



# EPA Nonregulatory Nonroad Duty Cycles

## Engine Speed and Torque vs Time

(Normalized 0 = idle; 100 = rated speed/torque)

### All Cycles and charts:

- Excel 5.0 Workbook [[1.6M XLS](#)]
- Adobe Acrobat [[1.0M PDF](#)]

### Individual Cycles and charts:

- Agricultural Tractor Cycle [[18K TXT](#)] [[Chart 14K GIF](#)]
- Backhoe Loader Cycle [[16K TXT](#)] [[Chart 23K GIF](#)]
- Crawler Tractor Cycle [[24K TXT](#)] [[Chart 30K GIF](#)]
- Excavator Cycle [[35K TXT](#)] [[Chart 22K GIF](#)]
- Wheel Loader Cycles
  - Wheel Loader Typical Operation 1 [[35K TXT](#)] [[Chart 40K GIF](#)]
  - Wheel Loader Typical Operation 2 [[35K TXT](#)] [[Chart 40K GIF](#)]
  - Wheel Loader High Speed Transient Operation [[35K TXT](#)] [[Chart 55K GIF](#)]
  - Wheel Loader High Torque Transient Operation [[35K TXT](#)] [[Chart 57K GIF](#)]
- Arc Welder Cycles
  - Arc Welder Typical Operation 1 [[35K TXT](#)] [[Chart 21K GIF](#)]
  - Arc Welder Typical Operation 2 [[50K TXT](#)] [[Chart 21K GIF](#)]
  - Arc Welder High Speed Transient Operation [[35K TXT](#)] [[Chart 29K GIF](#)]
  - Arc Welder High Torque Transient Operation [[35K TXT](#)] [[Chart 24K GIF](#)]
- Skid Steer Loader Cycles
  - Skid Steer Loader Typical Operation 1 [[35K TXT](#)] [[Chart 30K GIF](#)]
  - Skid Steer Loader Typical Operation 2 [[35K TXT](#)] [[Chart 23K GIF](#)]
  - Skid Steer Loader High Speed Transient Operation [[35K TXT](#)] [[Chart 28K GIF](#)]
  - Skid Steer Loader High Torque Transient Operation [[32K TXT](#)] [[Chart 30K GIF](#)]

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url: <http://www.epa.gov/oms/regs/nonroad/equip-hd/cycles/nrcycles.htm>

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Ag Tract

Time (sec.)	Speed (%)	Torque (%)
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	-0.281	-0.062
26	1.002	1.76
27	-0.675	0.267
28	-0.259	0.744
29	-0.259	1.186
30	-0.675	0
31	1.002	1.256
32	-0.27	0.552
33	-0.675	0.517
34	0.838	-0.016
35	0.109	0.221
36	0.675	0.737
37	0.08	0.418
38	0.079	0.251
39	0.675	0
40	0.079	1.02
41	0.098	-0.055
42	0.675	1.363
43	24.882	56.933
44	52.953	62.506
45	46.549	27.859
46	64.508	37.379
47	64.066	27.056
48	85.678	90.003
49	90.54	93.673
50	79.028	97.312
51	89.725	93.647
52	88.113	94.825

Ag Tract

53	86.614	92.435
54	88.376	93.43
55	88.259	95.033
56	90.967	94.067
57	93.773	97.108
58	92.64	90.383
59	94.026	94.204
60	92.423	90.684
61	92.72	94.155
62	92.624	92.736
63	91.074	91.275
64	91.169	93.64
65	89.844	93.53
66	88.376	94.933
67	86.633	95.515
68	86.125	96.906
69	85.677	96.256
70	85.576	96.934
71	85.662	95.314
72	87.027	96.777
73	86.607	93.803
74	85.86	96.264
75	87.027	97.301
76	84.562	96.23
77	83.919	97.275
78	85.678	95.912
79	87.117	97.052
80	84.873	95.92
81	87.026	93.75
82	85.436	95.019
83	85.5	96.173
84	85.677	94.022
85	84.747	94.832
86	87.906	96.412
87	88.375	94.283
88	86.78	93.78
89	89.471	94.474
90	89.725	95.328
91	88.425	93.625
92	87.244	95.117
93	88.376	94.427
94	88.085	94.842
95	87.951	95.351
96	88.376	96.468
97	89.188	93.136
98	89.427	92.639
99	91.074	92.808
100	92.971	94.669
101	91.782	93.789
102	91.074	94.155
103	90.312	92.493
104	89.973	93.834
105	91.074	93.298
106	94.568	93.431

Ag Tract

107	93.792	95.559
108	95.121	94.954
109	93.957	93.692
110	91.564	91.881
111	93.772	96.178
112	92.494	91.702
113	92.69	93.789
114	93.772	92.956
115	92.961	94.346
116	89.802	93.284
117	91.075	96.482
118	91.691	94.316
119	90.684	94.137
120	92.424	94.283
121	90.858	92.154
122	92.469	94.105
123	92.424	94.213
124	91.539	92.882
125	93.485	94.601
126	93.774	90.012
127	92.449	93.763
128	95.062	89.249
129	92.422	91.968
130	93.966	91.003
131	92.961	94.305
132	92.423	95.093
133	94.563	93.211
134	91.95	92.779
135	93.774	92.404
136	92.222	93.847
137	93.486	93.597
138	93.775	93.282
139	89.987	92.109
140	91.241	93.165
141	89.727	93.743
142	90.163	91.846
143	91.915	92.557
144	89.726	91.03
145	90.197	93.182
146	88.646	93.982
147	85.677	93.172
148	87.626	93.95
149	88.492	93.697
150	89.726	94.819
151	88.504	93.951
152	89.944	93.467
153	89.724	93.583
154	88.616	93.581
155	90.215	93.975
156	87.026	91.957
157	89.26	93.928
158	90.163	91.821
159	93.772	95.246
160	93.239	91.609

Ag Tract

161	95.127	90.981
162	91.075	93.525
163	94.184	88.54
164	91.06	91.999
165	95.124	92.037
166	93.227	92.718
167	95.281	96.544
168	93.776	96.943
169	95.283	83.368
170	93.105	91.617
171	92.428	91.265
172	93.469	88.158
173	93.572	91.631
174	93.776	92.854
175	92.583	93.825
176	92.108	92.151
177	88.377	93.933
178	87.908	95.232
179	89.53	93.201
180	89.728	94.188
181	91.672	93.857
182	93.198	94.771
183	89.731	93.859
184	89.729	95.731
185	89.91	93.998
186	89.724	95.742
187	88.931	92.947
188	89.229	94.082
189	91.069	95.061
190	87.619	95.676
191	88.122	94.045
192	87.029	95.057
193	85.934	93.007
194	88.233	95.793
195	88.372	96.58
196	91.482	93.054
197	88.514	94.066
198	88.373	93.544
199	87.19	94.532
200	88.936	92.407
201	89.732	95.497
202	89.72	94.482
203	88.679	91.765
204	85.68	96.709
205	87.846	93.957
206	87.303	97.677
207	85.675	95.565
208	83.683	96.306
209	81.396	96.069
210	82.985	95.374
211	85.118	96.057
212	88.165	94.176
213	87.029	93.834
214	87.107	97.824

Ag Tract

215	85.365	95.717
216	87.027	95.198
217	84.304	98.167
218	86.875	94.643
219	87.022	96.574
220	88.537	96.203
221	86.556	94.33
222	82.973	95.087
223	81.52	97.174
224	82.906	96.515
225	81.639	98.911
226	81.453	96.01
227	84.557	97.442
228	81.626	93.689
229	81.687	95.245
230	78.024	97.418
231	77.589	94.859
232	82.237	96.344
233	84.591	97.473
234	81.637	96.172
235	76.712	96.649
236	73.988	96.927
237	73.545	96.567
238	69.947	95.2
239	68.17	95.348
240	64.074	96.738
241	73.745	96.032
242	71.279	96.106
243	70.839	94.576
244	70.544	96.388
245	67.082	95.646
246	62.749	96.821
247	70.007	95.634
248	70.573	96.144
249	72.186	97.058
250	69.649	95.42
251	69.593	95.231
252	73.528	96.077
253	71.61	96.171
254	67.767	96.764
255	62.746	96.05
256	59.236	96.024
257	70.191	95.692
258	72.184	96.181
259	64.161	97.321
260	72.187	95.952
261	65.449	97.623
262	71.431	95.554
263	70.648	95.399
264	64.091	96.653
265	69.705	94.643
266	65.165	96.769
267	66.762	94.726
268	70.306	95.216

Ag Tract

269	70.934	97.252
270	70.836	97.407
271	71.206	97.25
272	71.277	95.326
273	69.494	95.938
274	70.177	95.706
275	70.86	95.548
276	70.837	96.516
277	71.838	94.86
278	71.048	95.053
279	70.819	96.225
280	72.729	97.272
281	72.166	95.397
282	73.524	95.15
283	75.037	96.618
284	77.006	96.694
285	76.23	96.797
286	76.551	98.734
287	74.325	94.992
288	73.519	96.316
289	72.136	96.244
290	70.335	95.036
291	69.486	95.244
292	70.342	95.991
293	72.325	96.344
294	72.184	95.794
295	74.234	95.284
296	76.269	97.151
297	77.577	96.53
298	79.065	96.274
299	80.216	96.72
300	84.326	97.594
301	83.493	97.07
302	82.89	96.189
303	82.974	96.898
304	83.739	96.635
305	82.755	95.619
306	82.975	97.473
307	84.023	96.37
308	83.183	95.877
309	82.974	96.236
310	85.08	97.943
311	85.632	93.164
312	82.978	94.317
313	85.297	97.863
314	84.129	94.907
315	81.629	95.75
316	83.331	95.918
317	83.22	96.118
318	82.978	95.92
319	84.413	95.345
320	83.935	96.359
321	85.676	95.937
322	85.924	92.471

Ag Tract

323	90.243	91.684
324	89.725	91.216
325	92.292	93.542
326	91.123	92.683
327	92.423	96.832
328	91.141	91.933
329	91.661	93.047
330	93.773	97.245
331	92.768	93.026
332	91.738	93.205
333	93.773	96.05
334	94.505	95.686
335	94.006	93.04
336	93.775	97.148
337	93.622	92.158
338	91.881	94.003
339	93.775	95.25
340	93.82	92.341
341	93.773	94.338
342	93.774	97.386
343	94.507	92.206
344	94.826	93.029
345	92.424	92.795
346	93.422	95.838
347	93.05	87.352
348	93.773	92.961
349	94.457	93.203
350	93.17	93.544
351	93.779	87.418
352	95.08	94.025
353	93.517	92.066
354	95.127	94.494
355	93.755	92.957
356	93.822	95.297
357	93.768	94.908
358	95.125	83.887
359	97.243	51.91
360	97.811	20.517
361	94.755	32.554
362	94.035	60.999
363	95.124	64.142
364	97.37	54.642
365	93.359	71.283
366	96.464	42.746
367	94.521	68.002
368	96.394	41.228
369	96.48	60.538
370	94.727	54.423
371	96.202	57.872
372	96.47	55.412
373	94.428	62.856
374	95.946	53.476
375	95.116	55.801
376	96.582	55.503



Ag Tract

377	94.423	50.61
378	96.477	53.69
379	94.048	61.939
380	97.869	62.147
381	96.478	67.264
382	95.011	60.702
383	95.625	55.998
384	96.496	62.87
385	96.077	51.48
386	94.088	65.724
387	96.464	46.899
388	93.703	64.771
389	96.784	66.702
390	95.12	64.509
391	95.12	62.592
392	95.306	63.825
393	95.127	66.784
394	94.965	56.562
395	94.686	70.884
396	95.118	76.794
397	94.551	73.835
398	94.014	82.496
399	93.788	83.595
400	95.157	78.769
401	95.485	78.917
402	93.766	79.799
403	94.572	72.742
404	94.735	85.141
405	95.146	83.037
406	95.483	74.666
407	95.13	81.851
408	93.786	97.207
409	95.801	76.007
410	94.073	74.51
411	93.803	90.861
412	95.383	76.275
413	92.794	84.237
414	97.814	84.826
415	93.517	86.201
416	94.539	79.734
417	93.806	90.721
418	95.781	71.227
419	95.373	77.149
420	95.085	69.523
421	93.22	75.398
422	93.665	84.638
423	93.798	78.826
424	94.163	75.076
425	94.648	73.047
426	95.13	79.837
427	94.502	71.021
428	93.681	83.708
429	93.729	72.814
430	91.729	79.713

Ag Tract

431	95.153	79.917
432	92.434	86.054
433	93.793	75.036
434	92.624	74.589
435	93.794	79.043
436	93.412	81.359
437	93.937	81.277
438	92.441	77.019
439	93.623	79.671
440	92.513	81.12
441	95.148	75.75
442	92.892	78.325
443	94.383	78.357
444	92.42	78.522
445	93.245	73.099
446	93.873	75.766
447	93.784	81.24
448	92.142	80.883
449	93.037	79.284
450	93.775	78.685
451	92.793	79.046
452	93.913	83.292
453	92.428	77.437
454	92.37	84.691
455	93.928	78.939
456	93.771	80.924
457	93.039	82.628
458	93.018	85.156
459	93.745	88.686
460	93.583	90.461
461	94.932	88.709
462	93.774	86.638
463	94.328	85.069
464	94.597	92.348
465	95.144	87.538
466	94.126	87.492
467	94.31	88.959
468	95.148	90.303
469	94.37	89.043
470	93.417	89.161
471	95.097	87.756
472	94.115	89.277
473	93.224	92.275
474	93.776	91.412
475	94.55	87.29
476	93.104	92.228
477	93.782	92.886
478	95.367	88.473
479	93.846	90.865
480	93.766	84.514
481	92.455	87.69
482	94.596	84.515
483	93.771	84.853
484	93.448	86.871

Ag Tract

485	94.772	86.736
486	93.789	84.991
487	92.947	86.6
488	94.791	86.729
489	93.781	89.75
490	95.095	88.64
491	93.99	88.305
492	95.143	87.459
493	94.125	86.555
494	93.63	87.826
495	93.807	86.906
496	94.857	89.852
497	94.875	89.156
498	93.766	84.397
499	94.637	89.498
500	93.586	88.797
501	93.771	90.663
502	94.311	85.211
503	94.253	89.214
504	93.729	89.494
505	95.324	90.75
506	93.8	93.21
507	93.81	95.368
508	94.964	90.908
509	92.823	86.969
510	93.81	94.013
511	94.332	89.908
512	94.44	93.322
513	95.119	89.073
514	94.804	88.259
515	93.589	92.629
516	93.809	88.505
517	93.811	91.207
518	94.935	90.34
519	93.735	87.589
520	94.318	88.584
521	94.429	88.459
522	93.737	87.503
523	94.15	92.31
524	93.852	88.424
525	93.736	87.21
526	94.2	86.849
527	92.957	88.471
528	95.132	89.644
529	94.787	91.221
530	94.943	89.482
531	92.385	86.246
532	94.166	88.767
533	93.839	91.198
534	95.078	86.124
535	93.138	87.953
536	94.259	85.752
537	95.111	92.004
538	93.566	88.529

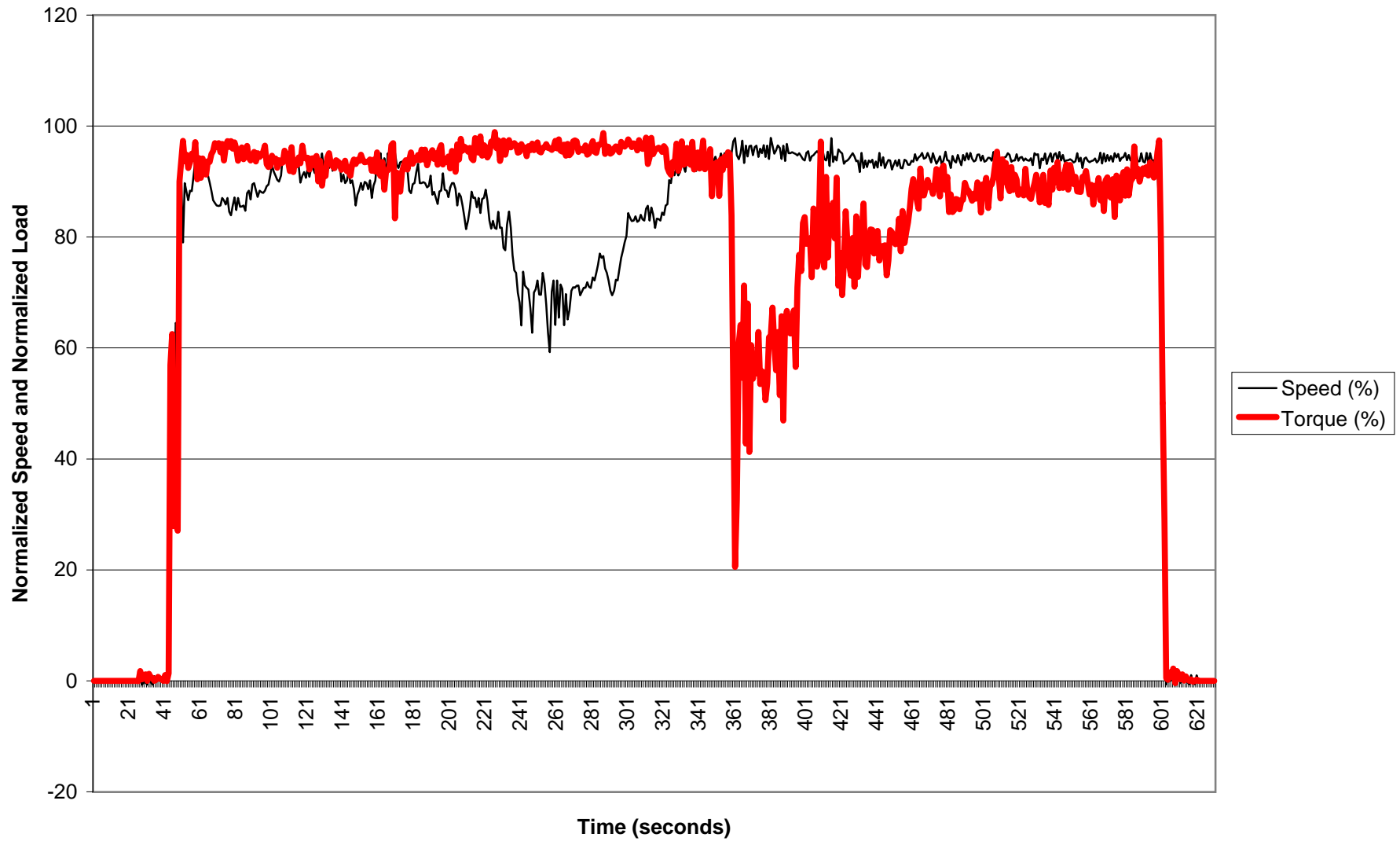
Ag Tract

539	94.882	92.501
540	95.117	89.898
541	93.786	93.507
542	95.351	88.808
543	93.774	91.137
544	94.811	88.845
545	93.59	91.645
546	93.815	93.088
547	93.86	88.515
548	94.002	92.996
549	93.804	91.406
550	93.45	89.552
551	93.649	90.828
552	95.109	88.234
553	93.61	88.151
554	94.294	88.148
555	92.433	90.862
556	94.124	90.8
557	94.338	91.895
558	93.728	89.803
559	93.457	87.675
560	93.715	89.378
561	93.78	85.88
562	94.157	89.221
563	93.445	88.609
564	93.784	90.635
565	95.201	86.643
566	93.266	89.506
567	95.084	84.672
568	93.619	90.203
569	94.786	90.754
570	93.763	87.547
571	94.622	87.096
572	93.576	90.441
573	95.127	83.575
574	94.319	91.097
575	94.972	88.769
576	93.685	86.573
577	94.286	90.673
578	94.404	91.713
579	95.134	87.441
580	93.851	92.22
581	94.791	87.488
582	93.813	90.043
583	94.325	90.574
584	92.863	96.354
585	95.131	90.978
586	93.623	92.281
587	93.65	90.001
588	95.118	91.407
589	93.627	92.391
590	93.424	91.406
591	95.149	92.63
592	93.245	91.097

Ag Tract

593	95.103	93.498
594	93.775	92.038
595	93.846	90.706
596	91.464	91.887
597	92.32	95.236
598	84.772	97.401
599	87.995	78.769
600	65.359	50.061
601	30.531	29.015
602	-0.625	0.485
603	0.668	0.16
604	0.007	1.526
605	0.152	0.688
606	0.666	2.202
607	-0.441	-0.4
608	0.414	1.782
609	0.616	1.033
610	-0.436	0.274
611	0.42	1.189
612	0.675	0.019
613	1.007	0.825
614	-0.339	0.282
615	-0.655	-0.004
616	1.019	0.253
617	-0.34	-0.151
618	-0.655	-0.032
619	1	0.22
620	0	0
621	0	0
622	0	0
623	0	0
624	0	0
625	0	0
626	0	0
627	0	0
628	0	0
629	0	0

# Agricultural Tractor Cycle



Backhoe

Time (sec.)	Speed (%)	Torque (%)
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	65.622	0
25	9.695	7.357
26	0.794	4.892
27	0.745	4.619
28	0.668	9.154
29	0.66	7.056
30	0.737	3.196
31	0.735	5.742
32	0.651	7.173
33	0.718	4.888
34	0.668	5.3
35	0.691	7.068
36	0.745	7.564
37	0.735	4.872
38	0.705	6.319
39	0.641	8.052
40	0.735	3.582
41	0.685	5.913
42	0.685	7.803
43	0.735	8.094
44	0.713	3.355
45	0.683	6.646
46	0.735	8.094
47	0.72	6.454
48	0.723	4.793
49	0.668	6.586
50	0.591	6.839
51	0.708	4.384
52	0.668	7.457

## Backhoe

53	0.664	8.028
54	1.138	1.92
55	-0.267	17.392
56	10.452	24.598
57	11.704	28.011
58	-1.336	26.88
59	28.919	57.784
60	49.118	62.405
61	48.349	44.294
62	31.742	0
63	-0.465	7.189
64	5.476	96.489
65	69.414	98.874
66	94.332	13.693
67	84.878	95.293
68	91.809	49.393
69	93.298	86.676
70	83.542	97.137
71	87.843	84.742
72	89.659	68.81
73	89.485	67.2
74	89.626	61.973
75	89.819	55.055
76	89.085	41.145
77	77.543	1.268
78	70.821	0
79	40.736	0
80	19.897	0
81	0.976	4.073
82	0.668	10.215
83	0.664	4.479
84	0.56	7.227
85	0.668	7.653
86	0.662	4.171
87	0.689	6.742
88	0.534	9.355
89	0.565	5.495
90	0.7	6.994
91	0.534	8.921
92	0.614	4.646
93	0.659	6.147
94	0.668	7.457
95	0.584	6.039
96	0.703	5.95
97	0.467	10.414
98	0.701	4.961
99	0.572	6.443
100	0.668	8.523
101	0.605	4.163
102	0.607	6.143
103	0.668	9.369
104	0.724	5.837
105	0.56	7.329
106	0.668	8.523



## Backhoe

107	0.682	5.398
108	0.617	5.7
109	0.668	8.523
110	0.603	5.463
111	0.157	5.279
112	12.488	92.736
113	55.171	34.886
114	51.854	42.096
115	54.827	27.251
116	53.932	32.556
117	55.56	11.726
118	50.152	59.581
119	56.653	13.959
120	56.343	16.542
121	59.368	32.205
122	60.144	40.187
123	61.773	39.808
124	64.176	21.107
125	61.329	31.919
126	63.53	27.609
127	63.308	28.48
128	63.386	26.323
129	60.39	44.259
130	60.636	46.55
131	56.766	64.004
132	57.292	63.212
133	55.694	71.246
134	56.545	61.695
135	57.575	52.103
136	57.899	65.762
137	59.466	52.727
138	59.66	53.117
139	56.964	57.369
140	62.026	39.384
141	61.8	29.282
142	63.107	34.143
143	62.877	31.707
144	58.014	42.345
145	61.238	41.449
146	64.208	20.175
147	62.572	31.293
148	63.441	25.165
149	62.787	29.366
150	63.075	27.612
151	60.167	26.622
152	63.009	30.974
153	61.697	31.072
154	61.573	39.192
155	59.828	44.778
156	60.229	56.97
157	64.048	35.748
158	66.136	25.723
159	64.261	30.24
160	64.577	32.64

## Backhoe

161	65.515	25.958
162	65.603	36.065
163	62.911	43.865
164	62.107	48.965
165	61.343	57.055
166	60.373	61.329
167	59.973	60.566
168	58.907	63.235
169	60.369	56.549
170	61.734	52.823
171	60.497	63.442
172	62.569	38.38
173	64.88	38.386
174	62.378	31.795
175	63.836	29.601
176	64.676	33.198
177	63.408	40.334
178	64.376	32.007
179	66.937	8.365
180	65.838	16.067
181	64.524	52.435
182	62.309	41.051
183	65.317	29.421
184	67.615	88.243
185	88.496	45.734
186	90.272	37.959
187	91.559	37.298
188	90.895	25.507
189	90.461	43.346
190	91.691	34.258
191	90.595	51.254
192	90.512	51.979
193	90.015	46.477
194	89.583	59.351
195	90.005	51.108
196	89.087	58.252
197	90.33	45.828
198	89.594	56.081
199	90.088	59.999
200	90.636	49.447
201	91.019	38.603
202	91.885	17.939
203	92.7	39.373
204	92.6	27.035
205	90.811	38.296
206	91.73	53.658
207	93.034	42.621
208	87.82	85.814
209	88.598	72.795
210	88.459	70.33
211	89.621	69.341
212	90.705	53.657
213	91.963	46.129
214	89.68	49.066

## Backhoe

215	91.807	59.736
216	91.177	59.475
217	91.749	45.184
218	93.393	31.955
219	91.506	46.151
220	92.015	39.403
221	87.382	86.771
222	87.86	76.945
223	90.084	60.229
224	90.076	62.835
225	91.905	43.908
226	91.024	59.505
227	88.593	66.837
228	93.523	25.872
229	92.425	42.81
230	93.165	40.469
231	89.072	68.971
232	93.893	26.948
233	92.012	47.961
234	89.519	78.234
235	93.352	37.711
236	92.335	48.764
237	93.755	30.008
238	94.696	24.041
239	93.473	39.929
240	93.83	30.788
241	92.958	42.242
242	94.176	26.911
243	94.135	29.397
244	94.159	29.196
245	95.529	18.23
246	95.236	19.782
247	94.699	25.702
248	93.704	29.593
249	94.57	30.238
250	93.959	32.651
251	95.159	21.052
252	94.959	23.97
253	93.954	16.783
254	91.316	58.138
255	90.792	61.668
256	91.685	56.151
257	90.808	54.558
258	92.002	51.13
259	89.873	57.982
260	90.142	66.852
261	90.284	59.483
262	89.282	71.759
263	92.633	45.988
264	91.166	53.608
265	89.597	66.969
266	90.181	76.071
267	89.782	45.916
268	87.212	35.712

## Backhoe

269	86.541	34.586
270	87.15	36.113
271	86.551	36.273
272	88.009	21.499
273	87.052	24.924
274	87.212	30.694
275	89.086	15.449
276	88.722	21.947
277	89.348	15.593
278	84.878	50.026
279	89.191	24.999
280	88.223	21.929
281	88.968	17.035
282	87.103	25.598
283	89.355	16.855
284	88.507	22.674
285	86.066	29.572
286	88.538	21.073
287	86.797	33.306
288	87.425	31.232
289	87.682	29.024
290	87.519	29.856
291	73.635	0
292	25.283	0.006
293	-0.355	4.584
294	0.579	7.449
295	0.667	8.158
296	0.512	3.233
297	0.918	6.929
298	0.869	4.205
299	0.869	5.115
300	0.869	6.791
301	0.868	8.722
302	0.921	6.775
303	0.885	4.825
304	0.868	4.628
305	0.938	5.39
306	0.923	7.442
307	0.735	7.409
308	0.914	5.075
309	0.866	5.491
310	0.869	6.154
311	0.845	7.407
312	0.973	8.307
313	1.001	4.194
314	0.867	5.736
315	0.855	6.033
316	0.869	6.998
317	0.964	7.936
318	0.749	4.985
319	0.869	5.255
320	0.861	4.534
321	0.875	5.732
322	0.869	6.758

## Backhoe

323	0.917	4.534
324	0.828	5.134
325	1.001	5.487
326	0.863	5.883
327	0.887	8.191
328	1.001	6.163
329	1.005	6.87
330	0.965	3.718
331	0.869	7.823
332	0.98	8.585
333	0.854	8.885
334	1.001	7.207
335	-1.686	29.48
336	-3.07	41.641
337	-3.54	34.354
338	-3.117	34.235
339	0.523	20.319
340	27.88	84.531
341	33.885	37.179
342	63.226	42.377
343	57.026	20.395
344	75.227	42.264
345	75.897	10.787
346	60.127	0.009
347	14.359	0
348	5.016	92.843
349	59.937	76.354
350	89.306	36.389
351	90.392	35.144
352	83.402	71.237
353	43.165	48.64
354	8.235	28.594
355	-1.389	24.462
356	11.702	93.868
357	39.437	41.411
358	29.286	8.571
359	5.262	3.549
360	-1.65	22.034
361	0.126	7.168
362	33.559	66.451
363	53.354	2.578
364	29.168	0.107
365	2.695	88.226
366	37.418	54.851
367	10.613	31.592
368	1.748	12.35
369	-2.633	65.86
370	30.122	99.053
371	52.259	53.346
372	47.876	42.313
373	40.853	40.646
374	13.547	7.45
375	-1.329	24.187
376	-3.539	33.646

## Backhoe

377	-2.329	32.824
378	-0.175	7.004
379	-1.737	23.191
380	-1.885	38.006
381	24.534	43.64
382	28.936	40.655
383	31.067	0
384	16.577	12.72
385	0.618	23
386	-1.503	21.151
387	1.028	4.496
388	1.001	5.257
389	0.836	7.202
390	0.946	8.407
391	1.002	6.36
392	0.959	4.506
393	0.944	5.547
394	1.001	5.086
395	0.962	8.414
396	0.548	6.081
397	9.329	75.519
398	42.129	25.84
399	35.594	16.606
400	26.842	22.033
401	24.481	28.453
402	18.653	23.297
403	26.525	29.32
404	18.292	9.841
405	-1.14	19.406
406	-1.402	15.776
407	2.817	10.23
408	2.693	30.88
409	10.637	27.148
410	13.228	26.874
411	14.274	23.445
412	13.617	24.151
413	23.5	47.101
414	27.834	44.344
415	35.573	43.234
416	37.687	41.45
417	37.134	45.189
418	28.386	22.798
419	-3.849	39.1
420	9.254	77.763
421	27.096	13.816
422	3.206	9.244
423	0.196	54.048
424	23.062	34.527
425	39.422	22.723
426	6.347	0
427	31.186	92.725
428	57.236	88.087
429	65.995	17.162
430	13.609	0

