construction started as soon as materials hit the site. Koller, meanwhile, drew up plans for the city of Wolfsburg, which called for community housing for 15,000 families. By the beginning of WW-II, 2500 units had been completed. (The war prisoners who worked in the factory during hostilities, though, were housed in semi-permanent barracks.) Ironically, many of the large machine tools used to equip the Wolfsburg plant had been purchased in the U.S.

EVEN AS WOLFSBURG was being built, Porsche and his staff continued to improve the *Volkswagen*. The Series 30 gave way to the Series 38, which Hitler (and Porsche) finally approved for production.

Aircooling had proven Porsche's toughest obstacle. In the Series 30, Porsche changed the air intake from the sides to the rear, but the louvers were so large they took up the space of the rear window. Extensive testing and development finally brought about a blower that needed less intake surface. By rearranging the ducting and moving the gas tank up front, Porsche's staff once again put in a rear window.

The pronounced beetle-like styling, which had been developed somewhat around the high louvering at the rear, could now be softened and refined. Body changes at this time included front-hinged doors and larger rear side windows. From these changes in the Series 30 evolved Model 38, designated by the year of its development. This design was destined to remain virtually unchanged in its overall concept for more than a generation to come.

With the design frozen in 1938 and the factory well toward completion, the Nazis set up a pilot assembly line and handbuilt a few Model 38s. Most of these found their way into the hands of top-ranking Nazis.

At this time, too, the Nazis began advertising, propagandizing, and actually selling the VW. The car was publicized to the Germans as the *KdF*, the letters standing for *Kraft durch Freude* (strength through joy), which was a slogan of the Nazi labor front. Nameplates and hubcaps, advertising logos and signs were being prepared with the *KdF* insignia, but it soon became apparent that no one liked this designation for the car. The name *Volkswagen* had been associated with it for too long a time. It had a natural ring and lent itself nicely to abbreviation (VW is pronounced *fow-vay* in German). So the

Volkswagen became the Volkswagen at last.

The Nazis launched their first auto sales campaign with full party fanfare, even to the issuing of postage stamps. The stamps showed a typical German family rushing along an *Autobahn* in their new VW.

The Nazi purchase plan also involved stamps, but of another sort: savings stamps. The Nazi labor organization, directed by Robert Ley, established a savings plan that theoretically let the average German worker buy a new VW by buying a weekly minimum of RM 5-worth of stamps. VWs weren't for sale through normal dealers, nor could cars be bought for cash; only through the government's savings-stamp plan. And the money raised this way wasn't put into armaments nor into the Wolfsburg factory but rather, so the story went, was set aside in a special account and kept intact. No interest was paid to VW stamp holders, though.

People began buying stamps, but even before normal production could roll in Wolfsburg, the Nazi government siphoned off steel and raw materials for the war effort. Civilian auto assembly never really got going, yet more than RM 280-million—an average of RM 400 per cardholder—came into Nazi coffers through the VW stamp program. And while the national VW enthusiasm seemed to support the car, critics called it a Nazi con game, saying the cars would never be delivered. They weren't, of course, but the Germans could see thousands of military VWs emerging from the Wolfsburg plant during the war.

After the war, those stamp buyers who survived organized and pressed claims against the postwar Volkswagen organization. German courts tossed these claims back and forth for 12 years, generally summarizing that cardholders weren't entitled to either cars or money.

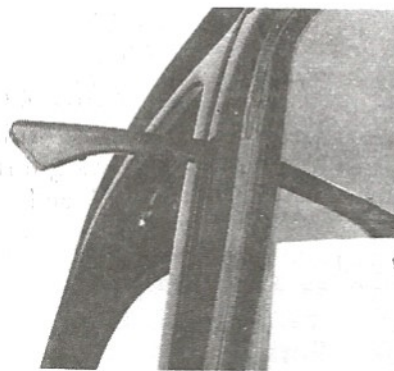
But even so, in 1961, the Volkswagen management took it upon themselves to honor the ancient stamps. Cardholders would receive a DM 600 credit toward a new VW or DM 100 in cash. This turned out to be quite generous, because the original RM 1000 exchanged to DM 100 at the going rate.

AFTER THE WAR, Wolfsburg ended up in the British zone of occupation. The factory had been badly bombed, but the British, needing cars for themselves in Germany, helped to rebuild the plant and eventually got it turning out cars. Production started in early 1946, and that year about 9000 VWs got built, most going to the British military.

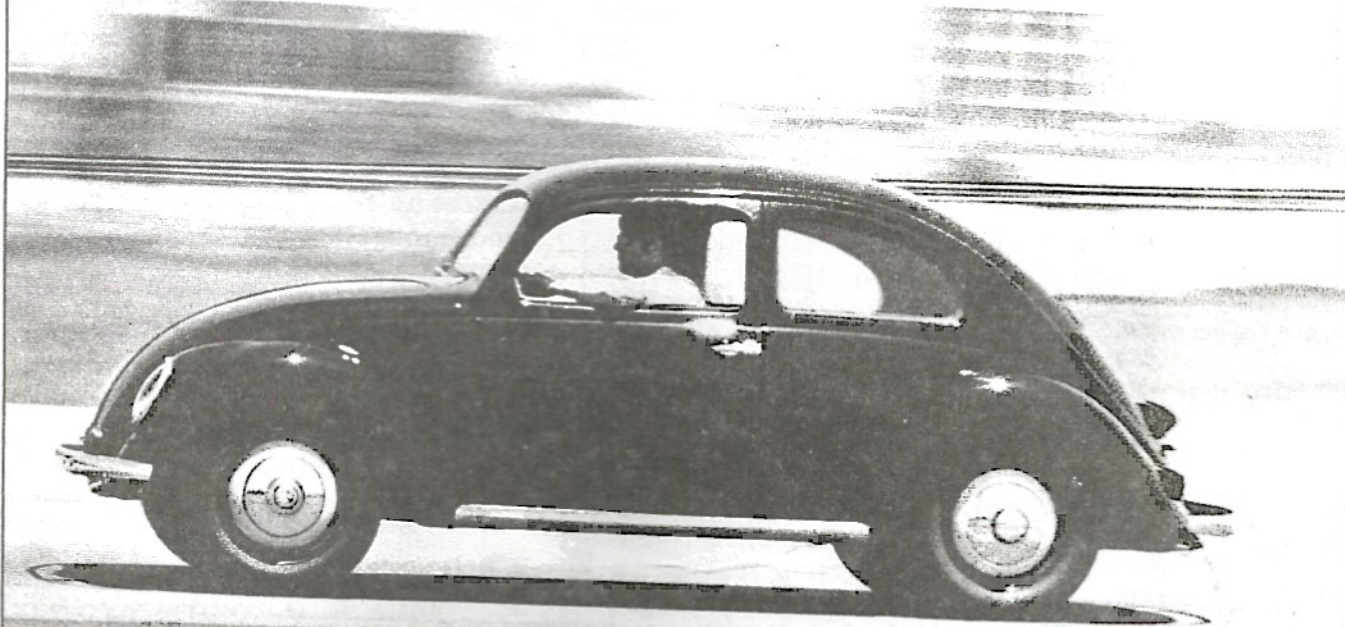
Later the British occupants began putting some cars up for sale. They were quickly grabbed by British and American troops for their personal use, and a few were also exported to Holland. Payment had to be made in cash.

In 1947, the British began a search for a qualified leader who could bring VW into the world market. They found their man in Heinz Nordhoff, previously with Opel, who stayed with Volkswagen through the fantastic expansion it enjoyed through the 1950s and '60s.

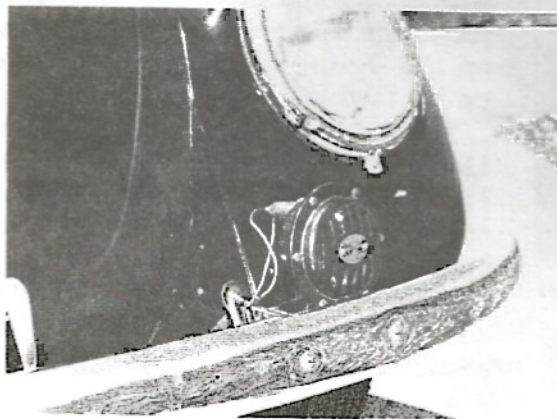
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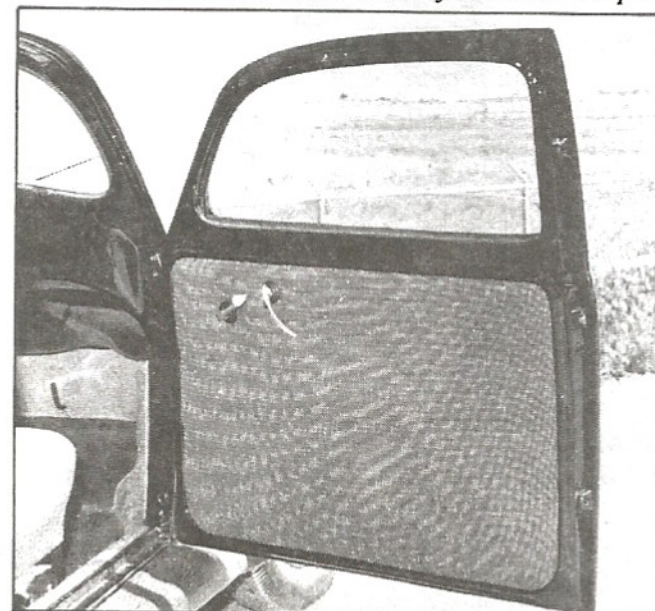
Left: Turn-signal flippers carry bulbs inside, are activated by a switch on the center of the instrument panel. Right: When the car's equipped with a radio, here's where the antenna goes on the roof.



