



# 3512 Industrial Engine

955 bkW/1280 bhp @ 1800 rpm

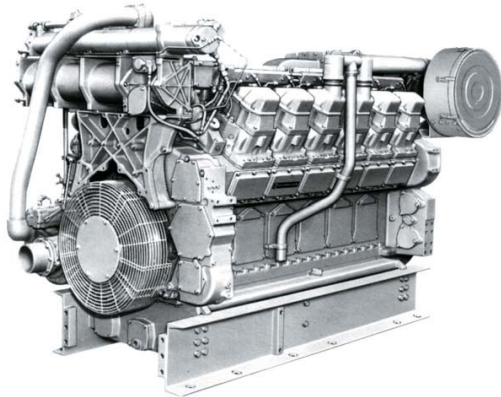


Image shown may not reflect actual engine

## 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 <sup>3</sup> )
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
- 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](http://www.cat-industrial.com).



**STANDARD ENGINE EQUIPMENT**

**955 bkW/1280 bhp @ 1800 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**

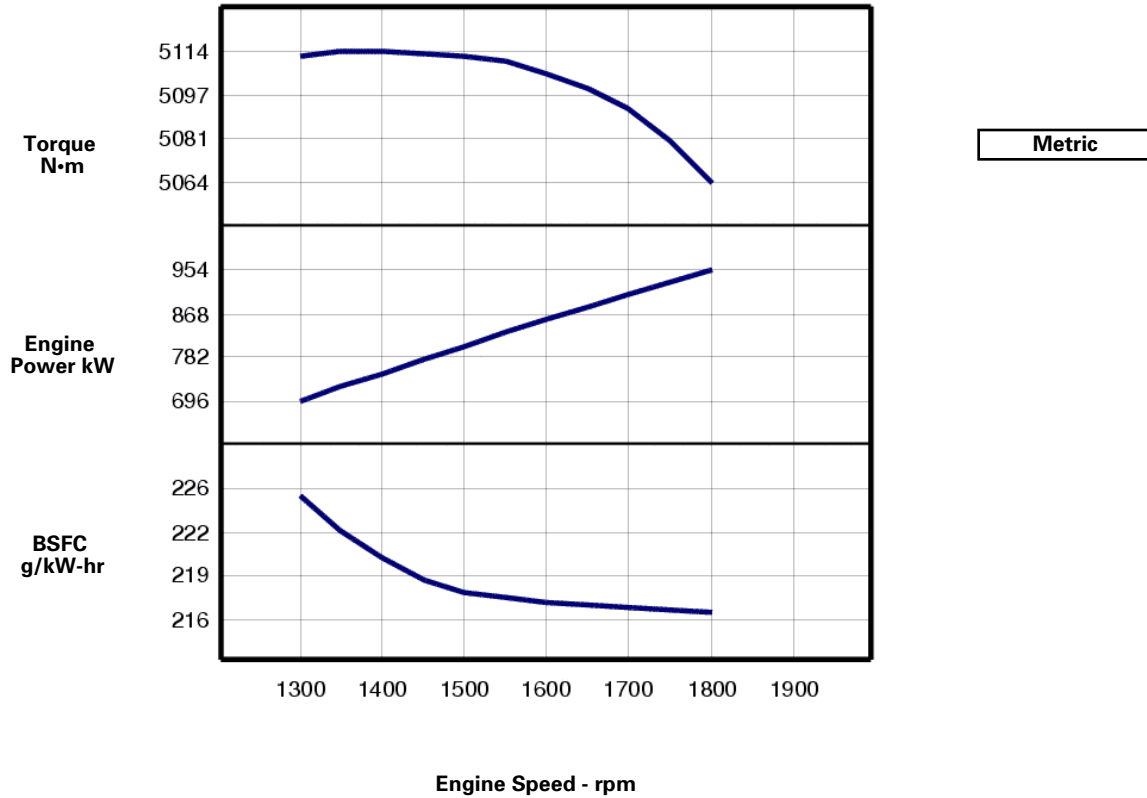
Paint, Caterpillar Yellow,  
Vibration damper and guard,  
Lifting eyes



