

STATE OF LOUISIANA
Department of Public Safety and Corrections
Office of State Fire Marshal Code Enforcement and Building Safety
8181 Independence Boulevard
Baton Rouge, Louisiana 70806
225-925-4920

H "BUTCH" BROWNING
FIRE MARSHAL

RENOVATION

ROBERT WILTZE
P O BX 2025
COVINGTON, LA 70434-0000

RE: P0388709
3923 BIENVILLE AVE
3923 BIENVILLE AVE
NEW ORLEANS, LA 70119

NFPA 101, 2009

BUSINESS

Dear Applicant:

This is to advise that we have reviewed the drawings and specifications for the subject proposed construction and have determined that they appear to satisfactorily comply with the adopted laws, codes, rules and regulations of The State Fire Marshal subject to the following requirements:

1. **Scope of Work: This review is for the installation of a new stand alone generator fueled by natural gas.**

NOTE: Installation is to comply with NFPA 37 & NFPA 54.

NOTE: THE FOLLOWING COMMENTS IDENTIFY ISSUES FOR INFORMATIONAL AND CAUTIONARY PURPOSES OR ISSUES THAT COULD NOT BE VERIFIED IN THE SUBMITTED DOCUMENTS.

2. **54:5.1.2.1 When additional appliances are being connected to a gas piping system, the existing piping shall be checked to determine whether it has adequate capacity (see 5.4.3).**
3. **54:5.3.1 Interconnections Supplying Separate Users. Where two or more meters, or two or more service regulators where meters are not provided, are located on the same premises and supply separate users, the gas piping systems shall not be interconnected on the outlet side of the meters or service regulators.**
4. **54:5.3.2.1 Where a supplementary gas for standby use is connected downstream from a meter or a service regulator where a meter is not provided, equipment to prevent backflow shall be installed.**
5. **54:7.1.1 Clearances. Underground gas piping shall be installed with sufficient clearance from any other underground structure to avoid contact therewith, to allow maintenance, and to protect against damage from proximity to other structures. In addition, underground plastic piping shall be installed with sufficient clearance or shall be insulated from any source of heat so as to prevent the heat from impairing the serviceability of the pipe.**

6. **54:7.1.2 Protection Against Damage.** Means shall be provided to prevent excessive stressing of the piping where there is heavy vehicular traffic or soil conditions are unstable and settling of piping or foundation walls could occur. Piping shall be buried or covered in a manner so as to protect the piping from physical damage. Piping shall be protected from physical damage where it passes through flower beds, shrub beds, and other such cultivated areas where such damage is reasonably expected.

7. **54:7.1.2.1 Cover Requirements.** Underground piping systems shall be installed with a minimum of 12 in. (300 mm) of cover.

(A) The minimum cover shall be increased to 18 in. (460 mm) if external damage to the pipe or tubing from external forces is likely to result.

(B) Where a minimum of 12 in. (300 mm) of cover cannot be provided, the pipe shall be installed in conduit or bridged (shielded).

8. **37:5.4.3* Automatic Safety Shutoff Valves.** The automatic safety shutoff valves shall stop the flow of fuel in the event the engine stops for any cause.

Changes to construction in the field which are not consistent with the reviewed documents are not authorized unless reviewed by this office for compliance with Code. Modifications to reviewed plans must be submitted to this office by the Architect/Civil Engineer for review prior to final inspection. If an Architect or Civil Engineer is not required by RS 37:155, revisions shall be submitted by the Owner. Submittals shall include plans, completed application, a minimum \$55.00 review fee, and a copy of the most current plan review letter.

Compliance with code requirements for fire protection systems, such as Fire Alarm, Sprinkler and Suppression Systems, is determined by separate shop drawing submittal and is not included in this review.

This review applies to work indicated in the drawings or specifications. Existing portions of the facility of building unaffected by the new work shall comply with LAC 55:103B thru 55:103F.

This review shall in no way permit and/or authorize any omissions or deviations from the specific requirements of the adopted codes, rules and regulations in accordance with R.S. 40:1574.1(B).

This review is valid for 180 days from the date of this letter. Construction permits must be issued and/or construction must commence within this time period.

This office requires certification of the completed project in accordance with the approved documents (certificate enclosed).

Occupancy of the project will not be permitted until we receive the completed certificate and a satisfactory inspection of the completed construction has been made by this office.

To arrange for inspection of the project, please contact the District Office at the phone number below two (2) to three (3) weeks in advance. The plans stamped reviewed by this office must be available on job site at time of inspection. Certificate of completion must be provided to the inspecting Deputy for final inspection.

