



RECEIVED

AUG 31 2012

DIVISION OF AIR  
RESOURCE MANAGEMENT

August 24, 2012

Director, Air, Pesticides and Toxics Management Division  
US Environmental Protection Agency Region IV  
Atlanta Federal Center  
61 Forsyth Street  
Atlanta, GA 30303-3104

**Fedex**  
**Airbill No. 7988-2157-9999**

**Re: Tampa Electric Company – Bayside Power Station**  
**Title V Permit Number 0570040-029-AV**  
**Initial Notifications for New Emergency Diesel Generator (EU-039)**  
**Facility ID No. 0570040**

To whom it may concern:

Tampa Electric Company (TEC) is submitting the initial notification for the startup of a new emergency diesel generator on August 21, 2012. Subpart §60.7(a)(3) requires notification of actual date of initial startup postmarked within 15 days of such date. The new emergency diesel generator replaces the existing “Standby Diesel Generator” (EU-039) that is currently out-of-service at Bayside Power Station. The specifications and emission certification of the new emergency diesel generator are shown attached.

TEC believes this request satisfies the initial notification requirements of NSPS Subpart §60.7(a)(3). The Title V air permit will be updated to reflect these changes at the next available opportunity.

Please contact me at (813) 228-4232 or Byron Burrows at (813) 228-1282, if you have any questions or comments.

Sincerely,

Robert A. Velasco, P.E., BCEE, QEP  
Air Programs  
Environmental, Health & Safety

EHS/iym/RAV165 Initial Notification- BPS New Diesel Generator

Enclosure

cc Jeffery Koerner, FDEP  
Robert Wong, DEP  
Diana Lee, EPCHC  
TAMPA ELECTRIC COMPANY  
P. O. BOX 111 TAMPA, FL 33601-0111

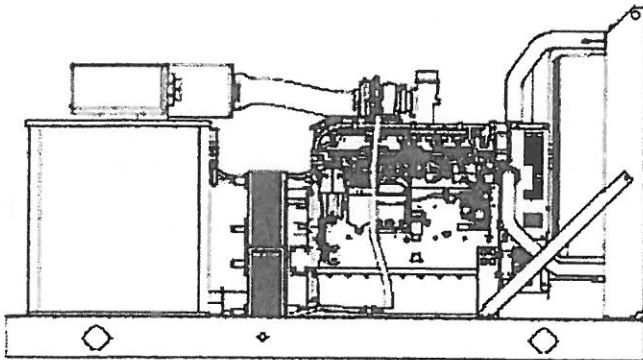
(813) 228-4111

# Spec Sheets

RAYSIDE  
750KW UNIT

# KOHLER POWER SYSTEMS

**9001**  
**KOHLER**  
**POWER SYSTEMS**  
 NATIONALLY REGISTERED



## Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The generator set complies with ISO 8528-5, Class G2, requirements for transient performance in all generator set configurations. Select the Decision-Maker™ 550 controller for improved voltage regulation and ISO 8528-5, Class G3, compliance.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA) to conform to interim Tier 3 nonroad emissions regulations.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Alternator Features:
  - The unique Fast-Response™ II excitation system delivers excellent voltage response and short circuit capability using a permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broad range reconnectability.
- Other Features:
  - Controllers are available for all applications. See controller features inside.
  - The electronic, isochronous governor incorporates an integrated drive-by-wire throttle body actuator delivering precise frequency regulation.

## Generator Set Ratings

Alternator	Voltage	Ph	Hz	Standby/130C Ratings	
				kW/kVA	Amps
4UA10	277/480	3	60	250/313	376

**RATINGS:** All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. Standby Ratings: 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, BS5514, AS2789, and DIN 6271. Prime Power Ratings: Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. **GENERAL GUIDELINES FOR DERATION:** Altitude. Derate 0.5% per 100 m (328 ft.) elevation above 1000 m (3300 ft.). Temperature. Derate 1.0% per 10°C (18°F) temperature above 25°C (77°F).

## Model: 250REOZJE, continued

---

### Alternator Specifications

Specifications	Alternator
Alternator manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet
Leads, quantity	12, Reconnectable
Voltage regulator	Solid State, Volts/Hz
Insulation	NEMA MG1
Insulation: Material	Class H
Insulation: Temperature Rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load Permanent magnet (PM) alternator	±2% Average
550 controller (with 0.5% drift due to temperature variation)	3-Phase Sensing, ±0.25%
One-Step Load Acceptance	100% of rating
Unbalanced load capability	100% of Rated Standby Current

- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling down stream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and drip-proof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

