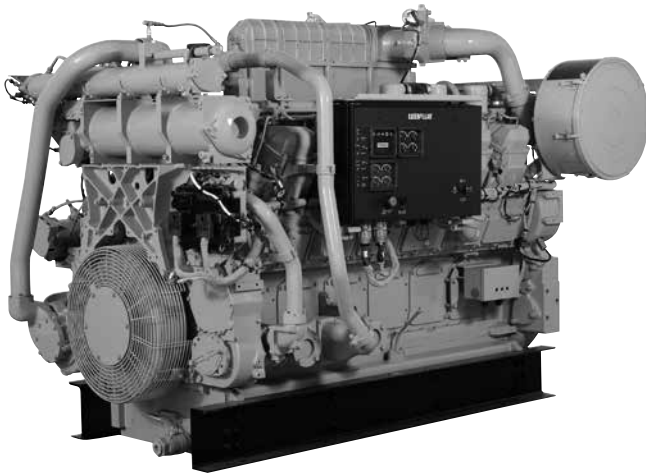




3512C (HD) Land Mechanical Engine

932-1100 bkW
(1250-1475 bhp)
1200 rpm



CAT® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

Emissions	2006 EPA/CARB Tier 2 Non-road Emissions Certified
Peak Torque at Speed.....	4376 lb-ft
Bore	170 mm (6.7 in)
Stroke	215 mm (8.5 in)
Displacement.....	58.6 L (3574 cu. in)
Aspiration	Turbocharged-Aftercooled
Governor and Protection.....	Electronic ADEM™ A3
Capacity for Liquids	
Lube Oil System (refill)	318 L (84 U.S. gal)
Cooling System (engine only) ..	157.1 L (41.5 U.S. gal)
Cooling System (radiator).....	244.2 L (64.5 U.S. gal)
Oil Change Interval.....	500 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel and Flywheel Housing	SAE No. 00
Flywheel Teeth	183

FEATURES

Engine Design

- Proven reliability and durability
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Market-leading power density
- Designed to perform in oilfield conditions, including high ambient high altitude applications
- Long overhaul life proven in oilfield applications
- Core engine components designed for reconditioning and reuse at overhaul

Emissions

2006 EPA/CARB Tier 2 non-road emissions certified

Advanced Digital Engine Management

ADEM A3 has improved user interface, display system, shutdown controls, system diagnostics, and allows electronic integration with transmissions.

Safety

- E-Stop pushbutton on instrument panel
- Air shutoff and explosion relief valves
- Configurable alarm and shutdown features
- Extra alarm switches available for customer-supplied panel
- Instrument panel (LH analog and digital display of key package operation parameters)

Improved Serviceability

Large inspection openings allow convenient access to core engine internals

Reduction of Owning and Operating Costs

- Long filter change intervals, aligned with service intervals
- Excellent fuel economy – direct injection electronic unit injectors precisely meter fuel
- Torsional vibration analysis available from factory to maximize component life

Custom Packaging

For any petroleum application, trust Caterpillar to meet your project needs with custom factory generator sets and mechanical packages. Cat® engines, generators, controls, radiators, and transmissions can be custom-designed and matched in collaboration with our local dealers to create unique solutions. Custom packages are globally supported and are covered by a one-year warranty after startup.

Full Range of Attachments

Large variety of factory-installed engine attachments reduces packaging time

Testing

Every engine is full-load tested to ensure proper engine performance.

Product Support Offered Through Global Cat Dealer Network

More than 2,200 dealer outlets

Cat factory-trained dealer technicians service every aspect of your petroleum engine

Caterpillar parts and labor warranty

Preventive maintenance agreements available for repair-before-failure options

S•O•SSM program matches your oil and coolant samples against Caterpillar set standards to determine:

- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience

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

- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site

For all your petroleum power requirements, visit www.catoilandgasinfo.com



STANDARD EQUIPMENT

Air Inlet System

Aftercooler core – corrosion resistant
Air cleaner – regular duty with soot filter
Service indicators

Control System

ADEM A3 ECU – LH
Includes adjustable speed droop capability
Pneumatic speed control, 10-100 psi

Cooling System

Radiator-cooled land-based
Outlet controlled thermostat and housing
Jacket water pump – gear-driven
Dual outlet
Aftercooler fresh water cooling pump (SCAC) – gear-driven, centrifugal

Exhaust System

Exhaust flexible fitting, adapter, flange

Flywheels and Flywheel Housings

Flywheel – SAE No. 00 and housing

Fuel System

Fuel filter – LH, priming pump – LH
Fuel transfer pump
Flexible fuel lines
Electronically controlled unit injectors

