

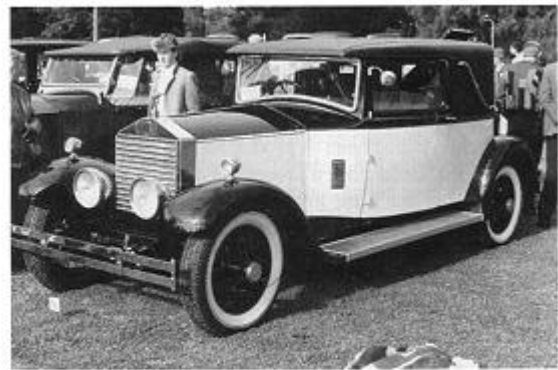
Rolls-Royce Owners' Club of Australia Library

Henry's 20 Horses

With Three-Speed "GO" and Two-Wheel "WHOA"

A 75TH ANNIVERSARY APPRECIATION
OF THE ROLLS-ROYCE 20HP CAR

by Brian Jenkins, 1997



A classic example of the early 20HP is the 1923 Sports Saloon by Martin & King (82K9) owned by Brian and Naelo Jenkins.

Acknowledgements: Needless to say, throughout my writing of this article John M. Fasal's excellent book

"The Rolls-Royce Twenty" has been a constant source of information and inspiration. Other sources of information have included "The Rolls-Royce Motor Car" by Anthony Bird and Ian Hallows, the Bulletin of the (UK) Rolls-Royce Enthusiasts' Club and articles by David Davis and Bert Ward in Yondon & Derby".

The years following the end of the Great War in 1918 did not, sadly, see the restoration of the "Merrie England" of pre-war years. The economic, physical and emotional tolls extracted by the war left many individuals and corporations facing difficult situations in the post-war era., Rolls-Royce Limited was no exception. Throughout the war years the Company had given absolute priority to its support of the Allied war effort. Accordingly, whilst the production of 40/50 HP chassis had continued, the production capacity of the Company had been increasingly directed towards the manufacture of Aero engines. With the cessation of hostilities, the demand for these engines virtually disappeared, as the growth of civil aviation in the post-war years was relatively slow. Furthermore, the drastic changes in the English social and economic climates resulting from the War, together with difficulties in export markets, resulted in a decrease in demand for the Company's sole established automotive product, the 40/50 HP (Silver Ghost) chassis. The Silver Ghost - with its original concept dating from about 1906 - was now seriously dated and faced competition from other prestige marks such as the Daimler, Napier and Hispano-Suiza. Accordingly, in November 1920 the Board of Directors formally requested that Henry Royce, as Engineer-in-Chief, should consider taking steps towards the manufacture of a new, smaller chassis.

Royce had himself, many years before, reached the conclusion that social conditions in post-war England would be less favourable to large cars such as the Silver Ghost, with its tradition of usually being chauffeur-driven and would favour smaller, lighter cars which would often but not invariably - be driven by the owner. He had accordingly, during the closing years of the War, commenced the design of an engine for a smaller car. Royce did not regard this smaller car (which was named

"Goshawk" during its development), as a replacement for the Silver Ghost, but envisaged that it might be purchased by a future Silver Ghost buyer as an entree to Rolls-Royce ownership, or purchased as a second car by an established Silver Ghost owner. He envisaged that production of the smaller car would be discontinued when demand for the Silver Ghost recovered.

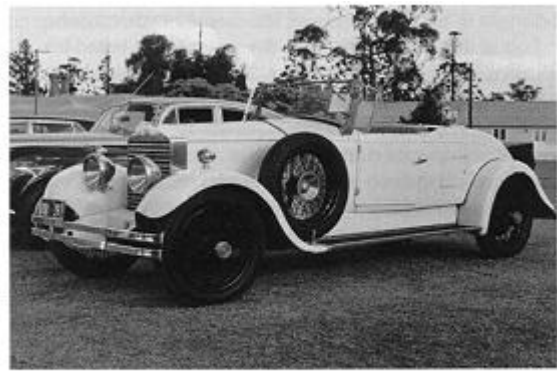
Since about 1909 Royce, in view of his health problems, had been relieved of all administrative responsibilities and had confined himself to design work, with very limited contact with the factory. During most of the period in which he was occupied with the design of the 20FIP, Royce lived and worked in his house "Elmstead" at West Wittering on the coast of Sussex. The house and a converted artist's studio nearby, accommodated a team of about eight design engineers and draughtsmen. Towards the end of 1921 Royce moved back to his villa at Le Canadel on the French Riviera, resuming his pre-war practice of spending winters in the more temperate climate of southern France.

