

ENGINE REFERENCE GUIDE

Here we give a guide to some engines most frequently seen at heritage shows and museums. It is not intended to be a complete and comprehensive survey of stationary engines but a guide to some of the more commonly seen manufacturers.

Much information is available on line and numerous books have been produced on the subject and the information here has been taken from them. Among the sources are:

A-Z of British Stationary Engines Vol. 1 & 2 by Patrick Knight

Amanco Engines, The Story of Associated Manufacturers' Company by D Edgington

American Gasoline Engines Since 1872 by C H Wendel

www.gracesguide.co.uk/Category:Stationary_Engines

ALLAN BROS OF ABERDEEN Began production of hot bulb oil engines in 1898. About 1910 lampless ignition was introduced which only required the lamp for starting.

W H ALLEN OF BEDFORD Established in 1880 manufacturing water pumps. In 1908 brought out a vertical paraffin engine which required a lamp for starting. Went on to produce engines up to 1080bhp.

AMANCO The Associated Manufacturing Company of Waterloo, Iowa, USA made engines of $\frac{3}{4}$ hp to 18hp between 1911 and 1930. The name AMANCO was only used for engines in the UK; the full name or sometimes shortened to ASSOCIATED was used in the States. The engines were given names according to the size of power they would replace on the farm.

See AMANCO ENGINES, THE STORY OF ASSOCIATED MANUFACTURERS' COMPANY by D EDGINGTON



3/4hp 4 stroke air cooled **COLT**



3/4hp 2 stroke air cooled **PONY**



1 1/2hp air cooled **BUSY BOY**



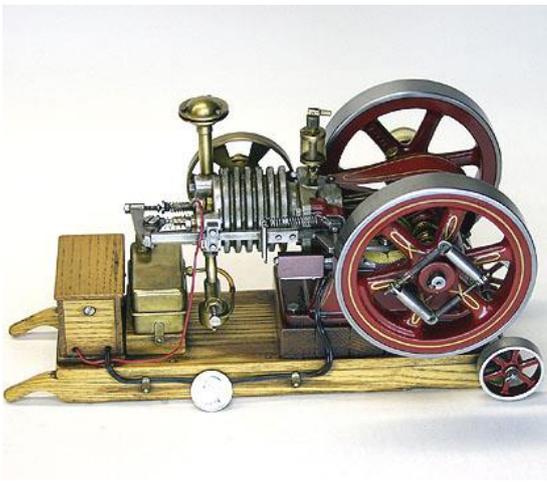
1 1/2hp hopper cooled **JOHNNY BOY**



1 3/4hp air cooled **CHORE BOY**



1 3/4hp hopper cooled **CHORE BOY**



2¼hp air cooled **HIRED HAND**



2¼hp hopper cooled **HIRED MAN**



3hp **THREE MULE TEAM**



4hp **FOUR MULE TEAM** or **FARM HAND**



6hp **SIX MULE TEAM**



12hp **TWELVE MULE TEAM**

BAMFORD

Company founded in 1871 producing agricultural equipment. Started engine production in 1921 with 5/6hp horizontal. Soon a range from 2½hp to 10 hp was available. The OV was introduced in 1929 in 3, 4 and 5hp sizes. Next came model EV in 1½, 3 and

5hp variants and model EG in the same sizes in 1944/45. A diesel engine was introduced in 1932 at 6, 8 and 10hp. The SD range of diesels came in 1936 ranging from 3½hp to 16hp. The Z range appeared in 1950 followed by a range of air cooled diesels.



2½hp 1920



Model EV1 1935



1924 tulip top



1921 Model OC 4hp

BELLISS & MORCOM

Normally associated with large industrial diesel engines.



Bellis and Morcom
stand-by generator at
Uxbridge war bunker.

BENTALL

Company founded in 1805 producing agricultural equipment. In 1900 an engine is designed to drive agricultural machinery. In 1912 a 1½hp 2 stroke engine is introduced but is soon superseded by the Pioneer range

of 1½hp - 12hp engines. 1925 sees the end of production of the vertical engine.



