3512
Industrial Engine

1119 bkW/1500 bhp @ 1800 rpm

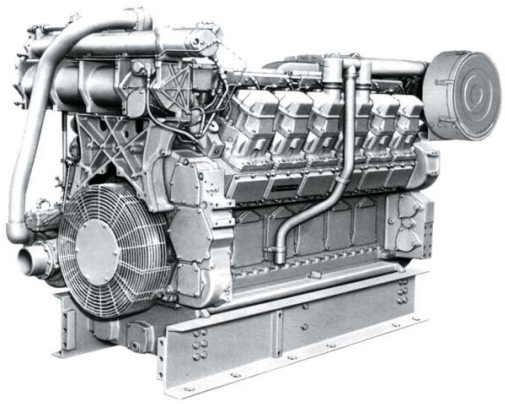

Image shown may not reflect actual engine

CAT® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle Diesel

Bore.....170.0 mm (6.69 in)
Stroke.....190.0 mm (7.48 in)
Displacement..... 51.8 L (3,161.03 in^3)
Aspiration.....Turbocharged / Aftercooled
Compression Ratio.....13.0:1
Rotation (from flywheel end)..... Counterclockwise
Capacity for Liquids
  Cooling System..... 156.8 L (41.4 gal)
  Lube Oil System (refill)..... 310.4 L (82.0 gal)
Engine Weight, Net Dry (approximate) 6,078 kg (13,400 lb)

FEATURES

EMISSIONS

Non-certified rating.

SINGLE SOURCE SUPPLIER

Caterpillar
- Casts engine blocks, heads, cylinder liners, and flywheel housings
- Machines critical components
- Assembles complete engine

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable product.

Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities

TESTING

Prototype testing on every model:
- proves computer design
- verifies system torsional stability
- functionality tests every model

Every Caterpillar engine is dynamometer tested under full load to ensure proper engine performance

FULL RANGE OF ATTACHMENTS

Wide range of bolt-on system expansion attachments, factory designed and tested

UNMATCHED PRODUCT SUPPORT OFFERED THROUGH WORLDWIDE CATERPILLAR DEALER NETWORK

More than 1,500 dealer outlets.
Caterpillar factory-trained dealer technicians service every aspect of your industrial engine.
99.7% of parts orders filled within 24 hours worldwide.
Caterpillar parts and labor warranty.
Preventive maintenance agreements. available for repair before failure options.
Scheduled Oil Sampling program matches your oil sample against Caterpillar set standards to determine:
- internal engine component condition
- presence of unwanted fluids
- presence of combustion by-products

WEB SITE

For all your industrial power requirements, visit www.cat-industrial.com.

STANDARD ENGINE EQUIPMENT

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Air Inlet System

Aftercooler core, corrosion resistant coated (air side)
Air cleaner, regular duty with service indicators, Turbocharger, rear mounted, jacket water aftercooled

Control System

Governor, RH, 3161 with self contained synthetic oil sump.
Air-fuel ratio control, mechanical speed control, without torque control, Governor control, positive locking.

Cooling System

Thermostats and housing for conventional core radiator, Jacket water pump, gear driven, centrifugal

Exhaust System

Exhaust manifold, dry

Flywheels and Flywheel Housings

Flywheel, SAE No. 00, 183 teeth, Flywheel housing, SAE No. 00

Fuel System

Fuel filter, with service indicators, cartridge type with RH service, Fuel transfer pump

Instrumentation

Instrument Panel, RH.
Engine oil pressure gauge, Fuel pressure gauge, Oil filter differential gauge, Jacket water temperature gauge. Service meter, electric, Tachometer.

Lube System

Crankcase breather, top mounted, Oil cooler, Oil filler and dipstick, RH, Oil pump, Oil filter, cartridge type with RH service, Shallow oil pan

Mounting System

Rails, mounting, engine length, 254 mm (10 in), industrial-type, C-channel.

