Cat® 3512B
Diesel Generator Sets

Image shown may not reflect actual configuration

Bore – mm (in)	170 (6.69)
Stroke – mm (in)	190 (7.48)
Displacement – L (in^3)	51.8 (3161.03)
Compression Ratio	14.0:1
Aspiration	TA
Fuel System	EUI
Governor Type	ADEM™ A3

Prime-DCP 50 Hz kVA (ekW)	Emissions Performance
1360 (1088)	Optimized for Low Fuel Consumption or Low Emissions

Features

Cat® Diesel Engine
- Designed and optimized for low emissions or low fuel consumption
- Reliable performance proven in thousands of applications worldwide

Generator Set Package
- Accepts 100% block load in one step and meets NFPA 110 loading requirements
- Conforms to ISO 8528-5 G3 load acceptance requirements
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators
- Superior motor starting capability minimizes need for oversizing generator
- Designed to match performance and output characteristics of Cat diesel engines

Cooling System
- Cooling systems available to operate in ambient temperatures up to 50°C (122°F)
- Tested to ensure proper generator set cooling

EMCP 4 Control Panels
- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements

Warranty
- 12 months/unlimited hour warranty for prime-DCP ratings
- Extended service protection is available to provide extended coverage options

Worldwide Product Support
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

Financing
- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

Standard and Optional Equipment

Engine

Air Cleaner
- ❑ Single element
- ❑ Dual element
- ❑ Heavy duty

Muffler
- ❑ Industrial grade (15 dB)

Starting
- ❑ Standard batteries
- ❑ Oversized batteries
- ❑ Standard electric starter(s)
- ❑ Dual electric starter(s)
- ❑ Jacket water heater

Alternator

Output voltage
- ❑ 380V
- ❑ 400V
- ❑ 415V

Temperature Rise (over 40°C ambient)
- ❑ 150°C
- ❑ 125°C/130°C
- ❑ 105°C
- ❑ 80°C

Winding type
- ❑ Random wound
- ❑ Form wound

Excitation
- ❑ Internal excitation (IE)
- ❑ Permanent magnet (PM)

Attachments
- ❑ Anti-condensation heater
- ❑ Stator and bearing temperature monitoring and protection

Power Termination

Type
- ❑ Bus bar
- ❑ Circuit breaker
- ❑ 2000A
- ❑ 2500A
- ❑ 3200A
- ❑ IEC
- ❑ 3-pole
- ❑ Electrically operated

Trip Unit
- ❑ LSI ❑ LSI-G
- ❑ LSIG-P

Control System

Controller
- ❑ EMCP 4.2B
- ❑ EMCP 4.3
- ❑ EMCP 4.4

Attachments
- ❑ Local annunciator module
- ❑ Remote annunciator module
- ❑ Expansion I/O module
- ❑ Remote monitoring software

Charging
- ❑ Battery charger – 10A
- ❑ Battery charger – 20A
- ❑ Battery charger – 35A

Vibration Isolators
- ❑ Rubber
- ❑ Spring

Cat Connect

Connectivity
- ❑ Ethernet
- ❑ Cellular

Extended Service Options

Terms
- ❑ 2 year (prime)
- ❑ 3 year
- ❑ 5 year
- ❑ 10 year

Coverage
- ❑ Silver
- ❑ Gold
- ❑ Platinum
- ❑ Platinum Plus

Ancillary Equipment
- ❑ Automatic transfer switch (ATS)
- ❑ Paralleling switchgear
- ❑ Paralleling controls

Certifications
- ❑ EU Declaration of Conformity
- ❑ EU Declaration of Incorporation
- ❑ Eurasian Conformity (EAC)
- ❑ Telecommunication Lab of China

