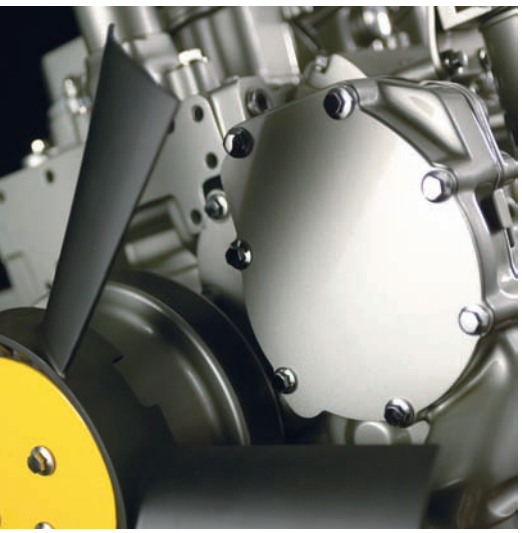
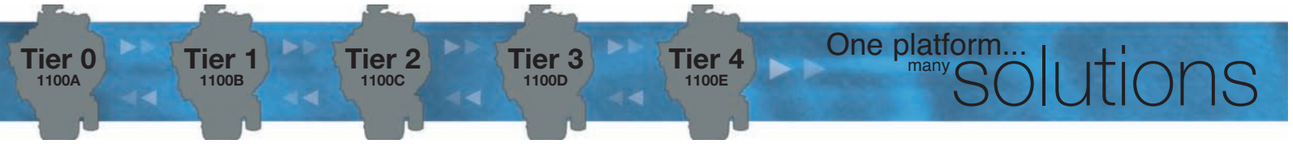
Perkins®

1100 Series

Tier 3/Stage IIIA



The heart of every...
great machine



Powered by your needs

Never before have engines been so closely matched to customer needs than with the single platform 1100 Series engines from Perkins. With 1100D now added to the range, the future is secure for manufacturers both at Tier 3/Stage IIIA emissions legislation and beyond.

Customers new to 1100D Series, will find a family of 3.3, 4.4 and 6.6 litre engines that go much further than meeting legislation. Now, each engine is equipped to impress with their range of convincingly enhanced, performance and installation benefits. For existing customers, 1100D Series adds a seamless, and thus cost effective, transition to ever-tighter noise and gaseous emissions legislation.

A single platform means engines at the appropriate technology level for compliant and non-emissions compliant territories. Effectively, a manufacturer could install today's 1100D for one market whilst adopting 1100A for another, less demanding, area. The common design of the 1100 Series single platform gives OEMs the opportunity to capitalise on reduced technology costs for less demanding markets, whilst incurring almost zero impact on installation design - allowing one machine to compete cost effectively in a variety of markets, with the minimum of development costs.

The 1100D range

An all-new, electronic, 6.6 litre model quietly delivers up to 205 kW (275 hp) and heads the line-up for Tier 3/ Stage IIIA. This 6 cylinder engine joins with 3 and 4 cylinder models to provide class-leading benefits to a wide range of original equipment manufacturers (OEMs) and end users. Going forward, 1100 Series will be the platform on which the long term solution to Tier 4/ Stage IIIB legislation will be built.

Perkins has developed a single engine platform for all compliant and non-emissions compliant territories

The 1100D range offers the possibility to move between different fuel system technologies and aspirations

1103D

With many OEMs facing the challenge of retaining a small engine bay at the emissions changeover and noise legislation cut-in then one answer could be the very productive 1103D. Mechanically fuelled, with a choice of natural, turbocharged or turbo charge-cooled aspiration, this is a high-powered, yet very refined and compact product that offers flexibility in design and installation options. It becomes the very latest in a long line of Perkins legendary 3 cylinder engines.

1104D

In the highly competitive world of the 4 cylinder heavy-duty product, nobody comes close to the choices offered by Perkins. The 1104D offers choice, of either cutting-edge electronic fuel control technology, or low noise and Tier 3/Stage IIIA emissions with the very latest advanced mechanical fuelling system. Choice of natural, turbocharged or turbo charge-cooled. There is also choice from a wide range of ratings and power up to 106 kW (142 hp). The 1104D has virtually identical hook-up points to its predecessors, so the OEM is not forgotten as he gets to choose whether to take this winning package of benefits into new machine concepts, or effortlessly slide new noise and gaseous emissions capability into today's machines.

