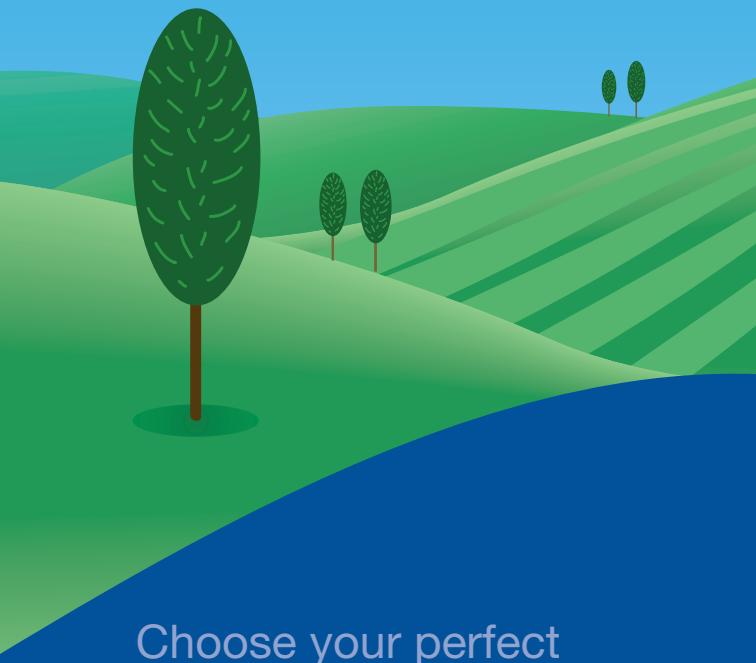
TIER 4ir

Industrial engine ratings guide



Choose your perfect power solution

400 Series
850 Series
1200 Series

Perkins®

THE HEART OF EVERY GREAT MACHINE

Contents

Industrial Power Units

Accessory

Application	400 Series 10.2-49.3 kW (13.7-66 hp)		
	Cylinders		
	2	3	4
Skid Steer Loaders			■
Excavators (Including Mini)		■	■
Wheeled Loaders			
Back Hoe Loaders			
Trenchers		■	■
Harvesters			
Tractors			■
Irrigation Pumps			
Rock Drills			
Crushers			
Motor Graders			
Screeners			
Forest Machines			
Mowers (Lawn and Garden)		■	■
Telehandlers			
Access Platforms			■
Forklifts			■
Airport Baggage Trucks			
Pavers			
Rollers			■
Auxilliary Power	■		


Access Platforms

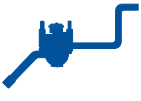

Airport Baggage Trucks

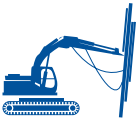

Auxilliary Power


Forest Machines


Forklifts


Harvesters


Irrigation Pumps


Rock Drills


Rollers


Skid Steer Loaders


Telehandlers

Perkins engines		
850 Series 45-86kW (60-115.3 hp)	**1200 Series** 110.1-225 kW (147.6-301.7 hp)	
Cylinders	Cylinders	
3 and 4	4	6
■		
■	■	■
	■	■
■	■	
■	■	■
		■
■	■	■
		■
		■
		■
	■	■
■		
	■	■
■	■	
■		
■	■	■
■		■
		■
■	■	■

Back Hoe Loaders

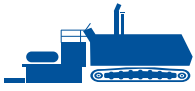
Combine Harvesters

Crushers

Excavators

Motor Graders

Mowers



Pavers

Tractors

Trenchers

Wheeled Loaders

Diesel Engine Rating Definitions

IND-B

For service where power and/or speed are cyclic (time at full load not to exceed 80%).

IND-C (Intermittent)

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%).

IND-D

For service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

IND-E

For service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

Additional ratings are available for specific customer requirements. Consult your Perkins distributor. Engine rating obtained and presented in accordance with ISO3046/1.

Rating Conditions

Diesel Engines - up to 7.1 litre

All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in. Hg), with a vapour pressure of 1 kPa (0.295 in. Hg) and 25°C (77°F). Performance is measured using fuel to specification EPA 40 CFR Part 1065 and EU Directive 97/68/EC with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Diesel Engines - greater than 7.1 litre

All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in. Hg), dry barometer and 25°C (77°F) temperature. Performance is measured using a standard fuel with a gravity of 35° API, having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) and a density of 838.9 g/L when used at 29°C (84.2°F).

Sulphur Diesel Definition

Industrial technology requires Ultra Low Sulphur Diesel Fuel (ULSD, 15 ppm sulphur), in addition to ultra low sulphur diesel oils, for use In Tier 4 Interim/Stage IIIB engines. These cleaner fuels and oils will help reduce ash and maintain service intervals. In addition, B20 biodiesel capability adds even greater sustainability where desired or required.

Emissions Statement

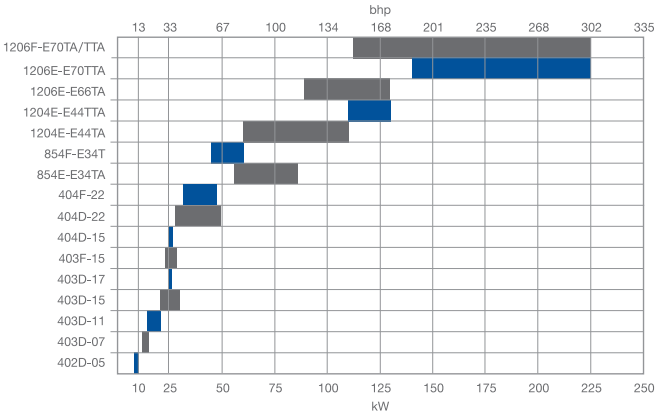
Variable Speed

Industrial and IOPU Engines: Certified against the requirements of EU Stage IIIB (Directives 97/68/EC as last amended, and 2004/26/EC, as last amended); and US EPA Tier 4 Final (40 CFR Part 1039).

Constant Speed Engines

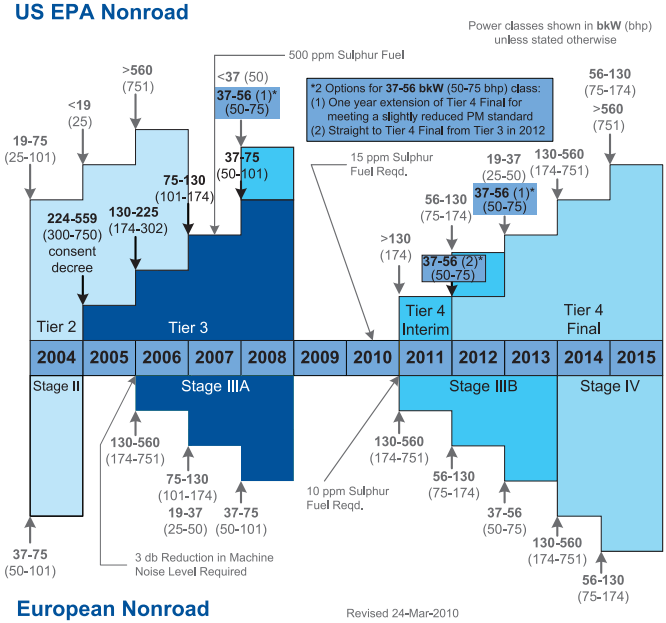
Constant Speed engines for use in Industrial, IOPU and ElectropaK applications: Certified against the requirements of EU Stage IIIA (Directive 97/68/EC, as last amended for mobile applications; and US EPA Tier 4 Final (40 CFR Part 60 for stationary applications and 40 CFR Part 1039 for mobile applications).

Tier 4 Product Offering



Emissions Table

US EPA Nonroad



European Nonroad

Revised 24-Mar-2010

Industrial Diesel Engines

Industry Leading Flexibility

We are the industry leaders in meeting the diverse power needs of the off-highway marketplace. Our power solutions will optimise your installations, whilst minimising your R&D investment for EPA Tier 4 Interim / EU Stage IIIB and beyond.

