

403D-07 Industrial Diesel Engine

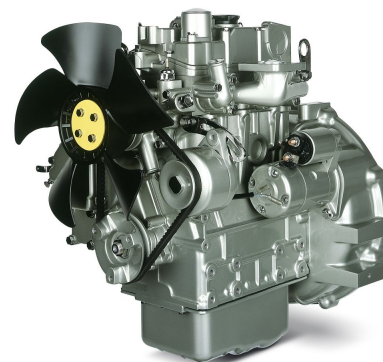
9-15.3 kW (12.1-20.5 hp) @ 2800-3600 rpm

EU Stage IIIA/U.S. EPA Tier 4 Interim equivalent

The Perkins 400 Series is an extensive family of engines in the 0.5-2.2 litre range. The 3 cylinder 403-07 model is one of Perkins smallest engines, combining performance, low operating costs and an ultra-compact package. From a packaging point of view, the 403-07 is the ideal engine for small industrial applications. Its simple, robust mechanical fuel system makes it easy to install and maintain.

Delivers up to 15.3 kW from an engine envelope of 0.09 cubic metres.

Designed to meet EU Stage IIIA/U.S. EPA Tier 4 Interim equivalent emission standards.



Specifications

Power Rating		
Minimum power	12.2 kW	16.4 hp
Maximum power	15.3 kW	20.5 hp
Rated speed	2800-3600 rpm	
Maximum torque	44.5 Nm @ 2200 rpm	32.8 lb-ft @ 2200 rpm

Emission Standards	
Emissions	EU Stage IIIA/U.S. EPA Tier 4 Interim equivalent. Less than 19 kW EU certification not required.

General		
Number of cylinders	3 inline	
Bore	67 mm	2.6 in
Stroke	72 mm	2.8 in
Displacement	0.76 litres	46.4 cubic in
Aspiration	Naturally aspirated	
Cycle	4 stroke	
Compression ratio	23.5:1	
Combustion system	Indirect injection	
Rotation (from flywheel end)	Anti-clockwise	

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Photographs are for illustrative purposes only and may not reflect final specification.
All information is substantially correct at time of printing and may be altered subsequently.
Final weights and dimensions will depend on completed specification.

SS-10435291-1000002519-005
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Cooling system	Liquid	
Total coolant capacity	1.2 litres	0.3 US gal
Total lubricating capacity	3.1 litres	0.8 US gal

Engine Dimensions*		
Length	480 mm	18.9 in
Width	371 mm	14.6 in
Height	528 mm	20.8 in
Dry weight	71 kg	156.5 lb

Disclaimer		
*Final dimensions dependent on selected options	0	0

Features and Benefits

A lifetime of low cost

The 400 Series offers highly competitive performance and fuel economy. Through appropriate use of technology, these engines have been designed to be reliable and to offer low cost of ownership in the wide variety of markets they serve.

Across an extensive power band, the 400 Series range offers you the ability to configure a solution to your specific machine, territory and market requirements.

Overlapping power bands between models and an extensive range of options gives the opportunity to optimise performance and functionality, adding customer value to the application.

We provide one year warranties for constant speed engines and two year warranties for variable speed models as standard.

As a 400 Series end user, you also benefit from Perkins world class product support and service coverage that comes from being a full range power solutions provider.

Compact design

The compact design of these engines makes them suitable for a range of applications, including skid steer loaders, mini excavators, wheel loaders, welders, lift platforms, lighting towers, small tractors, air compressors, turf care machinery and materials handling machinery.

Each of the six core engines of the 400 Series is configured for either Stage IIIA/Tier 4 Interim or Stage IIIB/Tier 4 Final emission standards, giving you flexibility depending on your market.

Performance and refinement

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The 400 Series lineup gives you a seamless power range of 8.2-50 kW (11-67 hp) in 2, 3 and 4 cylinder models designed with a family look and feel. The range offers a wide variety of ratings and configurations that can be tailored to meet the most exacting needs.

The selective use of indirect and direct injection fuel systems enables Perkins to offer world-class engine refinement and low noise levels.

