

F&A RECEIPT 53/202

FEB 20 2012

**RECIPROCATING INTERNAL COMBUSTION ENGINES
AIR GENERAL PERMIT REGISTRATION FORM**

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)

0990698-001

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-434

Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)

Street Address: 16020 U.S. HWY 27 (Lat: 26.26.06/Long: 80.36.38)

City: South Bay

County: Palm Beach

Zip Code: 33493

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.)(N/A for existing facility)
Pump Station used for flood control. Station to begin operation approximately March 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: Michael Gallagher, 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) 682-2124 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

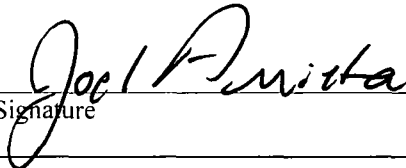
Telephone: (561) 682-2516 Fax: (561) 681-6232
Cell phone (optional):

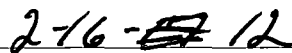
Owner/Authorized Representative Statement

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.


Signature


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 estimated at 1,600 hours. Attached is an emission calculation spread sheet. Estimated annual consumption is 64,000 gallons.

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.

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 floor control and water quality management. Station operates two Caterpillar, Model C18, 575 hp diesel engines that power two water pumps. Station operates one MTU, Model G45TB-3D, 1046 hp (680 kW) diesel engine emergency generator.

South Florida Water Management District

Pump Station G-434



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Palm Beach County

Broward County

2004-05 SFWMD Aerial Photography

2009 Palm Beach County Aerial Photography

©2009 Google

3.90 mi

Imagery Dates: Jan 17, 2005 - Jan 21, 2009

26°23'08.08" N 80°35'07.45" W elev 0 ft

Eye alt 13.48 mi

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

Owner/Operator: South Florida Water Management District
Facility: Pump Station G-434
Subject: Emission Estimates - Ultra Low Sulfur (0.0015%) Distillate Oil

Emission Factor Source: AP-42, Tables 3.3-1, October 1996
Source Classification Code: SCC 2-02-004-01
Emissions Unit: EU001

Operating Data

Parameter	Engine #1	Engine #2	Engine #3	Units	
Hours of Operation ¹ :	800	800	300	hr/yr	
Rating	575	575	1046	bhp	
Fuels:	DO	DO	DO	Distillate Oil	
Fuel Usage:	29.50	29.50	53.66	gal/hr	
	23,597	23,597	16,098	gal/yr	
Heat Content:	137,030	137,030	137,030	Btu/gal	
Heat Input ² :	4.04	4.04	7.35	mmBTU/hr	
Sulfur Content	0.0015	0.0015	0.0015	% Sulfur by Weight	
Pollutant	Engine #1	Engine #2	Power Gen. 1	AP-42 / Totals	Units
Nitrogen Oxides	7.130	7.130	4.864	14.26	TPY
	17.825	17.825	32.426	35.65	lb/hr
	4.41E+00	4.41E+00	4.41E+00	4.41E+00	lb/mmBtu
Carbon Monoxide	1.536	1.536	1.048	3.07	TPY
	3.840	3.840	6.985	7.68	lb/hr
	9.50E-01	9.50E-01	9.50E-01	9.50E-01	lb/mmBtu
Particulate Matter	0.501	0.501	0.342	1.00	TPY
	1.253	1.253	2.279	2.51	lb/hr
	3.10E-01	3.10E-01	3.10E-01	3.10E-01	lb/mmBtu
PM10	0.501	0.501	0.342	1.00	TPY
	1.253	1.253	2.279	2.51	lb/hr
	3.10E-01	3.10E-01	3.10E-01	3.10E-01	lb/mmBtu
Volatile Organic Compounds	0.568	0.568	0.388	1.14	TPY
	1.420	1.420	2.584	2.84	lb/hr
	2.47E-03	2.47E-03	2.47E-03	2.47E-03	lb/hp-hr
Sulfur Dioxide	0.472	0.472	0.322	0.94	TPY
	1.179	1.179	2.144	2.36	lb/hr
	2.05E-03	2.05E-03	2.05E-03	2.05E-03	lb/hp-hr
Benzene *	0.002	0.002	0.001	0.00	TPY
	0.004	0.004	0.007	0.01	lb/hr
	9.33E-04	9.33E-04	9.33E-04	9.33E-04	lb/mmBtu
Toluene *	0.001	0.001	0.000	0.00	TPY
	0.002	0.002	0.003	0.00	lb/hr
	4.09E-04	4.09E-04	4.09E-04	4.09E-04	lb/mmBtu
Xylenes *	0.000	0.000	0.000	0.00	TPY
	0.001	0.001	0.002	0.00	lb/hr
	2.85E-04	2.85E-04	2.85E-04	2.85E-04	lb/mmBtu
Formaldehyde *	0.002	0.002	0.001	0.00	TPY
	0.005	0.005	0.009	0.01	lb/hr
	1.18E-03	1.18E-03	1.18E-03	1.18E-03	lb/mmBtu
Acetaldehyde *	0.001	0.001	0.001	0.00	TPY
	0.003	0.003	0.006	0.01	lb/hr
	7.67E-04	7.67E-04	7.67E-04	7.67E-04	lb/mmBtu
Acrolein *	0.000	0.000	0.000	0.00	TPY
	0.0004	0.0004	0.0007	0.0014	lb/hr
	9.25E-05	9.25E-05	9.25E-05	9.25E-05	lb/mmBtu
PAH**	0.000	0.000	0.000	0.00	TPY
	0.001	0.001	0.001	0.0026	lb/hr
	1.68E-04	1.68E-04	1.68E-04	1.68E-04	lb/mmBtu
Total HAPs	0.01	0.01		0.01	TPY