Veedub's acceleration has to be described as leisurely, and non-synchro trans takes some pampering. Below left: Horn was later recessed behind its oval grille in fender. Below right: Tiny, hard-to-see tail lamps were enlarged, re-enlarged, and raised in subsequent models.



Below left: Gearshift knob has VW emblem surrounded by a cog: Nazi workers' symbol. Choke stands beside shift lever. Below right: Window crank takes 10.5 turns to roll from shut to open.



Major Model-Year Changes Volkswagen, 1949-77



1949—Outside hood release replaced by under-dash pull cable; instrument panel redesigned and set into one gauge in front of driver; no more crank hole; Solex carb becomes standard; VW convertible and transporter bus introduced.

1950—Hydraulic brakes replace mechanicals; ashtrays added front and rear; heater made quieter; heat-riser added; sunroof added.

1951—Kick-panel vents added for 1951 only; chrome windshield molding and Wolfsburg hood crest added.

1952—Synchro added to 2-3-4; ventipanes added; twin combination brake/tail lights added (previously one fender lamp and stop light in deck); rotary heater knob replaces pull type; T decklid handle replaces loop type; dash bin gets door; window cranking reduced from 10 1/2 to 3 1/2 turns; turn signal switch moved from dash to steering wheel; 5.60x15 tires replace 5.00x15.

1953—Split rear window gives way to oval; ventipanes get lock button; brake fluid reservoir moves from master cylinder to spare tire well.

1954—Keyturn starter replaces pushbutton; engine displacement raised from 1131cc to 1192cc, power from 30 to 36 bhp; no more top window in tail lights; oilbath aircleaner replaces felt element type; 3-way domelight added; no more engine break-in.

1955—Fender-mounted directional flashers replace semaphores.

1956—Bumper overriders and twin tailpipes added; tail lights moved up two inches on rear fenders; new steering wheel; redesigned gas tank gives more underhood space; front seatbacks now adjustable; nylon sunroof fabric replaces cloth; heater knob moved forward. Karmann-Ghia introduced.

1957—Doors get adjustable strikers; tubeless tires; front heater outlets moved rearward.

1958—Windshield and back glass enlarged; front turn indicators atop fenders; radio grille now ahead of driver; flat gas pedal replaces roller; bigger brakes.

1959—Chassis reinforced; improved fanbelt and clutch.

1960—Pushbutton door handles replace pull type; padded visors; plastic headliner replaces mouse hair; dished steering wheel and steering damper added; contoured seatbacks.

1961—Synchro on low; power from 36 to 40; passenger sunvisor and grab handle added; automatic choke, transparent fluid reservoirs, pump-type windshield squirter, automatic choke, sidemarker lights, non-repeat starter switch added. VW Type 3 introduced at Frankfort Auto Show.

1962—Tail lights enlarged; gas gauge replaces fuel reserve tap; hood spring-loaded; 3-point seatbelt mounts, heater outlet sliders added.

1963—No more Wolfsburg crest; sunroof handle folds flush; leatherette headliner; foam-insulated floor.

1964—Perforated vinyl upholstery replaces leatherette; cranked steel sunroof instead of sliding fabric; horn half-ring replaced by thumb buttons; larger rear license light.

1965—Bigger side windows; no more locking decklid; thinner front seats; heater knob replaced by levers; more heat volume; pivoted sunvisors; flat-folding rear seat.

1966—Horsepower from 40 to 50; 1300 on decklid; wheels revised; flat hubcaps; half horn ring re-introduced; headlight dimmer on steering column; center-dash defroster outlet.

1967—Horsepower from 50 to 53; displacement from 1300 to 1500; glass headlight covers removed; parking lamps in turn signals; backup lights added; "Volkswagen" in script on decklid; locking door buttons; dual brake system; electrical system from 6 to 12 volts.

1968—Single-bar bumpers; bigger tail lights with integrated backup lamps; external gas filler; cowl air inlet; hood release moved outside; flatter door handles; sarcophagus seatbacks; collapsible steering column; automatic stick shift optional.

1969—Swing axles give way to true independent rear suspension; hood release moves inside glovebox; rear-window defogger/defroster added; inside gas-door release; lock on steering column; day/night rearview mirror standard; symbol dashboard identifiers.

1970—VW diagnosis and maintenance program introduced.

1971—Super Beetle introduced with coil-spring front suspension, larger trunk; VW Type 4s debut; computer-analysis plugs installed in final 6 months of 1971 production.

1972—Inertia-reel belts, energy-absorbing steering wheels added.

1973—Beetle breaks Model T Ford's production record. "The Thing" introduced; 5-mph bumpers debut.

1974—VW Dasher bows.

1975—VW Rabbit and Scirocco introduced; electronic fuel injection standard in Beetles and buses.

1976—Beetle gets sporty wheels, rear-window defogger.

1977—Only Beetle convertible available in U.S.

Split-Window Volks

continued

I've owned two VW Beetles in my time—a 1955 and a 1958 model—and I loved and hated them both. I bought the '55 in 1957—early enough so that when I drove it through the South, filling-station attendants still had to be told where to find the gas tank.

We Beetle owners used to wave to each other back then, a gesture I later decided had to be slightly paranoid. We were symbolically telling one another, "We're not crazy, everyone else is." But I remember with slight sadness when VWs became so common that drivers *stopped* waving.

And I've thought about the Detroit executives who must have been looking down on Grand Boulevard from the 14th floor of the GM Building, seeing the first of those initial few Beetles crawling around on the street below, wondering, "Why would anybody buy such an ugly little car?" No product planner in his right mind, no market researcher, no designer, no engineer, no general manager, no auditor, no advertising exec, and especially no rank-and-file autoworker would have given the car half a chance for success. How could a cramped, ugly, noisy little car with a lawnmower engine behind the back seat and a "trunk" under the hood—how could it possibly succeed?

THE RARE 1946 BEETLE you see here was purchased in Germany by a U.S. GI that year—one of a handful sold. He brought it to this country and, a couple of years later, sold it to an elderly couple in Pasadena, Calif. At that time, of course, VWs were still all but unknown in the U.S. and constituted, if anything, a joke.

In 1954, just as Volkswagen was taking a toehold in the American car market, Johnny von Neumann, then the VW West Coast distributor, bought this 1946 Beetle from the Pasadena couple and reconditioned it, probably to sell it as a used car. Nobody, though, wanted it. Von Neumann was careful to replace worn and missing components with original parts, so while the car—as it stands today—isn't actually restored, it's very close to its 1946 self. The car's present owner, Volkswagen of America, took over from von Neumann several years ago.

To drive the ancient Beetle today shows how far and how quickly VW's under-the-skin improvements developed in those formative years. For example, the mechanical brakes, while they'll stop the car in a straight line, take a tremendous amount of leg muscle. You've really got to stand on the pedal. Brakes are the overriding concern—I drove with the knowledge that if something were to pop up in front of me, I'd be better off dodging than trying to stop.

The other thing I noticed immediately was that this Volks has no shock absorbers—just the torsion bars. That's how it came from the factory: shockless. So the suspension feels altogether different from any other car I've ever driven. The ride is unbelievable: rough, jouncy, un-

dulating, teeth-rattling. Going over a bump feels like passing through an earthquake at six on the Richter scale.

Steering is extremely quick, which is much of what makes all Beetles such great fun to drive. But cornering can be tricky, especially with the rear weight bias and the lack of shock control. The 1946 Beetle oversteers as expected, and I didn't put it through any dramatic maneuvers, for obvious reasons.

The crashbox takes some getting used to, too. There's no synchromesh, so any downshifting means double-clutching and sometimes double-double-clutching. Even then you can expect to grind going into second and low. Upshifting isn't bad—just a tick from low to second. Second to third and third to high are fine. The gearshift lever itself feels tight—no wobble. But you have to concentrate, that's for sure.

It's a noisy car. There's no insulation to speak of; nothing between the engine compartment and the back seat. Even the headliner ends short of the split rear window. Acceleration lets you know that the engine and trans are working. But when you're cruising along in high at 55, it's not too bad.

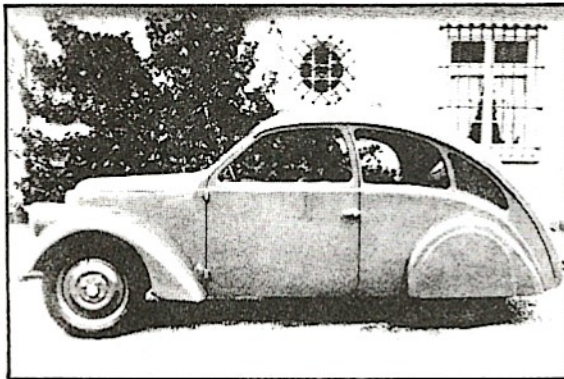
This Veedub has the 24-bhp engine. It's no neck snapper, but neither were my two 36-bhp cars. You have to learn to drive within the engine's capabilities, so I can't really fault this '46 on muscle.