PERFORMANCE CURVES

955 bkW/1280 bhp @ 1800 rpm

IND - A (Continuous) - TM3446-06



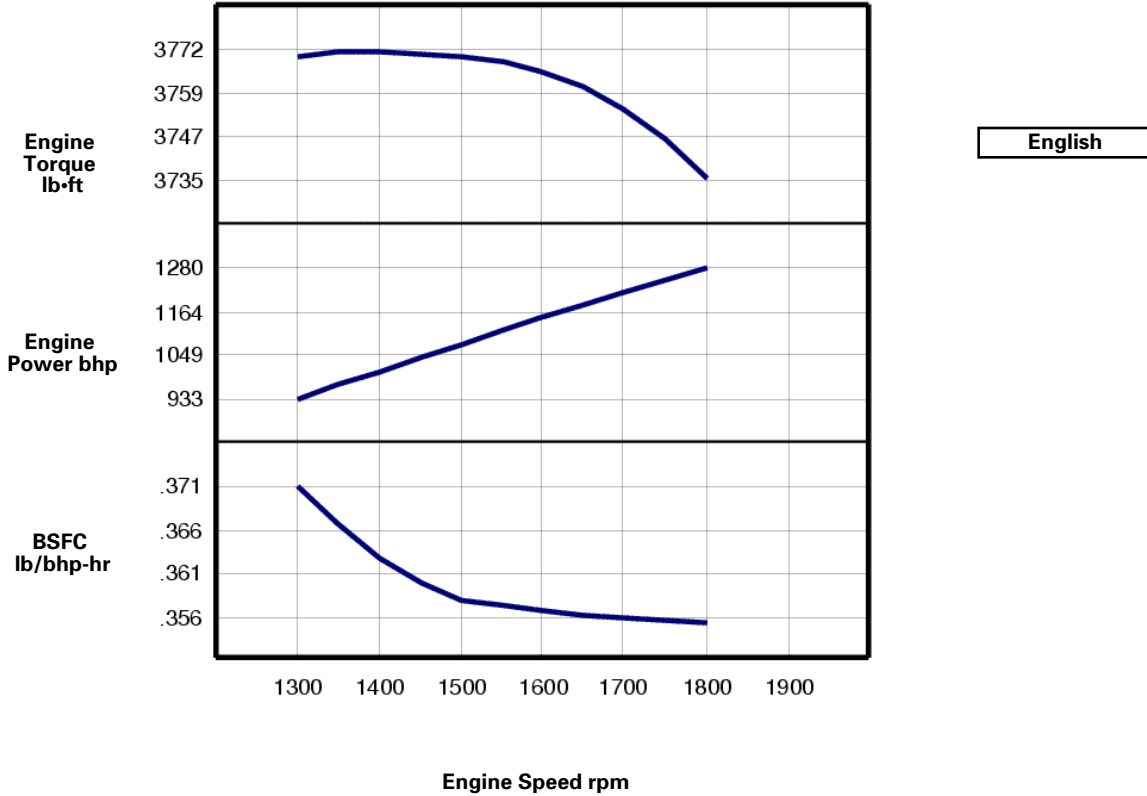
Engine Speed rpm	Engine Power kW	Torque N·m	BSFC g/kW-hr	Fuel Rate L/hr
1800	955	5064	216.1	245.9
1750	931	5080	216.3	240.0
1700	907	5092	216.5	233.9
1650	881	5100	216.7	227.7
1600	856	5106	217	221.3
1550	830	5110	217.3	214.9
1500	803	5112	217.8	208.5
1450	776	5113	218.9	202.7
1400	750	5114	220.7	197.3
1350	723	5114	223	192.1
1300	696	5112	225.7	187.2



PERFORMANCE CURVES

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IND - A (Continuous) - TM3446-06



Engine Speed rpm	Engine Power bhp	Engine Torque lb-ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
1800	1280	3735	.355	65.0
1750	1248	3747	.356	63.4
1700	1216	3756	.356	61.8
1650	1182	3762	.356	60.2
1600	1147	3766	.357	58.5
1550	1112	3769	.357	56.8
1500	1077	3770	.358	55.1
1450	1041	3771	.360	53.5
1400	1005	3772	.363	52.1
1350	969	3772	.367	50.7
1300	933	3770	.371	49.5



**RATINGS AND CONDITIONS**

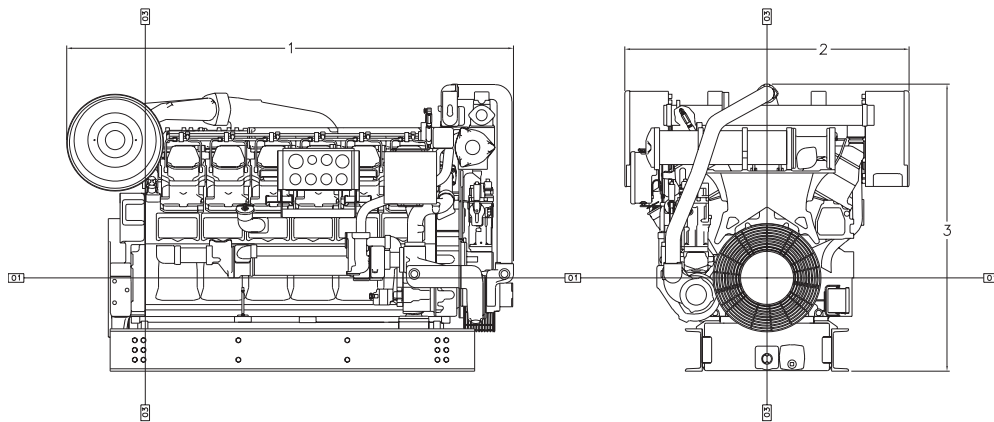
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**IND - A (Continuous)** Continuous heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling. Time at full load can be up to 100% of the duty cycle. Typical service examples 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: TM3446-06

Feature Code: 512DI01 Arr. Number: 4W0282

Materials and specifications are subject to change without notice.  
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