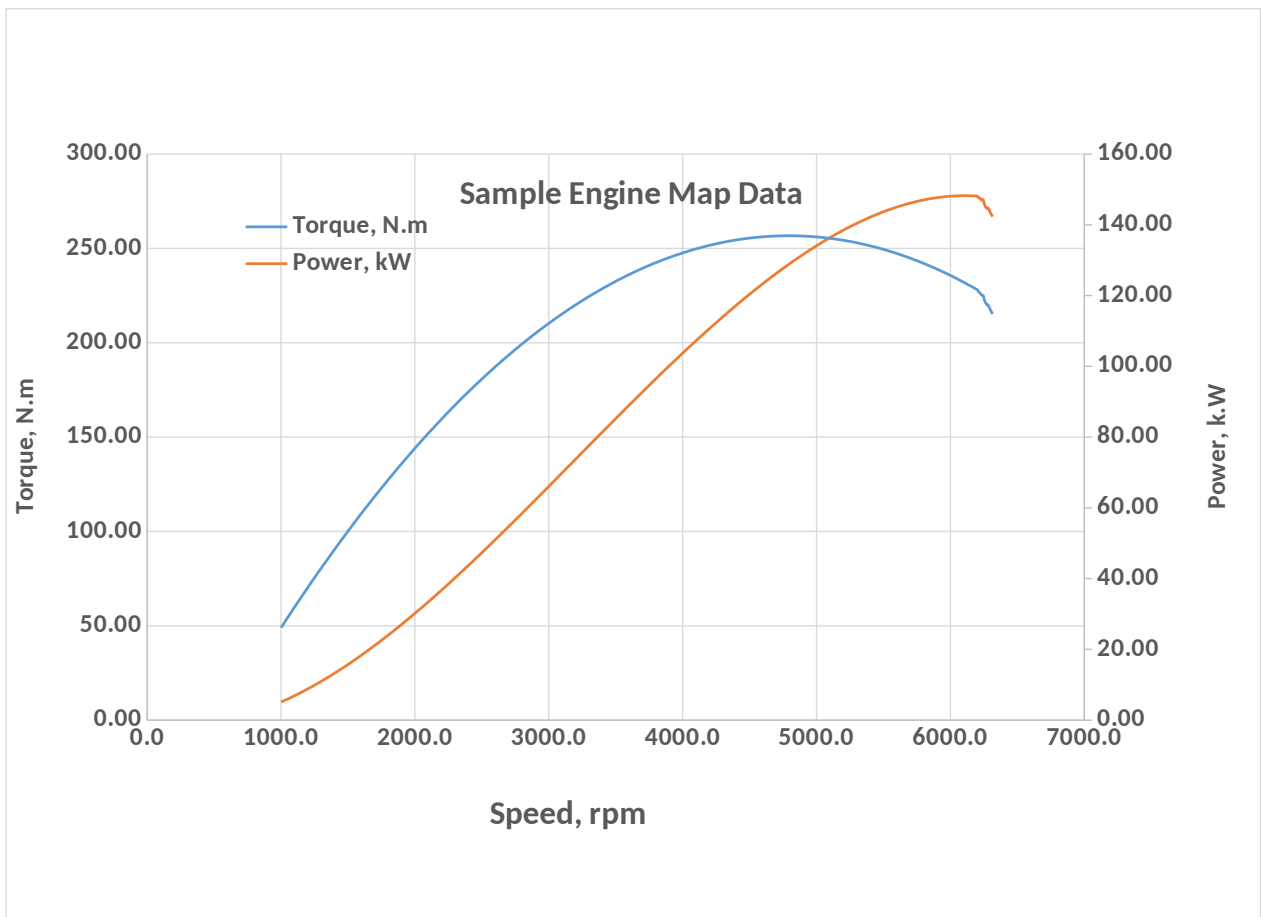




Pmax 148.23
 .98*Pmax 145.2687

.98*P_{max}-high 6259.7
 .98*P_{max}-low 5620.049
 Speed at Pmax 5939.875

Σmax,
 maximum sum
 of squares 2.090765
 .98*Σ_{max} 2.048949
 .98*Σ_{max}-low 6083.804
 .98*Σ_{max}-high 6300 point of engagement of rev limiter

Fnorm 6191.902 Maximum Test Speed
5750 declared maximum test speed +/- 500 rpm

Normalized
 Speed

CFR referenced nomenclature

					P _{norm}	f _{norm}
	Time, sec	Speed, rpm	Torque, N.m	Power, kW		
	0	633.6	-31.61	-2.10	0.10666398	-0.014148
	1	641.6	7.85	0.53	0.10800993	0.003558
	2	652.0	9.10	0.62	0.10976299	0.00419
	3	663.8	10.51	0.73	0.11175254	0.004928
	4	672.8	11.58	0.82	0.11327253	0.005506
	5	683.1	12.80	0.92	0.11499421	0.006176
	6	691.2	13.76	1.00	0.11636075	0.006719
	7	703.3	15.19	1.12	0.11839476	0.007547
	8	712.3	16.25	1.21	0.1199113	0.008178
	9	723.9	17.62	1.34	0.12186669	0.00901
	10	732.2	18.60	1.43	0.12327371	0.009622
	11	741.5	19.69	1.53	0.12483745	0.010314
	12	755.0	21.26	1.68	0.12710232	0.011339
	13	760.8	21.94	1.75	0.1280909	0.011795
	14	773.6	23.43	1.90	0.13023786	0.012803
	15	784.5	24.69	2.03	0.13207352	0.013683
	16	794.8	25.88	2.15	0.13381118	0.014533
	17	804.4	26.99	2.27	0.13542006	0.015334
	18	812.7	27.94	2.38	0.13682283	0.016044
	19	823.4	29.17	2.52	0.13862457	0.016969
	20	831.8	30.13	2.62	0.14003528	0.017706
	21	844.7	31.60	2.80	0.14220497	0.018859
	22	854.9	32.77	2.93	0.14392795	0.019791
	23	861.2	33.49	3.02	0.14499339	0.020375
	24	873.7	34.90	3.19	0.14708716	0.021539
	25	881.2	35.75	3.30	0.14836044	0.022258
	26	893.1	37.09	3.47	0.1503567	0.023401
	27	902.7	38.17	3.61	0.15196759	0.024338
	28	914.9	39.54	3.79	0.15402226	0.025552
	29	922.6	40.40	3.90	0.15532251	0.026331
	30	935.5	41.84	4.10	0.15749705	0.027652
	31	943.8	42.76	4.23	0.15889471	0.028513
	32	952.5	43.73	4.36	0.1603622	0.029428

