531202 FEB20 2012

RECIPROCATING INTERNAL COMBUSTION ENGINES
AIR GENERAL PERMIT REGISTRATION FORM

RECEIVED
FEB 2 1 2012
DIVISION OF AIR RESOURCE MANAGEMENT

Part II. Notification to Permitting Office

(Detach and submit to appropriate permitting office; keep copy onsite)

Instructions: To give notice to the Department of an eligible facility's intent to use this air general permit, the owner or operator of the facility must detach and complete this part of the Air General Permit Registration Form and submit it to the appropriate Department of Environmental Protection or local air pollution control program office which has permitting authority. Please type or print clearly all information, and enclose the appropriate air general permit registration processing fee pursuant to Rule 62-4.050, F.A.C. *($100 as of the effective date of this form)*

0510034-001

Registration Type

Check one:

INITIAL REGISTRATION - Notification of intent to:

- ☒ Construct and operate a proposed new facility.
- ☐ Operate an existing facility not currently using an air general permit (e.g., a facility proposing to go from an air operation permit to an air general permit).

RE-REGISTRATION (for facilities currently using an air general permit) - Notification of intent to:

- ☐ Continue operating the facility after expiration of the current term of air general permit use.
- ☐ Continue operating the facility after a change of ownership.
- ☐ Make an equipment change requiring re-registration pursuant to Rule 62-210.310(2)(e), F.A.C., or any other change not considered an administrative correction under Rule 62-210.310(2)(d), F.A.C.

Surrender of Existing Air Operation Permit(s) - For Initial Registrations Only

If the facility currently holds one or more air operation permits, such permit(s) must be surrendered by the owner or operator upon the effective date of this air general permit. In such case, check the first box, and indicate the operation permits being surrendered. If no air operation permits are held by the facility, check the second box.

- ☐ All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s): _____
- ☒ No air operation permits currently exist for this facility.

General Facility Information

Facility Owner/Company Name (Name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility.)
South Florida Water Management District

Site Name (Name, if any, of the facility site; e.g., Plant A, Metropolis Plant, etc. If more than one facility is owned, a registration form must be completed for each.)
Pump Station G-508

Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)
Street Address: NW Corner of Compartment C (Lat: 26.25.57 / Long: 80.56.44)
City: Clewiston County: Hendry Zip Code: 33440

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.)(N/A for existing facility)
Pump Station used for surface water management. Station to begin operation approximately June 2012.

Owner/Authorized Representative

Name and Position Title (Person who, by signing this form below, certifies that the facility is eligible to use this air general permit.)
Print Name and Title: Joel Arrieta, Bureau Chief, Field Operations North, Operation, Maintenance and Construction Division

Owner/Authorized Representative Mailing Address
Organization/Firm: South Florida Water Management District
Street Address: 3301 Gun Club Road
City: West Palm Beach County: Palm Beach Zip Code: 33406

Owner/Authorized Representative Telephone Numbers
Telephone: (561) 682-2867 Fax: (561) 681-6232
Cell phone (optional):

Facility Contact (If different from Owner/Authorized Representative)

Name and Position Title (Plant manager or person to be contacted regarding day-to-day operations at the facility.)
Print Name and Title: Jeffrey Smith, Lead Environmental Scientist

Facility Contact Mailing Address
Organization/Firm: South Florida Water Management District
Street Address: 3301 Gun Club Road
City: West Palm Beach County: Palm Beach Zip Code: 33406

Facility Contact Telephone Numbers
Telephone: (561) 682-2516 Fax: (561) 681-6232
Cell phone (optional):

Owner/Authorized Representative Statement

This statement must be signed and dated by the person named above as owner or authorized representative

I, the undersigned, am the owner or authorized representative of the owner or operator of the facility addressed in this Air General Permit Registration Form. I hereby certify, based on information and belief formed after reasonable inquiry, that the facility addressed in this registration form is eligible for use of this air general permit and that the statements made in this registration form are true, accurate and complete. Further, I agree to operate and maintain the facility described in this registration form so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof.

I will promptly notify the Department of any changes to the information contained in this registration form.

Joel Arrieta
Signature

2-16-12
Date

Fuel Consumption

If this is an **initial registration** for reciprocating internal combustion engine operations, provide an estimate of the total amount of fuel expected to be consumed over a 12-month period. Note: the general permit limits fuel consumption by all reciprocating internal combustion engines at the facility to 20,000 gallons per year of gasoline, 250,000 gallons per year of diesel fuel, 1.15 million gallons per year of propane, 40 million standard cubic feet per year of natural gas, or an equivalent prorated amount if multiple fuels are used

The annual operating hours for the main pump engines is 1,000 hours each. Attached is an emission calculation spread sheet based on 1,750 hours per engine per year (250,000 gal cap).

