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PROFILE ILLUSTRATIONS



Austin A40 Somerset



The A40 Somerset was produced by Austin from 1952 to 1954 and replaced the A40 Devon on the production lines. The car was basically a re-bodied A40 Devon, being comparable in size to its predecessor and sharing a number of components which included a similar 1,200 cc engine, which was slightly uprated to produce 42 hp which gave the car a top speed of 70 mph, although the car was still under-powered if fully loaded. The Somerset featured an updated body style with flowing lines which resembled the company's larger Austin A70 Hereford. The car was designed to improve export sales, particularly America, and initially was offered only as a four door saloon, and for seven pounds extra you could have a sliding roof as a factory option. A two door convertible was introduced in late 1952 which was marketed as the Austin A40 Somerset Coupé. The convertible differed from the saloon in having separate front seats that folded forward to give access to the rear. An additional variant known as the Austin A40 Sports, also a convertible, completed the range. The success of the A40 Somerset helped to pave the way for the creation of the British Motor Corporation in 1952.

SPECIFICATION:

Weight: 2,232 lbs (0.99 tons) Dimensions: Length 13 ft 2 ins, Width 5 ft 3 ins, Height 5 ft 2½ ins Wheelbase: 7 ft 8 ins Powerplant: 1 x 1,200 cc B Series petrol engine rated at 42 hp Torque: 62 lbs ft Performance: Top speed 70 mph Number Built: 173,306



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Alfa Romeo 158



The Alfa Romeo 158, and its successor the Alfa Romeo 159 was one of the most successful racing cars ever designed, and during their careers of the 158 won 47 Grands Prixs from the 54 they entered. The 158 made its debut in August 1938 at Livorno, Italy, where Emilio Villoresi took the car's first victory. More successes followed at the Coppa Acerbo, Coppa Ciano and Tripoli Grand Prix in May 1940, but after Italy entered World War Two in June development work was halted. Work on the car resumed in 1946, and in 1948 made a tragic debut in the Swiss Grand Prix when Achille Varzi lost control and was killed. In 1950 the Formula One European Championship was introduced, and during that first season the 158 won ever race it entered, a remarkable feat for a car that had its origins in a design from 1938. The Alfa Romeo team included several talented drivers which included Juan Manuel Fangio, who won the Championship five times during the 1950s. In 1951 the 159 appeared which had a reworked rear suspension and an uprated engine, but at the end of the season Alfa Romeo was forced to retire from Grand Prix racing. The car's last win was in 1953 at the Merano Grand Prix in Italy.

SPECIFICATION:

Weight: 1,543 lbs Dimensions: Length 13 ft 8 ins, Width 5 ft 1 ins, Height 3 ft 8 ins Wheelbase: 8 ft 2½ ins (2.5 m) Powerplant: 1 x 1.5 ltr Alfa Romeo 158 supercharged straight eight engine rated at 350 hp Transmission: Alfa 4-speed manual Performance: Top speed 180 mph



'B' Type Omnibus



The B-type bus was designed by Frank Searle, the chief engineer of the London General Omnibus Company, and entered service with the company in 1911. The chassis was made of ash faced with steel while the body was mainly of wood. A 4 cylinder 25 hp engine powered the vehicle through a 3 speed and reverse gearbox. The wheels were of cast steel with solid rubber tyres, while fenders were fitted on each side of the bus between the wheels to prevent people from falling under. 34 passengers could be carried, 16 inside and 18 on the open top deck, although this could be fitted with a wet weather canvas cover. Interior electric lighting was introduced in 1912, and headlights in 1913 when it became clear that the interior lighting alone was insufficient for the bus to be visible at night. The vehicle had a top speed of 16 mph, which was above the legal speed limit of that time, and under the right conditions could reach 30 mph. The 'B' type proved extremely successful, and were built in both double and single deck versions, and by 1913 around 2,500 were working on the streets of London.

