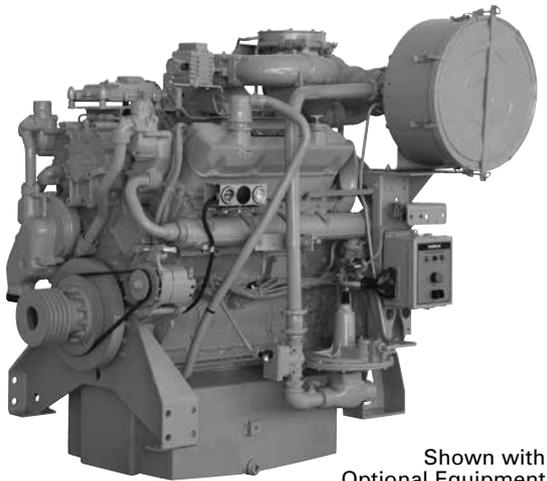




G3408C (LE) Gas Petroleum Engine

317 bkW
(425 bhp)
1800 rpm

2.0 g/bhp-hr NOx (NTE)



Shown with
Optional Equipment

CAT® ENGINE SPECIFICATIONS

V-8, 4-Stroke-Cycle

Bore	137 mm (5.4 in)
Stroke	152 mm (6.0 in)
Displacement	18 L (1099 in ³)
Aspiration	Turbocharged-Aftercooled Governor and Protection
Combustion	Woodward PROACT II Low Emission (Lean Burn)
Engine Weight, net dry (approx)	2245 kg (4950 lb)
Power Density	5.3 kg/kW (8.7 lb/bhp)
Power per Displacement	23.6 bhp/L
Engine Only Cooling System Capacity	54.9 L (14.5 gal)
Lube Oil System (refill)	147.63 L (39 gal)
Oil Change Interval	750 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel and Flywheel Housing	SAE No. 0
Flywheel Teeth	136

FEATURES

Engine Design

- Improved 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 2007/08

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.

Cat® Electronic Ignition System (EIS)

Detonation sensitive timing protects the engine against detonation damage. Higher voltage and longer spark duration mean easier starts, fewer misfires, and smoother operation. Diagnostic codes help pinpoint cylinder and component of interest. Spark plug maintenance codes identify spark plug condition.

Ease of Operation

- Deep sump oil pan has a larger capacity for normal 750-hour oil change intervals
- 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

Caterpillar 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

Air cleaner — single element with service indicator

Control System

Electronic governor
Air/fuel ratio control

Cooling System

Thermostats and housing
Jacket water pump
Aftercooler water pump
Aftercooler core

Exhaust System

Watercooled exhaust manifolds
Dry exhaust elbow

Flywheel & Flywheel Housing

SAE No. 0 flywheel
SAE No. 0 flywheel housing
SAE standard rotation

Fuel System

Gas pressure regulator (1.5 to 5 psi gas supply required)
Natural gas carburetor

Ignition System

Cat Electronic Ignition System (EIS) with detonation sensitive timing

Instrumentation

Service meter

Lube System

Crankcase breather — top mounted
Oil cooler
Oil filter — RH
Oil pan — deep sump
Oil filler — RH in valve cover and RH dipstick

Mounting System

Engine supports

Protection System

Detonation sensitive timing control
Shutoff

General

Paint — Cat yellow
Crankshaft vibration damper and pulleys
Lifting eyes
Cylinder block inspection covers

OPTIONAL EQUIPMENT

Air Inlet System

Air cleaner — two-stage
Air inlet adapter
Precleaner
Air cleaner rain cap

Charging System

Battery chargers
Charging alternators
Ammeter gauge
Ammeter gauge and wiring
Control mounting

Cooling System

Radiators
Blower fan and fan drives for customer supplied radiators
Expansion tank
Heat exchangers

Exhaust System

Flexible fittings
Elbows
Flanges
Rain caps
Mufflers
Exhaust manifold — instrument holes at each port

Fuel System

Dual gas regulator
Carburetor kits
Fuel filter

Ignition System

CSA ignition
Ignition ground wiring harness
Power supply

Instrumentation

Alarm module
Gauges and instrument panels

Mounting System

Vibration isolators

Power Take-offs

Auxiliary drive pulleys
Enclosed clutch and clutch support
Front stub shaft
Flywheel stub shaft
Pulley removal

Protection System

Gas valves
Status control box interconnect wiring harness

Starting System

Air starting motor
Air pressure regulator
Air silencer
Electric start control
Electric starting motors — single 24V
Starting aids
Battery sets — (24V dry), cables, and rack

General

Special paint



G3408C (LE) GAS PETROLEUM ENGINE

317 bkW (425 bhp)