Instrumentation

Electronic instrument panel – RH
Analog gauges with digital display data for: engine oil pressure gauge, engine water temperature gauge, fuel pressure gauge, system DC voltage gauge, air inlet

restriction gauge, exhaust temperature gauge, fuel filter differential pressure gauge, oil filter differential pressure gauge, service meter, tachometer, instantaneous fuel consumption, total fuel consumed, engine start-stop (off, auto start, manual start, cooldown timer)

Lube System

Crankcase breather
Oil cooler
Oil filter, LH
Oil pan drain valve, 2" NPT female connection

Mounting System

Rails – mounting, floor type, 254 mm (10 in)

Power Take-Offs

Accessory drive
Lower LH front (available for PTO usage)
Front housing – two-sided

Protection System

ADEM A3 ECU monitoring system provides engine protection strategies to protect against adverse operating conditions. Selected parameters are customer programmable.

Starting System

Air starting motor – RH, 620 to 1034 kPa (90 to 150 psi), LH control
Air silencer

General

Paint – Caterpillar yellow
Vibration damper and guard
Lifting eyes

OPTIONAL EQUIPMENT

Air Compressor

Air Inlet System

Air cleaners
Remote air inlet adapters

Charging Systems

Battery chargers and charging alternators

Control System

Load sharing modules
Local speed throttle control
Governor conversion
Throttle position sensors

Cooling Systems

High gloss black folded core radiators and conventional core radiators
Belt guard
Blower fan
Fan drive and fan pulley
Radiator cover
Water level switch gauge
Coolant level sensors
Air separator

Exhaust System

Flexible fitting
Elbows
Flange and exhaust expanders
Mufflers

Flywheel and Flywheel Housing

Fuel System

Fuel priming pumps, flexible fuel lines
Fuel filter
Fuel cooler, fuel level switch

Instrumentation

Remote panel display, remote cylinder temperature display
Gauges and instrument panels

Lube System

Fumes disposal
Oil filters
Pre-lube pumps, sump pumps

Mounting System

Power Take-Offs

Flexible couplings, coupling hubs
Front accessory drives
Auxiliary drive shafts and pulleys
Front stub shaft and flywheel stub shaft
Pulleys

Protection System

Shutoffs
Switches and contactors
Explosion relief valves
Oil pressure monitor

Starting System

Starting motors – air, gas, electric
Air pressure regulators, controls and silencer
Air controls – manual, electric
Redundant start systems
Start switch
Starting aids (JW heater and ether injection)
Battery sets – 24 volts with rack

General

Special paint
Cat data link wire
Flywheel guard
Tool set



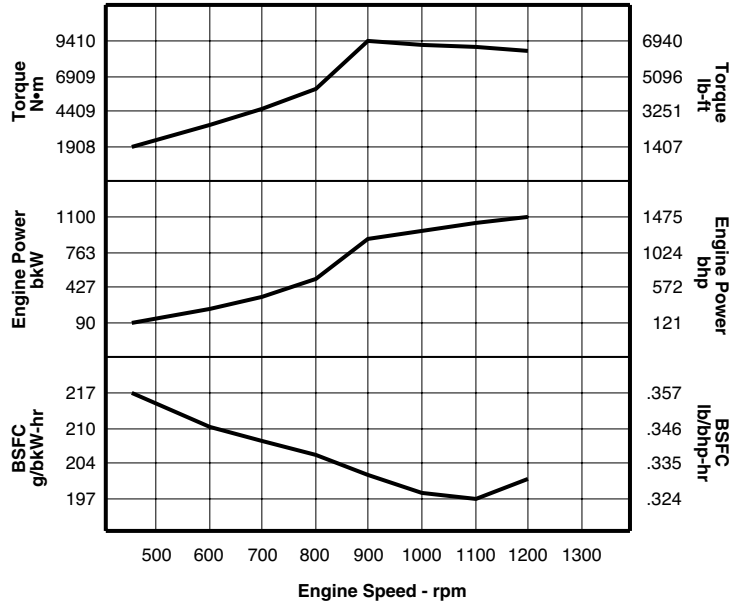
3512C (HD)

LAND MECHANICAL ENGINE

932-1100 bkW (1250-1475 bhp)

PERFORMANCE CURVES

Turbocharged-Aftercooled
 P/D MECH Rating – 1100 bkW (1475 bhp) @ 1200 rpm
 DM8277-02



Heat Rejection Data										
Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From Aft Clr	
	bkW	bhp	kW	Btu/min	kW	Btu/min	kW	Btu/min	kW	Btu/min
1200	1100	1475	420	23,896	114	6510	891	50,685	296	16,826
1100	1034	1386	381	21,651	109	6205	822	46,746	249	14,157
1000	962	1291	347	19,716	112	6363	780	44,377	208	11,843
900	887	1189	349	19,854	125	7122	720	40,929	164	9339
800	505	677	242	13,758	129	7339	428	24,341	34	1948
700	338	454	183	10,383	107	6085	264	15,022	4	231
600	213	286	108	6135	82	4649	159	9027	–	–
450	90	121	28	1612	64	3655	69	3946	–	–

