# WEST COUNTY POWER PARTNERS, LLC

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Florida Power & Light Company
West County Energy Center – Unit 1&2
Permit No. – PSD-FL-354
DEP File No. – 0990646-001-AC

WCPP Project 144553
WCPP Files 14.0100/32.0440
WCPP-2009-TP- 582
December 7, 2009

E-mail, Express Mail

Ms. Elizabeth Walker
Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation, Bureau Chief
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Subject: Notification of Initial Operation of Limited Use 2,250 Kw Liquid Fueled Emergency Generators

Dear Ms. Walker:

On behalf of Florida Power & Light Company (FPL) and its Designated Representative, Sheila M. Wilkinson, the West County Power Partners, LLC (WCPP), EPC Contractor for construction of the new combined cycle generating unit at the FPL West County Energy Center – Unit 1&2, is submitting notification of initial operation for the three (3) limited use 2,250 Kw liquid fueled emergency generators for the project in accordance with the regulations cited below.

This correspondence is to serve as notification to the Department, in accordance with 40 CFR 60.9, FPL first operated the following emergency generators on the following dates:

1. Emergency Generator #1 (SN: PBR00236, Model: 3516 BDITA) started burning ULS fuel oil on October 6, 2009.
2. Emergency Generator #2 (SN: PBR00469, Model: 3516 BDITA) started burning ULS fuel oil on October 8, 2009.
3. Emergency Generator #3 (SN: PBR00387, Model: 3516 BDITA) started burning ULS fuel oil on October 8, 2009.

Additionally, FPL West County Energy Center's Air Permit (Permit No. PSD-FPL-354), Section III. Emergency Generator (ID: 011), #6. Emergency Generators Testing Requirements, states the following:

> "As an alternative, an EPA Certification of emissions characteristics of the purchased model that are at least as stringent as the BACT values and the use of ULS fuel oil can be used to fulfill this requirement. [Rule 62-297.310(7)(a) 1, F.A.C.; 40 CFR 60.8 and 40 CFR 60.4211]"

In accordance with these conditions, West County Power Partners is herby submitting the manufacturer's performance data which meets EPA New Source Performance Standard Emission Level Requirements (40 CFR Part 60, Subpart IIII) for Stationary Certification over 3,000 hp from 2007 through 2010.

The manufacturer's performance data provides emissions in gm/kw-hr. The air permit limits are in gm/bhp-hr. The conversion from is 1 bhp = 0.7456999 kW. The following provides the conversion (multiply each of the values given in gm/kW-hr by 0.746):

$NO_X$: 9.2 gm/kw-hr = 6.9 gm/bhp-hr.
CO: 11.4 gm/kw-hr = 8.5 gm/bhp-hr.
HC: 1.3 gm/kw-hr = 1.0 gm/bhp-hr.
PM: 0.5 gm/kw-hr = 0.4 gm/bhp-hr.

In summary, the manufacturer's performance data is compliant with West County Energy Center's Air Permit.

If you have any questions about this notification, please contact Terry Apple at (913) 458-7220 or John Tidwell at (561) 784-8048.

Very truly yours,

WEST COUNTY POWER PARTNERS, LLC

for Chet Lloyd
Project Executive

WS:hs

Enclosures

cc: Dave McNeal, USEPA Air, Pesticides and Toxics Management
Art Diem, USEPA Clean Air Markets Division
Errin Pichard, FDEP Air Resource Management
Lee Hoefert, FDEP Southeast District
Tim Gray, FDEP Southeast District
Tom Cascio, FDEP Bureau of Air Regulation
Mike Halpin, FDEP Sitting Coordination Office
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E.N. Scoville II, FPL Director Construction
Sheila M. Wilkinson, FPL Designated Rep
Laxmana Tallam, PBC Health Department
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E.N. Scoville II, FPL Director Construction
Tom Young, FPL Construction Project General Manager
Jan Kirwan, FPL Environmental Specialist
Carmine Priore, FPL Plant General Manager
Chet Lloyd, WCPP Project Executive
John Tidwell, WCPP Senior Project Manger
Greg Hines, WCPP Site Environmental Manager
Terry Apple, WCPP Project Manager/ Project File
William Stevenson, WCPP Environmental Specialist

# GEN SET PACKAGE PERFORMANCE DATA [PBR00387]

*(PBR00387)-ENGINE (G6F00094)-GENERATOR*

**Performance Number:** DM8423

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**Sales Model:** 3516BDITA **Combustion:** DI **Aspr:** TA

**Engine Power:**

2250 W/F EKW 2367 W/O F EKW **Speed:** 1,800 RPM **After Cooler:** SCAC

3,285 HP

**Manifold Type:** DRY **Governor Type:** ADEM3 **After Cooler Temp(F):** 140

**Turbo Quantity:** 4 **Engine App:** GP **Turbo Arrangement:** Parallel

**Hertz:** 60 **Application Type:** PACKAGE-DIE **Engine Rating:** PGS **Strategy:**

**Rating Type:** STANDBY **Certification:** EPA STAT >3000HP 2007 - 2010

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## General Performance Data

| GEN W/F EKW | PERCENT LOAD | ENGINE POWER BHP | ENGINE BMEP PSI | FUEL BSFC LB/BHP-HR | FUEL RATE GPH | INTAKE MFLD TEMP DEG F | INTAKE MFLD P IN-HG | INTAKE AIR FLOW CFM | EXH MFLD TEMP DEG F | EXH STACK TEMP DEG F | EXH GAS FLOW CFM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 343.31 | 0.34 | 157.53 | 189.32 | 88.51 | 6,557.94 | 1,266.44 | 915.98 | 17,448.99 |
| 2,025 | 90 | 2972 | 310.53 | 0.33 | 141.02 | 182.66 | 80.81 | 6,204.79 | 1,194.8 | 863.78 | 15,895.15 |
| 1,800 | 80 | 2660 | 278.04 | 0.33 | 125.61 | 176 | 72.4 | 5,795.14 | 1,136.48 | 828.5 | 14,411.93 |
| 1,687.5 | 75 | 2505 | 261.8 | 0.33 | 118.3 | 172.76 | 67.93 | 5,565.6 | 1,112.18 | 816.98 | 13,691.51 |
| 1,575 | 70 | 2349 | 245.55 | 0.33 | 111.19 | 169.7 | 63.02 | 5,304.27 | 1,092.74 | 812.66 | 12,988.75 |
| 1,350 | 60 | 2040 | 213.06 | 0.33 | 97.24 | 163.76 | 53.16 | 4,763.95 | 1,054.4 | 805.46 | 11,583.22 |
| 1,125 | 50 | 1730 | 180.86 | 0.34 | 83.61 | 158.36 | 43.32 | 4,213.04 | 1,016.24 | 798.08 | 10,184.76 |
| 900 | 40 | 1428 | 149.25 | 0.35 | 70.48 | 153.86 | 33.76 | 3,662.13 | 973.76 | 790.52 | 8,800.42 |
| 675 | 30 | 1120 | 117.05 | 0.36 | 57.17 | 149.9 | 24.22 | 3,100.63 | 918.68 | 780.98 | 7,391.37 |
| 562.5 | 25 | 964 | 100.66 | 0.37 | 50.4 | 148.28 | 19.46 | 2,818.11 | 886.46 | 775.58 | 6,678.01 |
| 450 | 20 | 806 | 84.27 | 0.38 | 43.56 | 146.66 | 14.87 | 2,542.66 | 845.06 | 762.8 | 5,961.12 |
| 225 | 10 | 487 | 50.91 | 0.42 | 29.4 | 143.96 | 7.7 | 2,118.88 | 689.9 | 660.56 | 4,552.06 |

## General Performance Data 2

| GEN W/F EKW | PERCENT LOAD | ENGINE POWER BHP | COMPRESS OUT PRESS IN-HG | COMPRESS OUT TEMP DEG F |
|---|---|---|---|---|
| 2,250 | 100 | 3286 | 61.12 | 480.56 |
| 2,025 | 90 | 2972 | 53.27 | 445.46 |
| 1,800 | 80 | 2660 | 44.75 | 410.36 |
| 1,687.5 | 75 | 2505 | 40.19 | 393.08 |
| 1,575 | 70 | 2349 | 35.21 | 375.44 |
| 1,350 | 60 | 2040 | 25.17 | 339.62 |
| 1,125 | 50 | 1730 | 15.16 | 303.26 |
| 900 | 40 | 1428 | 5.48 | 263.66 |
| 675 | 30 | 1120 | 4.15 | 222.44 |
| 562.5 | 25 | 964 | 8.94 | 201.56 |
| 450 | 20 | 806 | 13.53 | 180.68 |