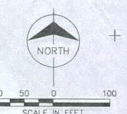
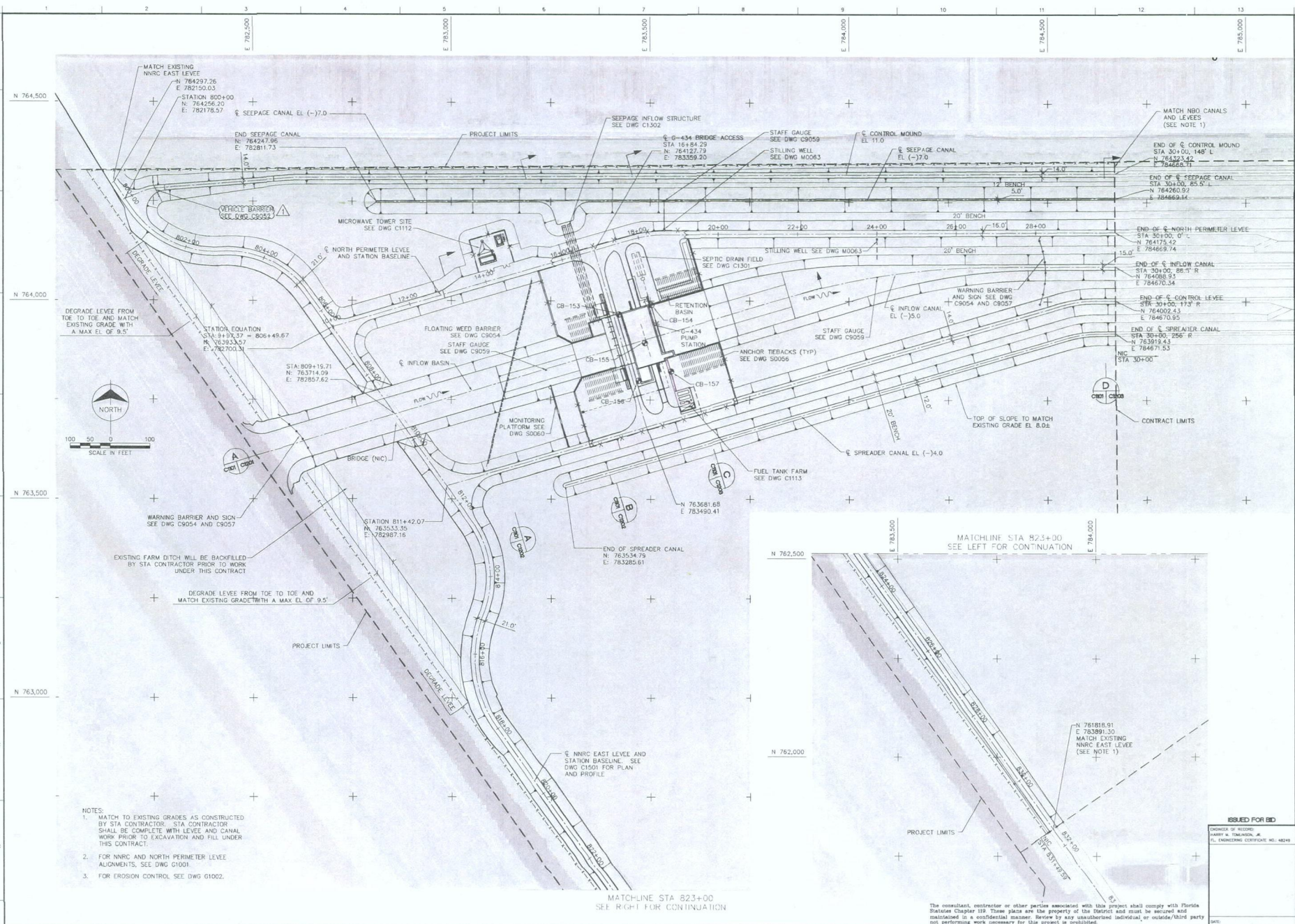
Note: This calculation assumes 100% use of Ultra Low Sulfur No. 2 Distillate Oil (0.0015% sulfur) .

* HAP Compounds per Table 3.3-2, 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 the resulting requested fuel cap.

