



RA Lister and Company

From Wikipedia, the free encyclopedia



A sectioned Lister Engine

R A Lister & Company was founded in Dursley, Gloucestershire, in 1867 by Sir Robert Ashton Lister (1845–1929), to produce agricultural machinery. The family was originally from Yorkshire but Ashton's father (George Lister) relocated to Dursley in 1817.

History

Founded in 1867, R. A. Lister and Co. were initially manufacturers of agricultural equipment, but after the invention of the internal combustion engine the company became a world-renowned name in engineering. By the early 20th century Listers were producing petrol engines, initially to power sheep-shearing equipment. These products remained an important part of the company's

business, but over time the product range expanded considerably, ranging from electric lighting plants and dairy equipment to garden furniture.

Robert Ashton Lister was still alive in the late 1920s, at which time the management of the firm had passed to younger members of his family. In 1926 the chairman of the board was Austin Lister, and the company was run by the five sons of Austin's brother Charles: Robert, George, Percy, Frank and Cecil. Inevitably this occasionally caused tensions, as for example George managed home sales and Frank was in charge of buying, while Cecil did not have a clearly defined role at all; and, although Robert was the eldest, it was Percy (later Sir Percy) who had by far the most significant impact.

As managing director Percy led the firm through a period of significant growth and prosperity in the 1920s and 1930s. By 1926 the workforce was around 2000 and was growing rapidly; the company ran a 24-hour manufacturing operation, expanding its range of products and supplying retailers to around 6000 UK customers and many more worldwide. Retailing revenues were particularly healthy in Australia and New Zealand, where sheep-shearing equipment was in great demand.

The company headquarters were housed in an early 16th-century Priory building in Dursley (which remained the headquarters of Lister Petter at time of writing in 2009). In the nearby valley was located a foundry, together with a number of other workshops necessary for the production of engines and the various other products offered, including a machining shop, capstan lathe shop, engine assembly lines, and a coopers' shop.

Lister engines were traditionally painted a mid-range shade of Brunswick Green, which continues to be used by Lister Petter (see below) at time of writing (2009). In 1929, the first of Lister's own design of "CS" (cold start) diesel engine was made in Dursley. The CS is a slow-running (600 rpm), reliable engine, suitable for driving electric generators or irrigation pumps. The CS type engines (the range spanned single-, twin-, triple- and four-cylinder versions in a range of power outputs) gained a reputation for longevity and reliability, especially in Commonwealth countries, to which they were widely exported. Some CS engines ran practically continuously for decades in agricultural, industrial and electrical applications.

By around 1930 Listers were producing around 600 engines a week, most of which were small at around 1.5 to 3 hp; many of these had applications in the construction industry. Listers continued to flourish during the 1930s, riding the economic financial crisis and building on its many earlier successes.

The most successful Lister engine was the Lister D type engine, most of which were 1.5 horsepower / 700 RPM units. Over 250,000 'D' engines were built between 1926 and 1964, and were used for a wide variety of light tasks such as pumping and small-scale electricity generation. The Lister 'D' is still one of the most widely seen vintage stationary engines in the UK. Unauthorized copycat engines ("Listeroids") have also been produced in other countries.

Having survived the Second World War, Listers continued to benefit from its reputation for durable, reliable high-quality engines, and its pedigree as an old-established firm. However labour costs in the post-war period made a return to the heyday of the 1920s and 1930s impossible. Competition from rivals such as Petter, and from overseas were also factors to be contended with, and in 1965 Listers was acquired by Hawker-Siddeley (see below) who had also bought its old rival Petter in 1957.

Hand-cranked Lister diesel engines were used in many early dumpers.

In 1986 Hawker-Siddeley merged the two engineering concerns to form a new company, Lister-Petter, which was now placed to build on the strengths of both its predecessors. The economic climate of the 1980s and 90s, however, led to a change in the company's fortunes, and Hawker-Siddeley had to sell out. An unstable period followed, and, having narrowly escaped collapse, the company was split; part was acquired by Deutz but the core part of the business was bought out by venture capital investors who began to rebuild its product range.

In the early years of the 21st century, as in previous decades, small, durable, reliable industrial and marine engines continued to be a staple, notably the ALPHA water-cooled industrial and marine engines (2-, 3- or 4-cylinder) and the "T" air-cooled series (1-, 2- or 3-cylinder). Although Lister-Petter no longer ran a foundry, engines and diesel generating sets continued to be assembled and sold from a factory on the original site in Dursley. The new investors began to extend the product range to include more powerful engines and a wider range of generating set specifications. In 2007 a new heavy-duty engine, the OMEGA, offering up to 268 kW, was added to the company's product range.

In 2007 Lister Petter held an exhibition in Dursley to mark its 140th anniversary, which included a group photo of staff on the 60th anniversary in 1927. Listers has always had strong family traditions, and one employee who attended this 2007 exhibition was able to identify both her maternal grandparents in the 1927 photo.

In 2009 Lister Shearing (now a separate company) celebrated its centenary.

Mergers

Lister took over Blackstone & Co in 1937 to form Lister Blackstone.

R A Lister & Company was taken over by the Hawker Siddeley Group in 1965, and merged in 1986 with Petter Diesels to form Lister-Petter Ltd.



Petters Limited

From Wikipedia, the free encyclopedia

Petters Limited (known as **JB Petter & Sons of Yeovil** until 1910), were a maker of stationary petrol and diesel engines from 1896 onwards.

