

Performance Number: DM7688

Change Level: 05

SALES MODEL:	C13	COMBUSTION:	DIRECT INJECTION
BRAND:	CAT	ENGINE SPEED (RPM):	2,100
MACHINE SALES MODEL:		PEAK TORQUE SPEED (RPM):	1,400
ENGINE POWER (BKW):	354.0	TORQUE RISE (%):	30
PEAK TORQUE (NM):	2,094.0	ASPIRATION:	TA
COMPRESSION RATIO:	17.3	AFTERCOOLER TYPE:	ATAAC
RATING LEVEL:	INDUSTRIAL D	AFTERCOOLER CIRCUIT TYPE:	JW+OC, ATAAC
PUMP QUANTITY:	1	INLET MANIFOLD AIR TEMP (C):	49
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:	GTA4502BS-48T-1.53
IGNITION TYPE:	CI	CERTIFICATION YEAR:	2005
INJECTOR TYPE:	EUI	PISTON SPD @ RATED ENG SPD (M/SEC):	11.0
REF EXH STACK DIAMETER (MM):	127		
MAX OPERATING ALTITUDE (M):	2,317		

INDUSTRY	SUBINDUSTRY	APPLICATION
INDUSTRIAL	GENERAL INDUSTRIAL	INDUSTRIAL
INDUSTRIAL	CONSTRUCTION	INDUSTRIAL
INDUSTRIAL	MATERIAL HANDLING	INDUSTRIAL
INDUSTRIAL	FIRE PUMP	INDUSTRIAL
INDUSTRIAL	AGRICULTURE	INDUSTRIAL
INDUSTRIAL	MINING	INDUSTRIAL
OIL AND GAS	WELL SERVICING	INDUSTRIAL
OIL AND GAS	LAND PRODUCTION	INDUSTRIAL
INDUSTRIAL	FORESTRY	INDUSTRIAL

General Performance Data

ENGINE SPEED	ENGINE POWER	ENGINE TORQUE	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)
RPM	BKW	NM	KPA	G/BKW-HR	G/BKW-HR	L/HR	L/HR
2,100	354	1,611	1,619	222.1	219.9	92.6	91.7
2,000	354	1,692	1,700	218.6	216.6	91.1	90.3
1,900	354	1,781	1,790	215.2	213.1	89.7	88.8
1,800	354	1,880	1,889	211.6	209.6	88.2	87.4
1,700	344	1,933	1,943	209.6	207.6	84.9	84.1
1,600	333	1,987	1,997	208.4	206.4	81.6	80.8
1,500	321	2,041	2,051	207.9	205.9	78.4	77.7
1,400	307	2,095	2,105	207.5	205.5	75.0	74.3
1,350	294	2,078	2,089	206.6	204.6	71.4	70.7
1,300	281	2,062	2,072	205.5	203.5	67.9	67.2
1,200	251	1,998	2,008	204.2	202.2	60.3	59.7
1,100	223	1,933	1,943	207.9	205.9	54.5	54.0
1,000	200	1,910	1,919	213.9	211.9	50.3	49.9
900	150	1,592	1,600	218.9	216.8	38.6	38.3
800	122	1,456	1,464	223.2	221.0	32.0	31.7
700	95.0	1,296	1,303	227.8	225.6	25.5	25.2

ENGINE SPEED	ENGINE POWER	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP
RPM	BKW	KPA	DEG C	DEG C	KPA	DEG C	KPA	DEG C
2,100	354	171.7	48.3	653.2	85.0	510.1	184	173.5
2,000	354	176.7	51.0	657.9	81.0	515.5	188	174.6
1,900	354	180.2	51.4	659.7	76.7	518.8	190	174.0
1,800	354	182.4	49.9	657.2	73.0	516.6	192	171.7
1,700	344	184.6	47.2	648.5	71.6	508.7	194	171.8
1,600	333	188.3	49.0	649.9	68.8	513.3	195	173.4
1,500	321	189.4	46.4	648.7	66.0	514.1	195	172.9
1,400	307	188.0	43.8	643.8	64.1	511.4	193	171.8
1,350	294	178.8	41.9	644.2	60.1	516.3	184	166.7
1,300	281	167.8	39.9	648.5	55.6	525.0	173	161.4
1,200	251	139.5	35.7	666.4	45.1	551.7	145	149.0
1,100	223	117.7	32.1	693.7	36.3	579.8	122	136.1
1,000	200	100.8	29.8	731.2	29.3	614.3	105	125.3

