AUSTIN

THROUGH THE YEARS

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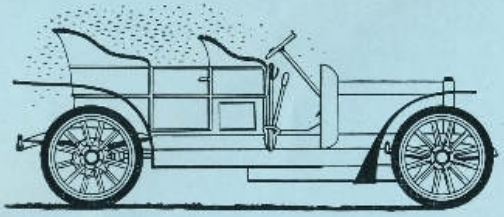
A BRIEF HISTORY OF THE COMPANY

THE AUSTIN MOTOR COMPANY LIMITED · LONGBRIDGE · BIRMINGHAM · ENGLAND

Introduction



In January, 1906, before the first Austin car pattered happily through the quiet countryside around Longbridge, there appeared in the preliminary announcement catalogue, these words . . . "The Austin car will represent the embodiment of all the best features in modern automobile construction . . . . Only the highest class of material will be used and the supervision during the course of construction will be such as to ensure the very best results."

Thus, the seeds of dependability were sown at the very beginning of Austin production and they have been tended and developed through the years. To-day, Austin cars hold a reputation for dependable service that is unique in the motor industry, and they are achieving successes unequalled by any other British car in the markets of the world.

We are impelled by these facts to pay tribute to two generations of skilful Austin workers who made these fine cars, to our colleagues in the industry who have maintained the flow of essential materials, and to our distributors and dealers everywhere who have ably assisted us to serve the public and maintain their faith in our products.

To that public we also send greeting, since so many of them have preferred to become Austin owners instead of merely motorists !

LORD AUSTIN OF LONGBRIDGE, K.B.E., LL.D., 1866-1941

FOUNDER AND FIRST CHAIRMAN OF THE AUSTIN MOTOR COMPANY LIMITED

Lord Austin was born in Little Missenden, Buckinghamshire, in 1866, and at the early age of 18 he emigrated to Australia to commence his apprenticeship in a Melbourne foundry. He later joined the Wolseley Sheep Shearing Machine Company and ultimately became manager. In 1893 he returned to England to supervise the manufacture of sheep shearing plant in a Birmingham factory. He was early inspired by the possibilities of mechanical transport, so much so that two years later, in 1895, he designed a three-wheeler, powered by a horizontal two-cylinder engine.

A four-wheeled car of his design was exhibited at the Crystal Palace Exhibition in 1896, and in 1900 his 3 h.p. two-seater carriage secured a silver medal by successfully accomplishing the 1,000 miles trial. Five years later he founded his own organisation in a small derelict printing works at Longbridge, seven miles from Birmingham. So commenced the Austin Motor Company.

Lord Austin was Chairman of the Company for thirty-six years until his death in 1941. His designing genius, organising ability, unfailing energy and faith made possible the outstanding success of the fine, dependable cars that bear his name.

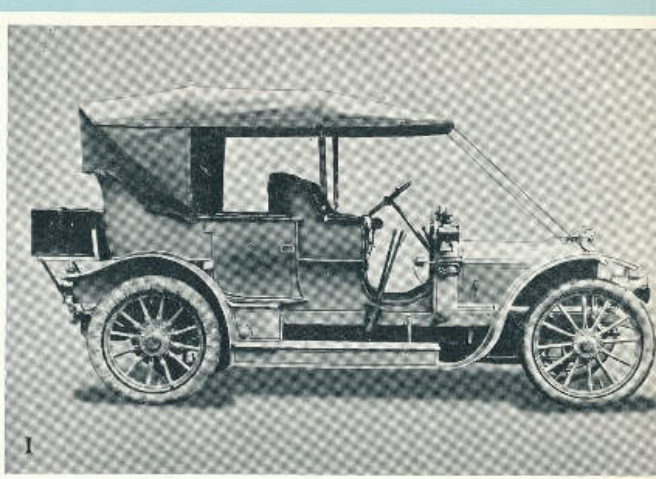
The motto below was displayed in Lord Austin's office for many years.

"Most everything worthwhile is born of some dreamer's dream."

THE first motor cars produced in Britain in 1896 were in reality horseless carriages, designed in a style similar to the horse-drawn vehicles of the day but propelled by an "infernal machine" instead of the then more reliable horse. It was not until some years had elapsed and the "newfangled contraptions" were generally recognised as a reasonably safe and respectable means of transport, that they gradually achieved their own individuality.

The first Austin car was made at the Longbridge factory early in 1906. It was a touring model with a 4-cylinder engine rated at 25—30 h.p. and was in every way a fully-fledged car—a tremendous advance over the horseless carriage style and the early Austin designs of 1895 and 1900. This car, with those that followed, gained considerable popularity and quickly established a reputation for sound, honest design.

By the end of 1908, seventeen different models had been introduced, ranging from 15 h.p. to 50 h.p., and of these the 40 h.p. Endcliffe Phaeton with chain drive was one of the most successful. The following year saw the introduction of the first Austin Seven. This was a single-cylinder open two-seater, and represented an early attempt to produce a really economical, low-powered car.



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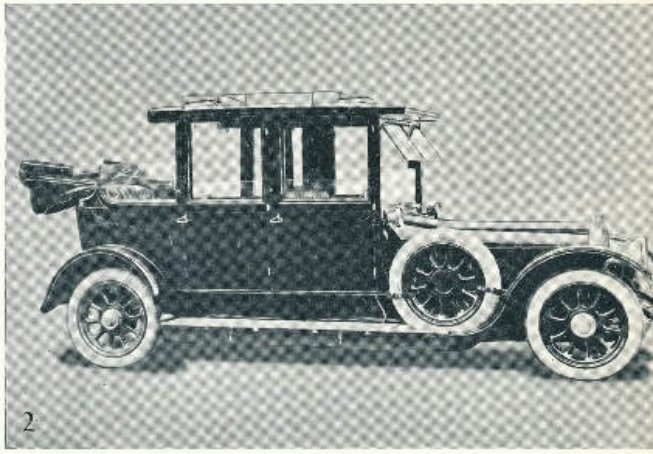