World-class Integration

We develop optimal solutions for our customers, integrating engine and machine through to Tier 4 Final based upon our 'design once' philosophy. Our integration success is testimony to our Tier 4 design.

Dependable Power

We produce dependable products. Our Tier 4 range delivers exceptional quality, reliability and durability.

A Lifetime of Low Cost

We design for low cost of Tier 4 implementation. We engineer for low cost to the end user.

Designed to be Productive

Get the best financial return from your machine by employing a high performance engine solution, offering uninterrupted machine operation with a superior driving experience.

Global Coverage. Local Support

Our products are supported by an extensive global network, offering local support around the world with access to over 40,000 genuine parts, available within 24 hours of ordering.
Our network is ready for Tier 4, trained to a consistent standard from our regional centres.
Our manufacturing presence is truly global, allowing us to be close to our Customer locations.

402D-05

Industrial Engine

Specifications

Number of cylinders ..... 2 in-line
Bore and stroke.....67 x 72 mm (2.64 x 2.83 in)
Displacement .....0.51 litres (31 in^3)
Aspiration .....Naturally aspirated
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....2.01 litres (0.5 US gals)
Total coolant capacity.....1.1 litres (0.3 US gals)
Dimensions
- Length.....407 mm (16 in)
- Width .....371 mm (14.6 in)
- Height .....523 mm (20.6 in)

Dry weight .....57 kg (126 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
8.2	11.0	2800	29.7 (21.9) @ 2400
8.8	11.8	3000	29.7 (21.9) @ 2400
10.2	13.7	3600	29.7 (21.9) @ 2000

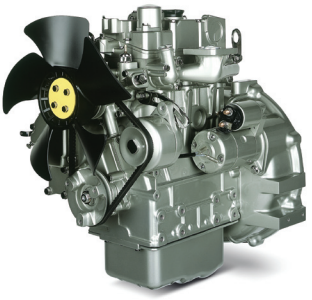
Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim emissions requirements

403D-07

Industrial Engine



Specifications

Number of cylinders ..... 3 in-line
Bore and stroke.....67 x 72 mm (2.64 x 2.83 in)
Displacement .....0.76 litres (46.4 in^3)
Aspiration .....Naturally aspirated
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....3.05 litres (0.8 US gals)
Total coolant capacity.....1.2 litres (0.3 US gals)
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)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
12.2	16.4	2800	44.5 (32.8) @ 2200
13.2	17.7	3000	44.5 (32.8) @ 2200
15.3	20.5	3600	44.5 (32.8) @ 2200

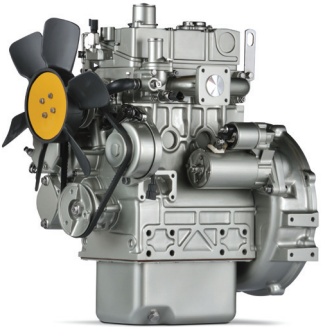
Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim emissions requirements

403D-11

Industrial Engine



Specifications

Number of cylinders ..... 3 in-line
Bore and stroke..... 77 x 81 mm (3.0 x 3.2 in)
Displacement ..... 1.13 litres (69 in^3)
Aspiration ..... Naturally aspirated
Cycle..... 4 stroke
Combustion system..... Indirect injection
Compression ratio 23:1
Rotation..... Counter-clockwise viewed on flywheel
Cooling system..... Liquid
Total lube system capacity..... 4.9 litres (1.3 US gals)
Total coolant capacity..... 1.9 litres (0.5 US gals)
Dimensions
- Length..... 491 mm (19.3 in)
- Width ..... 400 mm (15.7 in)
- Height ..... 576 mm (22.7 in)

Dry weight ..... 87 kg (191 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
14.7	19.7	2200*	66.8 (49.3) @ 1900
16.1	21.6	2400	66.9 (49.3) @ 2000
17.2	23.0	2600*	67.9 (50.0) @ 1800
18.5	24.8	2800*	67.9 (50.0) @ 1800
19.7	26.4	3000	66.8 (49.3) @ 1900
21.0	28.2	3400	70.2 (51.8) @ 2300
Derate			
13.7	18.4	2200	62.1 (45.8) @ 2000
16.8	22.5	2800	62.1 (45.8) @ 2000
17.7	23.7	3000	62.1 (45.8) @ 2100

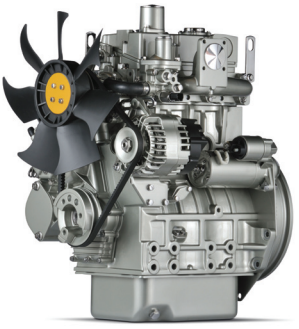
Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements
*Meets 2008 EPA (US) Tier 4 Interim emissions requirements

403D-15

Industrial Engine



Specifications

Number of cylinders ..... 3 in-line
Bore and stroke.....84 x 90 mm (3.3 x 3.5 in)
Displacement .....1.496 litres (91 in^3)
Aspiration .....Naturally aspirated
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 22.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....6 litres (1.6 US gals)
Total coolant capacity.....2.4 litres (0.6 US gals)
Dimensions
- Length.....572 mm (22.5 in)
- Width .....453 mm (17.8 in)
- Height .....643 mm (25.3 in)

Dry weight ..... 149 kg (328.5 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
20.7	27.8	2200	96.0 (70.8) @ 1800
22.3	29.9	2400	96.0 (70.8) @ 1800
23.4	31.4	2600	96.0 (70.8) @ 1800
24.4	32.7	2800	96.0 (70.8) @ 1800
25.1	33.7	3000	96.0 (70.8) @ 1800

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

403D-15T

Industrial Engine

Specifications

Number of cylinders ..... 3 in-line
Bore and stroke.....84 x 90 mm (3.3 x 3.5 in)
Displacement .....1.496 litres (91 in^3)
Aspiration .....Turbocharged
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 22.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....6 litres (1.6 US gals)
Total coolant capacity.....2.6 litres (0.7 US gals)
Dimensions
- Length.....572 mm (22.5 in)
- Width .....541 mm (21.3 in)
- Height .....643 mm (25.3 in)

Dry weight ..... 156.5 kg (345 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
23.1	31.0	2200	111.9 (82.5) @ 1800
25.2	33.8	2400	111.9 (82.5) @ 1800
27.3	36.6	2600	111.9 (82.5) @ 1800
29.4	39.4	2800	114.9 (82.1) @ 1800
30.0	40.2	3000	105.0 (77.4) @ 1800

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

403D-17

Industrial Engine

Specifications

Number of cylinders ..... 3 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....1.662 litres (101 in^3)
Aspiration .....Naturally aspirated
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....6 litres (1.6 US gals)
Total coolant capacity.....2.5 litres (0.6 US gals)
Dimensions
- Length.....564 mm (22.2 in)
- Width .....453 mm (17.8 in)
- Height .....654 mm (25.7 in)

Dry weight ..... 160 kg (352.7 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
23.6	31.6	2400	105.0 (77.4) @ 1800
26.1	35.0	2600	106.0 (78.1) @ 1800

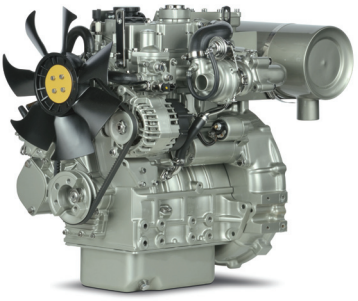
Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

403F-15T

Industrial Engine



Specifications

Number of cylinders ..... 3 vertical in-line
Bore and stroke ..... 84 mm x 90 mm (3.3 in x 3.5 in)
Displacement ..... 1.5 litres (91 in^3)
Aspiration ..... Turbocharged
Cycle ..... 4 stroke
Combustion system ..... Indirect injection
Compression ratio 22.5:1
Rotation ..... Counter-clockwise, viewed on flywheel
Cooling system ..... Liquid
Total lube system capacity ..... 6 litres (1.58 US gals)
Total coolant capacity ..... 2.6 litres (0.7 US gals)
Length including fan ..... 642 mm (25.3 in)
Width ..... 642 mm (25.3 in)
Height ..... 731 mm (28.8 in)
Dry weight* ..... 175 kg (386 lbs)