1922 3-4hp Pioneer



4hp vertical engine

BERNARD of France



1920 model D1



1932 model K2



1950? 610cc

BLACKSTONE In 1895 took an interest in the Reliance Oil Engine produced by the Carter Brothers of Billingham, Sussex. The first Blackstone engines appeared in 1896. Over the years, a wide variety of engines were produced.



1908 5hp



1913 5½hp



1929 2½hp



1947 Model OPH 22

BRADFORD

Bradford Gas Engine Co founded in 1912 producing 1½hp – 17hp engines. In 1923 introduced 'King of All' range. Built engines for Amanco, Walsh & Clark, Chalmers-Edina and others.



1919 2¼hp



1943 3hp

BRIGGS AND STRATTON

of Milwaukee Wisconsin USA Established in 1908 manufacturing automotive components. A stationary version of

their Motor Wheel appeared in 1923 labelled the PB. This led to the development of model F in 1925 and model FH in 1926. Model Y came in 1931 and in 1936 model WM specially designed for washing machines. Production took off in 1953 with the introduction of a lightweight aluminium engine



1942 Briggs and
Stratton

BSA (BIRMINGHAM SMALL ARMS Co.) of Birmingham



1947 BSA 320cc early
series

Note drop tube on inlet
manifold and lower tank.

Having been a major supplier of armaments during WW2, BSA needed to find a product to fill the gap left by the reduction in demand at the end of hostilities. They developed INDUSTRIAL POWER UNITS starting in 1947. The first units were 320cc. 98cc, 120cc, 220cc and 420cc units followed. Production was taken over by Villiers towards the end of the 1960's and while BSA units were produced for a while, the mark disappeared. BSA also made a variety of smaller engines including the 'SLOPER' engine used on military charging sets and lawnmowers.

COBORN

of Letchworth. A petrol/paraffin engine was introduced in 1932, built by others. Models C1,C2,C3,C6 and B23 rated from 3.2hp to 6.1hp. Production ceased in 1963.



Model C3
Petrol/Paraffin

CROSSLEY Set up in 1867 in Manchester producing over the years a wide range of engines.



1902 4hp Crossley MM



1928 2½hp PH 1030



1934 PH 1050



1928 4hp 10-40

JOHN DEERE of Moline Illinois USA As well as producing tractors, JD marketed engines from the 1920s rated at 1½hp, 3hp and 6hp



1924 1½hp model E



1945 1½hp model E

ECONOMY

Range of engines marketed by SEARS ROEBUCK & CO. In 1909 engines from 2hp to 10hp were offered.



1917 Model E
1½hp

FAIRBANKS MORSE

of Beloit Wisconsin USA

Started producing engines in 1893.

In 1895 the 'Jack of All Trades' engine was available from 3hp to 75hp in both horizontal and vertical styles. The type Y engine of 1913 was also available as vertical or horizontal. The type Z engine of 1915 was very popular.



1920 Model Z 3hp



1922 Economy Model 1½hp



1929 type Z 6hp

FOWLER

of Leeds Probably better known for their traction and ploughing engines, They produced the P series of petrol engines in 1936 in single and twin cylinder models up to 15hp. A diesel engine was produced in 1937.



1940 Model PA

GARDNER

of Manchester L Gardner & Sons produced diesel engines in Manchester from 1895 until the late 1990's. First produced in 1891 a hot air engine under licence. Many Gardner engines can be seen at the Anson Engine Museum.



1921type 1F at Anson Museum



1935 type 1L2

HARTOP

Frank Hartop and Sons of Bedford produced in 1924 S type in 1/3hp-1 1/4hp sizes. In 1928 introduced FE type vertical 2 stroke at 1 1/4hp. In 1929/30 introduced H type 4 stroke vertical at 1hp at 750rpm.



1926 Model S



1933 Model H 1hp

HERCULES

of Evansville Indiana USA

In 1912 were building engines in the 2hp to 14hp range. The 1½hp engine was replaced with the 1¾hp model S in the early 1920s. In 1931, 1½hp and 2½hp totally enclosed engines were announced.