In 1915 Petter founded Westland Aircraft Works (renamed "Westland Aircraft" in 1935).

In 1986 Petters Limited merged with one-time rival RA Lister and Company to form Lister-Petter.

History

Car

James Bazeley Petter, an agricultural engineer and iron founder, had premises in the Borough, Yeovil. It was there that Ernest and Percival, his twin sons, designed and built a self propelled oil engine in 1892. Three years later they designed the first internal combustion engine motor car to be made in the United Kingdom. The car, using a converted four-wheel horse-drawn Phaeton and a 3 hp (2 kW) horizontal oil engine, had a top speed of 12 miles per hour (19 km/h). The vehicle was constructed at the Park Road carriage works of Hill and Boll. It weighed 9 cwt (457 kg) including the 120 lb (55 kg) of the Petter engine with its flywheel and side bars.

A contemporary report said:

The carriage is intended for two persons, with which a speed of ten miles an hour [16 km/h] is obtained on level road. It will mount the hills of the neighbourhood with two persons, but larger power would be used for four persons ... The exhaust is, we are informed, quite invisible, and the engine almost noiseless'. The removable handle (indicated in the plan drawing) was used to start the engine 'in the first place, and an arrangement is made so that the handle, when put in position, automatically opens the exhaust valve which closes instantly when, a good impulse being given, the handle is withdrawn and the engine starts ... Tube ignition is adopted, and a small heating lamp is used ... The engine starts in ten minutes and runs, we are told, without attention.' The larger road wheels of the vehicle were 42 in (1.07 m.) in diameter.

The twins continued to develop vehicles, the twelfth of which they entered to a competition at Crystal Palace in 1897, without success.

Engines

Failing to achieve the commercial success that they hoped, they adapted the engines for agricultural and industrial use. In 1902 they produced the first agricultural tractor, powered by a 30 horsepower (22 kW) horizontal oil engine.

The first engines made by Petter were Petter Standard oil engines which were horizontal open crank engines made to very high standards.

With commercial production under way, the family launched a private company called J. B. Petter & Co. Ltd. in 1902

Around 1903 cheap American imports, including the "Jack of all Trades" manufactured by the Fairbanks Morse Company, threatened the English stationary engine industry, and unlike most companies at the time Petter decided to produce a cheaper engine of their own to combat the threat. This engine was called the Petter Handyman which was sold around 20% lower in price than the 'Petter Standard' and was sold in batches of 50 or more.

From 1920s onwards Petters made two-stroke and four-stroke engines. Such models as the M-type and the A-type were highly successful and were competitors for Listers D-Type.

The last two-stroke design was the "SS", introduced in 1938. It was available in two-cylinder to six-cylinder versions and delivered from 125 to 375 horsepower. The "SS" was described as a "superscavenger" engine. The meaning of this is uncertain but it may indicate that it used the inertial supercharging effect.. These engines ran at low temperatures, due to their patented oil-cooled piston, and spherical smallend bearing. This engine was used in British Rail 15107 and British Rail Class D3/14 number 15004.

Petter also manufactured the two-stroke M-type (petrol), the S-type stationary diesel, the A-type, and the A1-type, the only noticeable difference on the previous two being the position of the magneto: the A magneto jutted out, and the A1 magneto was tucked away underneath. The A range was aircooled. Petter also produced another 'handyman, a 'cheap' version of the M-type. Petter went on to make a comprehensive range of air-cooled diesels, such as the PAZ1, AVA range, and the 3.5 hp AA1.

Re-organization

In 1912 the company went public and began engine production in a new factory named the *Nautilus Works* (after the fire grates that had made James Petter's fortune) in Reckleford. Its workforce of 500 men produced 1500 engines a year. In 1919 the company bought the Vickers factory in Ipswich and was renamed Vickers Petters Ltd.

In 1937, Petters joined the Associated British Oil Engine Company. After the war the group was obtained by British Electrical Group, with Petter spun off in 1949 joining another engine manufacturer, J&H McLaren & Co. at the old Lagonda works in Egham Hythe near Staines, Middlesex, employing over 1,000 people at its peak. In 1957 the company was acquired by Hawker-Siddeley and some production was moved to Hamble as the reorganized company was split into four groups within Hawker-Siddeley Brush Group—Petter Staines (small engines), Petter Generator Divisions, Petter Marine Division, Petter Service Division and Thermo-King Division (building refrigeration units under license from the US firm Thermo-King). In 1984 Petter was merged with Lister to form Lister Petter Co. Ltd. The Staines site was sold in 1988 and all production was concentrated at the former Lister factory in Dursley, Gloucestershire..

Calculators

In the 1930s the company manufactured mechanical calculators. The company obtained a patent on calculator technology in 1923 and two more in 1930. Guy Bazeley Petter then took out equivalent US patents and assigned the rights to the company. The company subsequently sold its calculator designs to the Bell Punch company.

Petteroid

"*Petteroid*" is a nickname given to engines built under licence in India to Petter design. While rural contraptions in work used for casual heavy transport in Indian Punjab are known as "*Peter Rehras*" after the brand of engine that gained popularity there in days gone by.



Lister-Petter 2013

Lister Petter is based in Gloucestershire in England and has operations in the USA, France, India and China. This gives the company global spread and ensures that you are never too far from our expertise whenever you need diesel or gas engine technology.