Several cars from the other manufacturers including the Buick and the Essex, were apparently studied during the design of the 20HP car. About ten experimental cars were constructed and used in the design and subsequent development of the 20HP. Road testing of the cars was initially carried out in England., after Royce's move back to Le Canadel, some testing was carried out in France. Most of the experimental cars were eventually sold to customers after refurbishment by the factory.

The commencement of production of the 20HP was authorised in July, 1922 and an advertisement in "The Autocar" on October 6th, 1922 advised the public that " Rolls-Royce Limited are now prepared to accept orders by cablegram, telegram or letter, for their new 20HP six-cylinder car The price of the bare 20HP chassis was quoted as £ 1100. the advertisement assured the public that the 40/50 HP chassis would continue to be available at its current price of £ 1850.

The specification of the 20HP chassis, as first offered to the public, was briefly as follows: Six-cylinder engine, one piece cylinder block, detachable cast-Iron head, 3127cc capacity, compression ratio 4.6:1, seven bearing crankshaft with slipper-drive vibration damper, overhead valves operated by push-rods. Water-cooled, water temperature regulated by radiator shutters manually controlled by dashboard lever. Coil ignition, timing controlled by hand-lever on steering column and centrifugal control in the distributor. Two-jet carburettor and starting carburettor, mixture control on the dashboard. Hand throttle on the steering column. Fuel tank (14 gallons = 64 litres) at rear. gauge at filler. Fuel supply to carburettor by Autovac. Electric starter, switch operated by foot pedal. Single plate dry clutch. Gearbox constructed in unit with engine, three speeds, centre-mounted gear lever. Open propeller shaft, spiral bevel differential, fully-floating rear axle. Two-wheel internal expanding brakes, operated by foot pedal and centrally-mounted handbrake lever. Foot brake and handbrake shoes operating side by side in a common drum on each rear wheel. Worm and nut steering. Semi-elliptic springs front and rear, frictional dampers. Chassis lubrication by hand-gun. Wheelbase 129 inches (3277mm); track 54 in. (1 372mm); chassis length overall 178 in. (4521mm) Chassis weight (with tyres, battery, fuel, oil and water, but without spare wheel, lamps and accessories), 2305 lbs (1 045Kg).

The new car immediately attracted the attention of the motoring public and John Fasal, (in his book "The Rolls-Royce Twenty") has reproduced excerpts from the lively correspondence which erupted in the columns of "The Autocar". Early in the field (on October 13th 1922) and forthright in his opinions, was Mr. Leslie Northcott, who had not at that time actually seen the new car but based his opinions on the published specification. Mr. Northcott expressed his dissatisfaction with the price, the push-rod operated overhead valves, the expected oil



A very sporty-looking body on Greg Sproule's 1927 20HP (GYK82) - all aluminium with an overall weight of 30cwt.

consumption, the manual operation of the radiator shutters, the threespeed gearbox, the two-wheel brakes, the semi-elliptic rear springs, the lack of luggage grid on the touring car and the location of the petrol gauge on the fuel tank. On October 20th "Disappointed" supported Mr. Northcott's criticisms and added unfit construction of the engine and gearbox and mutation Delco ignition" to the list of perceived shortcomings, deploring "... an American flavour.. totally out of keeping with the reputation of Rolls-Royce". In the following weeks a succession of correspondents contributed to the discussion, either supporting or - like Mr. Oliver Lyle on November 10th - refuting the points raised by Mr. Northcott.

The car was well received by the motoring press', reports, conveying very favourable impressions, were published by "The Auto Motor Journal" on January 4th, 1923 and by "The Motor" on July 3rd 1923 - these reports are reproduced in "The Rolls-Royce Twenty".

.A statement released to the Press by the Company early in 1923 indicated that there were many owners who were willing to defy the critics and to express their satisfaction with the car, in terms such as a charming piece of mechanism and "... "I have never handled anything as sweet running.." while a Company advertisement offered an "expert's opinion" to the effect that the car "... is everything a motorist can want .. motoring with a high degree of refinement and its simplicity of construction will delight the driver". At the same time, the Company issued an internal memorandum offering answers to the criticism which had been raised. It is evident that some sensitivity existed to the implication that the design had been influenced by American practice. This reaction is somewhat inconsistent with the enthusiasm with which

American influences - in fields such as expressions of speech, popular music, films and entertainment - were at this time being embraced by significant and influential elements of English society, including undoubtedly the younger members of the upper and professional classes - groups which might have been expected to include many potential buyers of the car.