## Backhoe

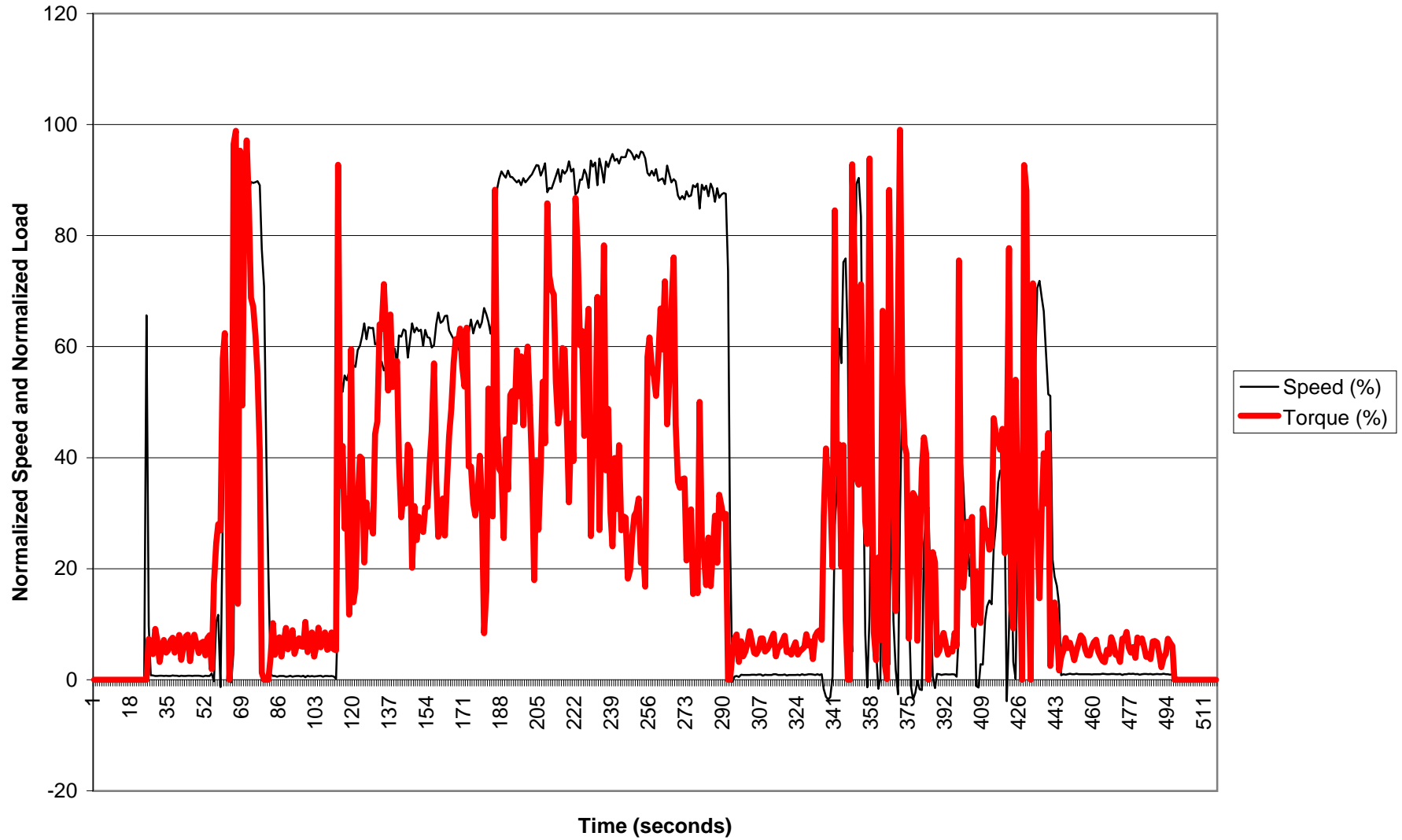
431	22.56	71.402
432	55.262	30.977
433	70.517	28.051
434	71.847	14.678
435	68.802	30.92
436	66.388	40.807
437	58.812	31.73
438	51.417	44.421
439	51.115	2.492
440	21.655	9.085
441	18.571	13.908
442	16.893	9.434
443	13.439	1.687
444	0.812	3.978
445	1.001	5.244
446	0.897	7.525
447	1.001	5.692
448	1.069	6.649
449	1.001	5.177
450	0.996	3.539
451	1.071	5.21
452	0.987	6.724
453	0.987	7.977
454	1.002	7.423
455	1.004	5.416
456	1.001	4.443
457	1.002	4.388
458	0.951	5.886
459	0.989	6.769
460	1.001	7.194
461	0.982	4.964
462	1.003	4.159
463	1.068	3.377
464	1.028	3.172
465	0.994	5.37
466	1.002	4.608
467	1.015	7.654
468	1.019	6.441
469	0.999	4.496
470	1.009	4.519
471	1.014	3.228
472	0.869	7.373
473	1.003	7.174
474	0.987	8.627
475	1.071	5.753
476	1.032	4.88
477	1.091	5.907
478	1.001	3.93
479	1.017	7.598
480	0.918	6.742
481	1.002	7.429
482	1.056	6.033
483	1.016	4.139
484	1.001	4.591

Backhoe

485	1.016	3.714
486	0.956	6.879
487	1.001	6.967
488	1.029	6.726
489	1.003	4.576
490	1.002	2.283
491	1.065	3.916
492	0.986	4.649
493	1.001	7.387
494	0.91	6.641
495	0.999	6.091
496	0	0
497	0	0
498	0	0
499	0	0
500	0	0
501	0	0
502	0	0
503	0	0
504	0	0
505	0	0
506	0	0
507	0	0
508	0	0
509	0	0
510	0	0
511	0	0
512	0	0
513	0	0
514	0	0
515	0	0



### Backhoe Loader Cycle



## Crawler

Time (sec.)	Speed (%)	Torque (%)
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	-0.291	21.759
25	0.968	21.479
26	0	21.659
27	0.353	21.083
28	0.352	21.591
29	0	21.659
30	0.352	21.161
31	1.122	21.36
32	0	21.659
33	0.962	21.423
34	0.901	21.394
35	1.298	21.288
36	0.56	21.353
37	0.338	21.514
38	1.298	21.288
39	0.559	21.136
40	0.333	21.574
41	1.298	21.288
42	0.336	21.103
43	0.336	21.065
44	1.298	21.083
45	0.336	21.11
46	0.341	21.1
47	1.298	21.288
48	0.944	20.97
49	0.961	21.643
50	0	21.659
51	0.576	21.809
52	0.333	21.393

## Crawler

53	1.298	21.083
54	-0.316	21.635
55	0.957	21.418
56	1.298	20.876
57	1.554	20.905
58	0.343	21.596
59	0	21.659
60	0.957	21.316
61	0.897	21.429
62	1.298	21.677
63	0.335	21.683
64	0.575	21.578
65	0	21.659
66	0.575	21.442
67	0.333	21.425
68	1.298	21.288
69	0.336	21.38
70	0.336	21.62
71	1.298	21.677
72	0.336	21.531
73	0.338	21.502
74	1.298	20.876
75	1.507	21.307
76	1.112	21.292
77	0	21.235
78	0.961	21.662
79	0.97	21.34
80	0	21.235
81	25.592	23.943
82	29.956	20.435
83	36.32	94.713
84	72.364	97.303
85	91.639	51.683
86	59.668	84.502
87	83.758	47.147
88	82.062	51.294
89	90.799	86.237
90	93.866	71.478
91	75.975	78.634
92	68.748	67.544
93	70.713	77.21
94	71.113	98.391
95	79.125	97.129
96	78.626	81.215
97	77.334	98.356
98	77.827	97.474
99	80.367	98.187
100	83.33	97.668
101	80.422	98.654
102	81.411	97.546
103	81.686	97.247
104	81.719	96.873
105	81.384	97.33
106	79.85	97.185

## Crawler

107	81.719	97.095
108	81.92	97.246
109	78.883	98.146
110	77.827	98.367
111	71.86	98.71
112	69.103	98.486
113	71.342	96.351
114	42.522	100
115	73.15	84.894
116	73.937	46.873
117	76.204	52.284
118	75.787	54.624
119	73.937	50.419
120	73.29	46.997
121	72.763	51.418
122	72.639	62.178
123	69.815	66.077
124	67.944	68.237
125	73.937	79.288
126	73.569	97.583
127	77.487	59.148
128	49.291	96.197
129	37.216	9.144
130	47.209	100
131	70.045	98.835
132	83.453	90.618
133	87.141	81.56
134	83.017	97.989
135	80.234	98.668
136	75.582	99.047
137	72.639	99.122
138	72.619	99.059
139	71.102	99.188
140	73.937	99.124
141	76.797	98.806
142	80.047	98.663
143	81.719	97.888
144	85.762	97.111
145	90.78	94.098
146	76.531	0
147	33.25	89.34
148	58.866	41.377
149	72.64	1.949
150	64.549	35.754
151	62.456	38.192
152	67.447	12.999
153	66.531	12.667
154	72.886	51.238
155	75.232	75.806
156	70.093	70.427
157	55.664	60.384
158	46.69	50.978
159	61.541	56.509
160	47.457	84.97

## Crawler

161	63.567	62.971
162	27.393	0
163	22.038	100
164	59.634	98.831
165	83.936	97.875
166	93.331	82.666
167	88.213	98.19
168	78.66	98.494
169	74.034	99.051
170	70.038	98.836
171	73.118	98.985
172	74.888	99.107
173	75.232	98.931
174	75.392	99.132
175	77.754	98.667
176	79.126	98.465
177	78.058	98.654
178	79.564	98.514
179	80.421	98.665
180	79.142	98.662
181	79.671	98.406
182	79.126	98.249
183	79.014	98.697
184	77.308	98.894
185	73.94	99.033
186	72.734	99.06
187	75.65	99.169
188	76.521	98.447
189	87.418	100
190	61.915	0.874
191	32.415	97.078
192	47.262	59.481
193	56.067	32.553
194	59.67	13.717
195	59.03	19.267
196	65.244	51.529
197	71.348	60.382
198	72.663	25.152
199	71.013	68.473
200	70.04	45.515
201	75.355	23.113
202	71.2	59.611
203	71.339	41.044
204	74.271	17.86
205	65.89	23.505
206	49.29	31.899
207	51.249	73.194
208	33.839	1.917
209	29.779	99.562
210	62.008	98.778
211	82.113	96.422
212	90.803	78.636
213	88.175	92.49
214	80.248	97.795

## Crawler

215	73.941	99.149
216	73.496	98.871
217	72.778	99.154
218	70.052	99.09
219	70.387	99.058
220	72.231	99.404
221	73.937	99.149
222	74.863	99.48
223	76.457	98.96
224	77.824	98.605
225	77.182	98.678
226	83.148	97.746
227	83.013	97.79
228	84.517	97.766
229	81.493	98.174
230	85.601	97.372
231	87.053	97.72
232	89.86	97.349
233	93.383	88.971
234	91.617	81.539
235	90.472	91.182
236	93.392	81.358
237	94.153	67.35
238	94.804	60.697
239	95.984	57.458
240	94.929	67.866
241	91.9	88.939
242	94.71	0.168
243	55.389	55.357
244	50.07	42.702
245	53.178	40.976
246	56.269	46.615
247	62.049	56.41
248	60.95	63.906
249	63.934	58.452
250	70.722	51.132
251	66.159	37.827
252	61.137	22.416
253	37.855	24.792
254	34.979	93.252
255	54.341	26.558
256	15.886	20.85
257	46.623	96.475
258	20.256	28.604
259	52.988	74.497
260	72.635	61.4
261	72.727	73.147
262	79.952	78.344
263	77.813	66.989
264	82.359	72.15
265	82.02	68.86
266	80.42	63.212
267	80.907	56.2
268	79.567	64.718

## Crawler

269	79.119	62.865
270	78.191	62.793
271	76.483	75.807
272	55.851	0.182
273	14.295	45.548
274	48.324	99.768
275	71.312	98.725
276	86.565	97.049
277	85.531	97.128
278	80.432	98.663
279	74.508	99.137
280	71.893	98.804
281	75.226	98.921
282	76.753	98.731
283	77.734	98.562
284	80.424	98.539
285	81.994	97.872
286	86.811	97.676
287	84.3	97.279
288	83.475	97.674
289	83.729	97.437
290	85.615	97.46
291	88.398	98.226
292	82.24	98.143
293	75.241	99.195
294	71.227	99.224
295	72.367	99.16
296	72.637	99.497
297	71.577	99.169
298	70.276	99.336
299	68.745	99.685
300	71.583	99.361
301	76.092	99.314
302	81.706	97.493
303	80.48	98.638
304	83.093	97.776
305	81.723	98.05
306	85.033	97.576
307	82.672	97.963
308	81.721	98.505
309	80.736	98.484
310	80.948	98.325
311	81.719	97.83
312	82.417	98.092
313	80.55	98.542
314	77.827	98.627
315	76.286	98.674
316	78.34	98.536
317	79.125	96.957
318	46.071	0
319	38.039	47.91
320	70.045	95.962
321	88.348	21.169
322	84.308	33.279

## Crawler

323	83.017	16.203
324	86.608	81.828
325	79.478	52.107
326	64.857	47.114
327	68.386	49.924
328	71.166	29.618
329	72.639	17.903
330	74.042	16.359
331	71.796	5.512
332	44.102	0
333	19.771	0
334	6.501	14.278
335	10.377	32.427
336	9.436	24.391
337	30.819	94.228
338	58.37	19.932
339	32.938	11.569
340	37.905	100
341	64.869	73.808
342	64.987	75.252
343	67.211	75.137
344	66.157	86.927
345	72.736	79.601
346	75.816	97.246
347	79.129	97.42
348	78.978	81.303
349	74.702	87.836
350	73.929	80.868
351	74.338	83.203
352	75.548	82.487
353	73.94	92.647
354	76.925	82.63
355	73.802	91.593
356	77.827	76.885
357	78.406	73.022
358	79.166	71.555
359	80.421	60.696
360	80.793	50.066
361	81.206	54.773
362	79.104	25.131
363	47.717	0
364	7.948	5.911
365	33.821	97.752
366	58.897	93.678
367	66.219	61.351
368	60.953	66.296
369	61.425	59.948
370	60.171	64.33
371	63.568	47.477
372	61.057	53.235
373	64.703	38.961
374	64.869	35.139
375	66.217	19.931
376	65.963	15.44



## Crawler

377	60.919	0
378	29.339	1.85
379	22.006	100
380	59.705	96.374
381	71.955	84.367
382	75.158	93.504
383	77.835	72.657
384	77.829	67.829
385	77.483	66.642
386	79.122	58.498
387	79.959	59.724
388	83.193	48.032
389	76.542	83.01
390	81.456	68.236
391	78.952	75.198
392	83.061	34.376
393	81.508	95.506
394	84.644	83.714
395	84.184	0
396	40.395	0
397	27.802	82.958
398	48.008	61.348
399	47.525	43.73
400	10.104	41.973
401	40.316	98.368
402	65.531	74.921
403	71.649	63.356
404	73.973	90.316
405	79.301	72.122
406	77.884	77.499
407	80.425	70.883
408	79.722	69.665
409	76.98	82.556
410	50.389	0.037
411	11.4	30.848
412	28.016	100
413	70.231	75.784
414	78.77	53.485
415	79.628	56.131
416	80.394	65.554
417	80.648	77.415
418	82.702	93.243
419	92.087	83.398
420	71.849	34.682
421	75.288	98.46
422	83.058	93.797
423	45.445	75.09
424	73.628	97.753
425	98.591	80.388
426	98.323	72.481
427	94.851	77.453
428	96.019	76.238
429	97.021	81.95
430	94.787	86.197

## Crawler

431	97.266	80.971
432	87.273	96.766
433	80.686	98.684
434	79.103	98.969
435	66.543	64.743
436	15.959	29.213
437	37.78	90.666
438	67.017	42.381
439	67.04	36.428
440	62.216	59.289
441	63.967	50.223
442	62.92	56.648
443	63.518	66.807
444	71.962	100
445	53.672	0.758
446	20.668	30.309
447	52.882	97.13
448	63.495	74.521
449	68.559	0
450	37.367	20.765
451	39.204	52.73
452	59.769	96.059
453	59.635	98.603
454	62.668	98.818
455	60.956	98.853
456	63.415	98.919
457	60.906	99.471
458	75.22	0
459	34.612	30.314
460	22.624	99.272
461	63.74	98.936
462	89.687	94.131
463	90.07	97.967
464	90.809	98.062
465	85.023	98.464
466	88.242	97.98
467	93.407	83.21
468	95.642	78.075
469	83.757	55.072
470	81.7	64.96
471	79.954	75.107
472	81.48	67.075
473	83.059	59.587
474	83.479	57.854
475	84.424	13.213
476	26.956	18.259
477	24.273	40.335
478	36.967	41.023
479	23.71	57.483
480	31.526	62.071
481	39.972	57.348
482	41.527	50.842
483	43.955	45.506
484	42.122	44.8

## Crawler

485	40.251	57.307
486	44.532	60.489
487	48.079	54.607
488	50.575	58.642
489	49.955	57.882
490	51.782	55.707
491	49.268	61.725
492	51.43	59.447
493	50.619	59.105
494	57.171	95.206
495	68.493	84.065
496	67.303	83.801
497	66.131	90.508
498	59.395	95.048
499	69.576	76.644
500	64.626	11.931
501	17.82	5.344
502	16.885	65.653
503	40.261	49.826
504	44.316	36.533
505	48.096	46.437
506	60.946	46.633
507	61.18	43.856
508	61.152	44.472
509	62.265	45.676
510	59.903	46.971
511	61.918	44.237
512	58.331	54.656
513	58.299	51.993
514	57.09	63.107
515	58.398	57.95
516	57.689	57.882
517	56.474	58.387
518	57.076	57.031
519	57.085	57.832
520	55.816	59.458
521	58.378	56.59
522	57.594	57.704
523	57.3	58.083
524	54.484	62.163
525	57.004	62.141
526	56.223	61.659
527	58.365	51.613
528	36.884	0.982
529	7.43	15.944
530	35.377	89.973
531	54.165	63.448
532	80.131	63.625
533	82.985	45.894
534	84.05	37.949
535	83.491	35.831
536	82.961	46.974
537	79.642	58.404
538	80.477	45.22

## Crawler

539	85.587	35.195
540	81.897	49.767
541	82.296	46.67
542	77.767	69.66
543	77.703	47.598
544	63.215	7.869
545	54.467	18.96
546	57.204	44.102
547	53.527	64.253
548	30.721	0
549	21.904	51.291
550	50.659	63.258
551	54.554	70.002
552	66.33	97.331
553	75.146	99.764
554	80.444	98.666
555	78.2	98.871
556	75.088	99.307
557	75.244	99.253
558	72.79	99.407
559	72.868	99.245
560	72.627	99.258
561	72.454	99.404
562	73.309	99.159
563	73.935	99.11
564	73.868	98.814
565	77.809	99.195
566	77.859	97.479
567	76.665	99.541
568	75.451	56.528
569	47.596	0
570	19.348	42.293
571	23.539	100
572	56.016	97.559
573	73.549	65.258
574	81.795	72.639
575	88.372	78.791
576	96.742	66.629
577	94.98	80.133
578	95.978	76.363
579	95.328	73.46
580	97.179	57.408
581	98.47	54.41
582	88.064	29.578
583	86.708	43.85
584	86.966	36.435
585	87.761	36.166
586	86.92	35.241
587	68.394	8.807
588	61.428	58.659
589	45.854	3.422
590	31.703	97.911
591	60.202	45.994
592	55.146	52.999

## Crawler

593	61.005	42.571
594	65.833	37.213
595	64.501	40.496
596	71.328	33.387
597	71.204	38.263
598	75.679	54.825
599	85.693	60.023
600	83.3	76.083
601	82.788	79.419
602	79.137	75.481
603	69.155	21.353
604	48.828	23.475
605	43.007	97.429
606	29.875	23.201
607	6.452	30.63
608	36.499	52.693
609	43.21	39.054
610	47.726	95.675
611	63.588	54.861
612	62.909	58.301
613	61.124	68.931
614	62.243	66.142
615	63.157	76.315
616	65.055	73.199
617	66.204	74.151
618	67.059	72.64
619	64.954	79.464
620	66.201	71.182
621	66.07	72.627
622	65.976	74.477
623	63.567	82.056
624	64.382	80.584
625	65.891	75.75
626	66.161	71.8
627	65.817	71.187
628	66.322	68.686
629	67.451	61.863
630	58.3	33.656
631	49.556	38.545
632	52.039	49.761
633	52.783	56.453
634	49.868	10.065
635	16.546	2.736
636	8.809	30.488
637	35.134	69.215
638	52.16	87.043
639	74.953	90.981
640	78.948	95.229
641	83.041	88.785
642	83.457	82.797
643	81.268	89.354
644	82.979	89.131
645	83.823	81.706
646	81.629	83.701

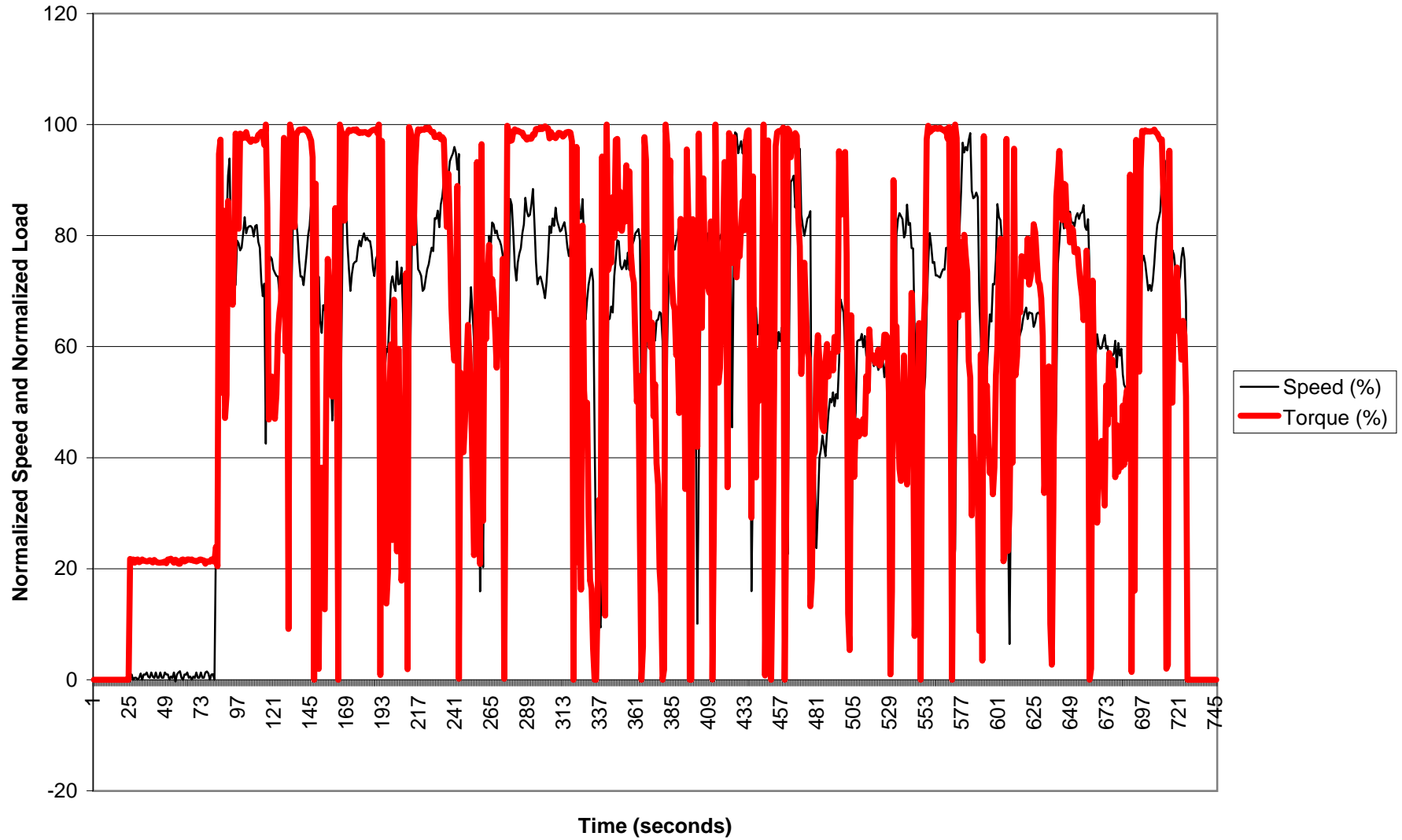
## Crawler

647	84.31	78.771
648	82.304	81.412
649	82.369	81.014
650	81.691	77.016
651	83.391	77.614
652	84.048	77.585
653	83.009	74.121
654	84.014	71.249
655	84.163	69.085
656	85.484	64.778
657	81.603	67.093
658	80.999	77.287
659	82.951	68.049
660	73.362	0
661	32.632	1.99
662	38.428	71.898
663	52.361	53.977
664	58.105	41.081
665	62.235	28.296
666	60.31	40.333
667	59.618	39.531
668	59.701	43.017
669	61.033	37.714
670	62.113	31.375
671	59.647	52.996
672	60.045	45.96
673	56.408	58.85
674	58.373	47.857
675	58.324	57.645
676	58.71	54.136
677	61.065	36.467
678	56.262	45.894
679	60.661	37.447
680	58.366	43.056
681	59.589	38.319
682	54.934	49.382
683	53.132	38.727
684	52.589	50.296
685	50.797	52.214
686	45.468	39.791
687	56.204	90.992
688	25.688	1.405
689	10.99	69.128
690	28.678	16.059
691	36.59	97.219
692	68.939	71.025
693	70.895	55.469
694	68.091	91.96
695	75.254	98.871
696	76.364	98.585
697	75.007	98.981
698	72.628	98.739
699	70.113	98.773
700	71.147	98.748

## Crawler

701	70.029	98.764
702	71.66	98.845
703	74.958	99.087
704	79.205	98.592
705	81.996	98.357
706	83.105	97.756
707	84.409	97.194
708	90.113	97.329
709	94.097	87.759
710	93.415	84.97
711	78.786	1.973
712	38.741	2.67
713	42.221	95.309
714	64.578	57.508
715	77.402	49.891
716	76.587	71.642
717	73.875	69.849
718	70.767	74.256
719	71.368	62.802
720	72.607	62.462
721	76.105	57.682
722	77.794	64.659
723	75.714	61.976
724	67.807	51.063
725	0	0
726	0	0
727	0	0
728	0	0
729	0	0
730	0	0
731	0	0
732	0	0
733	0	0
734	0	0
735	0	0
736	0	0
737	0	0
738	0	0
739	0	0
740	0	0
741	0	0
742	0	0
743	0	0
744	0	0

### Crawler Tractor Cycle





Excavator

Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	19.63	19.39
19	39.26	38.78
20	58.89	58.17
21	78.52	77.56
22	98.16	96.95
23	98.16	96.95
24	98.16	96.95
25	98.16	96.95
26	98.16	96.95
27	98.16	96.95
28	98.16	96.95
29	97.74	89.22
30	96.81	96.26
31	102.96	77.61
32	98.21	85.18
33	102.23	88.44
34	103.72	82.07
35	105.32	85.68
36	105.51	90.77
37	102.26	93.78
38	101.38	87.98
39	98.72	99.95
40	97.94	99.82
41	98.36	98.48
42	98.62	94.77
43	99.81	93.53
44	103.57	87.49
45	103.51	85.93
46	100.4	98.43
47	98.3	92.99
48	100.15	92.22
49	98.38	93.94
50	99.38	89.81
51	99.34	89.09
52	97.96	96.16
53	98.47	87.95

## Excavator

54	99.96	90.07
55	99.72	83.85
56	103.74	97.87
57	97.66	99.13
58	97.87	98.96
59	99.4	87.97
60	100.28	76.08
61	101.15	97
62	98.15	96.02
63	98.45	95.15
64	100.36	88.78
65	103.74	65.65
66	101.98	96.74
67	99.64	81.49
68	101.34	89.99
69	104.28	81.82
70	101.36	90.36
71	101.94	73
72	102.23	89.61
73	100.04	87.12
74	102.7	81.55
75	103.81	84.15
76	99.21	90.64
77	101.28	76.41
78	97.96	93.85
79	97.7	96.02
80	97.62	97.73
81	98.66	93.81
82	98.87	93.91
83	97.19	89.73
84	98.32	97.35
85	98.11	97.45
86	98.62	95.97
87	97.57	97.25
88	101.11	91.4
89	99.72	89.02
90	98.4	98.05
91	99.15	94.66
92	98.68	93.86
93	98.66	96.45
94	98.49	96.93
95	101.77	82.91
96	100.3	93.98
97	100.98	90.09
98	101.47	89.73
99	102.47	88.43
100	106.13	80.93
101	98.91	92.81
102	98.96	95.51
103	97.47	97.03
104	97.81	97.76
105	99.53	92.72
106	97.6	97.11
107	97.81	97.74

## Excavator

108	99.51	93.24
109	101.02	94.75
110	99.49	79.49
111	104.3	94.31
112	101.89	86.66
113	99.32	98.66
114	100.43	88.95
115	100.17	89.93
116	104.68	90.06
117	103.57	90.26
118	99.66	95.47
119	97.7	100
120	95.21	98.94
121	98.62	95.18
122	98.36	98.84
123	96.02	97.78
124	97.6	100
125	102.36	86.64
126	100.6	93.37
127	103.38	78.45
128	101.7	85.34
129	101.02	94.34
130	99.26	97.69
131	99.7	94.77
132	104.13	83.27
133	99.7	95.74
134	98.04	99.26
135	97.77	98.1
136	101.09	86.63
137	98.13	99.09
138	98.77	99.26
139	97.91	94.74
140	102.36	89.27
141	97.85	98.37
142	105.55	71.22
143	100.7	88.72
144	101.15	92.89
145	99.85	91.21
146	104.72	75.78
147	98.13	99.95
148	97.53	100
149	97.49	99.99
150	98.66	99.19
151	100.91	92.76
152	100.4	87.94
153	102.53	89.5
154	98.11	96.28
155	98.85	94.27
156	99.74	83
157	99	90.89
158	99.62	91.38
159	105.49	76.2
160	101.7	97.61
161	100.6	86.52

## Excavator

162	106.47	78.04
163	98.64	94.79
164	99.11	94.36
165	101.7	86.32
166	99.62	94.98
167	97.15	99.39
168	100.09	95.44
169	99.62	94.83
170	104.77	73.56
171	104.98	83.98
172	100	90.35
173	100.09	94.44
174	99.87	91.69
175	104.96	82.26
176	107.34	75.17
177	106.74	79.33
178	106.15	80.09
179	100.13	89.4
180	99.81	83.52
181	103	84.36
182	105.68	85.08
183	102.34	95.32
184	100.02	91.13
185	98.7	89.94
186	103.43	90.8
187	97.21	98.31
188	98.04	98.02
189	97.38	99.9
190	98.85	97.83
191	96.87	98.08
192	98.38	96.22
193	100.91	92.71
194	103.64	83.57
195	97.53	95.23
196	99.57	91.2
197	97.32	95.99
198	99.77	88.17
199	98.81	94.42
200	100.55	85.16
201	106.17	86.36
202	108.15	80.93
203	108.28	90.99
204	105.85	91.04
205	103.17	93.43
206	102.32	88.24
207	105.81	85.69
208	103.98	90.91
209	105.81	83.64
210	105.68	86.61
211	104.85	92.88
212	100.23	92.21
213	96.77	99.13
214	99.89	91.97
215	98.13	99.94

## Excavator

216	96.55	97.02
217	99	93.14
218	98.68	93.37
219	101.09	88.22
220	103.19	90.99
221	102.94	88.43
222	104.7	84.18
223	105.68	92.92
224	104.89	91.43
225	103.06	88.66
226	101.45	93.11
227	101.3	90.31
228	99.4	91.05
229	99.04	96.99
230	96.7	99.99
231	92.77	98.49
232	99.77	94.17
233	102.96	92.94
234	102.51	86.54
235	99.74	73.81
236	99.94	89.69
237	98.79	92.11
238	101.19	86.45
239	102.47	89.83
240	100.77	91.38
241	99.98	95.04
242	102.6	86.52
243	107.3	80.2
244	109.98	76.16
245	104.06	92.42
246	105.4	85.73
247	100.21	100
248	98.19	99.41
249	98.15	98.98
250	104.09	76.78
251	103.47	93.97
252	102.26	88.32
253	106.6	74.22
254	107.94	91.06
255	104.34	88.77
256	105.79	77.38
257	107.04	86.16
258	107	75.57
259	107.57	89.18
260	107.13	77.28
261	106.06	82.46
262	108.02	82.44
263	108.53	78.89
264	108.79	82.71
265	106.53	88.34
266	107.19	74.88
267	107.87	89.89
268	104.09	89.73
269	103.68	90.49

## Excavator

270	105.04	84.05
271	106.28	88.75
272	106.28	87.26
273	99.85	98.22
274	102.17	78.22
275	100.96	78.35
276	105.26	83
277	101.53	85.74
278	105.3	81.6
279	108.62	78.78
280	109.32	73.77
281	110.06	67.35
282	110.19	63.93
283	109.34	71.21
284	108.3	85.05
285	106.17	89.7
286	101.68	90.18
287	98.85	93.07
288	104.17	87.85
289	101.26	91.73
290	100.43	84.47
291	100.11	89.13
292	98.55	90.6
293	100.23	88.46
294	100.17	91.49
295	99.36	92.87
296	100.23	85.59
297	100.49	79.81
298	107.7	86.28
299	108.45	79.48
300	109.09	80.89
301	107.53	86.48
302	104	93.02
303	105.6	74.85
304	110.45	56.6
305	110.45	57.98
306	104.96	92.69
307	101.72	86.91
308	104.11	75.81
309	110.3	56.22
310	110.45	59.56
311	110.51	61.29
312	109.72	51.36
313	52.4	3.63
314	43.15	3.95
315	43.15	3.77
316	43.11	4.13
317	43	5.38
318	42.62	6.39
319	42.62	7.12
320	42.66	6.22
321	42.62	5.66
322	42.66	6.4
323	42.66	5.67

## Excavator

324	42.72	6.6
325	43.13	21.96
326	100.81	60.45
327	104.3	95.44
328	104.06	74.19
329	109.87	66.55
330	110.11	62.21
331	110.11	65.79
332	106.26	39.57
333	46.34	4.19
334	42.79	5.34
335	42.74	6.79
336	42.79	5.34
337	42.87	6.27
338	43.15	4.33
339	43.15	3.77
340	43.15	4.33
341	43.11	4.5
342	43.15	3.77
343	43.19	3.78
344	43.19	3.22
345	43.19	2.85
346	43.23	4.16
347	43.23	3.23
348	43.23	3.42
349	43.15	4.33
350	43.19	3.97
351	43.19	4.34
352	43.19	4.34
353	43.19	4.52
354	43.15	4.14
355	43.23	3.98
356	43.19	4.15
357	43.23	3.98
358	43.19	3.59
359	43.23	3.05
360	43.23	3.05
361	43.15	4.51
362	43	6.31
363	42.62	7.47
364	42.74	7.16
365	42.66	7.13
366	42.66	7.85
367	42.79	6.99
368	42.72	7.87
369	42.72	5.87
370	42.79	6.99
371	42.79	6.81
372	42.79	6.99
373	42.72	6.79
374	42.79	6.44
375	42.66	7.85
376	42.85	7.19
377	42.79	6.62