SPECIFICATION:

Weight: 8,512 lbs (3.8 tons) Dimensions: Length 22 ft 7 ins, Width 7 ft 10 ins, Height 12 ft 5 ins Powerplant: 1 x 25 hp 4 cylinder petrol engine Performance: Maximum speed 16 mph Payload: 34 passengers (16 lower deck, 18 top deck) Number Built: over 3,000



Routemaster Bus

LONDON TRANSPORT

The Routemaster was designed by London Transport and built by A.E.C. It was of traditional design, the vehicle having a halfcab for the driver positioned by the front mounted engine, and an open rear platform allowing passengers on and off the vehicle. The first vehicles entered service with London Transport in early 1956, with a small number being built for British European Airways and the Northern General Transport Company. In total 2,876 were built in several marks, the last being delivered in 1968. In December 2000 it become mandatory for all new buses delivered in the UK to comply with the Disability Discrimination Act of 1995, which led to the development of the wheelchair-accessible low-floor bus. Older buses were allowed to remain in service until 2009, but London Transport had phased out the Routemaster by 2005, apart from operations on the heritage route 15, which is also served by wheelchair-accessible buses. In 2006, the Routemaster was voted one of Britain's top 10 designs of all time, which included Concorde, the Mini, and the Supermarine Spitfire.

SPECIFICATION:

Weight: 8,512 lbs (7.35 tons) Dimensions: Length 27 ft 6 ins, Width 8, Height 14 ft 4½ ins Powerplant: 1 x 115 hp AEC 6 cylinder diesel engine Transmission: AEC 4 speed gearbox Performance: Maximum speed 40 mph Payload: 57-72 passengers Number Built: 2,850+ AERO ENGINE



Siddeley Puma



The Siddeley Puma British aero engine was based on a design produced by B.H.P. (Beardmore, Halford, Pullinger) and was used during the First World War aircraft, most notably to power the DeHavilland D.H.9 which entered service in 1917. Siddeley had taken over development of the engine which became the Siddeley Puma, a lightweight version of the B.H.P. engine rated at 300 hp, which was expected to give the D.H.9 an outstanding performance. Problems with the reliability of the engine led to it being de-rated to 230 hp, and a drop in performance which was below that of the D.H.4 which it was intended to replace. Production of the engine ran from August 1917 until December 1918 when all outstanding orders were cancelled, by which time over 4,000 engines had been delivered. Production continued under the name of Armstrong Siddeley Puma after the company was bought by Armstrong Whitworth to became Armstrong Siddeley. Frank Halford, the original designer of the engine and now with the Aircraft Disposal Company, continued to develop the engine in an attempt to produce its intended power output. He eventually achieved this in 1926 and the engine was then marketed as the ADC Nimbus. SPECIFICATION:

Type: Six cylinder water-cooled inline piston engine Weight: 645 lbs Dimensions: Length 70 ins, Width 24 ins, Height 43½ ins Cubic Capicity: 1,883 cc Bore/Stroke: 5.71 inches/7.48 inches Power Output: 250 hp at 1,400 rpm 265 hp at 1,500 rpm Number Built: 4,000 AERO ENGINE



Mercedes Daimler D.II



The Mercedes D.II was an inline six-cylinder, single overhead camshaft, liquid-cooled aircraft engine built by Daimler during the early stages of World War One. The engine was at the lower end of the power range of contemporary engines, being rated at between 110 to 120 hp, and generally outperformed by rotaries whose power-to-weight ratio tended to be better. The engine was used for several military aircraft, including the Aviatik B.II and Albatros B.I and B.II reconnaissance aircraft and the Fokker D.I and Halberstadt D.II scout fighters. The D.II engine was only produced for a short time, but its design formed the basis for the far more successful Mercedes D.III. The D.III was a scaled up version of the D.II which was rated at 160 hp, and was a popular powerplant for German aircraft by 1916. Development of the engine continued which produced the 170 hp D.IIIa which powered the Albatros D.III fighter in 1917 and the Fokker D.VII in 1918, often regarded as the best fighter aircraft produced in World War One. The final version of the engine was the D.IIIav which was introduced in October 1918. With this engine a higher compression ratio was achived while running at higher rpm rate achieved 200 hp. SPECIFICATION:

Type: Six cylinder water-cooled inline piston engine Weight: 449 lbs Dimensions: Length 1,650 mm, Width 490 mm, Height 1,072 mm Cubic Capicity: 9.4 L Bore/Stroke: 140 mm/160 mm Power Output: 120 hp at 1,400 rpm Compression Ratio: 4.5:1 Number Built: Unknown AERO ENGINE