| | | | | |
|---|---|---|---|---|
| 225 | 10 | 487 | 20.67 | 141.26 |

## Engine Heat Rejection Data

| GEN W/F EKW | PERCENT LOAD | REJ TO JW BTU/MN | REJ TO ATMOS BTU/MN | REJ TO EXHAUST BTU/MN | EXH RCOV TO 350F BTU/MN | FROM OIL CLR BTU/MN | FROM AFT CLR BTU/MN | WORK ENERGY BTU/MN | LHV ENERGY BTU/MN | HHV ENERGY BTU/MN |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 48,396.3 | 9,440.4 | 128,241.6 | 70,234.3 | 16,890.4 | 33,837.6 | 139,331.2 | 337,238.4 | 359,247.0 |
| 2,025 | 90 | 44,699.7 | 8,587.3 | 113,455.4 | 59,884.0 | 15,127.4 | 28,776.2 | 126,023.7 | 301,865.3 | 321,599.2 |
| 1,800 | 80 | 41,173.8 | 7,961.8 | 100,489.1 | 51,751.6 | 13,478.2 | 23,999.1 | 112,829.8 | 268,880.8 | 286,453.6 |
| 1,687.5 | 75 | 39,410.8 | 7,734.3 | 94,688.4 | 48,396.3 | 12,682.0 | 21,724.3 | 106,232.9 | 253,241.6 | 269,790.7 |
| 1,575 | 70 | 37,647.9 | 7,563.7 | 89,456.3 | 45,666.5 | 11,942.7 | 19,449.5 | 99,636.0 | 238,171.1 | 253,696.5 |
| 1,350 | 60 | 34,178.8 | 7,222.5 | 79,106.0 | 40,263.9 | 10,464.1 | 15,013.7 | 86,499.1 | 208,371.2 | 222,020.0 |
| 1,125 | 50 | 30,709.7 | 6,881.3 | 68,926.3 | 34,975.0 | 8,985.4 | 10,862.2 | 73,362.1 | 179,083.2 | 190,741.6 |
| 900 | 40 | 27,183.8 | 6,540.0 | 59,030.9 | 29,799.8 | 7,563.7 | 7,222.5 | 60,566.4 | 150,705.2 | 160,543.7 |
| 675 | 30 | 23,373.5 | 6,198.8 | 49,021.8 | 24,624.7 | 6,142.0 | 4,094.6 | 47,486.4 | 122,156.5 | 130,118.3 |
| 562.5 | 25 | 21,383.1 | 5,971.3 | 43,903.6 | 22,008.6 | 5,402.6 | 2,729.8 | 40,889.4 | 107,825.3 | 114,877.2 |
| 450 | 20 | 19,278.9 | 5,743.9 | 38,671.5 | 19,222.0 | 4,663.3 | 1,535.5 | 34,178.8 | 93,323.5 | 99,408.5 |
| 225 | 10 | 14,445.0 | 5,061.4 | 27,013.2 | 11,828.9 | 3,127.8 | -170.6 | 20,643.8 | 62,955.0 | 67,049.6 |

## EXHAUST Sound Data: 4.92 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 118 | 108 | 123 | 119 | 111 | 109 | 111 | 110 | 109 |
| 2,025 | 90 | 117 | 107 | 122 | 118 | 110 | 108 | 110 | 109 | 107 |
| 1,800 | 80 | 116 | 106 | 121 | 117 | 109 | 107 | 109 | 108 | 106 |
| 1,687.5 | 75 | 115 | 105 | 120 | 116 | 108 | 107 | 108 | 108 | 106 |
| 1,575 | 70 | 115 | 105 | 120 | 116 | 108 | 106 | 107 | 107 | 105 |
| 1,350 | 60 | 113 | 104 | 118 | 114 | 106 | 105 | 106 | 106 | 104 |
| 1,125 | 50 | 112 | 102 | 117 | 113 | 105 | 104 | 105 | 105 | 103 |
| 900 | 40 | 111 | 101 | 116 | 112 | 104 | 102 | 104 | 103 | 101 |
| 675 | 30 | 109 | 99 | 114 | 110 | 102 | 101 | 102 | 102 | 100 |
| 562.5 | 25 | 108 | 99 | 113 | 109 | 101 | 100 | 101 | 101 | 99 |
| 450 | 20 | 107 | 98 | 112 | 108 | 100 | 99 | 100 | 100 | 98 |
| 225 | 10 | 105 | 95 | 110 | 106 | 98 | 97 | 98 | 98 | 96 |

## EXHAUST Sound Data: 22.97 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 104 | 96 | 112 | 107 | 98 | 96 | 97 | 97 | 94 |
| 2,025 | 90 | 103 | 95 | 111 | 106 | 97 | 95 | 96 | 96 | 93 |
| 1,800 | 80 | 102 | 94 | 110 | 105 | 96 | 94 | 95 | 95 | 92 |
| 1,687.5 | 75 | 102 | 93 | 110 | 104 | 95 | 94 | 94 | 94 | 92 |
| 1,575 | 70 | 101 | 93 | 109 | 103 | 95 | 93 | 94 | 94 | 91 |
| 1,350 | 60 | 100 | 91 | 108 | 102 | 94 | 92 | 93 | 93 | 90 |
| 1,125 | 50 | 99 | 90 | 107 | 101 | 92 | 91 | 91 | 91 | 89 |
| 900 | 40 | 97 | 89 | 105 | 100 | 91 | 89 | 90 | 90 | 87 |
| 675 | 30 | 96 | 87 | 104 | 98 | 89 | 88 | 88 | 88 | 86 |
| 562.5 | 25 | 95 | 86 | 103 | 97 | 89 | 87 | 88 | 87 | 85 |
| 450 | 20 | 94 | 85 | 102 | 96 | 88 | 86 | 87 | 87 | 84 |
| 225 | 10 | 92 | 83 | 100 | 94 | 85 | 84 | 84 | 84 | 82 |

## EXHAUST Sound Data: 49.21 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 98 | 89 | 106 | 100 | 91 | 90 | 91 | 90 | 88 |
| 2,025 | 90 | 97 | 88 | 105 | 99 | 90 | 89 | 89 | 89 | 87 |
| 1,800 | 80 | 96 | 87 | 104 | 98 | 89 | 88 | 88 | 88 | 86 |
| 1,687.5 | 75 | 95 | 87 | 103 | 97 | 89 | 87 | 88 | 88 | 85 |
| 1,575 | 70 | 95 | 86 | 103 | 97 | 88 | 87 | 87 | 87 | 84 |
| 1,350 | 60 | 93 | 85 | 101 | 96 | 87 | 85 | 86 | 86 | 83 |
| 1,125 | 50 | 92 | 84 | 100 | 94 | 86 | 84 | 85 | 85 | 82 |
| 900 | 40 | 91 | 82 | 99 | 93 | 84 | 83 | 83 | 83 | 81 |
| 675 | 30 | 89 | 81 | 97 | 91 | 83 | 81 | 82 | 82 | 79 |
| 562.5 | 25 | 88 | 80 | 96 | 91 | 82 | 80 | 81 | 81 | 78 |
| 450 | 20 | 87 | 79 | 95 | 90 | 81 | 79 | 80 | 80 | 77 |
| 225 | 10 | 85 | 77 | 93 | 87 | 79 | 77 | 78 | 78 | 75 |

## MECHANICAL Sound Data: 3.28 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 2,025 | 90 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,800 | 80 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,687.5 | 75 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,575 | 70 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,350 | 60 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,125 | 50 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 900 | 40 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 675 | 30 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 562.5 | 25 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 450 | 20 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 225 | 10 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |

## MECHANICAL Sound Data: 22.97 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCJ 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 2,025 | 90 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,800 | 80 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,687.5 | 75 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,575 | 70 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,350 | 60 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,125 | 50 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 900 | 40 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 675 | 30 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 562.5 | 25 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 450 | 20 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 225 | 10 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |

## MECHANICAL Sound Data: 49.21 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 2,025 | 90 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,800 | 80 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,687.5 | 75 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,575 | 70 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,350 | 60 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,125 | 50 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 900 | 40 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 675 | 30 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 562.5 | 25 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 450 | 20 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 225 | 10 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |

## EMISSIONS DATA

EPA STAT >3000HP 2007 - 2010 ********** P3
This Engine meets EPA New Source Performance Standard Emission Level Requirements (40 CFR Part 60, Subpart IIII) for Stationary Certification over 3000hp from 2007 through 2010 (EPA nonroad Tier 1 equivalent)

Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following nonroad regulations:

| LOCALITY | AGENCY/LEVEL | MAX LIMITS - g/kW-hr | | | |
|---|---|---|---|---|---|
| U. S. (incl Calif) | EPA/STAT>3000hp | CO:11.4 | HC:1.3 | NOx:9.2 | PM:0.5 |

| | |
|---|---|
| REFERENCE EXHAUST STACK DIAMETER | 12 IN |
| WET EXHAUST MASS | 29,850.6 LB/HR |
| WET EXHAUST FLOW (915.80 F STACK TEMP ) | 17,463.12 CFM |
| WET EXHAUST FLOW RATE ( 32 DEG F AND 29.98 IN HG ) | 6,260.00 STD CFM |
| DRY EXHAUST FLOW RATE ( 32 DEG F AND 29.98 IN HG ) | 5,735.11 STD CFM |
| FUEL FLOW RATE | 156 GAL/HR |

**RATED SPEED "Not to exceed data"**

| GEN PWR EKW | PERCENT LOAD | ENGINE POWER BHP | TOTAL NOX (AS NO2) LB/HR | TOTAL CO LB/HR | TOTAL HC LB/HR | PART MATTER LB/HR | OXYGEN IN EXHAUST PERCENT | DRY SMOKE OPACITY PERCENT | BOSCH SMOKE NUMBER |
|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 65.8800 | 9.3300 | .3700 | .5400 | 9.7000 | 2.3000 | 1.2800 |
| 1,687.5 | 75 | 2505 | 45.3800 | 3.1300 | .8200 | .3100 | 11.1000 | 1.5000 | 1.2800 |
| 1,125 | 50 | 1730 | 26.8900 | 2.0500 | .9800 | .2600 | 11.8000 | 2.0000 | 1.2800 |
| 562.5 | 25 | 964 | 13.2800 | 2.0000 | .7500 | .2600 | 12.7000 | 2.8000 | 1.2800 |
| 225 | 10 | 487 | 9.1400 | 2.6900 | .7200 | .2400 | 14.7000 | 2.9000 | 1.2800 |