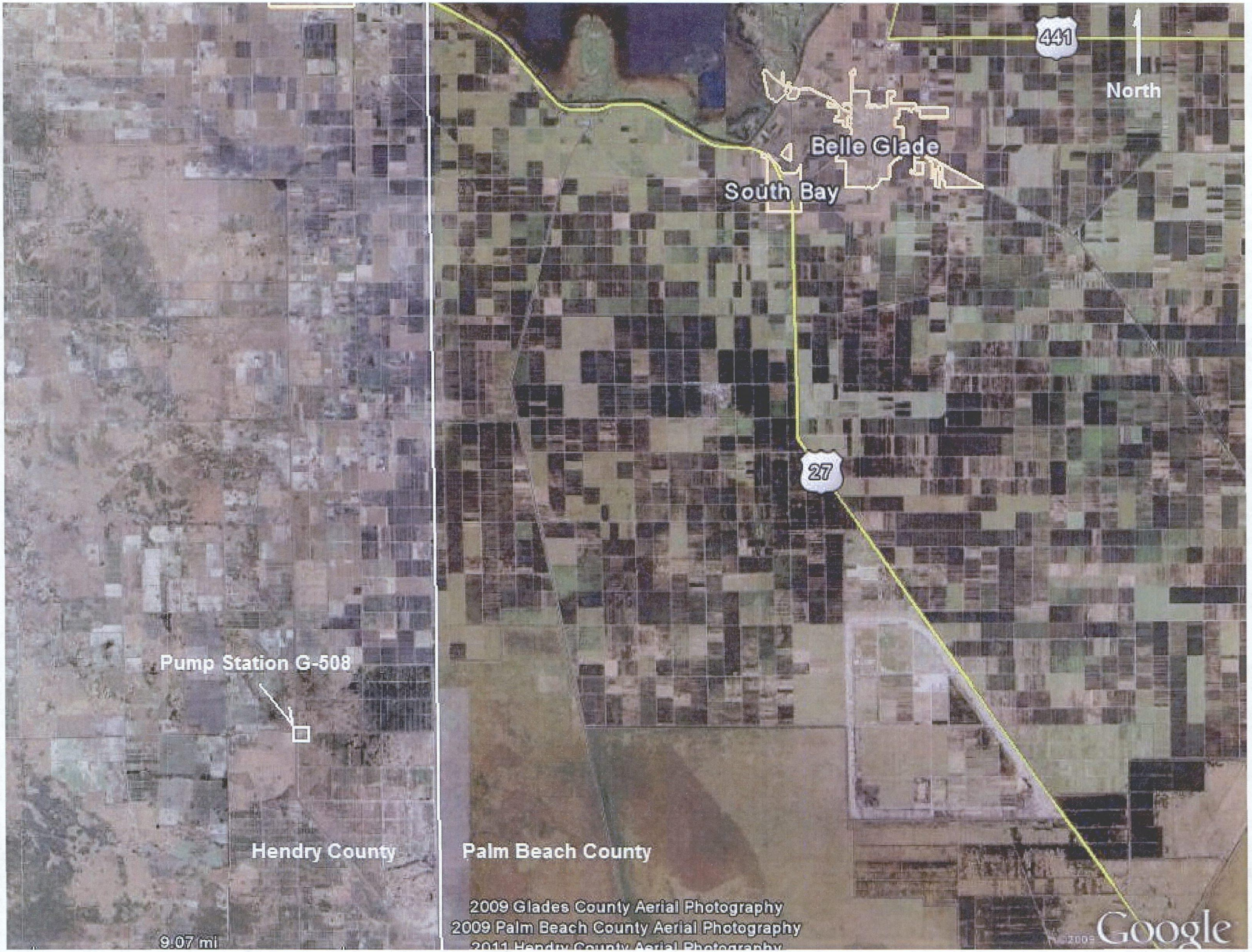
If this is a **re-registration** for reciprocating internal combustion engine operations, provide the highest 12-month total fuel consumption amount, in appropriate units, for the last five years. Indicate the 12-month period over which this fuel consumption occurred.

N/A

Description of Facility

Below, or as an attachment to this form, provide a description of the reciprocating internal combustion engine operations at the facility in sufficient detail to demonstrate the facility's eligibility for use of this air general permit and to provide a basis for tracking any future equipment or process changes at the facility. Describe all air pollutant-emitting processes and equipment at the facility, and identify any air pollution control measures or equipment used.

Station is used for surface water management. Station operate four Caterpillar, Model C18 ACERT, 575 hp diesel engines that power four water pumps. Station operates two Cummins 1490 hp diesel engine emergency generators.


441
North
Belle Glade
South Bay
27
Pump Station G-508
Hendry County
Palm Beach County
2009 Glades County Aerial Photography
2009 Palm Beach County Aerial Photography
2011 Hendry County Aerial Photography
9.07 mi
Google

South Florida Water Management District
Calculation Sheet - 100% Distillate Oil

Owner/Operator: South Florida Water Management District
Facility: Pump Station G-508
Subject: Emission Estimates - Ultra Low Sulfur (0.0015%) Distillate Oil

Emission Factor Source: AP-42, Tables 3.4-1, October 1996
Source Classification Code: SCC 2-02-004-01
Emissions Unit: EU001

Operating Data

Parameter	Engine #1	Engine #2	Engine #3	Engine #4	Engine #5	Engine #6	Units
Hours of Operation[1]:	1750	1750	1750	1750	200	200	hr/yr
Rating	575	575	575	575	1490	1490	bhp
Fuels:	DO	DO	DO	DO	DO	DO	Distillate Oil
Fuel Usage:	31.47	31.47	31.47	31.47	73.38	73.38	gal/hr
	55,075	55,075	55,075	55,075	14,676	14,676	gal/yr
Heat Content:	137,030	137,030	137,030	137,030	137,030	137,030	Btu/gal
Heat Input[2]:	4.31	4.31	4.31	4.31	10.06	10.06	mmBTU/hr
Sulfur Content	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	% Sulfur by Weight