Approximate Power (bhp) as function of Altitude and Inlet Manifold Temperature for DM8277-02									
Inlet Manifold Temp. (°F)	Altitude (feet)								
	10,499	9843	8202	6562	4921	3281	1640	984	0
50	1171	1200	1250	1250	1250	1250	1250	1250	1250
68	1130	1160	1235	1250	1250	1250	1250	1250	1250
86	1093	1121	1195	1250	1250	1250	1250	1250	1250
104	1058	1086	1156	1231	1250	1250	1250	1250	1250
122	1026	1051	1121	1192	1250	1250	1250	1250	1250
Normal	1172	1196	1250	1250	1250	1250	1250	1250	1250

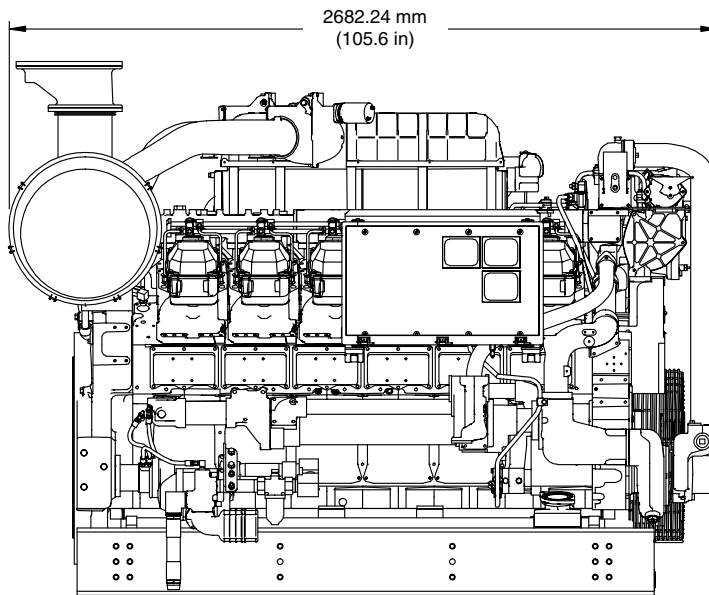


3512C (HD)

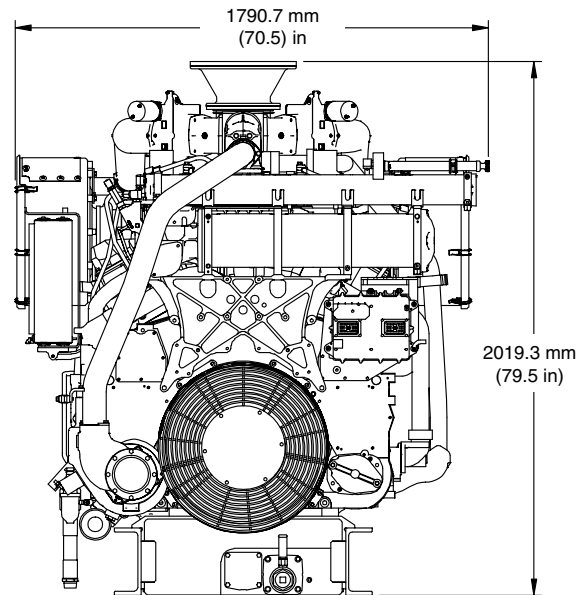
LAND MECHANICAL ENGINE

932-1100 kW (1250-1475 bhp)

LAND MECHANICAL ENGINE



Right Side View



Front View

Engine Dimensions		
Length	2682.24 mm	105.6 in
Width	1790.7 mm	70.5 in
Height	2019.3 mm	79.5 in
Engine Weight (dry)	5423 kg	11,945 lb

Note: Do not use for installation design. See general dimension drawings for detail. (Drawing #281-9127)

RATING DEFINITIONS AND CONDITIONS

Prime Power – 6,000 hrs./year, for applications with load factors less than or equal to 60%. Rated load (100%) usage is limited to 1 hour in 12. 10% overload available.

Ratings are based on SAE J1995 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions of 100 kPa (29.61 in Hg), 27°C (81°F), and 60% relative humidity. Ratings are valid for air cleaner inlet temperatures up to and including 50° C (122°F).

Fuel consumption has a tolerance of +5% and is based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 42 780 kJ/kg (18 390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal). Fuel consumption shown with all oil, fuel, and water pumps, engine driven.

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