Power Take-Offs

Accessory drive, upper RH, Front housing, single sided

Protection System

Junction box, Manual shutoff, RH, Safety shutoff protection, energized to shutdown, Low oil pressure, low idle 69 kPa (10 psi); high idle 207 kPa (30 psi), Water temperature, Overspeed, 3161 governor solenoid energized to shutdown

Starting System

Starting switch

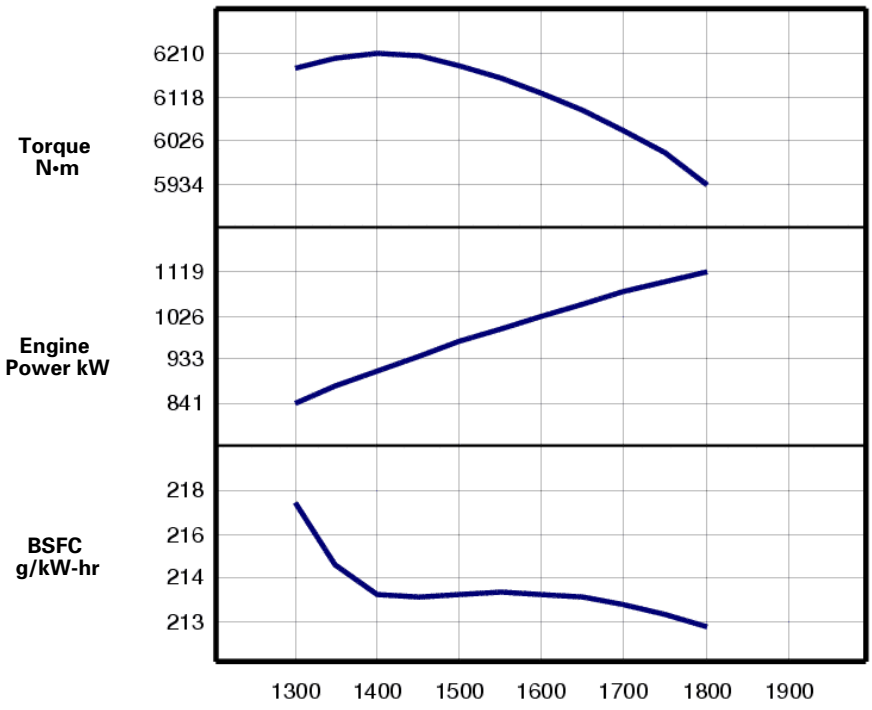
General

Paint, Caterpillar Yellow,
Vibration damper and guard,
Lifting eyes

PERFORMANCE CURVES

1119 bkW/1500 bhp @ 1800 rpm

IND - C (Intermittent) - TM3378-07



Metric

Engine Speed rpm	Engine Power kW	Torque N•m	BSFC g/kW-hr	Fuel Rate L/hr
1800	1119	5934	212.6	283.5
1750	1100	6000	213.1	279.1
1700	1077	6048	213.5	274.0
1650	1052	6088	213.8	268.1
1600	1026	6125	213.9	261.8
1550	1000	6158	214	254.9
1500	971	6182	213.9	247.5
1450	942	6202	213.8	239.8
1400	911	6210	213.9	232.0
1350	876	6199	215.1	224.7
1300	841	6177	217.7	218.2

PERFORMANCE CURVES

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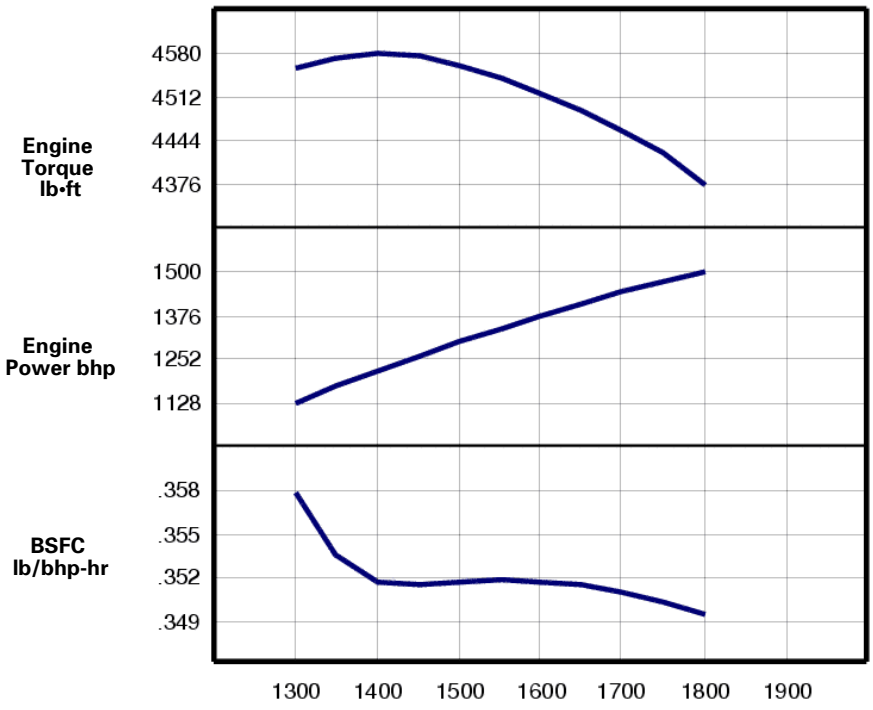