Pollutant	Engine #1	Engine #2	Engine #3	Engine #4	Power Gen 1	Power Gen 2	AP-42 / Totals	Units
Nitrogen Oxides	16.641	16.641	16.641	16.641	4.434	4.434	71.00	TPY
	19.018	19.018	19.018	19.018	44.343	44.343	120.42	lb/hr
	4.41E+00	4.41E+00	4.41E+00	4.41E+00	4.41E+00	4.41E+00	4.41E+00	lb/mmBtu
Carbon Monoxide	3.585	3.585	3.585	3.585	0.955	0.955	15.29	TPY
	4.097	4.097	4.097	4.097	9.552	9.552	25.94	lb/hr
	9.50E-01	9.50E-01	9.50E-01	9.50E-01	9.50E-01	9.50E-01	9.50E-01	lb/mmBtu
Particulate Matter	1.170	1.170	1.170	1.170	0.312	0.312	4.99	TPY
	1.337	1.337	1.337	1.337	3.117	3.117	8.46	lb/hr
	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	lb/mmBtu
PM10	1.170	1.170	1.170	1.170	0.312	0.312	4.99	TPY
	1.337	1.337	1.337	1.337	3.117	3.117	8.46	lb/hr
	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	lb/mmBtu
Volatile Organic Compounds	1.243	1.243	1.243	1.243	0.368	0.368	5.34	TPY
	1.420	1.420	1.420	1.420	3.680	3.680	9.36	lb/hr
	2.47E-03	2.47E-03	2.47E-03	2.47E-03	2.47E-03	2.47E-03	2.47E-03	lb/hp-hr
Sulfur Dioxide	1.243	1.243	1.243	1.243	0.368	0.368	5.34	TPY
	1.420	1.420	1.420	1.420	3.680	3.680	9.36	lb/hr
	2.47E-03	2.47E-03	2.47E-03	2.47E-03	2.47E-03	2.47E-03	2.47E-03	lb/hp-hr
Benzene *	0.004	0.004	0.004	0.004	0.001	0.001	0.02	TPY
	0.004	0.004	0.004	0.004	0.009	0.009	0.03	lb/hr
	9.33E-04	9.33E-04	9.33E-04	9.33E-04	9.33E-04	9.33E-04	9.33E-04	lb/mmBtu
Toluene *	0.002	0.002	0.002	0.002	0.000	0.000	0.01	TPY
	0.002	0.002	0.002	0.002	0.004	0.004	0.01	lb/hr
	4.09E-04	4.09E-04	4.09E-04	4.09E-04	4.09E-04	4.09E-04	4.09E-04	lb/mmBtu
Xylenes *	0.001	0.001	0.001	0.001	0.000	0.000	0.00	TPY
	0.001	0.001	0.001	0.001	0.003	0.003	0.01	lb/hr
	2.85E-04	2.85E-04	2.85E-04	2.85E-04	2.85E-04	2.85E-04	2.85E-04	lb/mmBtu
Formaldehyde *	0.004	0.004	0.004	0.004	0.001	0.001	0.02	TPY
	0.005	0.005	0.005	0.005	0.012	0.012	0.03	lb/hr
	1.18E-03	1.18E-03	1.18E-03	1.18E-03	1.18E-03	1.18E-03	1.18E-03	lb/mmBtu
Acetaldehyde *	0.003	0.003	0.003	0.003	0.001	0.001	0.01	TPY
	0.003	0.003	0.003	0.003	0.008	0.008	0.02	lb/hr
	7.67E-04	7.67E-04	7.67E-04	7.67E-04	7.67E-04	7.67E-04	7.67E-04	lb/mmBtu
Acrolein *	0.000	0.000	0.000	0.000	0.000	0.000	0.00	TPY
	0.000	0.000	0.000	0.000	0.001	0.001	0.00	lb/hr
	9.25E-05	9.25E-05	9.25E-05	9.25E-05	9.25E-05	9.25E-05	9.25E-05	lb/mmBtu
PAH**	0.001	0.001	0.001	0.001	0.000	0.000	0.00	TPY
	0.001	0.001	0.001	0.001	0.002	0.002	0.00	lb/hr
	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04	1.68E-04	lb/mmBtu
Total HAPs	0.01	0.01	0.01	0.01	0.00		0.06	TPY