**RATED SPEED "Nominal Data"**

| GEN PWR EKW | PERCENT LOAD | ENGINE POWER BHP | TOTAL NOX (AS NO2) LB/HR | TOTAL CO LB/HR | TOTAL HC LB/HR | TOTAL CO2 LB/HR | PART MATTER LB/HR | OXYGEN IN EXHAUST PERCENT | DRY SMOKE OPACITY PERCENT | BOSCH SMOKE NUMBER |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 54.9000 | 5.1800 | .2800 | 3,425.8 | .3900 | 9.7000 | 2.3000 | 1.2800 |
| 1,687.5 | 75 | 2505 | 37.8200 | 1.7400 | .6200 | 2,546 | .2200 | 11.1000 | 1.5000 | 1.2800 |
| 1,125 | 50 | 1730 | 22.4100 | 1.1400 | .7400 | 1,769.8 | .1800 | 11.8000 | 2.0000 | 1.2800 |
| 562.5 | 25 | 964 | 11.0600 | 1.1100 | .5600 | 1,054.2 | .1800 | 12.7000 | 2.8000 | 1.2800 |
| 225 | 10 | 487 | 7.6100 | 1.4900 | .5400 | 606.9 | .1700 | 14.7000 | 2.9000 | 1.2800 |

### Altitude Capability Data(Corrected Power Altitude Capability)

| Ambient Operating Temp. Altitude | 50 F | 68 F | 86 F | 104 F | 122 F | NORMAL |
|---|---|---|---|---|---|---|
| 0 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp |
| 984.25 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,206.38 hp | 3,285.5 hp |
| 1,640.42 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,229.18 hp | 3,129.94 hp | 3,285.5 hp |
| 3,280.84 F | 3,285.5 hp | 3,247.95 hp | 3,140.67 hp | 3,040.09 hp | 2,946.22 hp | 3,205.04 hp |
| 4,921.26 F | 3,163.47 hp | 3,056.18 hp | 2,954.27 hp | 2,860.4 hp | 2,771.89 hp | 3,049.48 hp |
| 6,561.68 F | 2,974.38 hp | 2,872.46 hp | 2,778.59 hp | 2,688.75 hp | 2,605.6 hp | 2,899.29 hp |
| 8,202.1 F | 2,794.69 hp | 2,699.47 hp | 2,609.62 hp | 2,526.48 hp | 2,448.7 hp | 2,754.46 hp |
| 9,842.52 F | 2,623.04 hp | 2,534.53 hp | 2,450.04 hp | 2,372.26 hp | 2,298.51 hp | 2,614.99 hp |
| 10,498.69 F | 2,557.33 hp | 2,470.16 hp | 2,388.36 hp | 2,311.92 hp | 2,240.84 hp | 2,561.35 hp |

**The powers listed above and all the Powers displayed are Corrected Powers**

### Identification Reference and Notes

| | | | |
|---|---|---|---|
| **Engine Arrangement:** | 2683679 | **Lube Oil Press @ Rated Spd(PSI):** | 55.8 |
| **Effective Serial No:** | PBR00150 | **Piston Speed @ Rated Eng SPD (FT/Min):** | 2,173.2 |
| **Primary Engine Test Spec:** | 0K8123 | **Max Operating Altitude(FT):** | 2,460.6 |
| **Performance Parm Ref:** | TM5739 | **PEEC Elect Control Module Ref** | |
| **Performance Data Ref:** | DM8423 | **PEEC Personality Cont Mod Ref** | |
| **Aux Coolant Pump Perf Ref:** | DM1286 | | |
| **Cooling System Perf Ref:** | DM1299 | **Turbocharger Model** | GTA5518-1.24 |
| **Certification Ref:** | EPA STAT 3000HP | **Fuel Injector** | 2563663 |
| **Certification Year:** | 2007 | **Timing-Static (DEG):** | -- |
| **Compression Ratio:** | 14.0 | **Timing-Static Advance (DEG):** | -- |
| **Combustion System:** | DI | **Timing-Static (MM):** | -- |
| **Aftercooler Temperature (F):** | 140 | **Unit Injector Timing (MM):** | 64.3 |
| **Crankcase Blowby Rate(CFH):** | 3,284.3 | **Torque Rise (percent)** | -- |
| **Fuel Rate (Rated RPM) No Load (Gal/HR):** | 16.2 | **Peak Torque Speed RPM** | -- |
| **Lube Oil Press @ Low Idle Spd(PSI):** | 20.0 | **Peak Torque (LB/FT):** | -- |

**Reference Number: DM8423** EPA STAT >3000HP 20072010P3

**Parameters Reference: TM5739**

GEN SET - PACKAGED - DIESEL
TOLERANCES:
AMBIENT AIR CONDITIONS AND FUEL USED WILL AFFECT THESE VALUES. EACH OF THE VALUES MAY VARY IN ACCORDANCE WITH THE FOLLOWING TOLERANCES.

| | | |
|---|---|---|
| ENGINE POWER | +/- | 3% |
| EXHAUST STACK TEMPERATURE | +/- | 8% |
| GENERATOR POWER | +/- | 5% |
| INLET AIR FLOW | +/- | 5% |
| INTAKE MANIFOLD PRESSURE - GAGE | +/- | 10% |
| EXHAUST FLOW | +/- | 6% |
| SPECIFIC FUEL CONSUMPTION | +/- | 3% |
| FUEL RATE | +/- | 5% |
| HEAT REJECTION | +/- | 5% |
| HEAT REJECTION EXHAUST ONLY | +/- | 10% |

CONDITIONS:
ENGINE PERFORMANCE IS CORRECTED TO INLET AIR STANDARD CONDITIONS OF 99 KPA (29.31 IN HG) AND 25 DEG C (77 DEG F).

THESE VALUES CORRESPOND TO THE STANDARD ATMOSPHERIC PRESSURE AND TEMPERATURE IN ACCORDANCE WITH SAE J1349. ALSO INCLUDED IS A CORRECTION TO STANDARD FUEL GRAVITY OF 35 DEGREES API HAVING A LOWER HEATING VALUE OF 42,780 KJ/KG (18,390 BTU/LB) WHEN USED AT 29 DEG C (84.2 DEG F) WHERE THE DENSITY IS 838.9 G/L (7.002 LB/GAL).

THE CORRECTED PERFORMANCE VALUES SHOWN FOR CATERPILLAR ENGINES WILL APPROXIMATE THE VALUES OBTAINED WHEN THE OBSERVED PERFORMANCE DATA IS CORRECTED TO SAE J1349, ISO 3046-2 & 8665 & 2288 & 9249 & 1585, EEC 80/1269 AND DIN70020 STANDARD REFERENCE CONDITIONS.

ENGINES ARE EQUIPPED WITH STANDARD ACCESSORIES; LUBE OIL, FUEL PUMP AND JACKET WATER PUMP. THE POWER REQUIRED TO DRIVE AUXILIARIES MUST BE DEDUCTED FROM THE GROSS OUTPUT TO ARRIVE AT THE NET POWER AVAILABLE FOR THE EXTERNAL (FLYWHEEL) LOAD. TYPICAL AUXILIARIES INCLUDE COOLING FANS, AIR COMPRESSORS, AND CHARGING ALTERNATORS.

RATINGS MUST BE REDUCED TO COMPENSATE FOR ALTITUDE AND/OR AMBIENT TEMPERATURE CONDITIONS ACCORDING TO THE APPLICABLE DATA SHOWN ON THE PERFORMANCE DATA SET.

GEN SET - PACKAGED - DIESEL
ALTITUDE:
ALTITUDE CAPABILITY - THE RECOMMENDED REDUCED POWER VALUES FOR SUSTAINED ENGINE OPERATION AT SPECIFIC ALTITUDE LEVELS AND AMBIENT TEMPERATURES.

COLUMN "N" DATA - THE FLYWHEEL POWER OUTPUT AT NORMAL AMBIENT TEMPERATURE.

AMBIENT TEMPERATURE - TO BE MEASURED AT THE AIR CLEANER AIR INLET DURING NORMAL ENGINE OPERATION.
NORMAL TEMPERATURE - THE NORMAL TEMPERATURE AT VARIOUS SPECIFIC ALTITUDE LEVELS IS FOUND ON TM2001.

THE GENERATOR POWER CURVE TABULAR DATA REPRESENTS THE NET ELECTRICAL POWER OUTPUT OF THE GENERATOR.

GENERATOR SET RATINGS
EMERGENCY STANDBY POWER (ESP)

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE ESP RATING. TYPICAL OPERATION IS 50 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 200 HOURS PER YEAR.

STANDBY POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE STANDBY POWER RATING. TYPICAL OPERATION IS 200 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 500 HOURS PER YEAR.

PRIME POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70% OF THE PRIME POWER RATING. TYPICAL PEAK DEMAND IS 100% OF PRIME RATED EKW WITH 10% OVERLOAD CAPABILITY FOR EMERGENCY USE FOR A MAXIMUM OF 1 HOUR IN 12. OVERLOAD OPERATION CANNOT EXCEED 25 HOURS PER YEAR.

CONTINUOUS POWER RATING

OUTPUT AVAILABLE WITH NON-VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70-100% OF THE CONTINUOUS POWER RATING. TYPICAL PEAK DEMAND IS 100% OF CONTINUOUS RATED EKW FOR 100% OF OPERATING HOURS.

