

FEATURES

• CATERPILLAR® QUALITY THROUGHOUT

Cat gas engines incorporate many of the same proven components as their diesel counterparts – including the block, crankshaft, main bearings, camshaft and connecting rods. However, by operating at 40 to 50 % lower cylinder pressure and bearing loads than diesels, they offer the extra benefit of prolonged life.

Caterpillar gas engines inherit more from their diesel counterparts than just strength. They are backed by the same support system recognized as one of the most sophisticated and dependable in the world.

• APPLICATION FLEXIBILITY

Broad operating speed range and the ability to burn a wide spectrum of fuels.

• LOW EMISSIONS

1gram/hp hr NOx level at 900 RPM.

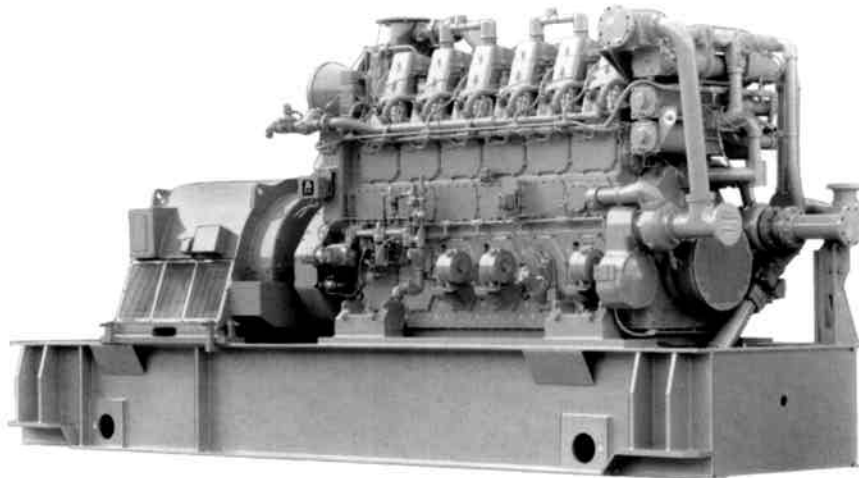
• SUPERIOR TECHNOLOGY

Represent the latest technology in engine design. The engine is offered in a low emission turbocharged and aftercooled configuration only. This configuration offers:

- High energy ignition systems for consistent firing
- Highly efficient enriched prechamber design for complete combustion
- Modern component design such as deep cup, oil gallery piston
- Electronic controls to optimize performance.

• RESULT

Low emissions and BSFC under all operating conditions.



Arrangement may be shown with optional equipment

STANDARD PACKAGE ARRANGEMENT

GENERAL

Flywheel and Ring Gear
Crankcase Explosion Doors
High Efficiency Turbos
Aftercooler
Engine Barring Device
Torsional Vibration Damper
Protective Guards

COOLING SYSTEM

Jacket Water Pump
Water Regulators, 189° F
Separate Circuit Gear Driven Pump For Aftercooler/Oil Cooler Circuit
Expansion Tank
Jacket Water Heater

IGNITION SYSTEM

Altronic III Ignition with Variable Timing

CONTROLS

Electronic Supervisory System:

Governing
Air/Fuel Ratio Control
Timing Optimization

Instrument Panel to Monitor:

Oil Pressure and Temperature
Oil Pressure Differential
Intake Manifold Pressure
Intake Manifold Temperature

Crankcase Pressure
Water Temperature
Exhaust Temperature
Service Meter Hours
Engine Speed

FUEL SYSTEM

Fuel Filter
Shipped Loose Gas
Pressure Regulator

PROTECTION

Misfire Sensing
Detonation Sensing and Compensation

Energized to Run Shutdowns For:
Engine Overspeed

Oil Pressure
Water Pressure
Crankcase Pressure

LUBE OIL SYSTEM

Gear Driven Lube Oil Pump
Engine Mounted Lube Oil Filters
Engine Mounted Lube Oil Cooler
Prelube/Postlube System
Sump Pump Connections