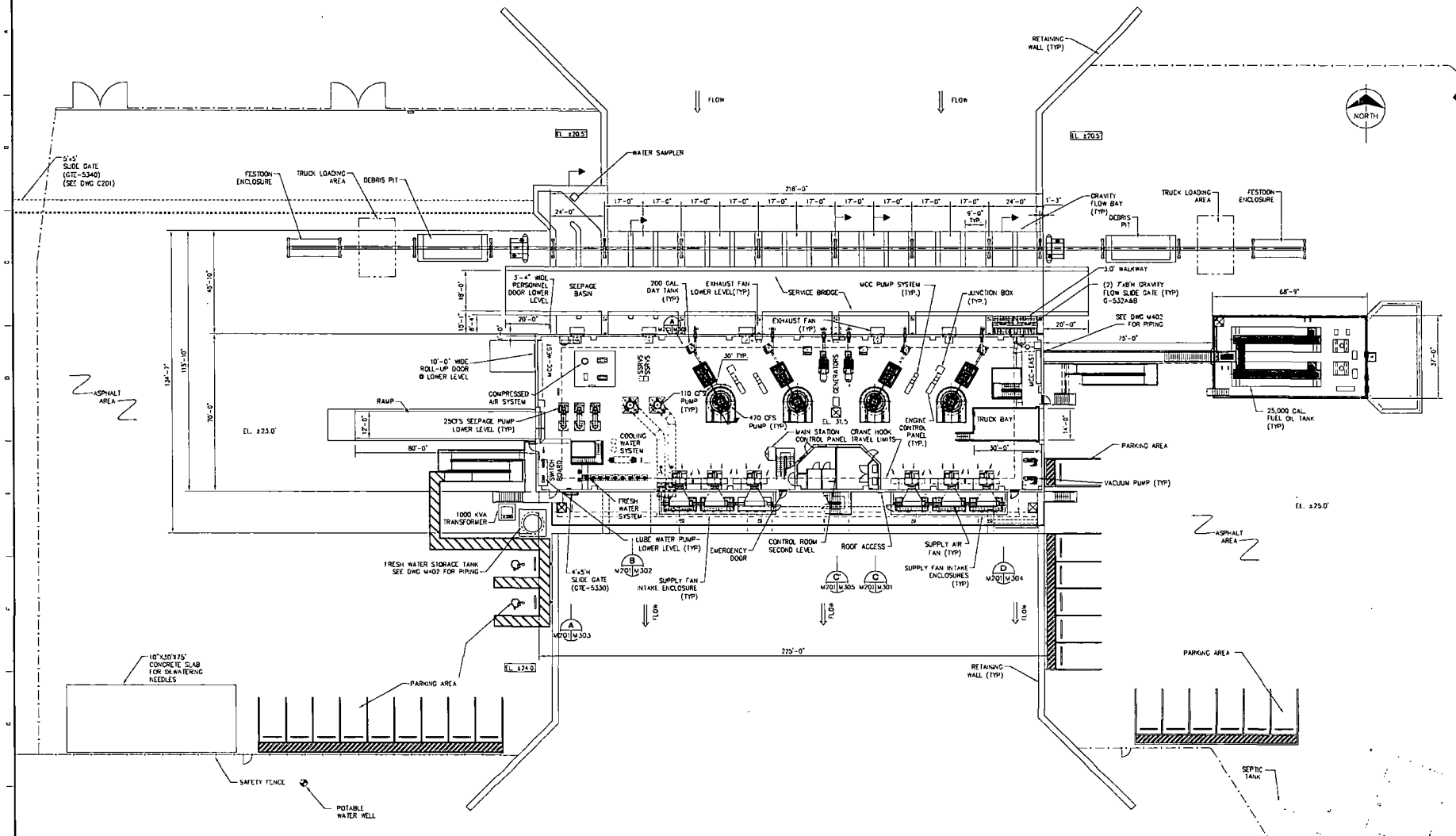
Note: This calculation assumes 100% use of Ultra Low Sulfur No. 2 Distillate Oil (0.0015% sulfur) .

* HAP Compounds per Table 3.4-2 and 3, AP-42.

** PAH compounds assumed to meet the definition of Polycyclic Organic Matter that is listed as a HAP.

[1] The hours of operations are shown as equal for all pump engines only to facilitate calculating the estimated facility-wide emissions and the resulting requested fuel cap.

[2] Heat input in units of mmBTU/hr, is calculated based on the reported engine's horsepower and the ratio of input and output emission factors for uncontrolled NOx, as reported in Table 3.4-1.



G-508 STRUCTURE OVERALL LAYOUT

GRAPHIC SCALE

SCALE: 1" = 20'-0"

FINAL DESIGN

The consultant, contractor or other parties associated with this project shall comply with Florida Statutes Chapter 119. These plans are the property of the District and must be secured and maintained in a confidential manner. Review by any unauthorized individual or outside/third party not performing work necessary for this project is prohibited.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
EVERGLADES RESTORATION
PHONE: 561-686-8800
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33406

COMPARTMENT C BUILDOUT
G-508 PUMP STATION
HENDRY COUNTY, FLORIDA
OVERALL PUMP STATION - LAYOUT

PROJECT NO B510C
DRAWING NO M201
SHEET 232 OF 456

CATERPILLAR® C18 ACERT™

429 bkW / 575 bhp

2100 rpm

Industrial

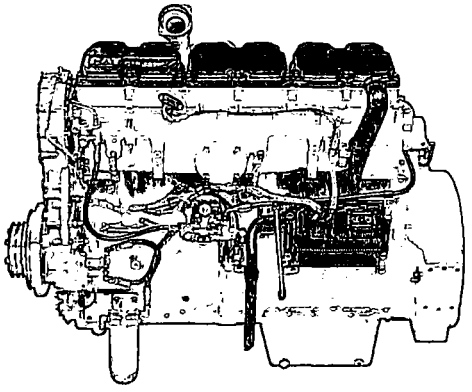


Image shown may not reflect actual engine

CATERPILLAR ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle Diesel

Bore	145.0 mm (5.71 in)
Stroke	183.0 mm (7.2 in)
Displacement	18.1 L (1,104.53 in³)
Aspiration	Turbocharged Aftercooled
Compression Ratio	16.3:1
Rotation (from flywheel end)	Counterclockwise
Weight, Net Dry (approximate kg. lb)	1673 kg (3688 lb)

FEATURES

Emissions

Meets Tier 3, Stage IIIA emission requirements. Tier 3 refers to EPA (U.S.) standards. Stage IIIA refers to European standards.

