



3512 Industrial Engine

761 bkW/1020 bhp @ 1200 rpm

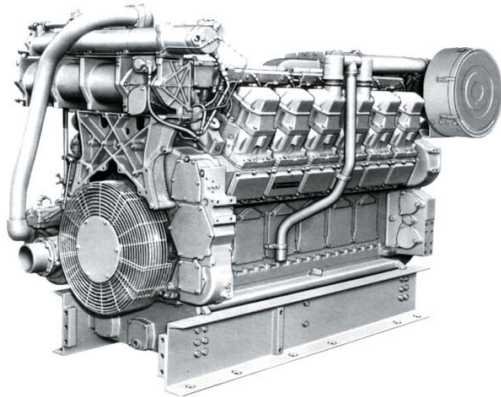


Image shown may not reflect actual engine

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)	4,906 kg (10,816 lb)

FEATURES

EMISSIONS

Non-certified rating.

SINGLE SOURCE SUPPLIER

Caterpillar

- Casts engine blocks, heads, cylinder liners, and flywheel housings
- 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

761 bkW/1020 bhp @ 1200 rpm

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

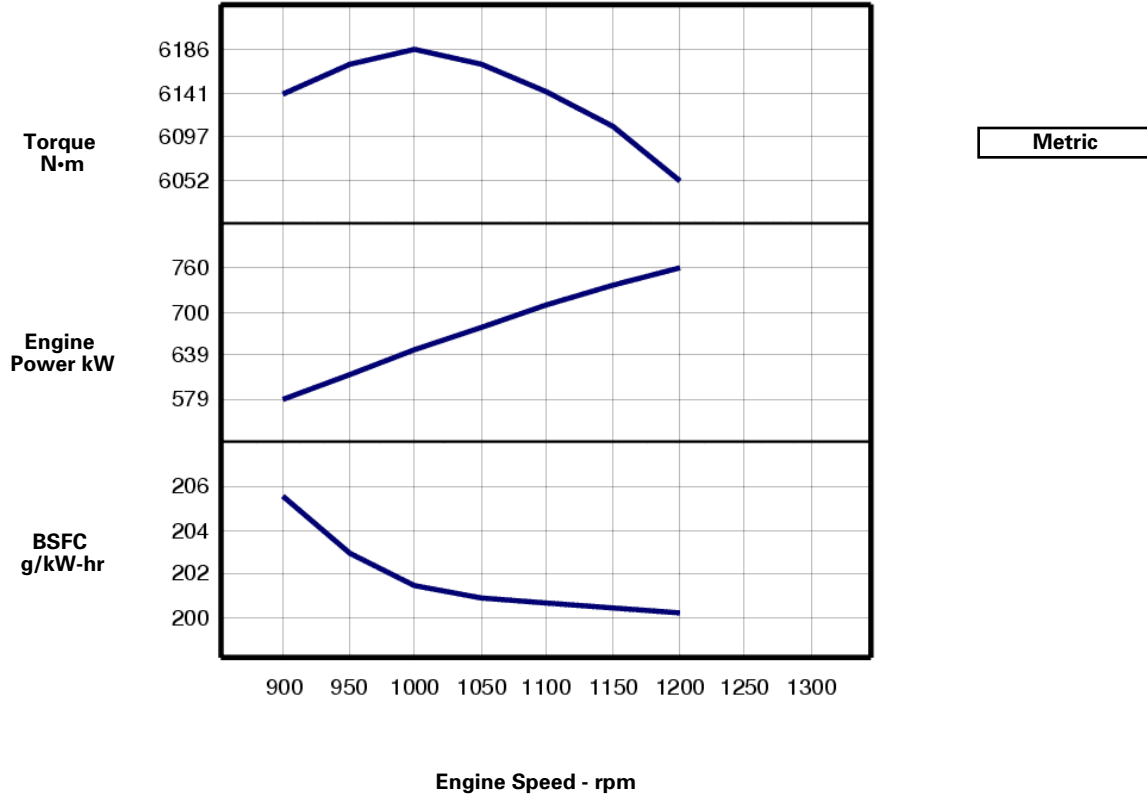
Paint, Caterpillar Yellow,
Vibration damper and guard,
Lifting eyes



