

Perf No: DM7976

Change Level: 02

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SALES MODEL:	3516B	COMBUSTION:	DIRECT INJECTION
BRAND:	CAT	ENGINE SPEED (RPM):	1,500
MACHINE SALES MODEL:		HERTZ:	50
ENGINE POWER (BKW):	1,955.0	FAN POWER (KW):	46.0
GEN POWER WITH FAN (EKW):	1,820.0	ASPIRATION:	TA
COMPRESSION RATIO:	15.5	AFTERCOOLER TYPE:	SCAC
RATING LEVEL:	PRIME	AFTERCOOLER CIRCUIT TYPE:	JW+OC, AC
PUMP QUANTITY:	2	AFTERCOOLER TEMP (C):	30
FUEL TYPE:	DIESEL	JACKET WATER TEMP (C):	99
MANIFOLD TYPE:	DRY	TURBO CONFIGURATION:	PARALLEL
GOVERNOR TYPE:	ADEM3	TURBO QUANTITY:	4
ELECTRONICS TYPE:	ADEM3	TURBOCHARGER MODEL:	GTA5518BN-56T-1.24
CAMSHAFT TYPE:	STANDARD	COMBUSTION STRATEGY:	LOW EMISSION
IGNITION TYPE:	CI	CRANKCASE BLOWBY RATE (M3/HR):	74.2
INJECTOR TYPE:	EUI	FUEL RATE (RATED RPM) NO LOAD (L/HR):	44.4
UNIT INJECTOR TIMING (MM):	64.34	PISTON SPD @ RATED ENG SPD (M/SEC):	10.8
REF EXH STACK DIAMETER (MM):	305		
MAX OPERATING ALTITUDE (M):	750		

INDUSTRY	SUB INDUSTRY	APPLICATION
ELECTRIC POWER	STANDARD	PACKAGED GENSET
OIL AND GAS	LAND PRODUCTION	PACKAGED GENSET

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GENSET POWER WITH FAN	PERCENT LOAD	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
2,002.0	110	2,127	2,179	214.3	210.2	536.1	525.9
1,820.0	100	1,934	1,981	211.8	207.8	481.9	472.7
1,638.0	90	1,742	1,785	215.0	210.9	440.7	432.3
1,456.0	80	1,552	1,590	214.5	210.4	391.7	384.2
1,365.0	75	1,458	1,493	214.0	209.9	366.9	359.9
1,274.0	70	1,363	1,397	213.3	209.2	342.1	335.5
1,092.0	60	1,175	1,204	212.0	208.0	293.1	287.5
910.0	50	988	1,012	211.6	207.6	246.0	241.3
728.0	40	803	822	212.9	208.9	201.1	197.2
546.0	30	617	632	217.9	213.8	158.1	155.1
455.0	25	523	536	223.2	219.0	137.5	134.8
364.0	20	429	440	232.0	227.6	117.2	115.0
182.0	10	239	245	277.6	272.3	78.1	76.7

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	ENGINE OUTLET TEMP	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP
EKW	%	BKW	KPA	DEG C	DEG C	DEG C	KPA	DEG C
2,002.0	110	2,127	282.3	57.9	652.8	511.6	289	235.9
1,820.0	100	1,934	261.3	54.6	616.5	473.5	267	220.1
1,638.0	90	1,742	245.1	52.6	592.3	454.8	251	208.9

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	ENGINE OUTLET TEMP	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP
1,456.0	80	1,552	218.8	49.7	566.1	436.1	225	192.3
1,365.0	75	1,458	203.7	48.2	552.7	426.8	210	182.8
1,274.0	70	1,363	187.3	46.7	539.2	417.5	193	172.5
1,092.0	60	1,175	151.6	43.7	512.0	403.6	158	150.1
910.0	50	988	114.9	41.0	484.5	395.8	121	126.9
728.0	40	803	83.5	39.3	449.9	380.6	89	104.9
546.0	30	617	57.2	37.9	405.6	354.9	62	84.5
455.0	25	523	46.2	37.3	378.5	336.1	51	75.8
364.0	20	429	36.4	36.7	348.3	313.8	41	67.7
182.0	10	239	20.7	35.6	277.9	258.1	24	53.7