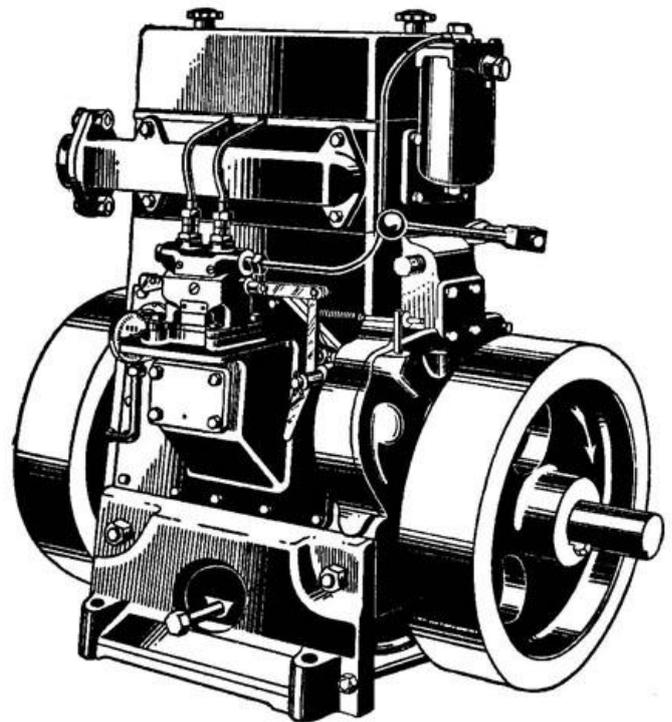
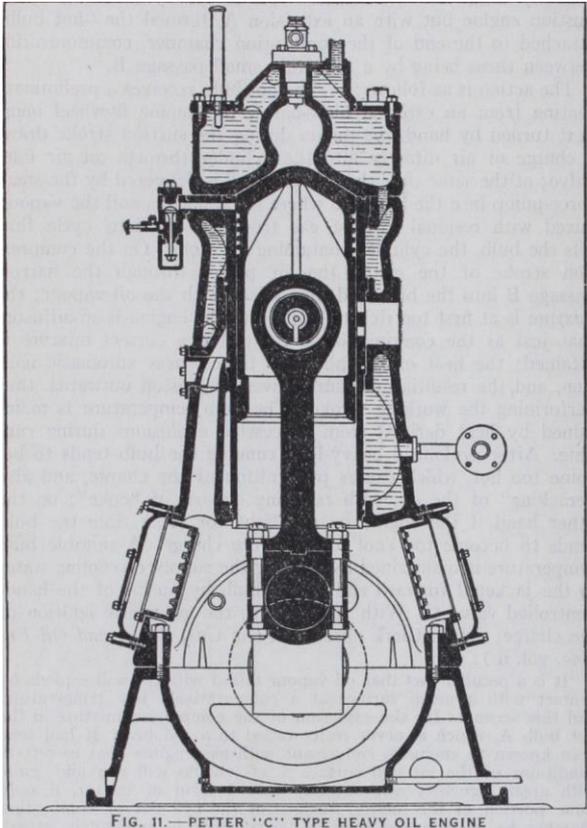
Lister Petter has a long and celebrated history in industrial engines. From our roots over 140 years ago to now producing advanced diesel and gas-powered engines for a wide range of applications, we have consistently set the standard in innovation, quality and reliability.

With many millions of our engines built, the range of uses and locations where you will see Lister Petter products around the world is remarkable. At the heart of our success is our continuing focus on producing products that exceed our customers' expectations with an emphasis on flexible design and reliable operation. Zie : <http://www.lister-petter.com>