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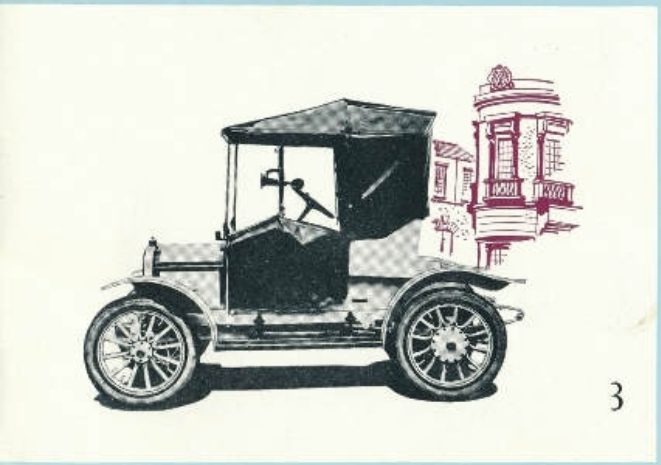
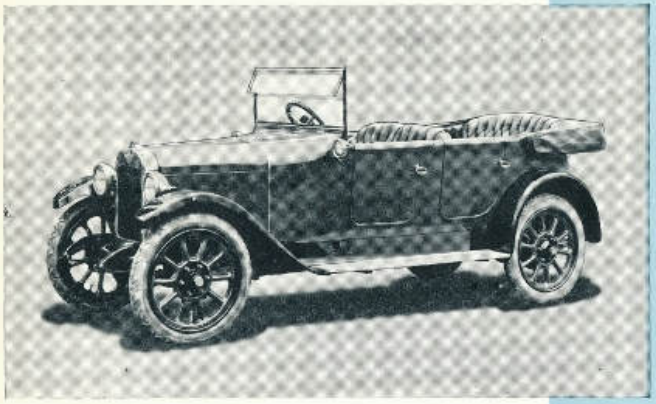


3

1 1908, one of the first Austin models, the 40 h.p. Endcliffe Phaeton.

2 1913, luxury exemplified by the 50 h.p., 6-cylinder Landaulet.

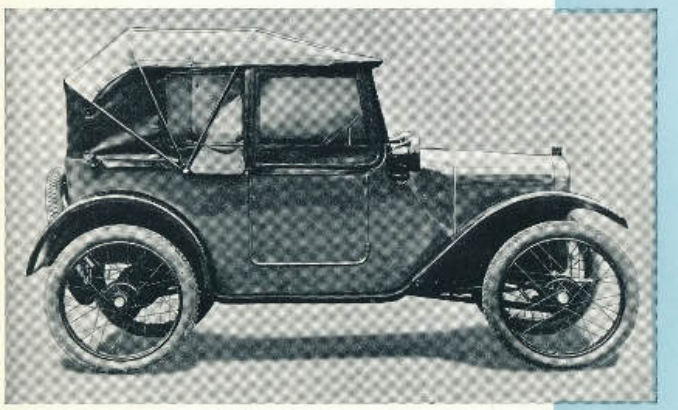
3 1909, the first baby Austin, a single-cylinder 7 h.p. tourer.



1922

Dependable to the last nut and bolt —the Heavy Twelve Tourer with a 4-cylinder engine.

One of the most famous cars in the world—the Austin Seven. Here is the first of a long line lasting 17 years.



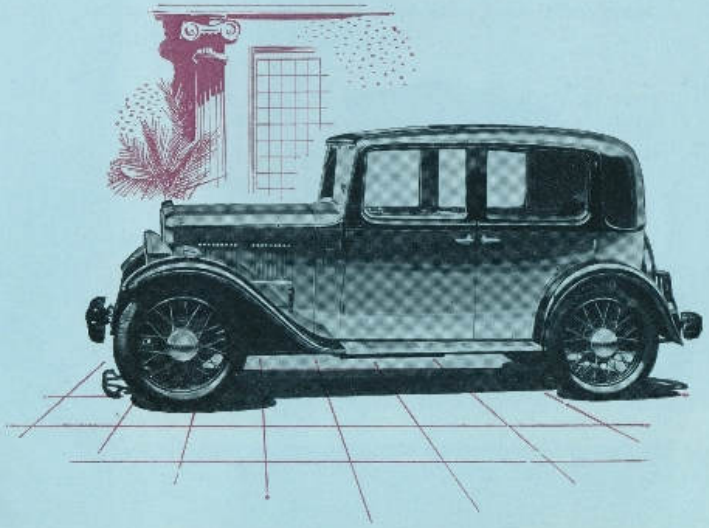
Austin production increased year by year, and by 1910 the annual output was 576 cars. Design also improved both in respect of mechanical operation and passenger comfort. The 50 h.p. 6-cylinder Landaulet provided a good example of luxury motoring in 1913.

Nine years after its inception, namely in 1914, the factory had achieved an output of 1,500 cars a year, which showed substantial progress. But the first world war came as an interruption to the normal activities at Longbridge, and during the national emergency large supplies of war material were manufactured.

Post-war car production was an uncertain process fraught with many difficulties, but the Austin name was soon to the fore with the first newly-designed British car—The Austin Twenty Tourer. The after-effects of the war were, however, not to be lightly discarded, and in the depression of 1920-21 the Austin organisation in common with many other firms had once again to face the storm of industrial difficulties. But it was in this period of stress that the real foundations of its present success were laid.

1932

Another popular and successful Austin was the Ten-Four saloon, which was produced until 1934 in the final form shown below.

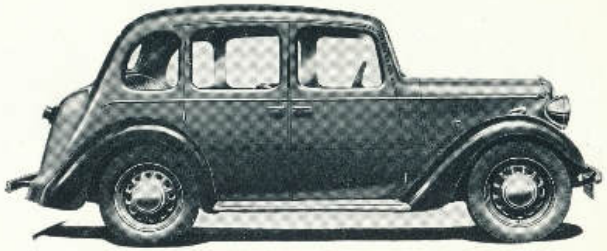


Lord Austin designed in quick succession the Austin Heavy Twelve and the Austin Seven, the former appearing on the market late in 1921 and the latter following in 1922. Both these models were an immediate and unqualified success, and by their wonderful endurance made Austin the standard of motoring dependability. At first the Seven, on account of its diminutive proportions, was the butt of much ridicule (witness the story of the motorist who bought two—one for each foot !). But those who came to scoff remained to praise when the amazing capabilities of the first practicable baby car began to be fully realised.

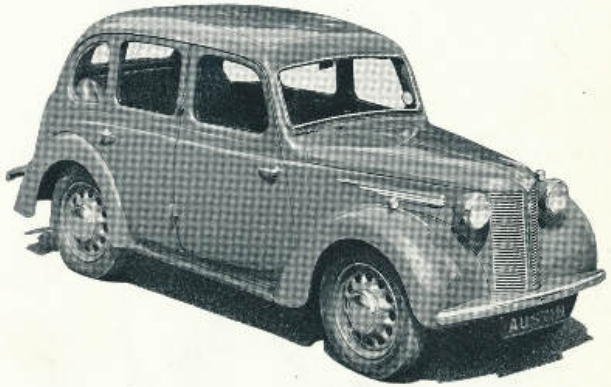
Between 1922 and 1926 the Austin Motor Company made remarkably rapid progress, and the production of cars increased during that period from 2,600 to 25,000 a year—a remarkable achievement.

1932 heralded another newcomer to the Austin range, namely the Ten-Four, a car whose engine, basically unchanged, continued in production for fifteen years. Meanwhile, the Seven was growing up and the Ruby 4-seater Saloon was a car infinitely more refined than the original design of 1922. There was, however, no fundamental alteration to the engine or chassis of the Seven right up to the time that this little car, beloved of many a motorist, gave way to the Austin Eight in 1939.