1919 1½hp open
crank engine

RICHARD HORNSBY

of Grantham. In 1891 started producing i/c engines in agreement with Herbert Ackroyd Stuart known as HORNSBY-ACKROYD engines.

1912 introduced the L type engine.

1918 amalgamated with RUSTON PROCTOR & CO to become RUSTON & HORNSBY.



1893 Ackroyd engine



1899 5hp lamp start engine



1907 6hp Hornsby-Ackroyd

JAP J A Prestwick & Co.of London had been producing motor cycle engines for many years when in1937 they branched out into the industrial engine market. They ceased trading in 1963, with Villiers possibly taking over the assets.

JAPY FRÈRES of Beaucourt, France



1916 4hp

R A LISTER & Co.



1948 1½hp D type

Possibly the most prolific producer of stationary engines. Founded in 1867 manufacturing agricultural equipment, their first produced the L type engine in 1909. Over the years to the present day a wide range of engines have been produced.

See books at www.stationaryenginebooks.co.uk for information on the many types.

2016 WAS THE NINETIETH ANNIVERSARY OF THE INTRODUCTION OF THE LISTER D.

The Lister D is a spark ignition engine using petrol, paraffin or gas as a fuel. (not to be confused with the Lister LD, a compression ignition (diesel) engine).

Production started in 1926 and continued until 1964 during which time many thousands were produced with numerous variants. Many survive in preservation and are often the first engine in many stationary engine collections.

Initially the engines had a shaft drive magneto; this was replaced by a chain drive system in the early 1930's. Also the fuel tank was moved to the top of the engine.

Engines were painted the Lister colour of Mid Brunswick Green, although some produced in World War II were painted in olive drab.

A complete history of the Lister D engine can be found in David Edgington's book:--

“THE LISTER D STORY”

available from:-- www.stationaryenginebooks.co.uk



1954 Lister D with chain drive magneto



Pre 1930's Lister D with shaft drive magneto

MOFFAT-VIRTUE

of Rosebery NSW Australia Began making petrol engines to drive sheep shearing machinery in 1920.



2¼hp petrol



1937 Model MV2 2hp

MOTEUR CERES

OF Bar-sur-Aube France



C1936

Model 1a serie 6

6½hp

NATIONAL GAS ENGINE Co of Ashton-under-Lyne, Lancs

Established in 1890 producing gas engines and in the late 1890s introduced oil engines. In 1906 introduced the K type in five sizes from 2hp to 9hp. About 1929 a small horizontal petrol/paraffin 2¼hp to 2¾hp engine was introduced and in 1930 the model V vertical engine. Type LB rated at 10-11hp appeared in 1932 and the small vertical BS, DS and ID range in 1935.



1901 8hp

Type L

NORMAN of Leamington Spa was founded in 1919 producing an engine for a motor scooter. The success of this engine led to the development of the D type for industrial use. The D type was replaced by the S type in 1926/27 and in 1935 the SC type was added. In 1930 the T250 was developed to be upgraded to the T300 in 1932. In 1945 the T300 Mk2 arrived with serial numbers prefixed with TA. The 6hp T600 Mk 1 was introduced in 1945 with the prefix TL.



1938 Type SC



1940s Model SCL

PELAPONE

of Derby produced a small horizontal oil engine in about 1902. Commercial production started in Leeds in 1911 and a large number were supplied to the War Office in 1914/18. In 1930 the D11 engine was built under licence and the D50 engine was introduced in 1934.



Exhibit at Armley Mill
Museum

PETTER LIMITED of Yeovil

Makers of stationary engines from 1896. The Standard Oil Engine was available in a range of sizes from the AF at 1½hp to the LL at 50hp. Production ceased around 1917. 1903 saw the development of the Handyman engine and in 1911 the V type engine. Around 1913 the Junior VF paraffin engine was introduced rated at 5hp. Other sizes up to 8hp were added and the Junior remained in production until 1939, though being called the M type from around 1923. In 1922 the 1½hp series 1 two-cycle engine was introduced closely followed by the series 2. The four-stroke air cooled universal or PU model was introduced in 1931 with power ratings of 2hp to 8hp. In response to competition the air-cooled four-stroke model A was introduced in 1936 rated at

1½hp to 3hp. In 1948 the AV series 1 diesel with a maximum output of 10hp was introduced. The AVA series 1 followed in 1950. The AA1 was launched in 1964 .



