

Performance Number: DM8167

Change Level: 03

SALES MODEL:	C15	COMBUSTION:	DIRECT INJECTION
BRAND:	CAT	ENGINE SPEED (RPM):	1,800
MACHINE SALES MODEL:		HERTZ:	60
ENGINE POWER (BKW):	626.0	FAN POWER (KW):	26.2
GEN POWER WITH FAN (EKW):	550.0	ASPIRATION:	TA
COMPRESSION RATIO:	16.1	AFTERCOOLER TYPE:	ATAAC
RATING LEVEL:	ESP	AFTERCOOLER CIRCUIT TYPE:	JW+OC, ATAAC
PUMP QUANTITY:	1	INLET MANIFOLD AIR TEMP (C):	52
FUEL TYPE:	DIESEL	JACKET WATER TEMP (C):	89
MANIFOLD TYPE:	DRY	TURBO CONFIGURATION:	SINGLE
GOVERNOR TYPE:	ELEC	TURBO QUANTITY:	1
CAMSHAFT TYPE:	STANDARD	TURBOCHARGER MODEL:	GTA5518BS-56T-1.58
IGNITION TYPE:	CI	COMBUSTION STRATEGY:	LOW BSFC
INJECTOR TYPE:	EUI	PISTON SPD @ RATED ENG SPD (M/SEC):	10.3
REF EXH STACK DIAMETER (MM):	152		
MAX OPERATING ALTITUDE (M):	1,000		

INDUSTRY	SUBINDUSTRY	APPLICATION
ELECTRIC POWER	STANDARD	PACKAGED GENSET

General Performance Data

GENSET POWER WITH PERCENT LOAD FAN		ENGINE POWER	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	ISO BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	ISO VOL FUEL CONSUMPTN (VFC)
EKW	%	BKW	KPA	G/BKW-HR	G/BKW-HR	L/HR	L/HR
550.0	100	626	2,746	194.7	191.9	143.4	141.3
495.0	90	562	2,465	194.7	191.9	128.7	126.9
440.0	80	500	2,192	193.4	190.7	113.7	112.1
412.5	75	469	2,058	193.4	190.6	106.8	105.2
385.0	70	439	1,925	193.9	191.2	100.1	98.7
330.0	60	379	1,663	195.5	192.7	87.2	85.9
275.0	50	320	1,405	197.9	195.1	74.6	73.5
220.0	40	263	1,154	201.3	198.4	62.3	61.4
165.0	30	206	904	207.1	204.1	50.2	49.5
137.5	25	177	778	211.6	208.6	44.1	43.5
110.0	20	148	650	218.3	215.2	38.0	37.5
55.0	10	88.2	387	248.6	245.0	25.8	25.4

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP
EKW	%	BKW	KPA	DEG C	DEG C	KPA	DEG C	KPA	DEG C
550.0	100	626	254.8	45.9	690.9	171.1	512.8	261	215.9
495.0	90	562	222.8	37.9	660.9	146.2	502.0	228	195.9
440.0	80	500	187.3	33.9	633.9	119.9	494.7	192	174.2
412.5	75	469	170.3	32.9	623.4	108.3	493.4	175	163.8
385.0	70	439	154.2	32.5	615.0	97.9	493.5	159	153.8
330.0	60	379	124.2	32.7	598.4	79.3	492.8	128	134.3
275.0	50	320	96.5	33.2	576.8	63.6	486.4	100	115.5
220.0	40	263	71.7	32.2	542.6	50.0	467.6	74	97.3
165.0	30	206	49.8	31.1	495.2	38.5	435.8	52	79.4
137.5	25	177	39.8	30.5	466.4	33.5	414.9	42	70.4
110.0	20	148	30.8	29.9	431.3	29.0	387.9	32	62.2
55.0	10	88.2	16.5	28.7	338.0	21.6	311.7	18	49.1

General Performance Data (Continued)