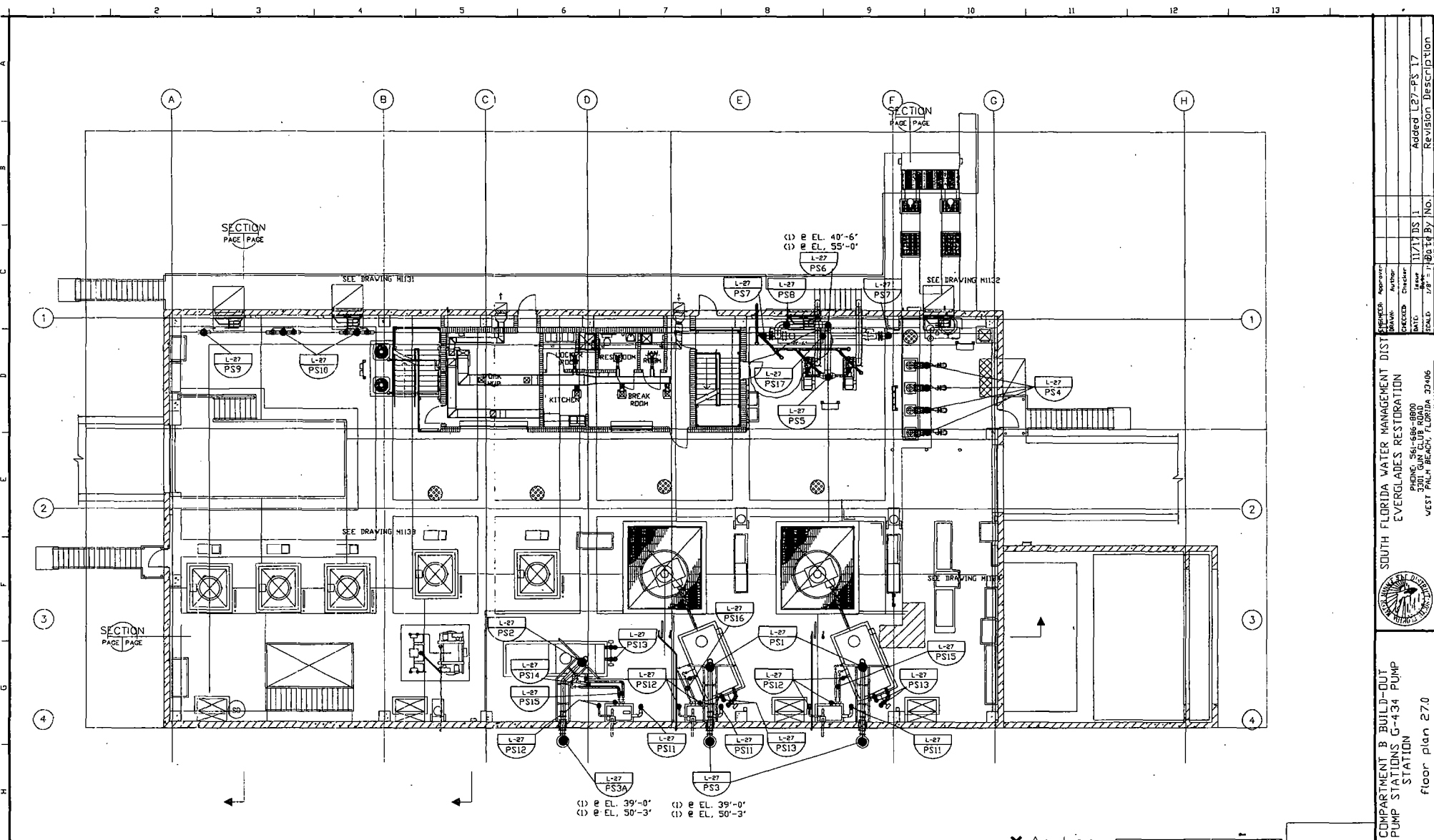
² Heat input in units of mmBTU/hr. is calculated based on the reported engine's horsepower and the ratio of input and output



- NOTES:
1. MATCH TO EXISTING GRADES AS CONSTRUCTED BY STA CONTRACTOR. STA CONTRACTOR SHALL BE COMPLETE WITH LEVEE AND CANAL WORK PRIOR TO EXCAVATION AND FILL UNDER THIS CONTRACT.
 2. FOR NNRC AND NORTH PERIMETER LEVEE ALIGNMENTS, SEE DWG G1001.
 3. FOR EROSION CONTROL, SEE DWG G1002.

BROWN AND CALDWELL Engineering and Consulting 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406 DATE: DRAWING / REVISION / PERSON: DESCRIPTION	
PROJECT NO: DRAWING NO: SHEET NO.:	SOUTH FLORIDA WATER MANAGEMENT DISTRICT EVERGLADES RESTORATION PHONE: 561-688-8800 3301 GUN CLUB ROAD WEST PALM BEACH, FLORIDA 33406 Necessity: August 18, 2008 8:47 AM
COMPARTMENT B BUILD-OUT PUMP STATIONS G-434 PUMP STATION OVERALL SITE PLAN	
ISSUED FOR BID PROVIDED BY: HARRY H. TOLSON, JR. P.L. ENGINEERING CERTIFICATE NO. 4828	
PROJECT ID NO: B000W030 DRAWING NO: C1101 SHEET: 12 OF 455	

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.



RELEASED FOR FABRICATION
9-29-2010

L-27
PS-XX
MARK
NUMBER

- ✕ Anchor
- Support
- Guide

GULF STATES HANGERS
PUMPING STATION G-434
Pipe Support Location Drawing
dated 4-30-10 Rev. 0

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.