# GEN SET PACKAGE PERFORMANCE DATA [PBR00387]

*(PBR00387)-ENGINE (G6F00094)-GENERATOR*

**Performance Number:** DM8423

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**Sales Model:** 3516BDITA **Combustion:** DI **Aspr:** TA

**Engine Power:**

2250 W/F EKW 2367 W/O F EKW 3,285 HP **Speed:** 1,800 RPM **After Cooler:** SCAC

**Manifold Type:** DRY **Governor Type:** ADEM3 **After Cooler Temp(F):** 140

**Turbo Quantity:** 4 **Engine App:** GP **Turbo Arrangement:** Parallel

**Hertz:** 60 **Application Type:** PACKAGE-DIE **Engine Rating:** PGS **Strategy:**

**Rating Type:** STANDBY **Certification:** EPA STAT >3000HP 2007 - 2010

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## General Performance Data

| GEN W/F EKW | PERCENT LOAD | ENGINE POWER BHP | ENGINE BMEP PSI | FUEL BSFC LB/BHP-HR | FUEL RATE GPH | INTAKE MFLD TEMP DEG F | INTAKE MFLD P IN-HG | INTAKE AIR FLOW CFM | EXH MFLD TEMP DEG F | EXH STACK TEMP DEG F | EXH GAS FLOW CFM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 343.31 | 0.34 | 157.53 | 189.32 | 88.51 | 6,557.94 | 1,266.44 | 915.98 | 17,448.99 |
| 2,025 | 90 | 2972 | 310.53 | 0.33 | 141.02 | 182.66 | 80.81 | 6,204.79 | 1,194.8 | 863.78 | 15,895.15 |
| 1,800 | 80 | 2660 | 278.04 | 0.33 | 125.61 | 176 | 72.4 | 5,795.14 | 1,136.48 | 828.5 | 14,411.93 |
| 1,687.5 | 75 | 2505 | 261.8 | 0.33 | 118.3 | 172.76 | 67.93 | 5,565.6 | 1,112.18 | 816.98 | 13,691.51 |
| 1,575 | 70 | 2349 | 245.55 | 0.33 | 111.19 | 169.7 | 63.02 | 5,304.27 | 1,092.74 | 812.66 | 12,988.75 |
| 1,350 | 60 | 2040 | 213.06 | 0.33 | 97.24 | 163.76 | 53.16 | 4,763.95 | 1,054.4 | 805.46 | 11,583.22 |
| 1,125 | 50 | 1730 | 180.86 | 0.34 | 83.61 | 158.36 | 43.32 | 4,213.04 | 1,016.24 | 798.08 | 10,184.76 |
| 900 | 40 | 1428 | 149.25 | 0.35 | 70.48 | 153.86 | 33.76 | 3,662.13 | 973.76 | 790.52 | 8,800.42 |
| 675 | 30 | 1120 | 117.05 | 0.36 | 57.17 | 149.9 | 24.22 | 3,100.63 | 918.68 | 780.98 | 7,391.37 |
| 562.5 | 25 | 964 | 100.66 | 0.37 | 50.4 | 148.28 | 19.46 | 2,818.11 | 886.46 | 775.58 | 6,678.01 |
| 450 | 20 | 806 | 84.27 | 0.38 | 43.56 | 146.66 | 14.87 | 2,542.66 | 845.06 | 762.8 | 5,961.12 |
| 225 | 10 | 487 | 50.91 | 0.42 | 29.4 | 143.96 | 7.7 | 2,118.88 | 689.9 | 660.56 | 4,552.06 |

## General Performance Data 2

| GEN W/F EKW | PERCENT LOAD | ENGINE POWER BHP | COMPRESS OUT PRESS IN-HG | COMPRESS OUT TEMP DEG F |
|---|---|---|---|---|
| 2,250 | 100 | 3286 | 61.12 | 480.56 |
| 2,025 | 90 | 2972 | 53.27 | 445.46 |
| 1,800 | 80 | 2660 | 44.75 | 410.36 |
| 1,687.5 | 75 | 2505 | 40.19 | 393.08 |
| 1,575 | 70 | 2349 | 35.21 | 375.44 |
| 1,350 | 60 | 2040 | 25.17 | 339.62 |
| 1,125 | 50 | 1730 | 15.16 | 303.26 |
| 900 | 40 | 1428 | 5.48 | 263.66 |
| 675 | 30 | 1120 | 4.15 | 222.44 |
| 562.5 | 25 | 964 | 8.94 | 201.56 |
| 450 | 20 | 806 | 13.53 | 180.68 |

| | | | | |
|---|---|---|---|---|
| 225 | 10 | 487 | 20.67 | 141.26 |

## Engine Heat Rejection Data

| GEN W/F EKW | PERCENT LOAD | REJ TO JW BTU/MN | REJ TO ATMOS BTU/MN | REJ TO EXHAUST BTU/MN | EXH RCOV TO 350F BTU/MN | FROM OIL CLR BTU/MN | FROM AFT CLR BTU/MN | WORK ENERGY BTU/MN | LHV ENERGY BTU/MN | HHV ENERGY BTU/MN |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 48,396.3 | 9,440.4 | 128,241.6 | 70,234.3 | 16,890.4 | 33,837.6 | 139,331.2 | 337,238.4 | 359,247.0 |
| 2,025 | 90 | 44,699.7 | 8,587.3 | 113,455.4 | 59,884.0 | 15,127.4 | 28,776.2 | 126,023.7 | 301,865.3 | 321,599.2 |
| 1,800 | 80 | 41,173.8 | 7,961.8 | 100,489.1 | 51,751.6 | 13,478.2 | 23,999.1 | 112,829.8 | 268,880.8 | 286,453.6 |
| 1,687.5 | 75 | 39,410.8 | 7,734.3 | 94,688.4 | 48,396.3 | 12,682.0 | 21,724.3 | 106,232.9 | 253,241.6 | 269,790.7 |
| 1,575 | 70 | 37,647.9 | 7,563.7 | 89,456.3 | 45,666.5 | 11,942.7 | 19,449.5 | 99,636.0 | 238,171.1 | 253,696.5 |
| 1,350 | 60 | 34,178.8 | 7,222.5 | 79,106.0 | 40,263.9 | 10,464.1 | 15,013.7 | 86,499.1 | 208,371.2 | 222,020.0 |
| 1,125 | 50 | 30,709.7 | 6,881.3 | 68,926.3 | 34,975.0 | 8,985.4 | 10,862.2 | 73,362.1 | 179,083.2 | 190,741.6 |
| 900 | 40 | 27,183.8 | 6,540.0 | 59,030.9 | 29,799.8 | 7,563.7 | 7,222.5 | 60,566.4 | 150,705.2 | 160,543.7 |
| 675 | 30 | 23,373.5 | 6,198.8 | 49,021.8 | 24,624.7 | 6,142.0 | 4,094.6 | 47,486.4 | 122,156.5 | 130,118.3 |
| 562.5 | 25 | 21,383.1 | 5,971.3 | 43,903.6 | 22,008.6 | 5,402.6 | 2,729.8 | 40,889.4 | 107,825.3 | 114,877.2 |
| 450 | 20 | 19,278.9 | 5,743.9 | 38,671.5 | 19,222.0 | 4,663.3 | 1,535.5 | 34,178.8 | 93,323.5 | 99,408.5 |
| 225 | 10 | 14,445.0 | 5,061.4 | 27,013.2 | 11,828.9 | 3,127.8 | -170.6 | 20,643.8 | 62,955.0 | 67,049.6 |

## EXHAUST Sound Data: 4.92 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 118 | 108 | 123 | 119 | 111 | 109 | 111 | 110 | 109 |
| 2,025 | 90 | 117 | 107 | 122 | 118 | 110 | 108 | 110 | 109 | 107 |
| 1,800 | 80 | 116 | 106 | 121 | 117 | 109 | 107 | 109 | 108 | 106 |
| 1,687.5 | 75 | 115 | 105 | 120 | 116 | 108 | 107 | 108 | 108 | 106 |
| 1,575 | 70 | 115 | 105 | 120 | 116 | 108 | 106 | 107 | 107 | 105 |
| 1,350 | 60 | 113 | 104 | 118 | 114 | 106 | 105 | 106 | 106 | 104 |
| 1,125 | 50 | 112 | 102 | 117 | 113 | 105 | 104 | 105 | 105 | 103 |
| 900 | 40 | 111 | 101 | 116 | 112 | 104 | 102 | 104 | 103 | 101 |
| 675 | 30 | 109 | 99 | 114 | 110 | 102 | 101 | 102 | 102 | 100 |
| 562.5 | 25 | 108 | 99 | 113 | 109 | 101 | 100 | 101 | 101 | 99 |
| 450 | 20 | 107 | 98 | 112 | 108 | 100 | 99 | 100 | 100 | 98 |
| 225 | 10 | 105 | 95 | 110 | 106 | 98 | 97 | 98 | 98 | 96 |

## EXHAUST Sound Data: 22.97 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 104 | 96 | 112 | 107 | 98 | 96 | 97 | 97 | 94 |
| 2,025 | 90 | 103 | 95 | 111 | 106 | 97 | 95 | 96 | 96 | 93 |
| 1,800 | 80 | 102 | 94 | 110 | 105 | 96 | 94 | 95 | 95 | 92 |
| 1,687.5 | 75 | 102 | 93 | 110 | 104 | 95 | 94 | 94 | 94 | 92 |
| 1,575 | 70 | 101 | 93 | 109 | 103 | 95 | 93 | 94 | 94 | 91 |
| 1,350 | 60 | 100 | 91 | 108 | 102 | 94 | 92 | 93 | 93 | 90 |
| 1,125 | 50 | 99 | 90 | 107 | 101 | 92 | 91 | 91 | 91 | 89 |
| 900 | 40 | 97 | 89 | 105 | 100 | 91 | 89 | 90 | 90 | 87 |
| 675 | 30 | 96 | 87 | 104 | 98 | 89 | 88 | 88 | 88 | 86 |
| 562.5 | 25 | 95 | 86 | 103 | 97 | 89 | 87 | 88 | 87 | 85 |
| 450 | 20 | 94 | 85 | 102 | 96 | 88 | 86 | 87 | 87 | 84 |
| 225 | 10 | 92 | 83 | 100 | 94 | 85 | 84 | 84 | 84 | 82 |