## Excavator

378	42.85	6.83
379	42.72	6.97
380	42.79	7.17
381	42.79	7.17
382	42.79	6.63
383	42.98	5.19
384	43.28	3.43
385	43.19	5.46
386	43.23	5.09
387	43.23	4.72
388	43.32	5.12
389	43.28	5.11
390	43.28	4.18
391	43.23	3.79
392	43.32	4
393	43.32	4.56
394	43.32	4.19
395	43.32	4.56
396	43.28	4.74
397	43.28	4.36
398	43.23	4.35
399	43.23	4.35
400	43.32	4.19
401	43.23	4.35
402	43.32	4.19
403	43.28	4.18
404	43.28	4.18
405	43.36	4.57
406	43.32	4
407	42.91	6.65
408	64.72	34.89
409	86.53	63.13
410	108.33	91.36
411	108.33	91.36
412	98.74	91.87
413	104.12	96.32
414	102.98	94.52
415	110.41	98.12
416	106.21	90.44
417	109.97	87.2
418	106.94	89.92
419	102.7	82.46
420	105.94	97.44
421	106.92	99.7
422	106.06	89.33
423	105.82	91.74
424	104.17	87.16
425	106.42	98.05
426	110.3	85.57
427	112.12	85.3
428	112.15	84.84
429	112.21	86.12
430	90.98	10.31
431	48.3	4.54



## Excavator

432	47.45	5.27
433	47.06	6.01
434	46.89	6.28
435	47.67	5
436	47.67	4.89
437	52.86	42.21
438	90.8	92.6
439	100.71	94.91
440	105.02	100
441	104.27	97.91
442	100.18	95.54
443	108.02	97.3
444	100.88	91.33
445	98.48	96.95
446	98.05	97.3
447	97.79	97.8
448	97.64	98.24
449	97.21	98.66
450	97.58	98.6
451	98.39	94.37
452	102.59	98.4
453	97.45	98.3
454	102.8	95.39
455	105.71	100
456	99.3	98.86
457	97.61	98.85
458	101.24	95.54
459	103.8	99.63
460	97.58	97.42
461	107.15	97.24
462	102.89	98.12
463	102.23	95.68
464	100.8	96.11
465	102.56	97.49
466	102.11	96.33
467	101.88	99.02
468	101.23	99.14
469	105.97	96.25
470	97.62	96.47
471	99.88	94.62
472	104.88	94.22
473	108.79	99.22
474	104.77	84.8
475	100.7	93.95
476	99.47	98.88
477	97.73	98.47
478	97.67	98.46
479	97.41	98.63
480	98.17	97.6
481	98.61	97.21
482	97.61	98.28
483	97.7	98.71
484	97.61	98.78
485	97.39	98.97

Excavator

486	102.62	95.25
487	98.06	99.94
488	103.95	92.07
489	102.44	98.16
490	98.58	97.39
491	103.45	90.89
492	108.38	95.62
493	102.45	87.94
494	104.47	95.19
495	101.02	96.7
496	101.05	96.59
497	105.09	94.28
498	98.47	96.7
499	101.36	94.61
500	107.21	99.28
501	103.76	93.82
502	103.71	95.13
503	97.2	98.12
504	97.85	98.11
505	97.65	98.81
506	98.32	98.55
507	97.94	98.48
508	98.38	98.14
509	97.76	98.96
510	103.73	95.24
511	99.95	98.84
512	97.7	98.19
513	97.61	98.17
514	97.61	98.48
515	97.39	98.56
516	105.94	93.87
517	99	95.37
518	109.2	100
519	100.24	93.7
520	107.24	98.25
521	99.83	93.92
522	100.3	95.35
523	103.5	98.85
524	99.92	97.88
525	101.77	99.14
526	103.08	93.82
527	103.32	96.17
528	100.48	94.46
529	103	96.22
530	102.98	96.59
531	108.55	100
532	99.29	94.52
533	97.44	98.36
534	97.32	98.72
535	98.05	97.41
536	97.68	97.91
537	97.64	97.13
538	98.47	96.56
539	98.59	90.39

## Excavator

540	108.5	99.84
541	97.65	97.25
542	97.91	97.58
543	97.67	98.01
544	97.67	98.84
545	97.48	98.22
546	105.36	95.12
547	104.64	94.18
548	101.47	98.73
549	97.7	98.19
550	102.85	95.67
551	102.03	95.18
552	100.08	93.73
553	102.55	99.82
554	102.38	100
555	106.5	95.05
556	98.5	95.94
557	98.23	96.92
558	99.09	94.71
559	104.89	99.99
560	106.33	97.77
561	96.91	98.8
562	97.61	97.94
563	97.97	98.55
564	97.56	98.03
565	98.7	96.96
566	98.18	97.95
567	98.11	98.25
568	98.05	98.05
569	98.8	90.75
570	102.88	97.94
571	98.14	98.57
572	98.89	92.12
573	107.24	97.39
574	99.92	93.61
575	97.95	96.67
576	99.73	93.91
577	105.21	97.76
578	107.97	99.7
579	106.12	95.27
580	108.11	100
581	103.48	92.17
582	103.68	94.01
583	108.52	100
584	102.39	90.06
585	104.5	95.27
586	101.98	95.55
587	102.14	92.91
588	102.48	97.2
589	102.94	99.16
590	103.11	96.19
591	103.47	97.03
592	99.76	93.6
593	98.82	94.94

## Excavator

594	99.55	94.67
595	101.23	93.6
596	110.45	97.61
597	98.2	95.13
598	98.65	96.66
599	98.86	95.57
600	100.12	94.19
601	97.41	98.93
602	97.29	98.5
603	97.47	97.99
604	106.42	92.87
605	101.95	92.28
606	99.39	97.05
607	97.58	96.91
608	99.77	94.14
609	99.7	96.26
610	101.97	95.04
611	109.5	100
612	106.73	95.13
613	106.76	97.02
614	107.17	95.02
615	109.44	99.06
616	109.09	96.46
617	107.2	89.98
618	106.65	89.99
619	105.03	87.13
620	103.14	90.24
621	101.18	92.23
622	102.48	97.71
623	102.15	99.66
624	101.83	95.04
625	104.55	96.26
626	100.92	93.27
627	97.86	96.44
628	107.64	97.06
629	100.62	96.89
630	98.15	97.89
631	97.58	97.7
632	97.15	98.22
633	99.86	94.73
634	100.42	97.89
635	105.48	95.7
636	103.06	93.89
637	102.38	97
638	99.98	94.18
639	100.02	98.74
640	99.18	94.16
641	104.27	96.58
642	105.23	100
643	109.74	97.71
644	109.79	93.35
645	105.98	91.99
646	98.08	95.82
647	104.94	92.43

## Excavator

648	108.21	92.93
649	108.26	91.52
650	108.44	94.94
651	106.5	90.17
652	107.91	90.58
653	106.61	94.72
654	105.09	85.12
655	108.38	95.24
656	101.94	85.45
657	103.5	92.7
658	99.62	95.5
659	98.59	98.3
660	102.29	90.77
661	112.77	98.53
662	108.39	94.94
663	110	84.38
664	107.36	91.21
665	107.44	88.45
666	98	98.37
667	99.21	96.15
668	102.06	98.84
669	109.89	96.44
670	109.65	94.7
671	107.7	91.41
672	101.94	78.71
673	107.56	99.2
674	96.67	97.77
675	100.76	97.05
676	106.8	98.49
677	106.79	94.46
678	111.44	93.88
679	109.05	98.72
680	108.12	92.31
681	108.35	90.94
682	104.32	92.49
683	98.45	96.72
684	107.95	97.7
685	104.5	88.45
686	111.67	91.15
687	110.56	93.11
688	106.17	90.47
689	103.29	79.82
690	108.18	90.94
691	110.65	89.12
692	112.24	83.55
693	112.15	85.89
694	108.44	53.63
695	59.53	3.88
696	47.86	4.61
697	47.35	5.45
698	46.79	6.57
699	47.58	4.98
700	47.7	4.68
701	47.42	5.37

## Excavator

702	46.62	6.73
703	47.52	5.18
704	47.64	4.88
705	47.7	4.9
706	47.7	4.68
707	47.7	4.79
708	47.61	4.99
709	47.64	4.99
710	47.64	4.99
711	47.82	4.49
712	47.76	4.81
713	47.64	4.99
714	47.61	4.99
715	47.55	5.08
716	47.58	4.98
717	47.64	4.78
718	47.73	4.91
719	47.76	4.81
720	47.7	4.79
721	47.61	5.09
722	47.64	4.99
723	47.67	5
724	47.7	5.01
725	47.7	5.01
726	47.67	5
727	47.67	5.11
728	47.67	5
729	47.61	5.09
730	47.7	5.01
731	47.64	4.99
732	47.73	5.02
733	47.67	5
734	47.7	5.01
735	47.64	5.21
736	47.7	5.01
737	47.64	5.1
738	47.64	5.1
739	47.61	4.99
740	47.7	5.01
741	47.67	5
742	47.61	4.99
743	47.7	4.9
744	47.67	5.22
745	47.7	5.12
746	47.67	5.22
747	47.76	5.02
748	47.7	5.12
749	47.73	5.12
750	47.73	4.91
751	47.79	4.92
752	47.67	5.11
753	47.73	5.12
754	47.67	5.11
755	47.67	5.11

## Excavator

756	47.67	5.11
757	47.7	5.01
758	47.73	5.02
759	47.73	5.02
760	47.61	5.2
761	47.64	4.99
762	47.67	5.22
763	47.67	5.32
764	47.73	5.02
765	47.79	5.03
766	47.7	5.01
767	47.73	5.12
768	47.79	5.03
769	47.76	4.91
770	47.73	5.01
771	47.73	5.02
772	47.73	5.12
773	47.76	5.02
774	47.76	5.13
775	47.76	4.91
776	47.76	5.02
777	47.76	5.13
778	47.73	5.02
779	47.79	5.03
780	47.67	5.22
781	47.7	5.22
782	47.76	5.02
783	47.79	5.14
784	47.79	5.03
785	47.73	5.23
786	47.79	5.03
787	47.79	4.92
788	47.73	5.34
789	47.73	5.23
790	47.76	5.02
791	67.05	29.5
792	86.34	53.97
793	105.64	78.44
794	105.64	78.44
795	103.98	96.16
796	100.32	94.36
797	98.62	97.46
798	99.23	97.88
799	99.28	96.96
800	98.3	99.88
801	99.09	99.07
802	102	93.59
803	100.11	90.52
804	102.81	79.6
805	104.68	92.88
806	104.7	89.56
807	105.91	91.69
808	106.79	90.12
809	108.19	87.23

## Excavator

810	106.3	92.91
811	102	97.59
812	98.49	99.77
813	99.43	97.07
814	99.64	96.22
815	98.64	97.32
816	104.11	83.63
817	109.4	73.64
818	111.32	79.19
819	111.02	85.97
820	109.28	91.4
821	103.43	99.4
822	100.02	97.53
823	100.02	91.09
824	102.53	91.04
825	102.09	87.38
826	99.91	91.34
827	103.38	94.07
828	101.36	95.48
829	102.34	89.78
830	105.68	86.57
831	105.72	95.02
832	101.06	97.4
833	98.3	98.61
834	99.45	98.12
835	98.68	97.51
836	98.85	99.87
837	98.6	99.19
838	98.3	100
839	97.81	100
840	97.68	100
841	99.72	92.99
842	101.51	94.93
843	99.77	91.13
844	102.49	92.21
845	102.3	93.16
846	104.32	93.84
847	105.55	96.01
848	101.66	93.63
849	98.72	99
850	99.4	98.23
851	99.51	96.78
852	98.06	99.85
853	105.32	86.32
854	103.87	94.94
855	107.7	90.05
856	107.98	94.66
857	103.55	97.96
858	100.43	91.24
859	100.49	93.19
860	102.51	92.87
861	101.51	92.62
862	101.66	87.44
863	102.64	95.26



## Excavator

864	104.89	88.22
865	99.06	94.07
866	99.94	96.02
867	99.4	99.83
868	101.4	94.5
869	101.77	88.33
870	101.15	93.3
871	107.36	74.45
872	111.32	80.14
873	111.38	80.04
874	111.36	83.13
875	111.47	84.63
876	69.23	4.49
877	44.55	2.32
878	44.6	2.06
879	44.55	1.86
880	44.64	2.07
881	44.6	2.62
882	44.6	2.62
883	44.64	2.44
884	44.6	2.06
885	44.64	2.63
886	44.55	2.42
887	44.6	2.62
888	44.6	2.25
889	44.6	2.25
890	44.6	2.43
891	44.55	2.8
892	44.6	2.43
893	44.6	2.25
894	44.55	2.61
895	44.6	3.38
896	43.94	5.48
897	44	5.5
898	44	5.31
899	44.06	5.52
900	44.06	5.14
901	44.13	4.59
902	44.13	4.97
903	44.13	5.34
904	44.13	4.78
905	44.13	4.59
906	44.13	5.16
907	44	4.93
908	44.13	4.78
909	44.06	4.57
910	44.06	5.52
911	44	5.5
912	44	5.12
913	43.94	5.48
914	43.94	5.67
915	44	5.69
916	44	5.31
917	43.94	5.48

## Excavator

918	43.94	5.67
919	43.94	5.29
920	44.06	5.14
921	44	5.88
922	44	5.31
923	44	4.93
924	44.06	4.95
925	44.06	5.33
926	44.15	4.21
927	44.55	2.8
928	44.55	2.8
929	44.55	2.61
930	44.55	2.8
931	44.55	2.61
932	44.6	2.81
933	44.51	2.79
934	44.55	2.99
935	44.55	3.37
936	44.55	2.61
937	44.51	2.79
938	44.55	3.18
939	44.51	2.79
940	44.55	2.61
941	44.55	2.61
942	44.6	3
943	44.55	3.18
944	44.6	3.19
945	44.6	3
946	44.6	3.38
947	44.55	3.18
948	44.64	3.01
949	44.55	2.99
950	44.6	3.19
951	44.6	3.19
952	58	26.3
953	109.4	81.03
954	110.15	90.1
955	110.96	82.19
956	111.38	86.85
957	110.96	93.7
958	106.3	98.55
959	103.32	84.6
960	107.13	95.48
961	103.32	89.34
962	100.83	99.99
963	99.32	98.35
964	99.26	99.56
965	98.3	100
966	97.28	100
967	100.43	95.22
968	99.55	96.14
969	100.96	92.26
970	99.68	92.63
971	100.89	84.85

## Excavator

972	108.79	89.14
973	108.13	93.79
974	107.74	93.56
975	108.64	95.26
976	108.23	92.7
977	107.83	95.11
978	99.19	98.97
979	99.45	95.85
980	99.45	98.07
981	98.74	100
982	98.02	99.61
983	99.11	97.13
984	98.32	97.73
985	102.26	92.18
986	100.4	95.95
987	100.83	92.78
988	101.81	89.24
989	101.6	95.1
990	104.19	93.44
991	99.94	97.97
992	99.06	96.82
993	99.51	97.94
994	101.02	93.87
995	98.85	92.53
996	107.49	85.05
997	110.02	91.91
998	111.02	81.43
999	110.55	88.66
1000	104.68	91.93
1001	103.62	97.43
1002	101.51	95.25
1003	100.64	95.49
1004	103	91.73
1005	102.64	95.49
1006	99.21	99.13
1007	98.74	98.95
1008	99.4	97.56
1009	99.21	98.98
1010	98.6	99.73
1011	98.45	96.98
1012	101.19	93.36
1013	100.98	93.56
1014	100.7	93.25
1015	100.17	86.58
1016	102.81	97.17
1017	105.45	88.66
1018	102.32	96.73
1019	98.4	99.32
1020	99.3	97.55
1021	99.23	99.68
1022	98.74	98.95
1023	96.66	100
1024	99.81	95.76
1025	101.15	90.93

## Excavator

1026	103.4	92.8
1027	98.36	90.46
1028	104.81	83.7
1029	103.15	81.6
1030	110.7	84.26
1031	110.81	85.93
1032	103.77	91.1
1033	101.47	92.23
1034	100.72	95.61
1035	104.17	89.97
1036	101.53	93.78
1037	99.09	98.49
1038	99.74	96.84
1039	99.7	97.8
1040	99.06	100
1041	98.79	100
1042	98.17	99.56
1043	99.32	97.49
1044	101.3	94.04
1045	100.21	95.09
1046	101.02	94.57
1047	102.21	84.44
1048	101.98	88.34
1049	104.13	78.31
1050	104.64	80.43
1051	103.11	96.7
1052	101.04	86.53
1053	108.55	94.59
1054	107.43	100
1055	102.32	95.66
1056	110.49	71.46
1057	111.28	90.44
1058	107.83	98.55
1059	102.96	91.45
1060	102.53	94.77
1061	104.04	89.64
1062	100.62	96.39
1063	99.23	97.32
1064	100.23	94.38
1065	99.26	99.74
1066	98.36	100
1067	98.06	100
1068	100.94	89.57
1069	100.49	94.04
1070	99.17	94.34
1071	100.66	81.78
1072	103.4	92.12
1073	102.51	97.16
1074	100.72	96.06
1075	104.21	89.47
1076	100.04	98.63
1077	99.26	97.85
1078	99.19	97.94
1079	98.91	99.35

Excavator

1080	97.51	100
1081	100.57	95.21
1082	98.47	91.97
1083	101.85	94.46
1084	97.96	95.29
1085	105.96	86.19
1086	103.81	97.6
1087	101.49	98.22
1088	99.51	97.91
1089	104.43	85.85
1090	99.17	99.28
1091	99.26	97.62
1092	98.34	97.11
1093	101.09	94.24
1094	99.55	98.24
1095	99.04	99.99
1096	99.7	95.81
1097	101.15	94.28
1098	103.13	94.61
1099	99.23	91
1100	104.72	83.93
1101	109.32	91.64
1102	108.66	96.76
1103	106.57	96.99
1104	103.19	96.84
1105	101.57	94.52
1106	100.66	93.59
1107	103.94	93.77
1108	99.51	97.98
1109	98.74	97.77
1110	99.6	98.45
1111	99.7	97.7
1112	98.26	100
1113	98.23	99.87
1114	98.55	100
1115	99.34	93.71
1116	100.51	93.9
1117	99.94	89.49
1118	101.98	94.9
1119	102.32	97.68
1120	100.13	97.55
1121	104.72	90.04
1122	98.87	98.15
1123	98.4	99.82
1124	100.36	93.14
1125	102.91	89
1126	106.34	80.56
1127	106.6	97.43
1128	98.26	100
1129	99.91	98.22
1130	100.89	86.92
1131	104.6	91.65
1132	101.53	95.2
1133	104.77	85.7

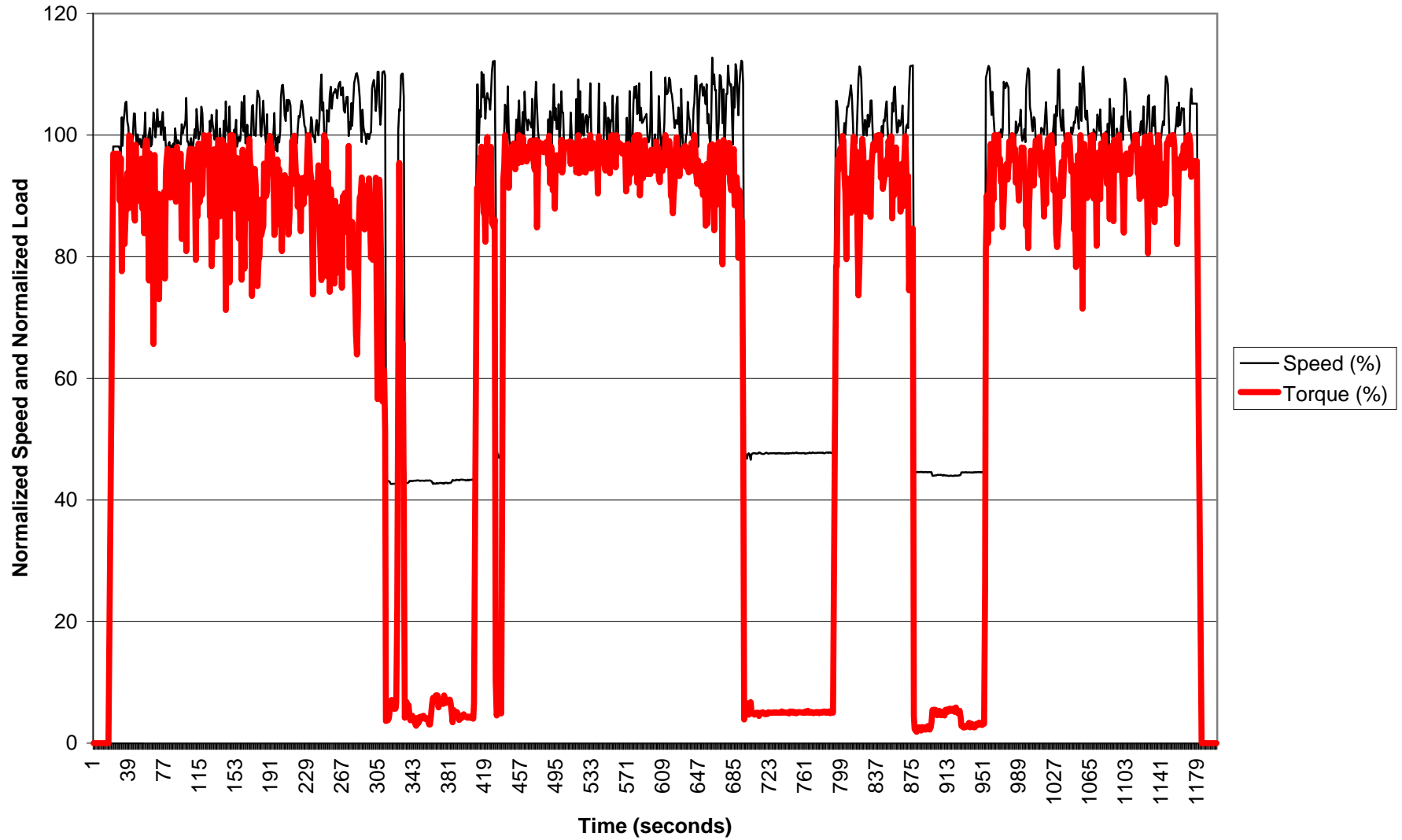
## Excavator

1134	100.26	97.94
1135	98.57	97.06
1136	99.13	96.64
1137	98.85	100
1138	99.04	98.47
1139	99.23	88.54
1140	99.55	91.95
1141	101.19	92.85
1142	102.3	94.19
1143	101.66	95.29
1144	105.79	88.79
1145	109.7	89.97
1146	109.32	98.74
1147	108.32	98.36
1148	103.53	99.44
1149	98.55	99.81
1150	99.04	99.73
1151	99.32	98.53
1152	98.06	100
1153	97.57	100
1154	97.57	98.08
1155	100.7	90.26
1156	101.96	96.06
1157	104.62	82.09
1158	101.4	88.92
1159	105.34	95.49
1160	101.66	96.03
1161	102.57	94.55
1162	104.49	96.66
1163	104.15	95.91
1164	104.4	98.36
1165	99.38	94.61
1166	100	96.17
1167	99	99.63
1168	98.6	99.44
1169	98.53	100
1170	98	100
1171	105.62	98.76
1172	107.68	93.13
1173	105.19	94.09
1174	105.19	95.75
1175	105.19	95.75
1176	105.19	95.75
1177	105.19	95.75
1178	105.19	95.75
1179	84.15	75.27
1180	63.11	56.45
1181	42.08	37.64
1182	21.04	18.82
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

Excavator

1188	0	0
1189	0	0
1190	0	0
1191	0	0
1192	0	0
1193	0	0
1194	0	0
1195	0	0
1196	0	0
1197	0	0
1198	0	0
1199	0	0

# Excavator Cycle





SkdStrTyp1

Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	6.68	1.65
22	13.35	3.23
23	20.03	4.73
24	26.71	6.31
25	33.38	7.89
26	33.38	7.89
27	33.38	7.89
28	33.38	7.89
29	33.38	7.89
30	33.38	7.89
31	33.38	7.89
32	33.13	7.72
33	33.13	7.72
34	33.38	6.76
35	33.38	7.89
36	33.38	7.89
37	33.38	7.89
38	33.38	6.76
39	33.13	7.72
40	33.38	9.01
41	33.38	7.89
42	33.13	6.59
43	33.38	6.76
44	33.38	6.76
45	33.38	7.89
46	33.38	6.76
47	33.38	6.76
48	33.38	7.89
49	33.38	7.89
50	33.38	6.76
51	33.63	6.93
52	33.38	7.89
53	33.38	9.01

SkdStrTyp1

54	33.13	6.59
55	33.13	7.72
56	33.38	7.89
57	33.13	7.72
58	33.13	6.59
59	33.13	6.59
60	33.13	7.72
61	33.38	7.89
62	33.38	7.89
63	33.38	6.76
64	33.38	7.89
65	33.38	7.89
66	33.38	7.89
67	33.38	6.76
68	33.38	7.89
69	33.13	7.72
70	33.13	7.72
71	33.38	6.76
72	33.38	7.89
73	33.38	7.89
74	33.38	7.89
75	33.38	6.76
76	33.38	7.89
77	33.13	7.72
78	33.38	6.76
79	33.63	6.93
80	33.38	6.76
81	33.38	7.89
82	33.38	7.89
83	33.38	6.76
84	33.38	6.76
85	33.38	6.76
86	33.38	7.89
87	33.38	6.76
88	33.38	6.76
89	33.38	7.89
90	33.38	7.89
91	33.13	7.72
92	33.38	6.76
93	33.38	7.89
94	33.38	7.89
95	33.38	6.76
96	33.13	6.59
97	33.38	7.89
98	33.38	6.76
99	33.38	7.89
100	33.38	6.76
101	33.38	7.89
102	33.13	7.72
103	33.38	7.89
104	33.38	6.76
105	33.38	6.76
106	33.38	7.89
107	33.38	7.89

## SkdStrTyp1

108	33.63	6.93
109	33.38	6.76
110	33.38	7.89
111	33.38	7.89
112	33.38	6.76
113	33.38	7.89
114	33.38	7.89
115	33.38	7.89
116	33.38	6.76
117	33.13	7.72
118	33.13	7.72
119	33.38	7.89
120	33.38	6.76
121	33.38	7.89
122	33.38	6.76
123	33.38	6.76
124	33.63	6.93
125	33.63	6.93
126	33.63	6.93
127	33.38	7.89
128	33.38	6.76
129	33.38	6.76
130	33.38	7.89
131	33.63	8.06
132	33.38	6.76
133	33.38	6.76
134	33.38	7.89
135	33.38	7.89
136	33.63	6.93
137	33.38	7.89
138	33.63	6.93
139	33.38	7.89
140	33.38	6.76
141	33.38	6.76
142	33.38	7.89
143	33.38	7.89
144	33.38	6.76
145	33.38	7.89
146	33.38	7.89
147	33.38	9.01
148	33.38	6.76
149	33.38	7.89
150	33.38	7.89
151	30.39	17.03
152	33.38	10.11
153	80.97	14.64
154	81.22	7.08
155	75.98	44.72
156	76.73	43.56
157	75.98	36.36
158	77.23	35.94
159	77.98	36.06
160	76.73	46.63
161	80.47	17.55

## SkdStrTyp1

162	76.48	54.66
163	72.75	62.03
164	75.24	50.36
165	78.72	42.82
166	76.73	47.24
167	76.23	48
168	75.24	52.1
169	74.24	56.18
170	75.49	51.71
171	78.48	36.13
172	80.72	17.59
173	79.97	18.24
174	78.97	22.69
175	75.24	47.19
176	73.49	59.92
177	74.49	52.74
178	77.48	49.88
179	76.23	56.04
180	77.23	47.54
181	77.48	41.35
182	74.74	54.59
183	75.49	53.45
184	79.97	21.7
185	80.97	31.93
186	79.72	23.66
187	78.72	39.11
188	75.98	46.74
189	71.25	82.17
190	76.23	55.56
191	74.24	56.7
192	75.24	49.26
193	77.23	32.02
194	74.24	57.6
195	80.22	21.77
196	77.73	49.49
197	80.22	20.16
198	80.97	16.75
199	80.97	14.64
200	80.97	16.75
201	79.97	21.17
202	76.48	39.88
203	76.48	45.06
204	74.99	50.72
205	72.99	86.68
206	77.23	49.2
207	75.73	60.73
208	77.98	45.09
209	76.48	50.79
210	78.72	42.82
211	78.97	30.28
212	80.22	19.6
213	80.47	20.76
214	79.97	18.93
215	82.21	7.76

## SkdStrTyp1

216	78.23	24.15
217	73.49	46.69
218	74.24	56.7
219	76.48	48.7
220	75.24	56.83
221	70.25	91.23
222	72.99	90.71
223	79.47	36.3
224	81.46	19.18
225	78.97	19.34
226	73.49	55.71
227	71.25	54.16
228	76.98	43.72
229	78.97	24.33
230	81.22	16.79
231	77.73	37.87
232	80.72	18.37
233	80.72	11.87
234	79.72	18.89
235	78.48	30.16
236	77.98	27.97
237	79.72	18.89
238	80.22	19.6
239	79.47	36.3
240	76.23	48.52
241	73.99	58.65
242	81.71	21.66
243	65.27	92.16
244	80.22	26.67
245	78.48	35.12
246	81.46	23.58
247	73.74	54.48
248	78.72	0.83
249	80.72	24.94
250	77.98	38.87
251	81.46	13.5
252	77.98	25.95
253	81.22	15.8
254	80.97	15.76
255	78.72	34.14
256	79.72	22.86
257	81.22	14.69
258	79.22	24.4
259	75.98	39.53
260	80.47	21.29
261	80.97	14.64
262	78.48	27.09
263	77.73	40.58
264	81.46	17.7
265	77.73	35.06
266	74.49	52.74
267	77.73	32.08
268	78.48	29.14
269	78.48	32.16

## SkdStrTyp1

270	78.48	28.11
271	72.25	59.91
272	74.74	51.11
273	81.22	26.11
274	77.48	34.08
275	79.47	25.42
276	81.46	23.58
277	80.47	21.85
278	78.23	26.02
279	78.97	24.33
280	78.97	36.2
281	79.97	14.37
282	78.97	23.46
283	72.25	69.34
284	73.49	81.03
285	71.25	72.35
286	81.46	48.13
287	78.72	35.15
288	76.73	42.68
289	76.48	41.63
290	74.99	47.47
291	75.98	44.72
292	79.47	20.01
293	74.74	56.73
294	82.46	-10.88
295	77.48	48.26
296	79.97	21.7
297	77.48	54.17
298	76.98	29.83
299	80.47	21.85
300	81.22	15.8
301	74.74	51.7
302	74.24	61.46
303	70.25	55.19
304	73.74	81.05
305	75.98	54.9
306	75.98	38.7
307	77.23	24.79
308	78.23	42.61
309	75.24	48.72
310	78.72	48.84
311	81.46	12.11
312	81.22	13.44
313	22.42	14.64
314	24.91	25.76
315	72.75	52.73
316	98.41	10.61
317	92.68	47.55
318	95.42	34.2
319	94.17	38.3
320	98.41	10.61
321	98.16	18.36
322	98.65	8
323	98.16	12.88

## SkdStrTyp1

324	98.16	10.41
325	97.91	12.66
326	95.91	28.24
327	96.16	24.86
328	96.66	20.54
329	90.68	58.89
330	94.17	38.3
331	97.66	23.42
332	94.67	30.3
333	94.42	28.57
334	93.17	4.25
335	97.41	17.73
336	89.69	62.7
337	97.41	22.62
338	96.91	24.66
339	93.17	41.2
340	87.94	68.05
341	95.42	26.51
342	89.69	62.01
343	95.91	35.35
344	89.19	59.85
345	92.18	40.46
346	91.68	51.5
347	87.69	98.07
348	92.68	61.58
349	98.65	13.35
350	98.41	10.61
351	98.41	10.61
352	98.41	13.11
353	98.16	10.41
354	98.16	10.41
355	98.41	10.61
356	98.16	10.41
357	98.16	10.41
358	97.91	18.14
359	96.16	30.06
360	95.42	23.27
361	97.41	19.04
362	98.16	10.41
363	97.91	12.66
364	93.92	54.08
365	91.18	58.58
366	94.17	31.25
367	92.43	39.58
368	93.42	39.36
369	93.17	38.54
370	91.43	64.41
371	94.42	22.8
372	94.92	24.26
373	91.18	61.37
374	88.69	99.03
375	88.69	72.49
376	87.94	61.48
377	97.66	30.92