REVIEWED BY:
JOHN LAUDUN
ARCHITECT

CC:
Gambit Communications
Bhola Dhume
New Orleans Fire Department*
New Orleans District* 5044557313

Dammon Engineering, Inc.

dammonengineering.com

1095 Florida Ave.
Slidell, LA 70458

P.O. Box 2830
Slidell, LA 70459

985-649-5832
FAX 985-641-5950

November 4, 2010

Mr. John Laudun
Office of State Fire Marshal
8181 Independence Blvd.
Baton Rouge, LA 70806

RE: P0388709
3929 Bienville Ave
New Orleans, LA 70119

Dear Mr. Laudun,

With regard to the above referenced project. Please find attached a revised coversheet with a scaled site plan. This is a natural gas generator and there is no fuel storage for this project. There is no fuel storage or incinerator on the property.

Manufacturer's data sheet is attached.

If you have any questions, please feel free to call.

Sincerely,



David Dammon
Project Manager

RECEIVED

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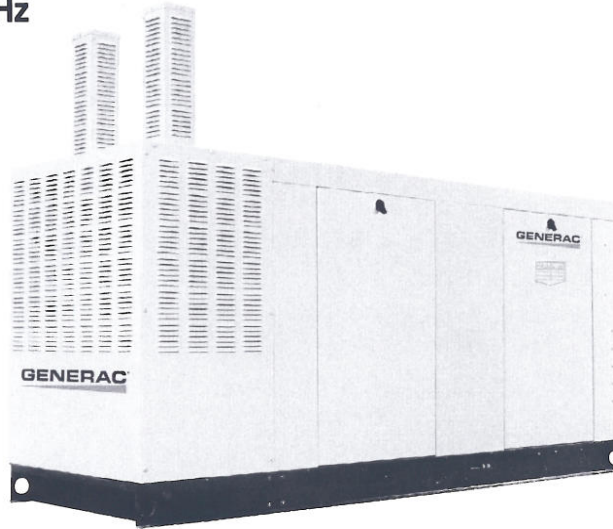
STATE FIRE MARSHAL
ARCHITECTURAL SECTION

LA. S.F.M. PLAN REVIEW
PO# _____ REVIEWER _____
READING FILE DATE MO _____ YR _____
ORIG TO: _____
SENDER _____ APPL. _____ OWNER _____
CC'S _____
COPYWHATPGS. _____
B.R. _____ N.O. _____ ALEX _____ LAF. _____
SHREVE _____ HO. FILE _____ HO DEPT. _____
DET FILE _____ HR FILE _____ NON-REQ. SYST. _____
OTHER _____

QT100

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
100 kW 60 Hz



GENERAC 6.8L ENGINE

Naturally Aspirated
Gaseous Fueled
Gear Drive
Meets EPA Emission Regulations

STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Low fuel pressure
- Overspeed automatic shutdown
- Adjustable cranking timer
- Adjustable exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Oil drain extension to frame rail
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery and battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor

FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated digital voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with H-100 microprocessor control panel
- Built-in kW, kVAR and power factor meters
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint

GENERAC®

APPLICATION & ENGINEERING DATA

QT100

GENERATOR SPECIFICATIONS

TYPE	Synchronous
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION.....	<3.5%
TELEPHONE INTERFERENCE FACTOR (TIF).....	<50
ALTERNATOR OUTPUT LEADS 3 PHASE.....	4 wire
BEARINGS.....	Sealed Ball
COUPLING.....	Gear Drive
LOAD CAPACITY (STANDBY RATING).....	100 kW
EXCITATION SYSTEM.....	Brushless

NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.

VOLTAGE REGULATOR

TYPE	Full Digital
SENSING.....	3 Phase
REGULATION.....	± 1/4%
FEATURES.....	Built into H-100 Control Panel V/F Adjustable Adjustable Voltage and Gain

GENERATOR FEATURES

- Revolving field heavy duty generator
- Quiet drive coupling
- Operating temperature rise 120 °C above a 40 °C ambient
- Insulation is Class H rated at 150 °C rise
- All prototype models have passed three phase short circuit testing

CONTROL PANEL FEATURES

- TWO FOUR LINE LCD DISPLAYS READ:
 - Voltage (all phases)
 - Power factor
 - kVAR
 - Engine speed
 - Run hours
 - Fault history
 - Coolant temperature
 - Low oil pressure shutdown
 - Overvoltage
 - Low coolant level
 - Not in auto position (flashing light)
 - ATS selection
 - Current (all phases)
 - kW
 - Transfer switch status
 - Low fuel pressure
 - Service reminders
 - Oil pressure
 - Time and date
 - High coolant temperature shutdown
 - Overspeed
 - Low coolant level
 - Exercise speed
- INTERNAL FUNCTIONS:
 - I²T function for alternator protection from line to neutral and line to line short circuits
 - Emergency stop
 - Programmable auto crank function
 - 2 wire start for any transfer switch
 - Communicates with the Generac HTS transfer switch
 - Built-in 7 day exerciser
 - Adjustable engine speed at exerciser
 - RS232 port for GenLink® control
 - RS485 port remote communication
 - Canbus addressable
 - Governor controller and voltage regulator are built into the master control board
 - Temperature range -40 °C to 70 °C