## Model: 250REOZJE, continued

---

### Engine

---

Engine Specifications	
Engine Manufacturer	John Deere
Engine Model	6090HF484
Engine: type	4-Cycle, Turbocharged, Charge Air Cooled
Cylinder arrangement	6, Inline
Displacement, L (cu. in.)	9.0 (548)
Bore and stroke, mm (in.)	118.4 x 136 (4.66 x 5.35)
Compression ratio	16.0:1
Piston speed, m/min. (ft./min.)	457 (1500)
Main bearings: quantity, type	7, Replaceable Insert
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	287 (385)
Cylinder head material	Cast Iron
Crankshaft material	Forged Steel
Valve (exhaust) material Intake	Chromium-Silicon Steel
Valve (exhaust) material Exhaust	Stainless Steel
Governor: type, make/model	JDEC Electronic, L14 Denso HP4
Frequency regulation, no-load to-full load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed
Air cleaner type, all models	Dry

### Exhaust

---

Exhaust System	
Exhaust Manifold Type	Dry
Exhaust flow at rated kW, m <sup>3</sup> /min. (cfm)	54.1 (1911)
Maximum allowable back pressure, kPa (in. Hg)	Min. 0 (0) Max. 7.5 (2.2)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	625 (1157)
Exh. outlet size at eng. hookup, mm (in.)	98 (3.86)

### Engine Electrical

---

Engine Electrical System	
Battery charging alternator	24 Volt
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	24
Ampere rating	60
Starter motor rated voltage (DC)	24
Battery, recommended cold cranking amps (CCA):	
Qty., CCA rating each	Two, 950
Battery voltage (DC)	12

## Model: 250REOZJE, continued

---

### Fuel

---

Fuel System	
Fuel type	Diesel
Fuel supply line, min. ID, mm (in.)	11.0 (0.044)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, fuel pump: type, m (ft.)	Electronic, 3(10)
Max. fuel flow, Lph (gph)	240 (63.4)
Fuel prime pump	Electronic
Fuel Filter Secondary	2 Microns @ 98% Efficiency
Fuel Filter Primary	10 Microns
Fuel Filter Water Separator	Yes
Recommended fuel	#2 Diesel

### Lubrication

---

Lubrication System	
Type	Full Pressure
Oil pan capacity, L (qt.)	32.5 (34.4)
Oil pan capacity with filter, L (qt.)	33.4 (35.3)
Oil filter: quantity, type	1, Cartridge
Oil cooler	Water-cooled

### Cooling

---

Radiator System	
Ambient temperature, °C (°F)	50 (122)
Engine jacket water capacity, L (gal.)	16 (4.25)
Radiator system capacity, including engine, L (gal.)	36 (9.5)
Engine jacket water flow, Lpm (gpm)	265 (70)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	97 (5521)
Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)	70.5 (4013)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	863.6 (34.0)
Fan, kWm (HP)	9.0 (12.1)
Max. restriction of cooling air, intake and discharge side of radiator, kPA (in. H2O)	0.125 (0.5)

### Operation Requirements

---

Air Requirements	
Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm) *	368.1 (13000)
Combustion air, m <sup>3</sup> /min. (cfm)	21.8 (770)
Heat rejected to ambient air: Engine, kW (Btu/min.)	53.8 (3060)
Heat rejected to ambient air: Alternator, kW (Btu/min.)	20.6 (1170)

\*Air density = 1.20 kg/m<sup>3</sup> (0.075 lbf/ft<sup>3</sup>)

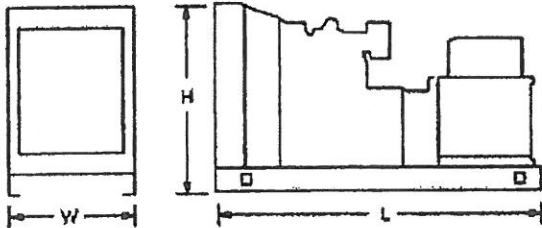
# Model: 250REOZJE, continued

## Fuel Consumption

Diesel, Lph (gph), at % load	Rating
Standby Fuel Consumption at 100% load	66.5 Lph (17.6 gph)
Standby Fuel Consumption at 75% load	50.4 Lph (13.3 gph)
Standby Fuel Consumption at 50% load	35.0 Lph (9.2 gph)
Standby Fuel Consumption at 25% load	20.5 Lph (5.4 gph)
Prime Fuel Consumption at 100% load	59.1 Lph (15.6 gph)
Prime Fuel Consumption at 75% load	45.3 Lph (12.0 gph)
Prime Fuel Consumption at 50% load	31.6 Lph (8.3 gph)
Prime Fuel Consumption at 25% load	18.4 Lph (4.9 gph)

## Dimensions and Weights

Overall Size, L x W x H, mm (in.): Wide Skid 3000 x 1300 x 1891 (118.1 x 51.2 x 74.4)  
Overall Size, L x W x H, mm (in.): Narrow Skid 2268-2449 (5000-5400)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.