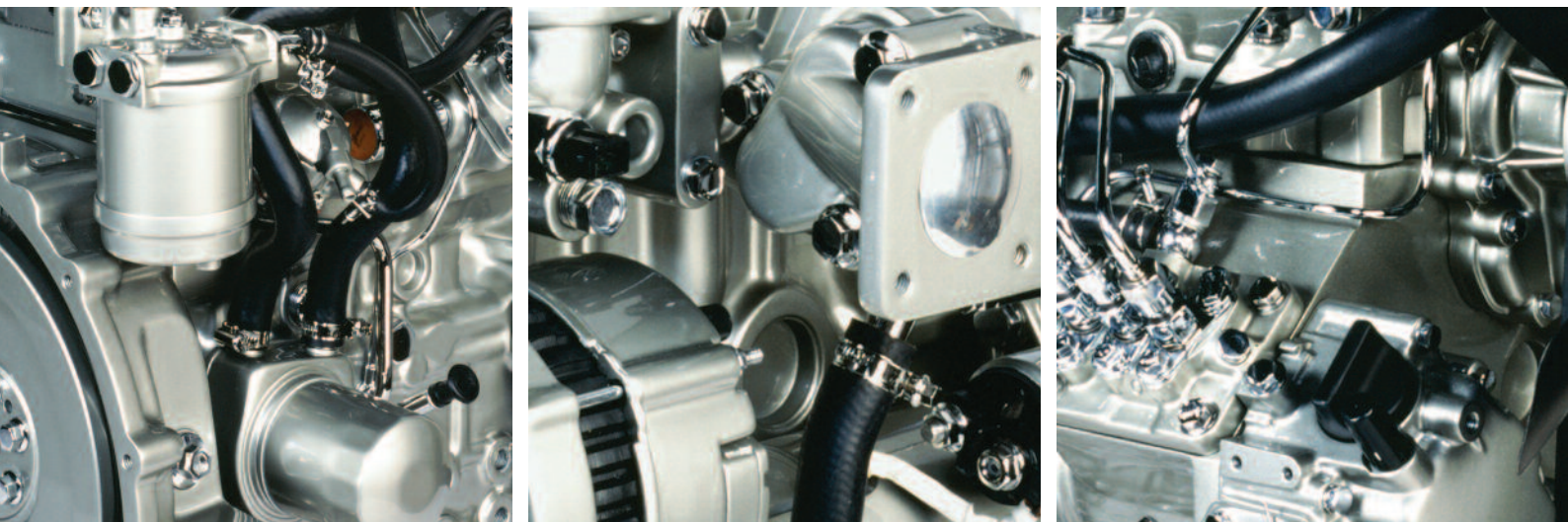




# 400 Series

EPA Tier 4, Interim Tier 4/EU Stage IIIA



The heart of every  
great machine

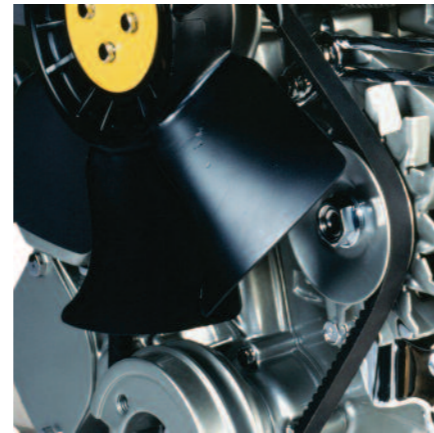
# Meeting customer needs

Perkins has been advancing diesel engine technology for over 75 years. Today we are designing, developing and manufacturing engines that meet worldwide customer needs more precisely than ever before. This international success can be attributed to the Perkins philosophy of putting customers at the heart of our business, helping them to meet their market challenges, anticipating trends and providing the power solutions to match changing requirements.

The 400 Series range from Perkins enforces our commitment to the exciting compact power market providing emission solutions for Tier 4 and beyond. A broader product range, improved productivity, increased refinement, and low cost of ownership combine to deliver a class leading and award winning product that firmly places Perkins at the forefront of the world of compact power.

The 400 Series is a range of tough 2, 3 and 4 cylinder water-cooled engines which provide clean, quiet and cost-effective power. It covers a power span of 8.2 – 49.3 kW (10.9 – 65.9 hp) and offers naturally aspirated, turbocharged and aftercooled models, with the additional choice of mechanically balanced ratings.