ENGINE SPECIFICATIONS

MAKE	Generac
MODEL.....	V Type
CYLINDERS.....	10
DISPLACEMENT.....	6.8 Liter
BORE.....	3.55
STROKE.....	4.17
COMPRESSION RATIO.....	9:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS.....	Hardened
LIFTER TYPE.....	Hydraulic

GOVERNOR SPECIFICATIONS

TYPE	Electronic
FREQUENCY REGULATION.....	Isynchronous
STEADY STATE REGULATION.....	± 0.25%
All functions are factory preset.	
Individual parameter adjustments can be made via GenLink®.	

ENGINE LUBRICATION SYSTEM

OIL PUMP.....	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	5 Quarts

ENGINE COOLING SYSTEM

TYPE.....	Closed
WATER PUMP.....	Belt driven
FAN SPEED.....	1670
FAN DIAMETER.....	26 inches
FAN MODE.....	Puller

FUEL SYSTEM

FUEL TYPE.....	Natural gas, propane vapor
CARBURETOR.....	Down Draft
SECONDARY FUEL REGULATOR.....	Standard
FUEL SHUT OFF SOLENOID.....	Standard
OPERATING FUEL PRESSURE.....	11" - 14" H ₂ O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER.....	12V 2 Amp
RECOMMENDED BATTERY.....	Group 24F, 525CCA
SYSTEM VOLTAGE.....	12 Volts

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

QT100
OPERATING DATA

		QT100		
KW RATING		100		
ENGINE SIZE		6.8 Liter V-10		
GENERATOR OUTPUT VOLTAGE/KW - 60Hz		KW	AMP	CB Size
120/240V, 1-phase, 1.0 pf		100	417	450
120/208V, 3-phase, 0.8 pf		100	347	400
277/480V, 3-phase, 0.8 pf		100	150	175
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%			200	
Single phase or 208 3-phase			240	
480V 3-phase				
ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)		Natural Gas		Propane
		(ft ³ /hr.)	(lbs/hr)	(ft ³ /hr.) (gal/hr.) (lbs/hr)
Exercise cycle		135	5.67	54.5 1.4 5.94
10% of rated load		307	12.9	119 3.3 14
25% of rated load		488	20.5	193 5.3 22.76
50% of rated load		798	33.5	312 8.6 36.84
75% of rated load		1059	44.47	419 11.5 49.51
100% of rated load*		1339	56.24	533 14.6 62.9
ENGINE COOLING				
Air flow (inlet air including alternator and combustion air)	ft ³ /min			5,500
System coolant capacity	US gal.			4.5
Heat rejection to coolant	BTU/hr.			342,000
Max. operating air temp. on radiator	°C (°F)			60 (150)
Max. ambient temperature	°C (°F)			50 (140)
COMBUSTION AIR REQUIREMENTS				
Flow at rated power 60 Hz	cfm			262
SOUND EMISSIONS IN DBA				
Exercising at 7 meters				61
Normal operation at 7 meters				72
EXHAUST				
Exhaust flow at rated output 60 Hz	cfm			888
Exhaust temp. at muffler outlet	°F			960
ENGINE PARAMETERS				
Rated synchronous RPM	60 Hz			2300
HP at rated KW**	60 Hz			162.3
POWER ADJUSTMENT FOR AMBIENT CONDITIONS				
Temperature Deration				
3% for every 10 °C above - °C				25
1.65% for every 10 °F above - °F				77
Altitude Deration				
1% for every 100 m above - m				183
3% for every 1000 ft. above - ft.				600