## SkdStrTyp1

378	89.19	63.11
379	95.17	11.08
380	92.18	38.82
381	92.68	53.55
382	95.17	30.5
383	90.43	61.48
384	93.17	38.54
385	95.42	40.62
386	91.93	39.69
387	94.67	31.2
388	96.91	24.1
389	94.17	32.17
390	97.66	19.23
391	96.91	24.66
392	94.17	34.86
393	90.18	62.58
394	96.91	20.72
395	96.91	27.14
396	87.44	68.53
397	81.22	97.9
398	93.17	57.59
399	91.68	44.7
400	90.43	64.64
401	91.18	87.12
402	93.42	42.11
403	97.91	4.81
404	86.95	88.55
405	91.18	43.8
406	96.91	27.89
407	96.16	24.86
408	97.41	22.62
409	93.92	35.78
410	93.17	37.69
411	94.42	27.73
412	95.42	51.8
413	97.41	26.68
414	93.17	34.2
415	94.67	41.13
416	96.91	20.72
417	95.67	43.97
418	88.94	61.26
419	93.17	56.12
420	94.92	36.59
421	94.92	34.86
422	93.92	39.26
423	88.19	74.43
424	78.72	98.23
425	46.59	97.77
426	83.46	59.64
427	90.43	69.26
428	86.95	93.26
429	89.19	75.75
430	90.93	66.2
431	89.19	83.42



## SkdStrTyp1

432	92.92	43.04
433	93.92	42.11
434	96.16	26.82
435	93.17	35.11
436	92.43	44.8
437	86.95	79.94
438	93.42	30.41
439	96.66	17.16
440	97.66	16.4
441	96.41	25.59
442	89.19	60.49
443	97.66	20.34
444	92.92	43.04
445	94.17	30.34
446	96.41	28.46
447	96.66	22.77
448	92.68	45.74
449	90.18	59.15
450	86.45	61.54
451	94.17	26.93
452	87.19	84.48
453	94.92	39.3
454	95.91	26.71
455	95.42	21.99
456	96.91	30.45
457	94.42	36.53
458	95.91	22.3
459	96.91	11.95
460	97.16	22.44
461	95.42	28.03
462	92.68	50.22
463	87.69	80.28
464	49.33	99.79
465	93.17	45.83
466	88.19	70.74
467	95.67	26.61
468	95.17	41.47
469	91.43	55.32
470	90.68	42.16
471	95.42	40.62
472	90.43	52.58
473	94.42	34.81
474	95.67	20.69
475	86.45	82.95
476	90.18	64.56
477	98.65	-4.57
478	97.66	-14.09
479	95.17	29.62
480	93.67	49.69
481	97.16	18.84
482	93.42	43.99
483	90.93	52.8
484	85.45	98.35
485	47.58	99.45

## SkdStrTyp1

486	92.43	64.32
487	92.43	51.81
488	94.42	34.81
489	86.45	99.29
490	93.67	46.88
491	90.43	64.32
492	91.93	48.22
493	92.18	28.59
494	96.66	34
495	94.42	45.1
496	94.67	48.11
497	87.69	76.63
498	90.18	77.11
499	90.18	62.58
500	96.66	22.11
501	88.69	68.83
502	98.16	22.45
503	94.92	31.3
504	97.41	2.08
505	94.67	25.48
506	97.41	4.69
507	97.66	4.74
508	94.17	27.74
509	96.41	24.4
510	96.41	20.36
511	97.91	4.81
512	96.91	17.34
513	96.91	19.77
514	97.41	9.91
515	94.92	36.59
516	91.68	43.85
517	93.67	31.31
518	91.68	57.57
519	90.68	64.41
520	91.93	55.55
521	89.69	65.09
522	87.69	98.75
523	60.54	98.11
524	88.94	98.63
525	93.42	37.62
526	88.94	68.9
527	94.67	34.77
528	91.68	56.17
529	96.41	33.84
530	92.92	64.09
531	95.42	25.8
532	92.43	36.23
533	87.19	91.76
534	88.94	84.52
535	92.68	49.34
536	92.92	50.31
537	93.67	44.98
538	94.67	42.13
539	92.68	26.03

## SkdStrTyp1

540	94.92	24.91
541	96.41	48.97
542	89.94	67.15
543	90.68	70.53
544	88.19	98.55
545	48.83	99.01
546	67.26	94.68
547	89.94	98.34
548	86.7	99.52
549	79.22	97.5
550	94.67	36.48
551	84.7	93.57
552	92.18	48.29
553	89.94	63.8
554	88.19	68.7
555	90.68	64.74
556	93.17	44.9
557	94.67	39.16
558	91.18	40.59
559	96.66	18.46
560	95.17	21.84
561	93.67	27.74
562	92.92	42.13
563	90.68	58.89
564	91.68	51.5
565	87.94	66.02
566	77.23	98.21
567	81.46	60.62
568	91.18	64.3
569	90.93	66.98
570	96.16	34.6
571	90.68	60.34
572	91.93	42.16
573	89.94	98.34
574	94.17	41.14
575	96.16	23.08
576	89.19	64.5
577	93.17	50.4
578	90.18	56.17
579	95.91	26.71
580	98.9	17.53
581	94.67	22.21
582	97.41	-4.65
583	93.17	42.12
584	98.16	16.83
585	91.68	51.5
586	92.18	43.02
587	90.18	61.61
588	86.45	99.29
589	70.75	98.21
590	91.43	63.23
591	94.17	35.73
592	92.92	41.23
593	86.45	97.93

## SkdStrTyp1

594	90.18	64.22
595	91.93	57
596	90.18	59.63
597	90.93	55.1
598	94.17	35.73
599	86.95	69.77
600	89.44	64.98
601	95.17	25.7
602	96.41	29.31
603	92.43	23.01
604	95.42	2.16
605	95.67	11.3
606	90.18	61.34
607	96.41	25.59
608	93.17	35.99
609	94.67	30.3
610	94.17	36.58
611	93.92	37.48
612	91.18	55.21
613	89.94	61.2
614	84.95	97.89
615	56.8	97.6
616	92.18	64.19
617	95.91	4.51
618	96.91	23.53
619	86.45	87.5
620	94.42	50.87
621	90.18	69.21
622	87.94	98.31
623	92.43	38.75
624	95.42	23.27
625	85.95	69.6
626	93.92	54.08
627	97.41	9.91
628	95.67	31.62
629	95.91	36.24
630	95.42	36.84
631	94.92	27.83
632	95.17	35.84
633	87.69	80.28
634	90.68	61.63
635	96.66	20.54
636	93.67	40.23
637	88.44	63.45
638	89.19	66.46
639	97.41	16.19
640	94.67	26.94
641	96.16	19.22
642	96.91	14.01
643	95.67	22.79
644	97.16	19.95
645	90.93	39.85
646	96.16	26.12
647	90.68	49.46

## SkdStrTyp1

648	91.43	58.1
649	87.19	81.23
650	81.22	88.92
651	90.68	62.51
652	93.17	38.54
653	92.92	40.34
654	87.44	92.68
655	93.17	63.05
656	91.43	42.99
657	93.42	44.94
658	87.69	65.94
659	90.93	52.8
660	96.16	26.82
661	93.67	48.76
662	92.68	50.22
663	95.91	-11.32
664	94.42	16.95
665	95.42	20.52
666	95.91	20.01
667	96.91	22.28
668	94.92	27.04
669	96.16	4.54
670	94.17	25.44
671	92.18	38
672	91.43	55.32
673	89.19	60.19
674	90.43	63.35
675	89.94	68.09
676	88.44	98.79
677	91.68	59.98
678	91.68	56.88
679	96.16	16.8
680	94.67	28.56
681	93.67	34.08
682	88.94	62.64
683	96.91	14.01
684	89.69	79.66
685	90.18	82.28
686	95.42	6.79
687	93.92	54.08
688	96.41	37.47
689	90.43	60.19
690	93.17	20.3
691	95.17	36.71
692	91.93	45.6
693	94.17	32.17
694	90.43	60.91
695	92.92	30.45
696	91.93	26.76
697	93.92	42.11
698	90.93	42.97
699	92.18	50.03
700	94.92	36.59
701	96.91	19.77

## SkdStrTyp1

702	91.43	42.17
703	95.67	13.26
704	93.42	35.04
705	93.92	26.93
706	92.92	38.61
707	90.18	63.24
708	90.68	54.98
709	94.42	40.15
710	90.93	59.56
711	92.43	47.48
712	86.7	79.83
713	93.42	23.94
714	93.17	24.59
715	95.17	39.45
716	95.67	19.84
717	96.91	30.45
718	90.68	43.74
719	94.92	21.68
720	95.17	30.5
721	88.94	61.95
722	88.94	61.6
723	91.18	66.28
724	93.67	57.09
725	90.68	55.71
726	92.18	58.48
727	93.42	25.36
728	90.93	38.32
729	93.42	35.04
730	91.93	7.98
731	95.67	23.4
732	97.41	9.91
733	97.41	9.91
734	97.66	10.06
735	97.41	9.91
736	97.41	12.28
737	97.66	12.46
738	32.64	7.39
739	19.68	4.99
740	19.68	4.99
741	19.93	5.08
742	19.93	5.08
743	20.18	5.18
744	20.18	5.18
745	14.45	-0.25
746	1.99	1.31
747	2.74	2.09
748	4.73	-0.02
749	2.49	1.21
750	3.74	0.99
751	4.48	0.95
752	6.73	1.65
753	5.73	2.26
754	3.24	1.07
755	4.98	2.06

## SkdStrTyp1

756	7.47	3.06
757	3.99	1.99
758	3.74	0.99
759	7.22	1.91
760	5.73	0.22
761	5.73	1.2
762	7.22	2.92
763	3.99	0.97
764	7.22	0.95
765	6.73	2.67
766	6.73	1.65
767	2.24	1.26
768	4.48	2
769	9.22	3.11
770	7.47	3.06
771	5.98	1.3
772	7.22	1.91
773	6.73	1.65
774	7.72	2.2
775	6.98	1.78
776	6.73	1.65
777	8.22	1.55
778	7.72	3.19
779	8.47	3.62
780	6.23	1.4
781	6.48	1.52
782	8.97	2.95
783	8.22	3.48
784	6.73	1.65
785	6.48	2.56
786	6.98	1.78
787	8.47	2.65
788	6.73	2.67
789	6.48	1.52
790	8.47	2.65
791	9.22	3.11
792	8.97	2.95
793	6.73	1.65
794	8.47	2.65
795	8.22	2.49
796	9.47	3.27
797	7.97	2.34
798	8.47	2.65
799	11.21	4.36
800	8.72	2.8
801	9.22	2.18
802	6.98	1.78
803	9.97	3.58
804	9.22	3.11
805	9.22	3.11
806	8.72	3.77
807	7.22	1.91
808	9.22	3.11
809	9.47	3.27

## SkdStrTyp1

810	9.47	2.34
811	9.22	3.11
812	9.22	3.11
813	9.72	4.37
814	8.22	3.48
815	7.97	2.34
816	69.51	7.48
817	69.26	10.54
818	66.27	18.71
819	67.51	19.69
820	66.77	20.1
821	68.51	15.94
822	68.01	16.55
823	68.01	21.16
824	65.77	19.84
825	67.02	23.89
826	64.03	30.61
827	65.27	25.69
828	67.26	28.02
829	67.26	19.61
830	67.51	16.34
831	67.26	17.02
832	67.02	3.5
833	69.76	16.62
834	65.27	21.75
835	67.02	18.92
836	60.54	50.93
837	68.26	6.33
838	68.01	13.67
839	69.01	8.73
840	67.51	10.77
841	69.76	2
842	67.02	28.69
843	66.52	20.03
844	66.52	20.03
845	63.28	38.09
846	64.28	30.64
847	66.27	18.07
848	68.76	-9.94
849	67.76	16.45
850	67.76	24.24
851	64.77	27.23
852	64.03	37.53
853	66.77	20.1
854	64.03	35.38
855	64.52	32.41
856	68.01	36.51
857	64.03	32.34
858	67.26	23.18
859	68.51	6.54
860	64.28	32.37
861	66.02	23.5
862	66.27	20.62
863	70.25	6.49



## SkdStrTyp1

864	63.03	41.52
865	65.27	39.22
866	65.77	45.51
867	62.28	44.67
868	62.28	51.99
869	66.52	28.52
870	67.26	18.37
871	67.26	13.29
872	66.77	5.2
873	62.28	45.92
874	62.53	42.1
875	67.76	20.4
876	57.8	77.59
877	61.53	51.47
878	65.02	37.02
879	63.78	36.77
880	67.02	29.47
881	68.76	8.51
882	65.77	23.42
883	63.78	39.58
884	64.28	38.98
885	67.26	24
886	62.03	56.72
887	66.77	31
888	65.02	41.94
889	62.53	39.35
890	64.77	29.82
891	64.77	30.7
892	62.53	51.98
893	62.28	60.78
894	62.03	44.63
895	65.27	44.7
896	69.01	8.73
897	67.51	17.81
898	68.76	12.92
899	68.01	14.75
900	65.52	20.43
901	67.51	20.99
902	63.03	42.2
903	65.52	29.95
904	65.02	33.27
905	63.53	41.61
906	69.01	23.22
907	60.79	48.71
908	62.53	53.04
909	67.02	20.84
910	69.01	18.42
911	66.52	20.69
912	68.01	14.75
913	69.01	17.75
914	65.02	44.62
915	64.77	36.95
916	64.28	37.57
917	67.26	24.82

## SkdStrTyp1

918	65.02	38.45
919	67.51	24.95
920	64.77	24.73
921	62.78	44.12
922	60.29	49.26
923	69.76	5.92
924	66.77	17.55
925	62.03	47.67
926	66.27	26.02
927	68.51	12.76
928	68.51	8.3
929	65.27	18.44
930	67.02	22.29
931	66.52	20.69
932	69.26	13.26
933	63.78	43.68
934	67.76	21.81
935	64.28	28.88
936	66.02	27.56
937	68.51	12.76
938	66.77	38.32
939	59.54	53.77
940	70.25	15.09
941	66.77	19.47
942	66.77	35.19
943	63.78	40.97
944	66.52	22.89
945	64.28	18.87
946	62.28	29.45
947	67.02	20.17
948	63.03	41.52
949	60.04	73.93
950	67.02	34.42
951	69.01	19.05
952	69.01	16.2
953	65.77	24.22
954	60.79	52.04
955	68.76	19.54
956	68.26	15.82
957	67.76	15.59
958	67.76	14.63
959	68.26	15.82
960	68.01	13.67
961	67.76	14.63
962	66.77	18.21
963	68.26	16.66
964	64.28	29.76
965	64.52	40.42
966	61.78	48.77
967	68.01	22.7
968	66.02	30.03
969	65.27	30.77
970	65.52	28.25
971	64.77	33.23

## SkdStrTyp1

972	63.03	48.35
973	63.03	49.42
974	61.04	54.26
975	68.01	14.75
976	66.02	22.72
977	69.01	10.33
978	64.28	37.57
979	63.28	40.88
980	64.28	33.94
981	64.52	27.19
982	67.02	18.29
983	66.52	21.39
984	66.52	27.73
985	67.76	17.9
986	66.02	31.73
987	70	20.16
988	65.02	36.29
989	63.28	53.01
990	60.79	71.13
991	59.54	23.82
992	63.03	51.47
993	66.02	37.31
994	63.78	54.68
995	63.03	47.79
996	63.28	49.96
997	58.05	96.26
998	63.78	48.46
999	67.51	20.32
1000	68.76	11.6
1001	66.02	20.56
1002	63.53	30.54
1003	64.52	35.46
1004	66.02	35.01
1005	65.02	25.62
1006	68.26	18.73
1007	67.76	17.9
1008	66.02	25.11
1009	66.52	20.03
1010	66.02	20.56
1011	69.01	1.23
1012	69.01	8.73
1013	68.01	15.71
1014	67.76	13.54
1015	68.26	13.81
1016	67.26	17.02
1017	66.77	21.46
1018	69.51	13.45
1019	69.26	7.23
1020	68.26	15.82
1021	65.27	25.69
1022	65.27	38.52
1023	65.77	42.86
1024	66.77	27.82
1025	69.26	10.54

## SkdStrTyp1

1026	65.27	24.87
1027	65.27	37.81
1028	63.28	35.98
1029	69.76	9.44
1030	67.51	17.81
1031	66.02	35.79
1032	68.51	26.38
1033	67.02	28.69
1034	67.51	27.37
1035	67.51	17.11
1036	66.77	19.47
1037	67.76	21.08
1038	66.77	19.47
1039	66.77	18.21
1040	68.01	12.45
1041	68.51	12.76
1042	67.76	18.54
1043	67.26	19.61
1044	67.76	16.45
1045	64.28	31.52
1046	64.03	32.34
1047	67.26	18.37
1048	68.51	11.42
1049	65.52	24.95
1050	63.53	34.57
1051	63.53	47.87
1052	68.51	20.04
1053	69.26	-0.5
1054	68.26	9.74
1055	66.27	22.8
1056	65.02	32.47
1057	64.77	33.23
1058	64.03	34.65
1059	68.01	21.9
1060	67.02	29.47
1061	62.78	47.18
1062	61.29	53.12
1063	65.77	38.68
1064	69.01	27.55
1065	68.01	11.08
1066	67.76	14.63
1067	69.51	5.65
1068	66.77	24.59
1069	68.26	17.41
1070	66.27	24.39
1071	67.02	19.54
1072	66.02	21.24
1073	67.51	20.99
1074	65.77	31.7
1075	68.01	16.55
1076	62.28	49.89
1077	68.76	8.51
1078	69.76	5.92
1079	67.76	7.71

## SkdStrTyp1

1080	68.26	11.24
1081	68.26	22.01
1082	65.02	23.2
1083	67.51	19.69
1084	64.77	29.82
1085	65.52	20.43
1086	67.51	20.32
1087	67.26	17.02
1088	66.52	31.79
1089	63.28	37.39
1090	64.03	44.38
1091	64.52	39.72
1092	68.51	8.3
1093	69.01	3.21
1094	63.53	33.06
1095	67.51	18.45
1096	67.26	15.38
1097	68.51	15.94
1098	67.02	8.9
1099	68.51	12.76
1100	66.52	22.89
1101	65.27	28.19
1102	65.77	17.24
1103	67.02	11.91
1104	64.03	39.63
1105	66.27	15.87
1106	68.51	13.95
1107	68.01	17.31
1108	64.52	28.04
1109	67.76	19.15
1110	67.76	17.9
1111	67.26	24.82
1112	67.76	12.31
1113	63.28	28.73
1114	66.27	18.07
1115	64.77	28.08
1116	66.02	20.56
1117	64.77	28.95
1118	61.04	43.17
1119	65.77	32.55
1120	65.52	31.67
1121	62.53	49.9
1122	60.29	67.09
1123	55.31	97.71
1124	65.27	42.71
1125	68.01	15.71
1126	66.02	30.88
1127	67.51	19.07
1128	64.28	24.63
1129	66.27	28.45
1130	69.76	2
1131	64.03	27.97
1132	65.27	24.06
1133	67.26	23.18

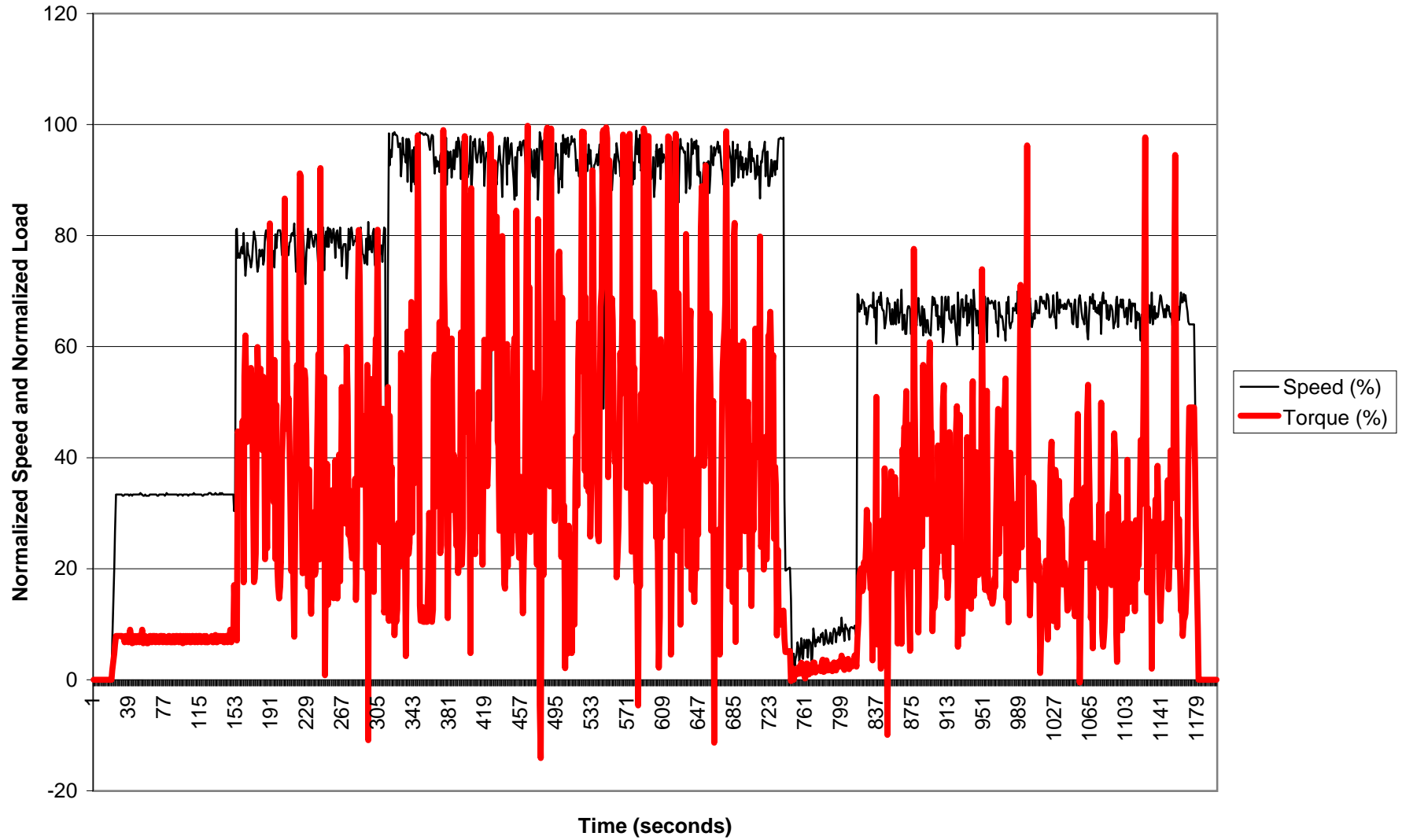
## SkdStrTyp1

1134	65.02	32.47
1135	66.02	25.93
1136	65.27	38.52
1137	65.77	31.7
1138	67.76	18.54
1139	69.26	10.54
1140	69.01	14.25
1141	67.51	18.45
1142	66.52	24.49
1143	65.27	28.19
1144	66.77	20.76
1145	65.27	28.19
1146	67.51	25.77
1147	66.52	35.93
1148	67.26	16.25
1149	65.77	21.89
1150	65.27	41.31
1151	66.02	32.57
1152	63.78	40.97
1153	67.26	38.53
1154	60.29	75.19
1155	53.31	94.5
1156	62.78	48.86
1157	66.27	29.26
1158	67.26	20.24
1159	64.77	28.95
1160	67.02	20.17
1161	69.76	12.38
1162	68.01	14.75
1163	68.01	7.9
1164	69.51	10.76
1165	68.26	11.24
1166	69.26	11.98
1167	67.51	16.34
1168	66.27	22.8
1169	64.52	38.32
1170	64.03	49.03
1171	64.03	49.03
1172	64.03	49.03
1173	64.03	49.03
1174	64.03	49.03
1175	64.03	49.03
1176	51.22	38.39
1177	38.42	27.62
1178	25.61	18.15
1179	12.81	9.3
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

SkdStrTyp1

1188	0	0
1189	0	0
1190	0	0
1191	0	0
1192	0	0
1193	0	0
1194	0	0
1195	0	0
1196	0	0
1197	0	0
1198	0	0
1199	0	0

### Skid Steer Loader Typical Operation 1 Cycle





## SkdStrTyp2

Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	19.63	3.35
22	39.26	6.8
23	58.89	10.77
24	78.53	15.17
25	98.16	23.14
26	98.16	23.14
27	98.16	23.14
28	98.16	23.14
29	98.16	23.14
30	98.16	23.14
31	98.16	23.14
32	96.41	24.4
33	99.9	0.29
34	98.9	19.02
35	99.4	11.51
36	98.65	8
37	99.15	2.4
38	99.15	5.37
39	99.15	2.4
40	98.9	11.04
41	98.41	10.61
42	98.16	18.36
43	98.9	15.75
44	97.66	17.94
45	93.67	36.7
46	98.16	19.64
47	94.67	33
48	98.65	21.13
49	99.65	-3.97
50	97.41	22.62
51	98.41	18.57
52	98.41	13.11
53	98.65	10.82

## SkdStrTyp2

54	98.65	5.08
55	98.9	-2.6
56	99.15	11.28
57	98.65	13.35
58	99.15	-0.3
59	98.16	15.02
60	98.9	20.27
61	97.91	20.53
62	97.16	25.35
63	95.42	33.31
64	97.41	28.13
65	98.9	2.29
66	97.16	20.9
67	96.16	26.82
68	98.41	17.06
69	98.41	19.85
70	99.15	11.28
71	98.41	18.57
72	98.9	11.04
73	99.15	5.37
74	99.15	-2.5
75	98.41	20.93
76	98.65	-0.42
77	98.65	10.82
78	97.66	23.99
79	98.65	15.5
80	98.65	20.06
81	98.9	15.75
82	98.9	17.53
83	97.66	23.42
84	98.16	23.76
85	98.16	18.36
86	94.42	41.13
87	95.17	32.3
88	96.91	34.17
89	99.65	11.75
90	99.15	19.24
91	99.15	11.28
92	99.4	5.55
93	99.15	13.87
94	99.4	-4.19
95	99.15	-2.5
96	98.65	20.06
97	97.66	22.79
98	96.41	26.92
99	96.41	27.67
100	97.66	19.23
101	96.41	24.4
102	93.42	47.76
103	93.17	42.12
104	97.16	25.94
105	97.91	22.26
106	90.43	58.76
107	93.42	49.6

## SkdStrTyp2

108	94.42	39.18
109	96.66	25.7
110	97.16	26.57
111	97.16	32.47
112	96.91	20.72
113	96.91	24.66
114	93.42	54.67
115	96.91	33.24
116	97.16	22.44
117	97.91	20.53
118	99.4	-0.18
119	96.16	22.46
120	98.16	23.76
121	98.41	10.61
122	98.41	18.57
123	95.42	36.84
124	96.16	23.08
125	93.67	34.98
126	98.41	17.06
127	96.91	27.89
128	97.91	20.53
129	95.91	28.24
130	98.9	-0.37
131	97.91	25.75
132	96.16	33.7
133	94.92	27.83
134	96.41	30.18
135	97.91	16.61
136	96.16	25.47
137	99.65	5.77
138	96.91	32.3
139	93.42	33.22
140	99.15	-10.51
141	97.16	40.03
142	98.65	17.29
143	95.91	29.94
144	93.67	50.59
145	95.42	35.96
146	97.41	20.14
147	97.41	25.48
148	90.93	60.04
149	93.42	53.05
150	96.41	34.75
151	97.16	28.01
152	97.41	24.39
153	98.41	-0.43
154	93.92	48.84
155	97.41	26.68
156	98.65	8
157	94.92	38.34
158	100.15	-6.89
159	96.66	33.08
160	94.42	59.59
161	98.9	-2.6

## SkdStrTyp2

162	90.93	57.2
163	93.42	37.62
164	96.66	28.58
165	92.43	53.45
166	99.15	20.48
167	93.17	46.76
168	98.16	20.73
169	96.16	26.82
170	97.16	24.79
171	96.91	29.56
172	96.16	29.19
173	95.17	39.45
174	95.42	38.64
175	95.67	37.87
176	99.65	-8.65
177	94.17	38.3
178	91.68	62.55
179	89.69	71.08
180	94.92	35.73
181	95.42	32.41
182	96.91	11.95
183	93.92	39.26
184	99.9	-1.92
185	97.91	16.61
186	96.41	23.23
187	95.42	36.84
188	92.92	42.13
189	93.67	44.98
190	93.42	39.36
191	93.42	51.37
192	93.67	45.93
193	94.92	35.73
194	96.16	26.12
195	93.17	60.85
196	96.91	26.45
197	90.68	66.51
198	92.68	43.03
199	95.42	34.2
200	95.42	30.61
201	91.43	61.84
202	99.4	11.51
203	96.66	24.53
204	94.92	34.86
205	92.43	55.02
206	93.42	53.05
207	92.43	58.6
208	92.18	58.48
209	93.17	56.87
210	93.17	46.76
211	96.16	26.82
212	92.68	43.03
213	94.67	37.34
214	92.18	63.14
215	96.91	27.14

## SkdStrTyp2

216	93.42	56.98
217	95.42	28.86
218	99.15	5.37
219	97.16	28.83
220	95.67	32.53
221	92.43	50.98
222	95.17	36.71
223	93.67	50.59
224	93.92	40.19
225	93.92	36.64
226	95.91	29.94
227	89.69	60.17
228	88.69	70.11
229	90.93	66.2
230	94.42	48.04
231	94.67	39.16
232	94.67	37.34
233	96.41	28.46
234	94.67	40.14
235	95.67	33.43
236	95.91	29.08
237	95.67	31.62
238	95.91	29.94
239	96.16	26.82
240	97.66	22.08
241	97.41	22.62
242	97.91	-0.43
243	98.16	20.73
244	98.65	5.08
245	99.4	-5.84
246	36.37	5.53
247	36.37	3.36
248	36.12	4.25
249	36.37	4.44
250	36.37	4.44
251	36.37	4.44
252	36.37	4.44
253	36.37	4.44
254	36.37	5.53
255	36.62	4.63
256	36.62	4.63
257	36.62	4.63
258	36.37	4.44
259	36.62	4.63
260	36.62	4.63
261	36.62	3.55
262	36.37	4.44
263	36.37	4.44
264	36.37	4.44
265	36.37	3.36
266	36.37	4.44
267	36.62	4.63
268	36.37	4.44
269	36.62	4.63

## SkdStrTyp2

270	36.37	4.44
271	36.37	5.53
272	36.37	5.53
273	36.37	5.53
274	36.62	4.63
275	36.62	4.63
276	36.62	4.63
277	36.62	4.63
278	36.62	4.63
279	36.37	5.53
280	36.37	4.44
281	36.62	4.63
282	36.62	3.55
283	36.62	4.63
284	36.37	4.44
285	36.62	5.71
286	36.37	4.44
287	36.62	4.63
288	36.62	4.63
289	36.62	4.63
290	36.62	4.63
291	36.37	3.36
292	36.62	4.63
293	36.37	4.44
294	36.37	4.44
295	36.62	4.63
296	36.37	4.44
297	36.37	4.44
298	76.48	2.3
299	84.95	78.05
300	97.41	29.84
301	93.92	36.64
302	92.92	46.71
303	95.17	34.97
304	95.17	34.09
305	95.42	36.84
306	95.42	35.09
307	96.16	29.19
308	95.42	34.2
309	95.17	31.4
310	97.91	24.15
311	96.41	30.18
312	96.16	30.06
313	96.41	29.31
314	96.16	30.06
315	96.41	30.18
316	95.91	29.94
317	96.16	30.06
318	98.16	24.85
319	98.41	17.06
320	98.16	22.45
321	100.4	7.04
322	99.9	6.14
323	95.67	25.91

## SkdStrTyp2

324	94.17	34.86
325	95.42	35.09
326	98.41	25.52
327	94.92	46.38
328	93.67	48.76
329	95.17	36.71
330	95.17	35.84
331	94.17	34.86
332	95.67	29.83
333	97.91	22.26
334	98.16	16.83
335	98.65	18.79
336	99.4	-0.18
337	98.9	11.04
338	99.15	-4.36
339	99.65	-3.97
340	99.65	-5.62
341	99.4	-4.19
342	99.4	-5.84
343	99.4	-4.19
344	99.65	-5.62
345	99.65	-3.97
346	97.16	27.26
347	95.91	33.56
348	94.67	31.2
349	94.92	27.83
350	94.17	37.43
351	95.42	36.84
352	93.42	35.92
353	92.68	56.64
354	93.42	46.82
355	93.42	40.26
356	94.17	39.22
357	93.92	38.35
358	95.17	39.45
359	97.41	22.62
360	93.17	58.98
361	97.41	23.84
362	96.66	23.38
363	97.41	24.39
364	98.9	24.29
365	96.41	36.56
366	94.42	37.38
367	93.17	43.97
368	96.66	30.31
369	95.67	32.53
370	96.41	29.31
371	95.91	30.83
372	96.41	32
373	95.67	28.97
374	97.41	24.93
375	95.91	33.56
376	98.41	20.93
377	94.67	39.16

