



PRODUCT SPECIFICATIONS FOR 3512B (50 HZ)



TST CO.

www.TST-CO.com

GENERATOR SET SPECIFICATIONS

Minimum Rating	1320 kVA
Maximum Rating	1875 kVA
Emissions/Fuel Strategy	Low Fuel, Low Emissions
Voltage	380 to 415 Volts
Frequency	50 Hz
Speed	1500 rpm
Duty Cycle	Standby, Mission Critical, Prime

ENGINE SPECIFICATIONS

Engine Model	3512B TA, V-12, 4-Stroke Water-Cooled Diesel
Bore	6.69 in
Stroke	7.48 in
Stroke - HD	8.46 in
Displacement	3161.03 in
Displacement - HD	3573.55 in ³
Compression Ratio	14.0:1 Std 15.5:1 HD
Aspiration	TA
Fuel System	Electronic Unit Injection
Governor Type	Adem™3

GENERATOR SET DIMENSIONS

Length - Minimum	206.6 in
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Length - Maximum	215.3 in
Width - Minimum	77.8 in
Width - Maximum	90 in
Height - Maximum	93.2 in
Dry Weight - Genset (minimum)	25010 lb
Dry Weight - Genset (maximum)	26840 lb

3512B (50 HZ) STANDARD EQUIPMENT

AIR INLET SYSTEM

Angle element canister type air cleaner with service indicator

AIR INLET

Air Cleaner

COOLING

Package mounted radiator (except C175)

CONTROL PANEL

Emergency stop button

Programmable protective relaying functions:

Over / under voltage (27 / 59)

kVA_r (per phase, average & percent)

kVA (per phase, average & percent)

Engine cool-down timer

Generator mounted - rear facing

Overcurrent (50 / 51)

Warning / shutdown with common LED indication of shutdowns for:

Low coolant level

DC volts

Generator phase sequence

Overspeed

Frequency (Hz)

Volts (L-L & L-N)

Reverse reactive power (kVAr) (32RV)

Text alarm / event descriptions

2 Programmable digital outputs

RPM

2 Programmable relay outputs (Form C)

Speed adjust

Alarm acknowledge

kVAr-hr (total)

Digital indication for:

Power Factor (per phase & average)

Environmental sealed front face

Controls:

True RMS AC metering, 3 phase, +/-2% accuracy

Low oil pressure

kW (per phase, average & percent)

Engine cycle crank

Accessory module data link

Coolant temperature

EMCP 4.2

24 Volt DC operation

Over / under frequency (81 o/u)

Amps (per phase & average)

4 Programmable relay outputs (Form A)

Reverse power (kW) (32)

Operating hours

Communications

Oil pressure (psi, kPa or bar)

Serial annunciator module data link

kW-hr (total)

6 Programmable digital inputs

High coolant temperature

Failure to start (overcrank)

Low coolant temperature

Lamp test

Emergency stop

Auto / start / stop control

Customer data link (Modbus RTU)

EXHAUST

Exhaust flange outlet

FUEL

Secondary fuel filter

Primary fuel filter with integral water separator

Fuel priming pump

CONTROL SYSTEM

Engine cool-down timer.

DC volts

True RMS AC metering, 3-phase, +/-2% accuracy

High coolant temperature

Coolant temperature

Auto/start/stop control

Failure to start (overcrank)

Communications

Oil pressure

Emergency stop

EMCP4.2B

Overspeed

frequency (Hz)

Volts (L-L & L-N)

Engine cycle crank

Warnings / Shutdown indicators

Speed adjust

Lamp test

24-volt DC operation

RPM

4 programmable digital inputs

Low coolant level

Operating hours

Alarm acknowledge

Emergency stop pushbutton

Low oil pressure

Amps (per phase & average)

4 programmable digital outputs

Digital indication for:

GENERATOR

IP23 Protection

Matched to the performance and output characteristics of Cat engines

POWER TERMINATION

Bus Bar

GENERATOR SYSTEM

Class H temperature rise at 40C ambient

3 phase brushless, salient pole

6 lead

Winding temperature detectors

NEMA Class H insulation

Random wound

Internal Excitation

3-phase voltage sensing

Bus bar connections

min/max exciter

Caterpillar's Digital Voltage Regulator (CDVR)

RFI suppression

LITERATURE

English

COOLING SYSTEM

Caterpillar extended life coolant. (Not included with packages without radiator, installed SF44CTS, shipped loose radiators or heat exchangers)

JWAC

Coolant level sensors. (Not included with packages without radiator)

Coolant drain line with valve

Radiator fan and fan drive

Fan and belt guards

EXHAUST SYSTEM

Dry exhaust manifold

Flanged faced outlet(s)