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Cambrian Railways The Cambrian Railways Company was created on the 25th July 1864

when the Cambrian Railways Act received Royal Assent for the amalgamation of most of the existing railway companies in Mid Wales. These were the Oswestry and Newtown Railway, the Llanidloes and Newtown Railway, the Newtown and Machynlleth Railway and the Oswestry, Ellesmere and Whitchurch Railway, which between them operated just under 100 miles of mainline track. The Aberystwith and Welsh Coast Railway was not included in the amalgamation as it was still under construction, but soon added a further 53 miles of main line to the company when they opened. The Cambrian negotiated agreements to share traffic with the Mid-Wales Railway, the Manchester and Milford Railway and the Great Western Railway, allowing it to control the transportation of goods and passengers across mid Wales. Little by little the Cambrian began to expand. In April 1888 they took over the working of the independent Mid Wales Railway from Llanidloes to Talyllyn Junction, which was finally amalgamated in July 1904, while the final additions to the system were the Nantmawr branch (1881), the Wrexham & Ellesmere Railway (1895), the Van Railway (1896), and the Tanat Valley Light Railway (1921). The Mawddwy Railway was also reopened by the Cambrian in 1910, having originally opened in October 1867 but closed soon after. The final companies to be amalgamated were the narrow gauge Vale of Rheidol (1903) and the Welshpool & Llanfair railways (1913), giving the company a mainline route system of nearly 300 miles.

The headquarters for the company was at Oswestry, where works were constructed in 1864 for the building and maintenance of rolling stock. The locomotives for the Cambrian were purchased from outside suppliers, their maintenance, modifications and repairs being carried out at Oswestry, although two 4-4-0 tender engines were built in their workshops in the early 1900s. Cambrian Railways had 94 standard gauge and five narrow gauge engines when it became part of the Great Western Railway on the grouping in 1923. Oswestry works was retained by the G.W.R. as a regional carriage and wagon works, and locomotive repair shop, although heavy overhaul was then carried out at Swindon.





The Great Eastern Railway

The Great Eastern Railway was formed by the amalgamation of the Eastern Counties Railways, the East Suffolk Railway, the Eastern Union Railway, the East Anglian Railway and the Norfolk Railway Companies under the powers of the 1862 Great Eastern Railway Act. The new company's system extended from London Liverpool Street Station through the North-eastern suburbs of London to East Anglia, comprising over 1,000 route miles with many interests in London's Docklands. It did not directly own any lines north of the Wash, but did reach Doncaster via Spalding, Lincoln and Gainsborough by a line jointly owned with the Great Northern Railway. This and other lines gave the G.E.R. a further 140 miles of jointly owned track, while the company would eventually take over several other small railway lines and end up with 1,217 route miles and 150 miles of joint railways by the time of the grouping in 1923. The G.E.R. served Cambridge, Chelmsford, Colchester, Great Yarmouth, Ipswich, King's Lynn, Lowestoft, Norwich, Southend-on-Sea, and seaside resorts such as Hunstanton and Cromer, whose prosperity was largely a result of the G.E.R.'s line being built. It also served a fairly large suburban area, including Enfield, Chingford, Loughton and Ilford, this suburban network being the busiest steam hauled commuter system in the world in the early part of the 20th century.

On its inception Robert Sinclair was appointed the Chief Mechanical Engineer of the G.E.R. in 1862, followed by Samuel Johnson (1866-73), William Adams (1873-78), Massey Bromley (1878-81), William Worsdell (1881-85), James Holden (1885-1907), Stephen Holden, (1908-12), and Alfred John Hill (1912-22), with Johnson, Adams and Worsdell going on to have successful careers with other major Railway companies. After Massey Bromleys tenure as Chief Mechanical Engineer, the majority of G.E.R. locomotive fleet and rolling stock were built at their Stratford Works in North London. The G.E.R. had a near monopoly in East Anglia, although the opening of the Midland and Great Northern Joint Railway in 1893 encroached on their territory which provided access from the Midlands to North Norfolk and Great Yarmouth. On the grouping in 1923 the G.E.R. became a major part of the L.N.E.R.