Note: *Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.*

Package Performance

Low Fuel Consumption

Performance	Prime-DCP		Prime-DCP		Prime-DCP	
Frequency	50 Hz		50 Hz		50 Hz	
Gen set power rating with fan	1088 ekW		1088 ekW		1088 ekW	
Gen set power rating with fan @ 0.8 power factor	1360 kVA		1360 kVA		1360 kVA	
SCAC temperature	30°C		60°C		90°C	
Performance number	EM5885-00		EM5886-00		EM5887-00	
Fuel Consumption						
100% load with fan – L/hr (gal/hr)	271.1	(71.6)	276.3	(80.0)	279.3	(73.8)
75% load with fan – L/hr (gal/hr)	205.4	(54.3)	211.3	(61.1)	211.4	(55.8)
50% load with fan – L/hr (gal/hr)	145.3	(38.4)	147.7	(42.3)	150.9	(39.9)
25% load with fan – L/hr (gal/hr)	88.5	(23.4)	86.2	(24.4)	88.8	(23.5)
Cooling System						
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m^3/min (cfm)	1283	(45308)	1283	(45308)	1283	(45308)
Engine coolant capacity – L (gal)	156.8	(41.4)	156.8	(41.4)	156.8	(41.4)
Radiator coolant capacity – L (gal)	149.0	(39.4)	149.0	(39.4)	149.0	(39.4)
Total coolant capacity – L (gal)	305.8	(80.8)	305.8	(80.8)	305.8	(80.8)
Inlet Air						
Combustion air inlet flow rate – m^3/min (cfm)	100.7	(3555.7)	92.5	(3265.2)	87.5	(3089.6)
Exhaust System						
Exhaust stack gas temperature – °C (°F)	389.0	(732.2)	446.7	(836.0)	484.7	(904.5)
Exhaust gas flow rate – m^3/min (cfm)	232.6	(8213.1)	235.0	(8296.4)	234.6	(8283.7)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(26.9)	6.7	(26.9)	6.7	(26.9)
Heat Rejection						
Heat rejection to jacket water – kW (Btu/min)	447	(25420)	475	(27036)	506	(28775)
Heat rejection to exhaust (total) – kW (Btu/min)	940	(53456)	1011	(57517)	1056	(60053)
Heat rejection to aftercooler – kW (Btu/min)	281	(15979)	221	(12581)	176	(10008)
Heat rejection to atmosphere from engine – kW (Btu/min)	107	(6085)	121	(6877)	134	(7620)
Heat rejection from alternator – kW (Btu/min)	51	(2917)	51	(2917)	51	(2917)
Emissions* (Nominal)						
NOx mg/Nm^3 (g/hp-h)	3295.1	(6.69)	4298.6	(8.89)	3990.5	(8.33)
CO mg/Nm^3 (g/hp-h)	714.9	(1.45)	642.3	(1.33)	601.0	(1.25)
HC mg/Nm^3 (g/hp-h)	79.6	(0.16)	73.0	(0.15)	83.3	(0.17)
PM mg/Nm^3 (g/hp-h)	33.5	(0.07)	26.6	(0.05)	26.0	(0.05)
Emissions* (Potential Site Variation)						
NOx mg/Nm^3 (g/hp-h)	3954.1	(8.03)	5158.3	(10.66)	4788.6	(10.00)
CO mg/Nm^3 (g/hp-h)	1286.8	(2.61)	1156.2	(2.39)	1081.8	(2.26)
HC mg/Nm^3 (g/hp-h)	105.9	(0.22)	97.0	(0.20)	110.8	(0.23)
PM mg/Nm^3 (g/hp-h)	46.9	(0.10)	37.3	(0.08)	36.4	(0.08)