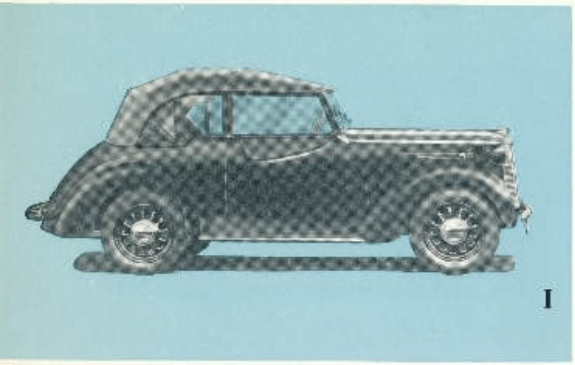
1935 **The Austin Seven Ruby 4-seater saloon was the stylish descendant of the original "baby" of 1922.**



1936 **A favourite among motorists everywhere—the "Cambridge" Ten. Two other models similarly styled were the "Ascot" Twelve and "Goodwood" Fourteen.**



1939 **Successor to the Seven, the Eight achieved immediate popularity on its introduction.**

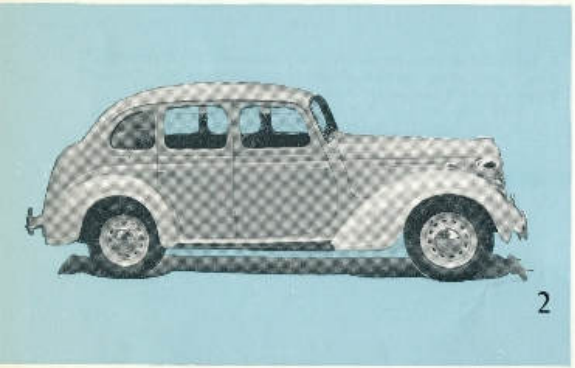


1

1940

Three models which were to achieve considerable popularity appeared late in 1936; the "Cambridge" Ten, the "Ascot" Twelve and the "Goodwood" Fourteen. They were the first Austin models to incorporate a covered rear luggage compartment, although spare wheels had been enclosed for more than a year. It was a practical feature of car design which, as we now know, had come to stay. These cars, with others in a comprehensive range, were enhancing Austin prestige in the years immediately prior to the second world war.

In 1939 Austin introduced in quick succession a new Eight in February, a new Ten in May, a new Twelve in August, and production reached 90,000 cars a year. And then, in September, came the second world war.



2

1946

The achievements of the Austin organisation during the period 1939—1945 are too numerous to mention in detail, but it is worth noting that vast quantities of war equipment were produced, including:—Over 120,000 military vehicles of all kinds from the 8 h.p. utility tourer to 3-ton 6×4 trucks; 2,866 complete aircraft, including Battles, Hurricanes and Stirlings; 56,485 aircraft engines; 3,500 lifeboat engines for the Royal and Merchant Navies; 1,350,000 rounds of 2-pounder, 6-pounder and 7-pounder armour piercing shells; 3,350,000 ammunition boxes; 600,000 Jerricans; 2,500,000 steel helmets for the services and civil defence. Additionally the Company made innumerable parts for aircraft, tanks and guns, and much of the pioneer work on the waterproofing of vehicles for seaborne landings was carried out at Longbridge.

3

1947

By the end of the war, new car designs were already well advanced and experimental and development work was progressing, so that in 1947 Austin were able to announce the first British light car of completely post-war design. This was the A40 Devon Saloon which met with unprecedented world-wide success and was acclaimed in the toughest of all markets—North America. Altogether, 344,025 Devons were made, of which 264,829 or 77 per cent. were exported, bringing into the country from overseas £85,000,000.

1 **A little car that did a big job in the second world war, the Austin 8 h.p. W.D. tourer.**

2 **The millionth Austin, a 16 h.p. saloon, signed by the people who made it and placed on show at Longbridge.**

3 **The A40 Devon was the first British light car of completely post-war design.**

In times to come 1947 might be described as a vintage year for Austins, because not only was the most successful model—the A40—introduced, but that year also saw the introduction of the Company's largest and finest product, the A125 Sheerline Saloon. A car of distinguished appearance and high performance, offering at its original selling price of £999, really outstanding value. A luxury, coachbuilt saloon was also produced on the Sheerline chassis. This was the A135 Princess Saloon with bodywork by Vanden Plas, of London.

More models were announced during the next year, 1948, including the A70 Hampshire Saloon, and the A90 Atlantic, the last-named taking 108 records in one week on the Indianapolis race track in 1949. Production had by now reached 136,600 vehicles a year, more than the total car production of the whole British Motor Industry in 1946. A magnificent achievement in view of the many post-war difficulties in the supply of essential materials.

During this period with production records being broken almost every week, the Company still found time to reorganise the factory layout and to embark upon an ambitious programme of expansion. In some instances, with factory walls being pulled down around them and with roofs temporarily replaced by tarpaulins, Austin cars continued to flow from the despatch section to the ships that were waiting to take them to all parts of the world. Never before had such organising skill been applied to "keep 'em rolling" but by the concentrated and combined efforts of both management and workers, roll they did, as shown by the increase in exports from nearly 84,000 to over 125,000 vehicles between 1949 and 1950.

In 1950 came the A40 Sports, a convertible on the Devon chassis, which achieved fame by circumnavigating the world in the first 21 days of June, 1951.

In October, 1952, came the re-introduction of the "Seven" in the form of the new A30. This was followed by the popular A40 Somerset.

A powerful and popular car—the A70 Hampshire. 1

High performance with sporting characteristics exemplified in the A90 Atlantic. 2

The famous Seven reappeared as the A30 in 1952. 3

1948

1

1949

2

1952

3

The 948 cc. A40 Farina was introduced in 1958 and in Saloon or Countryman form proved a firm favourite. In 1963, a 1098 cc. engine was fitted giving more power and performance.

1958

Luxury and high-class trim were built into this 3-litre Princess saloon by Vanden Plas.

1959

The Austin Mini with all independent rubber suspension, and combined engine/transmission front wheel drive took the motoring world by storm in 1959. In 1964 "Hydrolastic" interconnected suspension was added, and in 1965 automatic transmission, with overriding manual control, became available as an optional extra.

1959

In July, 1952, a new company, The British Motor Corporation Ltd., acquired the entire capital of Morris Motors Ltd. and the Austin Motor Co. Ltd. in exchange for its shares.

The £14,000,000 capital of the new company was divided into £9,250,000 in preference shares and £4,800,000 in ordinary shares. Shortly after the merger the capital was increased to £33,372,925 by increasing the issued ordinary shares to £24,131,799 to provide the necessary working capital.

On 30th September, 1953, the authorized capital was further increased to £36,250,000 to enable shares to be issued to acquire the ordinary capital of Fisher & Ludlow Ltd.