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
2,002.0	110	2,127	178.9	488.2	12,568.0	13,023.7	169.9	156.7
1,820.0	100	1,934	171.4	444.0	12,040.2	12,449.9	162.4	150.4
1,638.0	90	1,742	165.4	417.2	11,031.9	11,406.5	156.6	145.0
1,456.0	80	1,552	154.9	377.8	9,730.9	10,063.8	145.5	134.8
1,365.0	75	1,458	148.5	357.0	9,068.9	9,380.7	139.3	129.0
1,274.0	70	1,363	141.3	335.6	8,413.8	8,704.6	132.7	122.9
1,092.0	60	1,175	124.9	292.1	7,174.9	7,424.0	117.9	109.2
910.0	50	988	107.7	248.6	6,036.6	6,245.6	101.5	94.0
728.0	40	803	92.4	208.1	4,941.8	5,112.7	87.0	80.5
546.0	30	617	79.2	171.1	3,900.9	4,035.3	74.4	68.9
455.0	25	523	73.6	154.3	3,416.1	3,533.0	69.2	64.1
364.0	20	429	68.7	138.6	2,955.1	3,054.8	64.5	59.7
182.0	10	239	60.6	110.3	2,134.2	2,200.6	56.7	52.5

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GENSET POWER WITH 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
2,002.0	110	2,127	663	153	2,231	1,266	271	630	2,127	5,448	5,803
1,820.0	100	1,934	617	141	1,984	1,065	243	560	1,934	4,915	5,236
1,638.0	90	1,742	572	132	1,768	957	223	489	1,742	4,416	4,704
1,456.0	80	1,552	527	125	1,563	831	198	415	1,552	3,927	4,183
1,365.0	75	1,458	505	121	1,464	766	186	378	1,458	3,686	3,926
1,274.0	70	1,363	482	118	1,366	700	173	342	1,363	3,446	3,671
1,092.0	60	1,175	436	112	1,175	581	148	269	1,175	2,973	3,167
910.0	50	988	388	105	990	483	124	198	988	2,506	2,669
728.0	40	803	338	99.0	813	385	101	135	803	2,053	2,187
546.0	30	617	286	93.0	644	285	79.9	81.9	617	1,616	1,722
455.0	25	523	259	90.0	564	235	69.4	61.3	523	1,405	1,497
364.0	20	429	231	87.0	486	188	59.1	44.1	429	1,199	1,277
182.0	10	239	173	80.0	338	97.3	39.1	19.1	239	797	849

Sound Data [Top](#)

EXHAUST:SOUND PRESSURE(OBCF) DISTANCE:1.5 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	116.0	111.0	121.0	117.0	109.0
1,820.0	100	1,934	115.0	110.0	120.0	116.0	108.0

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
1,638.0	90	1,742	115.0	109.0	120.0	115.0	108.0
1,456.0	80	1,552	114.0	108.0	119.0	114.0	107.0
1,365.0	75	1,458	113.0	108.0	118.0	114.0	106.0
1,274.0	70	1,363	113.0	107.0	118.0	113.0	106.0
1,092.0	60	1,175	111.0	106.0	116.0	112.0	104.0
910.0	50	988	110.0	105.0	115.0	111.0	103.0
728.0	40	803	109.0	104.0	114.0	109.0	102.0
546.0	30	617	107.0	102.0	112.0	108.0	100.0
455.0	25	523	107.0	101.0	112.0	107.0	100.0
364.0	20	429	106.0	100.0	111.0	106.0	99.0
182.0	10	239	104.0	98.0	109.0	104.0	97.0

EXHAUST:SOUND PRESSURE(OBCF) DISTANCE:1.5 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	1000 HZ	2000 HZ	4000 HZ	8000 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	108.0	109.0	110.0	107.0
1,820.0	100	1,934	107.0	109.0	109.0	106.0
1,638.0	90	1,742	106.0	108.0	108.0	105.0
1,456.0	80	1,552	105.0	107.0	107.0	104.0
1,365.0	75	1,458	105.0	106.0	107.0	104.0
1,274.0	70	1,363	104.0	106.0	106.0	103.0
1,092.0	60	1,175	103.0	105.0	105.0	102.0
910.0	50	988	102.0	103.0	104.0	101.0
728.0	40	803	100.0	102.0	103.0	99.0
546.0	30	617	99.0	101.0	101.0	98.0
455.0	25	523	98.0	100.0	100.0	97.0
364.0	20	429	97.0	99.0	99.0	96.0
182.0	10	239	95.0	97.0	97.0	94.0

