CG137-8 Gas Engine

298 bkW (400 bhp) @ 1800 rpm
0.5% O2 Rating

Actual configuration may vary from displayed imaged.

SPECIFICATIONS

V-8, 4 -Stroke-Cycle
Bore.....137 mm (5.4 in)
Stroke.....152 mm (6.0 in)
Displacement.....18 L (1099 cu. in)
Aspiration.....Turbocharged After Cooled
Governor and Protection..... Electronic (ADEM™4)
Combustion..... Rich Burn - Customer Supplied Catalyst
Cooling System Capacity Total ..... 58.7 L (15.5 Gal)
JW..... 54.9 L (14.5 Gal)
SCAC..... 3.8 L (1 Gal)
Lube Oil System (refill) ..... 150 L (40 Gal)
Oil Change Interval ..... 750 hours
Rotation (from flywheel end)..... Counterclockwise
Flywheel Teeth 136

FEATURES AND BENEFITS

Engine Design

- Tough and durable, with field proven head design.
- When configured with customer-supplied three-way catalyst, the engine is capable of meeting NSPS and on-attainment area emissions levels.
- Improved fuel tolerance allows engine to run on a broad range of fuels.

Advanced HMI

Intuitive and easy-to-use 8-inch color and touch enabled HMI allows for ECM configuration and monitoring system updates, serve tool tests, histograms, screen snapshots, and product status reports, all without the need of a laptop.

Advanced Digital Engine Management

ADEM™4 (A4) engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system.

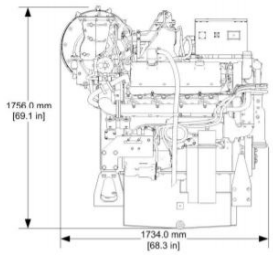
Full Range of Attachments

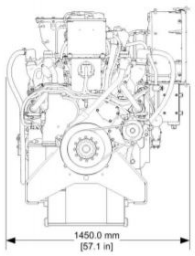
Large variety of factory-installed package attachments reduces packaging time.

Testing

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

DIMENSIONS





Length	1734 mm	68.3 in
Width	1450 mm	57.1 in
Height	1756 mm	69.1 in
Weight	2200 kg	4850 lb

Note: Do not use for installation design. See general dimension drawings for detail. Dimensions are dependent on generator and any options selected.

Full listing of equipment (standard and optional), along with additional features and benefits can be found at **www.cat.com/oilandgas** or through your local dealer.

LEHW0340-02
Caterpillar: Confidential Green

TECHNICAL DATA

Performance Number		EM3829-05
Rating	% O2	0.5
Engine Power	bkW (bhp)	298 (400)
Engine Speed	rpm	1800
Max Altitude @ Rated Torque and 38°C (100°F) m (ft)		1524 (5000)
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	%	25
Temperature		
JW	°C (°F)	99 (210)
SCAC	°C (°F)	54 (130)
Emissions (NTE)*		
NOx	g/bkW-hr (g/bhp-hr)	15.63 (11.65)
CO	g/bkW-hr (g/bhp-hr)	15.63 (11.65)
CO_2	g/bkW-hr (g/bhp-hr)	607 (452)
VOC**	g/bkW-hr (g/bhp-hr)	0.32 (0.24)
Fuel Consumption ***	MJ/bkW-hr (Btu/bhp-hr)	10.51 (7431)
Heat Balance		
Heat Rejection to Jacket Water	bkW (Btu/min)	295 (16780)
Heat Rejection to Oil Cooler	bkW (Btu/min)	40 (2266)
Heat Rejection to Aftercooler	bkW (Btu/min)	17 (980)
Heat Rejection to Exhaust LHV To 25°C (77°F)	bkW (Btu/min)	185 (10540)
Heat Rejection to Atmosphere	bkW (Btu/min)	35 (1980)
Exhaust System		
Exhaust Gas Flow Rate	$N*m^3$/min (scfm)	44.09 (1557)
Exhaust Stack Temperature	°C (°F)	505 (942)
Intake System		
Air Inlet Flow Rate	$N*m^3$/min (scfm)	15.04 (531)
Gas Pressure	kPag (psig)	138 - 276 (20 - 40)

* at 100% load and speed, listed as not to exceed
** Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ
*** ISO 3046/1

OPTIONAL EQUIPMENT

Air Inlet System
- Precleaner
- Rain Cap

Charging Alternator
- 24 V, 65A CSA alternator

Exhaust System
- Exhaust flex fitting
- Exhaust elbow
- Exhaust flange - ANSI

Fuel System
- Fuel filter

Instrumentation
- Product Link™ cellular radio - external antenna
- Product Link™ cellular radio - internal antenna
- Product Link™ satellite radio - external antenna
- 8-inch HMI touch screen panel
- 15', 25', 50' interconnect harness

Starting System
- Air pressure regulator
- Air strt silencer
- Vane starter
- Electric Starter
- Turbine starter

Torsional Vibration Analysis

STANDARD EQUIPMENT

Air Inlet System
- Air Cleaner - single element with service indicator
- Optional air inlet adapter with rain cap - recommended for weather protection.

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 treated water ans sea air atmosphere
- Exhaust manifolds - watercooled
- Exhaust elbow - dry 203 mm (8 in)

Flywheels and Flywheel Housings
- Flywheel, SAE No. 14 or 18
- Flywheel housing, SAE No. 0
- SAE standard rotation

Control System
- ADEM™4 (A4) Engine Control Module (ECM)
- CSA Class 1, Division 2, Group D

Fuel System
- Gas pressure regulator
- Electronic carburator
- Single gas shutoff

Lube System
- Crankcase breather - top mounted
- Oil cooler
- Oil filter - RH
- Oil filter in valve cover, dipstick - RH

Protection System
- ADEM™4 (A4) protection. The following includes alarm and shutdown
  - Inlet manifold air temperature
  - Inlet manifold air pressure
  - Oil pressure
  - Oil temperature
  - Coolant temperature
  - Engine speed (overspeed)
  - Battery voltage
  - Aftertreatment TWC inlet/outlet temperature
  - Exhaust port temperature

General
- Crankshaft vibration damper and drive pulleys
- Lifting eyes
- Cylinder block inspection covers

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.

LEHW0340-02
Caterpillar: Confidential Green