Too, you have to remember that the odometer registers 198,000 kilometers (about 124,000 miles), so it's not a new vehicle despite its looks. Our test admittedly isn't altogether fair.

If anyone had walked up and told you in 1946 that the Volkswagen would soon become one of America's best-selling cars, second only to Chevrolet and Ford during some years, and that it would influence the entire American auto industry like no other car since the Model T—well, you'd have laughed. Anyone would have laughed. It just couldn't happen, especially judging by the performance and personality of this 1946 Beetle.

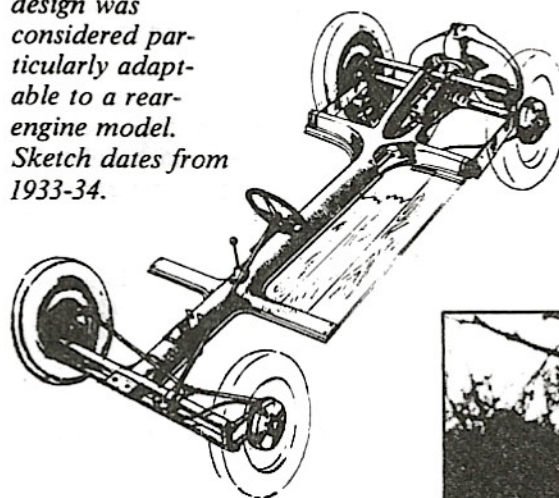
Yet it did happen, and the question becomes, Why? The answers aren't simple, but they boil down to five dominating reasons: 1) VWs were (are) great fun to drive, with a lot of sports-car feel and a crispness of handling that had never before been so affordable. 2) VWs were extremely well put together: workmanship and general quality remained flawless for perhaps a decade. 3) The car became an inverse status symbol, this at a time when many Americans—especially the young—were rebelling against Detroit's excesses. 4) The Beetle represented fair economy (although I well remember how expensive dealer service was even back in the 1950s). And 5) the car had marvelous resale value. At one time, demand for new VWs was so high that you had to wait 6-9 months to buy one. My 1955, bought in 1957, was a black-market car, with European specs and bulb headlights.

The Volkswagen arrived in America as a grass-roots phenomenon. Word-of-mouth was the car's only advertising in the beginning. It took hold initially as a young people's car; I bought my first two while still in college. In 1965, my dad, who'd

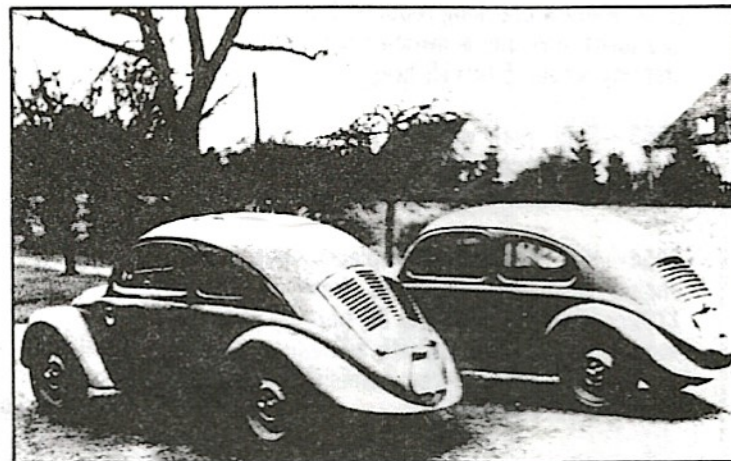


Above: Early VW forerunner, this Zundapp Type 12 was designed by Dr. Porsche and got its first tests in Apr. 1932. Its 5-cylinder, rear-mounted engine put out 26 bhp. Reutter, the Stuttgart coachbuilder, made the body of wood and aluminum.

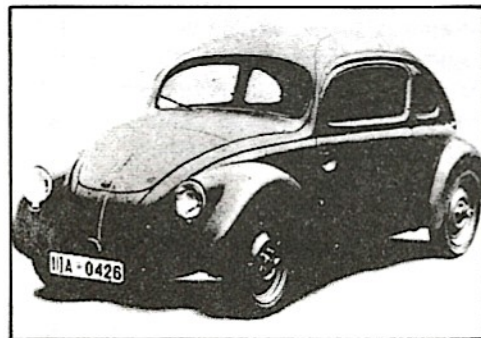
Below: Central tube chassis design was considered particularly adaptable to a rear-engine model. Sketch dates from 1933-34.



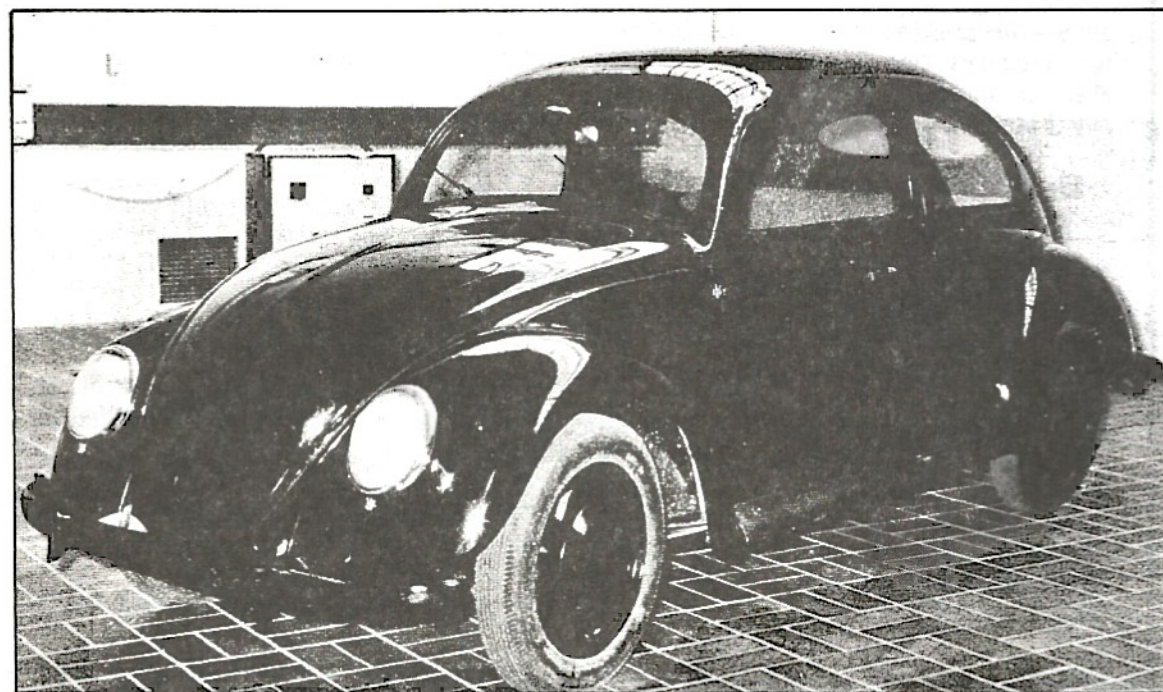
Right: Dubbed "Ugly Ducklings," 1936-37 Series 3 prototypes had no rear windows, but driver got a weak peek through cooling louvers. Glass inside car (not visible) separated engine from back seat.



PHOTOS COURTESY VOLKSWAGEN OF AMERICA, INC.

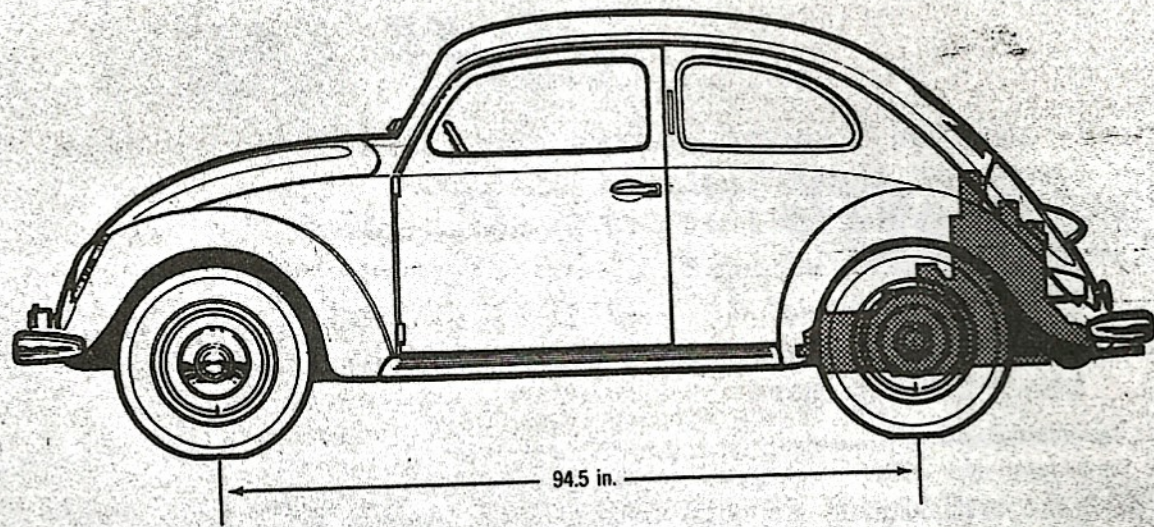
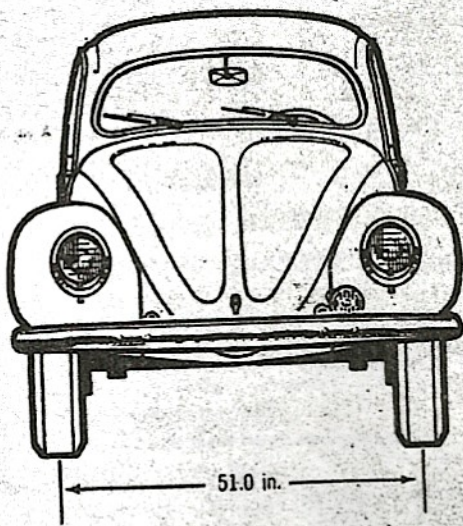