English

Engine Speed rpm	Engine Power bhp	Engine Torque lb•ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
1800	1500	4377	.350	74.9
1750	1475	4425	.350	73.7
1700	1444	4461	.351	72.4
1650	1411	4490	.351	70.8
1600	1376	4518	.352	69.2
1550	1340	4542	.352	67.3
1500	1302	4560	.352	65.4
1450	1263	4574	.351	63.3
1400	1221	4580	.352	61.3
1350	1175	4572	.354	59.4
1300	1128	4556	.358	57.6

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RATINGS AND CONDITIONS

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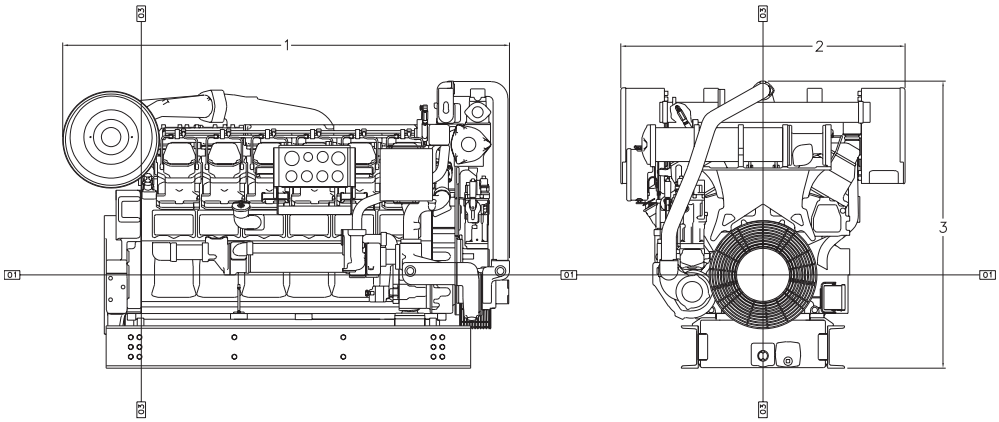
IND - C (Intermittent) Intermittent service where maximum power and/or speed are cyclic. The power and speed capability of the engine can be utilized for one uninterrupted hour followed by one hour of operation at or below IND - A. Time at full load is not to exceed 50% of the duty cycle. Typical service examples are: agricultural tractors, harvesters and combines, off highway trucks, fire pump application power, blast hole drills, rock crushers and wood chippers with high torque rise, and oil field hosting.

Engine Performance Engine performance is corrected to inlet air standard conditions of 99 KPA (29.31 IN HG) dry barometer and 25 deg C (77 deg F) temperature. These values correspond to the standard atmospheric pressure and temperature as shown in SAE J1995.

Performance measured using a standard fuel with fuel gravity of 35 degrees API having a lower heating value of 42,780 KJ/KG (18,390 BTU/LB) when used at 29 DEG (84.2 DEG F) where the density is 838.9 G/L (7.001 LB/US GAL).

The corrected performance values shown for Caterpillar engines will approximate the values obtained when the observed performance data is corrected to SAE J1995, ISO 3046-2 and 8665 and 2288 and 9249 and 1585, EEC 80/1269 and DIN 70020 standard reference conditions.



Engine Dimensions	
(1) Length	2675.8 mm (105.35 in)
(2) Width	1703.0 mm (67.05 in)
(3) Height	1719.6 mm (67.7 in)

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 7W5892).

Performance Number: TM3378-07

Feature Code: 512DI01 Arr. Number: 4W0282

Materials and specifications are subject to change without notice.

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