## SkdStrTyp2

378	93.92	45.01
379	94.17	40.17
380	94.17	46.03
381	93.17	49.51
382	93.67	51.47
383	92.92	48.53
384	92.68	53.55
385	94.42	45.1
386	93.67	44.98
387	94.92	35.73
388	93.67	41.16
389	93.42	43.05
390	93.92	44.05
391	94.17	46.03
392	93.92	43.08
393	94.42	39.18
394	94.42	32.13
395	93.42	47.76
396	95.17	26.4
397	91.18	62.5
398	94.92	56.32
399	95.67	32.53
400	93.42	43.05
401	95.42	32.41
402	99.4	-5.84
403	27.65	7.56
404	27.15	12.22
405	26.91	12.07
406	50.07	96.98
407	89.94	37.66
408	85.2	48.52
409	84.45	62.27
410	86.95	32.54
411	85.95	37.64
412	83.71	61.41
413	88.44	31.07
414	89.69	22.97
415	89.19	27.13
416	88.69	32.28
417	88.94	29.09
418	89.94	27.34
419	89.44	23.65
420	89.44	26.25
421	90.18	23.11
422	89.94	20.76
423	91.43	2
424	89.94	28.33
425	89.94	24.61
426	89.44	28.21
427	90.68	21.77
428	89.69	24.54
429	88.69	26
430	88.69	31.17
431	88.69	5.55



## SkdStrTyp2

432	89.19	29.17
433	89.94	22.29
434	89.69	21.46
435	87.94	36.17
436	87.69	40.77
437	88.94	32.36
438	86.7	36.4
439	87.44	39.94
440	86.2	42.3
441	85.2	46.97
442	88.94	32.36
443	88.44	27.87
444	89.44	28.21
445	89.19	33.55
446	87.94	31.97
447	87.69	34.03
448	90.93	21.85
449	90.93	18.58
450	89.69	21.46
451	92.92	-12.72
452	85.95	41.46
453	89.69	22.97
454	88.44	31.07
455	88.69	30.07
456	88.19	32.08
457	87.19	41.28
458	91.68	-3.81
459	90.18	23.11
460	86.7	33.46
461	90.68	23.26
462	89.44	28.21
463	90.43	11
464	90.93	15.4
465	91.68	-1.91
466	91.68	4.02
467	91.93	4.06
468	91.93	2.05
469	91.93	2.05
470	91.93	4.06
471	91.68	4.02
472	91.68	4.02
473	89.94	12.36
474	91.43	7.84
475	90.68	17.52
476	91.93	0.05
477	91.68	4.02
478	91.18	11.26
479	90.43	16.36
480	89.94	19.11
481	91.68	0.04
482	91.43	3.98
483	91.68	4.02
484	91.43	3.98
485	91.43	3.98

## SkdStrTyp2

486	91.43	2
487	91.43	2
488	91.43	2
489	91.43	3.98
490	91.43	3.98
491	91.43	3.98
492	91.68	4.02
493	91.68	4.02
494	90.18	17.32
495	91.68	2.03
496	92.18	-1.91
497	91.43	3.98
498	90.93	14.12
499	92.43	0.07
500	87.44	33.9
501	87.19	42.73
502	88.44	34.38
503	89.19	26.17
504	88.69	27.96
505	90.18	17.32
506	86.7	37.26
507	87.94	34.15
508	88.19	36.29
509	88.94	34.57
510	88.19	28.81
511	89.44	22.88
512	90.93	15.4
513	86.45	43.86
514	86.45	44.58
515	86.95	38.2
516	86.95	43.35
517	86.95	38.97
518	87.69	37.78
519	87.19	35.77
520	86.45	49.83
521	84.95	56.84
522	86.95	45.51
523	85.2	43.35
524	86.45	43.14
525	87.94	34.15
526	88.19	24.05
527	89.19	24.38
528	91.43	15.61
529	92.43	-17.47
530	91.93	4.06
531	90.93	-5.59
532	89.69	28.28
533	87.44	39.21
534	88.19	27.77
535	89.19	24.38
536	87.94	39.42
537	84.7	51.34
538	86.7	39.6
539	87.94	34.15

## SkdStrTyp2

540	87.19	37.53
541	86.45	38.71
542	87.19	33.76
543	87.44	35.91
544	86.7	41.07
545	85.95	44.38
546	86.95	39.72
547	86.45	43.14
548	86.2	43.03
549	86.7	41.07
550	86.2	42.3
551	84.21	48.29
552	84.21	54.47
553	85.2	48.52
554	85.95	42.93
555	85.7	42.82
556	85.2	44.8
557	85.2	47.74
558	85.7	42.82
559	85.2	46.97
560	85.7	44.28
561	85.95	42.19
562	86.2	42.3
563	86.45	39.47
564	86.45	37.93
565	86.95	38.2
566	86.7	36.4
567	86.7	38.07
568	86.95	37.4
569	90.18	9.28
570	89.44	19.77
571	91.18	7.78
572	91.93	-3.82
573	91.43	0.03
574	90.68	9.42
575	87.94	29.78
576	88.69	26
577	83.21	55.88
578	88.19	25.82
579	91.18	-1.9
580	90.43	15.2
581	91.43	0.03
582	91.43	3.98
583	25.91	4.58
584	28.65	3.83
585	28.65	1.6
586	28.15	3.57
587	26.66	8.99
588	27.9	77.05
589	19.68	5.99
590	19.93	11.8
591	69.51	3.72
592	68.76	2.98
593	65.77	21.17

## SkdStrTyp2

594	68.01	11.08
595	67.02	14.3
596	61.04	51.48
597	67.76	15.59
598	65.27	26.52
599	63.53	37.44
600	63.53	36.73
601	65.02	26.45
602	68.01	12.45
603	67.02	16.15
604	67.02	16.15
605	66.27	17.39
606	65.27	22.49
607	66.27	19.33
608	66.52	18.14
609	66.27	19.97
610	65.77	21.89
611	63.78	33.1
612	64.52	28.91
613	66.02	17.32
614	65.52	23.34
615	63.78	27.93
616	65.27	34.08
617	65.52	21.82
618	68.51	9.93
619	67.51	12.17
620	67.76	5.93
621	67.51	19.07
622	64.77	32.43
623	67.26	12.03
624	67.26	14.41
625	68.01	11.08
626	68.51	11.42
627	68.01	13.67
628	68.01	12.45
629	68.01	13.67
630	67.51	14.52
631	67.51	14.52
632	65.77	24.22
633	66.27	15.87
634	67.26	14.41
635	64.77	34
636	68.26	11.24
637	66.77	14.19
638	62.03	37.86
639	64.28	28.01
640	64.52	31.55
641	66.02	21.24
642	66.77	19.47
643	65.52	21.11
644	70.5	-1.04
645	60.54	52.6
646	67.51	13.42
647	67.51	14.52

## SkdStrTyp2

648	67.02	16.93
649	66.02	21.96
650	66.27	19.33
651	66.52	15.97
652	65.52	27.42
653	67.02	13.18
654	66.77	18.21
655	67.76	9.38
656	62.78	40.78
657	63.78	41.66
658	63.03	43.53
659	68.76	18.3
660	68.26	8.1
661	68.51	2.75
662	67.51	15.49
663	67.26	17.02
664	66.27	18.71
665	67.02	15.28
666	68.51	8.3
667	65.27	26.52
668	66.77	18.21
669	63.28	43.58
670	66.27	23.59
671	67.51	16.34
672	68.01	6.13
673	66.27	35.86
674	63.78	40.28
675	66.77	22.98
676	66.52	16.75
677	68.01	7.9
678	64.77	28.08
679	66.27	24.39
680	67.76	19.15
681	65.27	28.19
682	67.26	19.61
683	68.76	4.91
684	67.76	13.54
685	63.78	33.87
686	65.77	28.31
687	65.52	25.77
688	65.27	28.19
689	64.28	29.76
690	65.52	29.95
691	64.77	34.75
692	67.76	12.31
693	69.26	-4.24
694	64.03	32.34
695	66.02	19.27
696	66.02	19.9
697	67.02	18.29
698	68.51	8.3
699	67.02	20.17
700	66.02	22.72
701	69.01	-0.73

## SkdStrTyp2

702	69.26	1.47
703	69.01	3.21
704	67.26	20.91
705	68.26	8.1
706	68.51	8.3
707	68.76	4.91
708	65.77	24.22
709	60.79	56.06
710	64.77	32.43
711	62.28	42.72
712	59.04	75.27
713	59.04	72.56
714	67.26	18.37
715	61.04	49.28
716	61.78	53.64
717	68.26	15.82
718	67.76	9.38
719	61.53	43.25
720	67.26	17.72
721	67.76	14.63
722	68.26	16.66
723	69.26	1.47
724	63.78	36.77
725	68.76	1.01
726	66.77	19.47
727	64.28	28.01
728	63.78	37.48
729	64.77	31.58
730	63.78	37.48
731	66.77	15.18
732	69.51	10.76
733	69.01	11.78
734	67.02	15.28
735	64.28	29.76
736	64.77	29.82
737	64.28	40.37
738	64.03	45.62
739	68.26	14.88
740	65.27	13.57
741	64.77	20.93
742	64.77	27.23
743	63.28	35.26
744	62.03	38.56
745	65.52	24.95
746	67.76	10.92
747	69.51	-0.26
748	68.01	9.56
749	61.78	40.6
750	61.53	55.41
751	64.77	36.95
752	65.52	27.42
753	67.26	17.72
754	60.79	49.27
755	62.53	45.96

## SkdStrTyp2

756	65.27	41.31
757	62.03	45.26
758	64.28	33.94
759	64.28	34.68
760	65.52	20.43
761	66.77	18.21
762	68.76	2.98
763	67.76	10.92
764	66.77	18.21
765	68.01	11.08
766	67.51	13.42
767	67.51	10.77
768	67.26	15.38
769	67.76	9.38
770	66.27	19.33
771	68.76	4.91
772	66.02	21.24
773	67.02	16.15
774	67.51	9.22
775	67.76	12.31
776	67.76	7.71
777	67.51	10.77
778	66.77	17.55
779	67.51	10.77
780	66.77	13.06
781	67.76	7.71
782	63.28	33.02
783	57.55	73.79
784	62.78	50.95
785	63.53	42.3
786	64.52	38.32
787	68.76	8.51
788	68.51	4.68
789	63.28	30.5
790	59.54	62.32
791	68.51	15.01
792	66.77	20.1
793	67.02	17.63
794	64.77	28.08
795	67.76	2.14
796	61.29	46.4
797	62.03	42.68
798	65.02	32.47
799	66.02	20.56
800	66.52	20.03
801	66.77	18.21
802	61.78	44.59
803	68.01	13.67
804	70.25	-3.23
805	69.01	-0.73
806	68.51	-3.04
807	65.52	17.85
808	68.26	-1.35
809	68.26	-3.24

## SkdStrTyp2

810	68.51	-3.04
811	68.51	-3.04
812	68.51	-3.04
813	68.51	-1.15
814	68.51	-3.04
815	68.51	-3.04
816	68.51	-3.04
817	63.53	33.83
818	63.03	38.05
819	64.03	33.14
820	63.28	38.09
821	63.78	35.34
822	64.03	25.41
823	64.52	35.46
824	64.52	28.04
825	64.28	32.37
826	65.77	25.03
827	65.77	24.22
828	65.77	21.17
829	65.02	28.14
830	64.52	24.68
831	64.28	28.88
832	64.77	26.39
833	61.04	49.28
834	67.51	15.49
835	68.01	7.9
836	68.76	2.98
837	68.01	7.9
838	67.76	14.63
839	67.26	14.41
840	68.01	7.9
841	69.01	-6.26
842	64.77	26.39
843	62.53	40.04
844	68.01	4.26
845	67.51	9.22
846	67.76	10.92
847	68.26	8.1
848	68.51	4.68
849	68.26	8.1
850	68.26	4.47
851	68.51	4.68
852	67.51	10.77
853	66.52	17.47
854	66.27	20.62
855	66.52	15.97
856	64.77	23.92
857	66.27	1.05
858	64.28	27.14
859	65.02	25.62
860	61.04	49.84
861	64.03	38.93
862	64.03	35.38
863	63.28	29.62



## SkdStrTyp2

864	65.52	28.25
865	65.52	23.34
866	65.77	25.03
867	65.02	30.74
868	64.28	28.01
869	65.27	24.87
870	68.51	0.79
871	69.01	-2.63
872	68.76	-2.84
873	69.01	-2.63
874	65.77	25.03
875	61.53	49.31
876	64.52	37.62
877	65.52	27.42
878	65.02	24.8
879	65.52	24.14
880	66.52	21.39
881	64.52	25.5
882	66.02	25.11
883	66.77	23.78
884	68.26	12.6
885	66.27	22.04
886	67.51	10.77
887	66.27	19.97
888	64.52	30.67
889	64.77	34.75
890	65.27	29.04
891	65.27	23.27
892	66.52	28.52
893	67.51	10.77
894	67.76	15.59
895	68.01	7.9
896	69.26	3.46
897	67.76	9.38
898	68.76	4.91
899	69.76	-17.2
900	66.27	22.8
901	60.29	61.46
902	63.78	41.66
903	65.77	34.17
904	65.77	27.49
905	68.76	4.91
906	66.27	16.67
907	67.02	16.93
908	68.51	2.75
909	66.52	21.39
910	69.01	-2.63
911	69.01	-2.63
912	26.16	4.7
913	26.16	3.67
914	26.16	3.67
915	26.41	3.79
916	25.91	3.55
917	25.91	3.55

SkdStrTyp2

918	25.91	3.55
919	25.66	3.44
920	26.16	3.67
921	25.91	3.55
922	25.91	3.55
923	26.16	3.67
924	25.91	3.55
925	25.91	3.55
926	25.91	3.55
927	25.91	3.55
928	26.16	3.67
929	25.66	4.46
930	26.16	3.67
931	25.91	3.55
932	26.16	3.67
933	25.91	3.55
934	25.91	3.55
935	25.66	3.44
936	26.16	3.67
937	25.91	3.55
938	25.91	3.55
939	25.91	3.55
940	26.16	3.67
941	25.91	3.55
942	25.91	3.55
943	25.91	3.55
944	25.91	3.55
945	25.91	3.55
946	25.91	3.55
947	25.91	3.55
948	26.16	3.67
949	25.91	3.55
950	25.66	3.44
951	25.91	3.55
952	25.91	3.55
953	26.16	3.67
954	25.91	3.55
955	25.91	3.55
956	25.91	3.55
957	25.91	3.55
958	25.91	3.55
959	25.91	3.55
960	25.91	3.55
961	25.91	3.55
962	25.91	3.55
963	25.91	3.55
964	25.91	3.55
965	26.16	3.67
966	25.66	3.44
967	26.16	3.67
968	25.91	3.55
969	25.91	3.55
970	25.91	3.55
971	25.91	3.55

## SkdStrTyp2

972	25.91	3.55
973	25.91	4.58
974	26.16	3.67
975	26.16	3.67
976	26.16	3.67
977	26.16	3.67
978	25.91	4.58
979	25.91	4.58
980	25.91	3.55
981	26.16	4.7
982	25.91	3.55
983	26.16	4.7
984	26.16	3.67
985	26.16	4.7
986	25.91	4.58
987	25.91	4.58
988	25.91	4.58
989	25.91	4.58
990	26.16	4.7
991	26.16	4.7
992	25.91	4.58
993	26.16	4.7
994	25.91	4.58
995	25.91	4.58
996	26.16	4.7
997	25.91	4.58
998	26.16	4.7
999	26.16	4.7
1000	26.16	4.7
1001	25.91	4.58
1002	25.91	4.58
1003	25.91	4.58
1004	25.91	4.58
1005	25.91	4.58
1006	26.16	4.7
1007	25.91	3.55
1008	25.91	4.58
1009	26.16	4.7
1010	25.91	3.55
1011	25.91	3.55
1012	25.91	3.55
1013	26.16	3.67
1014	25.91	3.55
1015	25.91	3.55
1016	25.91	3.55
1017	25.91	3.55
1018	25.91	3.55
1019	25.91	3.55
1020	25.66	3.44
1021	25.91	3.55
1022	25.91	3.55
1023	25.91	3.55
1024	25.91	3.55
1025	25.91	3.55

## SkdStrTyp2

1026	25.91	3.55
1027	25.91	4.58
1028	26.16	3.67
1029	25.91	3.55
1030	25.91	3.55
1031	25.91	3.55
1032	25.91	3.55
1033	25.91	3.55
1034	26.16	3.67
1035	26.16	3.67
1036	26.16	3.67
1037	26.16	3.67
1038	25.91	3.55
1039	26.16	3.67
1040	25.91	3.55
1041	26.16	3.67
1042	25.91	3.55
1043	26.16	3.67
1044	26.16	4.7
1045	25.91	4.58
1046	26.16	3.67
1047	25.91	4.58
1048	25.91	4.58
1049	26.16	3.67
1050	26.16	4.7
1051	26.16	4.7
1052	25.91	4.58
1053	26.16	4.7
1054	26.16	4.7
1055	25.91	4.58
1056	25.91	4.58
1057	26.16	4.7
1058	25.91	4.58
1059	25.66	4.46
1060	25.91	4.58
1061	25.91	4.58
1062	25.91	4.58
1063	26.16	4.7
1064	26.16	4.7
1065	26.16	4.7
1066	25.91	4.58
1067	26.16	4.7
1068	25.91	4.58
1069	25.91	4.58
1070	25.91	4.58
1071	26.16	4.7
1072	25.91	4.58
1073	25.91	3.55
1074	25.91	3.55
1075	25.91	4.58
1076	25.66	4.46
1077	25.91	3.55
1078	25.66	4.46
1079	25.91	3.55

## SkdStrTyp2

1080	25.91	3.55
1081	25.91	3.55
1082	25.91	3.55
1083	25.91	3.55
1084	25.91	3.55
1085	25.91	3.55
1086	25.91	3.55
1087	25.91	4.58
1088	25.91	3.55
1089	25.91	3.55
1090	25.91	4.58
1091	25.66	4.46
1092	25.91	3.55
1093	25.91	3.55
1094	25.91	3.55
1095	25.91	3.55
1096	25.91	3.55
1097	25.91	4.58
1098	25.91	3.55
1099	25.91	3.55
1100	26.16	3.67
1101	26.16	3.67
1102	26.16	3.67
1103	26.16	3.67
1104	25.91	3.55
1105	26.16	3.67
1106	26.16	3.67
1107	26.16	3.67
1108	25.91	3.55
1109	26.16	3.67
1110	26.16	3.67
1111	25.91	4.58
1112	25.91	4.58
1113	26.16	4.7
1114	26.16	4.7
1115	26.16	4.7
1116	26.41	4.83
1117	26.16	4.7
1118	26.16	4.7
1119	26.16	4.7
1120	26.16	4.7
1121	25.91	4.58
1122	26.16	4.7
1123	25.91	4.58
1124	26.16	3.67
1125	25.91	3.55
1126	26.16	3.67
1127	26.16	3.67
1128	26.16	3.67
1129	26.16	3.67
1130	26.41	3.79
1131	26.41	3.79
1132	26.16	3.67
1133	26.16	3.67

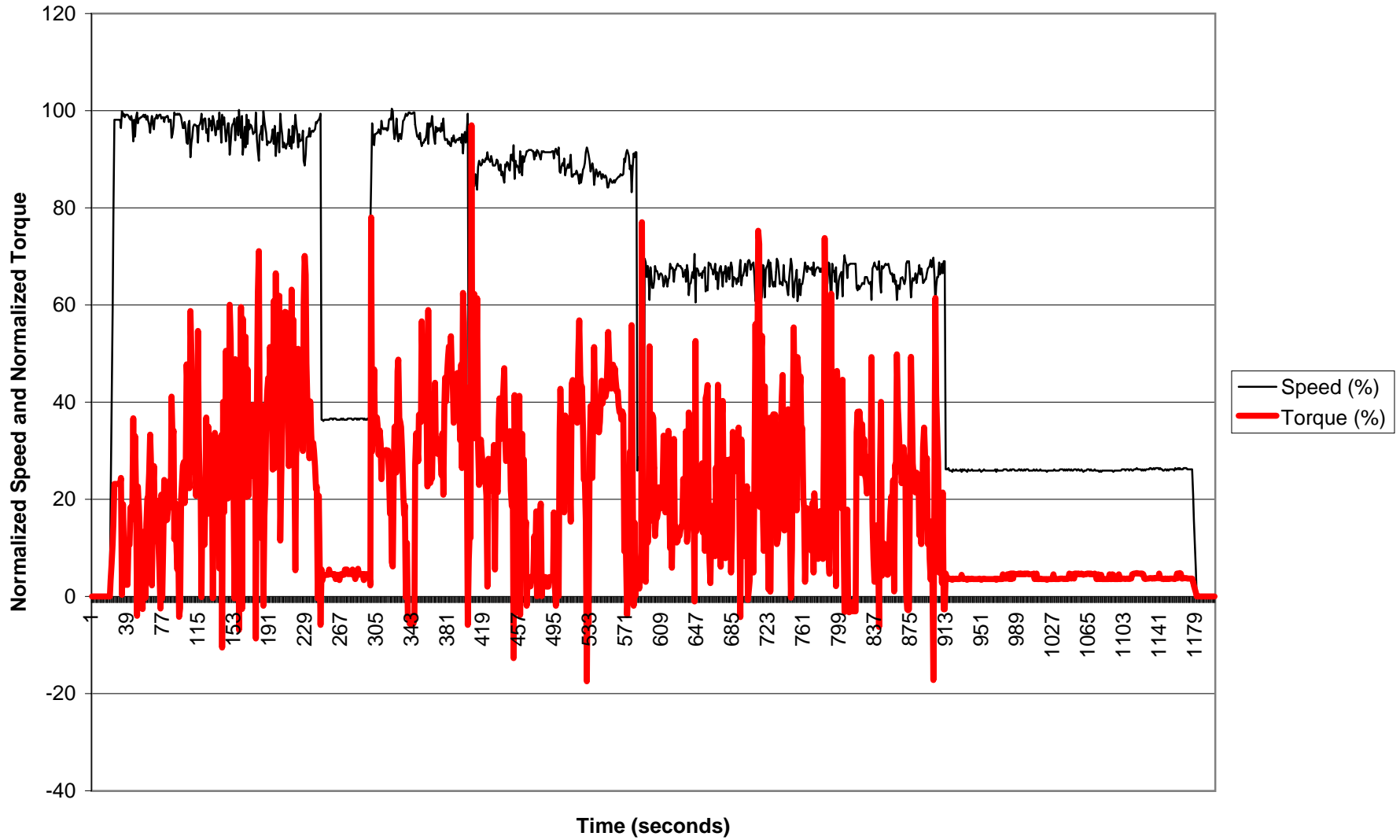
## SkdStrTyp2

1134	26.41	3.79
1135	26.16	3.67
1136	26.41	3.79
1137	26.41	3.79
1138	26.41	3.79
1139	26.41	3.79
1140	26.16	4.7
1141	26.41	3.79
1142	26.16	3.67
1143	26.16	3.67
1144	25.91	3.55
1145	25.91	3.55
1146	26.16	3.67
1147	26.16	3.67
1148	25.91	3.55
1149	26.16	3.67
1150	25.91	3.55
1151	26.16	3.67
1152	26.16	3.67
1153	26.16	3.67
1154	26.16	3.67
1155	26.16	3.67
1156	25.91	3.55
1157	26.41	3.79
1158	26.16	3.67
1159	26.16	4.7
1160	26.41	3.79
1161	26.16	4.7
1162	26.41	4.83
1163	26.16	4.7
1164	26.16	3.67
1165	26.16	3.67
1166	26.41	3.79
1167	26.41	3.79
1168	26.41	3.79
1169	26.41	3.79
1170	26.16	3.67
1171	26.16	3.67
1172	26.16	3.67
1173	26.16	3.67
1174	26.16	3.67
1175	26.16	3.67
1176	20.93	2.93
1177	15.7	2.24
1178	10.46	1.51
1179	5.23	0.77
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

SkdStrTyp2

1188	0	0
1189	0	0
1190	0	0
1191	0	0
1192	0	0
1193	0	0
1194	0	0
1195	0	0
1196	0	0
1197	0	0
1198	0	0
1199	0	0

### Skid Steer Loader Typical Operation 2 Cycle





## SkdStrSpe

Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	12.95	8.44
22	25.91	16.48
23	38.86	25.12
24	51.82	34.92
25	64.77	44.54
26	64.77	44.54
27	64.77	44.54
28	64.77	44.54
29	64.77	44.54
30	64.77	44.54
31	64.77	44.54
32	65.52	46.05
33	65.77	42.86
34	66.02	40.85
35	63.78	39.58
36	66.77	36.01
37	66.77	32.67
38	66.77	30.19
39	65.77	42.16
40	67.02	32.71
41	66.52	34.31
42	66.52	34.31
43	66.77	31.83
44	67.76	32.87
45	65.52	44.78
46	68.76	20.14
47	69.51	5.65
48	68.01	23.53
49	68.76	14.1
50	69.01	13.09
51	67.02	20.84
52	61.04	56.06
53	64.52	41.12

## SkdStrSpe

54	69.51	3.72
55	69.51	5.65
56	38.12	-2.26
57	16.69	7.53
58	69.76	-1.91
59	71	9.18
60	64.77	53.51
61	65.27	60.87
62	67.26	37.78
63	65.52	50.38
64	62.28	67.21
65	62.53	56.71
66	67.02	34.42
67	68.01	38.15
68	70	25.79
69	68.01	28.4
70	67.51	31.16
71	68.26	27.8
72	67.26	32.76
73	67.26	28.79
74	67.76	31.23
75	67.51	28.89
76	68.51	33.12
77	68.01	30.56
78	67.76	29
79	67.02	36.09
80	69.26	25.19
81	70.25	18.4
82	69.51	23.55
83	69.01	27.55
84	69.26	22.5
85	69.26	22.5
86	68.26	26.21
87	68.76	26.55
88	69.76	23.73
89	68.26	22.82
90	68.01	26.05
91	68.01	30.56
92	68.26	22.82
93	68.26	29.97
94	68.26	28.54
95	66.52	34.31
96	66.52	36.72
97	67.76	38.02
98	67.76	28.26
99	67.26	29.55
100	67.76	24.24
101	68.01	31.31
102	67.51	34.56
103	67.51	28.89
104	68.01	23.53
105	68.26	26.21
106	68.01	35.64
107	71.75	22.72

## SkdStrSpe

108	65.77	41.47
109	65.52	42.09
110	67.51	37.89
111	64.52	55.29
112	66.77	43.18
113	64.28	52
114	65.77	46.14
115	63.28	59.05
116	65.77	46.75
117	66.52	43.09
118	67.51	40.75
119	64.52	51.07
120	60.54	77.47
121	67.76	40.2
122	66.27	48.67
123	67.26	30.31
124	66.27	40.25
125	65.77	44.21
126	67.26	42.67
127	66.52	38.94
128	67.02	36.09
129	68.51	40.62
130	68.51	32.27
131	66.52	46.43
132	62.03	60.76
133	71.5	23.34
134	68.26	22.01
135	71	5.58
136	71.5	4.33
137	23.42	5.45
138	17.69	32.43
139	22.67	16.48
140	56.05	73.63
141	70	21.43
142	66.02	52.75
143	66.02	60.01
144	64.52	59.05
145	61.29	89.04
146	66.77	50.39
147	68.26	42.43
148	70.25	27.82
149	69.01	31.74
150	69.76	24.66
151	71.75	23.55
152	68.76	30.25
153	68.76	40.09
154	68.51	40.62
155	70.5	30.38
156	72.99	17.92
157	72	18.73
158	69.26	26.08
159	68.76	29.57
160	72	10.48
161	72.5	9.58

## SkdStrSpe

162	69.26	29.25
163	70	26.71
164	69.76	26.49
165	70.75	20.61
166	70.75	19.34
167	71.25	19.63
168	69.01	36.18
169	72.75	16.11
170	69.51	27.15
171	70	26.71
172	68.01	40.33
173	69.51	25.38
174	68.76	38.6
175	69.76	33.85
176	70	25.79
177	69.26	31.89
178	69.26	33.5
179	70	31.2
180	69.26	41.76
181	69.76	31.61
182	69.76	28.96
183	68.51	38.44
184	69.01	35.24
185	68.51	41.28
186	69.01	35.24
187	68.01	41.65
188	68.01	46.47
189	69.01	39.54
190	69.26	38.14
191	76.98	-22.59
192	70.25	21.59
193	71	17.37
194	72.25	13.54
195	72.5	9.58
196	14.7	18.61
197	19.43	8.84
198	20.18	15.31
199	19.43	14.98
200	19.43	14.15
201	19.43	13.3
202	19.68	13.41
203	18.68	15.47
204	21.67	10.68
205	19.93	11.8
206	19.68	11.69
207	19.68	11.69
208	19.68	11.69
209	19.68	11.69
210	19.68	11.69
211	19.68	11.69
212	17.19	21.44
213	18.44	18.62
214	20.18	11.02
215	33.38	91.71

## SkdStrSpe

216	86.45	13.6
217	86.2	18.62
218	83.71	30.49
219	82.96	36.76
220	82.46	35.56
221	83.46	37.02
222	82.21	40.08
223	82.46	26.75
224	80.47	60
225	85.45	31.59
226	83.46	43.71
227	82.21	46.69
228	81.46	55.39
229	82.46	50.32
230	83.21	41.24
231	80.72	43.34
232	81.46	45.9
233	82.46	45.94
234	81.71	45.13
235	81.71	42.63
236	81.96	45.93
237	83.96	41.44
238	79.72	62.57
239	82.21	62.34
240	83.46	45.97
241	80.72	61.97
242	83.46	51.14
243	82.46	59.1
244	82.21	60.43
245	81.96	60.03
246	82.21	59.74
247	82.21	53.43
248	83.21	50.41
249	81.71	58.92
250	82.71	55.75
251	82.71	57.62
252	83.21	55.35
253	82.96	48.95
254	83.71	44.5
255	84.7	41.63
256	82.21	51.6
257	83.96	44.52
258	82.21	60.09
259	83.71	49.75
260	84.7	42.4
261	84.21	46.01
262	84.45	43.1
263	84.21	43.06
264	83.71	49.01
265	84.21	45.28
266	83.71	42.18
267	83.46	45.97
268	81.96	53.93
269	84.45	39.18

## SkdStrSpe

270	83.96	46.73
271	82.71	54.69
272	82.71	52.95
273	80.47	56.95
274	80.97	57.95
275	86.45	31.17
276	81.71	50.21
277	80.22	62.26
278	87.94	14.18
279	86.2	20.99
280	69.01	19.05
281	75.24	49.8
282	76.23	40.57
283	63.28	93.66
284	58.79	94
285	74.74	52.89
286	75.24	45.56
287	75.98	49.35
288	78.23	20.25
289	75.98	37.13
290	74.99	26.83
291	74.49	50.94
292	76.23	49.03
293	72	70.32
294	76.98	28.75
295	74.49	50.34
296	76.23	35.68
297	77.73	19.02
298	72.25	91.45
299	2.74	94.35
300	75.98	43.02
301	75.49	48.42
302	76.48	39.03
303	74.74	35.53
304	74.74	27.76
305	75.73	38.52
306	72.99	56.2
307	73.74	52.85
308	77.23	28.82
309	70.75	70.1
310	44.59	96.63
311	74.74	47.24
312	76.48	38.21
313	71.25	58.89
314	71.75	85.81
315	73.74	54.92
316	76.98	28.75
317	72.99	54.75
318	67.76	96.77
319	75.73	49.15
320	73.49	52.68
321	72.99	53.94
322	75.24	44.12
323	68.01	87.69

## SkdStrSpe

324	71	56.52
325	76.23	44.07
326	72.25	56.38
327	62.78	98.13
328	74.49	55.41
329	75.49	41.72
330	72.75	58.46
331	78.23	16.03
332	76.98	30.91
333	73.49	43.89
334	73.99	56.83
335	75.49	21.84
336	71.25	57.71
337	66.77	94.41
338	70.75	58.08
339	74.24	46.83
340	73.49	53.26
341	76.98	16.51
342	78.23	20.77
343	69.26	94.17
344	40.36	99.59
345	70.5	65.1
346	69.26	78.2
347	76.73	42.68
348	72.5	56.92
349	78.23	35.1
350	73.49	55.97
351	73.24	53.09
352	76.73	24.65
353	78.23	20.25
354	76.73	30.86
355	78.48	15
356	72.75	44.33
357	78.23	21.31
358	76.98	23.84
359	77.48	21.16
360	76.98	20.47
361	76.23	23.62
362	77.98	17.74
363	74.99	31.34
364	75.98	26.29
365	76.48	25.49
366	77.23	21.1
367	77.48	20.06
368	77.23	23.91
369	77.48	21.75
370	76.23	27.42
371	79.22	18.78
372	74.74	38.43
373	74.24	36.48
374	74.49	12.38
375	73.99	33.54
376	76.48	20.9
377	78.72	20.37