The acquisition of this business, one of the remaining independent body-manufacturing concerns, ensured a source of supply for a proportion of the bodies for the Corporation, the remainder being obtained from Nuffield Metal Products Ltd. and The Pressed Steel Co. Ltd. In 1966, both these firms, together with one other—Morris Motors Bodies Branch—were merged with Fisher and Ludlow to form an entity called Pressed Steel-Fisher Ltd.

This investment and expansion has been planned to give the Corporation a potential annual output of 1,000,000 vehicles.

The merger of the Austin and Nuffield interests in 1952 created the largest motor-manufacturing business in Europe and the third largest in the world.

There are now 37 subsidiary companies and two associated companies.

Besides the various British companies, B.M.C. have companies registered in Australia, Canada, U.S.A., South Africa, Rhodesia, and Sweden. The largest of these is in Sydney, Australia, where there is a complete manufacturing unit completed at a cost of £13,000,000 and producing cars with over 60 per cent of the component parts manufactured in Australia.

At Blackheath, near Cape Town, in South Africa, is a plant for the assembly of several B.M.C. cars from parts imported from the parent company. This plant was extended by 90,000 sq. ft. in 1961 to cope with additional models.

The advantages of the merger briefly are as follows:

(1) **Research and Design.** Concentration of research and new development, and standardization and commonization of design.

(2) **Supply.** Creation of the large volumes necessary to make bulk buying possible and thereby reduce material costs.

(3) **Manufacture.** Commonization justified the installation of high-production machinery and reduced labour costs.

(4) **Finance.** Resources can be pooled to provide the capital necessary for expansion.

(5) **Sales.** The making available of additional sales outlets open to each company. The offering of a more comprehensive range of models, and making it possible to combine the overseas activities of the two organizations in certain countries.

(6) **Service.** The standardization and commonization of components reduce the number of parts to be stocked, enabling better supplies of service parts to be carried by Dealers and Distributors in both home and overseas territories.

More models were announced in 1954. The "Metropolitan" being manufactured for the American Nash Company, and a successor to the A40 Somerset—namely, the A50 Cambridge. This was closely followed by the A90 "Six" Westminster, which was developed into the A95 Saloon. The A110 Saloon was a further exposition on the A95 theme and had a manual or automatic gearbox.

A major breakthrough in small car design occurred in 1959 with the introduction of the now world famous Mini with transverse engine, front-wheel drive, and all independent rubber suspension. This car remains a firm favourite with all types of road users, and can now be had with automatic transmission combining full manual control of the gears.

The A50 Cambridge grew into the A55, and then, in 1961, became the A60 with an engine of 1,622 c.c. giving a scintillating performance on the road. This famous car has continued in production and has a large enthusiastic following. Similarly the A110 series of cars has been improved and the present version with a six-cylinder, 120 brake horse power engine, disc brakes at the front and four-speed gearbox gives luxurious travel for the high-speed-no-time-to-waste, executive.

In September, 1963, the Austin 1100 made further motoring history. The advanced mechanical details of this design include interconnected, fluid suspension for all four wheels giving a smooth, level ride and unparalleled road adhesion under almost any conditions. The transversely-mounted engine with sealed cooling system,

1960

The Hire car is designed for hard work and gives ample room for passengers and luggage.

1961

The world famous A60 Cambridge is still in production. Shown here is the 1961 car.

1961

Luxury motoring with six cylinder smoothness was offered in the A110 Westminster of 1961. In improved form it remains in production in 1964.

1963 saw the advent of the revolutionary Austin 1100 with front transverse engine, front wheel drive, and "Hydrolastic" suspension. In 1965 fully automatic transmission with overriding manual control became available as an optional extra. 1966 saw the introduction of the Countryman version.

1963

The Princess 4-Litre "R" Saloon, powered by a six-cylinder engine built by Rolls Royce, offers high speed performance and great comfort.

1964

The Austin 1800 carries on the Issigonis Concept of front transverse engine, front wheel drive, and "Hydrolastic" suspension.

1964

drives the front wheels through an integral four-speed gearbox—an arrangement which affords generous accommodation for five adults within a compact overall length of only 12 ft. 2¾ in. Power output of the 1.098 c.c. engine is 48 b.h.p. (net) at 5,100 r.p.m.

1964 was a year of great achievement. Two remarkable models were introduced, first the Vanden Plas Princess R in August, and then the Austin 1800 Saloon in October—development and production engineers had certainly not rested on their laurels during this period of the Company's history.

The Vanden Plas Princess 4-litre R Saloon is powered by a specially-developed six-cylinder Rolls-Royce "aluminium" engine, which is manufactured at the Rolls-Royce Motor Car Division, Crewe. Weighing only 450 lb., this engine develops 175 b.h.p., giving the Princess R an exceptionally high power-to-weight ratio and consequently an excellent performance.

The Austin "1800" follows the basic design conception of the Mini and "1100" having transversely-mounted engine and transmission unit, front wheel drive and "Hydrolastic" independent suspension with "a wheel at each corner."

A smooth 84 b.h.p. at 5,000 r.p.m. is delivered by the 1,798 c.c. four-cylinder, o.h.v. engine which has a five-bearing crankshaft. It drives, via a gear train, a four-speed gear box, with baulk-ring type synchromesh on all forward gears.

A new design of engine mounting combined with the use of control cables instead of the more usual rods linking the gear box to the gear lever helps to insulate the car interior from all engine noises, contributing to a quiet, high-speed cruising performance.

Although the Austin 1800 is over nine inches shorter than an Austin A60—itself a car of modest overall length at 14 ft. 6½ in. (4·43 m.)—the interior body and seat dimensions exceed those of cars of considerably greater external dimensions.

In employing the stiffest structure ever used for this category of family car, the designers have aimed not only at safety, but also at greater freedom from distortion and rattles over a huge mileage.

In conclusion it may be said that the advanced design and quality of engineering inherent in the new 1800 is such that it is confidently expected to carry on the tradition of longevity established so convincingly by Lord Austin in pre-war days.

AUSTIN

RACING AND SPORTING CARS

Between 1908 and the outbreak of war in 1939, Austins of many shapes and sizes competed in nearly every major event in Britain and in many countries overseas. But it was the Seven that achieved the greatest measure of success, holding at one time, all the records in its class.

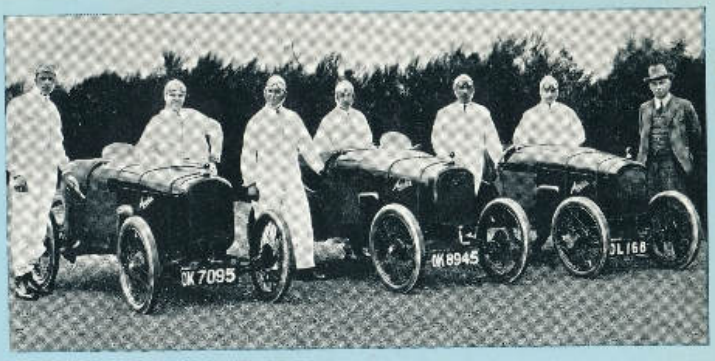
Most famous of all the pre-war Austin Seven racing cars was the O.H.C. Special. First introduced in 1936 it was, until 1939, a regular and sensational runner in trials and racing events. Of only 750 c.c. capacity, this remarkable car was capable of over 120 m.p.h.