AIR INTAKE SYSTEM

Shipped Loose Air Cleaners
Installed Turbo Air Inlet Adapters

OPTIONAL ATTACHMENTS

Caterpillar Installed Generators
Generator Set Base

G3606 GENERAL SPECIFICATIONS - 60 Hz

CAT 3606 ENGINE

Type — Spark Ignited	No. of Cylinders — 6
Displacement — 7765 cu in	Bore — 300 mm
Compression Ratio — 9.2:1	Stroke — 300 mm

Brushless revolving field generator with rotating brushless exciter. 90°C rise over 40°C ambient for use up to 1000 meters altitude. Insulation Class F. Open drip proof IP23 construction with terminal box sealed to IP44. Output 6 leads in terminal box designed for bottom entry cables. Includes two self lubricated sleeve bearings, 100 ohm RTD's, two per phase in stator and one per bearing. Electrical features include voltage regulator with three phase sensing, cross current compensation, underfrequency protection with automatic reset, volts per hertz operation, overvoltage protection with manual reset, permanent magnet exciter, space heaters installed with thermostat, 96% minimum efficiency at .8 power factor.

GENERATOR AND GENERATOR ATTACHMENTS

Caterpillar gen sets are available with a variety of generators, matched by Caterpillar. The description here is typical.

Available voltages includes 480, 4160, and 13,800.

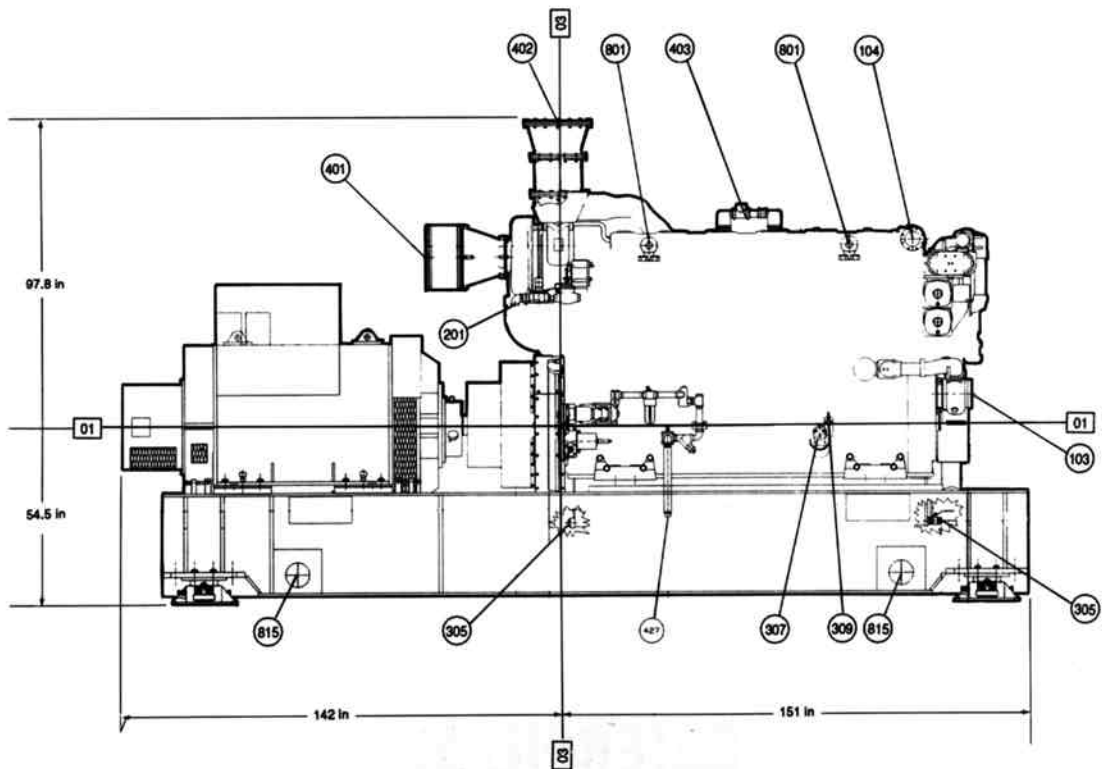
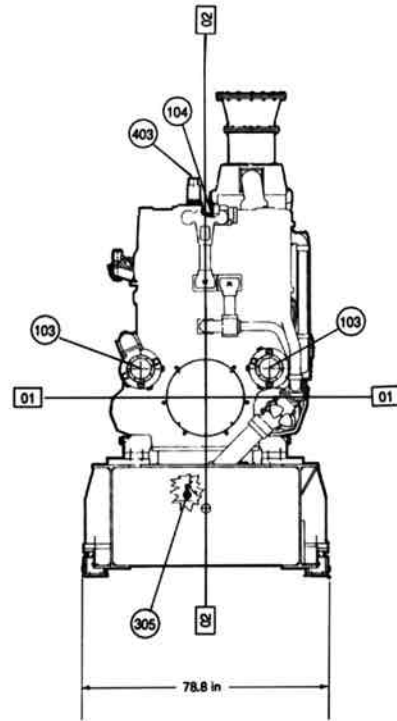
TECHNICAL DATA