## EXHAUST Sound Data: 49.21 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 98 | 89 | 106 | 100 | 91 | 90 | 91 | 90 | 88 |
| 2,025 | 90 | 97 | 88 | 105 | 99 | 90 | 89 | 89 | 89 | 87 |
| 1,800 | 80 | 96 | 87 | 104 | 98 | 89 | 88 | 88 | 88 | 86 |
| 1,687.5 | 75 | 95 | 87 | 103 | 97 | 89 | 87 | 88 | 88 | 85 |
| 1,575 | 70 | 95 | 86 | 103 | 97 | 88 | 87 | 87 | 87 | 84 |
| 1,350 | 60 | 93 | 85 | 101 | 96 | 87 | 85 | 86 | 86 | 83 |
| 1,125 | 50 | 92 | 84 | 100 | 94 | 86 | 84 | 85 | 85 | 82 |
| 900 | 40 | 91 | 82 | 99 | 93 | 84 | 83 | 83 | 83 | 81 |
| 675 | 30 | 89 | 81 | 97 | 91 | 83 | 81 | 82 | 82 | 79 |
| 562.5 | 25 | 88 | 80 | 96 | 91 | 82 | 80 | 81 | 81 | 78 |
| 450 | 20 | 87 | 79 | 95 | 90 | 81 | 79 | 80 | 80 | 77 |
| 225 | 10 | 85 | 77 | 93 | 87 | 79 | 77 | 78 | 78 | 75 |

## MECHANICAL Sound Data: 3.28 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 2,025 | 90 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,800 | 80 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,687.5 | 75 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,575 | 70 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,350 | 60 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,125 | 50 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 900 | 40 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 675 | 30 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 562.5 | 25 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 450 | 20 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 225 | 10 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |

## MECHANICAL Sound Data: 22.97 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCJ 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 2,025 | 90 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,800 | 80 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,687.5 | 75 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,575 | 70 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,350 | 60 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,125 | 50 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 900 | 40 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 675 | 30 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 562.5 | 25 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 450 | 20 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 225 | 10 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |

## MECHANICAL Sound Data: 49.21 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 2,025 | 90 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,800 | 80 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,687.5 | 75 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,575 | 70 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,350 | 60 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,125 | 50 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 900 | 40 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 675 | 30 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 562.5 | 25 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 450 | 20 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 225 | 10 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |

## EMISSIONS DATA

EPA STAT >3000HP 2007 - 2010 ********** P3
This Engine meets EPA New Source Performance Standard Emission Level Requirements (40 CFR Part 60, Subpart IIII) for Stationary Certification over 3000hp from 2007 through 2010 (EPA nonroad Tier 1 equivalent)

Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following nonroad regulations:

| LOCALITY | AGENCY/LEVEL | MAX LIMITS - g/kW-hr | | | |
|---|---|---|---|---|---|
| U. S. (incl Calif) | EPA/STAT>3000hp | CO:11.4 | HC:1.3 | NOx:9.2 | PM:0.5 |

| | |
|---|---|
| REFERENCE EXHAUST STACK DIAMETER | 12 IN |
| WET EXHAUST MASS | 29,850.6 LB/HR |
| WET EXHAUST FLOW (915.80 F STACK TEMP ) | 17,463.12 CFM |
| WET EXHAUST FLOW RATE ( 32 DEG F AND 29.98 IN HG ) | 6,260.00 STD CFM |
| DRY EXHAUST FLOW RATE ( 32 DEG F AND 29.98 IN HG ) | 5,735.11 STD CFM |
| FUEL FLOW RATE | 156 GAL/HR |

**RATED SPEED "Not to exceed data"**

| GEN PWR EKW | PERCENT LOAD | ENGINE POWER BHP | TOTAL NOX (AS NO2) LB/HR | TOTAL CO LB/HR | TOTAL HC LB/HR | PART MATTER LB/HR | OXYGEN IN EXHAUST PERCENT | DRY SMOKE OPACITY PERCENT | BOSCH SMOKE NUMBER |
|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 65.8800 | 9.3300 | .3700 | .5400 | 9.7000 | 2.3000 | 1.2800 |
| 1,687.5 | 75 | 2505 | 45.3800 | 3.1300 | .8200 | .3100 | 11.1000 | 1.5000 | 1.2800 |
| 1,125 | 50 | 1730 | 26.8900 | 2.0500 | .9800 | .2600 | 11.8000 | 2.0000 | 1.2800 |
| 562.5 | 25 | 964 | 13.2800 | 2.0000 | .7500 | .2600 | 12.7000 | 2.8000 | 1.2800 |
| 225 | 10 | 487 | 9.1400 | 2.6900 | .7200 | .2400 | 14.7000 | 2.9000 | 1.2800 |

**RATED SPEED "Nominal Data"**

| GEN PWR EKW | PERCENT LOAD | ENGINE POWER BHP | TOTAL NOX (AS NO2) LB/HR | TOTAL CO LB/HR | TOTAL HC LB/HR | TOTAL CO2 LB/HR | PART MATTER LB/HR | OXYGEN IN EXHAUST PERCENT | DRY SMOKE OPACITY PERCENT | BOSCH SMOKE NUMBER |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 54.9000 | 5.1800 | .2800 | 3,425.8 | .3900 | 9.7000 | 2.3000 | 1.2800 |
| 1,687.5 | 75 | 2505 | 37.8200 | 1.7400 | .6200 | 2,546 | .2200 | 11.1000 | 1.5000 | 1.2800 |
| 1,125 | 50 | 1730 | 22.4100 | 1.1400 | .7400 | 1,769.8 | .1800 | 11.8000 | 2.0000 | 1.2800 |
| 562.5 | 25 | 964 | 11.0600 | 1.1100 | .5600 | 1,054.2 | .1800 | 12.7000 | 2.8000 | 1.2800 |
| 225 | 10 | 487 | 7.6100 | 1.4900 | .5400 | 606.9 | .1700 | 14.7000 | 2.9000 | 1.2800 |

## Altitude Capability Data(Corrected Power Altitude Capability)

| Ambient Operating Temp. Altitude | 50 F | 68 F | 86 F | 104 F | 122 F | NORMAL |
|---|---|---|---|---|---|---|
| 0 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp |
| 984.25 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,206.38 hp | 3,285.5 hp |
| 1,640.42 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,229.18 hp | 3,129.94 hp | 3,285.5 hp |
| 3,280.84 F | 3,285.5 hp | 3,247.95 hp | 3,140.67 hp | 3,040.09 hp | 2,946.22 hp | 3,205.04 hp |
| 4,921.26 F | 3,163.47 hp | 3,056.18 hp | 2,954.27 hp | 2,860.4 hp | 2,771.89 hp | 3,049.48 hp |
| 6,561.68 F | 2,974.38 hp | 2,872.46 hp | 2,778.59 hp | 2,688.75 hp | 2,605.6 hp | 2,899.29 hp |
| 8,202.1 F | 2,794.69 hp | 2,699.47 hp | 2,609.62 hp | 2,526.48 hp | 2,448.7 hp | 2,754.46 hp |
| 9,842.52 F | 2,623.04 hp | 2,534.53 hp | 2,450.04 hp | 2,372.26 hp | 2,298.51 hp | 2,614.99 hp |
| 10,498.69 F | 2,557.33 hp | 2,470.16 hp | 2,388.36 hp | 2,311.92 hp | 2,240.84 hp | 2,561.35 hp |

**The powers listed above and all the Powers displayed are Corrected Powers**

## Identification Reference and Notes

| | | | |
|---|---|---|---|
| **Engine Arrangement:** | 2683679 | **Lube Oil Press @ Rated Spd(PSI):** | 55.8 |
| **Effective Serial No:** | PBR00150 | **Piston Speed @ Rated Eng SPD (FT/Min):** | 2,173.2 |
| **Primary Engine Test Spec:** | 0K8123 | **Max Operating Altitude(FT):** | 2,460.6 |
| **Performance Parm Ref:** | TM5739 | **PEEC Elect Control Module Ref** | |
| **Performance Data Ref:** | DM8423 | **PEEC Personality Cont Mod Ref** | |
| **Aux Coolant Pump Perf Ref:** | DM1286 | | |
| **Cooling System Perf Ref:** | DM1299 | **Turbocharger Model** | GTA5518-1.24 |
| **Certification Ref:** | EPA STAT 3000HP | **Fuel Injector** | 2563663 |
| **Certification Year:** | 2007 | **Timing-Static (DEG):** | -- |
| **Compression Ratio:** | 14.0 | **Timing-Static Advance (DEG):** | -- |
| **Combustion System:** | DI | **Timing-Static (MM):** | -- |
| **Aftercooler Temperature (F):** | 140 | **Unit Injector Timing (MM):** | 64.3 |
| **Crankcase Blowby Rate(CFH):** | 3,284.3 | **Torque Rise (percent)** | -- |
| **Fuel Rate (Rated RPM) No Load (Gal/HR):** | 16.2 | **Peak Torque Speed RPM** | -- |
| **Lube Oil Press @ Low Idle Spd(PSI):** | 20.0 | **Peak Torque (LB/FT):** | -- |

**Reference Number: DM8423** EPA STAT >3000HP 20072010P3

**Parameters Reference: TM5739**

GEN SET - PACKAGED - DIESEL
TOLERANCES:
AMBIENT AIR CONDITIONS AND FUEL USED WILL AFFECT THESE VALUES. EACH OF THE VALUES MAY VARY IN ACCORDANCE WITH THE FOLLOWING TOLERANCES.

| | | |
|---|---|---|
| ENGINE POWER | +/- | 3% |
| EXHAUST STACK TEMPERATURE | +/- | 8% |
| GENERATOR POWER | +/- | 5% |
| INLET AIR FLOW | +/- | 5% |
| INTAKE MANIFOLD PRESSURE - GAGE | +/- | 10% |
| EXHAUST FLOW | +/- | 6% |
| SPECIFIC FUEL CONSUMPTION | +/- | 3% |
| FUEL RATE | +/- | 5% |
| HEAT REJECTION | +/- | 5% |
| HEAT REJECTION EXHAUST ONLY | +/- | 10% |

CONDITIONS:
ENGINE PERFORMANCE IS CORRECTED TO INLET AIR STANDARD CONDITIONS OF 99 KPA (29.31 IN HG) AND 25 DEG C (77 DEG F).