RECORDED BY
PL ENGINEERING CERTIFICATE NO. 038
FOR PIPE
SUPPORT
LOCATION
ONLY
EL 27.G
DRAWING NO.
4301
PROJECT TO NO.
SHEET
GSH-2 Rev1

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 EVERGLADES RESTORATION
 PHONO: 361-686-8800
 3901 GUN CLUB ROAD
 WEST PALM BEACH, FLORIDA 33406

COMPARTMENT B BUILD-OUT
 PUMP STATIONS G-434 PUMP
 STATION
 floor plan 27.0

APPROVED	DATE	SCALE	BY	NO.	DESCRIPTION
Author	11/17/10	1/8" = 1'-0"	JTB	17	Added L27-PS 17
Checker					Revision
DATE					
SCALE					
BY					
NO.					
DESCRIPTION					



C18 ACERT™
Industrial Engine
Tier 3/Stage IIIA
429 bkW/575 bhp @ 2100 rpm

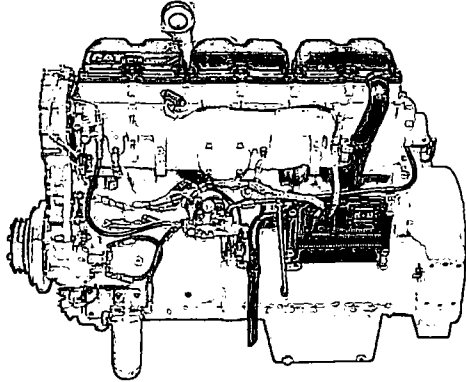


Image shown may not reflect actual engine

CAT® 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 in ³)
Aspiration.....	Turbocharged Aftercooled
Compression Ratio.....	16.3:1
Rotation (from flywheel end).....	Counterclockwise
Weight, Net Dry (approximate).....	1769 kg (3900 lb)

FEATURES

Emissions & Regulations

Meets U.S. EPA Tier 3, EU Stage IIIA and China Stage II emissions requirements.

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.



C18 ACERT™ Industrial Engine

Tier 3/Stage IIIA

429 bkW/575 bhp @ 2100 rpm

STANDARD ENGINE EQUIPMENT

Air Inlet System

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

Charging System

Charging alternator 24 volt, 50 amp

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



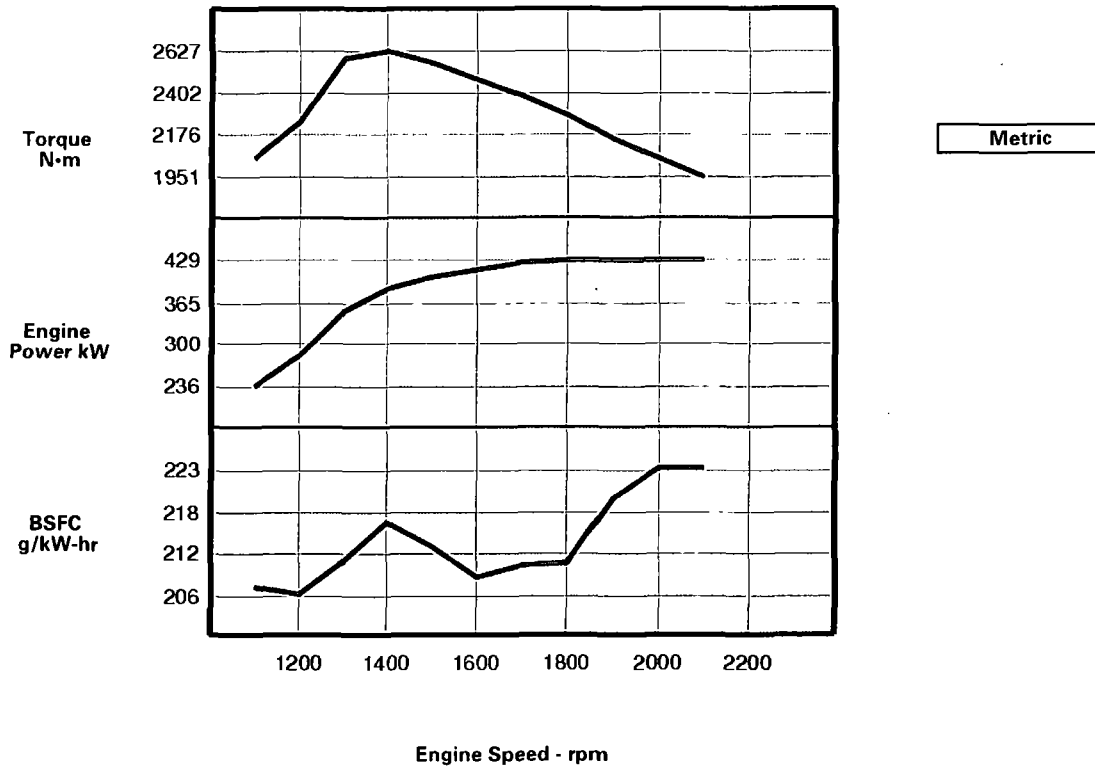
**C18 ACERT™
Industrial Engine**

Tier 3/Stage IIIA

429 bkW/575 bhp @ 2100 rpm

PERFORMANCE CURVES

IND - A (Continuous) - DM7698-01



Engine Speed rpm	Engine Power kW	Torque N-m	BSFC g/kW-hr	Fuel Rate L/hr
2100	429	1951	223	114.0
2000	429	2048	222.9	114.0
1900	429	2156	218.9	112.0
1800	429	2276	210.6	107.7
1700	424	2382	210.2	106.2
1600	415	2477	208.7	103.2
1500	402	2562	212.9	102.1
1400	385	2627	215.7	99.0
1300	353	2594	210.9	88.8
1200	282	2242	206.5	69.3
1100	236	2047	207.7	58.4