33	961.0	44.67	4.50	0.16179017	0.030328
34	972.2	45.90	4.67	0.16366885	0.031527
35	985.0	47.32	4.88	0.16583124	0.032928
36	993.3	48.23	5.02	0.16722514	0.033843
37	1000.7	49.04	5.14	0.16846579	0.034665
38	1011.0	50.17	5.31	0.17020797	0.035832
39	1022.9	51.46	5.51	0.1722087	0.037189
40	1035.3	52.81	5.73	0.17429965	0.038628
41	1040.9	53.42	5.82	0.1752441	0.039285
42	1053.4	54.77	6.04	0.17734616	0.040761
43	1063.5	55.86	6.22	0.1790477	0.041971
44	1074.5	57.04	6.42	0.18088924	0.043295
45	1080.4	57.68	6.53	0.1818902	0.044022
46	1091.1	58.82	6.72	0.18369531	0.045343
47	1101.6	59.94	6.92	0.18545996	0.04665
48	1113.1	61.17	7.13	0.18739476	0.048098
49	1121.4	62.04	7.29	0.18878436	0.049149
50	1130.6	63.02	7.46	0.19034323	0.050338
51	1145.5	64.60	7.75	0.19285226	0.052274
52	1154.8	65.58	7.93	0.19442002	0.053499
53	1161.9	66.31	8.07	0.19560369	0.05443
54	1171.1	67.28	8.25	0.19715857	0.055663
55	1180.7	68.28	8.44	0.1987698	0.056951
56	1194.6	69.73	8.72	0.20111755	0.058849
57	1200.5	70.35	8.84	0.2021157	0.059663
58	1212.6	71.59	9.09	0.2041389	0.061327
59	1223.9	72.77	9.33	0.20605453	0.062918
60	1231.1	73.50	9.48	0.20725488	0.063923
61	1242.4	74.67	9.71	0.2091676	0.065537
62	1252.7	75.72	9.93	0.21089269	0.067006
63	1265.4	77.01	10.20	0.21302691	0.06884
64	1273.7	77.86	10.38	0.21442584	0.070053
65	1280.3	78.53	10.53	0.21554742	0.071031
66	1294.4	79.95	10.84	0.2179132	0.073112
67	1301.5	80.67	10.99	0.2191044	0.074168
68	1311.2	81.65	11.21	0.22074478	0.075632
69	1322.9	82.83	11.47	0.22271959	0.077409
70	1331.6	83.70	11.67	0.22418209	0.078735
71	1341.5	84.68	11.90	0.22584794	0.080256
72	1354.8	86.01	12.20	0.22809036	0.082321
73	1362.5	86.77	12.38	0.22939017	0.083527
74	1374.3	87.94	12.66	0.23137128	0.085378
75	1385.1	89.00	12.91	0.23317848	0.08708
76	1390.7	89.55	13.04	0.23412147	0.087974
77	1401.2	90.58	13.29	0.23589462	0.089663
78	1411.2	91.56	13.53	0.23757613	0.091276
79	1424.7	92.88	13.86	0.23985457	0.093478
80	1432.9	93.67	14.06	0.24123166	0.09482
81	1444.8	94.83	14.35	0.24324149	0.09679
82	1455.0	95.81	14.60	0.24496126	0.098488
83	1461.1	96.40	14.75	0.24598145	0.0995