From our present viewpoint 75 years on, the most contentious features of the 20HP as introduced are probably the central gear lever, the three-speed gearbox and the two-wheel brakes. It seems that all three of these features were strenuously supported by Royce against the advice of others within the Company. It is of interest to note that within three years these features had disappeared. Opposition to the central gear lever seems to have arisen from personal prejudices (and particularly its association with American practice), rather than from technical considerations. The system is

uncomplicated and economical, both desirable attributes from the engineering viewpoint, Most drivers who have experienced a 20HP car of this original configuration will attest to the precise feel, short lever-travel and general convenience which makes this arrangement a pleasure to use It is admittedly inconvenient if a third passenger is to be carried in the front seat, but this situation is somewhat inconsistent with the intention that the 20HP was to be a light car with lightweight coachwork. With reference to the threespeed versus four-speed controversy, it seems likely that (although there were undoubtedly many competent and enthusiastic drivers who would make full use of the gearbox), many Rolls-Royce owners tended to minimise their gear changing. The press release issued by the Company in 1923 to refute the criticisms of the 20HP included a testimonial from a French owner who enthused: "I drove my 20HP here from Liverpool and am very satisfied with the running of the engine, not having to change gear between Liverpool and Versailles". There may accordingly be justification for the somewhat cynical viewpoint that even if four speeds were available, many owners would refrain from making full use of them. Conditioned as we are to present-day travel, speeds and traffic densities, the case in favour of fourwheel brakes seems unassailable, but in the context of 1922 motoring conditions the advantages of the simplicity of non-assisted two-wheel brakes probably made the system defensible.

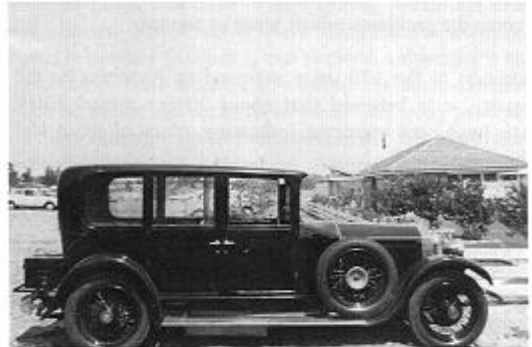
It is Interesting to consider the design philosophy underlying the development of the 20RP chassis. The 40/50 HP chassis had been in production for more than a decade and had undergone a process of development and evolution during that time. In approaching the design of a new chassis, Royce could have adopted the existing chassis in the state to which it had evolved, subjecting it to a process of consolidation to resolve the compromises which no doubt had occurred in the evolutionary process and introducing suitable modifications to meet the perceived role of the new model. Alternatively, he could virtually start afresh and design a new chassis - which would of course, indirectly incorporate the experience gained from the 40/50. The critics who expressed disappointment with the 20HP when it appeared had no doubt assumed that the first alternative would be adopted, whereas in fact, it was essentially the second approach which prevailed.

In spite of the somewhat controversial atmosphere surrounding its introduction, the 20HP was generally well accepted in the market place Figures quoted in John Fasal's book "The Rolls-Royce Twenty" indicate that by the end of 1923 some 562 20HP chassis had been built, compared with 415 Silver Ghosts built in England during the same period. It appears that within the Company it was firmly felt that the 20HP was to be regarded as a temporary expedient only and that it should not be allowed to challenge the established position of the 40/50 HP as the "flagship" of the Company. Nevertheless, in spite of fluctuations in demand for both models, the 20HP apparently consistently outsold the 40/50HP during the years when both were in production.

The 20HP was introduced during the era in which, in theory at least, the Company was concerned only with the supply of the chassis, construction of the body being a matter for arrangement between the purchaser and a firm of specialist coachbuilders. In fact however, the Company's earliest advertisements for the 20HP offered not only the bare chassis (priced at £ 1100), but a range of complete cars , an open touring car (£ 1590), a landaulet (£ 1745), a limousine (£ 1745) and enclosed-drive cabriolets in ownerdriven form (£1880), or chauffeur-driven configuration (£1900). In order to have complete cars available for immediate delivery, the Company ordered bodies for these "standard" cars in batches of up to ten, from coachbuilders including Barker, Hooper and Windovers. Figures presented in "The Rolls-Royce Twenty" indicate that five coachbuilding firms together built

the bodies for 1527 20HP cars (more than half of the total production); Barker built 440 bodies, Hooper 449, H.J. Mulliner 147, Park Ward 325 and Windovers 166. Overall, however, a large number of coachbuilders (in England and elsewhere), were involved in the construction of bodies for 20HP cars - in many cases a given firm constructed a very small number of such bodies.