Worldwide Supplier Capability

Caterpillar
- Casts engine blocks, heads, cylinder liners, and flywheel housings
- Machines critical components
- Assembles complete engine
- Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable product.

Testing

Prototype testing on every model:
- proves computer design
- verifies system torsional stability
- functionality tests every model

Every Caterpillar engine is dynamometer tested under full load to ensure proper engine performance.

Full Range of Attachments

Wide range of bolt-on system expansion attachments, factory designed and tested.

Unmatched Product Support Offered Through Worldwide Caterpillar Dealer Network

More than 1,800 dealer outlets
Caterpillar factory-trained dealer technicians service every aspect of your industrial engine
99.7% of parts orders filled within 24 hours worldwide
Caterpillar parts and labor warranty
Preventive maintenance agreements available for repair before failure options

Scheduled Oil Sampling program matches your oil sample against Caterpillar set standards to determine:
- internal engine component condition
- presence of unwanted fluids
- presence of combustion by-products

Web Site

For all your industrial power requirements, visit www.cat-industrial.com.

STANDARD ENGINE EQUIPMENT

Air Inlet System

Turbocharged Aftercooled -- 429-470 bkW (575-630 bhp)
Twin Turbocharged Aftercooled -- 522-597 bkW (700-800 bhp)
ATAAC

Control System

Electronic governing
PTO speed control
Programmable ratings
Cold mode start strategy
Automatic altitude compensation
Power compensation for fuel temperature
Programmable low and high idle and total engine limit
Electronic diagnostics and fault logging
Engine monitoring system
J1939 Broadcast (diagnostic and engine status)
ADEM™ A4

Cooling System

Thermostats and housing, vertical outlet
Jacket water pump, centrifugal
Water pump, inlet

Exhaust System

Exhaust manifold, dry
Optional exhaust outlet

Flywheels and Flywheel Housing

SAE No. 1 Flywheel housing

Fuel System

MEUI injection
Fuel filter, secondary (2 micron high performance)
Fuel transfer pump
Fuel priming pump
ACERT™ Technology

Lube System

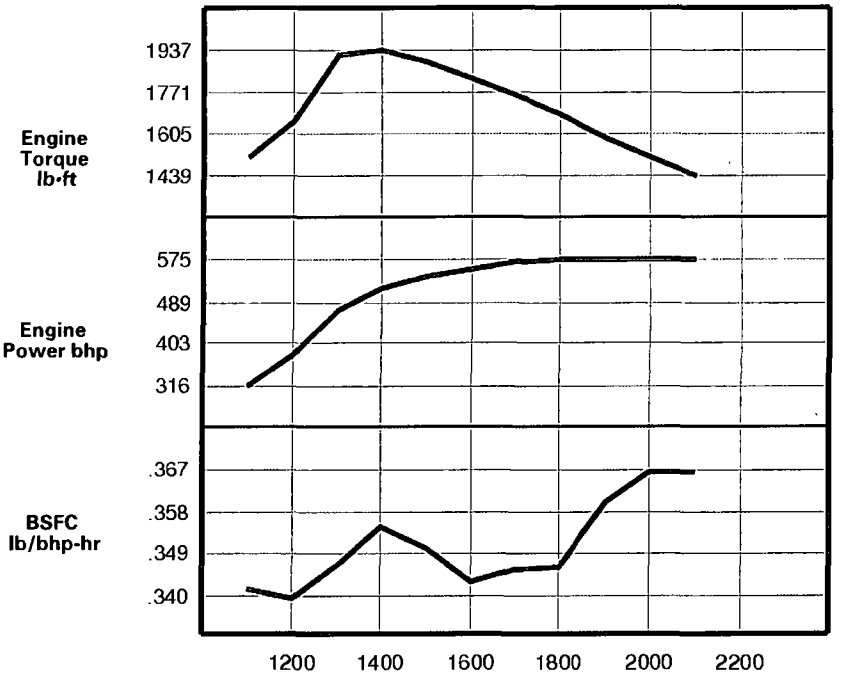
Crankcase breather
Oil cooler
Oil filler
Oil filter
Oil pan front sump
Oil dipstick
Oil pump (gear driven)

General

Paint, Caterpillar Yellow
Vibration damper
Lifting eyes

PERFORMANCE CURVES

IND - A (Continuous) - DM7698-01



English

Engine Speed rpm	Engine Power bhp	Engine Torque lb•ft	BSFC lb/bhp-hr	Fuel Rate gal/hr
2100	575	1439	.367	30.1
2000	575	1511	.366	30.1
1900	575	1590	.360	29.6
1800	575	1679	.346	28.5
1700	569	1757	.346	28.1
1600	557	1827	.343	27.3
1500	540	1890	.350	27.0
1400	516	1938	.355	26.2
1300	474	1913	.347	23.5
1200	378	1654	.339	18.3
1100	316	1510	.341	15.4