**mg/Nm^3 levels are corrected to 5% O_2. Contact your local Cat dealer for further information.*

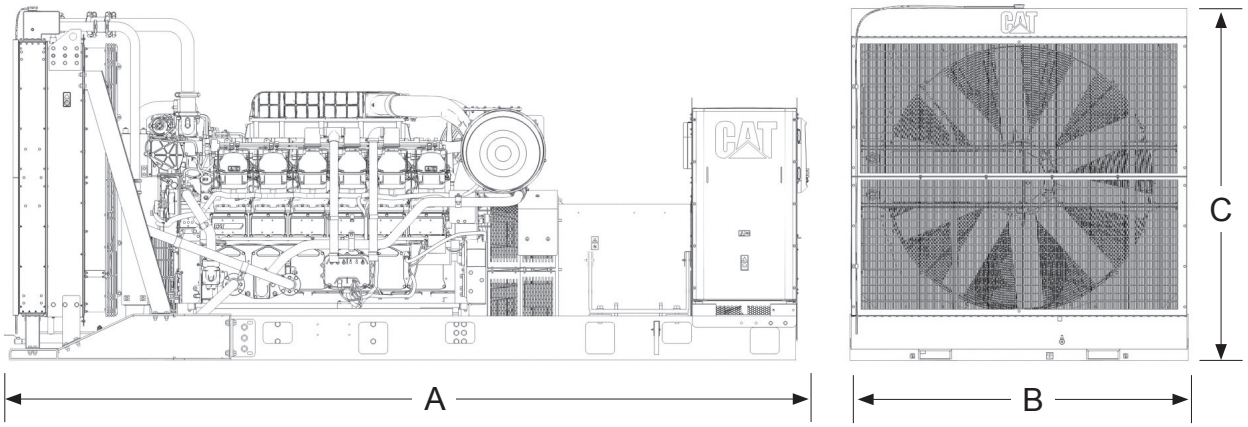
Package Performance

Low Emissions

Performance	Prime-DCP		Prime-DCP		Prime-DCP	
Frequency	50 Hz		50 Hz		50 Hz	
Gen set power rating with fan	1088 ekW		1088 ekW		1088 ekW	
Gen set power rating with fan @ 0.8 power factor	1360 kVA		1360 kVA		1360 kVA	
SCAC temperature	30°C		60°C		90°C	
Performance number	EM5891-00		EM5892-00		EM5893-00	
Fuel Consumption						
100% load with fan – L/hr (gal/hr)	289.2	(76.4)	297.5	(78.6)	279.2	(73.8)
75% load with fan – L/hr (gal/hr)	217.5	(57.5)	225.2	(59.5)	216.8	(57.3)
50% load with fan – L/hr (gal/hr)	149.0	(39.4)	153.8	(40.6)	154.8	(40.9)
25% load with fan – L/hr (gal/hr)	88.1	(23.3)	90.4	(23.9)	89.2	(23.6)
Cooling System						
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m^3/min (cfm)	1283	(45308)	1283	(45308)	1283	(45308)
Engine coolant capacity – L (gal)	156.8	(41.4)	156.8	(41.4)	156.8	(41.4)
Radiator coolant capacity – L (gal)	149.0	(39.4)	149.0	(39.4)	149.0	(39.4)
Total coolant capacity – L (gal)	305.8	(80.8)	305.8	(80.8)	305.8	(80.8)
Inlet Air						
Combustion air inlet flow rate – m^3/min (cfm)	108.7	(3838.2)	102.5	(3619.3)	90.7	(3202.6)
Exhaust System						
Exhaust stack gas temperature – °C (°F)	397.4	(747.3)	463.6	(866.5)	464.1	(867.4)
Exhaust gas flow rate – m^3/min (cfm)	255.8	(9032.3)	264.4	(9336.0)	235.4	(8312.0)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(26.9)	6.7	(26.9)	6.7	(26.9)
Heat Rejection						
Heat rejection to jacket water – kW (Btu/min)	472	(26842)	501	(28491)	506	(28775)
Heat rejection to exhaust (total) – kW (Btu/min)	1057	(60109)	1148	(65283)	1059	(60223)
Heat rejection to aftercooler – kW (Btu/min)	350	(19903)	278	(15809)	187	(10633)
Heat rejection to atmosphere from engine – kW (Btu/min)	115	(6540)	131	(7449)	135	(7678)
Heat rejection from alternator – kW (Btu/min)	50	(2849)	50	(2849)	50	(2849)
Emissions* (Nominal)						
NOx mg/Nm^3 (g/hp-h)	1802.8	(3.90)	1927.4	(4.29)	3891.5	(8.13)
CO mg/Nm^3 (g/hp-h)	142.1	(0.31)	662.1	(1.47)	623.5	(1.30)
HC mg/Nm^3 (g/hp-h)	90.6	(0.20)	78.4	(0.17)	84.7	(0.18)
PM mg/Nm^3 (g/hp-h)	37.6	(0.08)	34.8	(0.08)	26.0	(0.05)
Emissions* (Potential Site Variation)						
NOx mg/Nm^3 (g/hp-h)	2163.4	(4.68)	2312.9	(5.15)	4669.9	(9.75)
CO mg/Nm^3 (g/hp-h)	255.8	(0.55)	1191.8	(2.65)	1122.3	(2.34)
HC mg/Nm^3 (g/hp-h)	120.5	(0.26)	104.3	(0.23)	112.7	(0.24)
PM mg/Nm^3 (g/hp-h)	52.6	(0.11)	48.7	(0.11)	36.4	(0.08)

**mg/Nm^3 levels are corrected to 5% O_2. Contact your local Cat dealer for further information.*

Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
5404 (212.8)	2286 (90.0)	2411 (94.9)	11 621 (25,620)

Note: *For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.*

Ratings Definitions

Prime-DCP
For data center applications only. Prime-DCP power output available with varying load for unlimited time. Average power output is not to exceed 100% of prime-DCP rated ekW. Typical peak demand is 100% of the prime-DCP rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Applicable Codes and Standards
AS 1359, IBC, IEC 60034-1, ISO 3046, ISO 8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU and facilitates compliance to NFPA 37, NFPA 70, NFPA 99, NFPA 110.

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

Data Center Applications
- ISO 8528-1 Data Center Power (DCP) compliant per Cat diesel generator set prime-DCP rating.
- All ratings Tier III/Tier IV compliant per Uptime Institute requirements.
- All ratings ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

Fuel Rates
Fuel consumption reported in accordance with ISO 3046-1, based on fuel oil of 35º API [16°C (60ºF)] gravity having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 15ºC (59ºF) and weighing 850 g/liter (7.0936 lbs/U.S. gal.) All fuel consumption values refer to rated engine power.

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