I **Sir Herbert Austin with the first team of racing Sevens in 1923**

2 **A 1925 supercharged Austin 7 with George Duller at the wheel.**

3 **The Austin Seven Special with twin overhead camshafts, at speed on the Donnington Park track in 1938.**

4 **One of the famous 1929 "Ulster" Sevens which gained many pre-war successes.**



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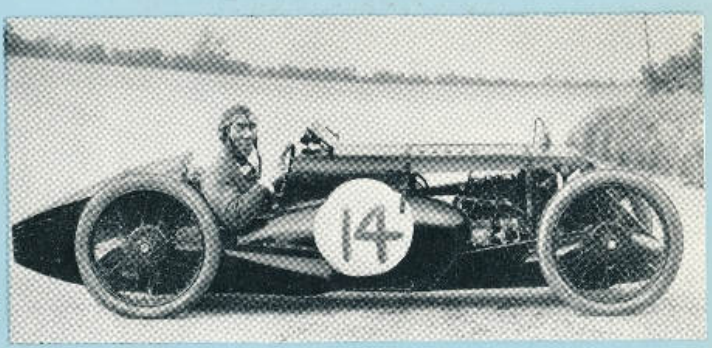

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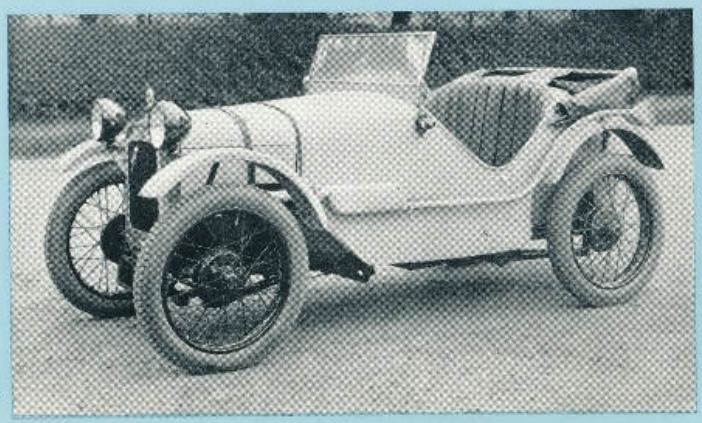

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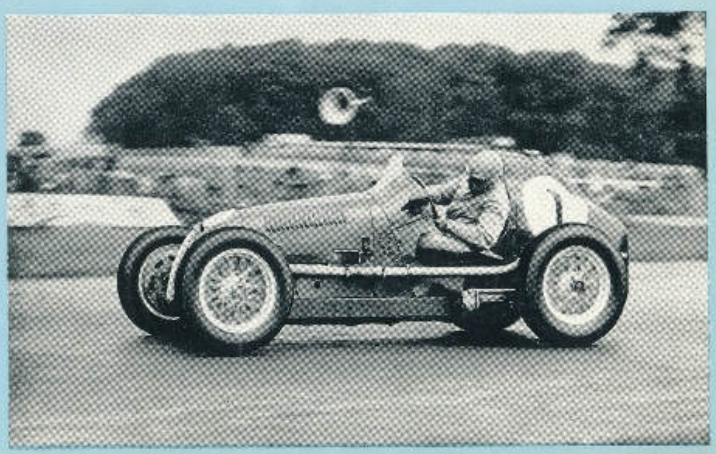


3

The 1953 Austin Healey 100 had a four-cylinder engine which gave the car a top speed of 110 m.p.h. In this year, at Bonneville Salt Flats, Utah, U.S.A., a standard model car took all American Stock Car Records from 1 to 5,000 km.

1953

At the 1952 Motor Show, an event occurred which was to have considerable influence over the future activities of the Company—an event which was also to put the name Healey, firmly into the markets of the world. It was Mr. G. W. Harriman (now Chairman and Managing Director) who saw, on the Healey show stand, a new sports car which made use of several basic components manufactured by Austin. Among these was the well known and proved A90 four-cylinder engine which had been so successful in the Atlantic Sports Saloon and Convertible. There and then, an agreement was made with Donald Healey to produce the car at Longbridge under the title of the Austin Healey 100. This 110 m.p.h. car soon penetrated deep into the Dollar market and became a firm favourite with American and Canadian owners. In sports and racing events it made its mark, its speed and handling characteristics being in a class apart. In fact, by 1939 standards, it gave performance akin to a Grand Prix racing car.

Further development of the Healey 100 in 1956 endowed it with a tuned version of the "C" type six-cylinder engine which is also the unit used to power certain of B.M.C.'s luxury cars. With twin S.U. Carburetters, and 102 b.h.p. at 4,600 r.p.m. the performance was still further increased. This model was known as the "100 Six." Distinguishing features were, an air intake on the bonnet top, two occasional seats and a redesigned front grill.

The power of the "100 Six" increased still further through the years. In 1957, a six-port cylinder head was fitted and boosted the output to 117 b.h.p. In 1959, the car was styled "Austin Healey 3000" and the power had grown to 124 b.h.p. 1961 saw 132 b.h.p. on the engine graph, whilst the present car gives no less than 150 b.h.p. Truly a remarkable example of constant development with reliability.

The Austin Healey 3000 Sports Convertible is, in 1966, still at

1958

The first Austin Healey Sprites of 1958 had a one-piece, lift-up bonnet and front wings. Underneath was the famous 948 c.c. B.M.C. "A" Type engine which produced 42·5 b.h.p.

the forefront of the world's classic sports cars offering high speed comfort to the highest degree.

May, 1958, saw the introduction of the Austin Healey Sprite Mk. I, which immediately found a great following, especially among younger and less pecunious enthusiasts, who aspired to participation in Motor Sport. It would be true to say that this car was the first post war sports model bringing back the opportunity to enjoy the open road in a manner similar to the mode of travel provided by such cars as the Sports Austin Sevens of pre-war years, but with much greater comfort.

In its original form it was powered by the well known "A" series 948 c.c. engine producing 42·5 b.h.p. at 5,000 r.p.m. At this time the complete bonnet with headlamps and front grill lifted up in one piece, but when the Mk. II Sprite saw the light of day in June, 1961,

1961

The Healey Sprite Mk. II, announced in June, 1961, had a restyled body with fixed front wings and headlights. The engine capacity was unchanged at 948 c.c. until the Mk. III Sprite came along with a 1098 c.c. unit in 1964.