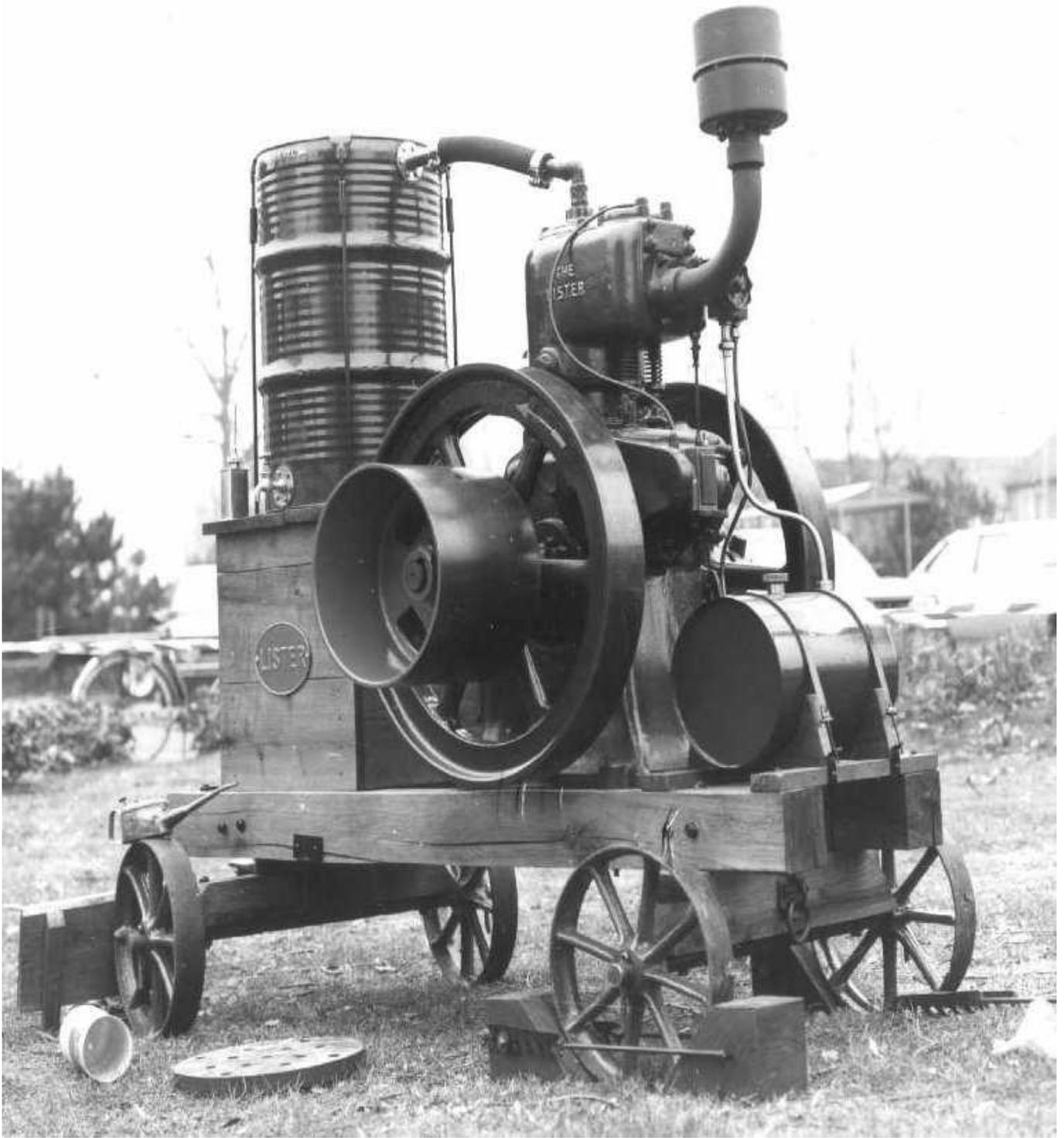




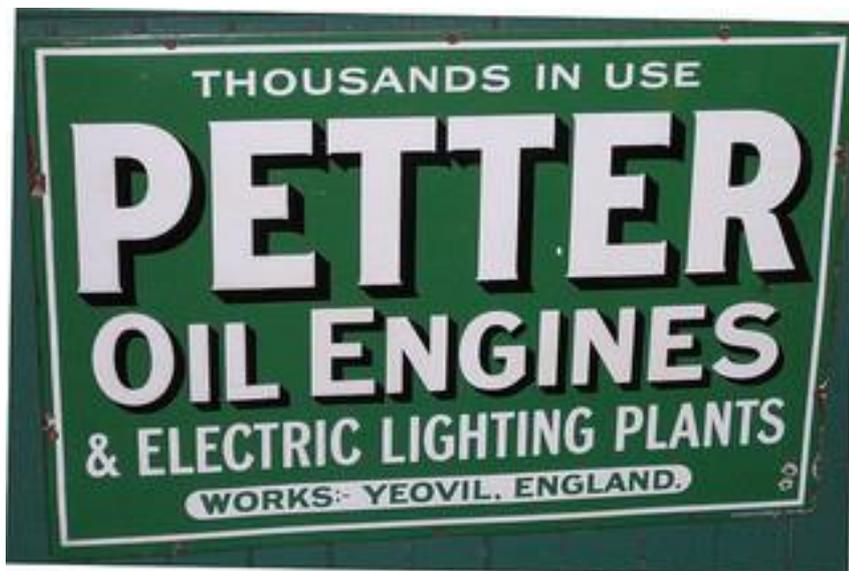