Technical Information

Air inlet system

- Cast iron exhaust manifold - side outlet
- Inlet manifold

Control system

- 12 volt alternator
- 12 volt starter motor
- Electronic Shut Off Solenoid (ESOS)

Cooling system

- Coolant pump belt driven
- Coolant temperature switch
- Cooling fan

Flywheel and flywheel housing

Fuel system

- Fuel injection pump
- Spin on fuel filter

General

- Cast iron engine block
- Closed circuit breather
- Glow plug starting aid
- Cold start capability to -20°C (-4°F) (aided)
- Gradeability 35° continuous

Oil system

- Lubricating oil pressure switch
- Lubricating oil sump
- Spin on lubricating oil filter

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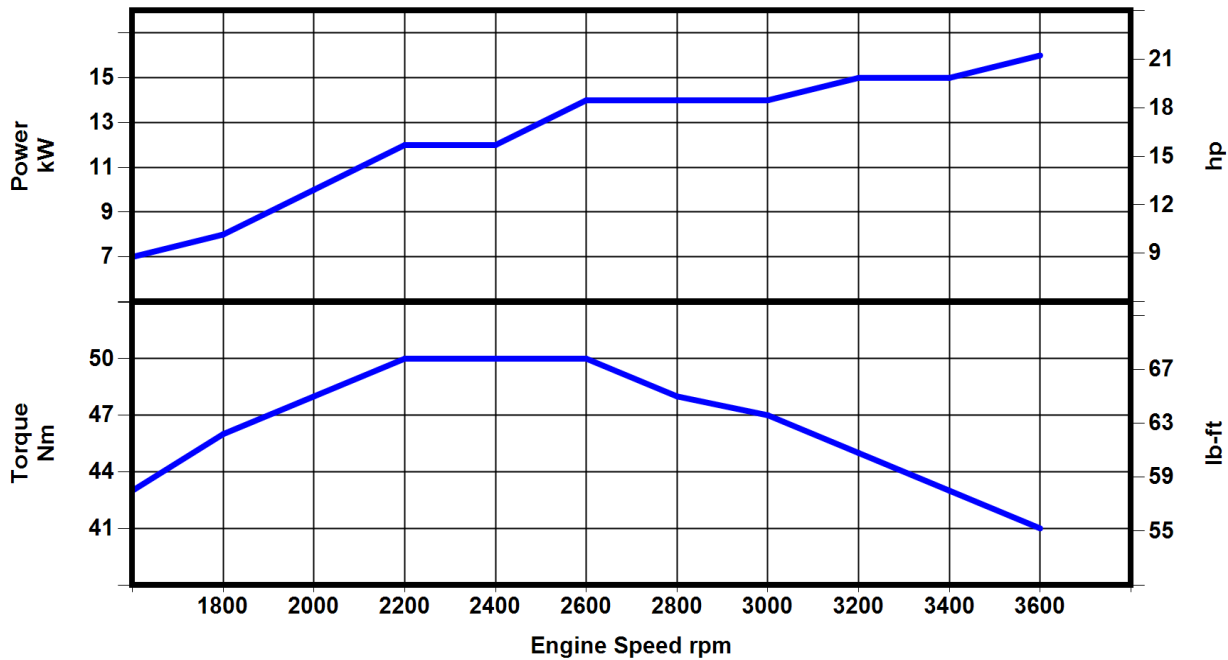
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400 Series 403D-07 INDUSTRIAL ENGINE

EU Stage IIIA/U.S. EPA Tier 4 Interim equivalent

9.0-15.5 kW / 12.1-20.8 hp



Power kW	Power hp	Rated Speed (rpm)	Torque Nm	Torque lb-ft	Speed (rpm)	Rating Type
9.0	12.1	2200	43.0	58.3	1700	Industrial C intermittent rating
12.0	16.1	2800	45.6	61.8	2000	Industrial C intermittent rating
13.0	17.4	3000	47.0	63.7	2000	Industrial C intermittent rating
14.5	19.4	3400	46.5	63.0	2400	Industrial C intermittent rating
15.5	20.8	3600	50.4	68.3	2400	Industrial C intermittent rating

Rating Standard ISO 14396:2002

Additional ratings are available for specific customer requirements. Consult your Perkins distributor.

Unless otherwise specified, all stated data is for maximum rated speed and 100% load.

B rating performance data will be added upon availability

Rating Definitions and Conditions

IND-C (Intermittent) Rating

Is the horsepower and speed capability of the engine where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

Rating Conditions for Diesel Engines – up to 7.1 liters are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in. Hg), with a vapor pressure of 1 kPa (0.295 in Hg) and 25°C (77°F). Performance is measured using fuel to specification EPA 2D 89.330-96 with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

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