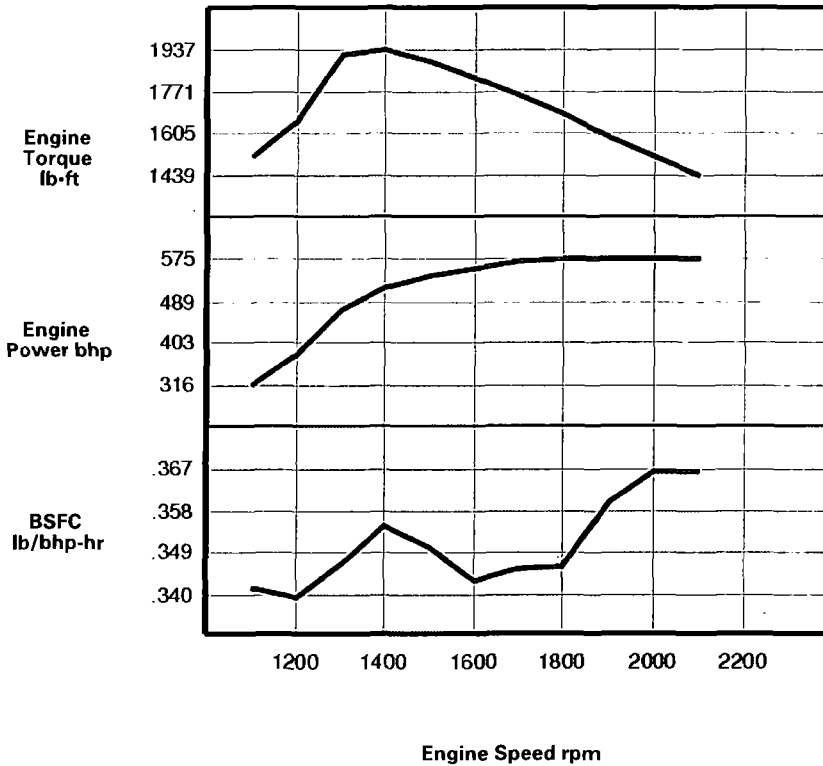
**C18 ACERT™
Industrial Engine**

Tier 3/Stage IIIA

429 bkW/575 bhp @ 2100 rpm

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



C18 ACERT™ Industrial Engine

Tier 3/Stage IIIA

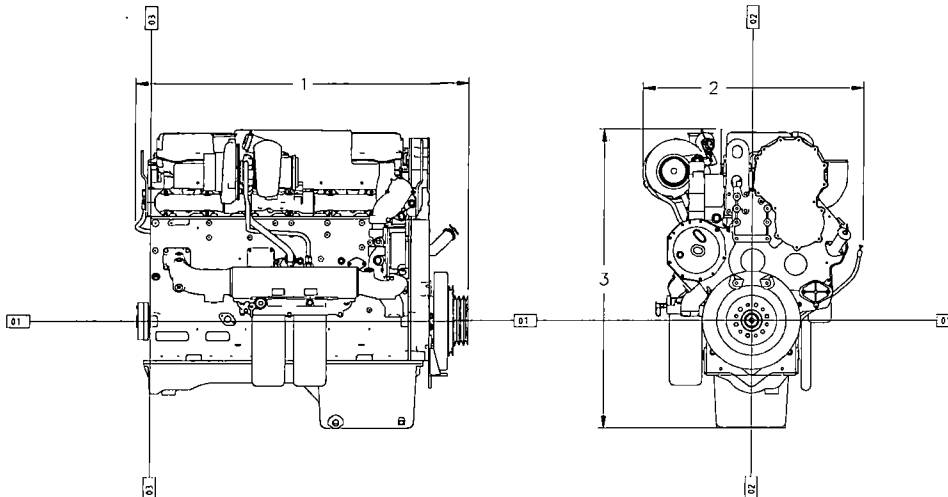
429 bkW/575 bhp @ 2100 rpm

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	1388.2 mm (54.65 in)
(2) Width	920.7 mm (36.25 in)
(3) Height	1242.8 mm (48.93 in)

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

Performance Number: DM7698-01

Feature Code: C18DI10 Arr. Number: 2769767

Materials and specifications are subject to change without notice.

16287229

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

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DIESEL ENGINE-GENERATOR SET 650-XC6DT2

⇒ 650 kWe / 60 Hz / Standby
615 kWe / 60 Hz / Prime
208 - 4160V



SYSTEM OPTIONS

Standby

Voltage (L-L)	208V**	240V**	480V**	600V**	4160V
Phase	3	3	3	3	3
PF	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60
kW	650	650	650	650	650
kVA	812.5	812.5	812.5	812.5	812.5
AMPS	2255	1955	977	782	113
skVA@30%					
Voltage Dip	1750	1750	1750	1350	1850
Generator Model*	573RSL4033	573RSL4033	573RSL4033	573RSS4274	574FSM4358
Temp Rise	130°C/27°C	130°C/27°C	130°C/27°C	125°C/40°C	130°C/27°C
Connection	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	4 LEAD WYE	6 LEAD WYE

Prime

Voltage (L-L)	208V	240V	480V	600V	4160V
Phase	3	3	3	3	3
PF	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60
kW	615	615	615	615	615
kVA	768.75	768.75	768.75	768.75	768.75
AMPS	2134	1849	925	740	107
skVA@30%					
Voltage Dip	1750	1750	1750	1350	1850
Generator Model*	573RSL4033	573RSL4033	573RSL4033	573RSS4274	574FSM4358
Temp Rise	105°C/40°C	105°C/40°C	105°C/40°C	105°C/40°C	105°C/40°C
Connection	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	4 LEAD WYE	6 LEAD WYE

* The Generator Model Number identified in the table is for standard C Series Configuration. Consult the factory for alternate configuration.