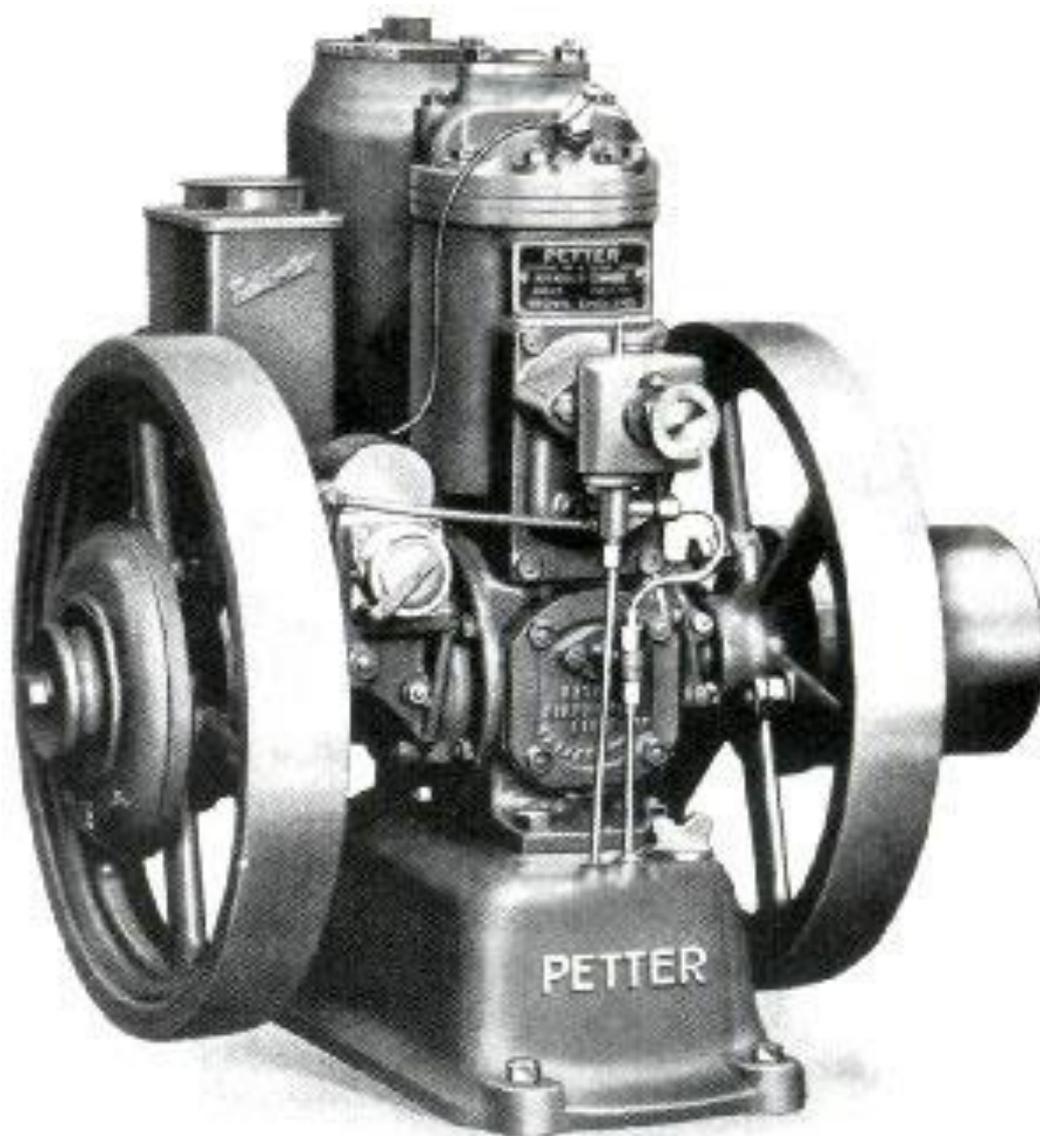
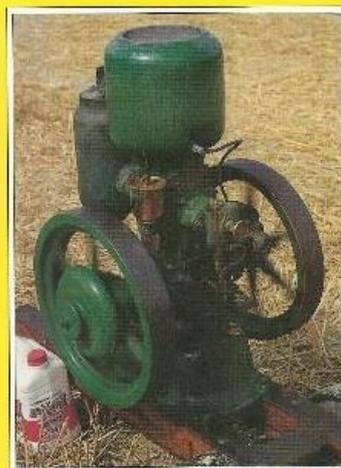