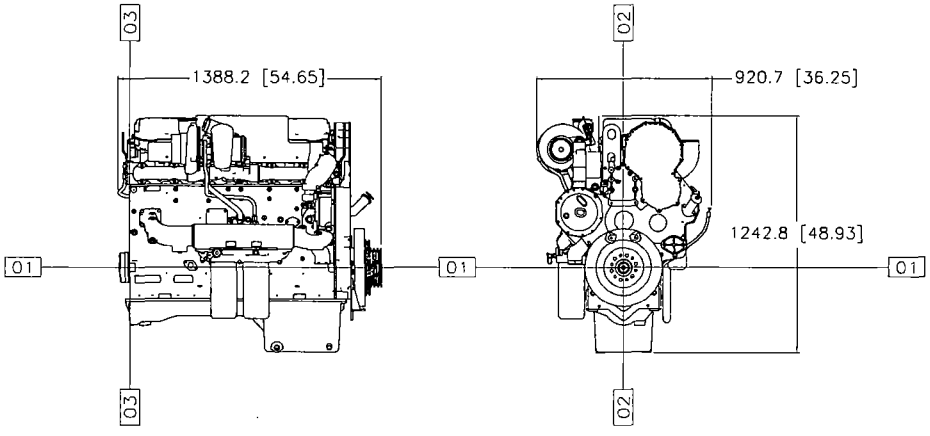
CATERPILLAR® C18 ACERT ™ INDUSTRIAL ENGINE

429 bkW (575 bhp)

RATINGS AND CONDITIONS

IND - A (Continuous) Continuous heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

Engine Performance Diesel Engines — 7 liter and higher
All rating conditions are based on SAE J1995, inlet air standard
conditions of 99 kPa (29.31 in. Hg) dry barometer and 25°C (77°F)
temperature. Performance measured using a standard fuel with fuel
gravity of 35° API having a lower heating value of 42,780 kJ/kg
(18,390 btu/lb) when used at 29° C (84.2° F) with a density of 838.9 g/L.



Engine Dimensions	
(1) Length	54.65 in
(2) Width	36.25 in
(3) Height	48.93 in

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 2588747).

Performance Number: DM7698-01

Feature Code: C18DI00 Arr. Number: 2371955

Materials and specifications are subject to change without notice.

14035717

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The International System of Units (SI) is used in this publication.

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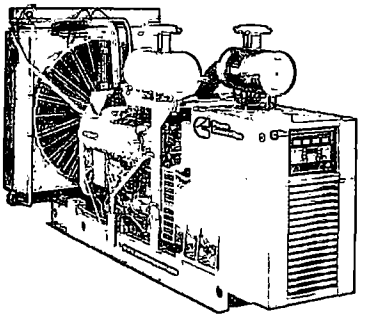
Power Generation

Diesel Generator Set

Model DFHD 60 Hz

EPA Emissions

1000 kW, 1250 kVA Standby
900 kW, 1125 kVA Prime



Description

The Cummins Power Generation DF-series commercial generator set is a fully integrated power generation system providing optimum performance, reliability, and versatility for stationary standby or prime power applications.

A primary feature of the DF GenSet is strong motor-starting capability and fast recovery from transient load changes. The torque-matched system includes a heavy-duty Cummins 4-cycle diesel engine, an AC alternator with high motor-starting kVA capacity, and an electronic voltage regulator with three-phase sensing for precise regulation under steady-state or transient loads. The DF GenSet accepts 100% of the nameplate standby rating in one step, in compliance with NFPA110 Level 1 requirements.

The standard PowerCommand® digital electronic control is an integrated system that combines engine and alternator controls for high reliability and optimum GenSet performance.

Optional coolant heaters improve starting in extreme operating conditions. A wide range of options, accessories, and services are available, allowing configuration to your specific power generation needs.

Every production unit is factory tested at rated load and power factor. This testing includes demonstration of rated power and single-step rated load pickup. Cummins Power Generation manufacturing facilities are registered to ISO9001 quality standards emphasizing our commitment to high quality in the design, manufacture, and support of our products. The generator set is CSA certified, and the PowerCommand control is UL508 listed. Circuit breaker assemblies are UL489 Listed for 100% continuous operation and also UL869A Listed Service Equipment.

All Cummins Power Generation systems are backed by a comprehensive warranty program and supported by a worldwide network of 170 distributors and service branches to assist you with warranty, service, parts, and planned maintenance support.