** UL2200 Offered

- EPA Tier 2 Certified
- Engine-Generator Set Tested to ISO 8528-5 for Transient Response
- UL2200, CSA Listing Offered
- Accepts Rated Load in One Step Per NFPA 110
- All engine-generator sets are prototype and factory tested
- MTU Onsite Energy is a single source supplier
- Global Product Support
- 2 Year Standard Warranty
- 12V 2000 Diesel Engine
 - 23.9 Liter Displacement
 - Electronic Unit Pump Injection
 - 4-Cycle
- Complete Range of Accessories

- Permanent Magnet Generator (PMG)
 - Brushless, Rotating Field
 - 300% Short Circuit Capability
 - 2/3 Pitch Windings
 - Standard for 570 frame and larger
 - Optional for 430 frame and smaller
- Digital Control Panel(s)
 - UL Recognized, cULus, NFPA 110
 - Complete System Metering
 - LCD Display
- Cooling System
 - Integral Set-Mounted
 - Engine Driven Fan

Engine

- Air Cleaners
- Oil Pump
- Full Flow Oil Filter
- Closed Crankcase Ventilation
- Jacket Water Pump
- Inter Cooler Water Pump
- Thermostats
- Exhaust Manifold - Dry
- Blower Fan & Fan Drive
- Radiator - Unit Mounted
- Electric Starting Motor - 24V
- Governor - Electronic Isochronous
- Base - Structural Steel
- SAE Flywheel & Bell Housing
- Charging Alternator - 24V
- Battery Box & Cables
- Flexible Fuel Connectors
- Flexible Exhaust Connection
- EPA Certified Engine

- No Load to Full Load Regulation
- Brushless Alternator with Brushless Pilot Exciter
- 4 Pole, Rotating Field
- 130°C Standby Temperature Rise
- 1 Bearing, Sealed
- Flexible Coupling
- Full Amortisseur Windings
- 125% Rotor Balancing
- 3-Phase Voltage Sensing
- ±0.25% Voltage Regulation
- 100% of Rated Load - One Step IAW NFPA 110, Level 1, Type 10
- 3% Maximum Harmonic Content

Digital Control Panel(s)

- Digital Metering
- Engine Parameters
- Generator Protection Functions
- Engine Protection
- SAE J1939 Engine ECU Communications
- Windows-Based Software
- Multilingual Capability
- Remote Communications to our RDP-110 Remote Annunciator
- 16 Programmable Contact Inputs
- 7 Contact Outputs
- UL Recognized, cULus, CE Approved
- Event Recording
- IP 54 Front Panel Rating with Integrated Gasket
- NFPA 110 Level Compatible

Generator

- NEMA MG 1, IEEE and ANSI standards compliance for temperature rise and motor starting
- Sustained short circuit current of up to 300% of the rated current for up to 10 seconds
- Self-Ventilated and Drip-Proof
- Superior Voltage Waveform
- Digital, Solid State, Volts-per-Hertz Regulator

Engine

Manufacturer	MTU
Model	12V 2000 G45TB
Type	4-Cycle
Arrangement	12-V
Displacement: L (in ³)	23.9 (1,457)
Bore: cm (in)	13 (5.1)
Stroke: cm (in)	15 (5.9)
Compression Ratio	16:1
Rated RPM	1,800
Engine Governor	Electronic Isochronous (ADEC)
Maximum Power: Standby: kWm (bhp)	780 (1,046)
Maximum Power: Prime: kWm (bhp)	710 (952)
Speed Regulation	±0.25%
Air Cleaner	Dry

Liquid Capacity (Lubrication)

Total Oil System: L (gal)	77 (20.3)
Engine Jacket Water Capacity: L (gal)	110 (29.1)
After Cooler Water Capacity: L (gal)	20 (5.3)
System Coolant Capacity: L (gal)	274 (72.4)

Electrical

Electric Volts DC	24
Cold Cranking Amps Under -17.8°C (0°F)	1,750

Fuel System

Fuel Supply Connection Size	3/4" NPT
Fuel Return Connection Size	1/4" NPT
Maximum Fuel Lift: m (ft)	3 (10)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	480 (127)

Fuel Consumption

	STANDBY	PRIME
At 100% of Power Rating: L/hr (gal/hr)	192.7 (50.9)	176 (46.5)
At 75% of Power Rating: L/hr (gal/hr)	145 (38.3)	132.9 (35.1)
At 50% of Power Rating: L/hr (gal/hr)	98.4 (26)	90.5 (23.9)

Cooling - Radiator System

	STANDBY	PRIME
Ambient Capacity of Radiator: °C (°F)	50 (122)	50 (122)
Maximum Restriction of Cooling Air, Intake, and Discharge Side of Rad.: kPa (in. H ₂ O)	0.12 (0.5)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	833 (220)	833 (220)
After Cooler Pump Capacity: L/min (gpm)	257 (68)	257 (68)
Heat Rejection to Coolant: kW (BTUM)	270 (15,354)	245 (13,932)
Heat Rejection to After Cooler: kW (BTUM)	235 (13,364)	215 (12,226)
Heat Radiated to Ambient: kW (BTUM)	76.4 (4,345)	73.1 (4,157)

Air Requirements

	STANDBY	PRIME
Aspirating: *m ³ /min (SCFM)	63 (2,225)	60 (2,119)
Air Flow Required for Rad. Cooled Unit: *m ³ /min (SCFM)	1,132 (39,977)	1,132 (39,977)

