

Shown with
Optional
Equipment

CAT® ENGINE SPECIFICATIONS

In-line 6, 4-Stroke-Cycle

Emissions Settings	0.5% O ₂ and 2.0% O ₂
Bore	137 mm (5.4 in.)
Stroke	165 mm (6.5 in.)
Displacement	18 L (1099 cu. in.)
Aspiration	Naturally Aspirated or Turbocharged-Aftercooled
Governor and Protection	Woodward PSG
Combustion	Rich Burn
Engine Weight, net dry (approx)	1360.8 kg (3000 lb)
Power Density	6.7 kg/kW (11 lb/bhp)
Power per Displacement	18.6 bhp/L
Total Cooling System Capacity	37.9 L (10 gal)
Jacket Water	30.3 L (8 gal)
SCAC	7.6 L (2 gal)
Lube Oil System (refill)	75.7 L (20 gal)
Oil Change Interval	750 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel and Flywheel Housing	SAE No. 1
Flywheel Teeth	113

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

- Rich burn engine design easily meets emission requirements
- 0.5% O₂ rating meets U.S. EPA Spark Ignited Stationary NSPS Emissions for 2007/8 and 2010/11 with the use of aftermarket AFRC and TWC

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

Air cleaner — heavy-duty
Air cleaner rain cap
Service indicator

Control System

Governor — Woodward PSG mechanical
Governor locking — positive 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. 1 flywheel
SAE No. 1 flywheel housing
SAE standard rotation

Fuel System

Gas pressure regulator
Natural gas carburetor

Ignition System

Altronic III ignition system

Instrumentation

Service meter

Lube System

Crankcase breather — top mounted
Oil cooler
Oil filter — RH
Auxiliary oil reservoir
Oil pan — full sump
Oil filler in valve cover, dipstick — RH

Mounting System

Engine supports

Protection System

Shutoffs

General

Paint — Cat yellow
Crankshaft vibration damper and drive pulleys
Lifting eyes

OPTIONAL EQUIPMENT

Air Inlet System

Precleaner

Charging System

Battery chargers
Charging alternators
Charging alternators f/u/w c customer supplied shutoffs
Ammeter gauge
Ammeter gauge and wiring
Control mounting

Control System

PSG Woodward governor

Cooling System

Radiators
Non-sparking blower fan
Blower fans for customer supplied radiators
Fan drives for customer supplied radiators
ATAAC conversion
Aftercooler
Expansion tank
Heat exchangers

Exhaust System

Flexible fittings
Elbow
Flange
Pipe
Rain cap
Muffler

Fuel System

Fuel filter
Natural gas valve and jet kits

Ignition System

CSA shielded ignition
Wiring harness

Instrumentation

Gauges and instrument panels

Lube System

Auxiliary oil reservoir removal
Lubricating oil

Mounting System

Vibration isolators

Power Take-Offs

Auxiliary drive pulleys
Enclosed clutch and clutch support
Front stub shaft and flywheel stub shaft

Protection System

Gas valves

Starting System

Air starting motor
Electric air start control
Air pressure regulator
Air silencer
Electric starting motor — single 12- and 24-volt
Starting aids
Battery sets, cables, and rack