EXHAUST:SOUND PRESSURE(OBCF) DISTANCE:7 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	103.0	100.0	111.0	105.0	96.0
1,820.0	100	1,934	102.0	99.0	110.0	104.0	95.0
1,638.0	90	1,742	101.0	98.0	109.0	103.0	94.0
1,456.0	80	1,552	100.0	97.0	108.0	102.0	93.0
1,365.0	75	1,458	100.0	96.0	107.0	101.0	92.0
1,274.0	70	1,363	99.0	96.0	107.0	101.0	92.0
1,092.0	60	1,175	98.0	95.0	106.0	100.0	91.0
910.0	50	988	97.0	94.0	104.0	98.0	89.0
728.0	40	803	96.0	92.0	103.0	97.0	88.0
546.0	30	617	94.0	91.0	102.0	96.0	87.0
455.0	25	523	93.0	90.0	101.0	95.0	86.0
364.0	20	429	92.0	89.0	100.0	94.0	85.0
182.0	10	239	90.0	87.0	98.0	92.0	83.0

EXHAUST:SOUND PRESSURE(OBCF) DISTANCE:7 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	1000 HZ	2000 HZ	4000 HZ	8000 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	95.0	96.0	97.0	92.0
1,820.0	100	1,934	94.0	95.0	96.0	91.0
1,638.0	90	1,742	93.0	94.0	95.0	90.0
1,456.0	80	1,552	92.0	93.0	94.0	89.0
1,365.0	75	1,458	92.0	93.0	93.0	89.0
1,274.0	70	1,363	91.0	92.0	93.0	88.0
1,092.0	60	1,175	90.0	91.0	92.0	87.0
910.0	50	988	89.0	90.0	91.0	86.0
728.0	40	803	88.0	89.0	89.0	85.0
546.0	30	617	86.0	87.0	88.0	83.0
455.0	25	523	85.0	86.0	87.0	82.0
364.0	20	429	84.0	86.0	86.0	81.0
182.0	10	239	82.0	83.0	84.0	79.0

EXHAUST:SOUND PRESSURE(OBCF) DISTANCE:15 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	96.0	93.0	104.0	98.0	89.0
1,820.0	100	1,934	95.0	92.0	103.0	97.0	88.0
1,638.0	90	1,742	95.0	91.0	102.0	96.0	87.0
1,456.0	80	1,552	94.0	90.0	101.0	95.0	86.0
1,365.0	75	1,458	93.0	90.0	101.0	95.0	86.0
1,274.0	70	1,363	93.0	89.0	100.0	94.0	85.0
1,092.0	60	1,175	91.0	88.0	99.0	93.0	84.0
910.0	50	988	90.0	87.0	98.0	92.0	83.0
728.0	40	803	89.0	86.0	96.0	90.0	81.0
546.0	30	617	87.0	84.0	95.0	89.0	80.0
455.0	25	523	87.0	83.0	94.0	88.0	79.0
364.0	20	429	86.0	82.0	93.0	87.0	78.0
182.0	10	239	84.0	80.0	91.0	85.0	76.0

EXHAUST:SOUND PRESSURE(OBCF) DISTANCE:15 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	1000 HZ	2000 HZ	4000 HZ	8000 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	88.0	89.0	90.0	85.0
1,820.0	100	1,934	87.0	89.0	89.0	84.0
1,638.0	90	1,742	87.0	88.0	88.0	84.0
1,456.0	80	1,552	86.0	87.0	87.0	83.0
1,365.0	75	1,458	85.0	86.0	87.0	82.0
1,274.0	70	1,363	85.0	86.0	86.0	82.0
1,092.0	60	1,175	83.0	85.0	85.0	80.0
910.0	50	988	82.0	83.0	84.0	79.0
728.0	40	803	81.0	82.0	83.0	78.0
546.0	30	617	79.0	81.0	81.0	76.0
455.0	25	523	79.0	80.0	80.0	76.0
364.0	20	429	78.0	79.0	80.0	75.0
182.0	10	239	76.0	77.0	77.0	73.0

MECHANICAL:SOUND PRESSURE(OBCF) DISTANCE:1 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	103.0	95.0	99.0	98.0	95.0
1,820.0	100	1,934	103.0	95.0	99.0	98.0	95.0
1,638.0	90	1,742	103.0	95.0	99.0	98.0	95.0
1,456.0	80	1,552	103.0	95.0	99.0	98.0	95.0
1,365.0	75	1,458	103.0	95.0	99.0	98.0	95.0
1,274.0	70	1,363	103.0	95.0	99.0	98.0	95.0
1,092.0	60	1,175	103.0	95.0	99.0	98.0	95.0
910.0	50	988	103.0	95.0	99.0	98.0	95.0
728.0	40	803	103.0	95.0	99.0	98.0	95.0