84	1472.8	97.52	15.04	0.2479541	0.101469
85	1481.6	98.36	15.26	0.24943419	0.102956
86	1492.6	99.42	15.54	0.25129075	0.104832
87	1504.0	100.50	15.83	0.25320528	0.10678
88	1514.9	101.53	16.11	0.25503138	0.108651
89	1521.8	102.18	16.28	0.25620158	0.109856
90	1533.0	103.24	16.57	0.25808721	0.111809
91	1542.3	104.11	16.81	0.25964382	0.11343
92	1555.1	105.31	17.15	0.2618041	0.115695
93	1564.8	106.22	17.40	0.26343396	0.117414
94	1572.2	106.91	17.60	0.26468258	0.118737
95	1585.8	108.17	17.96	0.26697209	0.121178
96	1595.4	109.06	18.22	0.26859432	0.122919
97	1603.6	109.81	18.44	0.26997019	0.124403
98	1615.1	110.87	18.75	0.27190462	0.126499
99	1621.2	111.43	18.92	0.27292988	0.127616
100	1634.5	112.65	19.28	0.27517875	0.130077
101	1643.3	113.44	19.52	0.27664882	0.131695
102	1651.3	114.17	19.74	0.27800135	0.13319
103	1663.4	115.27	20.08	0.28003796	0.135453
104	1671.6	116.01	20.31	0.28141845	0.136995
105	1683.8	117.11	20.65	0.28347215	0.1393
106	1692.4	117.88	20.89	0.28492918	0.140944
107	1702.9	118.82	21.19	0.28668645	0.142935
108	1712.4	119.66	21.46	0.28828371	0.144754
109	1724.6	120.74	21.81	0.29033774	0.147105
110	1733.8	121.56	22.07	0.291889	0.14889
111	1745.6	122.60	22.41	0.29387277	0.151183
112	1754.3	123.37	22.66	0.29534342	0.152891
113	1764.1	124.22	22.95	0.2969924	0.154814
114	1774.1	125.10	23.24	0.29867955	0.15679
115	1783.3	125.90	23.51	0.3002317	0.158616
116	1791.7	126.63	23.76	0.3016417	0.160281
117	1804.6	127.74	24.14	0.3038134	0.162857
118	1815.5	128.68	24.46	0.30564189	0.165037
119	1821.8	129.23	24.65	0.30671279	0.166318
120	1831.5	130.05	24.94	0.30833274	0.168263
121	1844.8	131.19	25.34	0.31058054	0.170975
122	1854.6	132.02	25.64	0.312234	0.172979
123	1863.9	132.81	25.92	0.31379158	0.174874
124	1872.2	133.51	26.18	0.31519608	0.176588
125	1884.3	134.53	26.55	0.31723705	0.17909
126	1891.1	135.10	26.75	0.31837464	0.18049
127	1905.2	136.28	27.19	0.32075062	0.183424
128	1915.1	137.10	27.49	0.32240657	0.185479
129	1925.2	137.94	27.81	0.32411025	0.187601
130	1931.6	138.47	28.01	0.32519738	0.188959
131	1942.3	139.35	28.34	0.32699205	0.191209
132	1955.1	140.40	28.75	0.3291491	0.193923
133	1962.8	141.04	28.99	0.33045134	0.195568
134	1975.2	142.05	29.38	0.33253518	0.19821

135	1983.0	142.67	29.63	0.33383879	0.199869
136	1993.8	143.56	29.97	0.33566871	0.202204
137	2005.1	144.47	30.33	0.33757126	0.204641
138	2014.8	145.25	30.65	0.3392061	0.206743
139	2023.8	145.97	30.94	0.34071952	0.208695
140	2032.0	146.62	31.20	0.34209751	0.210477
141	2042.9	147.49	31.55	0.34392807	0.212852
142	2051.9	148.20	31.84	0.3454476	0.21483
143	2060.6	148.89	32.13	0.3469083	0.216737
144	2074.2	149.96	32.57	0.3492007	0.219739
145	2080.7	150.47	32.79	0.35029318	0.221175
146	2090.3	151.22	33.10	0.35191243	0.223308
147	2101.3	152.08	33.46	0.3537631	0.225753
148	2114.8	153.12	33.91	0.3560372	0.228769
149	2124.1	153.84	34.22	0.35760446	0.230854
150	2132.1	154.46	34.49	0.35895373	0.232654
151	2144.3	155.39	34.89	0.36100273	0.235396
152	2151.1	155.91	35.12	0.36213738	0.236918
153	2161.5	156.70	35.47	0.3638902	0.239275
154	2171.1	157.43	35.79	0.36551003	0.24146
155	2183.5	158.37	36.21	0.36760642	0.244296
156	2192.3	159.03	36.51	0.36907587	0.246289
157	2203.2	159.84	36.88	0.3709098	0.248784
158	2214.6	160.69	37.27	0.37282855	0.251401
159	2221.2	161.19	37.49	0.3739428	0.252925
160	2235.0	162.21	37.97	0.37627753	0.256126
161	2244.1	162.88	38.28	0.37779642	0.258214
162	2251.2	163.40	38.52	0.37900323	0.259877
163	2263.4	164.30	38.94	0.38105621	0.262713
164	2274.7	165.12	39.33	0.38295754	0.265346
165	2281.2	165.59	39.56	0.3840404	0.266849
166	2294.1	166.52	40.01	0.38621931	0.269881
167	2303.9	167.23	40.35	0.38787741	0.272194
168	2312.1	167.82	40.63	0.38925068	0.274114
169	2320.7	168.44	40.93	0.39070347	0.276149
170	2333.0	169.31	41.37	0.39277357	0.279055
171	2341.4	169.90	41.66	0.39417872	0.281032
172	2355.2	170.88	42.15	0.39651138	0.284323
173	2360.6	171.26	42.33	0.39740992	0.285593
174	2372.4	172.09	42.75	0.39940636	0.288421
175	2384.2	172.91	43.17	0.40139436	0.291243
176	2391.5	173.42	43.43	0.40262298	0.292991
177	2403.5	174.24	43.86	0.40463256	0.295855
178	2410.8	174.75	44.12	0.40586425	0.297614
179	2424.5	175.69	44.61	0.4081735	0.300919
180	2435.5	176.44	45.00	0.4100322	0.303586
181	2443.9	177.01	45.30	0.41143598	0.305603
182	2453.2	177.64	45.64	0.41300662	0.307865
183	2463.2	178.31	45.99	0.41468192	0.310281
184	2473.0	178.98	46.35	0.41634498	0.312684
185	2483.2	179.66	46.72	0.41806208	0.31517