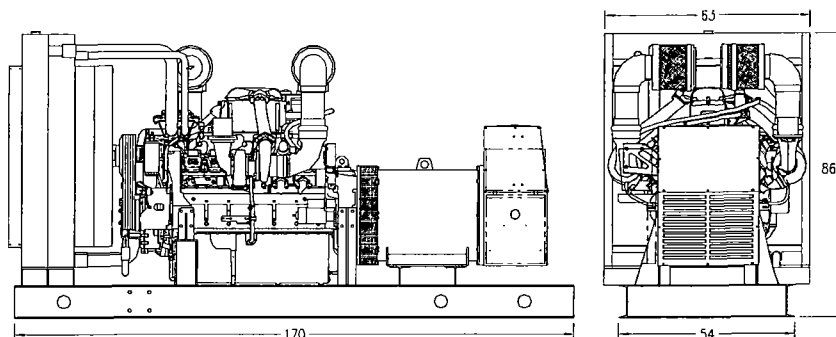
Air Flow Required for Heat Exchanger/Remote Rad. based on 25°F Rise: *m ³ /min (SCFM)	277 (9,798)	265 (9,375)
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* Air density = 1.184 kg/m³ (0.0739 lbm/ft³)

Exhaust System

	STANDBY	PRIME
Gas Temp. (Stack): °C (°F)	550 (1,022)	535 (995)
Gas Volume at Stack Temp: m ³ /min (CFM)	159 (5,615)	150 (5,297)
Maximum Allowable Back Pressure: kPa (in. H ₂ O)	8.5 (34.1)	8.5 (34.1)

WEIGHTS AND DIMENSIONS



Drawing above for illustration purposes only, based on standard open power 480 volt engine-generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific template drawings.

System	Dimensions (LxWxH)	Weight (less tank)
OPU	4,320 x 1,600 x 2,200 mm (170 x 63 x 86.5 in)	5,492 kg (12,108 lb)

Weights and dimensions are based on open power units and are estimates only. Consult the factory for accurate weights and dimensions for your specific engine-generator set.

SOUND DATA

Unit Type	Standby Full Load	Standby No Load	Prime Full Load	Prime No Load
OPU w/ Critical Grade Muffler (dBA)	99.5	92	98	92
Sound Attenuated Enclosure (dBA)	91.5	84	90	84

Sound data is provided at 7 m (23 ft).

EMISSIONS DATA

NO_x + NMHC	CO	PM
4.31	0.87	0.084

All units are in g/hp-hr and are EPA D2 cycle values.

Emission levels of the engine may vary as a function of ambient temperature, barometric pressure, humidity, fuel type and quality, installation parameters, measuring instrumentation, etc. The data provided are laboratory results from one engine representing this rating. The data was obtained under controlled environmental conditions with calibrated instrumentation traceable to the United States National Bureau of Standards and in compliance with US EPA regulations found within 40 CFR Part 89. The weighted cycle value from each engine is guaranteed to be below the US EPA Standards at the US EPA defined conditions.

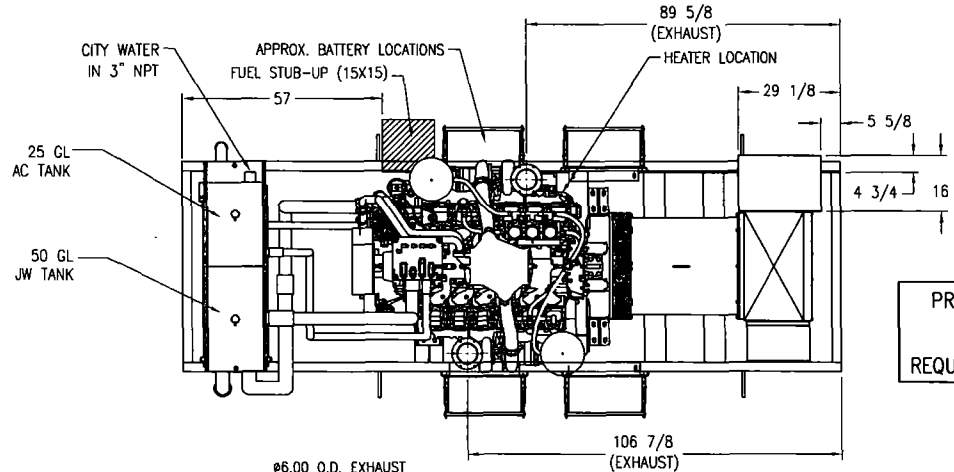
RATING DERIVATIONS AND CONDITIONS

- // 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. No overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271.)
- // 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.
- // Deration Factor:
 - Altitude:** Derate 0.8% per 100 m (328 ft) above 2,400 m (7,874 ft) at 25°C (77°F). Consult your local MTU Onsite Energy Power Generation Distributor for other altitudes.)
 - Temperature:** No temperature derate up to 50°C (122°F) at 100 m (328 ft).

Materials and specifications subject to change without notice.