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
546.0	30	617	103.0	95.0	99.0	98.0	95.0
455.0	25	523	103.0	95.0	99.0	98.0	95.0
364.0	20	429	103.0	95.0	99.0	98.0	95.0
182.0	10	239	103.0	95.0	99.0	98.0	95.0

MECHANICAL:SOUND PRESSURE(OBCF) DISTANCE:1 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	1000 HZ	2000 HZ	4000 HZ	8000 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	98.0	98.0	96.0	100.0
1,820.0	100	1,934	98.0	98.0	96.0	100.0
1,638.0	90	1,742	98.0	98.0	96.0	100.0
1,456.0	80	1,552	98.0	98.0	96.0	100.0
1,365.0	75	1,458	98.0	98.0	96.0	100.0
1,274.0	70	1,363	98.0	98.0	96.0	100.0
1,092.0	60	1,175	98.0	98.0	96.0	100.0
910.0	50	988	98.0	98.0	96.0	100.0
728.0	40	803	98.0	98.0	96.0	100.0
546.0	30	617	98.0	98.0	96.0	100.0
455.0	25	523	98.0	98.0	96.0	100.0
364.0	20	429	98.0	98.0	96.0	100.0
182.0	10	239	98.0	98.0	96.0	100.0

MECHANICAL:SOUND PRESSURE(OBCF) DISTANCE:7 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	92.0	83.0	87.0	86.0	83.0
1,820.0	100	1,934	92.0	83.0	87.0	86.0	83.0
1,638.0	90	1,742	92.0	83.0	87.0	86.0	83.0
1,456.0	80	1,552	92.0	83.0	87.0	86.0	83.0
1,365.0	75	1,458	92.0	83.0	87.0	86.0	83.0
1,274.0	70	1,363	92.0	83.0	87.0	86.0	83.0
1,092.0	60	1,175	92.0	83.0	87.0	86.0	83.0
910.0	50	988	92.0	83.0	87.0	86.0	83.0
728.0	40	803	92.0	83.0	87.0	86.0	83.0
546.0	30	617	92.0	83.0	87.0	86.0	83.0
455.0	25	523	92.0	83.0	87.0	86.0	83.0
364.0	20	429	92.0	83.0	87.0	86.0	83.0
182.0	10	239	92.0	83.0	87.0	86.0	83.0

MECHANICAL:SOUND PRESSURE(OBCF) DISTANCE:7 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	1000 HZ	2000 HZ	4000 HZ	8000 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	86.0	87.0	85.0	88.0
1,820.0	100	1,934	86.0	87.0	85.0	88.0
1,638.0	90	1,742	86.0	87.0	85.0	88.0
1,456.0	80	1,552	86.0	87.0	85.0	88.0
1,365.0	75	1,458	86.0	87.0	85.0	88.0
1,274.0	70	1,363	86.0	87.0	85.0	88.0
1,092.0	60	1,175	86.0	87.0	85.0	88.0
910.0	50	988	86.0	87.0	85.0	88.0
728.0	40	803	86.0	87.0	85.0	88.0
546.0	30	617	86.0	87.0	85.0	88.0
455.0	25	523	86.0	87.0	85.0	88.0
364.0	20	429	86.0	87.0	85.0	88.0
182.0	10	239	86.0	87.0	85.0	88.0

MECHANICAL:SOUND PRESSURE(OBCF) DISTANCE:15 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	86.0	78.0	82.0	81.0	78.0
1,820.0	100	1,934	86.0	78.0	82.0	81.0	78.0
1,638.0	90	1,742	86.0	78.0	82.0	81.0	78.0

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	OVERALL SOUND	63 HZ	125 HZ	250 HZ	500 HZ
1,456.0	80	1,552	86.0	78.0	82.0	81.0	78.0
1,365.0	75	1,458	86.0	78.0	82.0	81.0	78.0
1,274.0	70	1,363	86.0	78.0	82.0	81.0	78.0
1,092.0	60	1,175	86.0	78.0	82.0	81.0	78.0
910.0	50	988	86.0	78.0	82.0	81.0	78.0
728.0	40	803	86.0	78.0	82.0	81.0	78.0
546.0	30	617	86.0	78.0	82.0	81.0	78.0
455.0	25	523	86.0	78.0	82.0	81.0	78.0
364.0	20	429	86.0	78.0	82.0	81.0	78.0
182.0	10	239	86.0	78.0	82.0	81.0	78.0