** Includes flywheel housing, flywheel, burner, DPF and air pump*

Final weight and dimensions will depend on completed specification

Ratings

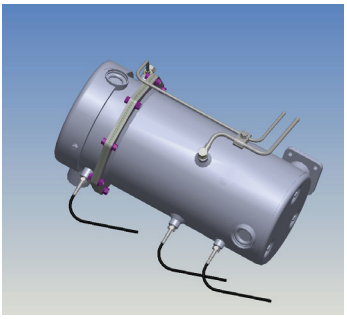
'C' Rating		Speed (rev/min)	Torque	
kW	bhp		Nm	lbf·ft
24.4	32.7	2800	96	70.8
25.2	33.8	2400	112	82.6
27.0	36.2	2800	112	82.6

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power
- 95% component commonality to reduce inventory costs
- High residual value

Designed to meet 2013 EPA (US) Tier 4 Final and MLIT Step 4 (Japan) emissions requirements

400F - Aftertreatment



Aftertreatment		
Length	Diameter of Can	Weight
449 mm (17.6 in)	198 mm (7.8 in)	16 kg (35.3 lbs)

Final weight and dimensions will depend on completed specification

Aftertreatment

- DOC - Diesel Oxidation Catalyst.
- DPF - Diesel Particulate Filter and regeneration system supplied, with a range of inlet and output options.

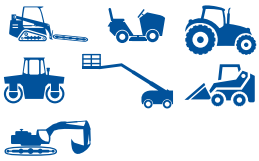
Customer Benefits

- Non intrusive regeneration strategy maintains machine productivity
- Highly effective passive regeneration under most operating environments and cycles
- Automatic, transparent active ‘back up’ system during light load or adverse operating cycles

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) and MLIT Step 4 (Japan) emissions requirements

404D-15

Industrial Engine



Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....77 x 81 mm (3.0 x 3.2 in)
Displacement .....1.5 litres (92 in^3)
Aspiration .....Naturally aspirated
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 22.9:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....5.6 litres (1.5 US gals)
Total coolant capacity.....2.4 litres (0.6 US gals)
Dimensions
- Length.....591 mm (23.3 in)
- Width .....420 mm (16.5 in)
- Height .....576 mm (22.7 in)

Dry weight .....106.8 kg (235.4 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
24.6	33.0	2800	94.4 (69.6) @ 1800
26.5	35.5	3000	94.4 (69.6) @ 1800

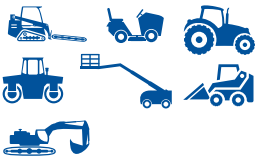
Customer Benefits

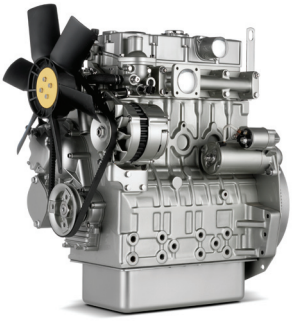
- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

404D-22

Industrial Engine





Specifications

Number of cylinders ..... 4 in-line
Bore and stroke..... 84 x 100 mm (3.3 x 3.9 in)
Displacement ..... 2.2 litres (135 in^3)
Aspiration ..... Naturally aspirated
Cycle..... 4 stroke
Combustion system..... Indirect injection
Compression ratio 24.4:1
Rotation..... Counter-clockwise viewed on flywheel
Cooling system..... Liquid
Total lube system capacity..... 10.6 litres (2.8 US gals)
Total coolant capacity..... 3.6 litres (1.0 US gals)
Dimensions
- Length..... 664 mm (26.1 in)
- Width ..... 459 mm (18.1 in)
- Height ..... 725 mm (28.5 in)

Dry weight ..... 184 kg (406 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
31.0	41.6	2200	142.7 (105.2) @ 1800
34.1	45.7	2400	142.7 (105.2) @ 1800
35.7	47.9	2600	142.7 (105.2) @ 1800
37.3	50.0	2800	142.7 (105.2) @ 1800
38.0	51.0	3000	142.7 (105.2) @ 1800
Derate			
31.4	42.1	2600	142.9 (105.3) @ 1800
32.8	43.9	2800	130.0 (95.9) @ 1800
34.0	45.6	3000	130.0 (95.9) @ 1800
Balanced			
35.4	47.5	2600	142.9 (105.3) @ 1800

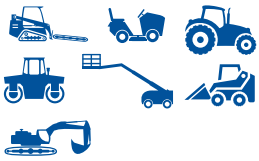
Customer Benefits

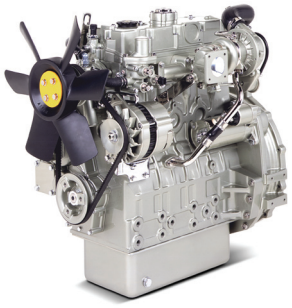
- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

404D-22T

Industrial Engine





Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....2.2 litres (135 in^3)
Aspiration .....Turbocharged
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.3:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....10.6 litres (2.8 US gals)
Total coolant capacity.....3.6 litres (1.0 US gals)
Dimensions
- Length.....660 mm (26.0 in)
- Width .....531 mm (21.0 in)
- Height .....725 mm (28.5 in)

Dry weight ..... 194 kg (427.7 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque
kW	bhp		N·m (lb·ft) @ rpm
39.8	53.3	2600	189.0 (139.4) @ 1800
43.0	57.7	2600	189.0 (139.4) @ 1800
44.7	60.0	2800	189.1 (139.5) @ 1800
45.5	61.0	3000	189.1 (139.5) @ 1800
Derate			
36.3	48.7	2800	154.0 (113.6) @ 1800
Balanced			
41.5	55.7	2600	185.0 (136.4) @ 1800

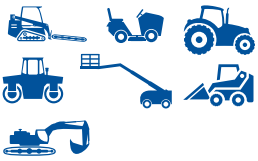
Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

404D-22TA

Industrial Engine



Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....2.2 litres (135 in^3)
Aspiration .....Turbocharged aftercooled
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.3:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....10.6 litres (2.8 US gals)
Total coolant capacity.....3.6 litres (1.0 US gals)
Dimensions
- Length.....660 mm (26.0 in)
- Width .....531 mm (21.0 in)
- Height .....725 mm (28.5 in)

Dry weight .....194 kg (427.7 lb)

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
49.2	66.0	2800	208.4 (153.7) @ 1800

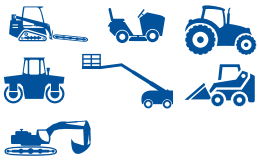
Customer Benefits

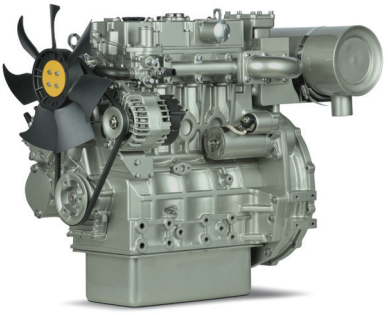
- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

404F-22

Industrial Engine





Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....2.2 litres (135 in^3)
Aspiration ..... Naturally Aspirated
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.3:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....10.6 litres (2.8 US gals)
Total coolant capacity.....3.6 litres (1.0 US gals)
Length including fan .....727 mm (28.6 in)
Width .....617 mm (24.3 in)
Height .....772 mm (30.4 in)
Dry weight*..... 218 kg (481 lbs)