THESE VALUES CORRESPOND TO THE STANDARD ATMOSPHERIC PRESSURE AND TEMPERATURE IN ACCORDANCE WITH SAE J1349. ALSO INCLUDED IS A CORRECTION TO STANDARD FUEL GRAVITY OF 35 DEGREES API HAVING A LOWER HEATING VALUE OF 42,780 KJ/KG (18,390 BTU/LB) WHEN USED AT 29 DEG C (84.2 DEG F) WHERE THE DENSITY IS 838.9 G/L (7.002 LB/GAL).

THE CORRECTED PERFORMANCE VALUES SHOWN FOR CATERPILLAR ENGINES WILL APPROXIMATE THE VALUES OBTAINED WHEN THE OBSERVED PERFORMANCE DATA IS CORRECTED TO SAE J1349, ISO 3046-2 & 8665 & 2288 & 9249 & 1585, EEC 80/1269 AND DIN70020 STANDARD REFERENCE CONDITIONS.

ENGINES ARE EQUIPPED WITH STANDARD ACCESSORIES; LUBE OIL, FUEL PUMP AND JACKET WATER PUMP. THE POWER REQUIRED TO DRIVE AUXILIARIES MUST BE DEDUCTED FROM THE GROSS OUTPUT TO ARRIVE AT THE NET POWER AVAILABLE FOR THE EXTERNAL (FLYWHEEL) LOAD. TYPICAL AUXILIARIES INCLUDE COOLING FANS, AIR COMPRESSORS, AND CHARGING ALTERNATORS.

RATINGS MUST BE REDUCED TO COMPENSATE FOR ALTITUDE AND/OR AMBIENT TEMPERATURE CONDITIONS ACCORDING TO THE APPLICABLE DATA SHOWN ON THE PERFORMANCE DATA SET.

GEN SET - PACKAGED - DIESEL
ALTITUDE:
ALTITUDE CAPABILITY - THE RECOMMENDED REDUCED POWER VALUES FOR SUSTAINED ENGINE OPERATION AT SPECIFIC ALTITUDE LEVELS AND AMBIENT TEMPERATURES.

COLUMN "N" DATA - THE FLYWHEEL POWER OUTPUT AT NORMAL AMBIENT TEMPERATURE.

AMBIENT TEMPERATURE - TO BE MEASURED AT THE AIR CLEANER AIR INLET DURING NORMAL ENGINE OPERATION.
NORMAL TEMPERATURE - THE NORMAL TEMPERATURE AT VARIOUS SPECIFIC ALTITUDE LEVELS IS FOUND ON TM2001.

THE GENERATOR POWER CURVE TABULAR DATA REPRESENTS THE NET ELECTRICAL POWER OUTPUT OF THE GENERATOR.

GENERATOR SET RATINGS
EMERGENCY STANDBY POWER (ESP)

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE ESP RATING. TYPICAL OPERATION IS 50 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 200 HOURS PER YEAR.

STANDBY POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE STANDBY POWER RATING. TYPICAL OPERATION IS 200 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 500 HOURS PER YEAR.

PRIME POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70% OF THE PRIME POWER RATING. TYPICAL PEAK DEMAND IS 100% OF PRIME RATED EKW WITH 10% OVERLOAD CAPABILITY FOR EMERGENCY USE FOR A MAXIMUM OF 1 HOUR IN 12. OVERLOAD OPERATION CANNOT EXCEED 25 HOURS PER YEAR.

CONTINUOUS POWER RATING

OUTPUT AVAILABLE WITH NON-VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70-100% OF THE CONTINUOUS POWER RATING. TYPICAL PEAK DEMAND IS 100% OF CONTINUOUS RATED EKW FOR 100% OF OPERATING HOURS.

# GEN SET PACKAGE PERFORMANCE DATA [PBR00469]

**JUNE 30, 2009**

*(PBR00469)-ENGINE (G6F00096)-GENERATOR*

For Help Desk Phone Numbers Click here

**Performance Number:** DM8423

**Change Level:** 00

**Sales Model:** 3516BDITA **Combustion:** DI **Aspr:** TA

**Engine Power:**

2250 W/F EKW 2367 W/O F EKW **Speed:** 1,800 RPM **After Cooler:** SCAC

3,285 HP

**Manifold Type:** DRY **Governor Type:** ADEM3 **After Cooler Temp(F):** 140

**Turbo Quantity:** 4 **Engine App:** GP **Turbo Arrangement:** Parallel

**Hertz:** 60 **Application Type:** PACKAGE-DIE **Engine Rating:** PGS **Strategy:**

**Rating Type:** STANDBY **Certification:** EPA STAT >3000HP 2007 - 2010

## General Performance Data

| GEN W/F EKW | PERCENT LOAD | ENGINE POWER BHP | ENGINE BMEP PSI | FUEL BSFC LB/BHP-HR | FUEL RATE GPH | INTAKE MFLD TEMP DEG F | INTAKE MFLD P IN-HG | INTAKE AIR FLOW CFM | EXH MFLD TEMP DEG F | EXH STACK TEMP DEG F | EXH GAS FLOW CFM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 343.31 | 0.34 | 157.53 | 189.32 | 88.51 | 6,557.94 | 1,266.44 | 915.98 | 17,448.99 |
| 2,025 | 90 | 2972 | 310.53 | 0.33 | 141.02 | 182.66 | 80.81 | 6,204.79 | 1,194.8 | 863.78 | 15,895.15 |
| 1,800 | 80 | 2660 | 278.04 | 0.33 | 125.61 | 176 | 72.4 | 5,795.14 | 1,136.48 | 828.5 | 14,411.93 |
| 1,687.5 | 75 | 2505 | 261.8 | 0.33 | 118.3 | 172.76 | 67.93 | 5,565.6 | 1,112.18 | 816.98 | 13,691.51 |
| 1,575 | 70 | 2349 | 245.55 | 0.33 | 111.19 | 169.7 | 63.02 | 5,304.27 | 1,092.74 | 812.66 | 12,988.75 |
| 1,350 | 60 | 2040 | 213.06 | 0.33 | 97.24 | 163.76 | 53.16 | 4,763.95 | 1,054.4 | 805.46 | 11,583.22 |
| 1,125 | 50 | 1730 | 180.86 | 0.34 | 83.61 | 158.36 | 43.32 | 4,213.04 | 1,016.24 | 798.08 | 10,184.76 |
| 900 | 40 | 1428 | 149.25 | 0.35 | 70.48 | 153.86 | 33.76 | 3,662.13 | 973.76 | 790.52 | 8,800.42 |
| 675 | 30 | 1120 | 117.05 | 0.36 | 57.17 | 149.9 | 24.22 | 3,100.63 | 918.68 | 780.98 | 7,391.37 |
| 562.5 | 25 | 964 | 100.66 | 0.37 | 50.4 | 148.28 | 19.46 | 2,818.11 | 886.46 | 775.58 | 6,678.01 |
| 450 | 20 | 806 | 84.27 | 0.38 | 43.56 | 146.66 | 14.87 | 2,542.66 | 845.06 | 762.8 | 5,961.12 |
| 225 | 10 | 487 | 50.91 | 0.42 | 29.4 | 143.96 | 7.7 | 2,118.88 | 689.9 | 660.56 | 4,552.06 |

## General Performance Data 2

| GEN W/F EKW | PERCENT LOAD | ENGINE POWER BHP | COMPRESS OUT PRESS IN-HG | COMPRESS OUT TEMP DEG F |
|---|---|---|---|---|
| 2,250 | 100 | 3286 | 61.12 | 480.56 |
| 2,025 | 90 | 2972 | 53.27 | 445.46 |
| 1,800 | 80 | 2660 | 44.75 | 410.36 |
| 1,687.5 | 75 | 2505 | 40.19 | 393.08 |
| 1,575 | 70 | 2349 | 35.21 | 375.44 |
| 1,350 | 60 | 2040 | 25.17 | 339.62 |
| 1,125 | 50 | 1730 | 15.16 | 303.26 |
| 900 | 40 | 1428 | 5.48 | 263.66 |
| 675 | 30 | 1120 | 4.15 | 222.44 |
| 562.5 | 25 | 964 | 8.94 | 201.56 |
| 450 | 20 | 806 | 13.53 | 180.68 |