1106D

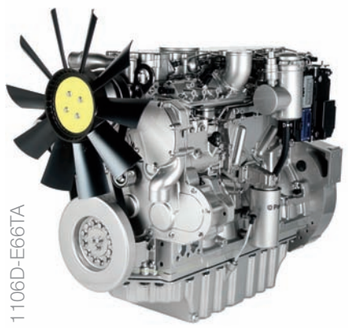
High power output, high power density and an almost limitless range of machine integration possibilities are the signatures of this new 6.6 litre engine. But with over 1000 Nm (>770 lbf.ft) torque available and under 88 dBA# at full load, machine performance will be seen, not heard. To up-fit the engine efficiently and cost effectively, the 1106D comes with a huge array of build options, including single-side servicing from either side.

All electronically controlled models within the 1100D range now take advantage of proven components of Caterpillar ® ACERT™ Technology.

Average sound pressure levels derived from ISO 6778:1995

1103D-33T

1104D-44



1106D-E66TA

Customer benefits

1100 Series at work

Utterly reliable heavy-duty capability, higher powered, more economical, clean and quiet: these are the benchmark qualities of the range that reward the user time after time. Now add a long warranty to back these claims and 500 hour servicing to keep that productivity at work and the 1100D becomes a power solution impossible to ignore.

Reducing noise suppression cost

Greater public awareness of noise pollution, operator acceptance and the implementation of 2000/14/EC in January 2006 has put noise at the centre of machine design. Here, the 1100D range has been designed to take out cost for the manufacturer by minimising noise at source. Now, by comparison to even their own very quiet predecessors, some ratings are reduced up to a massive 5 dBA on the 6 cylinder.

Low noise benefits are seen throughout the speed range with readings as low as 88 dBA. But 1100D doesn't stop there as each engine structure has been tuned and expertly assessed to eliminate all elements of subjective harshness.

Reducing installed cost

The 1100D has the same variety of hook-up points and the same size of envelope as its predecessor, the 1100C. This facilitates a seamless transition for manufacturers during the emission changeover process. For new design concepts or new customers, the compact 1100 Series becomes an individually tailored power solution through a wide choice of key dress items. 1100D also becomes the future as it is the platform from which to deliver Tier 4/Stage IIIB.

Reducing tooling costs

Existing cooling groups and engine bay designs are not compromised by 1100D, as any rise in heat rejection meeting the forthcoming emissions, is minimal.

Similarly, many customers will be able to use existing fuel tank designs and fuelling intervals, as 1100 Series' renowned fuel economy has not been seriously compromised in the move to lower emissions.

1106D-E66TA and 1104D-E44TA

Component commonality

Rationalised inventory, streamlined service training and consistent serviceability stem from 1100 Series having a single platform. Within the 1100D, pistons, con rods and valve gear become 'repeated' components and common front and rear ends offer their potential to simplify machine range designs.

The next level of machine performance

On the 4 and 6 cylinder 1100D Series high power ratings, the use of full authority electronic control brings, as well as a quite massive increase in power, also a huge choice of machine integration possibilities. These would include tailored power and torque curves along with torque matching for increased productivity and greater fuel economy.

Electronic communication enables coordination of engine, transmission and hydraulic events as well as full safety shutdown and faster diagnostics.

Worldwide power solution

This family of engines are tolerant to a wide range of fuels around the world including Kerosene and use of blended diesel with up to 5% rape methyl ester, without impact to standard warranty.

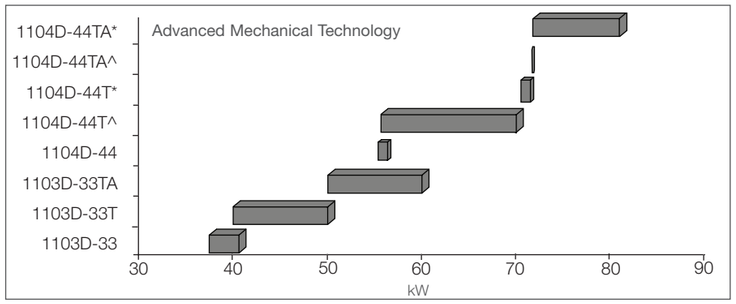
Perkins product support ensures engine expertise is available throughout the world and around the clock. Surpassing customer's needs and keeping Perkins powered machines productive.

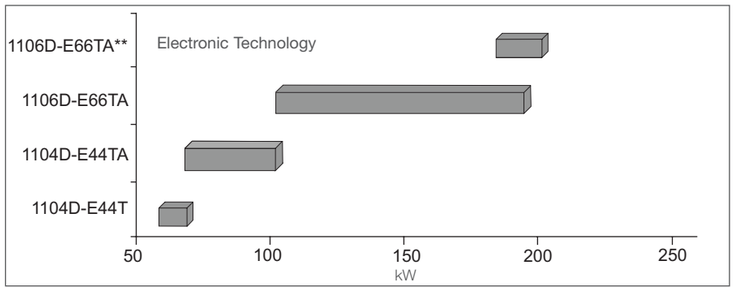
Think flexibility...
choose Perkins

Options to meet your needs

- Engine ratings
- Front SAE B PTO drive
- Timing case and gear-driven auxiliaries
- Flywheel housings
- Flywheel and starter rings
- Dynamic balancer
- Oil filter positions
- Adapter plates
- Starter motors
- Fan drives and locations
- Lubricating oil sumps
- Sound isolated sumps
- Lubricating oil filters and breathers
- Air compressor
- Front end drives
- Alternators
- Belt-driven auxiliaries
- Induction manifolds
- Exhaust manifolds
- Fuel filter positions
- Cold start aids
- Engine mountings
- Power and torque curve tailoring
- Cooling packs
- Control panels

