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 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.

The 1100 Series are 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 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 offers the possibility to move between different fuel system technologies and aspirations.

The 1100D range

An 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.

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 compliance with 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. But 1100D doesn't stop there as each engine structure has been tuned and expertly assessed to eliminate all elements of subjective harshness.

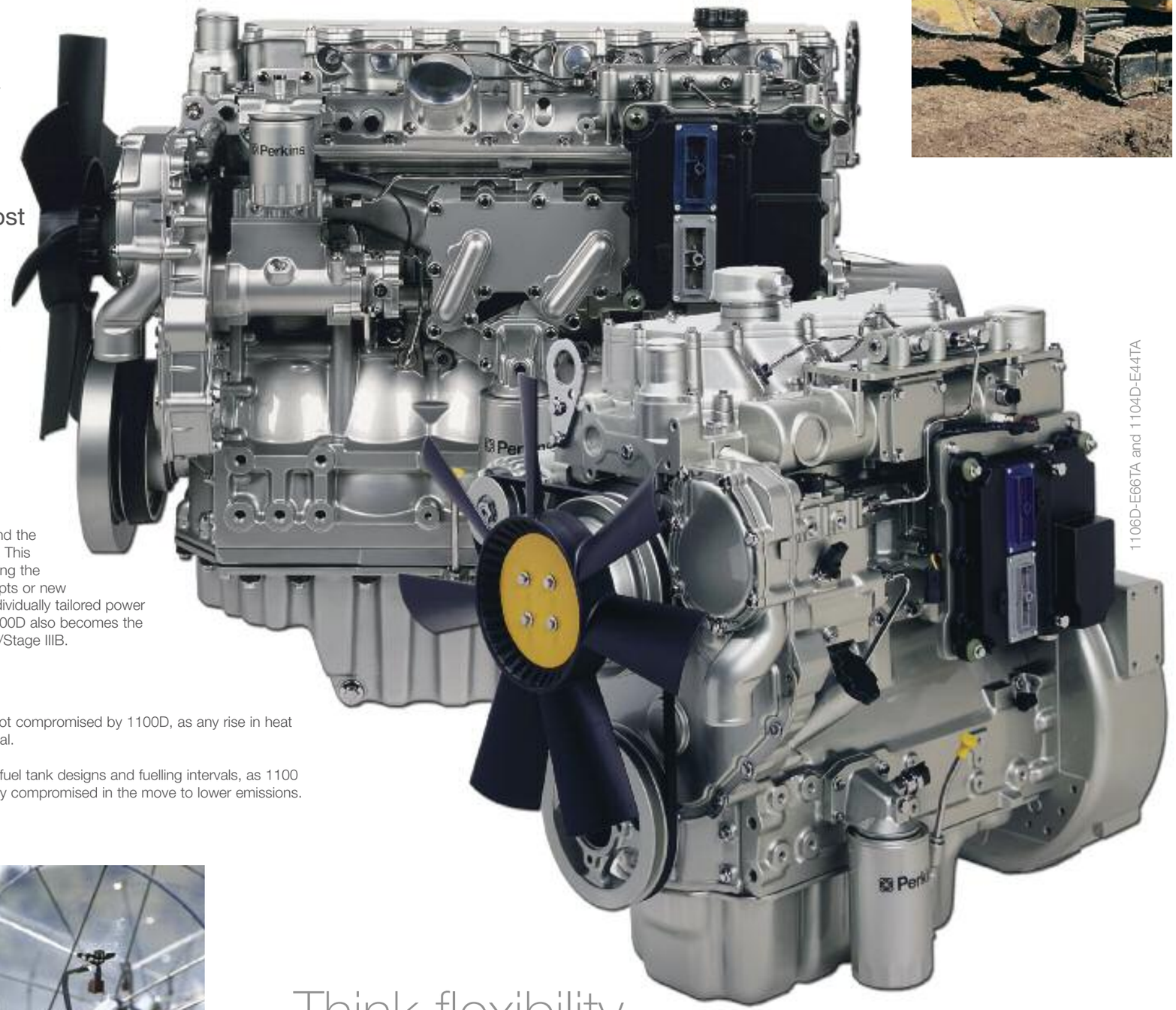
Reducing installed cost

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

Think flexibility...
choose Perkins

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 20% 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.

Product Support Excellence

In the modern, global marketplace, Perkins recognises it is not enough to be a manufacturing company with a quality product. It is also about creating relationships and building trust, and getting to know the specific needs of our customers.

Our customers expect quick, proactive responses to their requirements. Perkins understands that these requirements are different, according to each specific customer. Product Support Excellence is a key element in delivering a consistent, high quality response and a fundamental part of the total Perkins power solution.

Our global network is the strength and presence of Perkins Product Support. It forms the foundation of the enduring, quality relationships we have with our customers and delivers the promise we have made.

Our product support promise to keep Perkins' engines running, wherever they are located in the world, is a reality. To ensure we keep this promise, our investment in the skills and training of our people is constant. Perkins Regional Training Centres set the high standards required of our engine experts to meet the challenges of new technology and the commitment of quality service to our customers.

Our Product Support Excellence has one purpose - to give our customers peace of mind that our engines will keep their equipment running. So, whatever the age or condition of a Perkins engine, wherever it is, and whether it needs standard maintenance, complete overhaul or comprehensive repair, we have the people with the expertise and tools to do the job - so our customers' equipment can do theirs.