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	ENGINE OUTLET WET EXH VOL FLOW RATE (0 DEG C AND 101 KPA)	ENGINE OUTLET DRY EXH VOL FLOW RATE (0 DEG C AND 101 KPA)
EKW	%	BKW	M3/MIN	M3/MIN	KG/HR	KG/HR	M3/MIN	M3/MIN
550.0	100	626	42.0	114.7	2,910.8	3,033.0	39.9	36.1
495.0	90	562	38.6	103.8	2,674.5	2,784.0	36.6	33.2

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440.0	80	500	34.8	91.9	2,391.5	2,488.2	32.7	29.7
412.5	75	469	33.0	86.4	2,252.8	2,343.5	30.8	28.0
385.0	70	439	31.2	81.4	2,122.2	2,207.0	29.0	26.3
330.0	60	379	27.7	71.6	1,873.8	1,947.5	25.5	23.2
275.0	50	320	24.3	62.3	1,640.5	1,703.9	22.4	20.4
220.0	40	263	21.3	53.2	1,435.8	1,488.8	19.6	17.9
165.0	30	206	18.7	44.4	1,254.4	1,297.0	17.1	15.8
137.5	25	177	17.5	40.1	1,171.7	1,209.2	15.9	14.7
110.0	20	148	16.4	35.9	1,096.7	1,129.0	14.9	13.8
55.0	10	88.2	14.6	28.1	974.0	995.9	13.1	12.3

Heat Rejection Data

GENSET POWER WITH LOAD FAN	PERCENT LOAD	ENGINE POWER	REJECTION TO JACKET WATER	REJECTION TO ATMOSPHERE	REJECTION TO EXH	EXH RECOVERY TO 177C	FROM OIL COOLER	FROM AFTERCOOLER	WORK ENERGY	LOW HEAT VALUE ENERGY	HIGH HEAT VALUE ENERGY
EKW	%	BKW	KW	KW	KW	KW	KW	KW	KW	KW	KW
550.0	100	626	203	39.9	536	304	77.1	138	626	1,448	1,543
495.0	90	562	192	33.2	480	270	69.3	118	562	1,300	1,385
440.0	80	500	178	30.3	422	235	61.2	93.8	500	1,149	1,224
412.5	75	469	170	30.6	396	221	57.4	82.4	469	1,079	1,149
385.0	70	439	163	30.9	373	208	53.9	71.9	439	1,011	1,077
330.0	60	379	147	30.9	328	183	46.9	53.2	379	881	938
275.0	50	320	132	30.7	282	157	40.1	37.7	320	753	802
220.0	40	263	117	28.6	235	128	33.5	26.1	263	630	671
165.0	30	206	103	25.0	189	98.6	27.0	16.9	206	507	540
137.5	25	177	96.2	22.0	166	84.1	23.7	13.1	177	446	475
110.0	20	148	87.6	20.1	144	69.2	20.5	9.9	148	384	409
55.0	10	88.2	67.7	18.0	98.2	38.4	13.9	5.5	88.2	261	278