Engine data





Engine powers

Engine	Power Range at 2200 rpm		Torque Range	
	kW	hp	Nm	lb-ft
1103D-33	37.5-41	50-55	210	155
1103D-33T	40-50	53-67	220-275	162-203
1103D-33TA	50-60	67-81	270-310	199-229
1104D-44	54.5-56	73-75	260	191.7
1104D-44T^	55.5-70	74.4-93.8	294-392	216.8-289.1
1104D-44T*	72.5-74.5	97.2-99	384-392	283.2-289.1
1104D-44TA^	74.5	99	410	302.4
1104D-44TA*	74.5-83	99.9-111.3	410-418	302.4-308.3
1104D-E44T	61.5-74.5	82.4-99.9	360-420	265.5-309.7
1104D-E44TA	74.5-106	99.9-142	468-556	345.1-410
1106D-E66TA	90-186	121-250	425-1050	313-774
1106D-E66TA**	187-205	251-275	up to 950	up to 701

^ available at 2400 rpm
* specific applications
** harvester applications

Basic engine data

	1103D	1104D		1106D
Fuel System	Mechanical	Electronic	Mechanical	Electronic
Configuration	In-line 3 cylinder	In-line 4 cylinder		In-line 6 cylinder
Bore/Stroke	105/127 mm	105/127 mm		105/127 mm
Capacity	3.3 litre	4.4 litre		6.6 litre
Valves per cylinder	2	4	2	4
Combustion System	Direct injection	Direct injection		Direct injection
Induction System	NA/Turbo/Turbo Charge-Cooled	Turbo/Turbo Charge-Cooled	NA/Turbo/Turbo Charge-Cooled	Turbo Charge-Cooled
Cooling System	Water Cooled	Water Cooled	Water Cooled	Water Cooled
Front End Drive	Single	Multi-vee/Single	Single	Multi-vee/Single
Length	546 mm front of damper to rear face	663 mm front of damper to rear face		929 mm front of damper to rear face
Width	586 mm option dependant	597 mm option dependant		668 mm option dependant
Height	526 mm over crank centre option dependant	528 mm over crank centre option dependant		797 mm over crank centre option dependant
Dry Weight	276 kg +/-10%	357 kg +/-10%		506 kg +/-10%

Global Product Support

Wherever it is required in the world, Perkins product support is designed to keep a Perkins engine running. We recognise the importance of maximising engine productivity to fulfil our customer's needs, hence our goal to be the world leader in global product support for engines.

Our network are the engine experts when it comes to the full Perkins range. Perkins trained distributors have TIPSS (The Integrated Product Support Solution) suite of web enabled tools at their fingertips, providing them with the very latest, up-to-date real time information. So whether it's for parts identification and ordering, engine fault diagnosis or technical information, the Perkins distributor can complete the job to Perkins stringent standards, first time, worldwide.

From cradle to grave, Perkins has the solutions to meet customer needs. From standard maintenance, to comprehensive repair or complete overhaul, a cost effective solution is available whatever the age or condition of the Perkins engine. Perkins OE specification parts also come with a 12 month warranty, providing the best quality at the lowest possible cost.

Fully dedicated to looking for innovative solutions to industry issues, Perkins is working hard to ensure continuity of component supply. The exchange range offers remanufactured parts, giving good as new quality parts, from reworked core. A sustainable proposition, at the right price and all this with a reduced impact on the environment.

To give complete peace of mind to the machinery user, Perkins also offer Extended Service Contracts that take the worry out of engine ownership. Flexible coverage can be taken out for up to 8,000 hours of engine service, giving total protection against unexpected repair costs.

Perkins global product support is designed to enhance the customer experience of owning a Perkins powered machine. We deliver this through the quality of our distribution network, extensive global coverage and a range of Perkins supported OEM partnership options. So whether you are an end-user or an equipment manufacturer our engine expertise is essential to your success.

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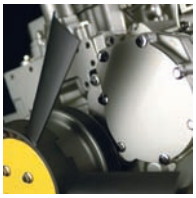

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