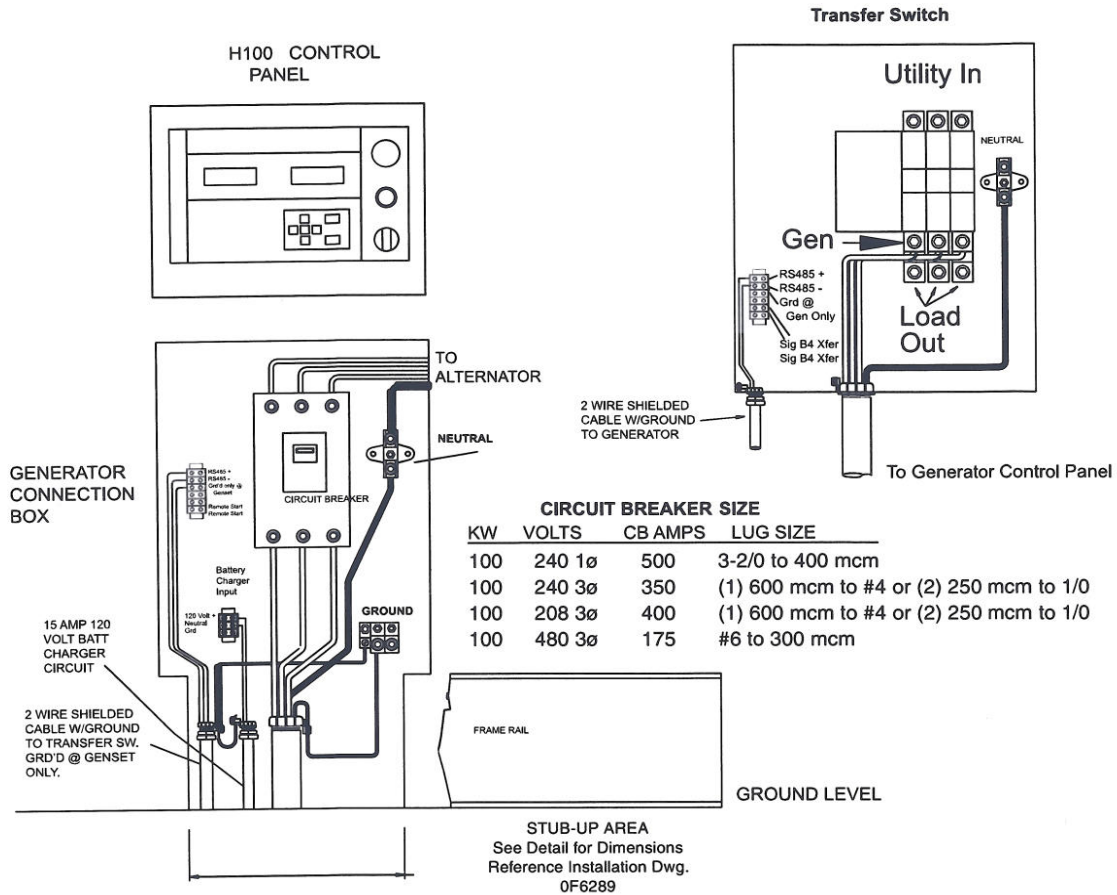
* Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

** Refer to "Emissions Data Sheets" for maximum bHP for EPA and SCAQMD permitting purposes.

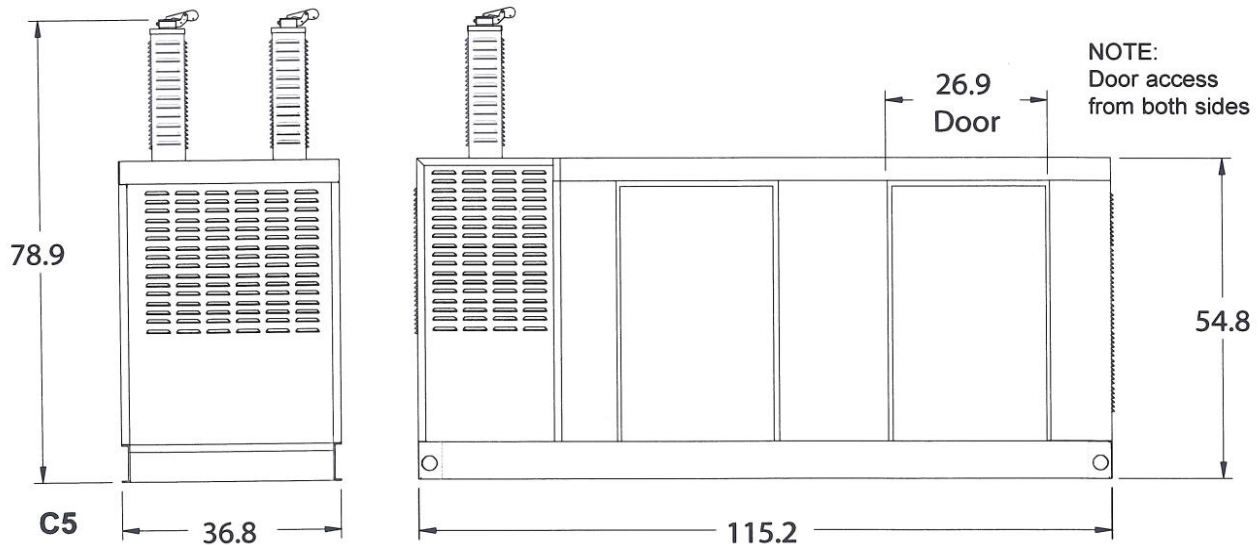
RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice. kW rating is based on LPG fuel and may derate with natural gas.

INTERCONNECTIONS

QT100



INSTALLATION LAYOUT



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