Emissions Data

DIESEL

RATED SPEED NOMINAL DATA: 1800 RPM

GENSET POWER WITH FAN	EKW	550.0	412.5	275.0	137.5	55.0
PERCENT LOAD	%	100	75	50	25	10
ENGINE POWER	BKW	626	469	320	177	88.2
TOTAL NOX (AS NO2)	G/HR	5,229	4,193	3,400	2,214	1,293
TOTAL CO	G/HR	334	257	188	115	136
TOTAL HC	G/HR	6	7	14	15	17
TOTAL CO2	KG/HR	395	293	202	119	70
PART MATTER	G/HR	407.2	376.7	274.3	211.8	132.4
TOTAL NOX (AS NO2)	(CORR 5% O2) MG/NM3	3,157.1	3,431.9	3,927.0	4,308.4	4,201.9
TOTAL CO	(CORR 5% O2) MG/NM3	202.5	210.5	217.8	223.6	500.5
TOTAL HC	(CORR 5% O2) MG/NM3	2.8	4.7	13.6	26.3	51.2
PART MATTER	(CORR 5% O2) MG/NM3	203.5	251.6	263.1	354.1	377.5
TOTAL NOX (AS NO2)	(CORR 5% O2) PPM	1,538	1,672	1,913	2,099	2,047
TOTAL CO	(CORR 5% O2) PPM	162	168	174	179	400
TOTAL HC	(CORR 5% O2) PPM	5	9	25	49	96
TOTAL NOX (AS NO2)	G/HP-HR	6.34	6.72	7.96	9.34	10.94
TOTAL CO	G/HP-HR	0.40	0.41	0.44	0.48	1.15
TOTAL HC	G/HP-HR	0.01	0.01	0.03	0.06	0.14
PART MATTER	G/HP-HR	0.49	0.60	0.64	0.89	1.12
TOTAL NOX (AS NO2)	LB/HR	11.53	9.24	7.50	4.88	2.85
TOTAL CO	LB/HR	0.74	0.57	0.42	0.25	0.30
TOTAL HC	LB/HR	0.01	0.01	0.03	0.03	0.04
TOTAL CO2	LB/HR	870	647	446	262	154
PART MATTER	LB/HR	0.90	0.83	0.60	0.47	0.29
OXYGEN IN EXH	%	7.9	8.6	9.1	11.1	14.0
DRY SMOKE OPACITY	%	0.5	0.8	1.5	1.2	1.0
BOSCH SMOKE		0.21	0.49	1.03	0.82	0.65

NUMBER

RATED SPEED POTENTIAL SITE VARIATION: 1800 RPM

GENSET POWER WITH FAN	EKW	550.0	412.5	275.0	137.5	55.0
PERCENT LOAD	%	100	75	50	25	10
ENGINE POWER	BKW	626	469	320	177	88.2
TOTAL NOX (AS NO2)	G/HR	5,647	4,528	3,672	2,392	1,396
TOTAL CO	G/HR	625	481	352	215	255
TOTAL HC	G/HR	11	12	26	29	32
PART MATTER	G/HR	794.0	734.7	535.0	412.9	258.2
TOTAL NOX (AS NO2) (CORR 5% O2)	MG/NM3	3,409.7	3,706.5	4,241.2	4,653.0	4,538.1
TOTAL CO (CORR 5% O2)	MG/NM3	378.6	393.6	407.3	418.1	936.0
TOTAL HC (CORR 5% O2)	MG/NM3	5.3	8.9	25.7	49.6	96.7
PART MATTER (CORR 5% O2)	MG/NM3	396.8	490.6	513.0	690.4	736.1
TOTAL NOX (AS NO2) (CORR 5% O2)	PPM	1,661	1,805	2,066	2,266	2,210
TOTAL CO (CORR 5% O2)	PPM	303	315	326	334	749
TOTAL HC (CORR 5% O2)	PPM	10	17	48	93	181
TOTAL NOX (AS NO2)	G/HP-HR	6.85	7.26	8.59	10.08	11.82
TOTAL CO	G/HP-HR	0.76	0.77	0.82	0.91	2.16
TOTAL HC	G/HP-HR	0.01	0.02	0.06	0.12	0.27
PART MATTER	G/HP-HR	0.96	1.18	1.25	1.74	2.19
TOTAL NOX (AS NO2)	LB/HR	12.45	9.98	8.10	5.27	3.08
TOTAL CO	LB/HR	1.38	1.06	0.78	0.47	0.56
TOTAL HC	LB/HR	0.02	0.03	0.06	0.06	0.07
PART MATTER	LB/HR	1.75	1.62	1.18	0.91	0.57

Regulatory Information

NON-CERTIFIED	1970 - 2100
THIS ENGINE RATING IS NOT EMISSIONS CERTIFIED BY ANY DOMESTIC OR FOREIGN AGENCY.	