General

Damper guard

TECHNICAL DATA
G3406 Gas Petroleum Engine — 1800 rpm

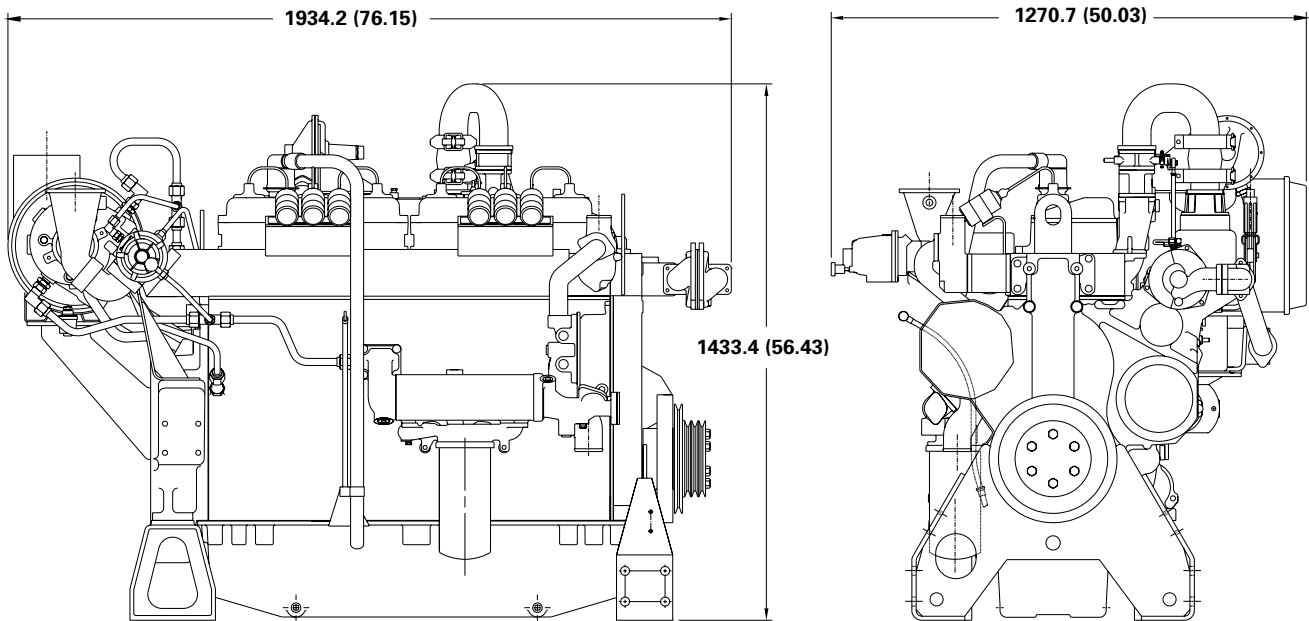
		DM5302-01	TM8513-05	DM5084-03
Engine Power				
@ 100% Load	bkW (bhp)	242 (325)	160 (215)	205 (276)
@ 75% Load	bkW (bhp)	192 (244)	120 (161)	154 (207)
Engine Speed				
	rpm	1800	1800	1800
Max Altitude @ Rated Torque and 38°C (100°F)	m (ft)	1219.2 (4000)	0	914.4 (3000)
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	%	55	45	0
SCAC Temperature				
	°C (°F)	54 (130)	—	—
Emissions*				
NOx	g/bkW-hr (g/bhp-hr)	35.29 (26.31)	37.47 (27.94)	20.69 (15.43)
CO	g/bkW-hr (g/bhp-hr)	2.15 (1.6)	1.9 (1.4)	20.69 (15.42)
CO ₂	g/bkW-hr (g/bhp-hr)	620 (463)	685 (511)	699 (521)
VOC**	g/bkW-hr (g/bhp-hr)	0.21 (.16)	0.24 (0.18)	—
Fuel Consumption***				
@ 100% Load	MJ/bkW-hr (Btu/bhp-hr)	9.96 (7037)	10.99 (7767)	10.49 (7418)
@ 75% Load	MJ/bkW-hr (Btu/bhp-hr)	10.53 (7443)	11.75 (8304)	11.44 (8082)
Heat Balance				
Heat Rejection to Jacket Water				
@ 100% Load	bkW (Btu/min)	200 (11,401)	160 (9081)	223 (12,709)
@ 75% Load	bkW (Btu/min)	173 (9822)	138 (7868)	178 (10,156)
Heat Rejection to Aftercooler				
@ 100% Load	bkW (Btu/min)	12.6 (716)	—	6.53 (372)
@ 75% Load	bkW (Btu/min)	7.9 (450)	—	3.86 (220)
Heat Rejection to Exhaust				
@ 100% Load	bkW (Btu/min)	161 (9180)	128 (7292)	140 (7991)
@ 75% Load	bkW (Btu/min)	125 (7091)	99 (5636)	105 (6022)
Exhaust System				
Exhaust Gas Flow Rate				
@ 100% Load	m ³ /min (cfm)	38.74 (1368)	30.04 (1061)	33.1 (1168)
@ 75% Load	m ³ /min (cfm)	30.33 (1071)	23.84 (842)	25.4 (900)
Exhaust Stack Temperature				
@ 100% Load	°C (°F)	526 (978)	560 (1040)	540 (1004)
@ 75% Load	°C (°F)	512 (953)	535 (995)	505 (942)
Intake System				
Air Inlet Flow Rate				
@ 100% Load	m ³ /min (scfm)	13 (459)	9.68 (342)	10.84 (383)
@ 75% Load	m ³ /min (scfm)	10.36 (366)	7.93 (280)	8.72 (308)
Gas Pressure				
	kPag (psig)	137-145 (19.9-21)	10.34-34.47 (1.5-5)	10.24-34.47 (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

GAS PETROLEUM ENGINE



PACKAGE DIMENSIONS		
Length	mm (in.)	1934.2 (76.15)
Width	mm (in.)	1270.7 (50.03)
Height	mm (in.)	1433.4 (56.43)
Shipping Weight	kg (lb)	1360.8 (3000)

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

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, 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.