** Includes flywheel housing, flywheel, burner, DPF and air pump*

Final weight and dimensions will depend on completed specification

Ratings

'C' Rating		Speed (rev/min)	Torque	
kW	bhp		Nm	lbf·ft
31.4	42.1	2600	130	95.8
34.1	45.7	2400	143	105.5
35.4	47.5	2600	143*	105.5*
35.7	47.9	2600	143	105.5
36.4	48.8	2800	143	105.5
36.4	48.8	3000	143	105.5

** Balanced*

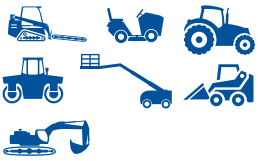
Customer Benefits

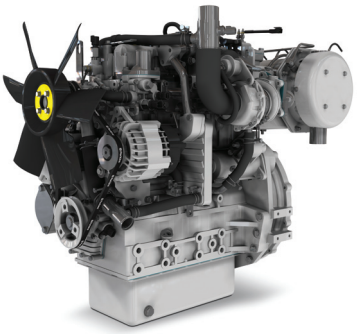
- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power
- 95% component commonality to reduce inventory costs
- High residual value

Designed to meet 2013 EPA (US) Tier 4 Final and MLIT Step 4 (Japan) emissions requirements

404F-22T

Industrial Engine





Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....2.2 litres (135 in^3)
Aspiration .....Turbocharged
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.3:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....10.6 litres (2.8 US gals)
Total coolant capacity.....3.6 litres (1.0 US gals)
Length including fan ..... 727 mm (28.6 in)
Width ..... 635 mm (25 in)
Height ..... 772 mm (30.4 in)
Dry weight*..... 228 kg (503 lbs)

** Includes flywheel housing, flywheel, burner, DPF and air pump*

Final weight and dimensions will depend on completed specification

Ratings

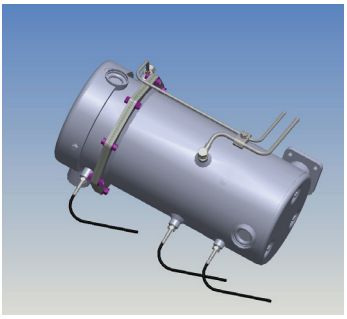
'C' Rating		Speed (rev/min)	Torque	
kW	bhp		Nm	lbf·ft
36.4	48.8	2600	185*	136.4*
36.4	48.8	2800	154	113.6
40.0	53.6	2600	192	141.6
41.5	55.7	2600	185*	136.4*
44.7	60.0	2800	192	141.6
45.5	61.0	3000	192	141.6

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power
- 95% component commonality to reduce inventory costs
- High residual value

Designed to meet 2013 EPA (US) Tier 4 Final and EU Stage IIIB (Europe) emissions requirements

400F - Aftertreatment



Aftertreatment		
Length	Diameter of Can	Weight
449 mm (17.6 in)	198 mm (7.8 in)	16 kg (35.3 lbs)

Final weight and dimensions will depend on completed specification

Aftertreatment

- DOC - Diesel Oxidation Catalyst.
- DPF - Diesel Particulate Filter and regeneration system supplied, with a range of inlet and output options.

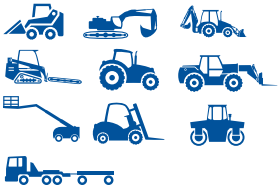
Customer Benefits

- Non intrusive regeneration strategy maintains machine productivity
- Highly effective passive regeneration under most operating environments and cycles
- Automatic, transparent active ‘back up’ system during light load or adverse operating cycles

Meets 2008 EPA (US) Tier 4 Interim and EU Stage IIIA (Europe) emissions requirements

854E-E34TA

Industrial Engine



Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....99 x 110 mm (3.9 x 4.3 in)
Displacement .....3.4 litres (207.5 in^3)
Aspiration .....Turbocharged aftercooled
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 17:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total coolant capacity..... 6 litres (6.3 US qts) engine only
Dimensions - side turbo
- Length.....747.5 mm (29.4 in)
- Width .....662 mm (26.0 in)
- Height .....822 mm (32.3 in)

Dimensions - top turbo
- Length.....747.5 mm (29.4 in)
- Width .....660.0 mm (26.0 in)
- Height .....830.0 mm (32.7 in)

Dry weight ..... 270 kg (595.2 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating Type	Engine Ratings		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
	kW	bhp		
C	63.0	84.5	2200	354 (261.1) @ 1400
C	66.0	88.5	2500	344 (254.0) @ 1400
C	66.0	88.5	2200	370 (272.9) @ 1400
C	70.0	94.0	2200	395 (291.3) @ 1400
C	75.0	100.6	2200	420 (309.7) @ 1400
C	75.0	100.6	2500	390 (287.6) @ 1500
D	83.0	111.3	2200	450 (331.9) @ 1600
D	86.0	115.3	2500	420 (309.8) @ 1600

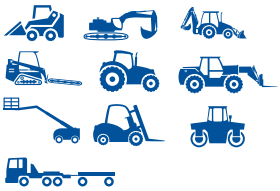
Customer Benefits

- Class-leading package size
- Extensive choice of options
- Installation flexibility
- Engine mounted aftertreatment available
- Service-free top end for reduced maintenance
- Poly-vee belts for 3,000 hour service intervals

Designed to meet 2012 EPA (US) Tier 4 Interim, EU Stage IIIB (Europe) emissions requirements

854F-E34T

Industrial Engine



Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....99 x 110 mm (3.9 x 4.3 in)
Displacement .....3.4 litres (207.5 in^3)
Aspiration .....Turbocharged
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 17:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total coolant capacity..... 6 litres (6.3 US qts) engine only
Dimensions - side turbo
- Length.....747.5 mm (29.4 in)
- Width .....662 mm (26.0 in)
- Height .....822 mm (32.3 in)

Dimensions - top turbo
- Length.....747.5 mm (29.4 in)
- Width .....660 mm (26.0 in)
- Height .....830 mm (32.7 in)

Dry weight .....275 kg (606.3 lb)

Final weight and dimensions will depend on completed specification

Ratings

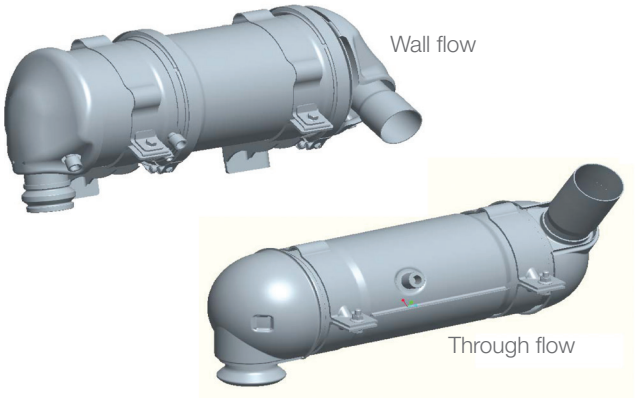
'C' Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
45.0	60.3	2200	243 (179.2) @ 1400
47.0	63.0	2500	245 (180.7) @ 1400
50.0	67.0	2200	272 (200.6) @ 1400
55.4	74.3	2200	318 (234.5) @ 1400
55.4	74.3	2500	291 (214.6) @ 1600

Customer Benefits

- Class-leading package size
- Extensive choice of options
- Installation flexibility
- Engine mounted aftertreatment available
- Service-free top end for reduced maintenance
- Poly-vee belts for 3,000 hour service intervals

Designed to meet 2013 EPA (US) Tier 4 Final, EU Stage IIIB (Europe) emissions requirements

854 - Aftertreatment



Weight and Dimensions	Length	Diameter of Can	Weight
Wall flow	541 mm (21.3 in)	180 mm (7.1 in)	20 kg (44 lbs)
Through flow	509 mm (20 in)	149 mm (5.8 in)	14 kg (30.8 lbs)

Final weight and dimensions will depend on completed specification

Aftertreatment

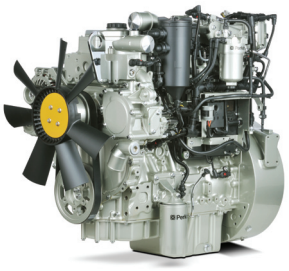
- DOC - Diesel Oxidation Catalyst - silicon carbide material and uses a through flow principle; the gases pass straight through the device rather than through the walls.
- DPF - Diesel Particulate Filter - for particulate reduction Perkins is offering customer flexibility by having two options for our customers:
  - A silicon carbide wall flow DPF. This porous ceramic material is highly efficient at removing particulate matter - 90% as a minimum - and often much higher.
  - A service-free, through flow diesel particulate filter (not suitable for Switzerland)
  - Incorporating low temperature regeneration with oxy-exotherm back-up

Customer Benefits

- The Diesel Particulate Filter (DPF) technology chosen performs through the whole work cycle of the engine thus allowing it to work efficiently.
- Using our advanced research and development techniques, we have perfectly matched the aftertreatment to the engine. The engine performance has then been optimised to give the maximum power and the emissions module is invisible to the operator in most duty cycles.
- Multiple off and on engine installation options provide OEM with simple and flexible solutions for many applications.
- Minimum 3,000 hour DPF ash service intervals.

