



GEN SET PACKAGE PERFORMANCE DATA [BLG]

JUNE 25, 2013

(BLG)-ENGINE (BCW)-GENSET (AFN)
-GENERATOR

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Performance Number: DM9135

Change Level: 01

Sales Model: 3412CDITA Combustion: DI

Aspr: TA

Engine Power:

725 W/F 758 W/O F
EKW EKW

Speed: 1,800 RPM

After Cooler: JWAC

1,081 HP

Manifold Type: DRY

Governor Type: PEEC

After Cooler Temp(F): --

Turbo Quantity: 4

Engine App: GP

Turbo Arrangement: Series

Hertz: 60

Application Type: PACKAGE-DIE

Engine Rating: PGS

Strategy:

Rating Type: PRIME

Certification: STAT-USE EPA-T1 2006 - 2006

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
725	100	1081	288.34	0.34	53.05	205.16	68.11	2,246.01	1,250.06	954.32	6,250.7
652.5	90	968	258.32	0.34	47.37	198.5	56.95	2,005.88	1,215.5	942.98	5,540.88
580	80	861	229.6	0.34	42.08	193.1	47.29	1,786.92	1,182.56	931.46	4,894.62
543.8	75	809	215.67	0.34	39.55	190.94	42.91	1,691.57	1,165.46	924.44	4,608.57
507.5	70	757	201.9	0.34	37.06	188.96	38.79	1,599.76	1,147.82	916.16	4,333.11
435	60	656	175.06	0.34	32.31	185.18	31.24	1,430.25	1,110.92	896.9	3,817.52
362.5	50	557	148.52	0.35	27.98	181.76	24.58	1,274.86	1,067.36	870.98	3,340.77
290	40	460	122.56	0.36	23.75	178.52	18.66	1,133.6	1,014.62	835.34	2,881.68
217.5	30	360	96.02	0.37	19.21	175.46	13.18	988.81	939.38	780.44	2,408.46
181.3	25	309	82.38	0.38	16.85	174.02	10.66	921.71	890.06	742.64	2,168.32
145	20	257	68.6	0.39	14.48	172.76	8.29	854.62	833.18	698	1,928.18
72.5	10	152	40.61	0.46	9.91	171.86	4.21	752.2	686.48	578.3	1,515

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
725	100	26,217.0	6,198.8	43,903.6	25,307.1	3,309.8	7,051.9	45,837.1	114,706.5	122,156.5
652.5	90	23,487.3	5,743.9	38,728.4	22,179.2	3,093.7	5,402.6	41,060.1	102,365.8	109,076.4
580	80	20,928.1	5,402.6	34,121.9	19,335.8	2,883.3	4,037.8	36,510.5	90,991.8	96,963.1
543.8	75	19,733.8	5,118.3	31,960.9	18,084.6	2,780.9	3,469.1	34,292.5	85,532.3	91,105.5
507.5	70	18,482.7	4,890.8	29,913.6	16,833.5	2,684.3	2,900.4	32,131.5	80,186.5	85,418.6
435	60	16,151.0	4,435.9	26,046.4	14,501.8	2,468.1	1,990.4	27,809.4	69,950.0	74,499.5
362.5	50	14,046.9	4,379.0	22,463.6	12,283.9	2,257.7	1,251.1	23,601.0	60,566.4	64,490.4
290	40	11,999.5	4,322.1	18,937.7	10,066.0	2,053.0	625.6	19,506.4	51,410.4	54,765.7
217.5	30	9,724.8	4,037.8	15,241.1	7,734.3	1,814.2	113.7	15,241.1	41,571.9	44,301.6
181.3	25	8,587.3	3,867.1	13,307.5	6,540.0	1,660.6	-56.9	13,080.1	36,510.5	38,842.1
145	20	7,393.1	3,639.7	11,430.8	5,345.8	1,501.4	-284.4	10,919.0	31,335.3	33,382.6
72.5	10	5,061.4	3,355.3	7,904.9	3,014.1	1,182.9	-511.8	6,483.2	21,439.9	22,804.8

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
725	100	111	100	110	111	110	103	101	100	90
652.5	90	110	99	109	110	109	102	100	99	89
580	80	109	98	108	109	108	101	99	98	88
543.8	75	108	98	108	109	108	101	99	97	88
507.5	70	108	97	107	108	107	100	98	97	87
435	60	107	96	106	107	106	99	97	96	86
362.5	50	106	95	105	106	105	98	96	95	85
290	40	105	94	104	105	104	97	95	94	84
217.5	30	104	93	103	104	103	96	94	93	83
181.3	25	103	93	103	103	103	96	93	92	82
145	20	103	92	102	103	102	95	93	92	82
72.5	10	101	91	101	101	101	94	91	90	80