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900	150	64.2	28.6	710.3	19.7	580.5	66	96.4
800	122	42.7	28.7	686.6	14.2	567.8	44	77.6
700	95.0	25.4	29.5	651.9	11.2	532.4	26	59.7

General Performance Data (Continued)

ENGINE SPEED	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)
RPM	BKW	M3/MIN	M3/MIN	KG/HR	KG/HR	M3/MIN	M3/MIN
2,100	354	30.8	83.9	2,146.8	2,225.4	29.3	26.8
2,000	354	30.1	82.4	2,094.0	2,171.7	28.5	26.1
1,900	354	29.1	80.0	2,022.7	2,099.0	27.6	25.2
1,800	354	28.0	76.7	1,943.8	2,018.8	26.5	24.2
1,700	344	27.0	73.1	1,871.0	1,943.0	25.5	23.3
1,600	333	25.7	69.9	1,778.3	1,847.6	24.3	22.1
1,500	321	24.4	66.1	1,681.2	1,747.6	22.9	20.9
1,400	307	22.9	62.0	1,578.9	1,642.7	21.6	19.6
1,350	294	21.6	58.6	1,483.4	1,544.1	20.3	18.4
1,300	281	20.1	55.0	1,379.0	1,436.8	18.8	17.1
1,200	251	16.8	47.4	1,144.5	1,195.7	15.7	14.2
1,100	223	14.3	41.2	969.7	1,015.7	13.2	11.8
1,000	200	12.2	36.0	817.8	860.2	11.1	9.8
900	150	8.8	25.9	592.5	625.0	8.3	7.3
800	122	6.8	19.7	459.4	486.6	6.4	5.6
700	95.0	5.2	14.4	349.2	370.8	4.9	4.2

Heat Rejection Data

ENGINE SPEED	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
RPM	BKW	KW	KW	KW	KW	KW	KW	KW	KW	KW
2,100	354	138	47.0	381	220	49.8	75.1	354	935	996
2,000	354	133	44.9	377	219	49.0	72.3	354	921	981
1,900	354	130	44.4	367	214	48.3	69.3	354	906	965
1,800	354	129	46.2	353	204	47.5	66.2	354	891	949
1,700	344	129	40.3	335	192	45.7	65.1	344	857	913
1,600	333	120	41.2	322	185	43.9	61.8	333	824	878
1,500	321	116	41.2	306	176	42.2	59.5	321	792	844
1,400	307	111	44.4	287	164	40.3	56.5	307	757	807
1,350	294	106	43.5	273	157	38.4	51.7	294	721	768
1,300	281	101	42.1	259	150	36.5	46.8	281	686	730
1,200	251	93.2	39.5	229	135	32.5	36.2	251	609	649
1,100	223	89.7	39.2	206	124	29.3	28.2	223	550	586

Emissions Data

DIESEL

RATED SPEED NOMINAL DATA: 2100 RPM

ENGINE POWER	BKW	354	266	177	88.5	35.4
PERCENT LOAD	%	100	75	50	25	10
TOTAL NOX (AS NO2)	G/HR	1,316	778	397	223	159
TOTAL CO	G/HR	630	564	931	280	252
TOTAL HC	G/HR	28	31	50	46	57
TOTAL CO2	KG/HR	253	196	142	74	40
PART MATTER	G/HR	38.9	16.5	24.0	26.4	30.3
TOTAL NOX (AS NO2) (CORR 5% O2)	MG/NM3	1,236.9	952.7	659.4	712.4	934.9