Left: Headlights migrated to fenders for Series 30 of 1937. Ironically, these early prototypes had no running-boards, while production Beetles all did. Below: Handbuilt Type 38 Beetle now rests in Wolfsburg museum. Although exterior changed very little for 40 years, no part of today's VW (the convertible is still being made) is the same as when production began in late 1938.



specifications

Illustrations by Russ von Sauers, The Graphic Automobile Studio



1946 Volkswagen Type 11 2-door sedan

Price when new \$1643 f.o.b. Wolfsburg (1946).

ENGINE
 Type Ohv opposed 4, aircooled, 3 mains, magnesium crankcase, cast-iron cylinder barrels, full pressure lubrication.
 Bore & stroke 2.95 x 2.50 in.
 Displacement 69.0 cid (1131cm³).
 Max. bhp @ rpm 24 @ 3000.
 Max. torque @ rpm N.a.
 Compression ratio 5.8:1.
 Induction system 1-bbl. downdraft carburetor, mechanical fuel pump.
 Exhaust system Pipe manifolds, single muffler.
 Electrical system 6-volt battery/coil.

CLUTCH
 Type Single dry plate, asbestos lining.
 Diameter N.a.
 Actuation Mechanical cable, foot pedal.

TRANSMISSION
 Type 4-speed non-synchro, floor lever.
 Ratios: 1st 3.60:1.
 2nd 2.07:1.
 3rd 1.25:1.
 4th 0.80:1.
 Reverse 6.60:1

DIFFERENTIAL
 Type Transaxle.
 Ratio 4.43:1.
 Drive axles Swing halfshafts.

STEERING
 Type Worm & cap nut.
 Turns lock to lock 2.5.
 Ratio N.a.
 Turn circle 32 ft.

BRAKES
 Type 4-wheel mechanical drums, cable operated internal-expanding shoes.
 Drum diameter 9.062 in.
 Total lining area N.a.

CHASSIS & BODY
 Frame Stamped steel floorpan with bolted-on body.
 Body construction All steel; rear engine placement.
 Body style 2-door, 5-pass. sedan.

SUSPENSION
 Front Independent, transverse torsion bars, upper & lower trailing arms, kingpins.
 Rear Trailing arms, swing axles, torsion bar.
 Tires 5.00 x 16 tube type.
 Wheels Pressed steel discs, drop-center rims, lug-bolted to brake drums.

WEIGHTS & MEASURES
 Wheelbase 94.5 in.
 Overall length 160.0 in.
 Overall height 61.0 in.
 Overall width 60.5 in.
 Front tread 51.0 in.
 Rear tread 49.2 in.
 Ground clearance 8.35 in.
 Curb weight 1600 lb. approx.

CAPACITIES
 Crankcase 3.3 qt.
 Cooling system None.
 Fuel tank 8.8 gal.

FUEL CONSUMPTION
 Best 30-33 mpg.
 Average 22-28 mpg.

PERFORMANCE (from *Mechanix Illustrated*, Apr. 1953):
 0-30 mph 7.9 sec.
 0-40 mph 15.3 sec.
 0-60 mph 42.1 sec.
 Top speed (av.) 66.0 mph.

Split-Window Volks

continued

driven and liked both of mine, finally succumbed and bought a new one for himself. It took about that long for his generation to accept the VW; in fact to accept small cars.

The VW exerted a tremendous influence on the American driving public and on Detroit. It put the small car in demand for the first time ever in this country. It showed that little cars don't have to be flimsy, that quality doesn't have to be expensive, that honesty in auto design can be the best policy. And it did all that with every possible strike against it: its political and cultural background, no ad budget, flaunting styling and engineering tradition,

and making grave concessions to what we Americans regard as basic driving comfort. Yet it's heartening to realize that here's one instance, finally, in a world where it's become increasingly rare, of virtue's triumph; at least *mechanical* virtue's triumph. □

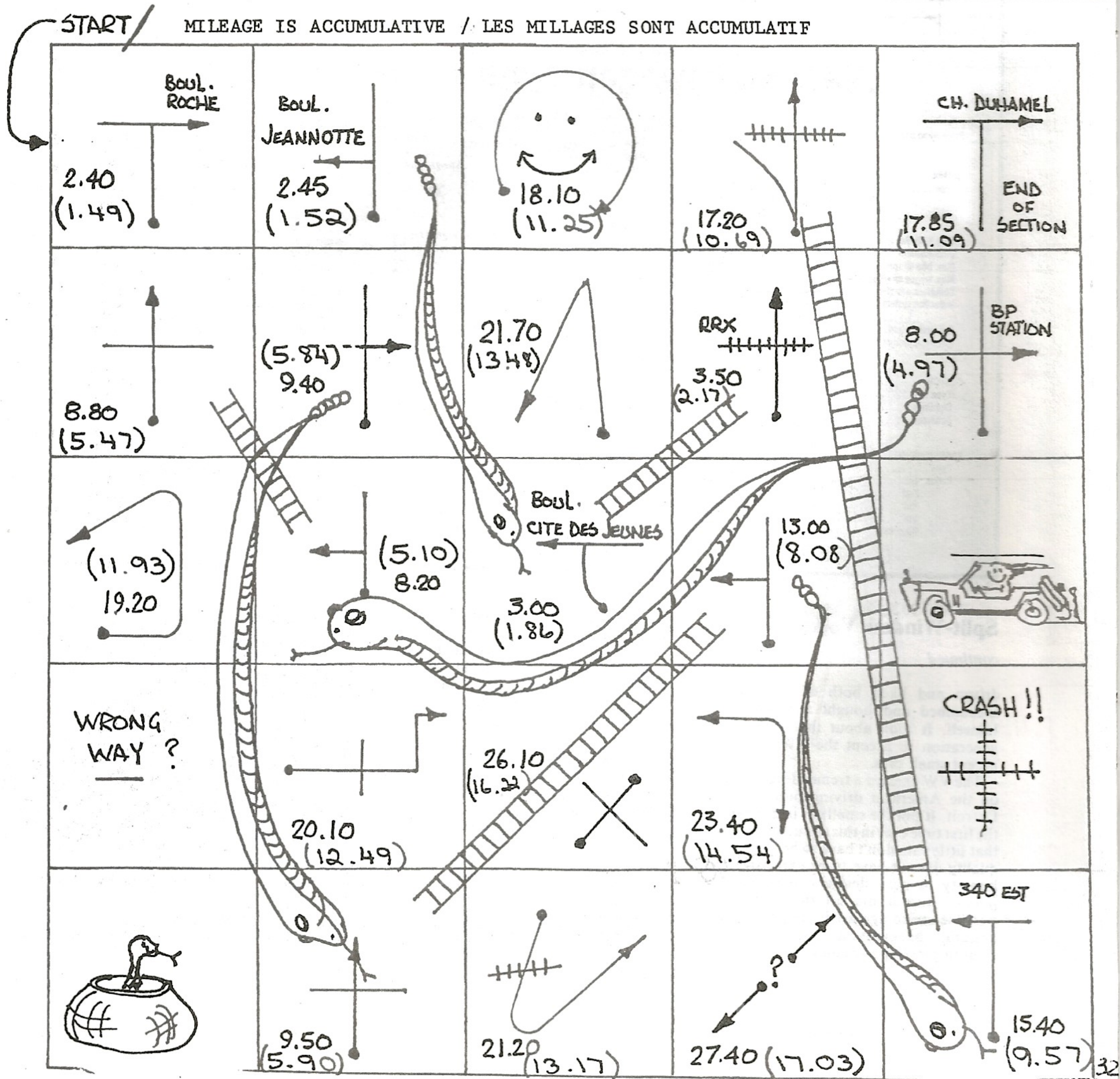
Our thanks to Ferdinand (Ferry) Porsche, Ludwigsburg, West Germany; Dan R. Post, Post Era Books, Arcadia, Calif. 91006; Herb Williamson and Andy Schupack of Volkswagen of America, Englewood Cliffs, N.J.; Erik Eckermann, Munich, Germany; Hans O. Neubauer, Hamburg, Germany; and Karl Ludvigsen, Pelham Manor, N.Y. Most of the information in this article is based on Volkswagen: Nine Lives Later, by Dan R. Post, 1966.