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
725	100	97	91	101	96	95	90	89	89	81
652.5	90	96	90	100	95	94	89	88	88	80
580	80	96	89	99	94	93	88	87	87	79
543.8	75	95	89	98	93	93	88	87	87	79
507.5	70	95	88	98	93	92	87	86	86	78
435	60	94	87	97	92	91	86	85	85	77
362.5	50	93	86	96	91	91	85	84	84	76
290	40	92	85	95	90	89	84	83	83	75
217.5	30	91	84	94	89	88	83	82	82	74
181.3	25	90	84	93	88	88	83	82	82	74
145	20	89	83	92	87	87	82	81	81	73
72.5	10	88	82	91	86	86	81	80	80	72

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
725	100	91	84	94	89	89	83	82	82	74
652.5	90	90	83	93	88	88	82	81	81	73
580	80	89	82	92	87	87	81	80	80	72
543.8	75	88	82	92	87	86	81	80	80	72
507.5	70	88	82	91	86	86	81	80	80	72
435	60	87	81	90	85	85	80	79	79	71
362.5	50	86	80	89	84	84	79	78	78	70
290	40	85	79	88	83	83	78	77	77	69
217.5	30	84	77	87	82	82	76	75	75	68
181.3	25	83	77	86	81	81	76	75	75	67
145	20	83	76	86	81	81	75	74	74	66
72.5	10	81	75	84	79	79	74	73	73	65

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
725	100	106	95	102	111	103	99	98	82	77
652.5	90	106	95	102	111	103	99	98	82	77
580	80	106	95	102	111	103	99	98	82	77
543.8	75	106	95	102	111	103	99	98	82	77
507.5	70	106	95	102	111	103	99	98	82	77
435	60	106	95	102	111	103	99	98	82	77
362.5	50	106	95	102	111	103	99	98	82	77
290	40	106	95	102	111	103	99	98	82	77
217.5	30	106	95	102	111	103	99	98	82	77
181.3	25	106	95	102	111	103	99	98	82	77
145	20	106	95	102	111	103	99	98	82	77
72.5	10	106	95	102	111	103	99	98	82	77

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
725	100	94	85	90	98	90	87	86	79	70
652.5	90	94	85	90	98	90	87	86	79	70
580	80	94	85	90	98	90	87	86	79	70
543.8	75	94	85	90	98	90	87	86	79	70
507.5	70	94	85	90	98	90	87	86	79	70
435	60	94	85	90	98	90	87	86	79	70
362.5	50	94	85	90	98	90	87	86	79	70
290	40	94	85	90	98	90	87	86	79	70
217.5	30	94	85	90	98	90	87	86	79	70
181.3	25	94	85	90	98	90	87	86	79	70
145	20	94	85	90	98	90	87	86	79	70
72.5	10	94	85	90	98	90	87	86	79	70

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
725	100	88	81	84	92	85	80	79	74	62
652.5	90	88	81	84	92	85	80	79	74	62
580	80	88	81	84	92	85	80	79	74	62
543.8	75	88	81	84	92	85	80	79	74	62
507.5	70	88	81	84	92	85	80	79	74	62
435	60	88	81	84	92	85	80	79	74	62
362.5	50	88	81	84	92	85	80	79	74	62
290	40	88	81	84	92	85	80	79	74	62
217.5	30	88	81	84	92	85	80	79	74	62
181.3	25	88	81	84	92	85	80	79	74	62
145	20	88	81	84	92	85	80	79	74	62
72.5	10	88	81	84	92	85	80	79	74	62

EMISSIONS DATA

STAT-USE EPA-T1 2006 - 2006 ***** P2

This engine meets EPA Tier 1 Equivalent Emission Levels for stationary use in 2006.