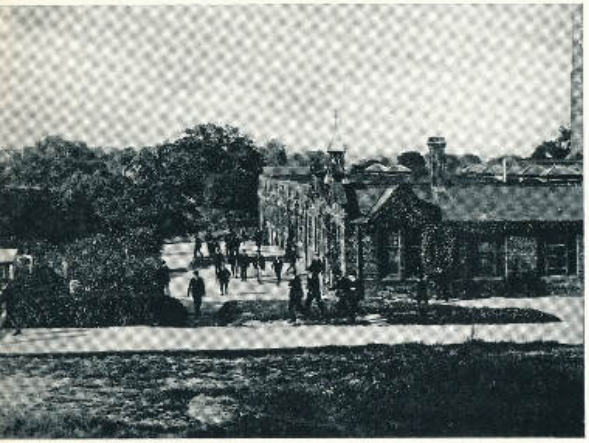
the headlamps were mounted in fixed wings and the front grill was part of the main body structure. In fact the car took on the appearance it largely has today. This Mk. II car also had greater power, the engine giving 49·8 b.h.p. at 5,500 r.p.m. The Mk. I and Mk. II had quarter elliptic springs at the rear, but on the Mk. III (announced in March, 1964,) these were replaced by semi-elliptics giving still greater roadholding and comfort. In addition to improved springing, this car has a 1,098 c.c. power unit giving no less that 59 b.h.p. at 5,750 r.p.m.

On the road the Mk. III reaches 91 m.p.h. over the flying quarter mile—no mean achievement from a fully equipped 1,098 c.c. car!

Since originally announced in 1958, over 103,000 Sprites have been produced and 84,000 of these have been exported. Included in these figures are over 6,800 Innocenti "Spyders" which are assembled in Italy from components made in the United Kingdom. The Sprite, as in the case of the big Healey 3000, has been developed throughout its production into the superb car it is today.

1964

The 1964 Austin Healey 3000 Mk III Sports Convertible goes from strength to strength. It gained outright wins in the 1964 Austrian Alpine Rally and the Liege, Sofia, Liege Rallies. In 1965 it won its class in the R.A.C. International Rally and was second overall.



1906

1906

2½ acres, 270 workers, 120 vehicles a year.

1966

260 acres, 27,000 workers

Capacity approximately 500,000 vehicles a year.

THE old family album is always an object of great interest, and few people can resist the fascination of turning its pages and glancing at the, perhaps faded, pictures of a bygone era. From the Austin "family album" comes the picture on the left. It shows the main entrance to the 1906 factory with some of the 270 workers leaving at the end of the day, after half completing one car.

In direct contrast is the photograph below depicting the car assembly plant of the modern Austin factory. It stands as a brilliant example of British engineering skill and ingenuity, and incorporates the most advanced techniques in the motor industry.

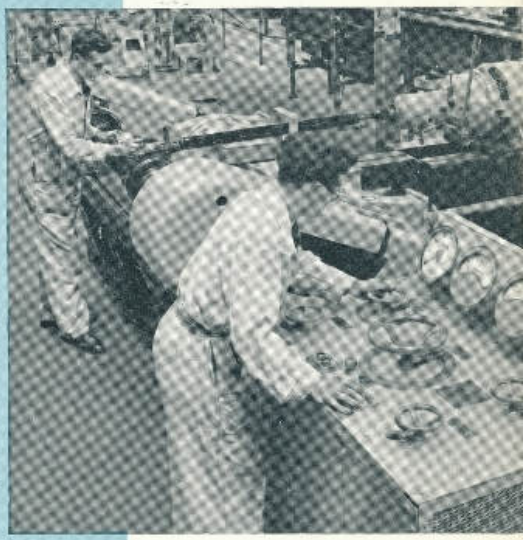
Little did Messrs. White and Pike know, when they sold their unwanted printing works to Mr. Herbert Austin in 1905, that this building was to be the birthplace of a vast organisation that would span the world.

1966

1

IN the modern Austin Factory at Longbridge, more of the complete process of car manufacture takes place than in any other single British plant. To this comprehensive quality it owes its exceptional interest as well as its efficiency, for visitors can see virtually the complete flow of motor car production. Not merely the assembling of units and parts derived from widely different sources, not only the machining processes, but the initial preparation and shaping of the raw materials and every subsequent stage of manufacture takes place until a shining, new and dependable vehicle rolls off the finishing lines.

Austin cars are conceived in the Styling Department where new body styles are first sketched, then modelled in plasticine. Full-scale drawings are next made and wood models constructed to actual size.



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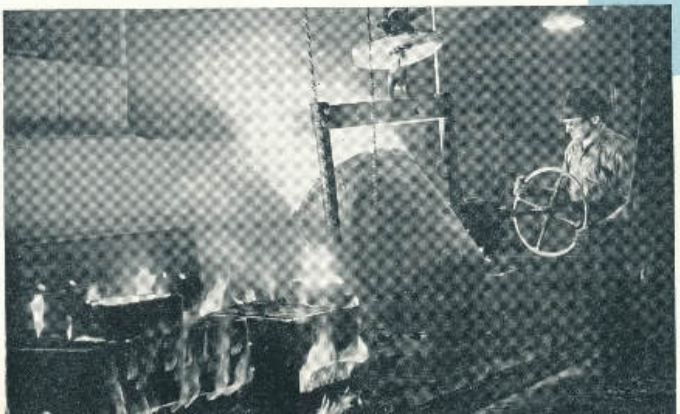

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1 **The world's largest multi-storey car park at the works of the Austin Motor Company Limited. Built to house production cars awaiting delivery, the car park can accommodate 3,300 vehicles.**

2 **Testing an experimental rear axle on one of the many special machines in the Development Department.**

3 **Molten iron being poured into moulds in the Austin foundry.**

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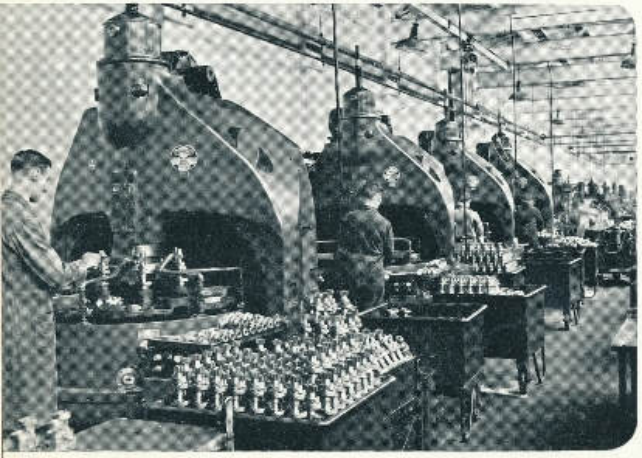

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Meanwhile, chassis designs are being produced to meet the required specifications of the new car. and the result of this initial activity is the building of a complete prototype vehicle. The development and experimental stages that follow are of extreme importance in the early life of the car, in that the experience gained from the performance and general behaviour of the prototype is invaluable when full-scale production begins. Thus, many months are spent in testing, modifying and re-testing every major component as well as the complete vehicle in order that the finished car will be equal to the most exacting conditions of operation and provide long-lasting dependability.