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TOTAL CO	(CORR 5% O2)	MG/NM3	595.5	692.9	1,545.1	891.3	1,475.6
TOTAL HC	(CORR 5% O2)	MG/NM3	22.6	32.4	72.1	127.3	291.8
PART MATTER	(CORR 5% O2)	MG/NM3	30.6	17.3	35.1	75.0	162.7
TOTAL NOX (AS NO2)	(CORR 15% O2)	MG/NM3	459.0	353.5	244.7	264.3	346.9
TOTAL CO	(CORR 15% O2)	MG/NM3	221.0	257.1	573.4	330.7	547.5
TOTAL HC	(CORR 15% O2)	MG/NM3	8.4	12.0	26.8	47.2	108.3
PART MATTER	(CORR 15% O2)	MG/NM3	11.3	6.4	13.0	27.8	60.4
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	602	464	321	347	455
TOTAL CO	(CORR 5% O2)	PPM	476	554	1,236	713	1,180
TOTAL HC	(CORR 5% O2)	PPM	42	61	135	238	545
TOTAL NOX (AS NO2)	(CORR 15% O2)	PPM	224	172	119	129	169
TOTAL CO	(CORR 15% O2)	PPM	177	206	459	265	438
TOTAL HC	(CORR 15% O2)	PPM	16	22	50	88	202
TOTAL NOX (AS NO2)		G/HP-HR	2.79	2.20	1.68	1.88	3.36
TOTAL CO		G/HP-HR	1.34	1.60	3.95	2.37	5.33
TOTAL HC		G/HP-HR	0.06	0.09	0.21	0.39	1.21
PART MATTER		G/HP-HR	0.08	0.05	0.10	0.22	0.64
TOTAL NOX (AS NO2)		G/KW-HR	3.80	2.99	2.29	2.56	4.57
TOTAL CO		G/KW-HR	1.82	2.17	5.36	3.22	7.24
TOTAL HC		G/KW-HR	0.08	0.12	0.29	0.53	1.65
PART MATTER		G/KW-HR	0.11	0.06	0.14	0.30	0.87
TOTAL NOX (AS NO2)		LB/HR	2.90	1.72	0.87	0.49	0.35
TOTAL CO		LB/HR	1.39	1.24	2.05	0.62	0.56
TOTAL HC		LB/HR	0.06	0.07	0.11	0.10	0.13
TOTAL CO2		LB/HR	558	432	312	162	88
PART MATTER		LB/HR	0.09	0.04	0.05	0.06	0.07
OXYGEN IN EXH		%	10.3	12.4	13.9	15.1	17.1
DRY SMOKE OPACITY		%	1.8	1.2	1.2	3.8	2.6
BOSCH SMOKE NUMBER			1.14	0.75	0.75	2.02	1.55

RATED SPEED POTENTIAL SITE VARIATION: 2100 RPM

ENGINE POWER	BKW	354	266	177	88.5	35.4	
PERCENT LOAD	%	100	75	50	25	10	
TOTAL NOX (AS NO2)	G/HR	1,421	840	428	240	172	
TOTAL CO	G/HR	1,179	1,056	1,741	523	471	
TOTAL HC	G/HR	52	58	94	87	109	
PART MATTER	G/HR	75.8	32.1	46.7	51.5	59.0	
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	1,335.8	1,028.9	712.2	769.3	1,009.7
TOTAL CO	(CORR 5% O2)	MG/NM3	1,113.6	1,295.7	2,889.4	1,666.8	2,759.4
TOTAL HC	(CORR 5% O2)	MG/NM3	42.7	61.3	136.3	240.5	551.5
PART MATTER	(CORR 5% O2)	MG/NM3	59.6	33.7	68.4	146.3	317.2
TOTAL NOX (AS NO2)	(CORR 15% O2)	MG/NM3	495.7	381.8	264.3	285.5	374.7
TOTAL CO	(CORR 15% O2)	MG/NM3	413.2	480.8	1,072.2	618.5	1,023.9
TOTAL HC	(CORR 15% O2)	MG/NM3	15.8	22.7	50.6	89.3	204.6
PART MATTER	(CORR 15% O2)	MG/NM3	22.1	12.5	25.4	54.3	117.7
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	651	501	347	375	492
TOTAL CO	(CORR 5% O2)	PPM	891	1,037	2,312	1,333	2,207
TOTAL HC	(CORR 5% O2)	PPM	80	114	254	449	1,029
TOTAL NOX (AS NO2)	(CORR 15% O2)	PPM	241	186	129	139	182
TOTAL CO	(CORR 15% O2)	PPM	331	385	858	495	819
TOTAL HC	(CORR 15% O2)	PPM	30	42	94	167	382
TOTAL NOX (AS NO2)		G/HP-HR	3.02	2.38	1.82	2.03	3.63
TOTAL CO		G/HP-HR	2.50	2.99	7.38	4.43	9.96
TOTAL HC		G/HP-HR	0.11	0.16	0.40	0.74	2.29
PART MATTER		G/HP-HR	0.16	0.09	0.20	0.44	1.25
TOTAL NOX (AS NO2)		G/KW-HR	4.10	3.23	2.47	2.77	4.93
TOTAL CO		G/KW-HR	3.40	4.06	10.03	6.02	13.54
TOTAL HC		G/KW-HR	0.15	0.22	0.54	1.00	3.12
PART MATTER		G/KW-HR	0.22	0.12	0.27	0.59	1.70
TOTAL NOX (AS NO2)		LB/HR	3.13	1.85	0.94	0.53	0.38
TOTAL CO		LB/HR	2.60	2.33	3.84	1.15	1.04
TOTAL HC		LB/HR	0.12	0.13	0.21	0.19	0.24
PART MATTER		LB/HR	0.17	0.07	0.10	0.11	0.13