186	2491.3	180.20	47.01	0.41942641	0.317148
187	2503.3	180.99	47.45	0.42144254	0.320077
188	2513.4	181.66	47.81	0.4231386	0.322545
189	2521.2	182.17	48.10	0.42445898	0.324469
190	2532.7	182.92	48.51	0.42638475	0.327281
191	2544.3	183.68	48.94	0.42835016	0.330155
192	2555.3	184.39	49.34	0.4301966	0.332861
193	2563.2	184.90	49.63	0.43152655	0.334813
194	2571.7	185.45	49.94	0.43295806	0.336916
195	2583.6	186.21	50.38	0.434962	0.339866
196	2592.6	186.78	50.71	0.43647454	0.342095
197	2604.9	187.56	51.16	0.43855036	0.34516
198	2614.1	188.14	51.50	0.44008908	0.347435
199	2623.0	188.70	51.83	0.44159083	0.349659
200	2634.3	189.40	52.25	0.44348787	0.352472
201	2641.2	189.83	52.50	0.44465525	0.354205
202	2652.7	190.54	52.93	0.44658958	0.35708
203	2664.4	191.27	53.37	0.44856149	0.360016
204	2670.5	191.64	53.59	0.44959449	0.361555
205	2683.6	192.44	54.08	0.45179568	0.36484
206	2692.8	193.00	54.42	0.4533349	0.36714
207	2702.3	193.58	54.78	0.45494089	0.369543
208	2715.2	194.35	55.26	0.45711357	0.372798
209	2721.7	194.74	55.50	0.45819992	0.374427
210	2734.4	195.50	55.98	0.46035146	0.377657
211	2741.4	195.92	56.24	0.46152972	0.379428
212	2752.2	196.55	56.65	0.46334141	0.382154
213	2763.6	197.22	57.08	0.46525474	0.385036
214	2774.3	197.85	57.48	0.46705903	0.387757
215	2781.5	198.27	57.75	0.46827291	0.389589
216	2792.9	198.93	58.18	0.47019117	0.392488
217	2804.0	199.57	58.60	0.47206334	0.395319
218	2814.3	200.16	58.99	0.47379999	0.397948
219	2824.1	200.72	59.36	0.47544876	0.400447
220	2831.3	201.13	59.63	0.47666761	0.402295
221	2841.6	201.71	60.02	0.47839742	0.404921
222	2853.7	202.39	60.48	0.48043315	0.408013
223	2860.8	202.78	60.75	0.48162073	0.409819
224	2872.9	203.46	61.21	0.48366795	0.412934
225	2883.8	204.06	61.62	0.48550377	0.415729
226	2895.0	204.67	62.05	0.48738098	0.41859
227	2903.2	205.12	62.36	0.48876343	0.420699
228	2913.5	205.68	62.75	0.49050139	0.423351
229	2921.5	206.12	63.06	0.49185345	0.425416
230	2932.2	206.69	63.47	0.4936504	0.428162
231	2942.8	207.26	63.87	0.49542922	0.430882
232	2954.8	207.90	64.33	0.497447	0.433969
233	2960.9	208.22	64.56	0.49847827	0.435548
234	2973.0	208.86	65.02	0.50051083	0.438661
235	2985.8	209.53	65.51	0.50266336	0.44196
236	2995.2	210.02	65.87	0.50425031	0.444394

237	3000.9	210.32	66.09	0.50521701	0.445876
238	3013.5	210.97	66.58	0.50733939	0.449134
239	3021.9	211.40	66.90	0.50874722	0.451295
240	3035.1	212.07	67.40	0.51096319	0.454699
241	3043.3	212.49	67.72	0.51235613	0.45684
242	3052.2	212.93	68.06	0.51384688	0.459131
243	3062.9	213.47	68.47	0.51565374	0.46191
244	3072.2	213.93	68.83	0.51721226	0.464307
245	3082.0	214.42	69.20	0.51886911	0.466856
246	3094.7	215.05	69.69	0.52100732	0.470147
247	3103.4	215.47	70.03	0.52247012	0.472399
248	3110.8	215.83	70.31	0.52371559	0.474316
249	3123.1	216.43	70.78	0.52578861	0.477509
250	3130.6	216.79	71.07	0.52704365	0.479442
251	3144.2	217.43	71.59	0.52933106	0.482966
252	3152.7	217.84	71.92	0.53077153	0.485185
253	3161.4	218.25	72.25	0.5322293	0.487431
254	3173.5	218.82	72.72	0.5342737	0.490582
255	3184.3	219.33	73.14	0.53609716	0.493392
256	3192.8	219.72	73.46	0.53752535	0.495593
257	3204.0	220.23	73.89	0.53940905	0.498496
258	3214.4	220.71	74.29	0.54115672	0.501189
259	3222.9	221.10	74.62	0.54259151	0.5034
260	3233.5	221.57	75.03	0.54437172	0.506144
261	3243.8	222.04	75.42	0.54610999	0.508822
262	3250.8	222.35	75.69	0.54729106	0.510642
263	3264.6	222.96	76.22	0.54960595	0.514207
264	3272.6	223.31	76.53	0.55095718	0.516289
265	3285.7	223.89	77.03	0.55316178	0.519683
266	3294.8	224.28	77.38	0.55468426	0.522027
267	3301.9	224.59	77.66	0.55589425	0.52389
268	3313.1	225.07	78.09	0.55776805	0.526773
269	3325.2	225.58	78.55	0.55980897	0.529913
270	3332.1	225.87	78.81	0.56096744	0.531695
271	3342.2	226.30	79.20	0.56267657	0.534322
272	3351.4	226.68	79.56	0.56422528	0.536703
273	3365.7	227.28	80.11	0.56663274	0.540401
274	3374.2	227.63	80.43	0.5680619	0.542596
275	3382.1	227.95	80.73	0.56938138	0.544621
276	3395.0	228.47	81.23	0.57155354	0.547954
277	3404.9	228.87	81.61	0.57322802	0.550522
278	3414.3	229.24	81.96	0.57480891	0.552945
279	3422.7	229.58	82.28	0.57621805	0.555104
280	3434.0	230.02	82.72	0.57813188	0.558035
281	3440.2	230.27	82.96	0.57917784	0.559636
282	3452.6	230.75	83.43	0.58125702	0.562816
283	3464.8	231.22	83.89	0.58331336	0.56596
284	3473.0	231.53	84.21	0.58469963	0.568077
285	3481.0	231.84	84.51	0.586043	0.570128
286	3491.8	232.24	84.92	0.58785996	0.5729
287	3500.3	232.56	85.24	0.5892822	0.575069