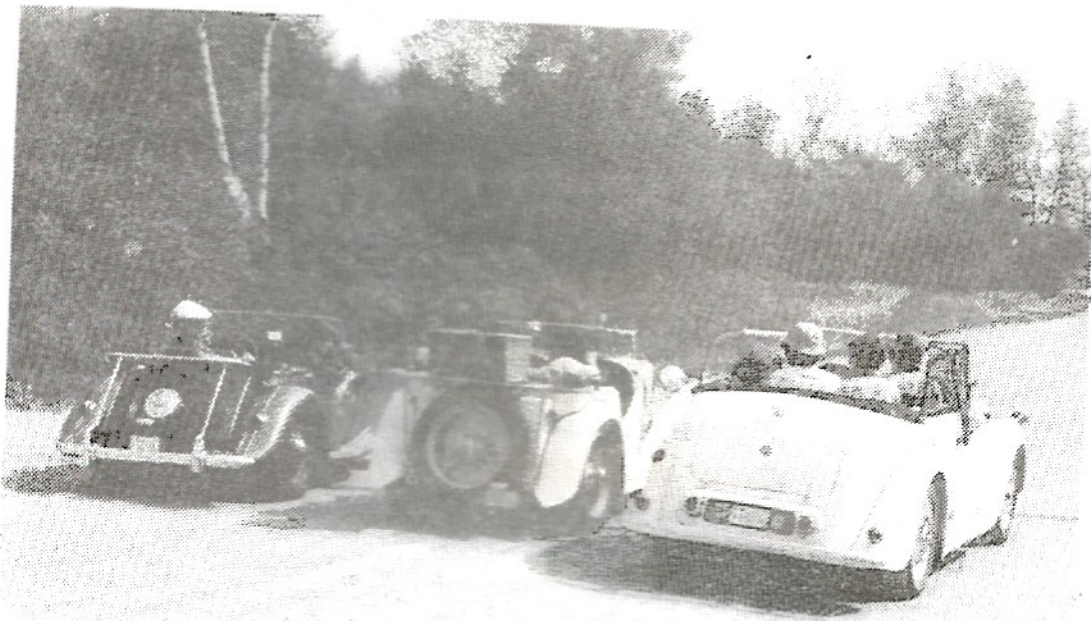


License light repeats sculpturing of hood and decklid. Thin, fragile bumper on early VW is all but useless, especially without overrides.

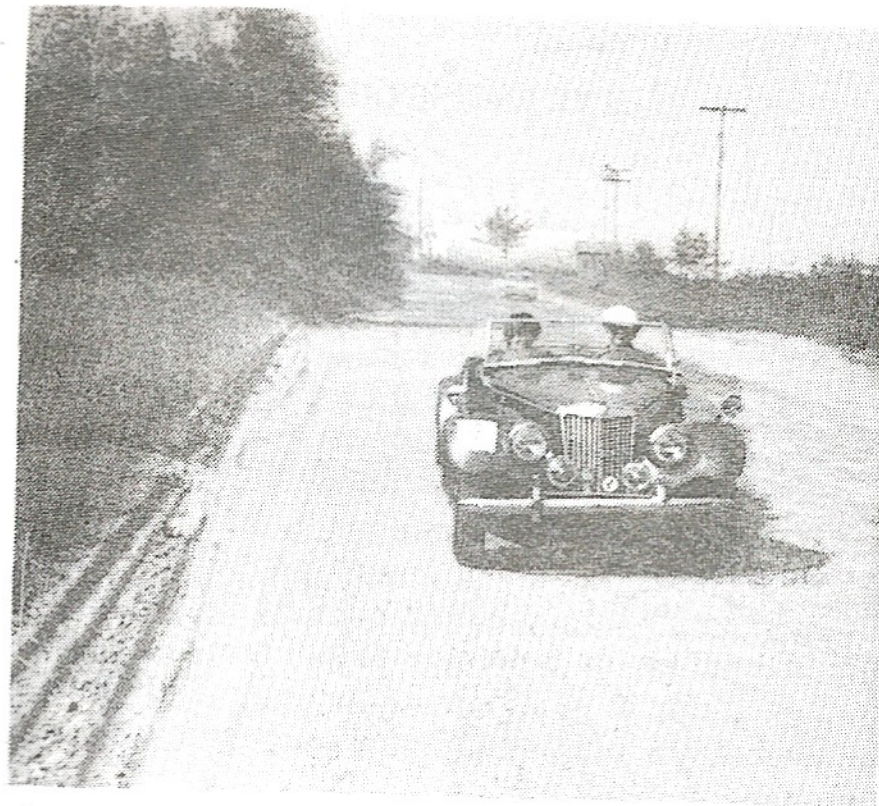
RALPH HEMMI RALLY

And you thought snakes and ladders was an easy kiddy game? Just try making sense of these instructions, part of the ten page rally instructions each team was to follow on the Ralph Hemmi Cup Rally. The event was held on a sunny, Sunday the 12th. and started from the Beaconsfield shopping center. The rally wound through most of Western Quebec, and ended up at Finnigans Market in Hudson, where non-rallying friends, family, and spectators, met the rally teams.