1204E-E44TA

Industrial Engines



Specifications

Number of cylinders .....4 in-line
Displacement ..... 4.4 litres (268.5 in^3)
Bore and stroke..... 105 x 127 mm (4.13 x 5.0 in)
Aspiration 1204E-E44TA.....Turbocharged aftercooled
Cycle ..... 4 stroke
Combustion system..... Direct injection
Compression ratio 16.5:1
Rotation..... Counter-clockwise viewed on flywheel
Cooling system..... Liquid
Total lube system capacity ..... 5.2-13.5 litres (1.37-3.57 US gals)
Total coolant capacity ..... 10.8 litres (2.85 US gals)
Dimensions
- Length ..... 845.1 mm (33.3 in)
- Width..... 772.4 mm (30.4 in)
- Height..... 848.2 mm (33.4 in)

Dry weight ..... 400 kg (881.8 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating Type	kW	bhp	Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
C	61.5	82.5	2200	347 (256.0) @ 1400
B	65.9	88.4	2200	370 (273.0) @ 1400
B	70.0	93.9	2200	400 (295.0) @ 1400
C	74.5	100.0	2200	450 (332.0) @ 1400
C	82.0	110.0	2200	450 (332.0) @ 1400
B	85.9	115.2	2200	480 (354.0) @ 1400
B	91.0	122.0	2200	500 (368.8) @ 1400
B	92.5	124.0	2200	530 (391.0) @ 1400
C	98.0	131.4	2200	500 (368.8) @ 1400
C	102.1	137.0	2200	560 (413.0) @ 1400
C	106.0	142.1	2200	560 (413.0) @ 1400
C	110.1	147.6	2200	560 (413.0) @ 1400

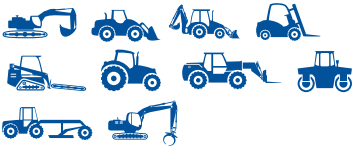
Customer Benefits

- Increased power and torque over Tier 3/Stage IIIA engine
- Compact package
- Extensive choice of options
- Installation flexibility
- Non-modular aftertreatment
- Maintenance-free valve adjustment
- Poly-vee belts for longer service intervals

Designed to meet 2012 EPA (US) Tier 4 Interim, EU Stage IIIB (Europe) and MLIT Step 4 emissions requirements

1204E-E44TTA

Industrial Engines



Specifications

Number of cylinders .....4 in-line
Displacement .....4.4 litres (268.5 in^3)
Bore and stroke..... 105 x 127 mm (4.13 x 5.0 in)
Aspiration 1204E-E44TTA ..... Series turbocharged aftercooled
Cycle ..... 4 stroke
Combustion system..... Direct injection
Compression ratio 16.5:1
Rotation..... Counter-clockwise viewed on flywheel
Cooling system..... Liquid
Total lube system capacity ..... 5.2-13.5 litres (1.37-3.57 US gals)
Total coolant capacity ..... 10.8 litres (2.85 US gals)
Dimensions
- Length ..... 845.1 mm (33.3 in)
- Width..... 741.6 mm (29.1 in)
- Height..... 867.6 mm (34.1 in)

Dry weight ..... 420 kg (926 lb)

Final weight and dimensions will depend on completed specification

Ratings

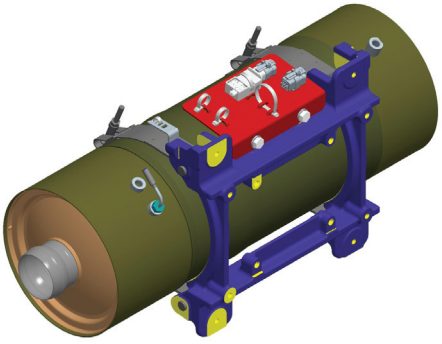
Rating Type	kW	bhp	Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
B	105.1	141.0	2200	650 (479.4) @ 1400
B	112.0	150.0	2200	650 (479.4) @ 1400
C	117.0	157.0	2200	683 (503.8) @ 1400
C	129.4	173.5	2200	750 (553.2) @ 1400

Customer Benefits

- Increased power and torque over Tier 3/Stage IIIA engine
- Compact package
- Extensive choice of options
- Installation flexibility
- Non-modular aftertreatment
- Maintenance-free valve adjustment
- Poly-vee belts for longer service intervals
- Series turbochargers with smart wastegate for increased performance

Designed to meet 2012 EPA (US) Tier 4 Interim, EU Stage IIIB (Europe) and MLIT Step 4 (Japan) emissions requirements

1204 - Aftertreatment



	≤ 82 kW (110 hp)		> 82 kW (110 hp)	
Length	802.5 mm	(31.6 in)	828 mm	(32.6 in)
Width	365 mm	(14.3 in)	365 mm	(14.3 in)
Height	279 mm	(11 in)	300.5 mm	(11.8 in)
Diameter	244.9 mm	(9.6 in)	270.3 mm	(10.6 in)
Weight	34 kg	(75 lbs)	37 kg	(81.6 lbs)

Excludes inlet and outlet connections. Final weight and dimensions will depend on completed specification

Aftertreatment Module

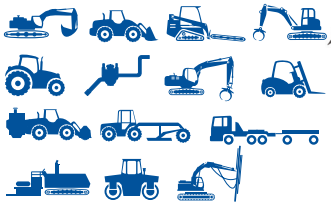
- DOC - Diesel Oxidation Catalyst
- DPF - Diesel Particulate Filter supplied, with a range of inlet and outlet options
- No ash service requirement, low temperature regeneration
- 3" flex pipe kits available with a variety of elbow options for turbocharger connection

Customer Benefits

- The DPF technology chosen is a wall flow filter configuration. This enables the engine to be optimised for superior performance and low fuel consumption.
- Using our advanced research and development techniques, we have perfectly matched the aftertreatment to the engine. The engine performance has then been optimised to give the maximum power and the regeneration is invisible to the operator.
- Remote and engine-mounted installation options provide OEM flexibility for many applications.
- Aftertreatment designed to be service-free (minimum 8,000 hours).