The raw material for many of the chassis parts first begins to take shape in the Austin foundry, where the molten metal is poured into previously prepared sand moulds. Some 320 tons of finished castings are made in a week, but by no means all components are cast, and the drop-forging shop accounts for approximately 600 tons of finished parts comprising 500,000 items during a normal week's work.

After the rough edges have been taken off by fettling, the castings and forgings pass to the machine shops where the surplus metal is removed and the contact faces are machined and ground. Machining must be carried out within very fine limits, and parts are carefully inspected to see that the required standard of accuracy and finish has been achieved. The various diameters of the camshaft for instance, must be correct to half-a-thousandth of an inch if the assembled engine is to run smoothly and silently.

Completed parts are now brought together in marshalling areas, and on their way to the assembly sections, pass through steam-washing machines to ensure absolute cleanliness. The assembling of major

I **The Automatic Factory provides a good example of tidy, spacious layout. Each operator is responsible for six machines.**

2 **A small section of the Gearbox Factory. The machine nearest the camera hobs 31 gear teeth every minute.**

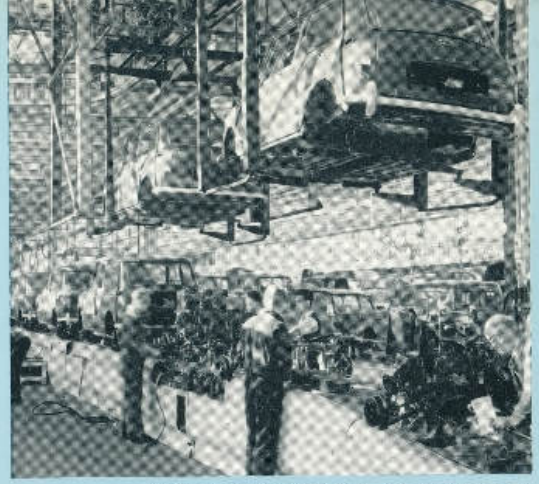
3 **Austin engines being assembled on moving conveyors in the Engine Factory.**

units such as the engine and gearbox is carried out behind glass partitions to afford protection from dust, metallic particles and other contamination resulting from nearby machining operations.

After a thorough testing, the assembled units are hung on special cradles from overhead chain conveyors and flow in continuous succession from their individual factories within the vast Austin Works to a mechanised central sequencing area. From there they are automatically selected in correct sequence and started on their journey to the car assembly building through a great underground passage accommodating conveyor chains.

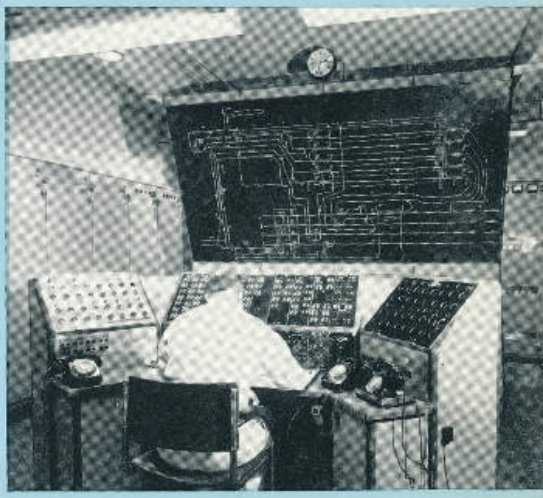
From the main tunnel, and still below floor level, the units are switched to sidings which house a complex network of sorting gear. Here they are held in readiness until an automatic device moves them singly and in their right order on to elevators which lift them through the main floor to the appropriate assembly lines.

The ingenious and entirely automatic system of control which operates from the sequencing area to the actual time of assembly, ensures that a given component reaches a predetermined point at precisely the right moment without being touched by hand. Skilled operators using strategically placed batteries of air-operated hand tools complete the assembling of the car.

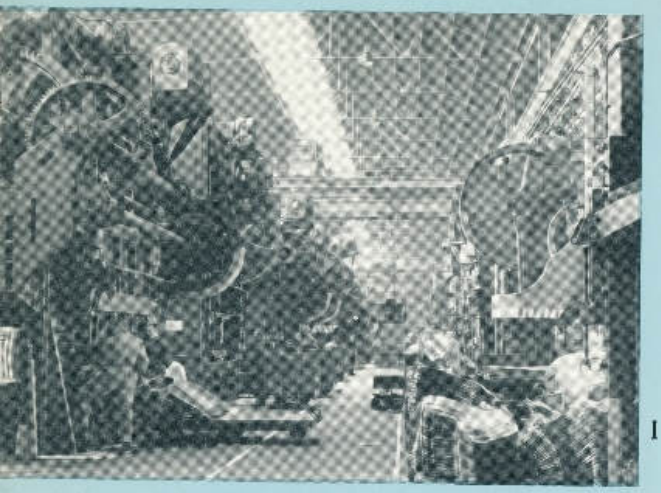


In the main assembly hall, sub-assemblies for Austin cars are automatically delivered to the assembly tracks to be built up with the aid of compressed-air tools.

One man maintains control of the complicated electrical system which operates the automatic component marshalling machinery.



The underground supply line along which major components are conveyed to the car assembly building.



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As each car in embryo proceeds down the assembly line details of its major components are flashed to the documentation office by means of automatic recorders operating on electrical impulse. Thus, all essential data are immediately available enabling release papers to be completed in advance of the vehicle's final inspection and test.

The capacity of the original Austin car assembly building when it was first commissioned was 4,000 vehicles a week. In 1963, a second building, known as C.A.B. No. 2 was put into operation. It is 960 feet long and 200 feet wide. It lies alongside the original building and the combined output is around 10,500 vehicles per week. Small wonder, then that we at Longbridge believe it to be the finest and most advanced assembly plant of its kind in the world.

Austin bodies begin as flat steel sheets. These are placed in presses, the largest of which applies a pressure of 1,000 tons, and in a matter of seconds the flat sheet becomes an intricately shaped panel. On the body assembly lines the individual panels are fitted into specially designed jigs which secure them firmly in their correct relative position while they are joined together by electric spot-welding. There are approximately 800 welding points on each Austin body. Completed body shells are sent through a 500 feet long rotodip system which in turn (1) removes all grease from the metal; (2) provides a phosphate coating to prevent corrosion and localise the formation of rust following damage to paintwork when the car is in use; (3) applies the primer paint, and (4) bakes the primer on to the body. After this preliminary treatment the bodies travel through a huge painting plant. Here the synthetic enamel is sprayed on then baked in gas ovens at a temperature of 240°F.—260°F. to give the lustrous, durable finish familiar to many thousands of Austin owners all over the world.