Features

- **UL Listed Generator Set** - The complete generator set assembly is available Listed to UL2200.
- **Emissions Compliance** - All 60 Hz models comply with EPA emissions requirements for stationary applications. Some 60 Hz models comply with EPA TPEM requirements for mobile applications.
- **Cummins Heavy-Duty Engine** - Rugged 4-cycle industrial diesel delivers reliable power, low emissions, and fast response to load changes.
- **Permanent Magnet Generator (PMG)** - Offers enhanced motor starting and fault clearing short circuit capability.
- **Alternator** - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings; low waveform distortion with non-linear loads, fault clearing short-circuit capability, and class H insulation.
- **Control System** - The PowerCommand electronic control is standard equipment and provides total genset system integration, including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, auto-shutdown at fault detection, and NFPA 110 Level 1 compliance.
- **Cooling System** - Standard integral set-mounted radiator system, designed and tested for rated ambient temperatures, simplifies facility design requirements for rejected heat.
- **Structural Steel Skid Base** - Robust skid base supports the engine, alternator, and radiator.
- **E-Coat Finish** - Dual electro-deposition paint system provides high resistance to scratches, corrosion, or fading.
- **Certifications** - Generator sets are designed, manufactured, tested, and certified to relevant UL, NFPA, ISO, IEC, and CSA standards.
- **Warranty and Service** - Backed by a comprehensive warranty and world wide distributor network.

© 2004-2005 Cummins Power Generation

Generator Set

This generator set is equipped with a standard radiator cooling system serving an engine-block cooling circuit and a turbocharger aftercooler. Also available with optional heat exhanger or remote radiator cooling systems. The general specifications in this document provide representative configuration details. Consult the respective outline drawing listed below for each available cooling system. These outline drawings must be used for installation design and construction dimensional information.

General Specifications	
Unit Width, in (mm)	78.7 (2000)
Unit Height, in (mm)	92.6 (2353)
Unit Length, in (mm)	171.7 (4361)
Unit Dry Weight, lb (kg)	16922 (7676)
Unit Wet Weight, lb (kg)	17578 (7973)
Rated Speed, rpm	1800
Voltage Regulation, No Load to Full Load	±0.5%
Random Voltage Variation	±0.5%
Frequency Regulation	Isochronous
Random Frequency Variation	±0.25%
Radio Frequency Interference	IEC 801.2 through IEC 801.5 MIL STD 461C, Part 9

	Standby	Prime
50° C Set-Mounted Radiator Cooling (Dwg. 500-3636)		
Fan Load, HP (kW)	56.9 (42.4)	56.9 (42.4)
Set Coolant Capacity, US Gal (L)	53.5 (202.5)	53.5 (202.5)
Total Heat Rejected from Cooling System, BTU/min (MJ/min)	36300.0 (38.5)	31470.0 (33.4)
Heat Radiated to Room, BTU/min (MJ/min)	10330.0 (10.9)	9120.0 (9.7)
Optional Heat Exchanger Cooling (Dwg. 500-3613)		
Set Coolant Capacity, US Gal (L)	70.0 (265.0)	70.0 (265.0)
Heat Rejected, Jacket Water Circuit, BTU/min (MJ/min)	20880.0 (22.1)	19350.0 (20.5)
Heat Rejected, Aftercooler Circuit, BTU/min (MJ/min)	15420.0 (16.3)	12120.0 (12.8)
Heat Radiated to Room, BTU/min (MJ/min)	10330.0 (10.9)	9120.0 (9.7)
Max Raw Water Pressure, Jacket Water Circuit, psi (kPa)	180.0 (1241.1)	180.0 (1241.1)
Max Raw Water Pressure, Aftercooler Circuit, psi (kPa)	150.0 (1034.2)	150.0 (1034.2)
Max Raw Water Flow, Jacket Water Circuit, US Gal/min (L/min)	360.0 (1362.6)	360.0 (1362.6)
Max Raw Water Flow, Aftercooler Circuit, US Gal/min (L/min)	150.0 (567.8)	150.0 (567.8)
Min Raw Water Flow @ 80° F (27° C) Inlet Temp, Jacket Water Circuit, US Gal/min (L/min)	42.0 (159.0)	42.0 (159.0)
Min Raw Water Flow @ 80° F (27° C) Inlet Temp, Aftercooler Circuit, US Gal/min (L/min)	90.0 (340.6)	90.0 (340.6)
Raw Water Delta P@Min Flow, Jacket Water Circuit, psi (Pa)	0.2 (1379.0)	0.2 (1379.0)
Raw Water Delta P@Min Flow, Aftercooler Circuit, psi (Pa)	0.8 (5516.0)	0.8 (5516.0)
Max Jacket Water Outlet Temp,°F (°C)	220.0 (104.4)	212.0 (100.0)
Max Aftercooler Inlet Temp,°F (°C)	150.0 (65.6)	150.0 (65.6)
Optional Remote Radiator Cooling (Dwg. 500-3612)		
Set Coolant Capacity, US Gal (L)	24.2 (91.6)	24.2 (91.6)
Max Flow Rate @ Max Friction Head, Jacket Water Circuit, Gal/min (L/min)	262.0 (991.7)	262.0 (991.7)
Max Flow Rate @ Max Friction Head, Aftercooler Circuit, Gal/min (L/min)	80.0 (302.8)	80.0 (302.8)
Heat Rejected, Jacket Water Circuit, BTU/min (MJ/min)	20880.0 (22.1)	19350.0 (20.5)
Heat Rejected, Aftercooler Circuit, BTU/min (MJ/min)	15420.0 (16.3)	12120.0 (12.8)
Heat Radiated to Room, BTU/min (MJ/min)	10330.0 (10.9)	9120.0 (9.7)
Max Friction Head, Jacket Water Circuit, psi (kPa)	10.0 (68.9)	10.0 (68.9)
Max Friction Head, Aftercooler Circuit, psi (kPa)	7.0 (48.3)	7.0 (48.3)
Max Static Head, Jacket Water Circuit, ft (m)	46.0 (14.0)	46.0 (14.0)
Max Static Head, Aftercooler Circuit, ft (m)	46.0 (14.0)	46.0 (14.0)
Max Jacket Water Outlet Temp,°F (°C)	220.0 (104.4)	212.0 (100.0)
Max Aftercooler Circuit Inlet Temp @ 77° F (11° C),°F (°C)	120.0 (48.9)	120.0 (48.9)
Max Aftercooler Circuit Inlet Temp,°F (°C)	150.0 (65.6)	150.0 (65.6)
Air		
Combustion Air, scfm (m^3/min)	2840.0 (80.4)	2650.0 (75.0)
Alternator Cooling Air, scfm (m^3/min)	6720.0 (190.2)	6720.0 (190.2)
Radiator Cooling Air, scfm (m^3/min)	34000.0 (962.2)	34000.0 (962.2)
Max. Static Restriction, in H_2O (Pa)	0.5 (124.5)	0.5 (124.5)