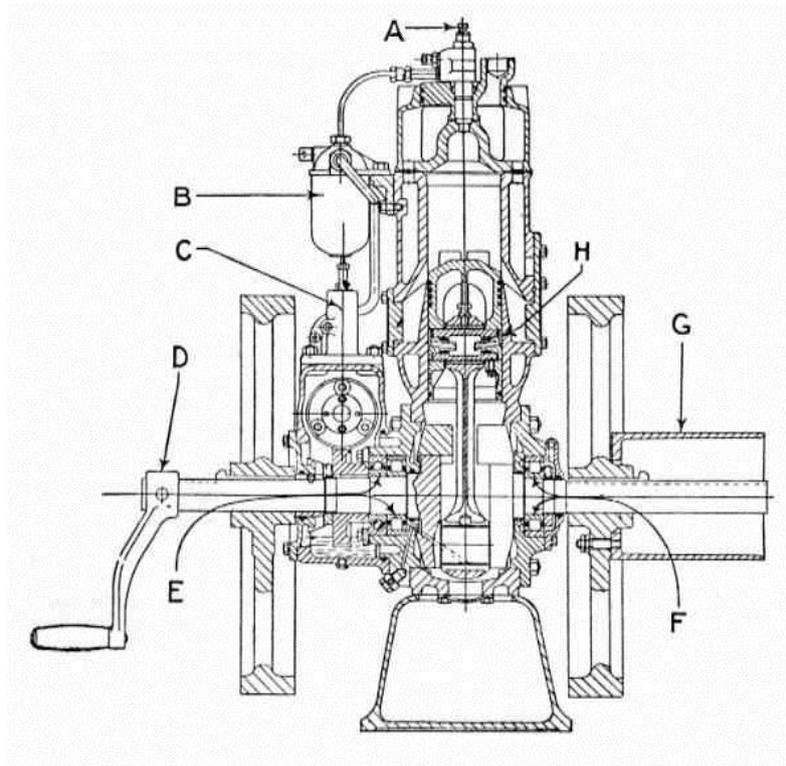
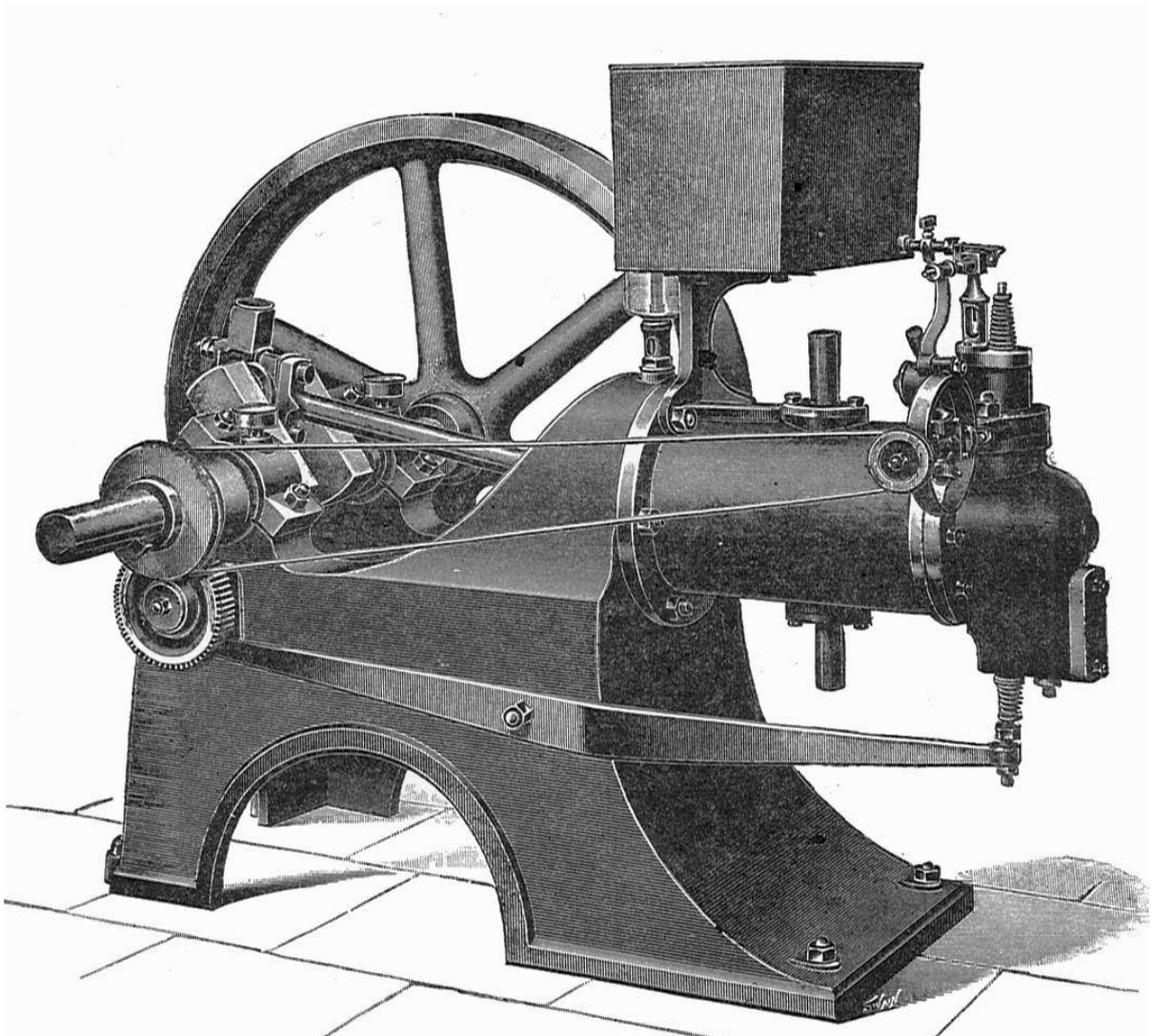