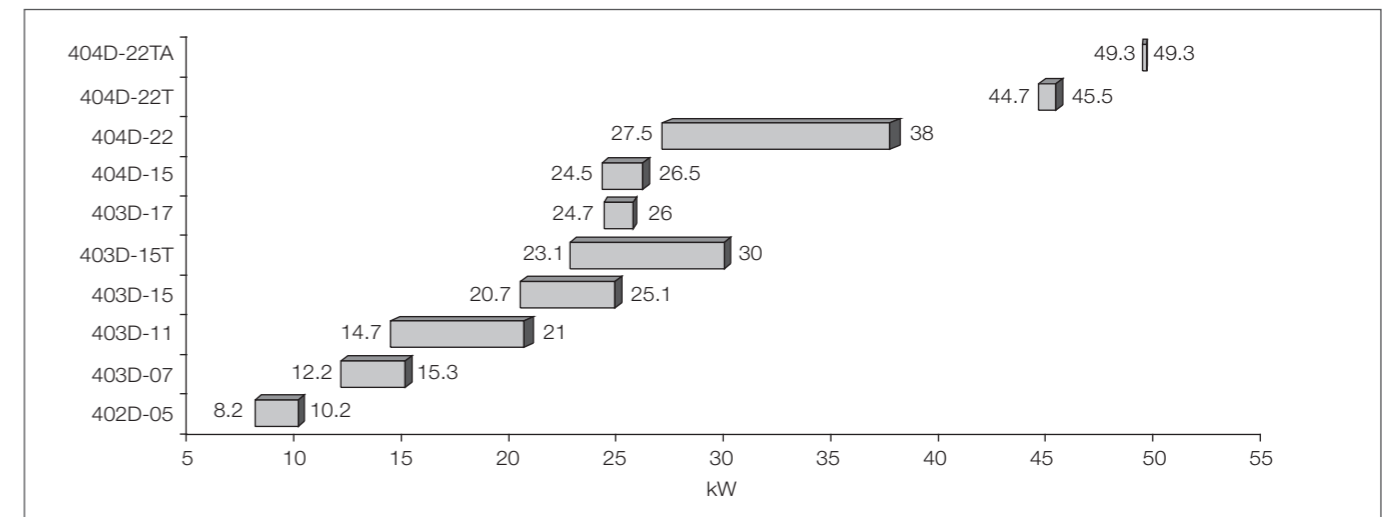
The versatile nature of the 400 Series makes it ideal for a large variety of applications in Agriculture, Lawn and Garden, Construction, Materials Handling, General Industrial and Electric Power.



# Features and benefits

- 8.2-49.3 kW from an engine envelope of 0.08-0.25m<sup>3</sup>
- Compact size and design
- Ease of installation even in the smallest of machines
- Noise levels have been kept to a minimum
- Subjective harshness has been controlled and reduced
- Reduced smoke emission levels
- An improved governor and compliance testing that delivers increased reliability
- A two year/2,000 hour warranty demonstrates our confidence in durability and reliability
- Oil and filter changes are set at 500 hours as standard

## Engine range



## Engine data

Engine Data	402D-05	403D-07	403D-11	403D-15	403D-15T	403D-17	404D-15	404D-22	404D-22T	404D-22TA
Cylinders	2	3	3	3	3	3	4	4	4	4
Displacement (litres)	0.5	0.7	1.1	1.5	1.5	1.7	1.5	2.2	2.2	2.2
Cassette Fuel Pump	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Indirect injection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cooling System:										
Liquid, 50/50 anti-freeze	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bore (mm)	67	67	77	84	84	84	77	84	84	84
Stroke (mm)	72	72	81	90	90	100	81	100	100	100
Compression Ratio	23.5:1	23.5:1	23:1	22.5:1	22.5:1	23.1:1	23.5:1	23.3:1	23.3:1	23.1:1
Maximum Power (kW)	10.2	15.3	21	25.1	30	26	26.5	38	45.5	49.3
Minimum Power (kW)	8.2	12.2	14.7	20.7	23.1	24.7	24.5	27.5	44.7	49.3
Length (mm)	406	480	491	572	572	564	591	661.5	662	662
Width (mm)	371	371	407	456	512	466	408	464	489	489
Height (mm)	523	528	576	643	643	654	576	676	698	698
Envelope (m <sup>3</sup> )	0.08	0.09	0.12	0.16	0.19	0.16	0.14	0.21	0.25	0.25
Weight (kg)	57	71	87	149	156	160	106.8	184	194	194

# Customer benefits

## Perkins provides a complete solution

**Specifying the engine to meet your needs**  
Our application team can work from your product requirements and ensure the package is tailored to suit you. Engine installation support – working with your engineering and purchasing teams we can advise on optimising the engine installation.

**Product development**  
Continuous support as your product range evolves and adapts to meet legislation on emissions and noise.

