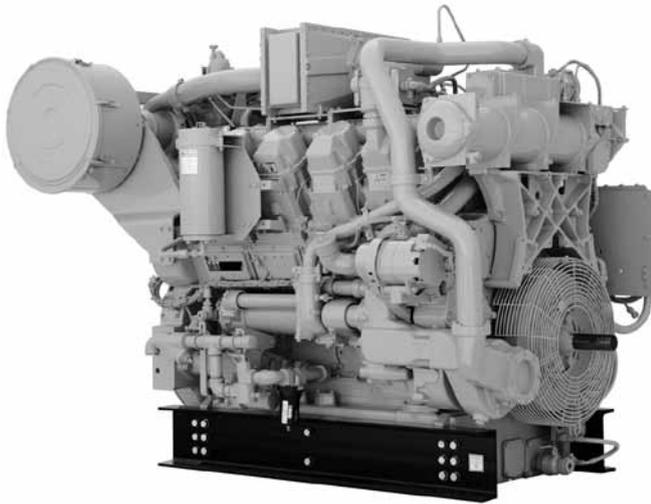


2.0 g/bhp-hr NOx (NTE)

CAT® ENGINE SPECIFICATIONS

V-8, 4-Stroke-Cycle

Bore	170 mm (6.7 in.)
Stroke	190 mm (7.5 in.)
Displacement	34.5 L (2105 cu. in.)
Aspiration	Turbocharged-Aftercooled
Digital Engine Management	
Governor and Protection	Electronic (ADEM™ A3)
Combustion	Low Emission (Lean Burn)
Engine Weight, net dry (approx)	5420 kg (11,950 lb)
Power Density	10.9 kg/kW (17.8 lb/bhp)
Power per Displacement	19.4 bhp/L
Total Cooling System Capacity	124.9 L (33 gal)
Jacket Water	113.6 L (30 gal)
SCAC	11.4 L (3 gal)
Lube Oil System (refill)	230.9 L (61 gal)
Oil Change Interval	1000 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel and Flywheel Housing	SAE No. 00
Flywheel Teeth	183



Shown with Optional Equipment

FEATURES

Engine Design

- Proven reliability and durability
- Ability to burn a wide spectrum of gaseous fuels
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range

Emissions

Meets U.S. EPA Spark Ignited Stationary NSPS Emissions for 2007/8

Advanced Digital Engine Management

ADEM A3 control system providing integrated ignition, speed governing, protection, and controls, including detonation-sensitive variable ignition timing. ADEM A3 has improved: user interface, display system, shutdown controls, and system diagnostics.

Lean Burn Engine Technology

Lean-burn engines operate with large amounts of excess air. The excess air absorbs heat during combustion reducing the combustion temperature and pressure, greatly reducing levels of NOx. Lean-burn design also provides longer component life and excellent fuel consumption.

Ease of Operation

Side covers on block allow for inspection of internal components

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.

Gas Engine Rating Pro

GERP is a PC-based program designed to provide site performance capabilities for Cat® natural gas engines for the gas compression industry. GERP provides engine data for your site's altitude, ambient temperature, fuel, engine coolant heat rejection, performance data, installation drawings, spec sheets, and pump curves.

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

Cat 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

Over 60 years of natural gas engine production

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.catoilandgas.cat.com.

STANDARD EQUIPMENT

Air Inlet System

Remote air inlet adapters

Charging System

Battery chargers

Cooling System

Jacket water thermostats and housing — full open temperature 98°C (208°F)

Jacket water pump — gear driven, centrifugal, non-self-priming

Aftercooler water pump — gear driven, centrifugal, non-self-priming

Aftercooler core for sea-air atmosphere

Aftercooler thermostats and housing — full open temperature 35°C (95°F)

Aftercooler — raw water, cleanable

Exhaust System

Exhaust manifolds — watercooled

Flywheels & Flywheel Housings

SAE No. 00 flywheel

SAE No. 00 flywheel housing

SAE standard rotation

Fuel System

Gas pressure regulator

Natural gas carburetor

Fuel gas shut-off valve (24V DC)

Instrumentation

Advisor panel

Advisor interconnect harness

Lubrication System

Crankcase breathers — top mounted

Oil cooler

Oil filter — RH

Oil pan — shallow

Oil sampling valve

Turbo oil accumulator

Mounting System

Rails, engine mounting

Power Take-Offs

Front housing — two-sided

Front lower LH accessory drive

Protection System

Electronic shutoff system

Gas shutoff valve

General

Paint — Cat yellow

Vibration damper and guard

OPTIONAL EQUIPMENT

Air Inlet System

Remote air inlet adapters

Charging System

Battery chargers

Cooling System

Aftercooler core

Thermostatic valves

Connections

Expansion and overflow tank

Water level switch gauge

European Certifications

European Union certifications

Exhaust System

Flexible fittings

Elbows

Flanges

Flange and exhaust expanders

Mufflers

Fuel System

Fuel filter

Instrumentation

Customer communication modules

Lubrication System

Oil filters — duplex

Oil pan drain

Oil level regulator

Sump pumps

Lubricating oil

Mounting System

Rails

Vibration isolators

Power Take-Offs

Auxiliary drive shaft

Auxiliary drive pulleys

Front stub shaft

Pulleys

Protection System

Gas valve

Explosion relief valves

Starting System

Air pressure regulator

Air silencer

JW heaters

Battery sets (24-volt dry)