MECHANICAL:SOUND PRESSURE(OBCF) DISTANCE:15 METER

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	1000 HZ	2000 HZ	4000 HZ	8000 HZ
EKW	%	BKW	dB(A)	dB(A)	dB(A)	dB(A)
2,002.0	110	2,127	81.0	81.0	79.0	83.0
1,820.0	100	1,934	81.0	81.0	79.0	83.0
1,638.0	90	1,742	81.0	81.0	79.0	83.0
1,456.0	80	1,552	81.0	81.0	79.0	83.0
1,365.0	75	1,458	81.0	81.0	79.0	83.0
1,274.0	70	1,363	81.0	81.0	79.0	83.0
1,092.0	60	1,175	81.0	81.0	79.0	83.0
910.0	50	988	81.0	81.0	79.0	83.0
728.0	40	803	81.0	81.0	79.0	83.0
546.0	30	617	81.0	81.0	79.0	83.0
455.0	25	523	81.0	81.0	79.0	83.0
364.0	20	429	81.0	81.0	79.0	83.0
182.0	10	239	81.0	81.0	79.0	83.0

Emissions Data [Top](#)

Units Filter

DIESEL

RATED SPEED NOMINAL DATA: 1500 RPM

GENSET POWER WITH FAN		EKW	2,002.0	1,820.0	1,365.0	910.0	455.0	182.0
ENGINE POWER		BKW	2,127	1,934	1,458	988	523	239
PERCENT LOAD		%	110	100	75	50	25	10
TOTAL NOX (AS NO2)	G/HR		11,338	9,783	6,144	4,935	3,734	2,311
TOTAL CO	G/HR		2,912	1,248	1,460	986	556	671
TOTAL HC	G/HR		303	342	297	238	207	239
TOTAL CO2	KG/HR		1,447	1,300	988	661	370	212
PART MATTER	G/HR		265.1	199.4	151.5	135.1	123.8	113.7
TOTAL NOX (AS NO2)	(CORR 5% O2) MG/NM3		1,813.9	1,742.2	1,433.7	1,724.5	2,345.3	2,560.8
TOTAL CO	(CORR 5% O2) MG/NM3		466.3	222.2	340.6	344.5	349.4	744.9
TOTAL HC	(CORR 5% O2) MG/NM3		48.5	60.9	69.3	83.2	129.7	265.3
PART MATTER	(CORR 5% O2) MG/NM3		42.4	35.5	35.4	47.2	77.8	126.1
TOTAL NOX (AS NO2)	(CORR 5% O2) PPM		883	848	693	843	1,119	1,172
TOTAL CO	(CORR 5% O2) PPM		374	177	282	273	290	630
TOTAL HC	(CORR 5% O2) PPM		79	98	114	134	212	434
TOTAL NOX (AS NO2)	G/HP-HR		3.97	3.77	3.14	3.72	5.32	7.20
TOTAL CO	G/HP-HR		1.02	0.48	0.75	0.74	0.79	2.09
TOTAL HC	G/HP-HR		0.11	0.13	0.15	0.18	0.29	0.74
PART MATTER	G/HP-HR		0.09	0.08	0.08	0.10	0.18	0.35
TOTAL NOX (AS NO2)	LB/HR		25.00	21.57	13.54	10.88	8.23	5.09
TOTAL CO	LB/HR		6.42	2.75	3.22	2.17	1.23	1.48
TOTAL HC	LB/HR		0.67	0.75	0.65	0.52	0.46	0.53
TOTAL CO2	LB/HR		3,190	2,866	2,179	1,458	815	467
PART MATTER	LB/HR		0.58	0.44	0.33	0.30	0.27	0.25
OXYGEN IN EXH	%		10.4	11.0	12.3	13.0	14.5	16.6
DRY SMOKE OPACITY	%		6.8	2.8	3.4	4.2	5.2	5.2
BOSCH SMOKE NUMBER			1.83	1.03	1.19	1.33	1.49	1.49

RATED SPEED POTENTIAL SITE VARIATION: 1500 RPM

GENSET POWER WITH FAN		EKW	2,002.0	1,820.0	1,365.0	910.0	455.0	182.0
ENGINE POWER		BKW	2,127	1,934	1,458	988	523	239
PERCENT LOAD		%	110	100	75	50	25	10
TOTAL NOX (AS NO2)	G/HR		13,606	11,739	7,373	5,922	4,481	2,773
TOTAL CO	G/HR		5,242	2,246	2,628	1,775	1,001	1,208