TECHNICAL DATA

G3408C (LE) Gas Petroleum Engine — 1800 rpm

		DM8642-01	DM5778-01
Engine Power			
@ 100% Load	bkW (bhp)	317 (425)	317 (425)
@ 75% Load	bkW (bhp)	238 (319)	238 (319)
Engine Speed			
Max Altitude @ Rated Torque and 38°C (100°F)	rpm	1800	1800
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	m (ft)	914.4 (3000)	1219.2 (4000)
	%	32	22
SCAC Temperature			
	°C (°F)	54 (130)	54 (130)
Emissions*			
NOx	g/bkW-hr (g/bhp-hr)	2.68 (2)	2.68 (2)
CO	g/bkW-hr (g/bhp-hr)	2.17 (1.62)	2.27 (1.69)
CO ₂	g/bkW-hr (g/bhp-hr)	632 (471)	625 (466)
VOC**	g/bkW-hr (g/bhp-hr)	0.46 (0.34)	0.43 (0.32)
Fuel Consumption***			
@ 100% Load	MJ/bkW-hr (Btu/bhp-hr)	10.75 (7595)	9.96 (7043)
@ 75% Load	MJ/bkW-hr (Btu/bhp-hr)	11.0 (7774)	10.28 (7266)
Heat Balance			
Heat Rejection to Jacket Water			
@ 100% Load	bkW (Btu/min)	262.33 (14,932)	262 (14,914)
@ 75% Load	bkW (Btu/min)	222.2 (12,651)	234 (13,297)
Heat Rejection to Aftercooler			
@ 100% Load	bkW (Btu/min)	50.04 (2848)	41.9 (2383)
@ 75% Load	bkW (Btu/min)	32.8 (1867)	25.9 (1475)
Heat Rejection to Exhaust			
@ 100% Load	bkW (Btu/min)	254.66 (14,495)	196 (11,144)
@ 75% Load	bkW (Btu/min)	182.64 (10,396)	130 (7383)
Exhaust System			
Exhaust Gas Flow Rate			
@ 100% Load	m ³ /min (cfm)	66.37 (2344)	55.13 (1947)
@ 75% Load	m ³ /min (cfm)	48.48 (1712)	37.69 (1331)
Exhaust Stack Temperature			
@ 100% Load	°C (°F)	430 (806)	361 (682)
@ 75% Load	°C (°F)	406.11 (763)	336 (637)
Intake System			
Air Inlet Flow Rate			
@ 100% Load	m ³ /min (scfm)	25.97 (917)	23.87 (843)
@ 75% Load	m ³ /min (scfm)	19.62 (693)	16.91 (597)
Gas Pressure			
	kPag (psig)	10-34.47 (1.5-5)	10-34.47 (1.5-5)

*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

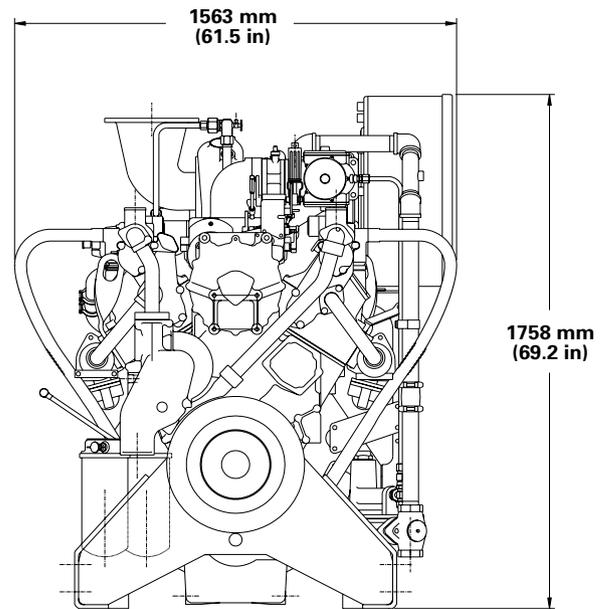
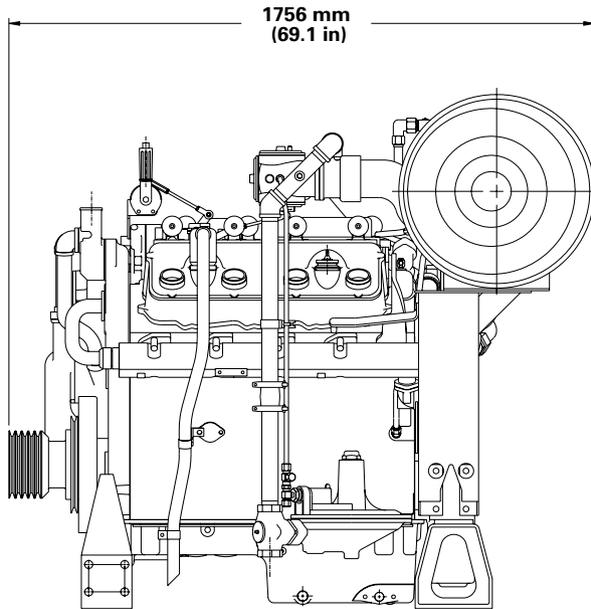
***ISO 3046/1



G3408C (LE) GAS PETROLEUM ENGINE

317 kW (425 bhp)

GAS PETROLEUM ENGINE



PACKAGE DIMENSIONS		
Length	mm (in)	1756 (69.1)
Width	mm (in)	1563 (61.5)
Height	mm (in)	1758 (69.2)
Shipping Weight	kg (lb)	2245 (4950)

Note: General configuration not to be used for installation. See general dimension drawings for detail.

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, 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.