Royce was insistent that the weight of the body fitted to any 20HP car should not exceed 9 hundredweight (460kg). In practice it was impossible to enforce this condition and many cars were burdened with massive coachwork which significantly exceeded this limit - contributing to the emergence of a general impression that the chassis was underpowered.



(Above: An example of the "heavy body" that gave the 20HP the name of being underpowered; Chassis GYL29, formerly owned by Frank and Tops Moulang; and below the rear interior ornately upholstered in petit-point).

Production of the 20HP chassis continued from July, 1922 until June 1929, the total number of chassis built being 2940. About 80% of these were delivered in Great Britain and Ireland; the significant export markets were Europe (with about 200), Australia (about 120) and India (about 100). Around 50 were exported to the United States and Canada and small numbers to Asia, South America and other markets. (The figures shown have been derived from "The Rolls-Royce Twenty" and other sources. In view of the uncertainties which exist, the figures have been rounded off and must be considered only as approximations). Most of the cars exported to India were destined for the collections of



the regional potentates; the first "production" car - chassis No. 40G1 with a landaulet body by Windovers - was delivered to the Maharaja of Rajpipla. The small number of 20HP cars exported to the United States is attributable to the strong competition offered by American manufacturers and to the fact that the Silver Ghost (and later the Phantom), was being manufactured at Springfield Massachusetts by Rolls-Royce of America Inc. In view of the Company's unwillingness - even in England - to promote the 20HP as an alternative to the 40/50HP, the small number sold in the United States is not surprising. In later years the growth of interest in older cars encouraged United States enthusiasts to privately import 20HP cars from the U.K. and elsewhere and John Fasal has suggested that as a result the total number in the United States reached about 200.

During the production life of the 20HP chassis, many modifications were introduced. The more visible and significant of the modifications are listed here, with the approximate dates of their introduction - more complete documentation is available in John Fasal's book "The Rolls-Royce Twenty" and in articles by Bert Ward in "London & Derby" in the early 1970's:- June 1923, standby magneto (Watford EO6) available as an option; mid- 1923 nickel-silver radiator shutters (previously black), late 1923 sharp-edged radiator header tank; standby magneto (Watford RO1) standard., early 1924 central handbrake lever moved from left to right of gear lever, July 1925 four-wheel brakes available, four-speed gearbox with right-hand brake lever and gear lever, track increased to 56 inches (1422mm); late 1926 hydraulic front shock absorbers; late 1927 hydraulic rear shock absorbers; late

1928 mixture control on steering column, vertical radiator shutters, early 1929 partially centralised chassis lubrication

The feature which (almost) guarantees that a 20HP can be instantly distinguished from other Rolls-Royce cars is the horizontal radiator shutters. The statements: "If it has horizontal shutters then it is a 20HP" and "if it doesn't have horizontal shutters it is not a WHY are both almost, but not quite, invariably true. The exceptions arise from the following circumstances: (1) A few Silver Ghosts were apparently fitted with shutters. (2) A very few 20HP cars in Australia were apparently not fitted with shutters (presumably cars destined for warm areas; a judiciously applied wheat bag or similar would take care of the occasional cold morning). (3) From late 1928 (GFN chassis numbers) onwards the shutters were vertical.

The shutters were finished in black enamel until mid-1923, thereafter they were polished nickel silver. Initially, the shutters were a separate unit screwed to the front of the radiator, with a distinctly "added-on" look. Later apparently about mid-1925, a more "Integrated" appearance was achieved with the radiator header tank and side panels widened to accommodate the shutter within the radiator shell.

The 20HP was generally well received in Australia, its relative economy, light steering and ease of driving endearing it to the owner-driver and the simplicity of its routine servicing (in comparison with the Silver Ghost), appealing to chauffeurs. Bert Ward, who was for many years closely associated with the servicing and repair of Rolls-Royce cars in Australia has suggested (in his article in "London & Derby" Vol: 16 No. 11, November, 1972, P. 6-8) that the testing carried out during the design of the 20HP did not adequately cover the conditions encountered on Australian roads and he discussed - in a series of articles in "London & Derby" in the early 1970's, the many modifications carried out in order to overcome the problems which arose in service.

In addition to the 120 units exported to Australia by the Company, it is believed that about 30 pre-owned 20FFP chassis have been imported, indicating a total of about 150 reaching Australia.