GENSET POWER WITH FAN		EKW	2,002.0	1,820.0	1,365.0	910.0	455.0	182.0
ENGINE POWER		BKW	2,127	1,934	1,458	988	523	239
PERCENT LOAD		%	110	100	75	50	25	10
TOTAL HC		G/HR	404	455	395	317	275	318
PART MATTER		G/HR	371.2	279.2	212.1	189.1	173.3	159.2
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	2,176.7	2,090.6	1,720.4	2,069.4	2,814.3	3,073.0
TOTAL CO	(CORR 5% O2)	MG/NM3	839.4	399.9	613.1	620.1	628.9	1,340.8
TOTAL HC	(CORR 5% O2)	MG/NM3	64.6	81.0	92.2	110.7	172.5	352.8
PART MATTER	(CORR 5% O2)	MG/NM3	59.4	49.7	49.6	66.1	108.9	176.5
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	1,060	1,018	832	1,012	1,343	1,406
TOTAL CO	(CORR 5% O2)	PPM	673	319	508	491	522	1,134
TOTAL HC	(CORR 5% O2)	PPM	105	130	152	178	282	578
TOTAL NOX (AS NO2)		G/HP-HR	4.77	4.53	3.77	4.47	6.38	8.64
TOTAL CO		G/HP-HR	1.84	0.87	1.34	1.34	1.43	3.77
TOTAL HC		G/HP-HR	0.14	0.18	0.20	0.24	0.39	0.99
PART MATTER		G/HP-HR	0.13	0.11	0.11	0.14	0.25	0.50
TOTAL NOX (AS NO2)		LB/HR	29.99	25.88	16.25	13.06	9.88	6.11
TOTAL CO		LB/HR	11.56	4.95	5.79	3.91	2.21	2.66
TOTAL HC		LB/HR	0.89	1.00	0.87	0.70	0.61	0.70
PART MATTER		LB/HR	0.82	0.62	0.47	0.42	0.38	0.35

Regulatory Information [Top](#)

NON-CERTIFIED

1970 - 2100

THIS ENGINE RATING IS NOT EMISSIONS CERTIFIED BY ANY DOMESTIC OR FOREIGN AGENCY.

Altitude Derate Data [Top](#)

STANDARD

ALTITUDE CORRECTED POWER CAPABILITY (BKW)

AMBIENT OPERATING TEMP (C)	0	5	10	15	20	25	30	35	40	45	50	55	60	NORMAL
ALTITUDE (M)														
0	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,857	1,760	1,955
250	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,949	1,916	1,838	1,740	1,955
500	1,955	1,955	1,955	1,955	1,955	1,955	1,955	1,953	1,922	1,892	1,862	1,799	1,701	1,955
750	1,955	1,955	1,955	1,955	1,955	1,955	1,926	1,895	1,865	1,836	1,807	1,740	1,662	1,955
1,000	1,899	1,899	1,899	1,899	1,899	1,899	1,869	1,839	1,809	1,781	1,753	1,701	1,623	1,899
1,250	1,844	1,844	1,844	1,844	1,844	1,843	1,813	1,784	1,755	1,728	1,701	1,662	1,584	1,844
1,500	1,792	1,792	1,792	1,792	1,792	1,788	1,758	1,730	1,702	1,675	1,650	1,603	1,544	1,792
1,750	1,741	1,741	1,741	1,741	1,741	1,734	1,705	1,677	1,651	1,625	1,599	1,564	1,505	1,741
2,000	1,691	1,691	1,691	1,691	1,691	1,681	1,653	1,626	1,600	1,575	1,551	1,525	1,466	1,691
2,250	1,643	1,643	1,643	1,643	1,643	1,629	1,602	1,576	1,551	1,527	1,503	1,466	1,408	1,643
2,500	1,597	1,597	1,597	1,597	1,597	1,579	1,553	1,528	1,503	1,480	1,457	1,388	1,310	1,597
2,750	1,552	1,552	1,552	1,552	1,552	1,530	1,505	1,480	1,457	1,434	1,412	1,290	1,232	1,552
3,000	1,508	1,508	1,508	1,508	1,507	1,482	1,458	1,434	1,411	1,389	1,367	1,212	1,153	1,508
3,250	1,466	1,466	1,466	1,466	1,460	1,436	1,412	1,388	1,310	1,251	1,193	1,134	1,075	1,466
3,500	1,425	1,425	1,425	1,425	1,414	1,390	1,367	1,290	1,232	1,173	1,114	1,056	997	1,425
3,750	1,385	1,385	1,385	1,385	1,369	1,329	1,271	1,212	1,153	1,095	1,036	978	919	1,385
4,000	1,347	1,347	1,347	1,347	1,310	1,251	1,193	1,134	1,075	1,017	958	899	841	1,347
4,250	1,310	1,310	1,310	1,290	1,232	1,173	1,114	1,056	997	938	880	841	782	1,310
4,500	1,273	1,273	1,271	1,212	1,153	1,095	1,036	978	919	860	821	782	743	1,273