| | | | | |
|---|---|---|---|---|
| 225 | 10 | 487 | 20.67 | 141.26 |

## Engine Heat Rejection Data

| GEN W/F EKW | PERCENT LOAD | REJ TO JW BTU/MN | REJ TO ATMOS BTU/MN | REJ TO EXHAUST BTU/MN | EXH RCOV TO 350F BTU/MN | FROM OIL CLR BTU/MN | FROM AFT CLR BTU/MN | WORK ENERGY BTU/MN | LHV ENERGY BTU/MN | HHV ENERGY BTU/MN |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 48,396.3 | 9,440.4 | 128,241.6 | 70,234.3 | 16,890.4 | 33,837.6 | 139,331.2 | 337,238.4 | 359,247.0 |
| 2,025 | 90 | 44,699.7 | 8,587.3 | 113,455.4 | 59,884.0 | 15,127.4 | 28,776.2 | 126,023.7 | 301,865.3 | 321,599.2 |
| 1,800 | 80 | 41,173.8 | 7,961.8 | 100,489.1 | 51,751.6 | 13,478.2 | 23,999.1 | 112,829.8 | 268,880.8 | 286,453.6 |
| 1,687.5 | 75 | 39,410.8 | 7,734.3 | 94,688.4 | 48,396.3 | 12,682.0 | 21,724.3 | 106,232.9 | 253,241.6 | 269,790.7 |
| 1,575 | 70 | 37,647.9 | 7,563.7 | 89,456.3 | 45,666.5 | 11,942.7 | 19,449.5 | 99,636.0 | 238,171.1 | 253,696.5 |
| 1,350 | 60 | 34,178.8 | 7,222.5 | 79,106.0 | 40,263.9 | 10,464.1 | 15,013.7 | 86,499.1 | 208,371.2 | 222,020.0 |
| 1,125 | 50 | 30,709.7 | 6,881.3 | 68,926.3 | 34,975.0 | 8,985.4 | 10,862.2 | 73,362.1 | 179,083.2 | 190,741.6 |
| 900 | 40 | 27,183.8 | 6,540.0 | 59,030.9 | 29,799.8 | 7,563.7 | 7,222.5 | 60,566.4 | 150,705.2 | 160,543.7 |
| 675 | 30 | 23,373.5 | 6,198.8 | 49,021.8 | 24,624.7 | 6,142.0 | 4,094.6 | 47,486.4 | 122,156.5 | 130,118.3 |
| 562.5 | 25 | 21,383.1 | 5,971.3 | 43,903.6 | 22,008.6 | 5,402.6 | 2,729.8 | 40,889.4 | 107,825.3 | 114,877.2 |
| 450 | 20 | 19,278.9 | 5,743.9 | 38,671.5 | 19,222.0 | 4,663.3 | 1,535.5 | 34,178.8 | 93,323.5 | 99,408.5 |
| 225 | 10 | 14,445.0 | 5,061.4 | 27,013.2 | 11,828.9 | 3,127.8 | -170.6 | 20,643.8 | 62,955.0 | 67,049.6 |

## EXHAUST Sound Data: 4.92 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 118 | 108 | 123 | 119 | 111 | 109 | 111 | 110 | 109 |
| 2,025 | 90 | 117 | 107 | 122 | 118 | 110 | 108 | 110 | 109 | 107 |
| 1,800 | 80 | 116 | 106 | 121 | 117 | 109 | 107 | 109 | 108 | 106 |
| 1,687.5 | 75 | 115 | 105 | 120 | 116 | 108 | 107 | 108 | 108 | 106 |
| 1,575 | 70 | 115 | 105 | 120 | 116 | 108 | 106 | 107 | 107 | 105 |
| 1,350 | 60 | 113 | 104 | 118 | 114 | 106 | 105 | 106 | 106 | 104 |
| 1,125 | 50 | 112 | 102 | 117 | 113 | 105 | 104 | 105 | 105 | 103 |
| 900 | 40 | 111 | 101 | 116 | 112 | 104 | 102 | 104 | 103 | 101 |
| 675 | 30 | 109 | 99 | 114 | 110 | 102 | 101 | 102 | 102 | 100 |
| 562.5 | 25 | 108 | 99 | 113 | 109 | 101 | 100 | 101 | 101 | 99 |
| 450 | 20 | 107 | 98 | 112 | 108 | 100 | 99 | 100 | 100 | 98 |
| 225 | 10 | 105 | 95 | 110 | 106 | 98 | 97 | 98 | 98 | 96 |

## EXHAUST Sound Data: 22.97 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 104 | 96 | 112 | 107 | 98 | 96 | 97 | 97 | 94 |
| 2,025 | 90 | 103 | 95 | 111 | 106 | 97 | 95 | 96 | 96 | 93 |
| 1,800 | 80 | 102 | 94 | 110 | 105 | 96 | 94 | 95 | 95 | 92 |
| 1,687.5 | 75 | 102 | 93 | 110 | 104 | 95 | 94 | 94 | 94 | 92 |
| 1,575 | 70 | 101 | 93 | 109 | 103 | 95 | 93 | 94 | 94 | 91 |
| 1,350 | 60 | 100 | 91 | 108 | 102 | 94 | 92 | 93 | 93 | 90 |
| 1,125 | 50 | 99 | 90 | 107 | 101 | 92 | 91 | 91 | 91 | 89 |
| 900 | 40 | 97 | 89 | 105 | 100 | 91 | 89 | 90 | 90 | 87 |
| 675 | 30 | 96 | 87 | 104 | 98 | 89 | 88 | 88 | 88 | 86 |
| 562.5 | 25 | 95 | 86 | 103 | 97 | 89 | 87 | 88 | 87 | 85 |
| 450 | 20 | 94 | 85 | 102 | 96 | 88 | 86 | 87 | 87 | 84 |
| 225 | 10 | 92 | 83 | 100 | 94 | 85 | 84 | 84 | 84 | 82 |

## EXHAUST Sound Data: 49.21 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 98 | 89 | 106 | 100 | 91 | 90 | 91 | 90 | 88 |
| 2,025 | 90 | 97 | 88 | 105 | 99 | 90 | 89 | 89 | 89 | 87 |
| 1,800 | 80 | 96 | 87 | 104 | 98 | 89 | 88 | 88 | 88 | 86 |
| 1,687.5 | 75 | 95 | 87 | 103 | 97 | 89 | 87 | 88 | 88 | 85 |
| 1,575 | 70 | 95 | 86 | 103 | 97 | 88 | 87 | 87 | 87 | 84 |
| 1,350 | 60 | 93 | 85 | 101 | 96 | 87 | 85 | 86 | 86 | 83 |
| 1,125 | 50 | 92 | 84 | 100 | 94 | 86 | 84 | 85 | 85 | 82 |
| 900 | 40 | 91 | 82 | 99 | 93 | 84 | 83 | 83 | 83 | 81 |
| 675 | 30 | 89 | 81 | 97 | 91 | 83 | 81 | 82 | 82 | 79 |
| 562.5 | 25 | 88 | 80 | 96 | 91 | 82 | 80 | 81 | 81 | 78 |
| 450 | 20 | 87 | 79 | 95 | 90 | 81 | 79 | 80 | 80 | 77 |
| 225 | 10 | 85 | 77 | 93 | 87 | 79 | 77 | 78 | 78 | 75 |

## MECHANICAL Sound Data: 3.28 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 2,025 | 90 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,800 | 80 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,687.5 | 75 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,575 | 70 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,350 | 60 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 1,125 | 50 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 900 | 40 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 675 | 30 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 562.5 | 25 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 450 | 20 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |
| 225 | 10 | 122 | 125 | 135 | 125 | 116 | 107 | 103 | 101 | 104 |

## MECHANICAL Sound Data: 22.97 FEET

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCJ 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 2,025 | 90 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,800 | 80 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,687.5 | 75 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,575 | 70 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,350 | 60 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 1,125 | 50 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 900 | 40 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 675 | 30 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 562.5 | 25 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 450 | 20 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |
| 225 | 10 | 107 | 111 | 120 | 111 | 102 | 94 | 90 | 89 | 92 |

**MECHANICAL Sound Data: 49.21 FEET**

| GEN W/F EKW | PERCENT LOAD | OVERALL SOUND DB(A) | OBCF 63HZ DB | OBCF 125HZ DB | OBCF 250HZ DB | OBCF 500HZ DB | OBCF 1000HZ DB | OBCF 2000HZ DB | OBCF 4000HZ DB | OBCF 8000HZ DB |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 2,025 | 90 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,800 | 80 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,687.5 | 75 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,575 | 70 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,350 | 60 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 1,125 | 50 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 900 | 40 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 675 | 30 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 562.5 | 25 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 450 | 20 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |
| 225 | 10 | 101 | 104 | 114 | 104 | 95 | 88 | 85 | 83 | 87 |

## EMISSIONS DATA

EPA STAT >3000HP 2007 - 2010 ********** P3

This Engine meets EPA New Source Performance Standard Emission Level Requirements (40 CFR Part 60, Subpart IIII) for Stationary Certification over 3000hp from 2007 through 2010 (EPA nonroad Tier 1 equivalent)

Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following nonroad regulations:

| LOCALITY | AGENCY/LEVEL | MAX LIMITS - g/kW-hr | | | |
|---|---|---|---|---|---|
| U. S. (incl Calif) | EPA/STAT>3000hp | CO:11.4 | HC:1.3 | NOx:9.2 | PM:0.5 |

| | |
|---|---|
| REFERENCE EXHAUST STACK DIAMETER | 12 IN |
| WET EXHAUST MASS | 29,850.6 LB/HR |
| WET EXHAUST FLOW (915.80 F STACK TEMP ) | 17,463.12 CFM |
| WET EXHAUST FLOW RATE ( 32 DEG F AND 29.98 IN HG ) | 6,260.00 STD CFM |
| DRY EXHAUST FLOW RATE ( 32 DEG F AND 29.98 IN HG ) | 5,735.11 STD CFM |
| FUEL FLOW RATE | 156 GAL/HR |

**RATED SPEED "Not to exceed data"**

| GEN PWR EKW | PERCENT LOAD | ENGINE POWER BHP | TOTAL NOX (AS NO2) LB/HR | TOTAL CO LB/HR | TOTAL HC LB/HR | PART MATTER LB/HR | OXYGEN IN EXHAUST PERCENT | DRY SMOKE OPACITY PERCENT | BOSCH SMOKE NUMBER |
|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 65.8800 | 9.3300 | .3700 | .5400 | 9.7000 | 2.3000 | 1.2800 |
| 1,687.5 | 75 | 2505 | 45.3800 | 3.1300 | .8200 | .3100 | 11.1000 | 1.5000 | 1.2800 |
| 1,125 | 50 | 1730 | 26.8900 | 2.0500 | .9800 | .2600 | 11.8000 | 2.0000 | 1.2800 |
| 562.5 | 25 | 964 | 13.2800 | 2.0000 | .7500 | .2600 | 12.7000 | 2.8000 | 1.2800 |
| 225 | 10 | 487 | 9.1400 | 2.6900 | .7200 | .2400 | 14.7000 | 2.9000 | 1.2800 |