1206E-E66TA

Industrial Engine



Specifications

Number of cylinders ..... 6 in-line
Bore and stroke ..... 105 x 127 mm (4.13 x 5.0 in)
Displacement ..... 6.6 litres (402.8 in^3)
Aspiration ..... Turbocharged aftercooled
Cycle ..... 4 stroke
Combustion system ..... Direct injection
Compression ratio 16.5:1
Rotation ..... Counter-clockwise viewed on flywheel
Cooling system ..... Liquid
Total lube system capacity ..... 13-16 litres (3.4-4.2 US gals)
Total coolant capacity ..... 13.7 litres (3.6 US gals)
Dimensions
- Length ..... 1063.7 mm (41.9 in)
- Width ..... 753 mm (29.6 in)
- Height ..... 907 mm (35.7 in)

Dry weight ..... 695 kg (1532 lb)

(bare engine + coolant and lub oil)

Final weight and dimensions will depend on completed specification

Ratings

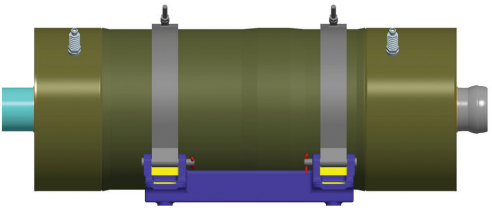
Rating Type	kW	bhp	Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
C	89.0	119.3	2200	545 (402.0) @ 1400
C	116.5	156.2	2200	683 (503.8) @ 1400
C	129.4	173.5	2200	825 (608.5) @ 1400

Customer Benefits

- Increased torque over Tier 3/Stage IIIA engine
- Compact package
- Extensive choice of options
- Installation flexibility
- Non-modular aftertreatment
- Maintenance-free valve adjustment
- Poly-vee belts for longer service intervals
- Series turbochargers with smart wastegate available on some ratings for increased performance

Designed to meet 2012 EPA (US) Tier 4 Interim, EU Stage IIIB (Europe) and MLIT Step 4 (Japan) emissions requirements

1206E-E66TA - Aftertreatment



Length	852.7 mm	(33.6 in)
Width	364.6 mm	(14.35 in)
Height	352 mm	(13.9 in)
Diameter	283 mm	(11.1 in)
Weight	40 kg	(88.1 lbs)

Final weight and dimensions will depend on completed specification

Aftertreatment module shipped as separate part to be assembled by customer.

Aftertreatment Module

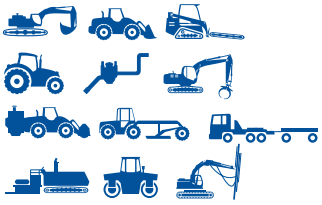
- DOC - Diesel Oxidation Catalyst
- DPF - Diesel Particulate Filter supplied, with a range of inlet and outlet options
- No ash service requirement, low temperature regeneration
- 3" flex pipe kits available with a variety of elbow options for turbocharger connection

Customer Benefits

- The DPF technology chosen is a wall flow filter configuration. This enables the engine to be optimised for superior performance and low fuel consumption.
- Using our advanced research and development techniques, we have perfectly matched the aftertreatment to the engine. The engine performance has then been optimised to give the maximum power and the regeneration is invisible to the operator.
- Remote and engine-mounted installation options provide OEM Flexibility for many applications.
- Aftertreatment designed to be service-free (minimum 8,000 hours).

1206E-E70TTA

Industrial Engine



Specifications

Number of cylinders ..... 6 in-line
Bore and stroke..... 105 x 135 mm (4.13 x 5.3 in)
Displacement .....7.01 litres (427.7 in^3)
Aspiration .....Series turbocharged aftercooled
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 16.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....13-16 litres (3.4-4.2 US gals)
Total coolant capacity.....15.2 litres (4.0 US gals)
Dimensions
- Length.....1063.7 mm (41.9 in)
- Width .....820.2 mm (32.3 in)
- Height .....907 mm (35.7 in)

Dry weight ..... 715 kg (1576 lb)
(includes electrics and backend)

Final weight and dimensions will depend on completed specification

Ratings

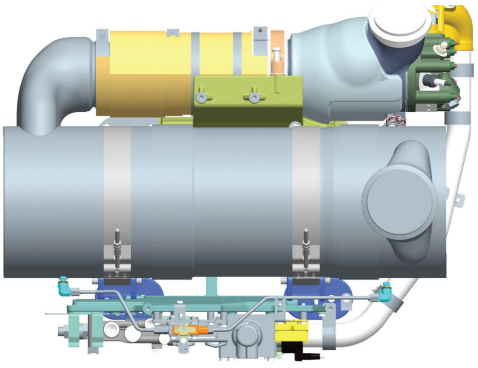
Rating Type	kW	bhp	Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
B	140.0	187.7	2200	890 (656.4) @ 1400
B	151.0	202.5	2200	922 (680.0) @ 1400
B	158.5	212.5	2200	973 (717.6) @ 1400
B	168.0	225.3	2200	1028 (758.2) @ 1400
B	176.5	236.7	2200	1086 (801.0) @ 1400
C	186.5	250.1	2200	1142 (842.2) @ 1400
C	205.0	274.9	2200	1257 (927.1) @ 1400
C	225.0	301.8	2200	1257 (927.1) @ 1400

Customer Benefits

- Increased power and torque over Tier 3/Stage IIIA engine
- Compact package
- Extensive choice of options
- Installation flexibility
- Non-modular aftertreatment
- Maintenance-free valve adjustment
- Poly-vee belts for longer service intervals
- Series turbochargers with smart wastegate for increased performance

Designed to meet 2011 EPA (US) Tier 4 Interim, EU Stage IIIB (Europe) and MLIT Step 4 (Japan) emissions requirements

1206E-E70TTA - Aftertreatment



	≤172 kW		≥172 kW	
Length	918.7 mm	(36.2 in)	918.7 mm	(36.2 in)
Width	714.4 mm	(28.1 in)	714.4 mm	(28.1 in)
Height	618.5 mm	(24.3 in)	643.9 mm	(25.3 in)
Diameter	287 mm	(11.3 in)	337.8 mm	(13.3 in)
Weight	124 kg	(273.4 lbs)	134 kg	(295.4 lbs)

Final weight and dimensions will depend on completed specification

Aftertreatment module shipped as separate part to be assembled by customer.

Aftertreatment Module

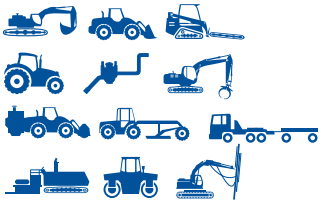
- High Temperature Regeneration System
- DOC - Diesel Oxidation Catalyst
- DPF - Diesel Particulate Filter and regeneration system supplied, with a range of inlet and outlet options
- 3” flex pipe connection kit with rotatable elbow for 60° and 90° RS inlet flexibility

Customer Benefits

- The DPF technology chosen is a wall flow filter configuration. This enables the engine to be optimised for superior performance and low fuel consumption.
- Using our advanced research and development techniques, we have perfectly matched the aftertreatment to the engine. The engine performance has then been optimised to give the maximum power and in normal operation, the regeneration is invisible to the operator.
- Flexible regeneration options maximise uptime.
- Remote installation options provide OEM flexibility for many applications.
- 5,000 hour DPF ash service interval.
- Available in 12 or 24 volt systems.

1206F-E70TA

Industrial Engine



Specifications

Number of cylinders ..... 6 in-line
Bore and stroke..... 105 x 135 mm (4.13 x 5.3 in)
Displacement .....7.01 litres (427.7 in^3)
Aspiration .....Turbocharged aftercooled
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 16.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....13-16 litres (3.4-4.2 US gals)
Total coolant capacity.....15.2 litres (4.0 US gals)
Dimensions
- Length.....1063.7 mm (41.9 in)
- Width .....753 mm (29.6 in)
- Height .....907 mm (35.7 in)

Dry weight .....715 kg (1576 lb)
(includes electrics and backend)

Final weight and dimensions will depend on completed specification

Ratings

Rating Type	kW	bhp	Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
B	116.0	156.0	2200	755 (557.0) @ 1400
B	129.0	173.0	2200	842 (621.0) @ 1400
C	151.0	202.0	2200	870 (642.0) @ 1400

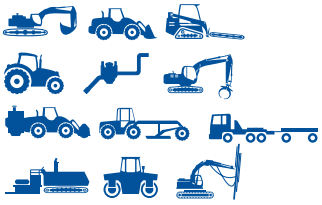
Customer Benefits

- Increased power and torque over Tier 3/Stage IIIA engine
- Compact package
- Extensive choice of options
- Installation flexibility
- Non-modular aftertreatment
- Maintenance-free valve adjustment
- Poly-vee belts for longer service intervals