The Furness Railway

In 1843 a scheme was announced for a railway link between Ulverston, the main town of the Furness district, and the iron ore mines at Daltonin-Furness and the slate mines at Kirkby-in-Furness with the coast at Barrow. The line was principally financed by the major mine and land owners of the area, and intended for the transportation of slate and iron ore to the developing harbour at Barrow, from where it could be shipped further afield or used in the local iron works. The Act of Parliament for the line was passed on the 23rd May 1844 when the Furness Railway came into existence, while a further Act in 1846 authorised an extension of the line from Kirkby to Broughton-in-Furness, and from Dalton to Ulverston. The line opened in August 1846 for mineral traffic, and to passengers in December between Dalton and Piel pier, where it connected with a steamer to Fleetwood on the other side of Morcombe Bay. Meanwhile the Whitehaven and Furness Junction Railway was completed in late 1851, allowing the Furness Railway to reach Whitehaven, and from the following year the West Coast Main Line at Carlisle, the two companies being amalgamated in 1866.

In August 1857 the Ulverston and Lancaster Railway was opened which linked Ulverston and Carnforth where it connected with the Lancaster and Carlisle Railway on the West Coast Main Line. The line was run by the Furness Railway who purchased it outright in 1862. Other lines that made up the system were the Coniston Railway which joined the Furness at Broughton. This was opened in 1859 to transport copper ore to Barrow and was amalgamated in 1862. In 1867 the Hincaster Branch from Arnside to the Lancaster and Carlisle line at Hincaster was opened. Another branch from Ulverston to Lake Side was opened in 1869, this being partly owned by the Furness who took full control in 1873. In the 1870s The Whitehaven, Cleator and Egremont Railway and the Cleator and Workington Junction Railway, both mineral lines, were worked jointly by the F.R. and the L.N.W.R., while the Furness and Midland Joint Railway connected to the Midland Railway network at Wennington. The Furness Railway was one of the first to promote tourism, and remained independent until December 1922 when it became part of the L.M.S.



The Lancashire & Yorkshire Railway



The Lancashire and Yorkshire Railway came into existence by the amalgamation of several existing railways in 1947. The L & Y system consisted of many branch lines and alternative routes, and for working purposes the railway was split into three working areas. The Western Division served the lines between Manchester to Blackpool and Fleetwood, Manchester to Bolton, Wigan, Southport and Liverpool, and the direct line to Liverpool. The Central Division was responsible for the traffic from Manchester to Oldham, Bury, Rochdale, Todmorden, Accrington, Burnley and Colne, and the connection to the L.N.W.R. at Stockport for through traffic to London, and finally the Eastern Division which was responsible for the lines from Todmorden to Halifax, Bradford, Huddersfield, Wakefield, Normanton, Goole, Leeds and Doncaster.

The L & Y was by far the most heavily trafficked system in the British Isles which was reflected in the 1,650 locomotives the company owned, and at its height there were over 1,900 weekday passenger services, a number only exceeded by the London and North Western, the Great Western and Midland Railway companies. They were also the first mainline railway to introduce electrification of some of its lines and became the biggest shipowner than any other British railway company with steamboat services across the Irish Sea and North Sea. It had a very close working relationship with the London and North Western Railway and amalgamated with them on the 1st January 1922, while one year later the merged company became the largest constituent of the London, Midland and Scottish Railway.





London & South Western Railway

The London & South Western began life as the London & Southampton Railway when it was incorporated by an Act of Parliament in July 1834. The line opened in stages between September 1838 and May 1840, and on its inauguration the company name was changed to the London & South Western Railway, often shortened to the South Western Railway. They were the main rivals of the Great Western Railway for traffic in the South West, with their network ultimately extending from London to Plymouth via Yeovil, Exeter and Okehampton, with branches to Barnstaple, Bude Ilfracombe, Torrington, Padstow and Wadebridge. Bournemouth and Weymouth were also reached via Basingstoke, Winchester and Southampton, while branch lines were built to connect with such places as Portsmouth and Reading. In 1875 agreement was reached with the Midland Railway for the joint operation of the Somerset and Dorset Joint Railway when the original company went into receivership, while the L.S.W.R. obtained running powers in several other areas. Among the significant achievements of the company was the electrification of the London suburban lines, the introduction of power signalling, the development of Southampton Docks, and the rebuilding of Waterloo Station in the early 1900s. Another achievement was the handling of massive amounts of traffic and material during the First World War. After the 1921 Railways Act was passed, the London & South Western Railway was largest constituent company of the newly formed Southern Railway which came into existence on the 1st January 1923.