			Continuous	
			TA 90 LE	TA 130 LE
Rating Information	Electrical Output @ 0.8PF w/o Fan	kW	1135	1075
	Voltage	V	480	480
	Compression Ratio		9.2	9.2
Package Dimensions	Min Gas Pressure Required	PSI	45	45
	Shipping Weight w/Generator and Base	lb	74,970	74,970
	Gen Set Length	in	293	293
	Gen Set Width	in	78.8	78.8
Engine Performance Data @ Rated Conditions	Fuel Consumption (100% Load)	Btu/hp-hr	6677	6690
	Fuel Consumption (75% Load)	Btu/hp-hr	6943	6960
	Air Inlet Flow Rate	scfm	4321	3999
	Exhaust Gas Flow Rate @ Stack Temp	cfm	844	858
	Heat Rejection to Jacket Water (Total)	Btu/min	16209	16235
	Heat Rejection to Exhaust (To 350°)	Btu/min	40630	38823
	Heat Rejection to Aftercooler	Btu/min	11002	8968
	Heat Rejection to Atmosphere From Engine	Btu/min	7776	8195
Exhaust Gas Stack Temperature	Deg. F	844	858	

90 refers to aftercooler water inlet temperature in °F (32°C).
 130 refers to aftercooler water inlet temperature in °F (54°C).
 All data is based on standard conditions.
 These ratings do not allow for overload capability.

G3606 GAS ENGINE GENERATOR SET PACKAGE

- 01 - CENTERLINE OF CRANKSHAFT
- 02 - CENTERLINE OF ENGINE
- 03 - REAR FACE OF CYL BLOCK
- 103 WATER INLET
- 104 WATER OUTLET
- 305 OIL DRAIN
- 307 OIL FILLER
- 309 OIL LEVEL GAUGE
- 340 OIL COOLER
- 401 AIR INLET
- 402 EXHAUST
- 403 BREATHER OUTLET
- 427 AIR STARTING MOTOR INLET
- 801 LIFTING EYE
- 815 LIFTING LOCATION



Note: General Configuration not to be used for installation.

CONDITIONS & DEFINITIONS

Ratings are based on SAE J1349 standard conditions of 100 kPa (26.61 in)Hg and 25°C (77°F); ISO 3046, DIN 6271, BS 5514 Standard conditions of 100 kPa (29.61 in)Hg, 27°C (81°F); and API 7B-11C standard conditions of 99 kPa (29.38 in)Hg, 29°C (85°F) also apply.

Ratings are based on dry natural gas having a low heat value of 35.22 MJ/m³ (905 btu/ft³). Variations in altitude, temperature and gas composition from standard conditions may require a reduction in engine horsepower.

Turbocharged-aftercooled ratings apply to 1525 m (5,000 ft) and 25°C (77°F). For applications which exceed these limits contact your Caterpillar Dealer.

Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

CATERPILLAR®