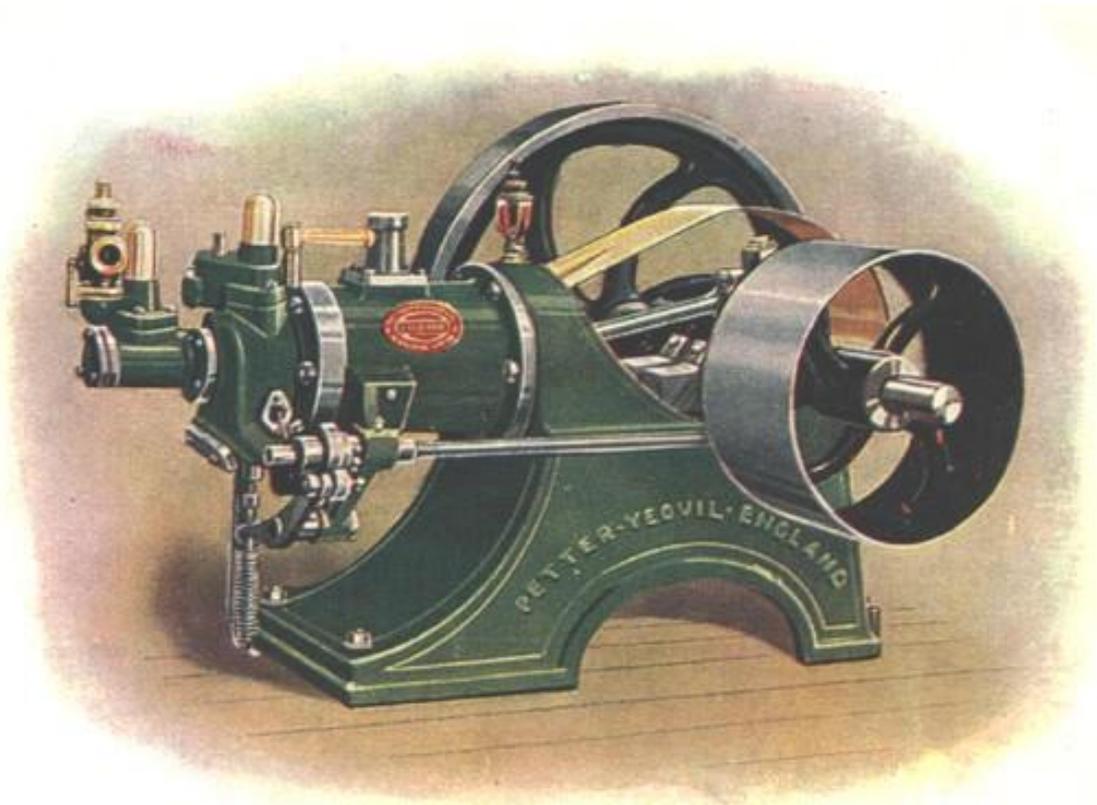
Lister



Petter M type







1½ to 50 B. H. P.



PETTER OIL ENGINES

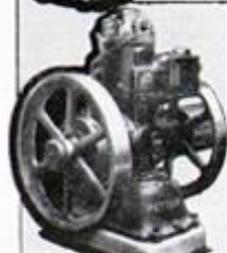
AND ELECTRIC GENERATING PLANTS

SIZES FROM 1½ to 260 B.H.P.

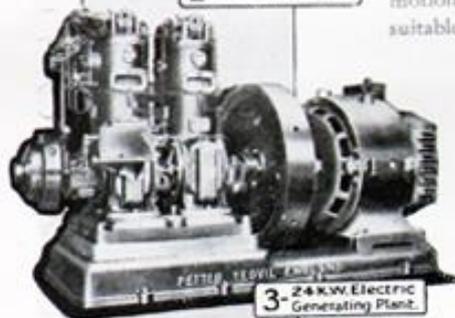
Simple — Reliable — Economical.



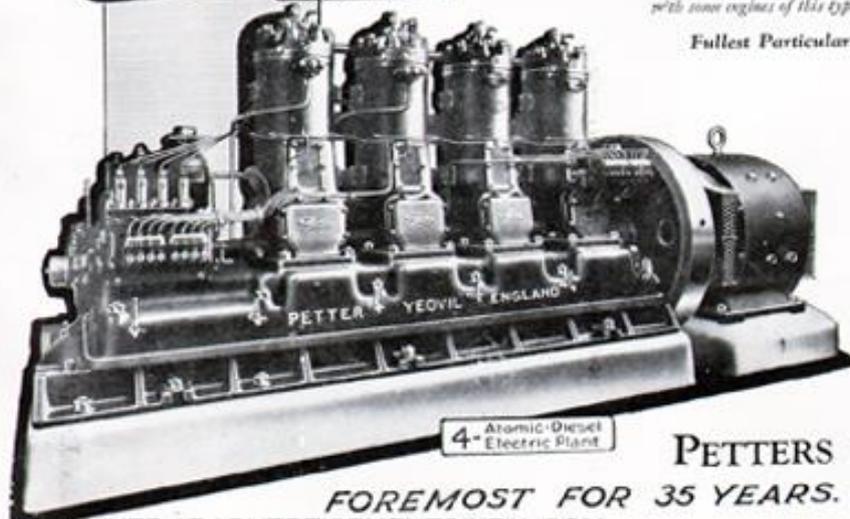
1-3 B.H.P. Engine.



2-12 B.H.P. Engine



3-24 K.W. Electric
Generating Plant.



4-Atomic-Diesel
Electric Plant

PETTER OIL ENGINES provide the most economical and reliable power from a wide range of fuel oils for driving Electric Lighting Plants, Pumps, Agricultural and Rubber Machinery, Coffee Grinders, Rice Hullers, Circular Saws, Fans, etc., and for a hundred and one similar purposes in every branch of industry.

They work on the Petter improved two-stroke cycle—have no valves or valve gear to cause trouble. Consequently they are so simple that they can be operated by unskilled native labour with perfect satisfaction. As they have a power impulse per cylinder at every revolution of the crankshaft they work with a regularity of motion unequalled by any four-stroke engine made. This makes them particularly suitable for generating electric current.

ILLUSTRATIONS.

- 1. *M* Type (Magneto Ignition) Petrol or Paraffin (Kerosene) Engine. Extremely popular for use on farms, etc. Sizes: 1½, 2, 3 & 5 B.H.P. Stationary, Portable and Semi-Portable.
- 2. *S* Type Surface Ignition Oil Engine, 12 B.H.P. All sizes start instantly by means of Petter Patent Cold Starter. Awarded Silver Medal, Royal Agricultural Society of England, 1923. In sizes 5 to 56 B.H.P. Industrial and Marine.
- 3. *S* Type Surface Ignition Oil Engine Electric Generating Plant. Starts instantly from Cold by Petter Patent Cold Starter. Sizes: 5 to 24 Kilowatts for all industrial and marine purposes.
- 4. Atomic Diesel Airless and Springless Injection Oil Engine Electric Generating Plant. Possesses Diesel economy without the complications usually associated with some engines of this type. Sizes: 16 to 168 Kilowatts.