288	3512.5	233.01	85.71	0.59133503	0.578197
289	3522.1	233.37	86.07	0.59295458	0.580662
290	3533.2	233.78	86.50	0.59483041	0.583515
291	3542.5	234.11	86.85	0.59639184	0.585889
292	3550.8	234.41	87.16	0.59778223	0.588
293	3565.1	234.92	87.70	0.60019868	0.591667
294	3573.0	235.20	88.00	0.60152947	0.593684
295	3584.0	235.59	88.42	0.60338595	0.596495
296	3594.8	235.96	88.83	0.6051993	0.599239
297	3602.8	236.24	89.13	0.60653889	0.601264
298	3614.3	236.63	89.56	0.60847269	0.604184
299	3623.7	236.95	89.92	0.61006343	0.606584
300	3630.4	237.18	90.17	0.61119156	0.608284
301	3643.2	237.60	90.65	0.61334887	0.611533
302	3651.2	237.87	90.95	0.61468977	0.61355
303	3665.1	238.32	91.47	0.61704063	0.617081
304	3674.7	238.63	91.83	0.61864251	0.619484
305	3683.3	238.91	92.15	0.6200957	0.621662
306	3691.6	239.18	92.46	0.62149975	0.623764
307	3701.4	239.49	92.83	0.6231457	0.626226
308	3711.8	239.81	93.22	0.62489778	0.628843
309	3725.2	240.23	93.72	0.62715783	0.632214
310	3731.7	240.43	93.95	0.62823756	0.633822
311	3744.7	240.83	94.44	0.63043879	0.637096
312	3751.9	241.04	94.71	0.63164719	0.638892
313	3764.7	241.42	95.18	0.63379818	0.642083
314	3771.2	241.62	95.42	0.63489635	0.64371
315	3784.1	242.00	95.90	0.63707508	0.646933
316	3795.3	242.32	96.31	0.63895304	0.649707
317	3804.9	242.60	96.66	0.64057135	0.652094
318	3812.3	242.80	96.93	0.64180769	0.653915
319	3824.9	243.16	97.40	0.64393811	0.657048
320	3831.9	243.35	97.65	0.64510947	0.658768
321	3842.7	243.65	98.05	0.64692979	0.661437
322	3851.9	243.91	98.39	0.6484901	0.663721
323	3860.9	244.15	98.71	0.64999691	0.665924
324	3873.4	244.48	99.17	0.65210361	0.668998
325	3885.3	244.80	99.60	0.65409867	0.671903
326	3893.1	245.00	99.88	0.65541128	0.673811
327	3903.8	245.28	100.27	0.65722764	0.676447
328	3912.6	245.50	100.59	0.65870537	0.678588
329	3923.4	245.77	100.98	0.66052277	0.681217
330	3934.4	246.05	101.37	0.66236951	0.683882
331	3940.3	246.19	101.59	0.6633646	0.685316
332	3955.2	246.56	102.12	0.66586772	0.688916
333	3965.2	246.80	102.48	0.66755815	0.691342
334	3975.3	247.04	102.84	0.66926309	0.693784
335	3982.1	247.20	103.08	0.67039649	0.695404
336	3993.8	247.47	103.50	0.67237587	0.698229
337	4002.0	247.66	103.79	0.67375857	0.700198
338	4013.3	247.92	104.19	0.67565724	0.702896

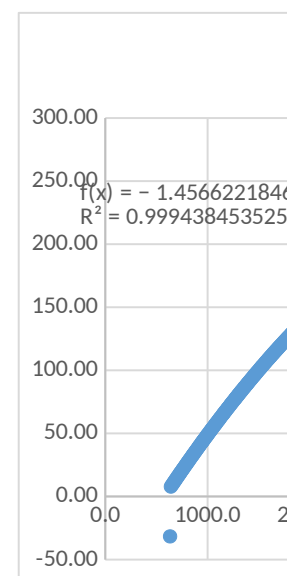
339	4022.5	248.12	104.52	0.67719753	0.705081
340	4035.2	248.40	104.97	0.67933702	0.708108
341	4042.5	248.56	105.22	0.68057188	0.709852
342	4051.3	248.75	105.53	0.68205493	0.711942
343	4065.5	249.05	106.03	0.68443852	0.715293
344	4071.4	249.18	106.24	0.68544315	0.716702
345	4081.8	249.39	106.60	0.68718972	0.719147
346	4090.2	249.56	106.89	0.68859649	0.721113
347	4104.7	249.85	107.40	0.69104256	0.724521
348	4114.0	250.04	107.72	0.69261304	0.726703
349	4121.6	250.18	107.98	0.69387925	0.728458
350	4133.7	250.42	108.40	0.69591679	0.731277
351	4143.5	250.60	108.74	0.69758119	0.733573
352	4153.9	250.80	109.10	0.6993321	0.735982
353	4160.6	250.92	109.33	0.70045755	0.737527
354	4171.3	251.11	109.69	0.70225726	0.739993
355	4183.5	251.33	110.11	0.70430265	0.742787
356	4191.4	251.47	110.38	0.70563812	0.744606
357	4202.4	251.66	110.75	0.70748334	0.747114
358	4214.9	251.87	111.17	0.70959621	0.749976
359	4223.1	252.01	111.45	0.71097141	0.751834
360	4231.8	252.15	111.74	0.71243746	0.753809
361	4242.5	252.32	112.10	0.7142428	0.756236
362	4254.2	252.50	112.49	0.71620995	0.758871
363	4262.4	252.63	112.76	0.71758405	0.760707
364	4272.6	252.79	113.10	0.71931318	0.76301
365	4281.2	252.91	113.39	0.72075188	0.764922
366	4294.3	253.10	113.82	0.72295905	0.767845
367	4303.0	253.23	114.11	0.72441875	0.769772
368	4313.8	253.38	114.46	0.72625095	0.772183
369	4322.4	253.50	114.74	0.72769748	0.774081
370	4334.6	253.66	115.14	0.72974565	0.77676
371	4344.4	253.79	115.46	0.73139775	0.778913
372	4351.1	253.88	115.68	0.73253107	0.780386
373	4361.4	254.01	116.01	0.73426234	0.78263
374	4372.0	254.14	116.35	0.73603493	0.78492
375	4384.9	254.29	116.77	0.73821171	0.787722
376	4391.2	254.36	116.97	0.73926733	0.789076
377	4403.9	254.51	117.37	0.74141052	0.791816
378	4414.9	254.63	117.72	0.7432689	0.794182
379	4421.7	254.71	117.94	0.74441068	0.795632
380	4434.2	254.84	118.33	0.74650681	0.798284
381	4442.3	254.92	118.59	0.74787933	0.800014
382	4450.8	255.01	118.85	0.74930255	0.801802
383	4463.1	255.13	119.24	0.75137208	0.804393
384	4475.0	255.24	119.61	0.75338205	0.806899
385	4483.8	255.32	119.88	0.75486327	0.808738
386	4491.2	255.38	120.11	0.75610473	0.810274
387	4504.0	255.49	120.50	0.7582586	0.81293
388	4512.3	255.56	120.76	0.75965944	0.81465
389	4520.5	255.63	121.01	0.761043	0.816344