FUEL SYSTEM

Fuel priming pump

Secondary fuel filters

Fuel cooler; not included with packages without radiator

Flexible fuel lines - shipped loose

GENERATORS AND ATTACHMENTS

Note: 1800 frames are form wound, permanent magnet, with winding temp detectors

3 Phase voltage sensing

RFI suppression

Class H temperature rise at 40C ambient (125C prime / 150C standby)

Min / max exciter limiter

Exciter diode monitor

Busbar connections, top center mounted, top cable entry

3 Phase brushless, salient pole

50 Hz models: IEC standard hole pattern

Caterpillar's Digital Voltage Regulator (CDVR) includes:

Random wound

Generator set packages include: Regulator (CDVR)

Reactive droop capability

6 Leads

KVAR / PF modes

NEMA Class H insulation

Winding temperature detectors

Internal Excitation

LV:

GOVERNING SYSTEM

Woodward 2301A isochronous governor

LUBE SYSTEM

Lubricating oil

Gear type lube oil pump

Integral lube oil cooler

Oil filter, filler and dipstick

Fumes disposal

Oil drain lines and valve

MOUNTING SYSTEM

Rails - engine / generator / radiator mounting

Rubber anti-vibration mounts (shipped loose)

STARTING / CHARGING SYSTEM

Battery disconnect switch

Battery and battery rack w/cables

24-volt electric starting motor

GENERAL

SAE standard rotation

Flywheel and Flywheel housing-SAE No. 00

RH Service

Paint - Caterpillar yellow with high gloss black rails & radiator

3512B (50 HZ) OPTIONAL EQUIPMENT

AIR INLET SYSTEM

Air Inlet protection

Remote air inlet adaptors

Dual element air cleaners

EXHAUST

Exhaust mufflers

GENERATOR

Anti-condensation heater

Internal excitation (IE)

Permanent magnet excitation (PMG)

Oversize and premium generators

CIRCUIT BREAKERS

Cable entry options

2000, 2500, 3200 and 4000 Amp, 4 pole, IEC rated circuit breakers

Busbar connections

Center posts busbars

Controls packaging - Enclosures

2000, 2500, 3200 and 4000 Amp, 3 pole, IEC rated circuit breakers

Optional busbar power connections

EMAX breakers connections

EMAX circuit breakers

Breaker harnesses

POWER TERMINATION

Circuit breakers, UL listed

Circuit breakers, IEC compliant

CONTROL PANELS

Annunciator modules

Customer connection mounting locations

Remote speed adjust

Local PC monitoring

Generator temperature monitoring

Auxiliary boxes

Governors

Customer interface options

EMCP 4.3, EMCP 4.4

Ground (Automatically selected)

Mounting group - External box clips

Vandal proof panel door

MOUNTING

Rubber anti-vibration mounts

IBC isolators

Spring-type vibration isolator

STARTING/CHARGING

Oversize batteries

Air starting motor with control and silencer

Jacket water heater

Heavy-duty starting system

Charging alternator

Battery chargers

COOLING SYSTEM

Water level switch gauges

Optional radiator arrangements

Heat exchangers

EUROPEAN CERTIFICATIONS

European Union certification

EU declaration of conformity

European directive genset, DoI (Declaration of Incorporation)

Eurasian conformity (EAC) mark

EXHAUST SYSTEM

Mufflers

Muffler mounting kits

Through-wall installation kit

Flexible fittings

FUEL SYSTEM

Primary fuel filter

GENERATORS AND ATTACHMENTS

Generator conversion

1500 RPM, 380/400/415volts @ 50 Hz, 3 phase, random wound, permanent magnet, No. of leads = 6, pitch= 0.6667

1500 RPM, 380/400/415volts @ 50 Hz, 3 phase, form wound, permanent magnet, No. of leads = 6, pitch=

1500 RPM, 380/400/415volts @ 50 Hz, 3 phase, form wound, permanent magnet, No. of leads = 6, pitch= 0.6667

1500 RPM, 380/400/415volts @ 50 Hz, 3 phase, random wound, internal excitation, No. of leads = 6, pitch= 0.6667

Space heater

INSTRUMENTATION

Pyrometer and thermocouples

LUBE SYSTEM

Oil level Reg-1 shallow pan

Electric prelube pumps

Manual prelube sump pumps

MOUNTING SYSTEM

IBC vibration isolators

Spring-type vibration isolator

PROTECTION SYSTEM

Explosion relief valve

SPECIAL TESTS / REPORTS

PGS test report @ 0.80 power factor

Neutral ground-LV

IBC seismic certifications

PGS test report @ 1.0 power factor

Neutral grounding connection

STARTING / CHARGING SYSTEM

Oversize battery set

Jacket water heaters

10 Amp battery chargers

Ether starting aid

24 Volt dual electric starting motor

20 Amp battery charger

GENERAL

Engine barring group