Battery accessories

General

Flywheel guard removal

Engine barring group

Premium 8:1 pistons

TECHNICAL DATA
G3508 LE Gas Petroleum Engine — 1400 rpm

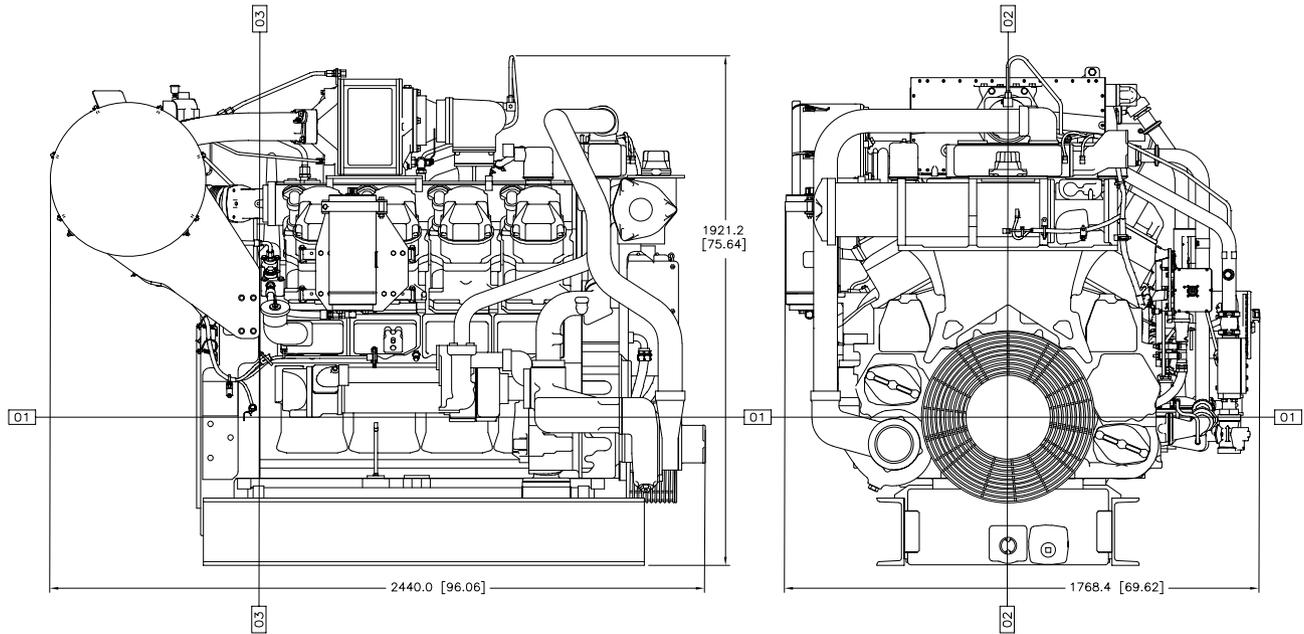
		2 g NOx NTE Rating DM8621-2
Engine Power		
@ 100% Load	bkW (bhp)	500 (670)
@ 75% Load	bkW (bhp)	375 (502)
Engine Speed		
Max Altitude @ Rated Torque and 38°C (100°F)	rpm m (ft)	1400 609.6 (2000)
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	%	25
SCAC Temperature		
	°C (°F)	54 (130)
Emissions*		
NOx	g/bkW-hr (g/bhp-hr)	2.68 (2)
CO	g/bkW-hr (g/bhp-hr)	2.47 (1.84)
CO ₂	g/bkW-hr (g/bhp-hr)	627 (468)
VOC**	g/bkW-hr (g/bhp-hr)	0.41 (0.3)
Fuel Consumption***		
@ 100% Load	MJ/bkW-hr (Btu/bhp-hr)	10.63 (7510)
@ 75% Load	MJ/bkW-hr (Btu/bhp-hr)	11.22 (7936)
Heat Balance		
Heat Rejection to Jacket Water		
@ 100% Load	bkW (Btu/min)	319.8 (18,204)
@ 75% Load	bkW (Btu/min)	282 (16,013)
Heat Rejection to Aftercooler		
@ 100% Load	bkW (Btu/min)	80 (4555)
@ 75% Load	bkW (Btu/min)	56.1 (3191)
Heat Rejection to Exhaust		
@ 100% Load (LHV to 77° F / 25° C)	bkW (Btu/mn)	481.9 (27,406)
@ 75% Load (LHV to 77°) (LHV to 77° F / 25° C)	bkW (Btu/mn)	372.8 (21,203)
Exhaust System		
Exhaust Gas Flow Rate (@ stack temp., 14.5 psig)		
@ 100% Load	m ³ /min (cfm)	115.7 (4086)
@ 75% Load	m ³ /min (cfm)	89.57 (3163)
Exhaust Stack Temperature		
@ 100% Load	°C (°F)	529 (985)
@ 75% Load	°C (°F)	525 (977)
Intake System		
Air Inlet Flow Rate		
@ 100% Load	m ³ /min (scfm)	39.53 (1396)
@ 75% Load	m ³ /min (scfm)	30.72 (1085)
Gas Pressure		
	kPag (psig)	242-276 (35-40)

*at 100% load and speed, all values are listed as not to exceed

**Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ

***ISO 3046/1

GAS PETROLEUM ENGINE



DIMENSIONS		
Length	mm (in)	2440.0 (96.06)
Width	mm (in)	1768.4 (69.62)
Height	mm (in)	1921.2 (75.64)
Shipping Weight	kg (lb)	5420 (11,950)

Note: General configuration not to be used for installation. See general dimension drawings for detail (drawing #315-3136).

Dimensions are in mm (inches).

RATING DEFINITIONS AND CONDITIONS

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards.

Transient response data is acquired from an engine/generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions.

Conditions: Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in. Hg) and 15° C (59° F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in. Hg) and 15.6° C (60.1° F). Air flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and 25° C (77° F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and stack temperature.

Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, S•O•S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.