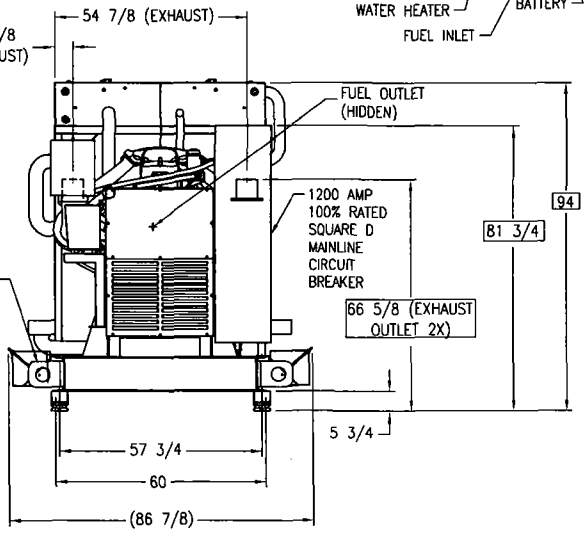
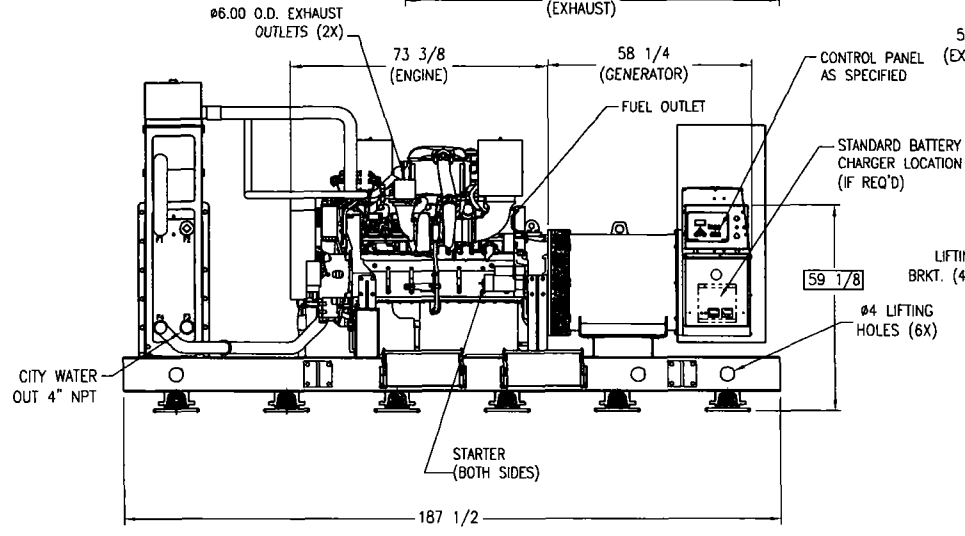
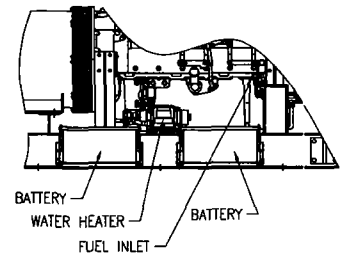
C/F = Consult Factory/MTU Onsite Energy Distributor

DWG. #: 650RXC6DT2(R1238A39)OPU-MX-231



- NOTES:**
1. SUB-BASE FUEL TANK INFORMATION:
OVERALL HEIGHT OF UNIT WILL INCREASE WITH USE OF OPTIONAL SUB-BASE FUEL TANK. REFERENCE SALES CATALOG FOR TANK HEIGHT AND GALLON CAPACITY INFORMATION.
 2. FUEL SYSTEM CONNECTIONS:
(FOR UNITS WITHOUT SUB-BASE FUEL TANKS)
INLET: 3/8 NPT OUTLET: 3/8 NPT
 3. [BOXED] DIMENSIONS MAY VARY DUE TO SPRING COMPRESSION.

PRELIMINARY DRAWING - NOT INTENDED FOR CONSTRUCTION PURPOSES DUE TO POSSIBLE CHANGES REQUIRED DURING THE SUBMITTAL PROCESS



DRAWING TOLERANCES: ±1/4"
EXCEPT BASE MTC. HOLES: ±1/8"

REVISION	DATE	REVISION DESCRIPTION	INITIALS
A	5-11-10	SUBMITTAL	AEF



THIS DRAWING IS THE PROPERTY OF ON SITE ENERGY. IT IS TO BE USED ONLY FOR THE PROJECT AND LOCATION SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF ON SITE ENERGY.

GEN-SET INFORMATION	
ENGINE: R1238A39	ENCLOSURE: NA
GENERATOR: 573 RSL	BREAKER: 1200 AMP
RADIATOR: N/A	TANK: NA
DUCT FLANGE: 105-4313	MUFFLER: NA
CONTROL PANEL: DGC 2020	TRAILER: NA
BASE: TBD	ISOLATORS: TJE

DIMENSIONAL LAYOUT	
DRAWN TO SCALE ALL DIMENSIONS ARE IN INCHES	MODEL: 650RXC6DT2
DATE: 5-11-10	DRAWN BY: AEF
DWG. #: 650RXC6DT2(R1238A39)OPU-MX-231	



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,

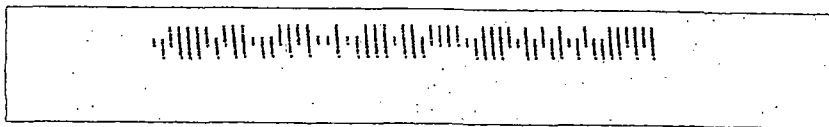
A handwritten signature in black ink, appearing to read "Jeffrey A. Smith".

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

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



MS 5822
SOUTH FLORIDA
WATER MANAGEMENT DISTRICT
3301 Gun Club Road
P.O. Box 24680
West Palm Beach, Florida 33416-4680



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