1 **Body panels being shaped by giant machines in the Austin press shop.**

2 **Completed body shells about to enter the rotodip where they are, in turn, degreased, rust-protected, primed and baked.**

Meanwhile, in another section of the body factory, upholstery is being made, fascia panels prepared, carpets cut to shape, and window glasses, dust-proofing strips and many other parts marshalled. Thus, as the shining new body shells move down the trimming lines they are gradually fitted out until, fully equipped, they are connected up to the overhead conveyor and started on their underground journey to the car assembly building. Here the entirely automatic sequencing system takes over to produce the right body for the right mechanical components at precisely the right point on the assembly line.

Testing, adjustment, cleaning and inspection of the now complete new Austins finally prepare them for the road and a long life of dependable service.

More Austins are exported to the markets of the world than any other single British make of vehicle. Sending vehicles overseas entails considerable organisation, and the Austin Motor Export Corporation Limited was formed in 1946 to handle the ever-increasing volume of trade. Five main methods are adopted for sending cars abroad:—(1) Car supplied to an overseas visitor who takes it back to his own country when he returns (must be within 12 months); (2) Finished car driven by road to the docks; (3) Finished car sent by rail to the docks; (4) Finished car packed complete in a wooden case; (5) C.K.D.—"Completely Knocked Down" cars packed in cases to be assembled at their destinations.

I

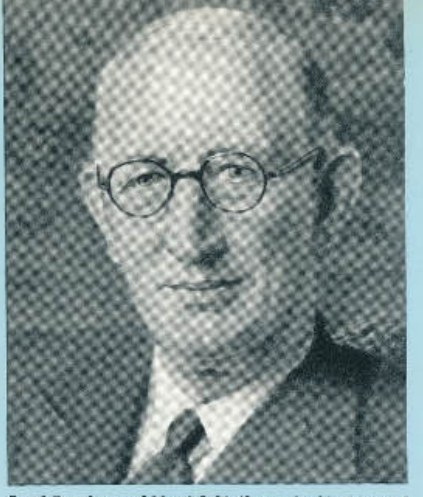
2

3

I Austin bodies having been rubbed down, enter an air-conditioned spray booth for a final coat of synthetic enamel.

2 A general view of the sewing room, where the various sections of upholstery are made up.

3 The object of our high endeavour—Austin cars on the point of shipment to the motorists of the world.



Lord Lambury of Northfield (formerly Sir Leonard Lord, K.B.E.), Executive Chairman of the Austin Motor Company Limited until his retirement in 1961.

Sir George Harriman, C.B.E., the present Chairman and Managing Director of the Company

LOOKING AHEAD

THE Austin factory at Longbridge resembles, in many respects, a small town with its own railway sidings, station and loading bays, 8 miles of roadways, an internal police force, restaurants and canteens, medical and welfare services, a rehabilitation centre—the first and finest of its kind in Britain—electric power plants, and a large engineering and maintenance staff. These varied departments are too numerous to describe in detail but they form an integral and necessary part of Britain's largest single car factory.

Since the end of the second world war in 1945, the Austin Company has been steadily replanning existing plant, constructing fine new buildings and installing the very latest equipment. During 1951 the most advanced car assembly building in the industry was opened at Longbridge and a large wartime aircraft factory was taken over. That this far-sighted programme of reorganisation has already borne fruit is shown by the mounting production figures and by the ever-increasing number of dependable Austins plying the roads of the world.

Lord Lambury retired from the position of Executive Chairman in 1961. Outstanding ability and energy gained for him and for the Company a primary position in the British Motor Industry. Under his direction Austin workers produced a world famous range of cars and commercial vehicles.

When Lord Lambury retired, Mr. G. W. Harriman (now Sir George), who had been his Deputy for many years, took over the office of Chairman and Managing Director and under his leadership, we at Longbridge look forward with confidence to a future of continued expansion and productivity.

Figures and facts

EMPLOYEES

Total employed	27,000
Night Shift	6,700
Females	2,600
Employees with over 25 to 50 years' service	3,250
Total hours worked per week	867,519
Total weekly wages (works and staff)	£470,567

FACTORY

Area covered by site	260 acres
Length of internal roadways	8 miles
Length of internal railway track	7⅛ miles
Total length of cable in internal works telephone system	27 miles
Length of overhead conveyers	23 miles
Oil fuel used per year	6,826,250 galls.
Water consumption per year	618,739,770 galls.
Gas consumed per year	845, 997, 029 cu. ft.
Coal used per year	90,441 tons
Power House generating capacity	5,000 k.w.
Electricity purchased load	35,000 k.w.

MATERIAL FOR PRODUCTION (per week)

Plywood and hardboard	30,000 sq. ft.
Timber	1,400 cu. ft.
Floor covering	9 miles
Roof linings	8,000
Hides	2,000
Glass (windscreens and windows)	210,000 sq. ft.
Paint	29,700 galls.
Steel pressings	1,250,000
Steel tubing	220,000 ft.
Steel strip	4,762 tons
Sparking plugs	51,600
Length of electric wiring cable (approx.)	820 miles

SPARE PARTS

Orders handled per week	9,000
Individual lines stocked	105,000
Average weight of parts despatched per week	1,700 tons
Cartons used per week	375,000

USE OF SALVAGED MATERIAL (per year)

YELLOW METALS (brass and phosphor bronze) ... 400 tons
Re-smelted for the production of ingots.

ALUMINIUM and Light Alloys ... 2,050 tons
Re-smelted for the production of ingots.

LEATHER AND CARPET CUTTINGS ... 320 tons
Used in making slippers, shoes, industrial gloves and artificial fertilizers.

BALED AND LIGHT SHEET STEEL ... 9,000 tons
Re-smelted for steel sheets.

PAPER ... 420 tons
This is baled and shredded for the purpose of packing B.M.C. spare parts.

FIREWOOD ... 150 tons
Used for lighting fires in works railway engines and the forges of the Stamp Shop.

PACKING FOR EXPORT

Crates for C.K.D. vehicles and spare parts (average per week)	350
Total of timber used per week	13,500 cu. ft.
Waterproof lining paper used per week	75,000 sq. ft.
Nails used in crates per week	1 ton

WORKS POST OFFICE

Letters and postcards despatched per week	55,000
Average cost per week of post	£1,000
Internal works post—number of postmen	17

WELFARE SERVICES

Dining rooms	15
Snack bars	10
Cooked meals served a year	500,000
Canteen staff employed	250
Ambulance stations	13
Qualified Nurses	32
Works Police	90
Firemen (full time)	42

A modern Health Department, which has been built as a memorial to the late Lord Austin, includes X-ray apparatus and deep ray and radiant heat equipment. There are two resident medical officers, and two specialists attend two or three times a week. In 1966, no less than 2,718 pints of blood were donated by 2,990 employees to the National Blood Transfusion Service.

Operated in close association with the Health Department is the Rehabilitation Shop. Here injured workers can exercise stiff limbs, and at the same time do a useful paid job of work by operating light machines fitted with special manual or foot controls.

In addition to the dining rooms and snack bars, there are 150 food and soft drink vending machines positioned throughout the factory.

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