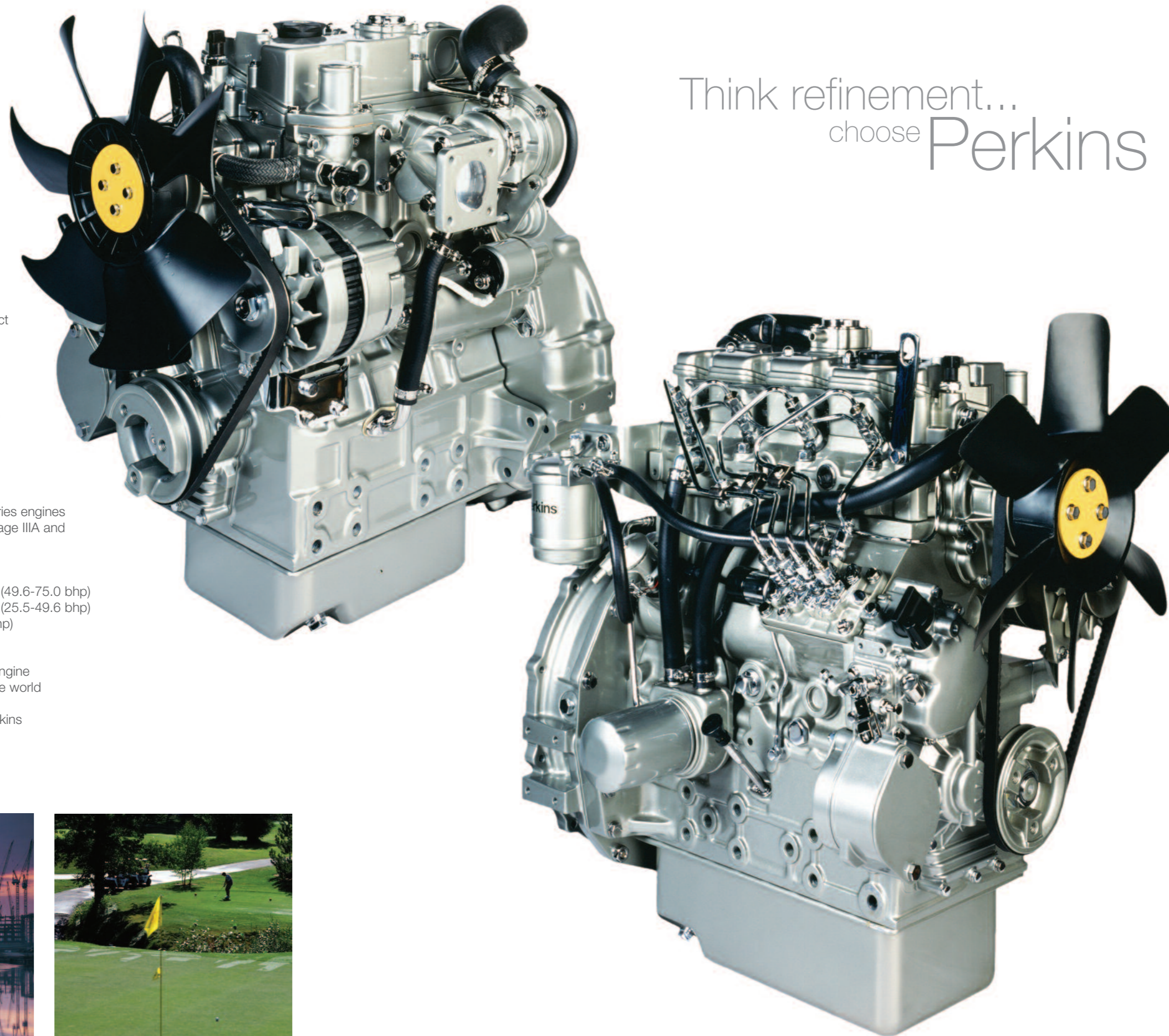
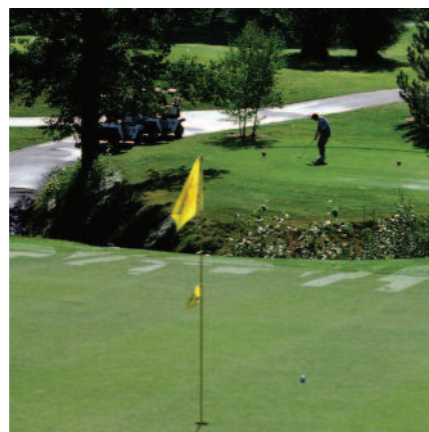
**Customised logistics**  
Working with your purchasing department we can provide engine delivery and stock control to meet your growing needs.

**Emissions**  
Developed and built to the most demanding standards, our 400 Series engines meet all the requirements of EU Stage IIIA and EPA Tier 4 emissions legislation.

**Tier 4 Platform**

- EPA Interim Tier 4 = 37-56 kW (49.6-75.0 bhp)
- EPA Interim Tier 4 = 19-37 kW (25.5-49.6 bhp)
- EPA Tier 4 = <19 kW (<25.5 bhp)

**Global Product Support**  
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 refinement...  
choose **Perkins**



## Productivity

- High power and torque
- Designed for quality and reliability
- Expanded product range

## Low cost of ownership

- 500 hour service intervals
- 500 hour oil change
- 1,000 hour fuel filter change
- Standard two year warranty
- Low oil consumption and servicing costs

## Refinement

- Low emissions – smoke and noise
- Modern aesthetics
- Tailored technology
- Options to support reduction of machine noise

## Product functionality

- Glow plugs for reliable cold starting to -20°C
- SAE A and A-A PTO capability
- 35° continuous gradeability
- Multiple fan positions
- Option of electronic controlled governing

# 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.



## Global Network

### Worldwide Service Support Over 75 Years Experience

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

## 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

## 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 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



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.

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

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