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THE COLOMBO ELECTRIC TRAMWAYS
& LIGHTING Co., LTD., Union
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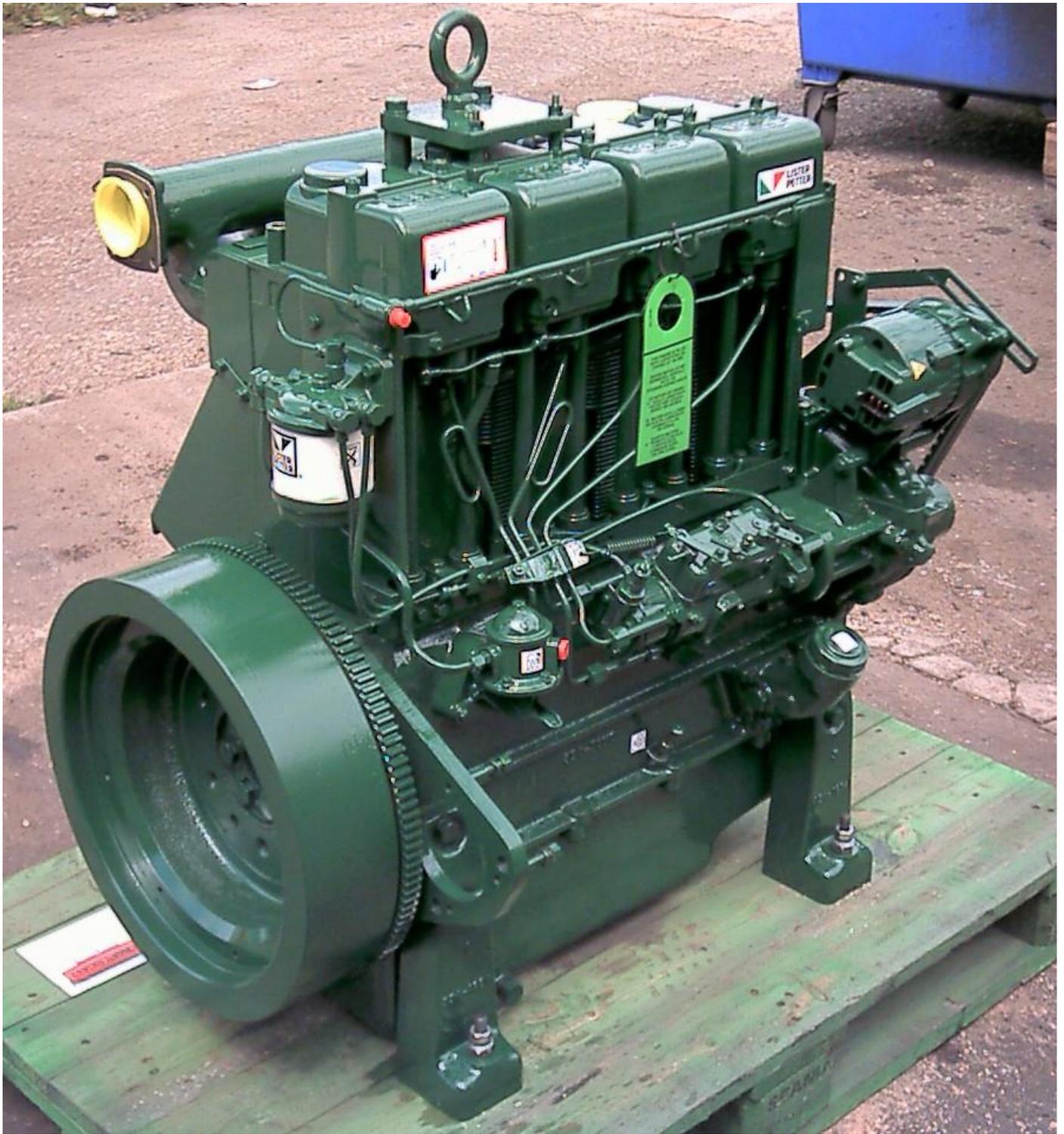
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Awarded 40 Gold and Silver Medals in Leading Exhibitions.







T Series TR2 G-Build Engine

TR2

Power ranges: 11.0–14.4 kW; 14.8–19.3 bhp
Fixed speeds: 1500, 1800 r/min

Reliable, durable two-cylinder air-cooled G-Build diesel engine

Special Attributes

- ✓ suitable for generating sets
- ✓ designed for continuous operation in ambient temperatures up to 52 °C (122 °F)
- ✓ oil cooling by means of air flow over deep crankcase finning

Basic Engine Characteristics

- diesel fuelled
- direct injection
- 2 cylinders
- air cooled
- naturally aspirated
- electric start (hand start optional)

Design Features and Equipment

- medium-duty air cleaner*
- inlet and exhaust manifolds
- self-vent fuel system with individual fuel injection pumps
- fuel filter
- fuel lift pump*
- self-regulating plunger type lubricating oil pump
- spin-on lubricating oil filter
- decompressor lever
- flywheel with cooling fan**
- flywheel housing with SAE4 flange**
- mechanical governing
- 12V starter motor*
- safety switches*
- fuel control solenoid (energised to run)*
- standard skid base packing
- 250 hour service intervals
- operators' handbook



Emissions

Complies with EU Stage 3A emissions regulations.

Optional Items

- 12V battery charge windings.
- SAE4 flywheel housing and 7.5" flywheel.
- SAE5 flywheel housing and 7.5" flywheel.
- SAE4 and non SAE standard flywheel.

See also items with asterisk under *Design Features and Equipment*.

A range of options allows you to select a specification that matches your requirements; please consult your Lister Petter distributor.

* Optional items standard on most builds.
** Options available