London, Tilbury & Southend Railway



The London, Tilbury & Southend Railway was a joint proposal by the Eastern Counties and the London & Blackwall Railway companies, for a line from the E.C.R. Colchester route north of Forest Gate station to Southend. The railway was authorised in 1852, with the first section being opened in 1854 with trains being operated from both the E.C.R. Bishopsgate terminus for a short time and the L.&.B.R. Fenchurch Street. The working of the line was given to Peto, Brassey and Betts (the builders of the line) on a 21 year lease, trains and rolling stock being supplied by the E.C.R. During their tenure there was very little investment in the line, and at a special meeting for shareholders in December 1861 it was agreed that the company should become fully independent. This was approved by parliament the following year and came into effect in July 1875.

The G.E.R. supplied the locomotives and rolling stock until 1880, when the first L.T.&.S.R. locomotives were delivered from Sharp, Stewart & Co. The company was efficient and financially successful, but by 1911 it was clear that it could no longer remain independent. There were only two companies in a position to take over the line, but it was the Midland Railway who put forward the best offer to the shareholders from under the noses of the Great Eastern Railway. As part of the Midland Railway the line was operated by the L.M.S. after the 1923 grouping. Under British Railways work began ro electrify the line In the late 1950s, with the first electric train entering service in 1961 and the last steam train being withdrawn in June 1962. Throughout its career the L.T. & S.R. lines have remained virtually intact, and today operate intensive commuter and freight services.



The Midland & Great Northern Joint Railway



The first lines of what would become the Midland and Great Northern Railway was the Norwich & Spalding Railway which was opened to Sutton Bridge in 1862, and in reality a Great Northern Railway branch line. The Peterborough, Wisbech and Sutton Bridge Railway was opened soon after, this time a very Midland Railway affair, followed by the Lynn & Sutton Bridge Railway in 1864, and the Spalding & Bourne Railway in 1866. In the east the Lynn and Fakenham and the Great Yarmouth and Stalham were given assent to proceed, work starting at Yarmouth in 1876 and King's Lynn in 1878. The Yarmouth & North Norfolk Railway (the G.Y. & S. was renamed in 1877), reached North Walsham in 1881, and the L. & F. R. Norwich in 1882. On the 1st January 1883 the Eastern & Midlands Railway was formed and comprised all the lines east and west of King's Lynn, while a branch to Cromer was completed in 1887 which soon became a fashionably holiday resort. In 1893 the Midland and G.N.R. jointly took over the E. & M.R. which became the Midland and Great Northern Joint Railway, the largest joint railway in the U.K. In 1898 the Mundesley branch was opened from North Walsham to Cromer in an attempt to develop the Norfolk coast further. The M. & G.N.J.R. remained independent after the grouping in 1923 and was jointly run by the L.M.S. and the L.N.E.R. In 1936 the L.N.E.R. took over full responsibility for the line with all maintenance and repairs being transferred to Stratford. Patronage of the line declined in the 1950's, and in 1959 closure of many parts of the line began, while the Beeching Report sounded the end for what remained. One section survives between Sheringham and Holt and is now run as a heritage line.





The Cambrian Railway



The Furness

Railway



The London, Tilbury & Southend Railway



The Midland & Great

Northern Joint Railway



The North Eastern

Railway



The Great Western Railway



The London, Brighton & Southcoast Railway



The London & South Western Railway





The Great Eastern Railway



The Manchester, Sheffield & Lincolnshire Railway



The Somerset & Dorset Joint Railway



& Yorkshire Railway



The London North

Western Railway



The Great Western Railway



The Great Central Railway



The Great Western Railway



London, North Eastern Railway







BRITISH RAILWAY



British Railways

Railway Company Coats-of-Arms

London, Midland

& Scottish Railway