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 capable of meeting the following non-road emission levels:

LOCALITY AGENCY/LEVEL MAX LIMITS - g/kW-hr

U. S. (incl Calif) EPA/TIER-1 CO:11.4 HC:1.3 NOx:9.2 PM:0.5

REFERENCE EXHAUST STACK DIAMETER	8 IN
WET EXHAUST MASS	10,337.5 LB/HR
WET EXHAUST FLOW (953.60 F STACK TEMP)	6,254.23 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	2,127.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	1,949.02 STD CFM
FUEL FLOW RATE	53 GAL/HR

RATED SPEED "Potential site variation"

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
725	100	1081	17.1100	3.0200	.5700	.4800	9.9000	1.4000	1.2800
543.8	75	809	12.8100	2.0800	.3300	.4000	10.0000	1.4000	1.2800
362.5	50	557	8.1800	1.6200	.2900	.3700	10.7000	2.0000	1.2800
181.3	25	309	4.1700	1.6800	.4100	.2800	12.4000	2.5000	1.2800
72.5	10	152	2.4000	1.8600	.9200	.2000	14.8000	2.0000	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
725	100	1081	14.1400	1.6100	.3000	1,184.1	.2400	9.9000	1.4000	1.2800
543.8	75	809	10.5800	1.1100	.1800	873.9	.2100	10.0000	1.4000	1.2800
362.5	50	557	6.7600	.8700	.1600	618.8	.1900	10.7000	2.0000	1.2800
181.3	25	309	3.4500	.9000	.2200	369.4	.1400	12.4000	2.5000	1.2800
72.5	10	152	1.9800	.9900	.4900	215.2	.1000	14.8000	2.0000	1.2800

Altitude Capability Data(Corrected Power Altitude Capability)

Ambient Operating Temp.	50 F	68 F	86 F	104 F	122 F	NORMA
A l t i t u d e						
0 F	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86
984.25 F	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86
1,640.42 F	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86
3,280.84 F	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,078.18 hp	1,044.65 hp	1,080.86
4,921.26 F	1,080.86 hp	1,080.86 hp	1,047.34 hp	1,013.81 hp	982.97 hp	1,080.86
6,561.68 F	1,055.38 hp	1,019.18 hp	985.65 hp	953.47 hp	923.96 hp	1,028.56
8,202.1 F	991.01 hp	957.49 hp	925.3 hp	895.8 hp	868.98 hp	976.26 h
9,842.52 F	930.67 hp	898.48 hp	868.98 hp	840.82 hp	815.34 hp	927.99 h
11,482.94 F	873 hp	843.5 hp	815.34 hp	789.86 hp	764.38 hp	879.71 h
13,123.36 F	818.02 hp	789.86 hp	764.38 hp	740.24 hp	717.45 hp	834.11 h
14,763.78 F	765.72 hp	740.24 hp	716.1 hp	693.31 hp	671.85 hp	791.2 h

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

Identification Reference and Notes			
Engine Arrangement:	2819205	Lube Oil Press @ Rated Spd(PSI):	61.6
Effective Serial No:	BLG	Piston Speed @ Rated Eng SPD (FT/Min):	1,773.6
Primary Engine Test Spec:	0K2179	Max Operating Altitude(FT):	4,921.3
Performance Parm Ref:	TM5739	PEEC Elect Control Module Ref	
Performance Data Ref:	DM9135	PEEC Personality Cont Mod Ref	
Aux Coolant Pump Perf Ref:			
Cooling System Perf Ref:		Turbocharger Model	TV9215-2.00
Certification Ref:	STAT USE EPA T1	Fuel Injector	
Certification Year:	2006	Timing-Static (DEG):	18.50
Compression Ratio:	13.0	Timing-Static Advance (DEG):	3.50
Combustion System:	DI	Timing-Static (MM):	0.00
Aftercooler Temperature (F):	--	Unit Injector Timing (MM):	--
Crankcase Blowby Rate(CFH):	--	Torque Rise (percent)	--
Fuel Rate (Rated RPM) No Load (Gal/HR):	--	Peak Torque Speed RPM	--
Lube Oil Press @ Low Idle Spd(PSI):	61.2	Peak Torque (LB.FT):	--

Reference**Number: DM9135** STAT-USE EPA-T1 20062006P2**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.

Power	+/- 3%
Exhaust Stack Temperature	+/- 8%
Generator Power	+/- 5%
Inlet Airflow	+/- 5%
Intake Manifold Pressure-gage	+/- 10%
Exhaust Flow	+/- 6%
Specific Fuel Consumption	+/- 3%
Fuel Rate	+/- 5%
Heat Rejection	+/- 5%
Heat Rejection - Exhaust Only	+/- 10%

T4i Tolerance Exceptions**C15:** Power Tolerance +4% , -0%**C27:** Power Tolerance +0% , -4%**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.

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.

SOUND DEFINITIONS:

Sound Power : [DM8702](#)

Sound Pressure : [TM7080](#)

Date Released : 03/14/12

Caterpillar Confidential: **Green**

Content Owner: Commercial Processes Division

Web Master(s): [PSG Web Based Systems Support](#)

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