1922 S type



1938 Model A



1940 Model AVA2

RUSTON & HORNSBY

of Lincoln Formed by the merger of Ruston & Proctor and Richard Hornsby & Sons in 1918. Of their smaller engines, the IP (industrial paraffin) was introduced in 1920 and the AP (agricultural paraffin) in 1921. Also in 1921 the OK engine was produced in sizes from 3½hp to 10hp. 1922 saw the PR model in four sizes from 1½hp to 6hp. The HR range was introduced in 1929 in sizes of 5bhp to 87bhp. 1930 saw the introduction of the PB range of fully enclosed engines. The 6PB was rated at 1½-2hp, the 8PB at 3hp, the 9PB at 4½hp and the 10PB at 6½hp. The PT range followed in 1936 in four sizes from 1½hp to 4hp. With a range of 4bhp to 13bhp, the YB vertical range was introduced in 1954. Larger models followed.



1928 Model AP 4hp



1948 Model PT 1½hp



1956 Model YB 6hp

STUART TURNER

of Henley on Thames produced a small ½hp vertical two-stroke engine in around 1906 and continued with small engines. There was a ½hp and ¾hp model in 1920 and model 600 at ¾hp to 1hp. Model 800 was rated at 1hp using petrol and model 400 gas engine rated at ¾bhp. 1928 saw the introduction of a range of vertical engines which ranged from the R2 at ½bhp to the P55 at 4bhp. The Sandhurst ¾bhp engine was developed by cadets at Sandhurst Military Academy in the mid 1930s. 1938 saw the introduction of the smallest available diesel engine rated at 2bhp later raised to 3bhp.



1924 Model N



1937 Model R7



1944 Model S2

TANGYE

of Birmingham First built ½NHP to 4NHP engines for James Robson in 1879/81. Continued with various engines. 1903/05 Model B paraffin engine to be modified in 1908 to Model BR. About the same time the AA series of horizontal oil engines was introduced. 1913/15 saw the introduction of the model V in sizes from 2¾bhp to 10bhp. The model M in 2½bhp, 4bhp and 6bhp sizes appeared in 1929.



VILLIERS

of Wolverhampton Early engines were of the motorcycle type. Industrial engines were gradually introduced. Firstly the water cooled WX11 in 1927/28 at 1½bhp followed by a 2½bhp version in 1933. The 0.6bhp marvel arrived in 1933. The Mk25 at 3hp was introduced in 1941. Around this time the Mk 20 (200cc), Mk 10(98cc) and Mk12(120cc) were introduced mainly for military service. 1950 saw the arrival of the Mk40 at 385cc and the Mk15 at 147cc in 1953. Production continued with various models popular with horticultural and machinery manufacturers.



1927 1½hp



1939 VX11

WOLSELEY

Sheep Shearing Co. Of Birmingham. Made a 3bhp vertical engine to drive their shearing machines in 1909. In 1912 the Style 1 engine rated at 3½bhp appeared followed by a 5bhp model. Style 2 came out in 1916, Style 3 in 1920 and Style 4 also known as Style R about 1925/26. About 1923 two hopper cooled vertical engines rated at 1½bhp and 2bhp came out. In 1942 at the request of the War Department the WD1 appeared, becoming available generally in 1943. Two sizes were made, 1½bhp and 2½bhp. WD2(or WD11) came out in 1945, the main difference being that it had a finned hopper. The WD8 was introduced in 1949 rated at 1½bhp to 3bhp to be replaced by the WD9 in 1961. The WLB1 came out in 1946 and was replaced by the WLB8 which in turn was replaced by the

WLB9 in 1961. An air cooled engine came out in 1954 rated at 2bhp to 5bhp.



1944 WD1



1945 WD2 2¼bhp



1949 WD8