Site Derating Factors

Engine power available up to 4958 ft (1512 m) at temperatures up to 104°F (40°C) and up to 4433 ft (1350 m) at 122°F (50°C). Above these elevations, derate at 3.4% per 1000 ft (305 m) up to 9843 ft (3000 m). Above 122°F (50°C) and 9843 ft (3000 m), derate an additional 9% per 1000 ft (305 m) and 15% per 18°F (10°C).

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Engine

Cummins heavy duty diesel engines use advanced combustion technology for reliable and stable power, low emissions, and fast response to sudden load changes.

Electronic governing provides precise speed regulation, especially useful for applications requiring constant (isochronous) frequency regulation such as Uninterruptible Power Supply (UPS) systems, non-linear loads, or sensitive electronic loads. Optional coolant heaters are recommended for all emergency standby installations or for any application requiring fast load acceptance after start-up.

General Specifications

Base Engine	Cummins Model QST30-G5 Nonroad 1, Turbocharged and Low Temperature Aftercooled, diesel-fueled	
Displacement in^3 (L)	1860.0 (30.5)	
Overspeed Limit, rpm	2100 ±50	
Regenerative Power, kW	82.00	
Cylinder Block Configuration	Cast iron, 50°V 12 cylinder	
Battery Capacity	1280 amps minimum at ambient temperature of 32°F (0°C)	
Battery Charging Alternator	35 amps	
Starting Voltage	24-volt, negative ground	
Lube Oil Filter Types	Four spin-on, full flow; two bypass oil filters	
Standard Cooling System	122°F (50° C) ambient radiator	
Fuel System	Direct injection, number 2 diesel fuel; fuel filter; automatic electric fuel shutoff	
Power Output	***Standby***	***Prime***
Gross Engine Power Output, bhp (kWm)	1490.0 (1111.5)	1350.0 (1007.1)
BMEP at Rated Load, psi (kPa)	352.0 (2427.0)	319.0 (2199.4)
Bore, in. (mm)	5.51 (140.0)	5.51 (140.0)
Stroke, in. (mm)	6.50 (165.1)	6.50 (165.1)
Piston Speed, ft/min (m/s)	1949.0 (9.9)	1949.0 (9.9)
Compression Ratio	14.0:1	14.0:1
Lube Oil Capacity, qt. (L)	140.0 (132.5)	140.0 (132.5)
Fuel Flow		
Fuel Flow at Rated Load, US Gal/hr (L/hr)	150.0 (567.8)	150.0 (567.8)
Maximum Inlet Restriction, in. Hg (mm Hg)	4.0 (101.6)	4.0 (101.6)
Maximum Return Restriction, in. Hg (mm Hg)	20.0 (508.0)	20.0 (508.0)
Air Cleaner		
Maximum Air Cleaner Restriction, in. H_2O (kPa)	25.0 (6.2)	25.0 (6.2)
Exhaust		
Exhaust Flow at Rated Load, cfm (m^3/min)	7775.0 (220.0)	6960.0 (197.0)
Exhaust Temperature,°F (°C)	975.0 (523.9)	920.0 (493.3)
Max Back Pressure, in. H_2O (kPa)	27.0 (6.7)	27.0 (6.7)

Fuel Consumption

Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
US Gal/hr	20.6	35.3	51.1	69.3	19.2	32.3	46.2	61.8
L/hr	78	134	193	262	73	122	175	234

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

ADM 38-40

February 16, 2012

Florida Dept. of Environmental Protection - Receipts
P.O. Box 3070
Tallahassee, FL 32315-3070

Subject: **Air General Permit Registration Form**
South Florida Water Management District

Enclosed please find Air General Permit Registration Form (DEP Form No. 62-210.920(1)(b)) and fee for the South Florida Water Management District's Pump Stations G-434, G-436 and G-508. These are initial notifications for each facility.

Please contact me at 561/682-2516 if you have any questions.

Sincerely,

Jeffrey A. Smith
Lead Environmental Scientist
Infrastructure Maintenance Section
Operations, Maintenance & Construction Division

c: District O/M file (w/ enclosure)

MS 5602

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WATER MANAGEMENT DISTRICT
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