Cross Reference [Top](#)

Test Spec	Setting	Engine Arrangement	Engineering Model	Engineering Model Version	Start Effective Serial Number	End Effective Serial Number
4576846	LL8376	20R3662	NAP	NAP	ZAX00001	
0K6917	LL5708	2560760	GS226	-	ZAR00001	
0K6917	LL6256	2560760	GS226	-	ZAR00001	
0K9206	LL6054	3259345	NAP	NAP	YAW00001	
0K9206	LL6237	3259345	NAP	NAP	YAW00001	
4485851	LL6589	3844574	NAP	NAP	DC400001	

4182988	GG0711	3844574	GS639	XJ	DB400001
3704975	GG0618	3994242	GS714	-	DD400003
3704952	GG0595	3994246	GS715	-	DD400003
4369428	LL6437	4326145	NAP	NAP	TG500001
3704975	GG0618	5063093	GS500	-	YAW01000
3704952	GG0595	5063098	GS226	-	ZAR01000
4581555	LL6750	5157713	PG236	-	LY400001
6351447	GG3137	6382782	GS639	XJ	DB400001

General Notes [Top](#)

DM7976 - 02

SOUND PRESSURE DATA FOR THIS RATING CAN BE FOUND IN PERFORMANCE NUMBER - DM8779

Supplementary Data [Top](#)

Type	Classification	Performance Number
AFTERCOOLER TEMP	60C	DM7977
AFTERCOOLER TEMP	90C	DM7978
SOUND	SOUND PRESSURE	DM8779

Performance Parameter Reference [Top](#)

Parameters Reference: DM9600 - 15

PERFORMANCE DEFINITIONS

PERFORMANCE DEFINITIONS DM9600

APPLICATION: Engine performance tolerance values below are representative of a typical production engine tested in a calibrated dynamometer test cell at SAE J1995 standard reference conditions. Caterpillar maintains ISO9001:2000 certified quality management systems for engine test Facilities to assure accurate calibration of test equipment. Engine test data is corrected in accordance with SAE J1995. Additional reference material SAE J1228, J1349, ISO 8665, 3046-1:2002E, 3046-3:1989, 1585, 2534, 2288, and 9249 may apply in part or are similar to SAE J1995. Special engine rating request (SERR) test data shall be noted.

PERFORMANCE PARAMETER TOLERANCE FACTORS: Power +/- 3% Torque +/- 3% Exhaust stack temperature +/- 8% Inlet airflow +/- 5% Intake manifold pressure-gage +/- 10% Exhaust flow +/- 6% Specific fuel consumption +/- 3% Specific fuel consumption (C7-C18) +/- 4% Fuel rate +/- 5% Specific DEF consumption +/- 3% DEF rate +/- 5% Heat rejection +/- 5% Heat rejection exhaust only +/- 10% Heat rejection CEM only +/- 10% Heat Rejection values based on using treated water.

Torque is included for truck and industrial applications, do not use for Gen Set or steady state applications.

On C7 - C18 engines, at speeds of 1100 RPM and under these values are provided for reference only, and may not meet the tolerance listed.

On 3500 and C175 engines, at speeds below Peak Torque these values are provided for reference only, and may not meet the tolerance listed.

These values do not apply to C280/3600. For these models, see the tolerances listed below.

C280/3600 HEAT REJECTION TOLERANCE FACTORS: Heat rejection +/- 10% Heat rejection to Atmosphere +/- 50% Heat rejection to Lube Oil +/- 20% Heat rejection to Aftercooler +/- 5%

TEST CELL TRANSDUCER TOLERANCE FACTORS: Torque +/- 0.5% Speed +/- 0.2% Fuel flow +/- 1.0% Temperature +/- 2.0 C degrees Intake manifold pressure +/- 0.1 kPa
OBSERVED ENGINE PERFORMANCE IS CORRECTED TO SAE J1995 REFERENCE AIR AND FUEL CONDITIONS.

REFERENCE ATMOSPHERIC INLET AIR FOR 3500 ENGINES AND SMALLER SAE J1228 AUG2002 for marine engines, and J1995 JAN2014 for other engines, reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity at the stated aftercooler water temp, or inlet manifold temp. **FOR 3600 ENGINES** Engine rating obtained and presented in accordance with ISO 3046/1 and SAE J1995 JANJAN2014 reference atmospheric pressure is 100 KPA (29.61 in hg), and standard temperature is 25deg C (77 deg F) at 30% relative humidity and 150M altitude at the stated aftercooler water temperature.