The first 20HP chassis to reach Australia was chassis No. 42G1, now owned by David Davis, a member of the NSW Branch of the R-ROCA. The history of this car has been documented in articles by Bert Ward ("London & Derby" Vol: 116 No. 11, Nov. 1972, P: 6-8) and by David Davis, ("London & Derby" Vol: 36, No. 5, May, 1992, P: 6-7, 10-11). Bert Ward has related how the chassis was shipped by the Company in December, 1922 to Dalgety & Co (the Sydney agents for Rolls-Royce at the time), arriving early in 1923. The coachbuilders Smith & Waddington of Camperdown fitted a temporary bench seat and a box in which two bags of sand were carried as ballast. In this form, the chassis was used for some time to demonstrate the new model to many interested customers in Sydney. The chassis was then sold to Colonel J. M. Amott of Homebush (a member of the biscuit-making family) and Smith and Waddington constructed a two-door, four-seater body on the car which was used primarily by Mrs. J.M. Arnott. Several children learnt to drive on the car and as a result, it was involved in several severe collisions. The chassis frame was replaced three times and the front axle, steering box and steering column several times. During this period, the two-door body was modified to a four-door saloon. The car subsequently passed through the hands of several owners, including Auto Auctions of Sydney who used it as a mobile advertisement and was at one time offered as a prize in an Art



Union before being acquired in 1960 by its present owner David Davis, who had a body constructed to his own design by the Sydney firm of Diskon & Molyneux.

The first complete 20HP car to arrive in Australia was chassis 59S7. Fitted with a touring body by Barker, this car was shipped to Sydney by the Company in April 1923 and delivered to Mr. R. Ramsey of Killara. The car still carries the original coachwork.

Chassis No. 41G8, with a Hooper touring body, having been delivered to its first owner in England in 1922, was imported to Australia in the late 1920's. This car is at present owned by RROCA NSW Branch member Keith Ross and is apparently the only known survivor of the "production" 20HP cars. An experimental car built in 1921 (Chassis No. 4G11) survives in England; this car was used for experimental and testing purposes until May, 1925 when it was refurbished by the Company and sold to Sir Frederick Hewett of London.

The Sydney coachbuilding company Smith & Waddington built the original bodies for many of the 20HP cars imported to Australia as bare chassis. Australian road conditions of the time placed severe strain on imported bodies (,and on the local products) and many chassis have carried two or more different bodies during various periods of their lives. It was commonplace for an owner to have a new body built on a chassis which was judged to still be mechanically sound. There were also cases in which an owner, having bought a new chassis, had a body removed from an older car and had it fitted to the new chassis.

In addition to Smith & Waddington, the Australian coachbuilders who built bodies for 20HP cars included Agate, Diskon & Molyneux, Propert and Reliance Motor Body Works in Sydney; Burlington Motor Body Builders, Cheetham & Borwick, Martin & King and Melbourne Motor Bodies in Melbourne., Spencers in Adelaide and Hopes Body Works and Peel in Brisbane. Other small firms and individual craftsmen also built bodies for 20HP cars.

Some Australian owners undertook the design and construction of bodies for their own cars, often with highly satisfactory results and sometimes with lesser degrees of success. Particularly in the period when old cars in general were not valued or sought after (as in the 1940's and '50's) , some bodies were brutally mutilated, usually with the objective of creating a table-top truck or utility.

In 1990, the (UK) Rolls-Royce Enthusiasts' Club estimated that the worldwide survival rate for the 20HP was about 44% (reported in RREC Bulletin No. 179). With production total of 2940 this corresponds to about 1300 surviving world-wide. John Fasal (in "The Rolls-Royce Twenty") has suggested that about 130 20HP cars survive out of the 150 that reached Australia; these figures imply a (very high) survival rate of about 87%. The 1997 membership Register of the R-ROCA after allowing for cars believed to be domiciled overseas indicates that there are about 58 Club-affiliated 20HP cars in Australia.

The 20HP occupies an important place in the history of the Rolls-Royce motor car. Its introduction marked the end of the single-model policy which had been pursued by the Company since 1906. Its acceptance by the motoring public assisted the Company to consolidate its position in the difficult years which followed the Great War. It was the first of the line of small horsepower Rolls-Royce cars, its successors, including the 20/25, the 25/30 and eventually, after the Second World War, the Bentley Mk VI and the Silver Dawn - cars which, under conditions rather similar to those which

prevailed when the 201 [P was introduced, made a significant contribution to the Company's post-war recovery in the face of difficult economic conditions and social upheavals.

The surviving examples of the 20HP form a link with the early days of the Company and with their characteristic individuality and charm, they recall an era when motoring was an adventure to be enjoyed in a world which was in many respects very different from that of today.

(Photographs by courtesy of Bob Tompkins).