## SkdStrSpe

378	77.73	22.46
379	74.24	32.95
380	77.48	21.75
381	75.49	29.3
382	75.49	33.72
383	76.73	22.97
384	73.49	44.51
385	79.72	-1.79
386	74.49	53.33
387	73.24	45.39
388	74.74	45.1
389	79.22	20.48
390	74.24	41.43
391	72.99	52.91
392	71.5	57.83
393	68.76	70.15
394	74.49	49.75
395	74.49	40.77
396	74.49	44.88
397	74.74	49.36
398	78.23	20.77
399	75.73	39.33
400	77.48	20.06
401	76.73	22.24
402	78.72	8.89
403	77.23	19.44
404	76.73	22.24
405	71.25	52.65
406	76.23	34.84
407	76.73	22.97
408	74.74	41
409	71.25	58.29
410	72.99	56.85
411	72.75	52.73
412	76.73	34.95
413	76.48	35.76
414	74.24	41.43
415	75.24	35.21
416	75.24	31.48
417	76.23	29.61
418	70	53.36
419	74.24	37.97
420	74.24	47.88
421	79.22	18.78
422	71.75	52.01
423	72.5	45.76
424	73.24	48.18
425	72.99	56.2
426	73.49	53.26
427	72.75	53.76
428	71.5	57.29
429	71	60.74
430	71	61.43
431	73.74	55.59



## SkdStrSpe

432	75.98	37.9
433	76.23	46.31
434	85.7	58.89
435	85.2	59.05
436	86.7	52.22
437	85.7	53.83
438	86.2	50.49
439	86.95	45.51
440	86.45	43.14
441	85.7	50.27
442	85.7	47.17
443	85.95	44.38
444	86.7	42.52
445	86.7	42.52
446	85.45	50.17
447	85.95	43.65
448	85.7	51.03
449	85.95	45.09
450	85.7	46.43
451	87.19	42.01
452	82.71	61.62
453	84.45	60.13
454	87.44	51.08
455	80.22	97.66
456	50.32	97
457	79.97	64.95
458	88.69	36.51
459	90.68	24.02
460	89.44	36.76
461	84.95	52.82
462	85.95	44.38
463	84.7	52.04
464	80.22	67.93
465	53.06	98.85
466	87.94	47.45
467	90.93	22.59
468	87.44	43.55
469	83.46	55.94
470	85.45	57.55
471	86.45	41.68
472	87.69	47.33
473	76.23	96.55
474	85.7	64.36
475	60.54	96.6
476	86.45	57.08
477	87.19	52.47
478	85.7	42.08
479	83.46	66.13
480	87.44	45
481	84.7	53.99
482	90.18	22.36
483	83.96	62.62
484	55.8	99.79
485	81.96	63.2

## SkdStrSpe

486	81.22	93.26
487	87.94	47.45
488	85.2	52.26
489	88.69	41.83
490	87.69	27.57
491	90.18	23.88
492	83.71	58.65
493	84.95	55.28
494	86.45	45.3
495	91.43	9.65
496	91.43	9.65
497	80.47	83.52
498	78.97	95.92
499	86.45	48.27
500	87.44	46.47
501	86.2	51.25
502	87.69	38.57
503	77.23	90.47
504	85.7	56.71
505	81.22	78.17
506	82.21	78.15
507	89.44	18
508	83.46	97.08
509	71.25	96.48
510	80.72	96.23
511	85.95	51.14
512	44.34	98.55
513	86.45	44.58
514	86.45	44.58
515	85.95	46.54
516	85.2	52.26
517	80.47	68.77
518	87.19	35.77
519	91.43	12.91
520	85.45	47.84
521	84.45	53.93
522	72.99	99.36
523	87.44	48.75
524	79.47	95.23
525	87.44	54.69
526	84.21	68.73
527	85.2	57.88
528	86.95	37.4
529	88.44	31.07
530	88.19	30.97
531	88.44	35.43
532	88.94	26.08
533	87.94	30.87
534	87.69	32.95
535	87.94	31.97
536	88.69	25.08
537	88.19	28.81
538	88.69	26
539	88.44	28.91

## SkdStrSpe

540	87.69	31.85
541	88.44	31.07
542	88.69	24.22
543	88.94	29.09
544	90.93	15.4
545	87.94	22.37
546	88.19	36.29
547	89.94	21.53
548	89.19	25.25
549	87.19	32.69
550	90.93	15.4
551	90.43	21.69
552	88.44	24.13
553	88.94	23.49
554	88.19	26.77
555	87.44	41.39
556	84.95	43.25
557	87.94	24.82
558	83.71	57.44
559	87.69	42.2
560	88.19	29.88
561	85.45	44.18
562	87.69	42.92
563	86.2	46.65
564	86.2	46.65
565	83.96	56.06
566	84.21	59.1
567	80.47	93.08
568	83.46	69.58
569	83.96	64.47
570	83.21	66.13
571	84.95	59.61
572	86.7	45.41
573	87.44	37.66
574	87.19	31.6
575	87.44	37.66
576	89.44	23.65
577	91.43	9.65
578	89.44	22.12
579	90.43	17.42
580	90.68	16.46
581	88.19	32.08
582	85.95	45.09
583	83.21	56.38
584	89.19	22.04
585	82.96	62.06
586	82.46	62.39
587	87.94	29.78
588	89.19	20.49
589	88.19	34.27
590	86.45	37.93
591	88.44	31.07
592	85.95	44.38
593	85.95	44.38

## SkdStrSpe

594	84.21	59.1
595	84.95	46.87
596	85.95	43.65
597	86.45	46.03
598	87.69	48.87
599	86.95	45.51
600	84.95	52.82
601	86.45	48.27
602	85.95	48.05
603	84.7	58.08
604	84.95	52.15
605	86.7	45.41
606	84.95	55.83
607	84.95	53.48
608	84.45	52.67
609	84.21	54.47
610	84.7	52.71
611	85.95	45.81
612	86.2	43.76
613	85.7	44.99
614	85.95	45.09
615	84.95	47.64
616	86.2	44.48
617	85.7	44.99
618	85.7	44.28
619	85.7	41.34
620	85.7	48.72
621	85.95	45.09
622	85.7	46.43
623	85.45	48.62
624	86.2	40.84
625	85.95	40.71
626	85.7	44.28
627	82.21	61.15
628	83.71	57.87
629	82.71	60.19
630	66.27	95
631	77.98	97.39
632	87.19	53.19
633	87.69	40.05
634	85.95	39.96
635	86.45	38.71
636	88.94	32.36
637	87.94	30.87
638	84.45	52.67
639	86.2	47.39
640	89.19	32.44
641	88.69	27.96
642	76.23	97.38
643	88.19	43.84
644	64.52	97.34
645	85.95	59.68
646	82.21	79.14
647	85.95	49.61

## SkdStrSpe

648	91.18	17.72
649	83.96	57.04
650	75.98	93.36
651	84.21	64.48
652	87.19	32.69
653	87.94	34.15
654	89.19	32.44
655	89.19	27.13
656	89.94	23.81
657	88.19	32.08
658	91.18	12.81
659	91.68	-5.66
660	90.68	5.8
661	21.67	-18.19
662	62.53	73.27
663	80.22	74.9
664	82.96	33.05
665	82.46	33.7
666	83.21	26.19
667	82.96	31.07
668	84.45	19.71
669	82.96	29.03
670	83.96	23.12
671	82.96	27.02
672	84.45	17.25
673	85.95	0.33
674	84.21	21.77
675	84.21	24.01
676	83.21	25.27
677	83.21	22.85
678	81.71	30.36
679	84.7	15.3
680	83.96	22.39
681	82.96	26.05
682	84.95	22.01
683	81.71	31.35
684	79.72	43.15
685	83.71	28.43
686	81.71	34.2
687	81.46	35.98
688	84.45	28.85
689	82.71	30.92
690	84.95	25.22
691	80.97	40.67
692	79.72	48.56
693	78.48	60.64
694	83.46	42.12
695	77.73	68.99
696	78.48	68.67
697	78.72	68.83
698	80.47	60.71
699	81.71	50.87
700	82.71	28.89
701	85.95	14.58

## SkdStrSpe

702	83.71	25.51
703	81.71	37.07
704	84.21	15.2
705	83.96	21.01
706	81.96	43.52
707	77.48	60.49
708	82.21	39.17
709	80.22	52.28
710	80.72	54.1
711	78.72	76.36
712	83.21	31.21
713	81.22	48.8
714	82.21	36.36
715	82.21	37.3
716	83.21	33.21
717	81.46	45.11
718	81.71	49.54
719	81.46	44.3
720	80.47	55.06
721	82.71	40.24
722	80.97	34.76
723	79.97	56.34
724	80.22	52.28
725	80.47	50.6
726	81.71	45.92
727	81.46	48.13
728	80.22	53.93
729	80.72	52.44
730	78.23	60.13
731	80.72	51.27
732	82.46	32.74
733	80.97	48.77
734	84.7	33.14
735	80.72	51.86
736	82.46	39.26
737	81.71	38.04
738	80.72	46.62
739	80.72	50.04
740	80.97	44.24
741	81.96	39.08
742	81.71	40.86
743	81.96	40.01
744	81.71	34.2
745	81.22	45.09
746	80.72	45.85
747	81.46	43.46
748	81.71	39.94
749	80.47	47.32
750	80.22	49.93
751	81.22	41.65
752	80.97	40.67
753	80.72	44.21
754	77.98	59.65
755	82.21	44.36

## SkdStrSpe

756	79.22	59.23
757	78.48	60.26
758	79.72	60.11
759	83.21	32.22
760	69.01	98.52
761	81.46	55.89
762	69.01	97.5
763	82.71	51.69
764	81.46	62.17
765	78.48	77.27
766	56.8	97.6
767	78.72	65.75
768	77.23	89.75
769	78.23	78.16
770	77.23	73.28
771	83.71	44.5
772	87.69	-1.53
773	82.71	30.92
774	81.96	40.01
775	85.2	25.35
776	85.2	24.47
777	85.95	19.37
778	82.71	30.92
779	84.45	27.82
780	84.95	26.14
781	83.71	26.45
782	81.96	37.18
783	85.45	22.96
784	83.96	31.67
785	85.2	14.33
786	80.97	47.37
787	81.96	35.28
788	79.47	57.48
789	82.21	42.72
790	85.95	20.91
791	86.2	18.62
792	87.19	5.41
793	81.71	38.04
794	82.71	35.71
795	84.21	23.21
796	84.7	23.39
797	84.7	19
798	86.45	6.83
799	85.2	19.91
800	83.21	30.19
801	82.46	38.34
802	82.46	40.16
803	85.2	18.32
804	81.46	40.79
805	87.94	7.13
806	80.22	61.4
807	80.22	61
808	86.2	20.99
809	80.22	44.98

## SkdStrSpe

810	81.22	52
811	80.97	55.23
812	79.22	63.4
813	77.73	82.6
814	80.22	58.88
815	82.71	48.2
816	80.22	54.97
817	84.7	26.96
818	84.95	20.57
819	85.2	19.91
820	83.21	41.24
821	86.7	9.8
822	84.7	21.91
823	85.45	18.39
824	85.45	17.5
825	85.95	15.68
826	86.2	10.98
827	86.2	10.98
828	85.95	14.58
829	86.2	12.27
830	85.7	14.5
831	85.95	14.58
832	85.2	18.32
833	83.46	26.32
834	82.96	27.02
835	79.47	57.89
836	81.46	49.51
837	82.96	42.02
838	85.95	16.7
839	84.21	23.21
840	86.45	6.83
841	85.7	15.6
842	84.7	21.2
843	87.19	3.77
844	86.45	3.71
845	75.73	67.45
846	85.2	21.38
847	85.2	22.85
848	82.46	29.76
849	83.71	28.43
850	86.7	11.17
851	85.7	17.58
852	84.95	18.25
853	81.22	35.86
854	81.46	32.18
855	82.46	47.45
856	82.71	29.9
857	83.46	30.34
858	81.71	36.1
859	81.71	43.49
860	82.21	34.49
861	84.21	24.01
862	84.95	19.84
863	82.71	33.85



## SkdStrSpe

864	80.72	49.4
865	80.47	50.6
866	81.46	43.46
867	78.72	56.75
868	80.47	51.79
869	82.46	48.91
870	80.47	55.56
871	80.47	52.37
872	81.71	42.63
873	79.97	53.84
874	73.49	96.63
875	81.71	38.04
876	80.97	42.5
877	79.97	51.64
878	81.46	42.59
879	81.96	40.01
880	81.71	43.49
881	80.97	40.67
882	81.96	40.92
883	81.46	37.94
884	80.72	50.66
885	85.45	17.5
886	86.7	2.08
887	86.2	10.98
888	86.2	9.63
889	86.2	10.98
890	86.2	9.63
891	86.45	8.3
892	86.2	9.63
893	86.2	9.63
894	86.2	10.98
895	86.2	9.63
896	86.2	8.22
897	86.2	9.63
898	85.95	9.54
899	83.71	26.45
900	78.48	58.91
901	83.21	38.66
902	82.21	40.98
903	80.47	45.83
904	81.71	45.13
905	81.96	35.28
906	81.96	37.18
907	81.96	36.23
908	81.71	40.86
909	81.46	38.91
910	81.22	40.73
911	80.97	41.6
912	78.72	57.6
913	83.46	28.29
914	79.47	54.68
915	84.45	28.85
916	83.46	38.76
917	79.97	47.25

## SkdStrSpe

918	77.48	61.89
919	81.46	38.91
920	77.48	50.94
921	79.47	56.61
922	79.97	51.64
923	81.96	41.81
924	81.96	45.15
925	74.49	97.37
926	80.97	62.49
927	81.46	41.7
928	79.72	53.21
929	81.71	42.63
930	80.72	58.28
931	80.47	40.55
932	85.2	19.91
933	78.23	60.51
934	73.99	98.35
935	80.47	60.35
936	81.46	49.51
937	76.23	71.53
938	83.96	28.57
939	77.48	59.37
940	80.22	49.3
941	84.95	22.01
942	83.71	23.03
943	79.72	59.09
944	49.58	99.89
945	80.22	49.93
946	80.72	53.01
947	72.5	97.53
948	83.46	35.24
949	85.7	20.07
950	79.47	55.67
951	78.72	65.04
952	77.73	63.17
953	84.45	39.98
954	82.71	47.45
955	36.12	99.5
956	80.47	57.8
957	74.74	97.31
958	77.48	59.72
959	77.73	61.53
960	76.48	82.98
961	75.24	96.5
962	78.23	96.61
963	77.73	81.69
964	82.21	36.36
965	76.48	68.04
966	81.46	45.11
967	80.72	40.61
968	85.95	15.68
969	84.45	22.55
970	83.21	26.19
971	84.45	15.25

## SkdStrSpe

972	85.2	19.91
973	84.21	27.69
974	85.7	13.32
975	85.95	10.88
976	86.95	6.94
977	85.95	9.54
978	86.2	9.63
979	83.46	28.29
980	83.96	23.12
981	76.23	60.12
982	82.96	29.03
983	84.21	22.47
984	85.2	19.14
985	80.97	36.76
986	83.71	23.03
987	82.71	24.17
988	84.21	22.47
989	81.71	33.26
990	85.45	27.41
991	86.45	13.6
992	85.2	18.32
993	83.46	25.39
994	82.96	29.03
995	81.96	30.49
996	84.21	22.47
997	83.46	24.52
998	84.45	20.44
999	83.96	21.01
1000	82.46	26.75
1001	84.21	23.21
1002	82.46	45.94
1003	80.97	39.72
1004	80.72	44.21
1005	84.45	31.97
1006	81.46	35.01
1007	84.95	25.22
1008	80.72	45.85
1009	77.73	59.51
1010	77.23	65.51
1011	77.98	69.16
1012	77.98	69.16
1013	78.23	72.96
1014	78.97	59.79
1015	84.95	30.2
1016	85.2	18.32
1017	84.45	18.14
1018	85.45	19.21
1019	79.97	46.52
1020	81.22	45.09
1021	88.44	-7.08
1022	84.7	19.76
1023	84.7	19.76
1024	81.71	48.85
1025	81.71	37.07

## SkdStrSpe

1026	83.21	34.16
1027	81.22	40.73
1028	81.22	40.73
1029	79.97	51.06
1030	80.47	43.3
1031	77.98	61.21
1032	81.46	46.67
1033	78.48	58.24
1034	83.21	42.07
1035	81.22	49.48
1036	77.73	58.25
1037	79.97	53.3
1038	80.72	43.34
1039	81.46	50.17
1040	79.72	54.27
1041	80.97	40.67
1042	80.22	52.28
1043	81.71	41.76
1044	80.47	54.55
1045	83.46	38.76
1046	80.47	46.59
1047	81.46	49.51
1048	80.97	46.64
1049	80.72	45.85
1050	82.21	40.08
1051	81.22	45.09
1052	81.71	41.76
1053	81.71	35.15
1054	81.71	38.04
1055	81.22	42.55
1056	81.46	37.94
1057	82.21	34.49
1058	80.47	44.17
1059	81.71	39.94
1060	80.72	42.46
1061	80.97	42.5
1062	81.96	38.14
1063	81.96	39.08
1064	80.72	41.55
1065	81.96	41.81
1066	77.98	58.36
1067	79.22	59.23
1068	83.96	35.55
1069	84.21	23.21
1070	76.98	88.26
1071	70.25	70.07
1072	41.11	96.06
1073	80.97	46.64
1074	74.74	97.31
1075	81.22	47.39
1076	76.73	69.1
1077	81.71	39
1078	80.72	50.66
1079	79.97	52.76

## SkdStrSpe

1080	81.96	37.18
1081	86.45	9.72
1082	86.7	8.38
1083	86.45	9.72
1084	86.45	8.3
1085	86.45	8.3
1086	86.45	9.72
1087	86.2	9.63
1088	86.45	9.72
1089	86.45	9.72
1090	86.2	9.63
1091	86.45	8.3
1092	80.72	36.66
1093	79.72	57.98
1094	79.72	49.8
1095	80.97	39.72
1096	78.23	58.14
1097	81.96	41.81
1098	81.46	41.7
1099	79.47	55.18
1100	83.21	35.09
1101	81.22	45.09
1102	79.72	50.98
1103	80.22	49.3
1104	80.72	48.06
1105	82.71	41.96
1106	80.72	46.62
1107	80.97	44.24
1108	80.22	48.66
1109	80.47	45.02
1110	81.71	41.76
1111	80.97	45.07
1112	80.97	43.38
1113	81.71	38.04
1114	80.22	44.13
1115	83.71	31.52
1116	81.71	36.1
1117	81.22	38.83
1118	80.72	41.55
1119	80.72	41.55
1120	82.21	35.42
1121	82.71	28.89
1122	80.72	43.34
1123	81.96	33.4
1124	82.71	30.92
1125	80.47	48.02
1126	82.46	30.77
1127	81.22	40.73
1128	81.46	38.91
1129	80.47	46.59
1130	83.71	24.63
1131	86.2	20.23
1132	81.96	40.01
1133	80.72	45.85

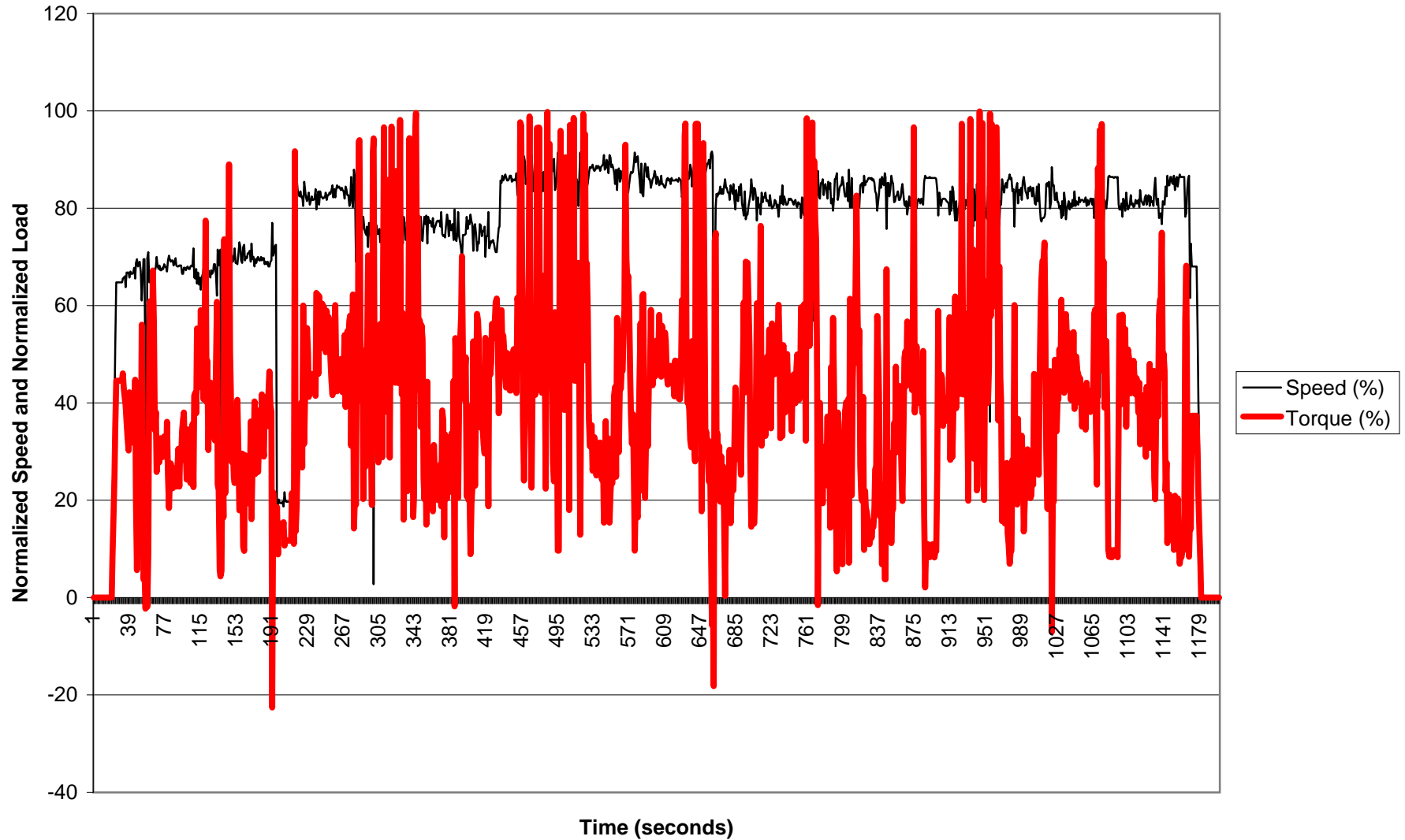
## SkdStrSpe

1134	81.96	37.18
1135	77.98	58.03
1136	78.72	61.17
1137	78.97	61.3
1138	76.73	74.98
1139	81.46	45.11
1140	81.22	50.13
1141	80.72	46.62
1142	84.45	21.84
1143	82.46	27.74
1144	86.7	11.17
1145	84.7	21.2
1146	84.7	21.2
1147	86.45	14.76
1148	86.45	16.87
1149	85.2	18.32
1150	84.95	19.84
1151	86.7	9.8
1152	83.71	20.95
1153	85.95	14.58
1154	86.45	14.76
1155	84.45	20.44
1156	85.95	12.18
1157	86.95	6.94
1158	86.45	8.3
1159	86.45	8.3
1160	86.45	9.72
1161	86.45	9.72
1162	86.45	11.07
1163	78.23	56.98
1164	78.97	68.19
1165	83.96	33.68
1166	85.95	12.18
1167	86.7	8.38
1168	61.53	17.56
1169	72.75	14.08
1170	68.01	37.35
1171	68.01	37.35
1172	68.01	37.35
1173	68.01	37.35
1174	68.01	37.35
1175	68.01	37.35
1176	54.41	29.21
1177	40.81	20.97
1178	27.2	13.67
1179	13.6	7
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

SkdStrSpe

1188	0	0
1189	0	0
1190	0	0
1191	0	0
1192	0	0
1193	0	0
1194	0	0
1195	0	0
1196	0	0
1197	0	0
1198	0	0
1199	0	0

### Skid Steer Loader High Speed Transient Operation Duty Cycle





Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	13.8	4.5
22	27.6	8.8
23	41.41	13.51
24	55.21	18.83
25	69.01	24.11
26	69.01	24.11
27	69.01	24.11
28	69.01	24.11
29	69.01	24.11
30	69.01	24.11
31	69.01	24.11
32	69.01	25.01
33	68.01	29.84
34	67.76	25.91
35	68.51	27.96
36	69.51	25.38
37	69.76	18.13
38	69.76	21.98
39	70.5	16.22
40	69.01	20.25
41	68.76	23.08
42	69.51	18.66
43	67.51	38.65
44	64.52	56.68
45	66.02	46.85
46	64.52	57.43
47	70	17.55
48	61.78	83.02
49	63.53	62.84
50	67.51	37.1
51	67.76	32.87
52	64.77	55.96
53	69.76	31.61

54	63.28	68.29
55	56.3	98.55
56	60.29	88.85
57	71	9.18
58	68.01	41
59	67.51	37.89
60	69.26	26.08
61	68.01	40.33
62	71.25	3.97
63	70.25	20.93
64	69.26	32.63
65	64.28	61.83
66	38.86	95.37
67	63.53	54.09
68	67.51	50.28
69	57.3	98.61
70	68.01	50.05
71	63.53	44.27
72	65.52	49.9
73	66.52	42.4
74	72.99	-1.99
75	71.5	0.27
76	68.26	35.75
77	61.29	85.48
78	59.79	98.39
79	62.78	89.23
80	69.51	21.13
81	61.29	80.4
82	72.25	13.54
83	63.03	62.82
84	68.76	42.69
85	66.77	27.02
86	67.76	27.5
87	63.28	53.54
88	58.05	98.63
89	55.06	99.23
90	30.39	99.46
91	69.01	31.06
92	70.75	20.61
93	70.25	15.09
94	62.28	61.74
95	65.27	56.02
96	70.75	21.95
97	64.28	63.88
98	72.5	24.17
99	37.87	99.19
100	65.52	53.12
101	61.78	85.25
102	60.54	81.59
103	70.25	28.65
104	66.27	47.55
105	71.25	18.27
106	65.27	50.3
107	64.77	59.05

108	44.84	97.3
109	65.27	54.71
110	70.5	21.09
111	68.76	28.87
112	66.27	44.38
113	64.28	63.88
114	72.5	15.9
115	64.52	52.99
116	62.53	88.67
117	41.11	99.74
118	64.77	67.93
119	24.17	95.95
120	67.51	42.77
121	53.31	96.74
122	69.76	20.03
123	63.03	58.22
124	71.25	18.27
125	62.28	63.8
126	64.52	56.68
127	70.5	29.67
128	72.99	0.14
129	67.76	31.23
130	61.53	84.7
131	58.55	50.35
132	70	22.99
133	70.75	19.97
134	60.04	88.43
135	68.76	40.78
136	62.78	60.82
137	68.76	30.92
138	62.28	59.02
139	63.28	50.97
140	68.26	37.48
141	57.55	98.62
142	69.76	33.85
143	68.76	27.36
144	67.51	30.39
145	66.02	49.1
146	70.25	19.69
147	65.27	50.3
148	60.79	91.7
149	26.41	98.71
150	70	28.41
151	62.53	60.8
152	69.76	28.19
153	61.04	75
154	65.02	52.55
155	72	3.04
156	67.76	29
157	62.78	64.94
158	51.57	99.71
159	65.52	57.51
160	65.52	39.3
161	69.51	23.55

162	59.29	92.23
163	58.05	98.63
164	68.01	42.98
165	73.49	3
166	71.75	18.58
167	63.78	81.33
168	66.02	52.31
169	49.83	99.22
170	68.51	27.19
171	56.8	94.86
172	70	28.41
173	65.02	48.73
174	71.75	2.67
175	69.76	20.64
176	68.51	39.93
177	58.79	97.18
178	51.32	99.39
179	68.51	27.19
180	67.76	36.39
181	61.04	67.16
182	70.25	26.93
183	71.5	12.73
184	65.77	38.68
185	62.28	51.46
186	60.29	96.66
187	47.83	95.89
188	66.02	53.72
189	68.51	38.44
190	67.02	45.33
191	66.52	41.03
192	63.28	51.47
193	69.76	3.99
194	71	20.12
195	69.76	14.75
196	71	13.48
197	71.5	9.82
198	70.75	13.25
199	71.25	9.5
200	70.75	7.12
201	70.75	13.25
202	71.5	8.13
203	71.75	6.66
204	63.28	46.68
205	70.75	13.25
206	70.75	11.95
207	69.01	20.88
208	64.28	45.68
209	70.25	9.95
210	71.5	11.35
211	71.5	15.04
212	70.5	11.7
213	70.25	17.69
214	69.26	21.69
215	69.76	20.03

216	70.25	19.06
217	66.52	22.89
218	67.51	23.29
219	69.51	19.29
220	69.51	19.29
221	68.26	20.57
222	61.04	60.64
223	66.27	38.85
224	62.03	56.04
225	64.77	53.51
226	28.15	99.7
227	66.52	38.22
228	62.28	74.57
229	71.5	15.04
230	70.5	17.83
231	65.02	45.87
232	64.77	61.8
233	67.02	42.58
234	72	11.95
235	70.25	16.91
236	71.75	6.66
237	67.26	27.24
238	69.51	10.76
239	70	18.26
240	69.26	21.69
241	69.26	21.69
242	70.25	16.05
243	67.76	24.24
244	67.26	24
245	61.29	67.18
246	62.28	53.06
247	64.03	44.38
248	62.28	54.76
249	62.03	59.86
250	27.4	98.15
251	64.77	49.67
252	56.55	95.82
253	63.78	59.94
254	70.5	17.06
255	71	1.6
256	62.78	62.8
257	67.26	36.18
258	66.52	38.94
259	65.52	50.38
260	70.5	42.74
261	67.51	40.07
262	62.03	83.74
263	69.01	29.05
264	71.75	18.58
265	71.5	17.69
266	70	17.55
267	67.26	26.45
268	70.75	16.38
269	64.03	78.22

270	66.02	47.44
271	70	13.82
272	70	14.92
273	71.5	8.13
274	71.5	4.33
275	71	15.64
276	71.75	8.48
277	67.26	32.76
278	69.26	21.69
279	66.27	33.44
280	70	17.55
281	71.5	4.33
282	68.26	24.52
283	69.26	19.16
284	68.26	24.52
285	69.01	17.75
286	69.51	18.66
287	68.01	20.48
288	68.76	23.95
289	69.76	16.62
290	61.78	62.68
291	65.27	39.92
292	67.26	24
293	61.78	54.21
294	67.76	42.87
295	62.78	85.92
296	62.03	36.46
297	65.02	60.86
298	67.02	39.85
299	62.28	68.41
300	63.28	59.05
301	68.01	24.38
302	68.76	22.24
303	66.77	34.36
304	64.52	50.59
305	65.27	45.96
306	65.77	42.86
307	70.5	-6.65
308	69.51	16.48
309	71.25	9.5
310	69.01	18.42
311	71.25	9.5
312	70.5	13.03
313	70.5	13.03
314	70.75	8.87
315	71	9.18
316	70.25	14.02
317	70.25	15.09
318	70.75	13.25
319	70	8.01
320	70.5	15.27
321	70.5	13.03
322	69.26	17.87
323	70.25	12.81

324	67.26	29.55
325	68.51	23.8
326	64.52	51.07
327	66.52	38.94
328	67.51	29.64
329	66.27	36.63
330	61.78	72.27
331	65.52	47.25
332	64.52	50.11
333	57.05	49.74
334	52.32	94.35
335	64.28	54.66
336	67.02	39.85
337	71.5	16.02
338	67.51	29.64
339	65.52	46.05
340	70.75	17.22
341	59.29	87.19
342	56.05	78.53
343	65.27	55.35
344	71.75	14.19
345	67.26	31.91
346	64.52	48.05
347	67.51	35.43
348	65.27	51.22
349	54.81	100
350	67.02	44.65
351	64.77	51.1
352	70	18.92
353	70	17.55
354	72.75	12.87
355	71.25	14.83
356	69.26	18.54
357	66.02	38.04
358	64.28	59.06
359	67.51	33.68
360	71.25	3.97
361	70.75	10.49
362	71	7.45
363	70.5	14.21
364	71.25	7.78
365	69.01	19.65
366	68.26	19.94
367	64.03	41.71
368	65.52	35.67
369	71	14.62
370	70.75	17.22
371	71.5	4.33
372	70.75	17.22
373	71.25	7.78
374	70.5	11.7
375	70	12.59
376	71	9.18
377	69.51	12.18

378	70.75	11.95
379	70.5	14.21
380	68.01	21.16
381	68.26	24.52
382	68.01	20.48
383	70.5	11.7
384	69.01	22.36
385	70.75	14.42
386	68.26	18.09
387	70.75	7.12
388	70.75	11.95
389	70.25	11.45
390	69.76	16.62
391	70.25	12.81
392	70	16.76
393	70	18.92
394	69.51	19.89
395	66.77	38.32
396	68.76	27.36
397	63.28	50.47
398	65.02	52.55
399	65.02	45.87
400	63.78	50.01
401	72	7.04
402	70.25	15.09
403	69.26	23.38
404	67.02	34.42
405	67.26	30.31
406	67.76	30.47
407	64.03	43.74
408	65.02	37.74
409	71	15.64
410	71.25	11.06
411	71.75	11.65
412	70.25	15.09
413	68.01	23.53
414	68.26	24.52
415	63.78	48.99
416	61.29	68.45
417	69.76	15.74
418	71	9.18
419	67.76	27.5
420	68.51	22.12
421	71	5.58
422	67.51	27.37
423	67.26	28.79
424	72.25	7.42
425	68.01	20.48
426	67.76	22.59
427	70.5	21.77
428	70.5	16.22
429	69.76	17.41
430	71.75	11.65
431	70.25	22.33