The cornerstones of our Product Support Excellence are:

- Global Distributor/Dealer Network - our customers' portal to quality service and support
- Parts Distribution - genuine parts to extend engine life and performance
- Service Excellence - on-line information and tools; TIPSS (The Integrated Product Support Solution) - providing the very latest diagnostic and technical information
- Service Solutions - Power Exchange Components - a sustainable, cost effective, high quality service solution

Retaining our position as a market leader is proof that we listen to our customers and focus on their needs. It is this commitment that differentiates Perkins from our competitors and enables us to meet and exceed our customers expectations.

Global Network

Worldwide Service Support

Over 75 Years Experience

- 132 distributors
- 184 countries
- Technical support
- Warranty support

Parts Distribution

Global Parts Network

- Genuine Parts – designed specifically for your engine
- High availability – over 40,000 parts in stock
- On-line Parts information – ensures the correct part
- Direct Ship – next day delivery for most of Europe

Service Excellence

Distributor/Dealer Service Standards

- Product Training – skilled on the latest technology
- Required Tooling – electronic and speciality tools for fast, high quality repair
- Information Systems – on-line access for up to date technical data
- Parts in stock – critical parts on the shelf to minimise down time

Service Solutions

Lower Owning and Operating Cost

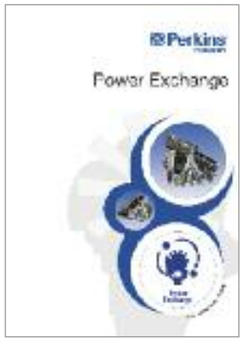
- Power Exchange Components – a sustainable solution
  - Remanufactured to like new specification
  - Typically 60 to 70% the price of a new component
- Extended Service Contracts – added protection for your engine

Product Support excellence is all about commitment to our customers; giving them the assurance that we understand their specific needs, and that our engines will keep their equipment running

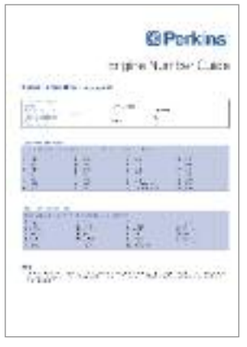
Related Literature

Publication No. PP1107

Publication No. PN1891



Publication No. PP1144



Publication No. PP827

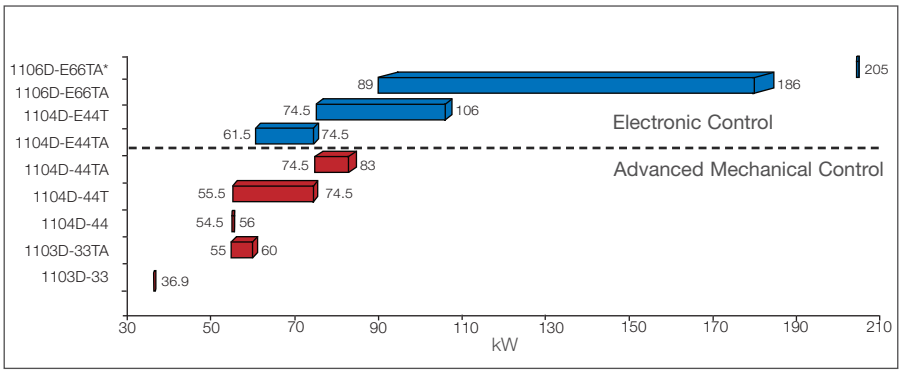
Options to meet your needs

- 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

1100A and 1100C Engine powers

Engine	Power Range		Torque Range	
	kW	hp	Nm	lb-ft
1104A-44	63.5	85.2	293	216
1104A-44T	80.5	108	404	298
1103C-33	43	57.7	222	164
1103C-33T	55	73.8	291	215
1104C-44	64	85.8	308	227
1104C-44T	74.5	99.9	413	305
1104C-44TA	97	130.1	500	369

1100D Engine data



* Harvester applications

1100D Engine powers

Engine	Power Range		Torque Range	
	kW	hp	Nm	lb-ft
1103D-33	36.9	49.5	196	145
1103D-33TA	55-60	74-80	293-320	216-236
1104D-44	54.5-56	73-75	256-260	189-192
1104D-44T	55.5-74.5	74-99.9	294-392	217-289
1104D-44TA*	74.5-83	99.9-111	410-418	302-308
1104D-E44T	61.5-74.5	82.4-99.9	360-420	266-310
1104D-E44TA	74.5-106	99.9-142	468-556	345-410
1106D-E66TA	89-186	119-250	543-1050	400-774
1106D-E66TA*	205	275	952	702

* 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	571 mm option dependant	597 mm option dependant		668 mm option dependant
Height	826 mm over crank centre option dependant	528 mm over crank centre option dependant		797 mm over crank centre option dependant
Dry Weight	264 kg +/-10%	357 kg +/-10%		506 kg +/-10%

Final weight and dimensions will depend on completed specification

Asia
Perkins Engines (Asia Pacific) Pte Ltd
14 Tractor Road
Singapore 627973
Telephone +65 6828 7469
Fax +65 6828 7414

Europe, Middle East and Africa
Perkins Engines Company Limited
Peterborough PE1 5NA
United Kingdom
Telephone +44 (0)1733 583000
Fax +44 (0)1733 582240

North America
Perkins Engines Inc
N4 AC 6160
PO Box 610
Mossville, IL 61552-0610, USA
1-888-PERK-ENG
Telephone +1 309 578 7364
Fax +1 309 578 7329

Latin America
Perkins Motores do Brasil Ltda
Rua Alexandre Dumas, 1711 Ed. Birman 11, 9º andar
Chácara Santo Antonio
São Paulo / SP - Brasil
Cep: 04717-004
Telephone +55 11 2109 2038
Fax +55 11 2109 2089



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www.perkins.com