390	4531.4	255.71	121.34	0.76288278	0.818588
391	4542.1	255.79	121.66	0.76467387	0.820762
392	4554.5	255.88	122.04	0.76676	0.823284
393	4561.5	255.92	122.25	0.7679529	0.82472
394	4571.0	255.99	122.54	0.76955194	0.826638
395	4583.3	256.06	122.90	0.77160872	0.829094
396	4594.7	256.13	123.24	0.77353317	0.831381
397	4603.2	256.18	123.49	0.77495924	0.833068
398	4614.6	256.24	123.82	0.77687771	0.835329
399	4625.5	256.29	124.14	0.77872483	0.837494
400	4631.3	256.32	124.31	0.77970148	0.838635
401	4643.0	256.37	124.65	0.78167134	0.840927
402	4653.5	256.42	124.95	0.78342595	0.842958
403	4662.7	256.45	125.22	0.78498141	0.84475
404	4674.1	256.50	125.55	0.7869084	0.846961
405	4685.1	256.53	125.86	0.78875093	0.849063
406	4692.0	256.55	126.06	0.78991472	0.850385
407	4700.6	256.58	126.30	0.79135721	0.852017
408	4715.1	256.61	126.70	0.79379807	0.854765
409	4724.8	256.63	126.98	0.79543859	0.8566
410	4733.2	256.65	127.21	0.79685799	0.858181
411	4744.3	256.67	127.52	0.79872223	0.860247
412	4753.2	256.68	127.76	0.8002117	0.86189
413	4765.3	256.69	128.09	0.80226226	0.864139
414	4775.6	256.70	128.37	0.80398223	0.866014
415	4782.3	256.70	128.56	0.80511889	0.867248
416	4795.6	256.70	128.91	0.80735585	0.869663
417	4804.1	256.70	129.14	0.80878653	0.871199
418	4813.5	256.69	129.39	0.81036515	0.872885
419	4823.6	256.69	129.66	0.81207053	0.874697
420	4831.7	256.68	129.87	0.81343064	0.876135
421	4841.5	256.67	130.13	0.81508977	0.87788
422	4851.5	256.65	130.39	0.81676856	0.879635
423	4861.5	256.63	130.65	0.81845608	0.88139
424	4871.7	256.61	130.91	0.82016358	0.883155
425	4883.1	256.58	131.21	0.8220918	0.885135
426	4893.0	256.56	131.46	0.82375989	0.886838
427	4900.6	256.53	131.65	0.82503171	0.888129
428	4911.5	256.50	131.93	0.82687534	0.88999
429	4920.5	256.47	132.15	0.82838465	0.891504
430	4935.2	256.41	132.52	0.83086671	0.893976
431	4943.8	256.37	132.73	0.83230033	0.895393
432	4953.3	256.33	132.96	0.83390071	0.896965
433	4961.3	256.29	133.16	0.83524808	0.898282
434	4973.0	256.23	133.44	0.83722058	0.900197
435	4985.6	256.17	133.74	0.83934012	0.902238
436	4992.3	256.13	133.90	0.84046918	0.903318
437	5004.5	256.06	134.19	0.84253106	0.905277
438	5015.3	255.99	134.45	0.84435181	0.906994
439	5024.3	255.93	134.66	0.84585417	0.908401
440	5030.8	255.89	134.81	0.84696102	0.909431