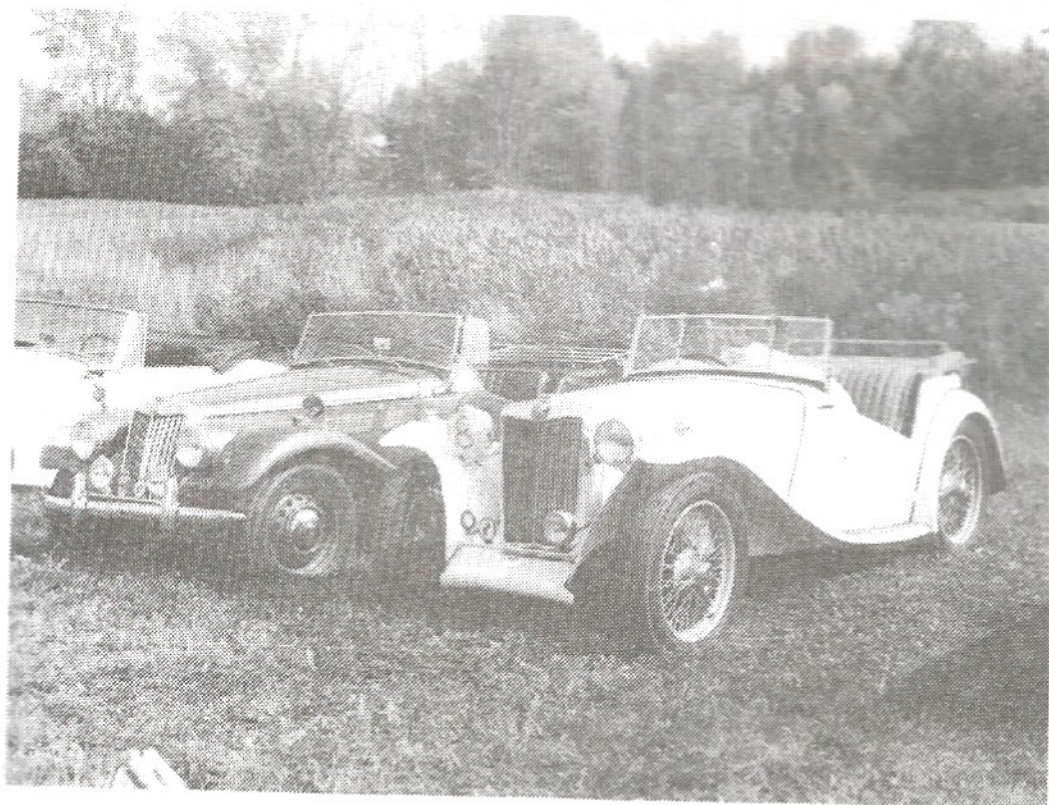




Neck and Neck, or
Exchanging Coupons



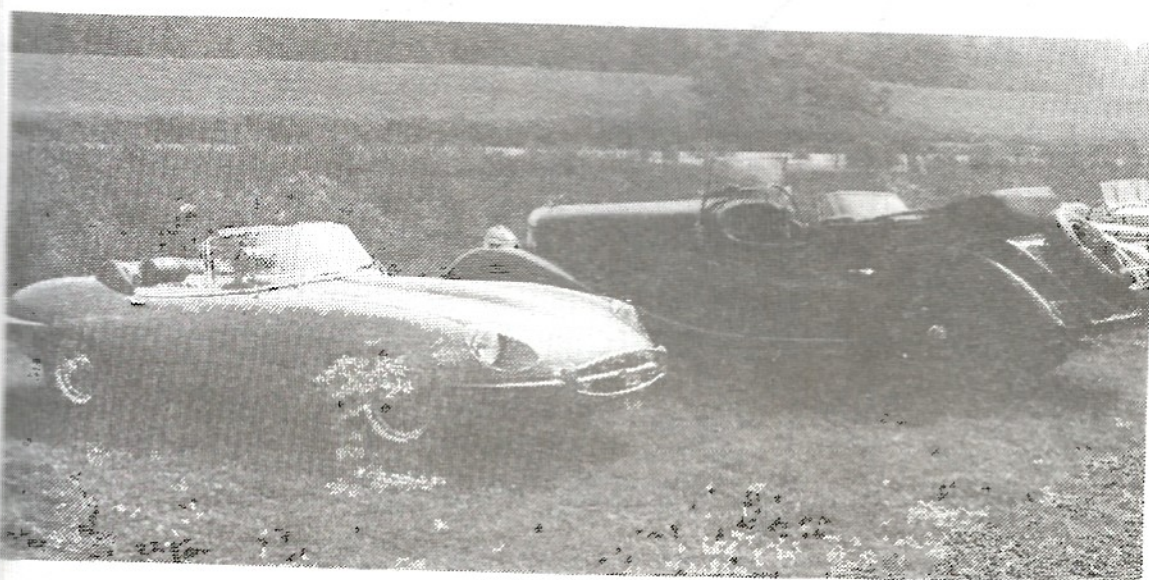
'Bearing Down on a Check Point



At Rest After a Day's Labour



The Winners



The New and the Old

Bits and Pieces

JAGUAR XK ENGINE OIL FILTER CONVERSION

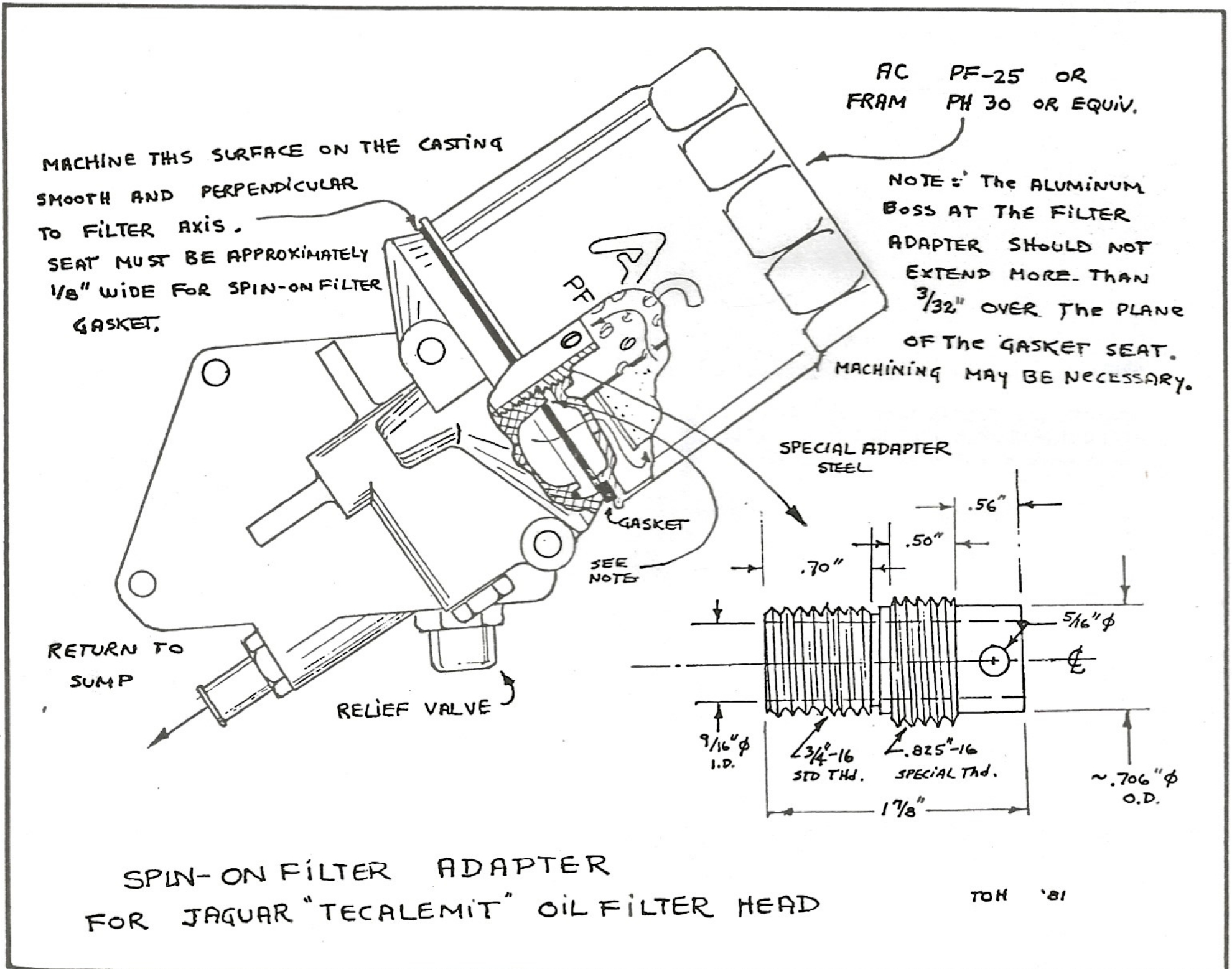
By T. O. Holderer of Mississippi

As the owner of a regularly used XK Jaguar, I enjoy doing the maintenance work almost as much as driving the car. Routine things like changing the oil and greasing the chassis give me the opportunity to inspect all the machinery to make sure everything is in tip-top shape. The only frustration is that when parts are needed, a brief wait is usually necessary while the requisitioned parts travel across the country.

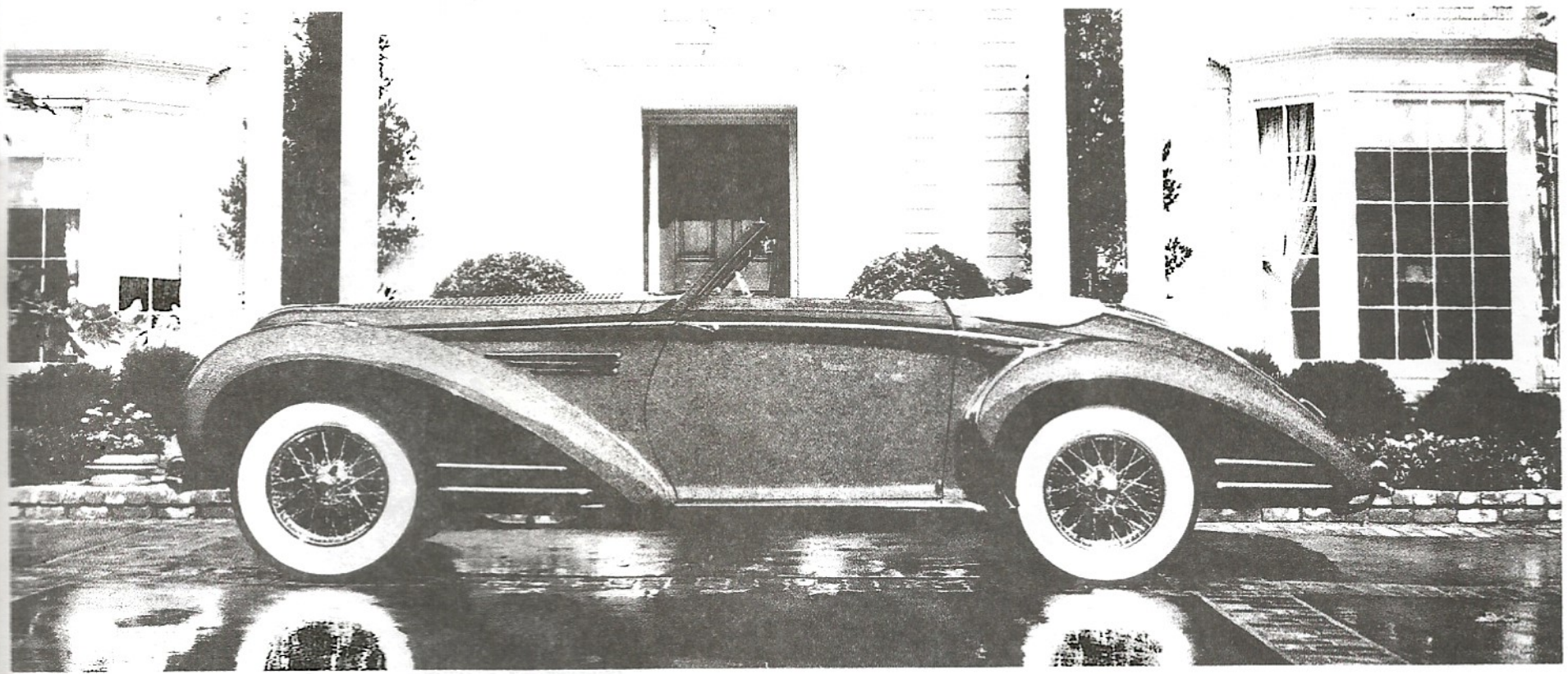
The felt oil filter element on an XK engine is such an item and substitution or conversion to use the now-popular spin on filters may be of advantage to some people. I have designed and installed a popular oil filter on my Jaguar and I would like to

share the idea with other mechanically inclined Jaguar owners. My design has the advantage that the original filter can be refitted in the event that a purist ever possesses the car.

The sketch shows the details of the installation and of the special threaded adapter that is required. The cast aluminum filter head must be slightly machined to produce a new gasket surface, and care should be taken to make the surface flat, smooth and perpendicular to the axis of the filter threads. So little material is removed that the filter remains essentially in the original shape, facilitating the potential refitting of the original take-apart oil filter. When the conversion is made, make sure that the entire assembly is clean of chips and other dirt. Spin on the new filter, tightening as recommended. Be sure to check for leaks after starting the engine.