Designed to meet 2014 EPA (US) Tier 4 Final, EU Stage IV (Europe) emissions requirements

1206F-E70TTA

Industrial Engine



Specifications

Number of cylinders ..... 6 in-line
Bore and stroke..... 105 x 135 mm (4.13 x 5.3 in)
Displacement .....7.01 litres (427.7 in^3)
Aspiration .....Series turbocharged aftercooled
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 16.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....13-16 litres (3.4-4.2 US gals)
Total coolant capacity.....15.2 litres (4.0 US gals)
Dimensions
- Length.....1063.7 mm (41.9 in)
- Width .....820.2 mm (32.3 in)
- Height .....907 mm (35.7 in)

Dry weight .....715 kg (1576 lb)
(includes electrics and backend)

Final weight and dimensions will depend on completed specification

Ratings

Rating Type	kW	bhp	Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
B	151.0	202.0	2200	983 (725.0) @ 1400
B	168.0	225.0	2200	1092 (805.0) @ 1400
C	186.0	249.0	2200	1214 (895.0) @ 1400
C	205.0	275.0	2200	1257 (927.0) @ 1400
D	225.0	302.0	2200	1274 (940.0) @ 1400

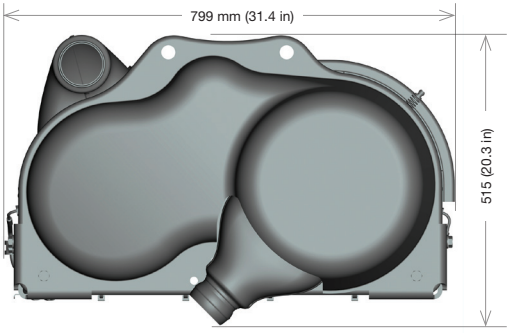
Customer Benefits

- Increased power and torque over Tier 3/Stage IIIA engine
- Compact package
- Extensive choice of options
- Installation flexibility
- Non-modular aftertreatment
- Maintenance-free valve adjustment
- Poly-vee belts for longer service intervals
- Series turbochargers with smart wastegate available for increased performance

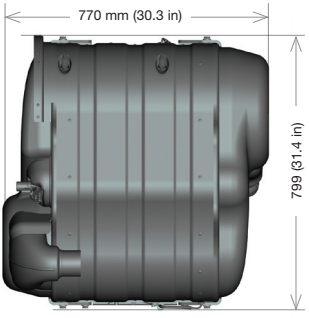
Designed to meet 2014 EPA (US) Tier 4 Final, EU Stage IV (Europe) emissions requirements

1206F-E70TA/TTA - Aftertreatment

Front view



Top view



Final weight and dimensions will depend on completed specification

Aftertreatment Module

- Passive Regeneration System
- DOC - Diesel Oxidation Catalyst
- DPF - Diesel Particulate Filter and regeneration system supplied, with a range of inlet and outlet options
- 3” flex pipe connection kit with rotatable elbow for 60° and 90° RS inlet flexibility

Customer Benefits

- The DPF technology chosen is a wall flow filter configuration. This enables the engine to be optimised for superior performance and low fuel consumption.
- Using our advanced research and development techniques, we have perfectly matched the aftertreatment to the engine. The engine performance has then been optimised to give the maximum power and in normal operation, the regeneration is invisible to the operator.
- Remote and engine-mounted installation options provide OEM flexibility for many applications.
- Aftertreatment designed to be service-free (minimum 8,000 hours).
- Available in 12 or 24 volt systems.

Industrial Power Units

Perkins power units offer the advantages of an industrial engine, with the convenience of a cost effective cooling and filtration solution. This minimises machine development time and costs, and enables applications to be powered with ease.

These units deliver impressive performance with low operating costs in a small, efficient package ideal for a range of industrial applications.

403D-11

Power unit

Specifications

Number of cylinders ..... 3 in-line
Bore and stroke.....77 x 81 mm (3.0 x 3.2 in)
Displacement .....1.13 litres (69 in^3)
Aspiration .....Naturally aspirated
Cycle .....4 stroke
Combustion system..... Indirect injection
Compression ratio 23:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....4.9 litres (1.3 US gals)
Total coolant capacity.....5.2 litres (1.4 US gals)
Dimensions
- Length.....778 mm (30.6 in)
- Width .....438 mm (17.2 in)
- Height .....730 mm (28.7 in)

Dry weight .....129 kg (284.4 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
Intermittent 'C' ratings			
17.3	23.2	2800	64.6 (47.6) @ 2100
18.1	24.3	3000	64.6 (47.6) @ 2100
Continuous			
15.1	20.2	2800	56.2 (41.5) @ 2100
15.8	21.2	3000	56.2 (41.5) @ 2100

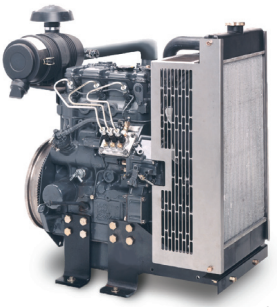
Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

403D-15

Power unit



Specifications

Number of cylinders ..... 3 in-line
Bore and stroke ..... 84 x 90 mm (3.3 x 3.5 in)
Displacement ..... 1.496 litres (91 in^3)
Aspiration ..... Naturally aspirated
Cycle ..... 4 stroke
Combustion system ..... Indirect injection
Compression ratio 22.5:1
Rotation ..... Counter-clockwise viewed on flywheel
Cooling system ..... Liquid
Total lube system capacity ..... 6 litres (1.6 US gals)
Total coolant capacity ..... 6 litres (1.6 US gals)
Dimensions
- Length ..... 820 mm (32.3 in)
- Width ..... 497 mm (19.6 in)
- Height ..... 793 mm (31.2 in)

Dry weight ..... 175 kg (385.8 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
Intermittent 'C' Ratings			
23.9	32.1	2800	94.4 (69.6) @ 1800
24.2	32.5	3000	94.4 (69.6) @ 1800
Continuous			
20.8	27.9	2800	82.1 (60.6) @ 1800
21.1	28.3	3000	82.1 (60.6) @ 1800

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

404D-22

Power unit

Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....2.2 litres (135 in^3)
Aspiration .....Naturally aspirated
Cycle .....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.3:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....10.6 litres (2.8 US gals)
Total coolant capacity.....6.98 litres (1.8 US gals)
Dimensions
- Length.....946 mm (37.2 in)
- Width .....513 mm (20.2 in)
- Height .....854 mm (33.6 in)

Dry weight .....218 kg (480.6 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
Intermittent 'C' Ratings			
36.3	48.7	2800	140.6 (103.7) @ 1800
37.0	49.6	3000	140.6 (103.7) @ 1800
Continuous			
31.6	42.4	2800	122.3 (90.2) @ 1800
32.2	43.2	3000	122.3 (90.2) @ 1800

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

404D-22T

Power unit

Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....2.2 litres (135 in^3)
Aspiration .....Turbocharged
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.3:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....10.6 litres (2.8 US gals)
Total coolant capacity.....6.98 litres (1.8 US gals)
Dimensions
- Length.....973 mm (38.3 in)
- Width .....590 mm (23.2 in)
- Height .....973 mm (38.3 in)

Dry weight .....228 kg (502.6 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
Intermittent 'C' Ratings			
44.7	59.9	2800	189.1 (139.4) @ 1800
Continuous			
31.6	42.4	2800	162.7 (120.0) @ 1800

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

404D-22TA

Power unit

Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....84 x 100 mm (3.3 x 3.9 in)
Displacement .....2.2 litres (135 in^3)
Aspiration .....Turbocharged and aftercooled
Cycle.....4 stroke
Combustion system..... Indirect injection
Compression ratio 23.3:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system..... Liquid
Total lube system capacity.....10.6 litres (2.8 US gals)
Total coolant capacity .....11.7 litres (3.1 US gals)
Dimensions
Length..... 1050 mm (41.3 in)
Width ..... 711 mm (28.0 in)
Height ..... 997.5 mm (39.2 in)
Dry weight ..... 302 kg (665.8 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
Intermittent 'C' Ratings			
46.2	62	2800	195 (143.8) @ 1800
Continuous			
40.2	53.9	2800	169.7 (125.1) @ 1800