441	5043.6	255.80	135.10	0.84910865	0.911417
442	5051.5	255.74	135.28	0.85043089	0.912631
443	5064.5	255.64	135.58	0.85262283	0.914627
444	5074.7	255.56	135.81	0.85434686	0.916184
445	5084.7	255.47	136.03	0.85603097	0.917693
446	5091.6	255.42	136.18	0.85718262	0.918718
447	5105.2	255.30	136.49	0.85947854	0.920746
448	5114.7	255.21	136.69	0.86107521	0.922143
449	5124.1	255.12	136.90	0.86266347	0.923522
450	5134.3	255.02	137.11	0.86437028	0.924993
451	5141.4	254.95	137.27	0.86556773	0.926017
452	5151.1	254.85	137.47	0.86720679	0.92741
453	5162.3	254.73	137.71	0.86909913	0.929004
454	5173.8	254.61	137.95	0.87103647	0.930619
455	5181.7	254.52	138.11	0.87236049	0.931714
456	5192.9	254.40	138.34	0.87425142	0.933265
457	5205.4	254.25	138.59	0.87634297	0.934963
458	5211.4	254.18	138.71	0.87735052	0.935774
459	5220.3	254.07	138.89	0.87886505	0.936984
460	5231.4	253.93	139.11	0.8807211	0.938454
461	5243.0	253.78	139.34	0.88267205	0.939983
462	5250.6	253.68	139.48	0.88395808	0.940982
463	5264.8	253.49	139.76	0.88634956	0.942819
464	5271.1	253.41	139.88	0.88740379	0.943621
465	5285.5	253.20	140.15	0.8898301	0.945448
466	5293.3	253.09	140.29	0.89114138	0.946424
467	5300.5	252.99	140.42	0.89235918	0.947323
468	5310.6	252.84	140.61	0.89406233	0.94857
469	5321.7	252.67	140.81	0.89593413	0.949925
470	5335.0	252.47	141.05	0.8981588	0.951514
471	5342.8	252.34	141.18	0.89948123	0.952448
472	5353.6	252.17	141.37	0.90129688	0.953718
473	5362.8	252.02	141.53	0.90284888	0.95479
474	5372.9	251.85	141.70	0.90454743	0.955951
475	5383.1	251.68	141.88	0.90626773	0.957113
476	5393.6	251.50	142.05	0.90803674	0.958294
477	5400.9	251.37	142.17	0.90926757	0.959106
478	5415.0	251.12	142.40	0.91162796	0.960644
479	5423.0	250.98	142.53	0.91298242	0.961515
480	5432.5	250.80	142.68	0.91458652	0.962534
481	5442.4	250.62	142.84	0.91625653	0.963583
482	5454.7	250.39	143.02	0.91831949	0.964859
483	5462.0	250.25	143.13	0.91954177	0.965605
484	5472.9	250.03	143.30	0.92138588	0.966717
485	5483.0	249.84	143.45	0.92307508	0.967721
486	5491.8	249.66	143.58	0.9245653	0.968596
487	5504.9	249.39	143.77	0.92676325	0.969865
488	5510.6	249.27	143.85	0.9277241	0.970412
489	5524.4	248.99	144.04	0.93004942	0.971717
490	5535.2	248.76	144.19	0.93186315	0.972717
491	5542.2	248.60	144.29	0.9330575	0.973365

492	5555.0	248.33	144.46	0.93520635	0.974515
493	5564.9	248.11	144.58	0.93686659	0.975387
494	5574.5	247.89	144.71	0.93848225	0.976222
495	5582.7	247.71	144.81	0.93986686	0.976927
496	5590.9	247.52	144.92	0.9412572	0.977624
497	5602.8	247.24	145.06	0.94325558	0.97861
498	5610.9	247.05	145.16	0.94460756	0.979265
499	5625.3	246.71	145.33	0.94704292	0.980421
500	5634.0	246.50	145.43	0.94850817	0.981101
501	5642.9	246.28	145.53	0.95000342	0.981784
502	5650.6	246.09	145.62	0.95129425	0.982364
503	5663.3	245.78	145.76	0.95343341	0.983305
504	5673.6	245.52	145.87	0.95516608	0.98405
505	5684.7	245.23	145.99	0.95703772	0.984836
506	5692.5	245.03	146.07	0.95834618	0.985375
507	5703.0	244.76	146.17	0.96011575	0.986089
508	5715.0	244.44	146.29	0.96213448	0.986882
509	5721.6	244.26	146.35	0.96324941	0.987311
510	5735.4	243.89	146.48	0.96557233	0.988182
511	5741.7	243.72	146.54	0.96664428	0.988575
512	5752.0	243.43	146.63	0.96836902	0.989192
513	5762.0	243.16	146.72	0.97004913	0.989778
514	5773.9	242.82	146.82	0.97205294	0.990457
515	5783.7	242.54	146.90	0.97370307	0.990999
516	5790.9	242.33	146.96	0.97492399	0.99139
517	5801.6	242.02	147.04	0.97672898	0.991953
518	5813.8	241.67	147.13	0.97877326	0.992568
519	5822.6	241.41	147.20	0.98025565	0.993
520	5833.3	241.09	147.27	0.98205619	0.993507
521	5841.0	240.86	147.32	0.98335104	0.993861
522	5852.0	240.52	147.40	0.98520384	0.99435
523	5861.9	240.22	147.46	0.98686621	0.994772
524	5871.1	239.93	147.51	0.98841965	0.995152
525	5883.6	239.54	147.59	0.99052435	0.995645
526	5894.8	239.19	147.65	0.99241166	0.996065
527	5901.5	238.97	147.69	0.99353164	0.996304
528	5913.2	238.59	147.75	0.9955143	0.99671
529	5921.3	238.33	147.78	0.99687542	0.996975
530	5933.2	237.94	147.84	0.9988696	0.997344
531	5942.9	237.62	147.88	1.00050345	0.997629
532	5953.1	237.28	147.92	1.00223466	0.997913
533	5962.0	236.98	147.96	1.00372628	0.998144
534	5970.6	236.69	147.99	1.00516791	0.998354
535	5980.8	236.34	148.02	1.00689344	0.99859
536	5994.6	235.87	148.07	1.00922085	0.998879
537	6003.8	235.55	148.09	1.01075566	0.999052
538	6012.0	235.26	148.11	1.01214939	0.999197
539	6025.3	234.79	148.14	1.01437365	0.999403
540	6033.7	234.49	148.16	1.01578988	0.999518
541	6041.8	234.20	148.18	1.01716184	0.999619
542	6050.4	233.89	148.19	1.01860361	0.999711