432	70.75	18.68
433	70.5	14.21
434	70.25	12.81
435	64.03	45.01
436	69.51	14.58
437	71.5	4.33
438	65.27	39.92
439	70.75	8.87
440	66.52	42.4
441	67.51	31.16
442	69.26	20.37
443	69.01	20.88
444	66.77	30.19
445	65.77	32.55
446	65.27	39.22
447	68.76	21.46
448	62.53	50.95
449	61.04	81.46
450	64.03	30.61
451	65.77	48.47
452	67.51	20.99
453	67.02	37.67
454	66.52	46.43
455	67.26	41.99
456	68.51	27.19
457	69.51	18.66
458	68.01	29.13
459	68.01	24.38
460	71	14.62
461	68.26	21.26
462	71.5	8.13
463	71.5	6.29
464	69.26	18.54
465	68.51	23.8
466	68.76	16.89
467	72	11.95
468	70.25	11.45
469	71.5	8.13
470	69.01	18.42
471	69.26	22.5
472	71.5	9.82
473	68.01	20.48
474	68.01	19.24
475	67.02	28.69
476	67.26	31.1
477	70.5	15.27
478	64.52	44.49
479	63.03	61.81
480	70.5	10.21
481	68.76	20.77
482	63.03	50.96
483	67.51	39.38
484	62.78	63.85
485	65.02	43.32

486	66.02	47.44
487	69.01	21.57
488	69.26	18.54
489	70.5	13.03
490	63.28	58.22
491	67.02	43.27
492	72.99	17.16
493	72.25	12.26
494	68.01	23.53
495	70	13.82
496	71	1.6
497	70.25	9.95
498	70	9.69
499	69.51	15.58
500	70	14.92
501	68.76	24.84
502	64.52	42.51
503	66.52	38.22
504	67.02	24.7
505	67.02	25.52
506	66.02	28.38
507	66.77	33.52
508	63.28	46.68
509	63.03	56
510	68.51	30.1
511	65.02	58.24
512	53.31	81.12
513	67.51	40.75
514	63.28	33.79
515	64.77	55.29
516	70.5	13.03
517	70.25	14.02
518	66.27	35.86
519	65.02	53.03
520	67.02	38.42
521	69.76	20.64
522	71.5	9.82
523	66.02	24.3
524	66.77	28.6
525	70.25	12.81
526	68.76	23.08
527	66.77	39.75
528	72	16.4
529	71	15.64
530	67.51	24.95
531	70.25	16.91
532	68.51	20.04
533	66.27	35.07
534	65.27	39.92
535	67.26	21.63
536	71.25	5.93
537	68.76	23.95
538	66.77	31.83
539	66.27	35.86

540	71.25	18.97
541	64.28	44.43
542	66.27	46.95
543	39.86	95.79
544	21.18	94.98
545	65.27	50.3
546	70	18.92
547	69.26	18.54
548	67.51	31.16
549	65.77	52.7
550	68.76	21.46
551	66.52	31.79
552	68.01	27.64
553	72.75	4.15
554	69.26	21.69
555	65.52	40.69
556	68.26	23.66
557	69.51	19.29
558	70.25	18.4
559	69.76	15.74
560	65.27	34.85
561	70.5	17.06
562	70.75	14.42
563	67.26	28.79
564	68.51	22.94
565	70	13.82
566	65.27	37.09
567	65.27	35.61
568	70	20.16
569	67.02	29.47
570	66.52	30.95
571	65.52	35.67
572	65.77	37.23
573	69.01	23.22
574	61.53	60.7
575	64.52	50.59
576	67.51	33.68
577	60.04	99.9
578	47.58	98
579	69.76	23.73
580	64.77	52.03
581	65.27	48.81
582	64.28	52
583	68.51	24.67
584	67.02	40.54
585	38.86	99.59
586	61.29	84.8
587	62.53	64.92
588	69.76	20.64
589	69.51	13.45
590	69.76	15.74
591	69.01	20.25
592	68.01	19.85
593	66.77	25.41

594	62.78	70.76
595	64.52	61.81
596	68.26	29.26
597	73.24	-18.66
598	70	9.69
599	68.76	18.93
600	70	15.89
601	70.25	8.29
602	69.76	13.63
603	68.76	18.93
604	69.51	18
605	68.01	21.9
606	69.51	16.48
607	69.01	28.32
608	62.53	62.77
609	66.77	37.57
610	67.26	36.18
611	62.78	52.5
612	65.77	53.67
613	66.77	41.12
614	69.76	26.49
615	66.52	31.79
616	69.76	20.03
617	64.52	48.05
618	60.79	97.99
619	63.53	50.49
620	71	9.18
621	71.25	12.46
622	67.02	34.42
623	70	17.55
624	69.51	20.5
625	67.76	21.08
626	70.75	13.25
627	69.76	19.42
628	65.02	45.25
629	66.77	38.32
630	68.01	32.1
631	67.51	25.77
632	67.26	24.82
633	69.01	20.25
634	67.26	26.45
635	67.26	31.1
636	65.27	41.31
637	65.77	41.47
638	67.76	29.74
639	69.51	1.73
640	68.51	25.53
641	68.51	34.96
642	72.99	6.63
643	69.26	21
644	65.52	39.3
645	68.01	26.86
646	67.26	30.31
647	72.5	1.64

648	67.51	32.81
649	68.01	26.86
650	67.26	32.76
651	70	15.89
652	70	12.59
653	63.78	48.99
654	65.77	38.68
655	66.52	32.63
656	67.51	26.58
657	66.52	35.93
658	66.77	31
659	66.52	31.79
660	69.01	20.88
661	69.26	19.77
662	71.5	8.13
663	47.33	17.78
664	44.1	30.71
665	48.08	17.02
666	95.67	35.21
667	98.65	21.13
668	91.68	58.85
669	97.91	27.62
670	92.43	49.25
671	89.94	72.7
672	90.43	64.64
673	94.42	53.46
674	90.18	69.8
675	97.41	27.37
676	94.17	53.36
677	91.93	61.87
678	93.67	52.32
679	97.41	23.84
680	96.16	28.35
681	89.19	71.72
682	98.65	23.5
683	92.92	55.24
684	65.02	97.34
685	87.69	60.37
686	89.19	82.15
687	86.7	99.52
688	91.68	60.94
689	97.16	25.94
690	87.69	80.28
691	95.17	34.97
692	96.41	31.09
693	95.17	32.3
694	91.18	61.37
695	93.42	48.69
696	98.65	20.06
697	98.41	10.61
698	96.91	26.45
699	98.65	10.82
700	94.92	30.4
701	96.91	25.82

702	98.41	18.57
703	98.9	8.18
704	99.15	16.01
705	97.91	2.1
706	98.65	8
707	97.66	23.42
708	96.91	24.1
709	89.94	63.13
710	96.66	28.58
711	95.42	32.41
712	94.92	32.2
713	95.67	37.87
714	92.92	45.79
715	93.92	26.93
716	97.41	23.25
717	96.91	28.7
718	89.44	74.64
719	89.19	69.58
720	96.16	32.78
721	92.68	53.55
722	91.68	62.55
723	95.67	32.53
724	85.45	97.24
725	92.68	51.07
726	91.43	47.21
727	97.66	25.07
728	99.4	8.59
729	98.16	15.02
730	94.17	30.34
731	96.16	36.39
732	96.91	22.93
733	94.17	42.11
734	93.92	44.05
735	97.41	19.04
736	99.15	8.38
737	98.41	21.85
738	98.65	10.82
739	98.65	2.21
740	98.41	10.61
741	98.41	2.15
742	98.65	8
743	97.91	10.23
744	97.91	7.56
745	93.17	44.9
746	96.91	20.72
747	96.66	35.83
748	91.18	39.82
749	89.44	75.81
750	97.91	10.23
751	92.18	57.81
752	95.67	31.62
753	97.41	28.96
754	99.15	2.4
755	99.15	22.44

756	97.66	33.8
757	97.66	25.07
758	95.91	31.74
759	97.16	24.79
760	94.17	35.73
761	97.91	7.56
762	98.65	18.79
763	94.67	38.22
764	90.93	62.06
765	94.92	38.34
766	92.18	52.53
767	96.16	24.27
768	96.16	36.39
769	96.16	30.96
770	96.91	27.89
771	97.66	22.79
772	96.41	32.92
773	93.17	42.12
774	92.43	50.98
775	91.93	54.02
776	94.42	38.25
777	96.16	26.12
778	96.91	22.93
779	97.91	16.61
780	98.16	15.02
781	97.91	20.53
782	98.41	10.61
783	97.91	19.44
784	97.66	17.94
785	96.91	24.1
786	95.91	28.24
787	97.16	24.24
788	94.17	33.98
789	93.17	38.54
790	90.18	61.34
791	94.67	42.13
792	95.17	33.2
793	97.16	22.44
794	96.41	28.46
795	93.17	48.61
796	94.17	38.3
797	93.67	43.06
798	93.92	39.26
799	96.41	25.59
800	95.42	45.83
801	91.93	60.64
802	96.66	29.43
803	89.94	61.2
804	97.16	25.94
805	96.41	28.46
806	97.41	23.25
807	97.41	22.62
808	95.42	31.51
809	92.18	54.91

810	95.91	31.74
811	96.16	29.19
812	94.67	33
813	95.42	28.03
814	92.18	56.4
815	95.91	31.74
816	94.67	32.1
817	96.91	26.45
818	98.16	15.02
819	97.41	23.25
820	97.91	19.44
821	97.91	14.8
822	98.16	16.83
823	97.91	12.66
824	98.16	12.88
825	98.65	13.35
826	96.41	25.59
827	96.16	24.86
828	96.91	25.22
829	95.17	27.15
830	98.16	16.83
831	93.92	39.26
832	94.17	43.09
833	94.92	40.29
834	98.9	11.04
835	72	14.43
836	68.76	21.46
837	66.02	41.55
838	67.26	34.49
839	64.03	41.71
840	60.29	88.35
841	66.52	50.74
842	66.52	46.43
843	59.79	89.01
844	67.51	42.09
845	67.51	38.65
846	68.76	33.23
847	68.26	32.18
848	64.77	34.75
849	64.77	43.9
850	46.09	99.48
851	69.51	33.66
852	65.27	50.3
853	65.77	47.34
854	66.77	47.16
855	65.52	48.9
856	69.51	19.89
857	68.26	28.54
858	69.76	14.75
859	69.26	20.37
860	68.26	23.66
861	65.77	33.37
862	69.51	20.5
863	71.5	13.95



864	71.25	11.06
865	69.76	19.42
866	68.51	22.12
867	68.51	21.35
868	67.26	22.39
869	67.26	28.79
870	61.29	69.75
871	65.27	46.56
872	71	18.12
873	65.52	32.52
874	67.02	23.08
875	67.76	20.4
876	66.52	29.32
877	60.54	79.6
878	64.28	59.06
879	35.63	99.57
880	65.77	42.16
881	63.53	54.69
882	72.25	13.54
883	69.51	19.29
884	64.03	51.99
885	63.53	59.06
886	64.28	61.83
887	71.5	32.77
888	67.76	29.74
889	70.75	8.87
890	68.01	26.86
891	67.26	27.24
892	70	15.89
893	71.5	11.35
894	70.75	13.25
895	68.51	21.35
896	69.51	17.28
897	68.51	19.43
898	66.27	33.44
899	63.03	46.64
900	66.52	22.12
901	67.76	28.26
902	64.77	42.56
903	68.51	20.67
904	65.77	35.73
905	69.76	17.41
906	61.53	59.81
907	64.03	59.94
908	39.86	98.72
909	65.77	49.99
910	65.02	52.08
911	68.01	32.1
912	69.76	17.41
913	70	12.59
914	68.51	20.67
915	69.26	21
916	68.76	22.24
917	67.76	18.54

918	70.5	15.27
919	72.25	7.42
920	71.5	8.13
921	71.75	8.48
922	65.27	39.92
923	67.02	18.92
924	70.75	19.97
925	70	12.59
926	64.77	48.64
927	68.51	20.04
928	69.51	18.66
929	70	17.55
930	67.26	26.45
931	68.51	22.94
932	71.25	9.5
933	66.02	31.73
934	70	11.22
935	71.25	9.5
936	71.25	13.71
937	71	15.64
938	62.28	63.8
939	65.77	67.72
940	64.52	53.51
941	66.27	40.94
942	67.02	35.26
943	67.26	33.62
944	65.52	37.88
945	66.77	31.83
946	67.51	31.97
947	66.77	36.01
948	67.76	29
949	67.51	31.16
950	66.77	27.02
951	64.52	44.49
952	62.78	54.73
953	63.53	59.06
954	67.26	46.76
955	68.01	26.05
956	70.75	19.97
957	71.75	2.67
958	70.25	2.6
959	67.26	18.99
960	71	5.58
961	68.01	25.22
962	69.01	11.78
963	71.5	8.13
964	69.51	16.48
965	68.26	20.57
966	70.5	17.06
967	65.27	44.05
968	69.76	19.42
969	69.51	16.48
970	65.77	35.73
971	66.27	33.44

972	65.77	40.08
973	67.76	19.77
974	68.01	22.7
975	70.25	12.81
976	68.76	16.89
977	67.26	30.31
978	70.75	10.49
979	63.78	46.77
980	68.51	39.21
981	67.51	42.09
982	66.27	45.7
983	66.02	47.44
984	58.3	97.34
985	64.28	65.96
986	63.53	61.83
987	62.53	76.75
988	63.53	66.04
989	63.53	68.24
990	64.03	55.97
991	63.28	59.93
992	65.52	56.76
993	66.27	53.28
994	63.53	50.99
995	63.53	72.87
996	66.02	54.83
997	69.01	32.49
998	68.01	27.64
999	69.51	22.65
1000	63.28	52.49
1001	69.26	19.77
1002	70.75	14.42
1003	69.76	21.27
1004	64.28	54.66
1005	65.27	60.87
1006	64.28	58.22
1007	67.51	42.09
1008	66.77	42.49
1009	68.01	27.64
1010	66.52	35.93
1011	64.03	51.99
1012	70.5	19.83
1013	69.26	24.28
1014	68.01	25.22
1015	65.52	34.13
1016	67.26	24
1017	70.75	13.25
1018	71	10.77
1019	69.51	19.29
1020	69.76	15.74
1021	70.5	13.03
1022	70.25	14.02
1023	70.5	13.03
1024	69.01	20.25
1025	69.51	19.29

1026	69.01	21.57
1027	64.52	45.11
1028	63.03	59.92
1029	64.28	57.43
1030	61.29	87.04
1031	52.57	97.32
1032	62.53	63.83
1033	68.76	29.57
1034	65.02	44.62
1035	67.51	27.37
1036	63.78	46.18
1037	68.51	27.19
1038	68.01	29.84
1039	65.27	39.22
1040	68.26	26.21
1041	69.26	21.69
1042	68.51	20.04
1043	66.77	21.46
1044	71.25	15.83
1045	69.26	18.54
1046	70	15.89
1047	69.01	18.42
1048	63.53	27.89
1049	64.28	41.07
1050	66.27	37.39
1051	65.27	47.73
1052	66.27	33.44
1053	60.79	86.77
1054	67.51	43.46
1055	66.77	49.42
1056	69.51	32.06
1057	63.28	48.92
1058	66.77	38.32
1059	70.25	15.09
1060	70.25	18.4
1061	69.26	17.14
1062	69.01	18.42
1063	64.03	46.82
1064	62.78	60.82
1065	67.51	42.77
1066	66.27	49.2
1067	65.52	34.13
1068	66.27	45.7
1069	67.02	31.05
1070	66.02	38.76
1071	66.52	35.13
1072	67.51	27.37
1073	67.51	27.37
1074	68.51	26.38
1075	69.76	13.63
1076	71.25	11.06
1077	17.69	19.14
1078	21.92	23.99
1079	21.67	19.25

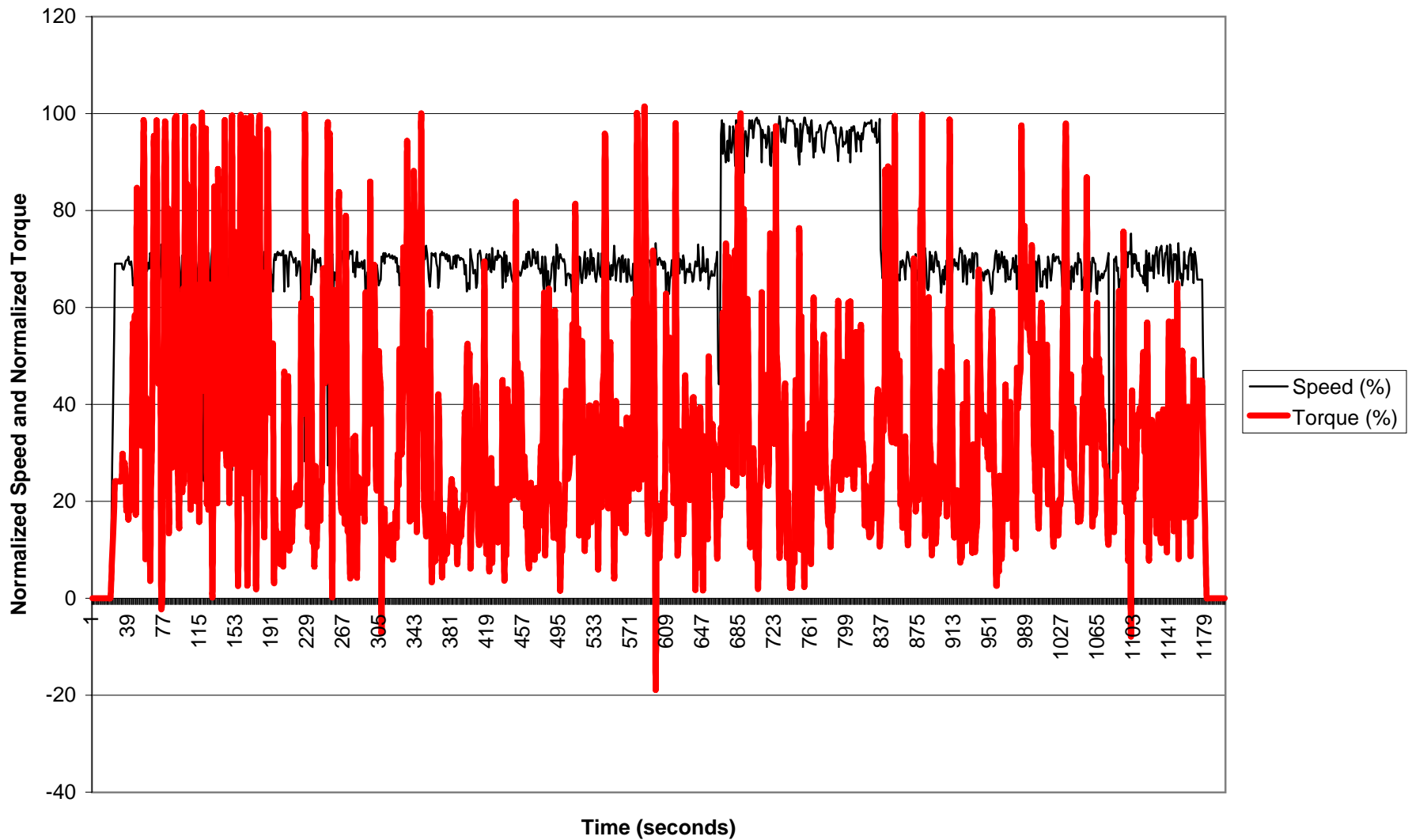
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1081	21.92	20.14
1082	70	13.82
1083	69.51	29.45
1084	70.5	26.23
1085	67.51	35.43
1086	68.26	37.48
1087	63.53	62.84
1088	65.77	56.09
1089	65.52	59.98
1090	67.02	49.54
1091	70.75	32.56
1092	62.78	75.52
1093	71	20.77
1094	68.26	30.67
1095	71.5	17.69
1096	68.26	27.8
1097	71.25	7.78
1098	71.5	21.78
1099	71	10.77
1100	75.24	-7.02
1101	66.27	42.32
1102	71	20.77
1103	69.01	28.32
1104	71	23.8
1105	70.75	22.72
1106	68.01	33.84
1107	67.51	37.89
1108	69.26	35.41
1109	67.02	39.15
1110	66.52	38.22
1111	66.52	40.34
1112	66.27	45.04
1113	65.02	50.22
1114	68.76	30.25
1115	64.52	50.59
1116	71.75	11.65
1117	63.28	56.7
1118	70.5	25.27
1119	71.25	7.78
1120	67.51	27.37
1121	68.26	32.18
1122	67.51	36.28
1123	70.75	19.97
1124	66.02	32.57
1125	70.5	17.06
1126	71.5	17.69
1127	72.5	13.81
1128	68.51	30.1
1129	67.02	37.67
1130	71.5	19.12
1131	72.25	12.26
1132	72.75	11.5
1133	70	25.79

1134	66.52	38.94
1135	68.51	26.38
1136	71.25	20.93
1137	71	14.62
1138	72.75	9.95
1139	67.02	36.09
1140	65.02	56.7
1141	72.99	17.16
1142	72	22.14
1143	68.26	33.93
1144	65.27	56.73
1145	71	14.62
1146	69.76	21.98
1147	71	17.37
1148	70.25	19.06
1149	62.28	64.9
1150	73.24	8.97
1151	69.01	30.41
1152	66.02	41.55
1153	67.02	40.54
1154	64.52	51.07
1155	66.02	44.29
1156	71.5	16.9
1157	68.01	29.84
1158	68.76	28.14
1159	68.51	27.96
1160	65.77	39.38
1161	70.5	19.83
1162	71.5	16.02
1163	72.25	9.21
1164	67.76	31.23
1165	71	18.12
1166	65.02	49.24
1167	71.5	16.9
1168	70.75	17.22
1169	68.76	26.55
1170	65.77	44.87
1171	65.77	44.87
1172	65.77	44.87
1173	65.77	44.87
1174	65.77	44.87
1175	65.77	44.87
1176	52.62	35.15
1177	39.46	25.29
1178	26.31	16.55
1179	13.15	8.47
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

SkdStrTor

1188	0	0	
1189	0	0	
1190	0	0	
1191	0	0	
1192	0	0	
1193	0	0	
1194	0	0	
1195	0	0	
1196	0	0	
1197	0	0	
1198	0	0	
1199	0	0	

### Skid Steer Loader High Torque Transient Operation Duty Cycle





## ArcWeldTyp1

Time (sec.)	Speed (%)	Torque (%)
1	0	5.04
2	0	5.04
3	0	5.04
4	0	5.04
5	0	5.04
6	0	5.04
7	0	5.04
8	0	5.04
9	0	5.04
10	0	5.04
11	0	5.04
12	0	5.04
13	0	5.04
14	0	5.04
15	0	5.04
16	0	5.04
17	0	5.04
18	0	5.04
19	0	5.04
20	0	5.04
21	19.89	7.24
22	39.78	9.51
23	59.67	11.88
24	79.56	14.22
25	99.44	16.56
26	99.44	16.56
27	99.44	16.56
28	99.44	16.56
29	99.44	16.56
30	99.44	16.56
31	99.44	16.56
32	99.08	15.87
33	99.08	31.12
34	99.08	30.34
35	99.08	26.7
36	98.75	23.49
37	98.75	23.84
38	98.75	21.15
39	99.08	19.77
40	98.39	18.55
41	98.39	15.95
42	98.39	17.86
43	98.39	16.04
44	99.08	17.25
45	99.08	19.68
46	98.75	20.03
47	99.08	21.93
48	98.39	19.85
49	99.08	17.51
50	98.75	17.51
51	99.08	17.34
52	98.75	16.21
53	98.39	17.94

## ArcWeldTyp1

54	98.75	18.12
55	98.75	20.81
56	98.75	20.72
57	99.44	18.21
58	100.14	24.02
59	98.75	27.4
60	99.08	23.58
61	99.44	18.81
62	99.08	19.51
63	98.75	19.59
64	99.44	29.74
65	99.44	23.41
66	99.44	24.71
67	99.44	23.67
68	99.08	22.28
69	99.08	22.46
70	99.44	21.24
71	98.75	21.15
72	99.08	21.5
73	99.08	30.34
74	99.08	33.03
75	99.44	25.14
76	99.08	29.22
77	99.78	26.53
78	99.08	23.5
79	99.08	20.81
80	99.78	20.46
81	99.08	19.42
82	99.08	20.2
83	99.08	23.84
84	98.75	23.23
85	99.08	21.15
86	98.75	44.13
87	98.75	34.16
88	99.78	27.31
89	98.06	36.93
90	99.08	29.82
91	99.08	26.96
92	99.78	33.3
93	98.39	27.39
94	99.08	21.93
95	106.03	29.68
96	105.33	25.08
97	105.33	17.7
98	105.33	13.02
99	105.33	10.33
100	105.33	8.59
101	105.33	7.64
102	105	7.03
103	105	6.68
104	105.33	6.42
105	105.33	6.34
106	99.08	37.28
107	98.75	34.24

## ArcWeldTyp1

108	99.08	29.3
109	99.08	22.89
110	98.39	23.15
111	98.75	20.63
112	98.39	19.59
113	99.44	28.18
114	98.75	26.79
115	98.75	26.01
116	99.44	34.68
117	99.44	43.35
118	105.33	34.8
119	105.33	24.21
120	105.33	17.01
121	105.33	12.67
122	105	10.07
123	105	8.5
124	105	7.55
125	105.33	7.03
126	105	6.6
127	105.33	6.42
128	98.06	35.71
129	99.08	30.43
130	98.75	25.05
131	99.08	20.72
132	99.44	21.5
133	98.75	18.81
134	98.06	33.55
135	98.39	36.58
136	98.75	30.78
137	99.08	26.01
138	99.44	26.44
139	99.08	21.24
140	99.44	21.24
141	98.75	18.21
142	99.08	18.21
143	99.44	18.9
144	99.08	19.42
145	99.44	22.8
146	99.08	21.76
147	99.08	19.59
148	99.08	23.15
149	99.08	20.03
150	99.08	18.47
151	99.44	18.29
152	99.08	16.56
153	99.08	19.25
154	100.14	25.23
155	99.78	30.35
156	99.78	29.74
157	98.75	23.06
158	98.75	23.93
159	99.44	21.76
160	100.14	19.68
161	99.44	17.17

## ArcWeldTyp1

162	99.08	16.73
163	99.08	16.13
164	99.08	14.39
165	98.75	17.6
166	99.08	18.38
167	99.08	20.11
168	98.75	20.55
169	99.08	18.47
170	99.08	17.08
171	96.31	53.82
172	98.75	37.89
173	98.75	28.7
174	98.39	24.62
175	98.39	24.27
176	98.39	24.19
177	98.75	23.49
178	98.39	20.2
179	98.75	19.94
180	99.08	18.55
181	98.39	19.16
182	99.08	19.07
183	99.08	16.47
184	99.08	15.69
185	98.75	15.26
186	98.75	17.77
187	98.39	20.46
188	98.75	20.2
189	98.75	20.11
190	98.75	17.51
191	99.44	18.9
192	99.08	16.91
193	98.75	18.21
194	98.75	15.87
195	98.75	16.21
196	98.75	15.52
197	98.75	17.6
198	98.75	15.87
199	99.08	17.6
200	98.75	17.77
201	99.44	17.43
202	99.08	16.13
203	98.75	17.43
204	98.75	17.43
205	99.44	21.68
206	98.75	18.9
207	99.08	19.25
208	105.33	20.83
209	105.33	15.45
210	105.33	11.72
211	105.33	9.46
212	105.69	8.07
213	106.03	7.29
214	105.33	6.86
215	105.69	6.51

## ArcWeldTyp1

216	105.33	6.34
217	105.69	6.25
218	105.69	6.16
219	85.19	6.14
220	87.64	47.32
221	99.44	33.81
222	99.44	27.14
223	98.75	26.36
224	98.75	25.49
225	99.08	21.93
226	98.39	22.28
227	99.08	21.07
228	99.44	20.98
229	99.78	22.28
230	99.44	22.98
231	99.44	22.46
232	99.08	22.8
233	98.75	23.49
234	99.08	21.5
235	99.78	22.02
236	99.78	24.45
237	99.08	23.76
238	98.75	23.15
239	98.75	20.63
240	98.75	19.51
241	99.44	20.03
242	99.44	20.2
243	99.08	21.33
244	99.08	26.01
245	98.39	21.24
246	99.08	19.51
247	99.08	17.95
248	99.08	22.02
249	99.08	20.2
250	100.14	27.05
251	98.75	21.93
252	99.44	22.89
253	98.75	20.81
254	99.44	21.42
255	105.33	21.96
256	105.33	16.23
257	105.33	12.15
258	105.33	9.72
259	105.33	8.24
260	105.33	7.38
261	105.69	6.86
262	105.33	6.6
263	105.33	6.34
264	97	41.69
265	99.08	36.5
266	99.08	33.03
267	94.58	59.78
268	98.39	47.42
269	99.44	36.24

## ArcWeldTyp1

270	98.75	30.26
271	98.39	27.91
272	98.39	24.19
273	99.08	23.84
274	99.08	22.37
275	98.75	22.19
276	98.39	25.49
277	98.75	27.05
278	98.75	28.7
279	99.08	26.18
280	99.44	26.36
281	99.44	21.16
282	98.75	22.11
283	99.44	22.72
284	100.14	22.55
285	98.75	39.79
286	100.14	66.6
287	99.08	45.78
288	99.44	38.15
289	98.75	28.96
290	98.75	28
291	99.08	26.62
292	99.08	28.87
293	99.44	28.01
294	100.47	33.39
295	99.08	31.12
296	98.75	29.91
297	100.14	41.36
298	99.08	31.47
299	98.75	28.61
300	99.08	27.22
301	98.75	23.06
302	98.75	23.49
303	99.08	20.2
304	99.08	20.2
305	99.78	23.41
306	99.44	22.11
307	98.75	23.84
308	98.75	25.31
309	98.39	19.85
310	98.75	24.79
311	99.44	23.41
312	99.08	22.37
313	99.08	24.36
314	99.08	28.09
315	98.75	23.67
316	99.44	24.02
317	99.44	34.07
318	98.75	30.86
319	98.39	34.5
320	99.08	31.3
321	98.39	32.34
322	99.08	31.04
323	99.08	30.26

## ArcWeldTyp1

324	98.75	23.15
325	98.75	22.19
326	98.75	35.11
327	98.75	31.82
328	98.39	25.14
329	98.75	30.86
330	99.08	33.29
331	99.44	30.95
332	98.75	26.88
333	99.44	23.84
334	99.44	19.33
335	105.69	20.83
336	105.69	15.45
337	105.33	11.8
338	105.33	9.46
339	105.33	8.16
340	105.33	7.38
341	105.33	6.86
342	105	6.68
343	105.33	6.42
344	105.33	6.34
345	105	6.16
346	82.42	6.3
347	-2.31	6.06
348	1.17	5.88
349	1.17	5.88
350	1.86	5.88
351	1.86	5.88
352	1.86	5.88
353	1.86	5.88
354	1.86	5.88
355	1.86	5.88
356	1.86	5.88
357	1.53	5.88
358	1.53	5.88
359	1.53	5.88
360	1.86	5.88
361	102.92	72.52
362	99.08	65.37
363	98.39	52.19
364	98.75	37.71
365	98.39	30.08
366	98.75	31.38
367	99.08	26.36
368	99.44	20.9
369	99.08	21.59
370	99.44	25.66
371	99.08	22.72
372	99.08	19.25
373	99.08	26.96
374	99.08	41.88
375	98.39	29.39
376	100.14	25.49
377	100.14	25.58

## ArcWeldTyp1

378	100.14	29.48
379	99.44	27.92
380	99.08	23.41
381	99.08	20.37
382	99.08	25.75
383	99.08	22.98
384	99.08	19.68
385	100.14	22.72
386	99.44	18.55
387	98.75	19.25
388	99.08	22.8
389	99.44	18.99
390	99.08	16.73
391	99.44	24.97
392	99.44	21.59
393	99.08	19.94
394	99.78	25.06
395	100.14	27.49
396	99.44	23.67
397	99.44	23.5
398	99.78	25.15
399	98.39	23.06
400	99.08	20.29
401	99.08	19.07
402	99.08	24.1
403	99.78	19.94
404	99.08	18.12
405	99.44	20.98
406	105.33	21.87
407	105.69	16.23
408	105.69	12.24
409	105.33	9.72
410	105.69	8.33
411	105.33	7.46
412	105.69	6.94
413	105.69	6.6
414	105.69	6.42
415	105.69	6.25
416	105.33	6.25
417	93.89	6.32
418	1.53	6.04
419	1.17	5.88
420	2.22	5.87
421	1.86	5.88
422	2.22	5.87
423	1.53	5.88
424	1.86	5.88
425	1.53	5.88
426	1.53	5.88
427	1.53	5.88
428	1.53	5.88
429	1.53	5.88
430	1.86	5.88
431	1.53	5.88