Customer Benefits

- Class-leading package size
- Extensive range of options
- Ultra compact size
- Easy routine servicing
- High power density
- Low installed costs
- 500 hour service interval
- Low fuel consumption
- Quiet and refined power

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

854E-E34TA

Power unit

Specifications

Number of cylinders ..... 4 in-line
Bore and stroke.....99 x 110 mm (3.9 x 4.3 in)
Displacement .....3.4 litres (207.5 in^3)
Aspiration .....Turbocharged aftercooled
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 17:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total coolant capacity.....16 litres (4.2 US gals)
Dimensions - engine mounted aftertreatment, axially along head
Length.....1252 mm (49.3 in)
Width .....705 mm (27.7 in)
Height .....1033 mm (40.7 in)
Dimensions - engine mounted aftertreatment, transverse across flywheel housing
Length.....1252 mm (49.3 in)
Width .....705 mm (27.7 in)
Height .....957 mm (37.6 in)
Dry weight .....407 kg (897 lb)

Final weight and dimensions will depend on completed specification

Ratings

Rating		Speed rpm	Maximum Torque N·m (lb·ft) @ rpm
kW	bhp		
Intermittent 'C' Ratings			
66	88.5	2200	370 (272.9) @ 1400
Continuous			
75	100.6	2200	420 (310.0) @ 1400

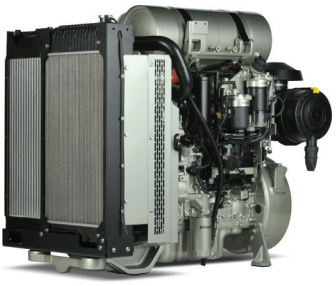
Customer Benefits

- Engine-mounted DPF
- Can be factory installed without DPF
- Sound improvement over Tier 3/Stage IIIA engine
- Increased power
- Compact package
- Extensive choice of options
- Installation flexibility
- Maintenance-free valve adjustment
- Poly-vee belts for 3,000 service intervals

Meets 2008 EPA (US) Tier 4 Interim, EU Stage IIIA (Europe) emissions requirements

1204E-E44TA
1204E-E44TTA

Power units



Specifications

Number of cylinders .....4 vertical in-line
Bore and stroke .....105 x 127 mm (4.13 x 5 in)
Displacement .....4.4 litres (268.5 in^3)
Aspiration 1204E-E44TA.....Turbocharged aftercooled
Aspiration 1204E-E44TTA.....Series turbocharged aftercooled
Cycle .....4 stroke
Combustion system .....Direct injection
Compression ratio 16.5:1
Rotation.....Counter-clockwise, viewed on flywheel
Total lubricating capacity.....5.2-13.5 litres (1.37-3.57 US gals)
Cooling system .....Liquid
Total coolant capacity.....10.8 litres (2.85 US gals)
Dimensions (including radiator and aftertreatment)

	TA	TTA
Length	1433 mm (56.4 in)	1433 mm (56.4 in)
Width	820 mm (32.3 in)	795 mm (31.3 in)
Height	1126 mm (44.3 in) <82 kW	1150 mm (45.3)
	1150 mm (45.3 in) >82 kW	
Dry weight	650 kg (1433 lb)	700 kg (1543.2 lb)

Final weight and dimensions will depend on completed specification

Ratings

Power		Speed	Maximum Torque	Rating
kW	bhp	rpm	N·m (lb·ft) @ rpm	Type
74.5	100.0	2200	450 (332.0) @ 1400	C
82.0	110.0	2200	450 (332.0) @ 1400	C
92.5	124.0	2200	530 (391.0) @ 1400	B
102.1	137.0	2200	560 (413.0) @ 1400	C
110.1	147.6	2200	560 (413.0) @ 1400	C
117.0	157.0	2200	683 (503.8) @ 1400	C
129.4	173.5	2200	750 (553.2) @ 1400	C

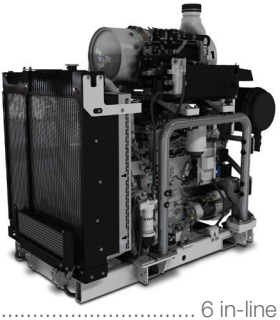
Customer Benefits

- Engine-mounted DPF
- Can be factory installed without DPF
- Sound improvement over Tier 3/Stage IIIA engine
- Increased power
- Compact package
- Extensive choice of options
- Installation flexibility
- Maintenance-free valve adjustment
- Poly-vee belts for longer service intervals
- Series turbocharger options on some ratings for increased performance

Designed to meet 2012 EPA (US) Tier 4 Interim, EU Stage IIIB (Europe) and MLIT Step 4 (Japan) emissions requirements

1206E-E70TTA

Power unit



Specifications

Number of cylinders ..... 6 in-line
Bore and stroke..... 105 x 135 mm (4.13 x 5.3 in)
Displacement .....7.01 litres (427.7 in^3)
Aspiration .....Series turbocharged aftercooled
Cycle.....4 stroke
Combustion system.....Direct injection
Compression ratio 16.5:1
Rotation.....Counter-clockwise viewed on flywheel
Cooling system.....Liquid
Total lube system capacity.....13-16 litres (3.4-4.2 US gals)
Total coolant capacity.....15.2 litres (4 US gals)
Dimensions (including radiator and aftertreatment)
Length..... 1902 mm (74.9 in)
Width .....916 mm (36.0 in)
Height ..... 1617 mm (63.7 in)
Dry weight ..... 1200 kg (2645.5 lb)

Final weight and dimensions will depend on completed specification

Ratings

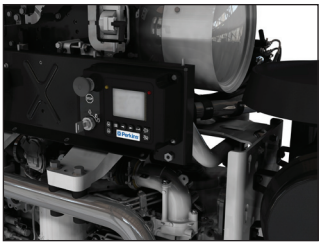
Power		Speed	Torque	Speed	Rating
kW	bhp	rpm	N·m	rpm	Type
151.0	202.5	2200	922	1400	B
*168.0	225.3	2200	1028	1400	B
186.5	250.1	2200	1142	1400	C
*205.0	274.9	2200	1257	1400	C

Customer Benefits

- Base aftertreatment module mounted above engine
- Maintenance-free valve adjustment
- Can be factory installed with or without base aftertreatment module
- Sound improvement over Tier 3 / Stage IIIA power unit
- Improved mounting points
- Series turbocharger with smart wastegate
- SAE 1, 2, 3 backends
- 500 hour service

Designed to meet 2012 EPA (US) Tier 4 Interim, EU Stage IIIB (Europe) and MLIT Step 4 (Japan) emissions requirements

Engine Control Panel



The installation of Perkins Industrial Open Power Units (IOPUs) is even easier for our customers because they no longer need to source the engine control panels separately.

This small, lightweight and easy-to-use engine control panel can be ordered at the same time as the IOPU. It is a cost-effective component that is entirely compatible with the engine models listed below and is fully covered by Perkins' warranty system.

The rugged engine control panel allows the operator to start and stop the engine, control engine speed, enable or disable regeneration, and monitor vital engine information and diagnostics by using a graphical LCD display.

Available For IOPU Models

- MK, ML 1204E-E44TTA and 1204E-E44TA
- JR 854F-E34T
- JS, JT 854E-E34TA
- BK 1206E-E66TA
- BL 1206E-E70TTA

Perkins Part Number: 380-3669

Control Panel Dimensions

Depth .....76 mm (3.0 in)
Width.....233 mm (9.2 in)
Height .....163 mm (6.4 in)
Weight.....1.7 kg (3.7 lb)

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