543	6063.7	233.40	148.21	1.02083854	0.99983
544	6071.4	233.12	148.22	1.02214647	0.999885
545	6084.8	232.62	148.23	1.02439578	0.999955
546	6094.7	232.25	148.23	1.02606439	0.999987
547	6103.6	231.92	148.23	1.02756661	1
548	6114.3	231.51	148.23	1.0293585	0.999997
549	6125.1	231.10	148.23	1.031187	0.999974
550	6133.6	230.77	148.22	1.03261151	0.999941
551	6142.8	230.41	148.22	1.0341678	0.99989
552	6150.6	230.11	148.21	1.03547408	0.999836
553	6162.9	229.62	148.19	1.03755401	0.999727
554	6174.7	229.15	148.17	1.03953446	0.999597
555	6185.2	228.73	148.15	1.04130536	0.99946
556	6192.8	228.43	148.14	1.04257733	0.999349
557	6202.7	228.03	148.11	1.04424359	0.999187
558	6210.5	227.01	147.64	1.04556218	0.99599
559	6220.4	226.45	147.51	1.04723048	0.995118
560	6232.1	225.27	147.02	1.04919487	0.99179
561	6245.3	224.98	147.14	1.05141977	0.992613
562	6254.5	222.56	145.77	1.05296374	0.983378
563	6261.2	221.33	145.12	1.05410376	0.979002
564	6275.0	219.94	144.53	1.05642752	0.974999
565	6281.9	220.13	144.81	1.05758547	0.97691
566	6294.8	218.02	143.72	1.05976033	0.969536
567	6303.2	216.71	143.04	1.06117438	0.964997
568	6315.5	215.22	142.34	1.06324392	0.960231



Σ squares_{max}

0.011577
0.011679
0.012065
0.012513
0.012861
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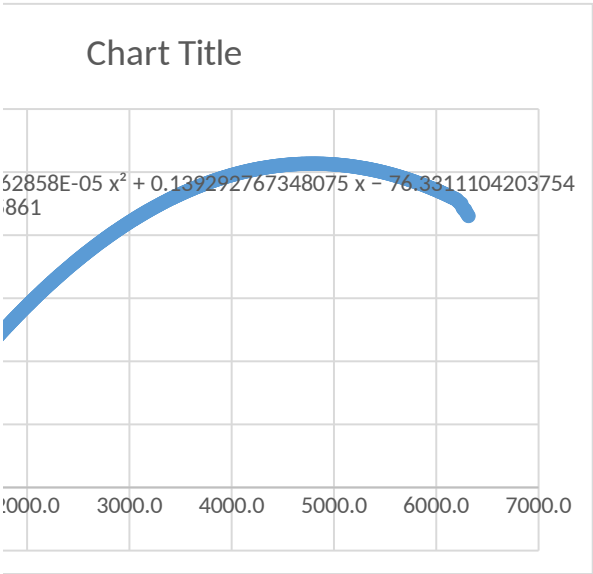
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Marine SI Engine Map Data Sheet (40 CFR 1065.510)

Regulatory references: 40 CFR 1065.510 and 1065.511

	Engine Family
	Date of Map
	Ambient Conditions of Engine Map
	Barometer
	Temperature
	Humidity
	Indicate Step or Continuous Sweep Map (1065(b)(5)(i))
	Record Checkpoint Speed
	If Checkpoint Speed Not Achieved, Provide explanation
YES/NO	Unsafe-- (you should describe why it is unsafe)
YES/NO	Unachievable (rev Limiter or Governor)
	If Engine Governed indicate Speed Setting
YES/NO	Governor?
YES/NO	Rev Limiter?
	Speed Setting of Above
	Describe the method of speed limitation
	Describe how you notify your customers or the installer of a proper speed range this engine can be operated, and what maximum rpm
	On The Map Data Sheet, Identify the following values from 1065.511
	P_{max}
	High and Low values of 98% P_{max} (interpolate if needed)
	$F_n P_{n\ max}$
	Maximum Value of $\Sigma(P_{norm}^2 + f_{norm}^2)$
	High and low 98% points of $\Sigma(P_{norm}^2 + f_{norm}^2)$ (interpolate if needed)
	$f_{ntest,}$ maximum test speed
	If the provisions of 1045.501(f) is used, state the declared Maximum of the measured maximum test speed)
	Additionally you should supply the following information in spreadsheet: Provide the timebase, speed, load, and power data for the power test. Show your work in tabulating P_{norm} (notmalized power) and f_{norm} (normalized frequency) Show your work in tabulating $\Sigma(P_{norm}^2 + f_{norm}^2)$ Identify all of the above values in the analysis If you cannot identify the higher 98% power or higher 98% $\Sigma(P_{norm}^2 + f_{norm}^2)$ terminated too soon for safety reasons, you may use the nominal values for calculation purposes. You are attesting with this application that the engine is designed and functioning for this family's production and at the stated nominal speed and load engines would be limited in this way.

	If any alternate procedures were used in mapping the engine, inc 1065.510(b)(5)(iv), or any other regulatory provision, you should to request approval.

FR 1045)

5.610

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OMB No. 2060-0338

Approval Expires on

1/31/2022

EPA Form 5900-459

top or of the engine into a vessel, of the recommended speed is?

5.610:

sary)

imum Test Speed (it must be within 500 rpm

adsheet format:

r map on the noted worksheet

normalized speed).

$f_m^2 + f_{norm}^2$) value, because the map

il governor or rev limiter speed for

: this speed limiting function is installed

minimal speed, and it is expected that in-use

cluding as provided for in 1065.10 or
describe the procedure and contact EPA

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