Collector Car of the Month



1947 Delahaye 135MS

story and photography by Dennis Adler

This car has been the subject of an on-again, off-again disappearing act, a 32-year tour of obscurity from 1947 to 1979, which is strange when one considers that it is one of the rarest of the French classics from Delahaye, the Henri Chapron-bodied 135MS. A car that has been almost forgotten, even though it is the only one of its kind.

Built by Chapron for the 1947 Paris Auto Show, this Delahaye 135MS was designed to illustrate the latest technology of war brought into peacetime use — that technology manifested itself in plastics. Crystal-clear lucite to be exact — a medium of the age that found a thousand-and-one uses. On the Delahaye it was an elegant steering wheel and an array of dash controls operated by pull-push lucite crystal cubes. At that time, it was a very futuristic look.

Beneath the flowing lines of the Chapron coachwork, was basically the same Delahaye that had captured the Le Mans title in 1938, an inline overhead pushrod six, with three Solex carburetors producing a staunch 152bhp at 4500rpm. The 3.557-liter engine had a bore and stroke of

84mm x 107mm. With transverse independent front suspension, semi-elliptic rear, and large 14-inch drum brakes on all four wheels, the car was designed to perform on the track. However, with the Chapron body, the Paris show car became a true example of luxury and performance in a four-passenger automobile.

In the style set a decade earlier by the Cord 810 and 812 (which were considered to be ahead of their time), the Delahaye used a four-speed Cotal electromagnetic transmission with a speed selector located off the steering column, similar to that of the Cords. A forward and reverse lever located on the floor allowed the four-speed gear box to operate fully in either direction. Four speeds in reverse could make for some rather serious backing up!

The dash contained an array of controls, all with clear lucite cubes serving as knobs. The lights, wind-screen wipers, ignition, etc., were all controlled by pulling the proper (but unmarked!) lucite cube outward. The starter switch, secreted beneath the dash, was about the only control which did not have a lucite fixture attached to it. The dash itself was beautifully finish-

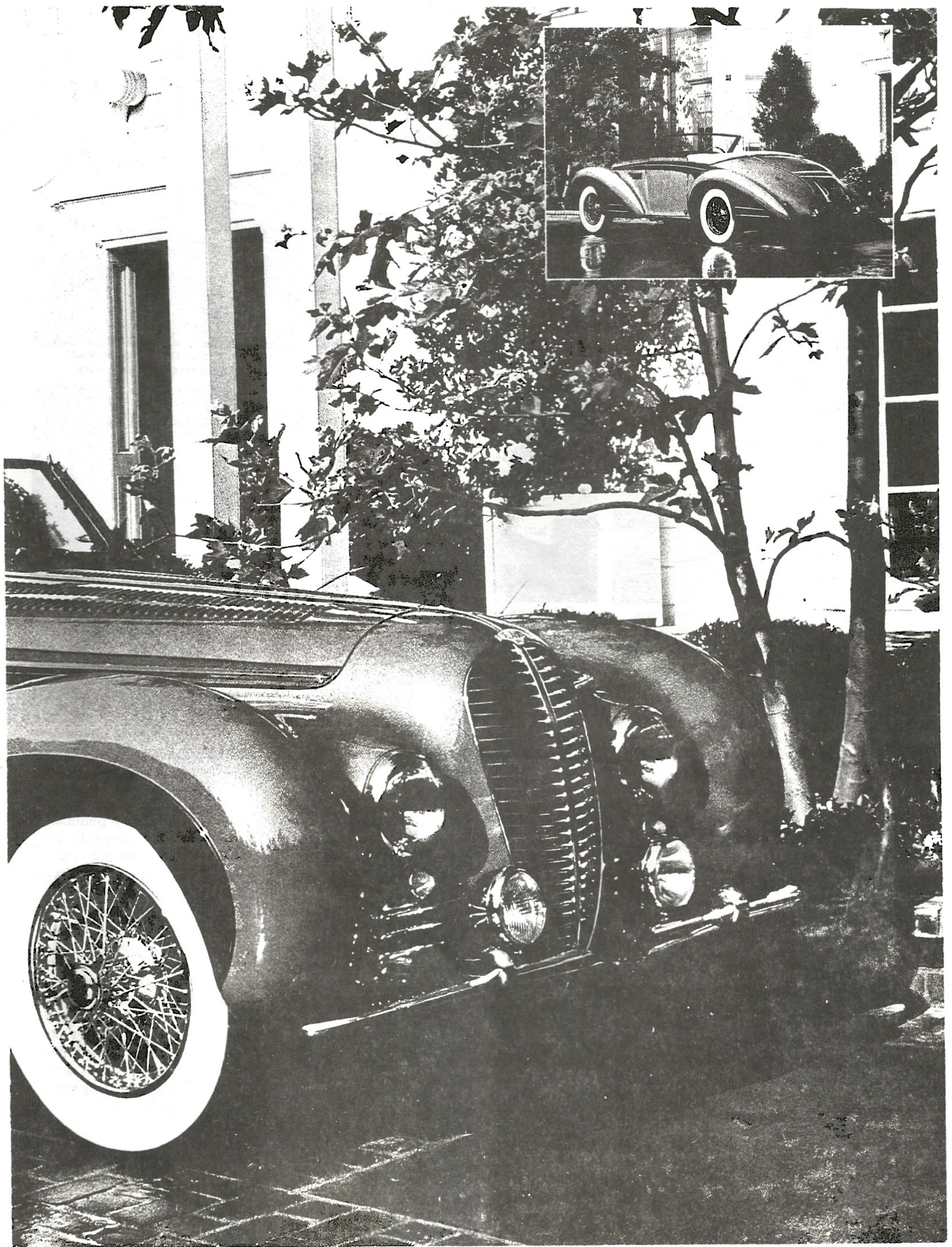
ed, burlwood with a chromed fascia surrounding the instruments. As futuristic a touch as the lucite accessories appeared to be, they were never used in production models, appearing only on the Delahayes built for the Paris show.

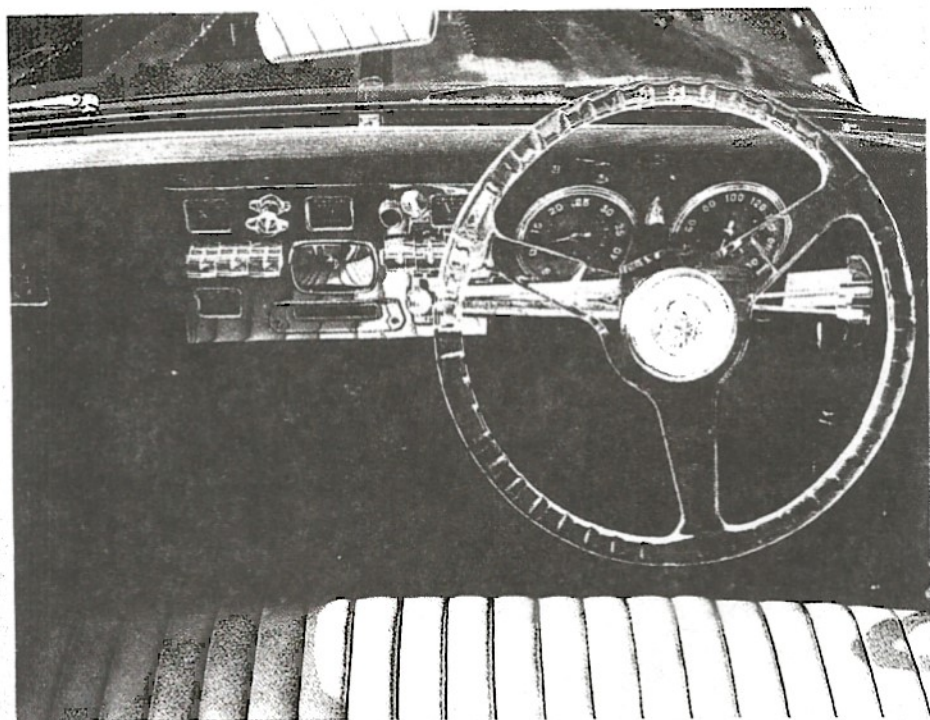
BUT NOT FOR THE FRENCH...