**RATED SPEED "Nominal Data"**

| GEN PWR EKW | PERCENT LOAD | ENGINE POWER BHP | TOTAL NOX (AS NO2) LB/HR | TOTAL CO LB/HR | TOTAL HC LB/HR | TOTAL CO2 LB/HR | PART MATTER LB/HR | OXYGEN IN EXHAUST PERCENT | DRY SMOKE OPACITY PERCENT | BOSCH SMOKE NUMBER |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,250 | 100 | 3286 | 54.9000 | 5.1800 | .2800 | 3,425.8 | .3900 | 9.7000 | 2.3000 | 1.2800 |
| 1,687.5 | 75 | 2505 | 37.8200 | 1.7400 | .6200 | 2,546 | .2200 | 11.1000 | 1.5000 | 1.2800 |
| 1,125 | 50 | 1730 | 22.4100 | 1.1400 | .7400 | 1,769.8 | .1800 | 11.8000 | 2.0000 | 1.2800 |
| 562.5 | 25 | 964 | 11.0600 | 1.1100 | .5600 | 1,054.2 | .1800 | 12.7000 | 2.8000 | 1.2800 |
| 225 | 10 | 487 | 7.6100 | 1.4900 | .5400 | 606.9 | .1700 | 14.7000 | 2.9000 | 1.2800 |

### Altitude Capability Data(Corrected Power Altitude Capability)

| Ambient Operating Temp. Altitude | 50 F | 68 F | 86 F | 104 F | 122 F | NORMAL |
|---|---|---|---|---|---|---|
| 0 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp |
| 984.25 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,206.38 hp | 3,285.5 hp |
| 1,640.42 F | 3,285.5 hp | 3,285.5 hp | 3,285.5 hp | 3,229.18 hp | 3,129.94 hp | 3,285.5 hp |
| 3,280.84 F | 3,285.5 hp | 3,247.95 hp | 3,140.67 hp | 3,040.09 hp | 2,946.22 hp | 3,205.04 h |
| 4,921.26 F | 3,163.47 hp | 3,056.18 hp | 2,954.27 hp | 2,860.4 hp | 2,771.89 hp | 3,049.48 h |
| 6,561.68 F | 2,974.38 hp | 2,872.46 hp | 2,778.59 hp | 2,688.75 hp | 2,605.6 hp | 2,899.29 h |
| 8,202.1 F | 2,794.69 hp | 2,699.47 hp | 2,609.62 hp | 2,526.48 hp | 2,448.7 hp | 2,754.46 h |
| 9,842.52 F | 2,623.04 hp | 2,534.53 hp | 2,450.04 hp | 2,372.26 hp | 2,298.51 hp | 2,614.99 h |
| 10,498.69 F | 2,557.33 hp | 2,470.16 hp | 2,388.36 hp | 2,311.92 hp | 2,240.84 hp | 2,561.35 h |

**The powers listed above and all the Powers displayed are Corrected Powers**

### Identification Reference and Notes

| | | | |
|---|---|---|---|
| **Engine Arrangement:** | 2683679 | **Lube Oil Press @ Rated Spd(PSI):** | 55.8 |
| **Effective Serial No:** | PBR00150 | **Piston Speed @ Rated Eng SPD (FT/Min):** | 2,173.2 |
| **Primary Engine Test Spec:** | 0K8123 | **Max Operating Altitude(FT):** | 2,460.6 |
| **Performance Parm Ref:** | TM5739 | **PEEC Elect Control Module Ref** | |
| **Performance Data Ref:** | DM8423 | **PEEC Personality Cont Mod Ref** | |
| **Aux Coolant Pump Perf Ref:** | DM1286 | | |
| **Cooling System Perf Ref:** | DM1299 | **Turbocharger Model** | GTA5518-1.24 |
| **Certification Ref:** | EPA STAT 3000HP | **Fuel Injector** | 2563663 |
| **Certification Year:** | 2007 | **Timing-Static (DEG):** | -- |
| **Compression Ratio:** | 14.0 | **Timing-Static Advance (DEG):** | -- |
| **Combustion System:** | DI | **Timing-Static (MM):** | -- |
| **Aftercooler Temperature (F):** | 140 | **Unit Injector Timing (MM):** | 64.3 |
| **Crankcase Blowby Rate(CFH):** | 3,284.3 | **Torque Rise (percent)** | -- |
| **Fuel Rate (Rated RPM) No Load (Gal/HR):** | 16.2 | **Peak Torque Speed RPM** | -- |
| **Lube Oil Press @ Low Idle Spd(PSI):** | 20.0 | **Peak Torque (LB/FT):** | -- |

**Reference Number: DM8423** EPA STAT >3000HP 20072010P3

**Parameters Reference: TM5739**

GEN SET - PACKAGED - DIESEL
TOLERANCES:
AMBIENT AIR CONDITIONS AND FUEL USED WILL AFFECT THESE VALUES. EACH OF THE VALUES MAY VARY IN ACCORDANCE WITH THE FOLLOWING TOLERANCES.

| | | |
|---|---|---|
| ENGINE POWER | +/- | 3% |
| EXHAUST STACK TEMPERATURE | +/- | 8% |
| GENERATOR POWER | +/- | 5% |
| INLET AIR FLOW | +/- | 5% |
| INTAKE MANIFOLD PRESSURE - GAGE | +/- | 10% |
| EXHAUST FLOW | +/- | 6% |
| SPECIFIC FUEL CONSUMPTION | +/- | 3% |
| FUEL RATE | +/- | 5% |
| HEAT REJECTION | +/- | 5% |
| HEAT REJECTION EXHAUST ONLY | +/- | 10% |

CONDITIONS:
ENGINE PERFORMANCE IS CORRECTED TO INLET AIR STANDARD CONDITIONS OF 99 KPA (29.31 IN HG) AND 25 DEG C (77 DEG F).

THESE VALUES CORRESPOND TO THE STANDARD ATMOSPHERIC PRESSURE AND TEMPERATURE IN ACCORDANCE WITH SAE J1349. ALSO INCLUDED IS A CORRECTION TO STANDARD FUEL GRAVITY OF 35 DEGREES API HAVING A LOWER HEATING VALUE OF 42,780 KJ/KG (18,390 BTU/LB) WHEN USED AT 29 DEG C (84.2 DEG F) WHERE THE DENSITY IS 838.9 G/L (7.002 LB/GAL).

THE CORRECTED PERFORMANCE VALUES SHOWN FOR CATERPILLAR ENGINES WILL APPROXIMATE THE VALUES OBTAINED WHEN THE OBSERVED PERFORMANCE DATA IS CORRECTED TO SAE J1349, ISO 3046-2 & 8665 & 2288 & 9249 & 1585, EEC 80/1269 AND DIN70020 STANDARD REFERENCE CONDITIONS.

ENGINES ARE EQUIPPED WITH STANDARD ACCESSORIES; LUBE OIL, FUEL PUMP AND JACKET WATER PUMP. THE POWER REQUIRED TO DRIVE AUXILIARIES MUST BE DEDUCTED FROM THE GROSS OUTPUT TO ARRIVE AT THE NET POWER AVAILABLE FOR THE EXTERNAL (FLYWHEEL) LOAD. TYPICAL AUXILIARIES INCLUDE COOLING FANS, AIR COMPRESSORS, AND CHARGING ALTERNATORS.

RATINGS MUST BE REDUCED TO COMPENSATE FOR ALTITUDE AND/OR AMBIENT TEMPERATURE CONDITIONS ACCORDING TO THE APPLICABLE DATA SHOWN ON THE PERFORMANCE DATA SET.

GEN SET - PACKAGED - DIESEL
ALTITUDE:
ALTITUDE CAPABILITY - THE RECOMMENDED REDUCED POWER VALUES FOR SUSTAINED ENGINE OPERATION AT SPECIFIC ALTITUDE LEVELS AND AMBIENT TEMPERATURES.

COLUMN "N" DATA - THE FLYWHEEL POWER OUTPUT AT NORMAL AMBIENT TEMPERATURE.

AMBIENT TEMPERATURE - TO BE MEASURED AT THE AIR CLEANER AIR INLET DURING NORMAL ENGINE OPERATION.
NORMAL TEMPERATURE - THE NORMAL TEMPERATURE AT VARIOUS SPECIFIC ALTITUDE LEVELS IS FOUND ON TM2001.

THE GENERATOR POWER CURVE TABULAR DATA REPRESENTS THE NET ELECTRICAL POWER OUTPUT OF THE GENERATOR.

GENERATOR SET RATINGS
EMERGENCY STANDBY POWER (ESP)

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE ESP RATING. TYPICAL OPERATION IS 50 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 200 HOURS PER YEAR.

STANDBY POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE STANDBY POWER RATING. TYPICAL OPERATION IS 200 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 500 HOURS PER YEAR.

PRIME POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70% OF THE PRIME POWER RATING. TYPICAL PEAK DEMAND IS 100% OF PRIME RATED EKW WITH 10% OVERLOAD CAPABILITY FOR EMERGENCY USE FOR A MAXIMUM OF 1 HOUR IN 12. OVERLOAD OPERATION CANNOT EXCEED 25 HOURS PER YEAR.

CONTINUOUS POWER RATING

OUTPUT AVAILABLE WITH NON-VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70-100% OF THE CONTINUOUS POWER RATING. TYPICAL PEAK DEMAND IS 100% OF CONTINUOUS RATED EKW FOR 100% OF OPERATING HOURS.