Regulatory Information

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THIS ENGINE HAS BEEN TESTED IN ACCORDANCE WITH THE PROVISIONS OF THE PEOPLE'S REPUBLIC OF CHINA NATIONAL STANDARD #GB 20891-2007, AND COMPLIES WITH THE STATED LIMITS OF CO, HC, NOX, AND PM FOR STAGE II

Locality	Agency	Regulation	Tier/Stage	Max Limits - G/BKW - HR
CHINA	CHINA	NON-ROAD	STAGE II	CO: 3.5 NOx: 6.0 HC: 1.0 PM: 0.20

EPA TIER 3 2005 - 2010

GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 89 SUBPART D AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.

Locality	Agency	Regulation	Tier/Stage	Max Limits - G/BKW - HR
U.S. (INCL CALIF)	EPA	NON-ROAD	TIER 3	CO: 3.5 NOx + HC: 4.0 PM: 0.20

EU STAGE IIIA 2006 - 2010

GASEOUS EMISSION DATA MEASUREMENTS ARE CONSISTENT WITH THOSE DESCRIBED IN EU 97/68/EC, ECE REGULATION NO. 96 AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. GASEOUS EMISSION VALUES ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.

Locality	Agency	Regulation	Tier/Stage	Max Limits - G/BKW - HR
EUROPE	EU	NON-ROAD	STAGE IIIA	CO: 3.5 NOx + HC: 4.0 PM: 0.20

IMO II 2011 - ----

GASEOUS EMISSIONS DATA MEASUREMENTS ARE CONSISTENT WITH THOSE DESCRIBED IN REGULATION 13 OF REVISED ANNEX VI OF MARPOL 73/78 AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THIS ENGINE CONFORMS TO INTERNATIONAL MARINE ORGANIZATION'S (IMO) MARINE COMPRESSION-IGNITION EMISSION REGULATIONS.

Altitude Derate Data

STANDARD

ALTITUDE CORRECTED POWER CAPABILITY (BKW)

AMBIENT OPERATING TEMP (C)	0	5	10	15	20	25	30	35	40	45	50	55	60	NORMAL
ALTIITUDE (M)														
0	354	354	354	354	354	354	354	354	354	354	354	354	354	354
250	354	354	354	354	354	354	354	354	354	354	354	354	354	354
500	354	354	354	354	354	354	354	354	354	354	354	354	354	354
750	354	354	354	354	354	354	354	354	354	354	354	354	354	354
1,000	354	354	354	354	354	354	354	354	354	354	354	354	354	354
1,250	354	354	354	354	354	354	354	354	354	354	354	354	354	354
1,500	354	354	354	354	354	354	354	354	354	354	354	354	352	354
1,750	354	354	354	354	354	354	354	354	354	354	352	346	341	354
2,000	354	354	354	354	354	354	354	354	351	346	340	335	330	354
2,250	354	354	354	354	354	354	351	346	340	335	330	324	320	354
2,500	354	354	354	354	351	346	340	334	329	324	319	314	309	354
2,750	354	354	352	346	340	334	329	323	318	313	308	304	299	354
3,000	353	346	340	334	329	323	318	313	308	303	298	294	289	345
3,250	341	335	329	323	318	313	307	302	298	293	288	284	280	335
3,500	330	324	318	313	307	302	297	292	288	283	279	274	270	326
3,750	319	313	307	302	297	292	287	282	278	274	269	265	261	317
4,000	308	302	297	292	287	282	277	273	268	264	260	256	252	308
4,250	297	292	287	282	277	272	268	264	259	255	251	248	244	299
4,500	287	282	277	272	267	263	259	254	250	246	243	239	235	291

Cross Reference

Test Spec	Setting	Engine Arrangement	Engineering Model	Engineering Model Version	Start Effective Serial Number	End Effective Serial Number
0K6070	PP5379	2364575	E707	-	LGK00001	
0K6070	PP5379	3605974	E707	-	LGK00001	
0K6070	PP5379	3605974	E707	-	RRA00001	
0K6070	PP5379	3678500	E707	-	RRA00001	
0K6070	PP5379	3684902	E707	-	LGK00001	
0K6070	PP5379	3684902	E707	-	RRA00001	
4581442	PP7738	5181539	EE382	-	PK300001	
5957732	NAP	6061920	E707	-	RRA00001	

Performance Parameter Reference

Parameters Reference:DM9600-14
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%

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).

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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 out put 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 : 10/27/21