In the land where romance and beauty are said to have been created, one would think a car such as this 135MS would have been sold to a wealthy French aristocrat, but such was not the case, not from a lack of interest, but from a regulation which forbade the sale of any Delahaye show car to a French citizen. Only foreigners were permitted to purchase the cars, which sold for \$22,000 to \$33,000 each. Just who purchased the Chapron 135MS is not known, nor its whereabouts from 1947 up until the late 1950s, when it turned up in Southern California as part of the Fred Treat collection. Treat was a noted Bugatti collector, but just how he acquired the Delahaye is not known. Unrestored, the car changed hands twice more, finally ending up in storage for over a dozen years, apparently forgotten. It was purchased in 1979, at a probate sale, by California architect

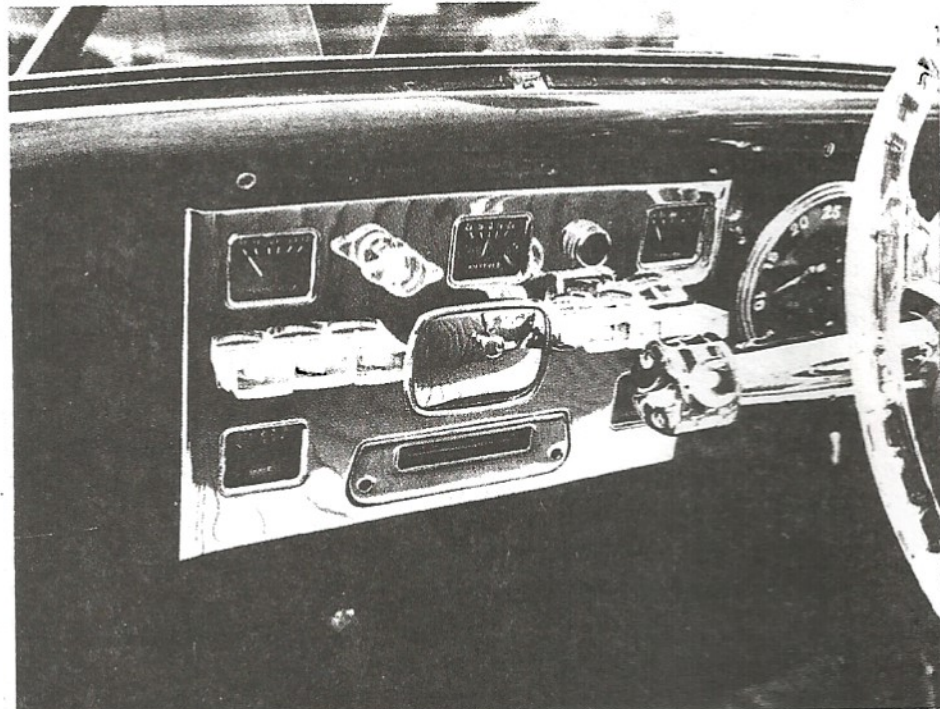


Car Collector 1947 DeSoto 135MS by Henri Chapron

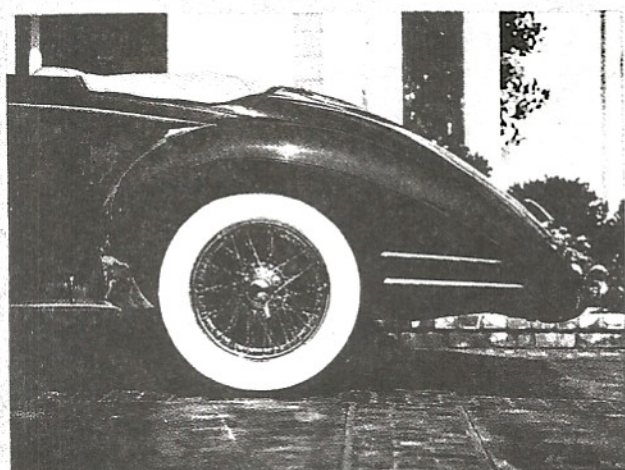




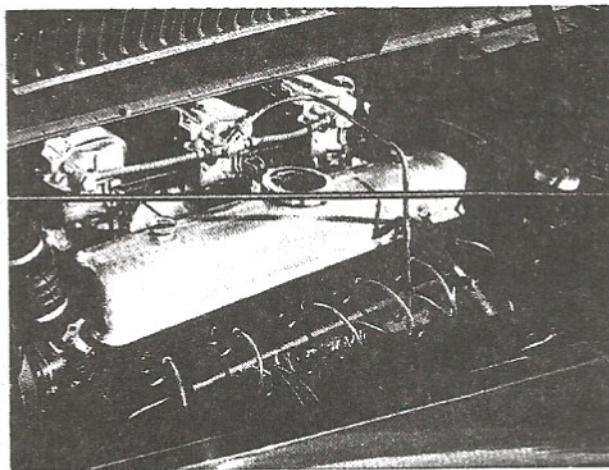
Lucite steering wheel is unusual; right hand drive on a Delahaye was standard equipment, as it was on Bugatti and Hispano.



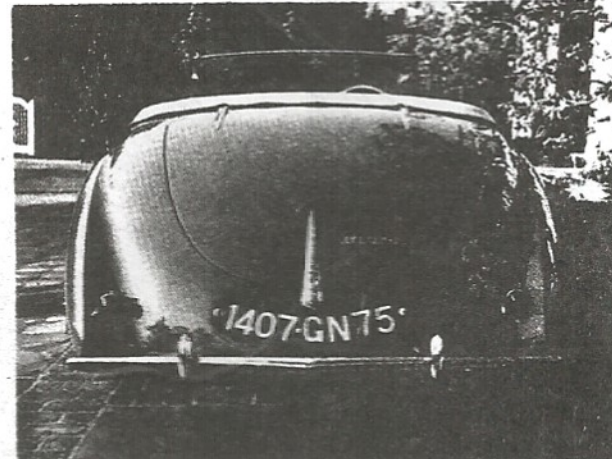
Many of the knobs on the dash are lucite. The "Johnson Rod" under the radio is in reality the forward-reverse change lever.



The combination of chro-med wire wheel, white sidewall tire, and elegant fender line is just right for this French Classic.



Delahaye's Type 135 had a six-cylinder, overhead valve engine and three Solex carburetors. The usual transmission for this car was the Cotal semi-automatic.

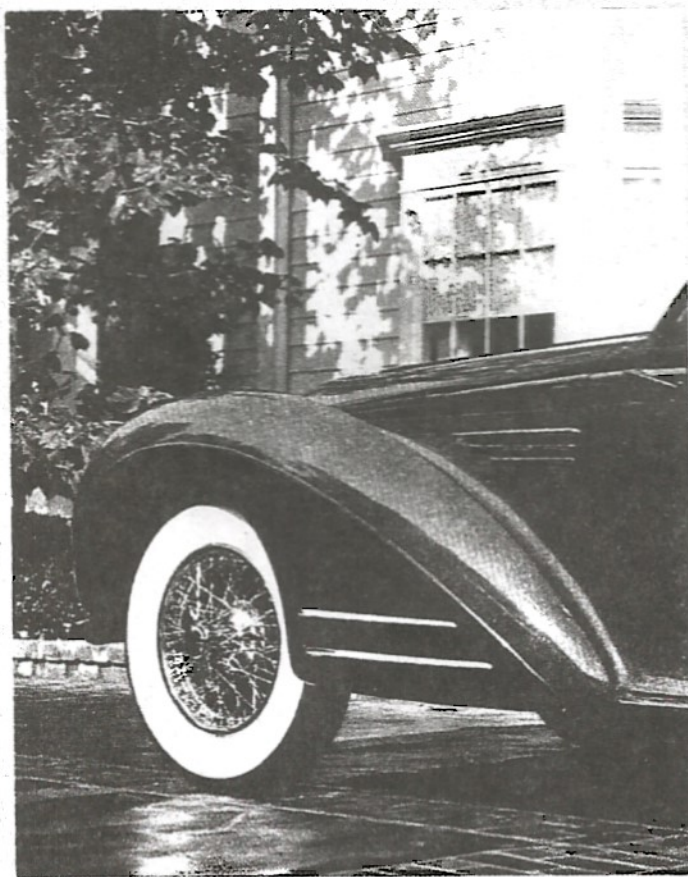


The rear view is as handsome as the rest of the car. License plate is French and 75-suffix designates a car registered in Paris.

and designer Jim Hull. At the time, Hull did not know what he had, only that it was a '47 Delahaye. Not until almost a year later, did he learn how rare this particular car actually is.

After purchasing the car, Hull consulted with noted car collector and restorer Phil Hill, who helped get the Delahaye back into running condition, but it was Hull who undertook the restoration himself, with an allotted time of only eight weeks to complete the car in order to make the 1980 Monterey Historic Car Races. Incredibly, Hull finished the car in time, and not only raced at Laguna Seca, but followed up by showing the car the next day at Pebble Beach.

With a shop set up in his back yard, and a good deal of help from friends and suppliers, and very little sleep, Hull's first effort at restoring a classic car turned out to be quite a success. Hull said he was amazed to add up over



The front fender shown here exemplifies the conservative good taste that Henri Chapron always brought to his coachwork designs.

1000 man-hours in the paint work alone.

As it turned out, Hull had purchased and restored one of the truly rare Delahaye cars, a one-off model built for the '47 Paris Auto Show. We, too, are fortunate, as this is the first time the car has been seen in any publication since *Life* magazine covered the Paris Auto Show in an article published in 1948. A finale of sorts for the Delahaye's 32 years of obscurity.

Although Delahaye did not fare well in the postwar European economy, the marque left a lasting impression on the automotive world. In Jim Hull's own words, "The design, combined with the car's high performance, makes it, in my mind, perhaps one of the finest examples of postwar European automotive excellence — and the end of an era where French automotive styling, as well as fashion design, were hand-in-hand at the forefront of the world."

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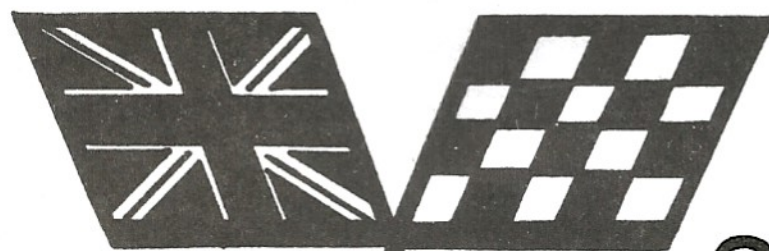
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