MEASUREMENT LOCATION FOR INLET AIR TEMPERATURE Location for air temperature measurement air cleaner inlet at stabilized operating conditions.

REFERENCE EXHAUST STACK DIAMETER The Reference Exhaust Stack Diameter published with this dataset is only used for the calculation of Smoke Opacity values displayed in this dataset. This value does not necessarily represent the actual stack diameter of the engine due to the variety of exhaust stack adapter options available. Consult the price list, engine order or general dimension drawings for the actual stack diameter size ordered or options available.

REFERENCE FUEL DIESEL Reference fuel is #2 distillate diesel with a 35API gravity; A lower heating value is 42,780 KJ/KG (18,390 BTU/LB) when used at 15 deg C (59 deg F), where the density is 850 G/Liter (7.0936 Lbs/Gal). **GAS** Reference natural gas fuel has a lower heating value of 33.74 KJ/L (905 BTU/CU Ft). Low BTU ratings are based on 18.64 KJ/L (500 BTU/CU FT) lower heating value gas. Propane ratings are based on 87.56 KJ/L (2350 BTU/CU Ft) lower

heating value gas.

ENGINE POWER (NET) IS THE CORRECTED FLYWHEEL POWER (GROSS) LESS EXTERNAL AUXILIARY LOAD

Engine corrected gross output includes the power required to drive standard equipment; lube oil, scavenge lube oil, fuel transfer, common rail fuel, separate circuit aftercooler and jacket water pumps. Engine net power available for the external (flywheel) load is calculated by subtracting the sum of auxiliary load from the corrected gross flywheel output power. Typical auxiliary loads are radiator cooling fans, hydraulic pumps, air compressors and battery charging alternators. For Tier 4 ratings additional Parasitic losses would also include Intake, and Exhaust Restrictions.

ALTITUDE CAPABILITY Altitude capability is the maximum altitude above sea level at standard temperature and standard pressure at which the engine could develop full rated output power on the current performance data set. Standard temperature values versus altitude could be seen on TM2001.

When viewing the altitude capability chart the ambient temperature is the inlet air temp at the compressor inlet. Engines with ADEM MEUI and HEUI fuel systems operating at conditions above the defined altitude capability derate for atmospheric pressure and temperature conditions outside the values defined, see TM2001.

Mechanical governor controlled unit injector engines require a setting change for operation at conditions above the altitude defined on the engine performance sheet. See your Caterpillar technical representative for non standard ratings.

REGULATIONS AND PRODUCT COMPLIANCE TMI Emissions information is presented at 'nominal' and 'Potential Site Variation' values for standard ratings. No tolerances are applied to the emissions data. These values are subject to change at any time. The controlling federal and local emission requirements need to be verified by your Caterpillar technical representative.

Customer's may have special emission site requirements that need to be verified by the Caterpillar Product Group engineer.

EMISSION CYCLE LIMITS: Cycle emissions Max Limits apply to cycle-weighted averages only. Emissions at individual load points may exceed the cycle-weighted limit.

WET & DRY EXHAUST/EMISSIONS DESCRIPTION: Wet - Total exhaust flow or concentration of total exhaust flow Dry - Total exhaust flow minus water vapor or concentration of exhaust flow with water vapor excluded

EMISSIONS DEFINITIONS: Emissions : DM1176

EMISSION CYCLE DEFINITIONS

1. For constant-speed marine engines for ship main propulsion, including,diesel-electric drive, test cycle E2 shall be applied, for controllable-pitch propeller sets test cycle E2 shall be applied.
2. For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied.
3. For constant-speed auxiliary engines test cycle D2 shall be applied.
4. For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

HEAT REJECTION DEFINITIONS: Diesel Circuit Type and HHV Balance : DM9500

HIGH DISPLACEMENT (HD) DEFINITIONS: 3500: EM1500

RATING DEFINITIONS: Agriculture : TM6008

Fire Pump : TM6009

Generator Set : TM6035

Generator (Gas) : TM6041

Industrial Diesel : TM6010

Industrial (Gas) : TM6040

Irrigation : TM5749

Locomotive : TM6037

Marine Auxiliary : TM6036

Marine Prop (Except 3600) : TM5747

Marine Prop (3600 only) : TM5748

MSHA : TM6042

Oil Field (Petroleum) : TM6011

Off-Highway Truck : TM6039

On-Highway Truck : TM6038

SOUND DEFINITIONS: Sound Power : DM8702

Sound Pressure : TM7080

Date Released : 03/12/24

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