PERFORMANCE CURVES

761 bkW/1020 bhp @ 1200 rpm

IND - A (Continuous) - TM4538-09



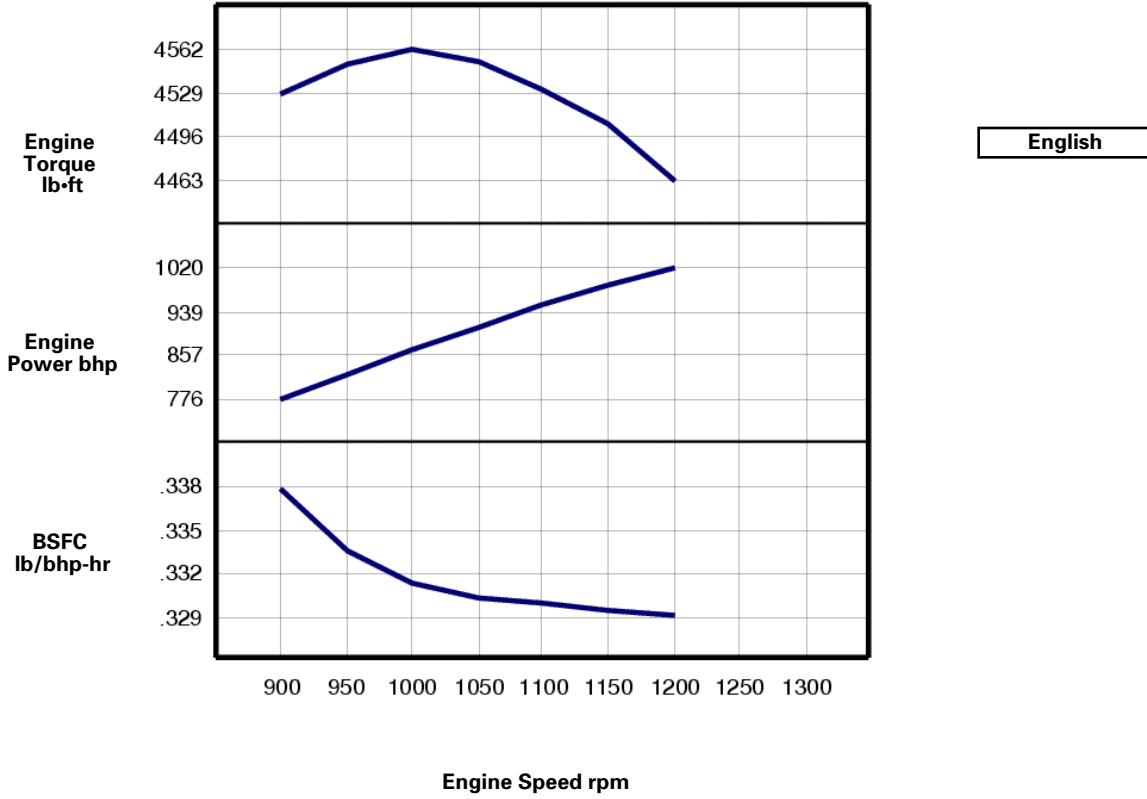
Engine Speed rpm	Engine Power kW	Torque N·m	BSFC g/kW-hr	Fuel Rate L/hr
1200	761	6052	200.2	181.5
1150	736	6108	200.4	175.7
1100	708	6144	200.7	169.3
1050	679	6172	200.9	162.5
1000	648	6186	201.5	155.6
950	614	6170	202.9	148.5
900	579	6140	205.5	141.8



PERFORMANCE CURVES

761 bkW/1020 bhp @ 1200 rpm

IND - A (Continuous) - TM4538-09



Engine Speed rpm	Engine Power bhp	Engine Torque lb-ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
1200	1020	4464	.329	47.9
1150	986	4505	.329	46.4
1100	949	4532	.330	44.7
1050	910	4552	.330	42.9
1000	869	4563	.331	41.1
950	823	4551	.334	39.2
900	776	4529	.338	37.5



RATINGS AND CONDITIONS

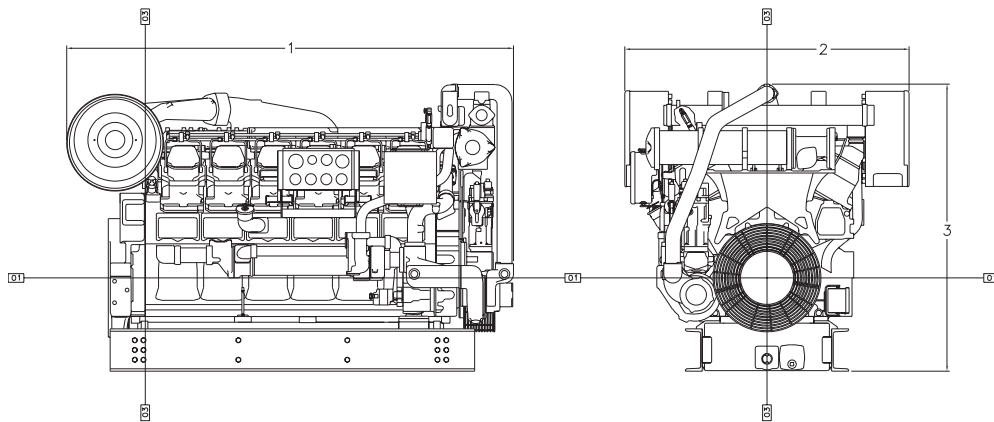
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IND - A (Continuous) Continuous heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling. Time at full load can be up to 100% of the duty cycle. Typical service examples are: pumping, ventilation, customer specs.

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: TM4538-09

Feature Code: 512DI02 Arr. Number: 4W0283

Materials and specifications are subject to change without notice.
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