## ArcWeldTyp1

432	1.86	5.88
433	1.53	5.88
434	1.53	5.88
435	1.86	5.88
436	1.53	5.88
437	1.86	5.88
438	1.53	5.88
439	1.17	5.88
440	0.83	5.88
441	1.53	5.88
442	1.53	5.88
443	1.53	5.88
444	1.86	5.88
445	1.53	5.88
446	1.53	5.88
447	1.53	5.88
448	1.86	5.88
449	1.86	5.88
450	1.53	5.88
451	1.86	5.88
452	98.06	65.79
453	98.75	47.6
454	98.39	39.44
455	99.08	33.64
456	99.44	27.75
457	98.75	22.8
458	99.08	27.48
459	98.75	26.53
460	99.08	22.72
461	99.08	18.81
462	99.44	24.8
463	98.75	23.93
464	98.75	21.67
465	99.08	30.78
466	99.08	35.81
467	98.75	27.92
468	98.39	25.05
469	98.75	34.33
470	99.08	33.99
471	99.08	29.22
472	98.75	37.28
473	98.75	36.67
474	99.44	38.5
475	98.75	31.21
476	98.75	29.39
477	99.08	33.99
478	98.39	36.32
479	98.75	33.46
480	99.08	30.78
481	99.08	25.75
482	99.08	21.15
483	101.17	16.3
484	105.69	19.09
485	105.69	14.41

## ArcWeldTyp1

486	105.33	11.11
487	105.69	9.11
488	105.33	7.98
489	105.33	7.2
490	105.33	6.77
491	105.69	6.6
492	105.69	6.42
493	106.03	6.25
494	105.33	6.25
495	75.14	6.38
496	-3.69	74.45
497	97.69	51.75
498	98.75	42.74
499	99.08	36.76
500	98.75	34.24
501	98.06	33.29
502	98.39	38.14
503	99.78	39.8
504	99.08	29.3
505	98.39	23.32
506	98.75	23.23
507	99.08	23.93
508	98.75	24.27
509	98.39	19.77
510	99.08	18.64
511	98.75	16.3
512	98.75	21.15
513	99.08	22.63
514	99.08	23.93
515	99.08	21.67
516	98.75	18.03
517	98.75	20.37
518	103.25	18.13
519	105.33	19.96
520	105.33	14.75
521	105.69	11.37
522	105.33	9.29
523	105.69	7.98
524	105.33	7.29
525	105.33	6.86
526	105.33	6.6
527	105	6.42
528	105.69	6.25
529	105.69	6.25
530	69.92	6.37
531	-3.33	5.89
532	1.17	5.88
533	39.03	53.81
534	100.47	51.34
535	98.39	42.74
536	98.39	41.87
537	98.39	31.12
538	98.75	25.4
539	98.39	20.55

## ArcWeldTyp1

540	98.06	17.16
541	98.39	15.08
542	99.08	14.57
543	98.39	16.21
544	98.75	14.56
545	98.75	14.04
546	98.39	14.39
547	99.08	16.82
548	100.14	14.74
549	97.69	45.42
550	98.06	44.99
551	98.06	40.57
552	98.06	32.59
553	98.75	25.92
554	99.08	21.15
555	98.75	19.85
556	99.08	17.43
557	98.39	16.82
558	98.75	16.99
559	98.75	15.43
560	99.08	13.96
561	99.08	15.61
562	98.75	14.48
563	98.75	13.44
564	98.39	15.78
565	99.08	15
566	99.08	13.87
567	99.08	13.26
568	98.75	13.44
569	98.39	13.44
570	98.39	14.48
571	99.08	17.6
572	98.39	17.51
573	99.08	21.76
574	98.75	21.67
575	98.39	18.81
576	98.75	19.42
577	98.75	19.68
578	98.75	17.95
579	99.08	19.68
580	98.75	19.94
581	97.69	41.61
582	98.75	32.16
583	98.75	25.05
584	98.39	26.09
585	99.08	23.06
586	98.75	21.07
587	98.75	22.97
588	98.75	19.07
589	98.39	20.55
590	98.39	20.03
591	98.39	20.11
592	98.39	20.2
593	98.39	18.38

## ArcWeldTyp1

594	98.39	17.77
595	98.39	20.81
596	98.39	19.16
597	98.75	20.63
598	98.06	19.42
599	98.39	18.81
600	98.75	18.47
601	98.39	18.29
602	98.39	17.34
603	98.39	15.86
604	98.39	15.17
605	98.39	14.48
606	98.75	16.13
607	98.75	19.33
608	99.44	51.94
609	98.06	44.64
610	98.75	33.2
611	98.06	28.52
612	98.39	23.49
613	98.75	19.59
614	98.75	17.34
615	98.75	16.21
616	98.06	18.29
617	98.39	18.46
618	98.39	20.03
619	98.39	21.76
620	99.08	19.25
621	98.75	17.17
622	98.75	16.99
623	98.39	17.16
624	98.75	18.99
625	98.39	18.2
626	99.08	18.29
627	98.75	19.68
628	98.39	17.6
629	98.75	18.21
630	98.06	20.54
631	98.06	23.93
632	98.06	25.75
633	98.75	25.31
634	98.75	23.58
635	98.75	24.1
636	98.75	20.72
637	98.75	22.89
638	98.06	20.89
639	98.75	17.25
640	98.39	15.95
641	106.03	18.4
642	100.83	51.6
643	98.75	36.67
644	98.75	27.74
645	98.39	26.87
646	98.39	25.83
647	98.39	22.97

## ArcWeldTyp1

648	98.75	21.15
649	98.75	22.37
650	98.06	21.5
651	98.39	22.54
652	98.75	21.59
653	98.39	21.93
654	99.08	22.19
655	98.75	23.15
656	98.75	22.54
657	98.75	21.41
658	99.44	22.8
659	98.75	23.15
660	98.75	23.75
661	98.75	26.7
662	98.39	26.7
663	98.75	25.23
664	98.39	24.79
665	98.39	27.39
666	98.75	25.83
667	98.39	26.53
668	98.39	21.07
669	98.39	19.16
670	98.75	17.43
671	98.39	17.08
672	98.75	17.08
673	98.39	18.2
674	98.75	18.21
675	98.75	18.29
676	99.08	19.77
677	99.08	24.62
678	98.06	20.54
679	98.75	18.55
680	98.39	16.9
681	98.75	17.69
682	98.75	19.25
683	98.75	17.17
684	98.75	19.59
685	99.08	19.25
686	99.08	19.85
687	98.75	18.38
688	99.08	21.41
689	99.08	27.22
690	99.08	33.12
691	99.08	28.61
692	98.75	22.63
693	98.39	19.25
694	99.08	16.91
695	99.44	23.32
696	99.78	26.27
697	98.39	21.5
698	99.08	20.81
699	99.44	20.55
700	99.08	23.58
701	99.44	21.85

## ArcWeldTyp1

702	97.69	33.2
703	98.39	25.23
704	98.75	21.5
705	99.08	19.77
706	98.75	16.82
707	98.75	16.13
708	98.75	15.78
709	98.75	16.65
710	99.08	18.03
711	98.75	16.39
712	98.75	18.55
713	98.39	17.42
714	98.39	28.09
715	99.08	25.4
716	99.08	20.03
717	98.75	17.6
718	98.75	16.82
719	98.39	16.64
720	98.39	18.2
721	98.75	20.03
722	98.75	17.17
723	98.39	15.6
724	98.75	20.37
725	98.75	23.58
726	98.75	26.96
727	98.39	30.25
728	98.39	25.05
729	98.39	20.11
730	99.08	16.99
731	98.75	15.95
732	98.75	20.46
733	99.08	17.86
734	98.75	15.78
735	99.08	17.34
736	98.75	17.69
737	98.39	15.52
738	98.75	15.95
739	98.75	14.56
740	98.06	15.17
741	99.08	14.74
742	99.44	18.73
743	99.08	21.85
744	99.08	35.63
745	99.78	66.42
746	98.75	44.13
747	98.75	32.77
748	98.75	26.44
749	98.75	21.93
750	98.75	19.42
751	106.72	19.88
752	105.69	17.53
753	105.69	13.19
754	105.69	10.33
755	105.33	8.68

## ArcWeldTyp1

756	105.33	7.72
757	105.69	7.12
758	97	54.95
759	98.75	37.97
760	99.78	36.94
761	99.08	33.38
762	98.75	29.74
763	98.39	24.1
764	99.08	24.97
765	98.75	22.11
766	98.75	27.31
767	98.75	22.02
768	99.44	19.94
769	98.75	18.73
770	99.08	17.17
771	98.75	18.21
772	98.75	19.16
773	99.08	20.89
774	98.75	19.16
775	99.08	21.15
776	99.08	18.38
777	99.08	20.63
778	99.44	18.55
779	99.44	18.03
780	99.08	16.73
781	98.75	17.6
782	99.08	15.87
783	99.08	19.25
784	99.08	21.76
785	99.08	21.67
786	98.75	20.29
787	98.75	17.95
788	98.75	16.39
789	98.75	14.74
790	99.08	14.48
791	99.08	15.61
792	99.08	14.22
793	98.39	13.44
794	98.75	17.25
795	99.08	16.47
796	99.08	14.74
797	99.08	14.13
798	99.08	14.91
799	99.08	16.47
800	99.44	15.69
801	99.08	17.43
802	99.44	17.69
803	99.08	16.3
804	99.08	18.55
805	98.75	17.08
806	98.75	16.99
807	99.08	16.3
808	99.08	14.74
809	98.75	15.26

## ArcWeldTyp1

810	99.08	15.09
811	99.78	16.39
812	99.08	16.21
813	99.08	15.95
814	98.75	17.86
815	99.08	16.56
816	99.08	17.86
817	99.44	21.85
818	99.44	21.85
819	99.08	21.67
820	99.44	18.38
821	99.44	26.1
822	99.44	20.46
823	99.08	17.25
824	98.39	17.51
825	98.75	15.95
826	99.08	15.26
827	99.78	24.71
828	99.08	23.84
829	99.78	21.68
830	99.08	18.29
831	98.75	16.99
832	98.75	15.78
833	99.08	15.87
834	99.08	17.69
835	99.08	16.82
836	99.08	19.51
837	98.75	21.76
838	99.44	17.95
839	99.44	15.43
840	99.08	14.22
841	99.44	19.94
842	99.44	20.38
843	98.75	21.85
844	98.75	17.77
845	99.44	16.04
846	98.75	14.39
847	98.75	26.79
848	98.75	27.83
849	99.08	21.85
850	99.44	19.6
851	99.44	17.6
852	99.78	20.81
853	99.08	24.54
854	99.08	23.67
855	99.44	19.94
856	99.08	23.67
857	99.08	22.19
858	99.08	19.51
859	99.44	16.91
860	99.08	18.21
861	99.08	20.37
862	99.44	28.27
863	99.08	22.8



## ArcWeldTyp1

864	99.08	18.64
865	99.08	18.55
866	99.08	16.65
867	99.08	15
868	98.75	14.04
869	99.08	13.61
870	99.08	18.21
871	99.08	19.94
872	100.14	52.11
873	98.75	47.25
874	99.08	37.37
875	98.75	27.74
876	98.75	36.93
877	99.44	39.71
878	99.08	30.26
879	98.75	25.23
880	99.08	20.89
881	99.08	20.2
882	99.08	21.59
883	99.08	17.95
884	99.08	18.29
885	99.08	18.73
886	98.75	16.73
887	98.75	14.91
888	99.08	15.35
889	99.44	14.83
890	99.08	15.52
891	99.08	16.91
892	99.78	24.71
893	98.75	20.37
894	99.44	19.6
895	99.44	20.98
896	99.44	27.49
897	99.08	22.02
898	99.08	18.21
899	99.08	16.3
900	98.75	15.69
901	99.44	14.91
902	99.08	30.78
903	98.75	24.62
904	98.75	19.59
905	98.75	17.95
906	99.44	24.97
907	99.08	20.89
908	99.08	18.03
909	99.08	16.47
910	99.08	16.39
911	98.75	15.61
912	99.44	14.74
913	99.08	13.96
914	99.08	14.05
915	99.44	14.05
916	99.08	16.65
917	99.44	20.72

## ArcWeldTyp1

918	99.08	18.12
919	99.08	16.47
920	99.78	16.56
921	99.44	17.51
922	99.08	17.43
923	99.08	16.65
924	98.75	17.69
925	99.08	17.77
926	98.75	18.81
927	98.75	20.11
928	98.75	18.47
929	98.75	15.61
930	99.08	14.13
931	99.08	12.83
932	99.08	12.31
933	99.44	14.13
934	99.08	18.38
935	99.44	21.94
936	99.08	28.35
937	99.08	29.82
938	99.78	31.04
939	98.39	38.49
940	99.08	29.74
941	99.08	25.4
942	99.08	24.62
943	98.39	20.46
944	99.08	20.11
945	98.39	17.51
946	98.39	16.73
947	98.75	18.03
948	98.75	19.68
949	99.08	20.37
950	98.75	18.03
951	99.08	16.82
952	98.75	14.91
953	99.08	13.79
954	99.08	13.09
955	98.75	14.04
956	98.75	13.44
957	98.75	13.7
958	98.75	13.78
959	98.39	15.08
960	98.39	14.3
961	98.39	14.39
962	98.75	14.39
963	98.75	13.61
964	99.44	18.81
965	98.39	23.23
966	98.75	20.72
967	98.75	17.51
968	98.75	16.82
969	98.39	16.73
970	98.39	16.12
971	98.75	16.21

## ArcWeldTyp1

972	98.39	16.21
973	98.75	15.69
974	98.75	14.91
975	99.08	15.09
976	99.08	18.21
977	98.39	17.25
978	98.39	15.69
979	98.75	16.99
980	98.39	15.6
981	98.75	20.11
982	98.75	18.55
983	98.75	18.9
984	98.75	19.25
985	98.75	17.6
986	99.44	16.21
987	98.75	14.82
988	98.75	15.78
989	99.44	20.98
990	106.39	24.04
991	105.69	20.13
992	105.69	14.67
993	106.03	11.2
994	105.33	9.2
995	105.69	7.98
996	105.33	7.2
997	105.33	6.77
998	105.69	6.51
999	105.69	6.34
1000	105.69	6.16
1001	105.69	6.16
1002	40.42	6.27
1003	-1.61	5.72
1004	1.17	5.88
1005	1.17	5.88
1006	1.53	5.88
1007	1.86	5.88
1008	1.53	5.88
1009	1.86	5.88
1010	1.86	5.88
1011	2.22	5.87
1012	1.86	5.88
1013	2.22	5.87
1014	2.22	5.87
1015	2.22	5.87
1016	1.86	5.88
1017	1.86	5.88
1018	1.86	5.88
1019	1.86	5.88
1020	26.86	60.03
1021	99.08	50.81
1022	99.08	43.09
1023	98.75	37.02
1024	98.75	29.04
1025	99.44	24.28

## ArcWeldTyp1

1026	99.08	20.2
1027	99.08	18.47
1028	99.08	16.39
1029	99.44	18.73
1030	98.75	18.47
1031	99.08	19.85
1032	98.75	19.68
1033	99.08	19.85
1034	98.75	19.59
1035	98.75	18.21
1036	99.78	19.34
1037	99.44	18.55
1038	99.44	18.21
1039	99.08	17.43
1040	99.08	15.69
1041	99.08	15.26
1042	99.44	15.17
1043	99.44	13.87
1044	99.78	15.26
1045	99.44	15
1046	99.44	14.13
1047	99.08	14.65
1048	99.08	14.74
1049	99.44	15.87
1050	99.44	16.91
1051	99.44	17.51
1052	99.08	16.65
1053	99.44	17.69
1054	99.08	19.51
1055	99.08	20.29
1056	99.44	19.77
1057	99.44	19.94
1058	99.44	20.9
1059	99.08	20.72
1060	99.78	19.34
1061	99.44	17.34
1062	99.44	19.16
1063	99.44	17.43
1064	99.44	17.95
1065	99.08	18.81
1066	99.44	19.33
1067	99.44	17.25
1068	99.44	18.64
1069	99.44	16.56
1070	98.75	18.12
1071	98.75	18.21
1072	99.08	19.25
1073	99.44	16.82
1074	100.14	22.55
1075	99.44	20.03
1076	99.08	19.07
1077	99.78	25.93
1078	99.44	25.49
1079	99.08	21.41

## ArcWeldTyp1

1080	99.08	18.47
1081	99.44	16.13
1082	99.78	15.09
1083	99.08	15.26
1084	99.44	15.26
1085	99.44	14.83
1086	99.08	17.08
1087	99.44	17.69
1088	99.08	16.47
1089	100.14	24.45
1090	99.08	20.37
1091	99.08	19.59
1092	99.08	16.56
1093	98.75	15
1094	99.44	17.25
1095	99.08	16.21
1096	99.08	17.17
1097	100.47	29.22
1098	99.44	23.24
1099	99.08	21.07
1100	100.14	21.16
1101	99.08	28.09
1102	99.08	22.63
1103	98.75	19.94
1104	99.08	18.55
1105	99.44	16.65
1106	99.08	14.91
1107	99.08	15.95
1108	98.75	15.95
1109	98.75	15.87
1110	99.44	21.42
1111	107.08	22.22
1112	106.03	19.88
1113	106.03	14.49
1114	105.69	11.2
1115	106.03	9.11
1116	105.69	7.98
1117	105.69	7.2
1118	105.69	6.77
1119	105.69	6.51
1120	106.03	6.34
1121	105.69	6.25
1122	105.69	6.16
1123	48.06	6.21
1124	-1.61	5.89
1125	1.86	5.88
1126	2.22	5.87
1127	2.56	5.87
1128	2.22	5.87
1129	2.22	5.87
1130	2.22	5.87
1131	2.22	5.87
1132	1.86	5.88
1133	2.22	5.87

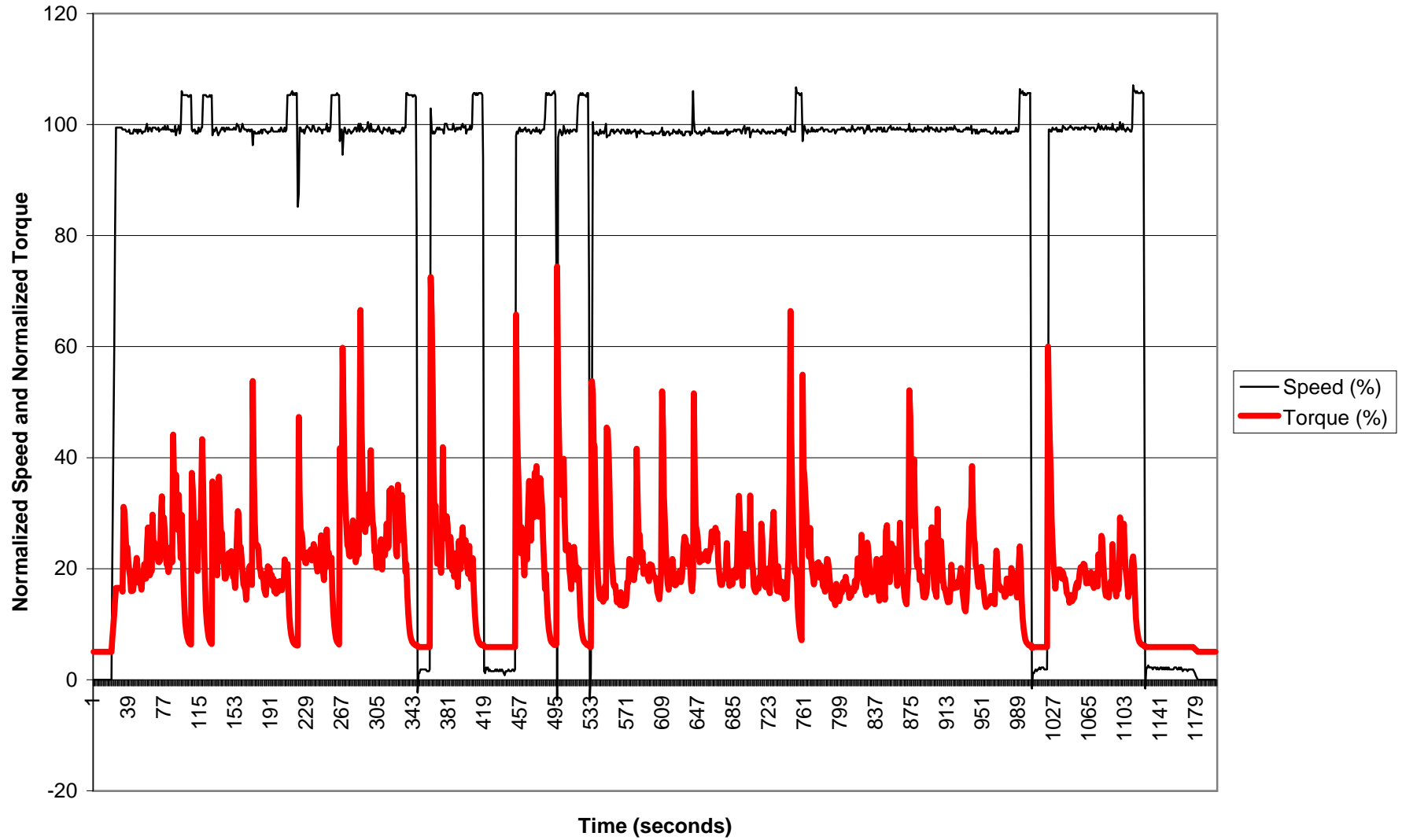
## ArcWeldTyp1

1134	2.22	5.87
1135	2.22	5.87
1136	1.86	5.88
1137	2.22	5.87
1138	1.86	5.88
1139	1.86	5.88
1140	2.22	5.87
1141	2.22	5.87
1142	1.86	5.88
1143	2.22	5.87
1144	1.86	5.88
1145	2.22	5.87
1146	1.86	5.88
1147	2.22	5.87
1148	1.86	5.88
1149	2.22	5.87
1150	1.86	5.88
1151	1.86	5.88
1152	1.86	5.88
1153	1.86	5.88
1154	1.86	5.88
1155	2.22	5.87
1156	2.22	5.87
1157	2.22	5.87
1158	1.86	5.88
1159	1.86	5.88
1160	2.22	5.87
1161	1.86	5.88
1162	2.22	5.87
1163	1.86	5.88
1164	1.53	5.88
1165	1.86	5.88
1166	1.86	5.88
1167	1.86	5.88
1168	1.86	5.88
1169	1.53	5.88
1170	1.86	5.88
1171	1.86	5.88
1172	1.86	5.88
1173	1.86	5.88
1174	1.86	5.88
1175	1.86	5.88
1176	1.49	5.71
1177	1.12	5.54
1178	0.74	5.38
1179	0.37	5.21
1180	0	5.04
1181	0	5.04
1182	0	5.04
1183	0	5.04
1184	0	5.04
1185	0	5.04
1186	0	5.04
1187	0	5.04

ArcWeldTyp1

1188	0	5.04
1189	0	5.04
1190	0	5.04
1191	0	5.04
1192	0	5.04
1193	0	5.04
1194	0	5.04
1195	0	5.04
1196	0	5.04
1197	0	5.04
1198	0	5.04
1199	0	5.04

### Arc Welder Typical Operation 1 Duty Cycle





## ArcWeldTyp2

Time (sec.)	Speed (%)	Torque (%)
1	0	5.04
2	0	5.04
3	0	5.04
4	0	5.04
5	0	5.04
6	0	5.04
7	0	5.04
8	0	5.04
9	0	5.04
10	0	5.04
11	0	5.04
12	0	5.04
13	0	5.04
14	0	5.04
15	0	5.04
16	0	5.04
17	0	5.04
18	0	5.04
19	0	5.04
20	0	5.04
21	19.96	8.67
22	39.91	12.39
23	59.87	16.25
24	79.82	20.09
25	99.78	23.93
26	99.78	23.93
27	99.78	23.93
28	99.78	23.93
29	99.78	23.93
30	99.78	23.93
31	99.78	23.93
32	99.44	23.5
33	99.44	22.46
34	99.44	20.64
35	99.44	22.02
36	99.08	18.55
37	99.08	21.76
38	99.08	20.29
39	99.08	19.85
40	98.75	22.63
41	99.08	23.24
42	99.44	22.72
43	99.44	20.38
44	99.08	24.36
45	99.44	24.1
46	99.08	24.28
47	99.44	23.76
48	99.44	23.5
49	99.78	27.49
50	99.08	31.21
51	99.08	28
52	99.08	25.92
53	99.44	22.54

## ArcWeldTyp2

54	99.44	20.98
55	99.08	21.59
56	99.08	22.28
57	99.44	24.1
58	99.08	26.1
59	100.14	38.15
60	98.75	32.51
61	99.08	28.78
62	99.08	26.1
63	99.08	26.18
64	99.08	27.22
65	99.08	29.04
66	99.78	26.53
67	98.39	35.11
68	99.44	28.09
69	99.44	23.06
70	99.08	20.55
71	99.44	21.59
72	99.08	23.58
73	99.78	24.71
74	99.44	27.49
75	98.75	29.65
76	98.75	26.1
77	98.75	24.27
78	99.08	21.15
79	99.44	20.03
80	99.08	19.51
81	99.08	20.98
82	99.44	23.84
83	99.44	24.36
84	99.44	23.76
85	99.78	22.37
86	99.78	22.28
87	99.78	24.19
88	99.78	22.8
89	99.08	21.67
90	99.44	24.36
91	99.08	24.02
92	99.44	25.23
93	99.08	23.24
94	99.08	23.41
95	99.44	25.84
96	99.44	30.26
97	99.08	28.18
98	99.78	27.92
99	99.08	25.75
100	99.44	26.1
101	99.44	31.39
102	98.75	34.59
103	99.78	30.26
104	99.78	24.45
105	99.08	22.63
106	99.44	21.5
107	99.44	22.98

## ArcWeldTyp2

108	99.08	21.59
109	100.14	45.18
110	99.78	39.45
111	98.75	42.39
112	99.08	33.9
113	99.08	27.92
114	98.75	26.62
115	98.75	27.31
116	99.08	28.52
117	99.08	24.1
118	99.44	23.67
119	99.08	24.1
120	99.44	22.72
121	99.44	23.06
122	99.08	25.23
123	99.44	22.28
124	99.78	21.59
125	99.44	21.42
126	99.08	24.19
127	99.08	24.02
128	99.08	27.66
129	99.08	25.06
130	98.75	23.93
131	99.08	29.91
132	99.08	27.31
133	99.08	25.58
134	99.78	27.66
135	99.08	25.23
136	99.08	24.45
137	99.08	26.18
138	99.44	25.66
139	99.44	24.71
140	99.44	24.1
141	99.08	24.8
142	99.44	22.46
143	99.44	21.85
144	99.44	21.07
145	99.08	18.55
146	99.44	24.45
147	99.44	20.38
148	99.44	22.98
149	98.75	22.63
150	99.44	21.85
151	98.06	29.65
152	99.08	24.8
153	99.44	25.84
154	99.08	25.58
155	99.08	23.76
156	99.78	32.26
157	98.75	29.04
158	99.44	27.05
159	99.44	28.09
160	99.78	28.01
161	99.44	25.84

## ArcWeldTyp2

162	99.08	23.5
163	99.78	25.58
164	99.44	23.24
165	99.08	21.67
166	99.78	21.16
167	99.08	22.89
168	105.69	23.17
169	104.31	18.92
170	104.31	13.71
171	104.31	10.59
172	103.94	8.76
173	104.31	7.55
174	104.31	6.94
175	104.31	6.51
176	104.31	6.25
177	103.94	6.07
178	104.31	5.99
179	104.31	5.9
180	33.47	5.74
181	-1.61	5.47
182	1.17	5.29
183	1.17	5.46
184	1.53	5.46
185	1.53	5.29
186	1.53	5.29
187	1.17	5.29
188	1.17	5.29
189	1.17	5.29
190	37.28	49.44
191	99.78	38.76
192	99.44	31.99
193	99.44	28.27
194	99.44	25.66
195	99.44	24.28
196	99.44	22.89
197	99.08	22.54
198	99.78	21.5
199	99.44	22.89
200	99.08	20.98
201	99.44	21.33
202	99.08	19.51
203	99.44	18.21
204	99.44	17.43
205	99.78	22.02
206	99.08	18.64
207	99.08	18.55
208	99.08	16.39
209	98.75	17.95
210	99.08	18.81
211	99.08	19.16
212	99.08	20.98
213	98.75	23.06
214	98.75	24.27
215	98.75	21.85

## ArcWeldTyp2

216	99.08	22.46
217	99.08	23.93
218	99.44	21.59
219	99.44	24.02
220	99.08	22.28
221	99.08	21.93
222	99.08	22.89
223	99.08	21.76
224	99.08	21.15
225	99.44	21.85
226	99.08	20.98
227	99.08	21.76
228	99.08	23.15
229	99.08	24.28
230	99.44	22.8
231	99.78	20.38
232	99.78	20.55
233	99.44	22.37
234	99.08	22.46
235	99.44	20.98
236	99.44	21.16
237	99.44	19.94
238	99.08	19.94
239	99.44	19.94
240	99.08	20.03
241	99.08	20.11
242	99.08	18.9
243	99.44	18.73
244	99.08	18.9
245	99.08	16.99
246	98.75	17.51
247	99.08	17.08
248	99.44	19.94
249	98.75	20.55
250	99.08	18.55
251	99.08	17.51
252	99.08	17.08
253	98.75	16.99
254	99.08	15.95
255	98.75	15.17
256	99.08	16.13
257	99.08	15.52
258	99.08	14.91
259	99.44	16.73
260	99.44	17.6
261	99.08	18.03
262	99.44	18.9
263	99.44	18.64
264	99.44	19.42
265	99.44	19.16
266	99.08	17.08
267	99.08	16.65
268	99.08	19.07
269	99.08	18.64

## ArcWeldTyp2

270	99.44	19.42
271	99.08	20.81
272	99.08	22.28
273	99.08	24.71
274	99.08	23.76
275	99.08	20.81
276	99.44	18.64
277	99.08	17.86
278	99.08	17.43
279	99.08	17.08
280	98.75	16.82
281	98.75	17.17
282	98.39	16.82
283	99.44	17.08
284	99.08	16.91
285	99.08	16.65
286	99.08	19.59
287	99.08	20.81
288	99.44	18.99
289	99.44	18.9
290	99.78	19.51
291	99.44	24.36
292	99.44	22.63
293	99.44	22.89
294	99.08	21.41
295	99.08	19.68
296	99.08	19.33
297	99.44	20.12
298	99.44	21.94
299	99.44	20.72
300	99.78	18.9
301	99.44	17.17
302	99.44	19.16
303	99.44	18.81
304	99.08	18.81
305	99.08	20.55
306	99.44	21.85
307	99.08	20.37
308	99.08	21.67
309	99.08	20.98
310	99.08	21.93
311	99.08	19.77
312	99.08	21.41
313	99.08	20.63
314	99.44	20.98
315	99.44	21.76
316	99.44	21.94
317	99.08	23.58
318	99.44	22.11
319	99.44	23.15
320	99.44	22.63
321	99.44	20.9
322	99.44	18.29
323	99.44	17.6

## ArcWeldTyp2

324	99.44	19.94
325	99.78	19.16
326	99.78	19.6
327	99.44	18.47
328	99.78	22.11
329	99.44	20.29
330	99.78	20.03
331	99.08	19.59
332	99.78	18.04
333	99.44	17.69
334	99.44	17.95
335	99.08	19.25
336	98.75	19.68
337	99.08	19.51
338	99.44	21.68
339	99.08	21.07
340	99.08	22.98
341	98.75	22.71
342	98.75	23.23
343	99.44	23.76
344	99.08	22.46
345	99.08	22.37
346	99.44	20.9
347	98.75	22.97
348	99.44	22.89
349	99.44	24.54
350	99.44	22.11
351	99.44	21.76
352	99.44	22.28
353	99.44	21.24
354	99.78	20.29
355	99.44	20.81
356	99.44	20.64
357	99.44	21.85
358	99.44	21.68
359	99.78	23.5
360	99.08	25.49
361	99.08	25.58
362	104.64	24.3
363	104.31	18.83
364	104.64	13.62
365	104.31	10.59
366	104.64	8.68
367	104.31	7.55
368	103.94	6.94
369	104.31	6.51
370	104.31	6.25
371	104.64	6.07
372	104.31	5.99
373	104.64	5.9
374	22.36	5.8
375	-0.56	5.46
376	1.53	5.46
377	1.53	5.46

## ArcWeldTyp2

378	1.53	5.46
379	1.17	5.46
380	1.53	5.46
381	1.17	5.46
382	1.53	5.46
383	1.17	5.29
384	0.83	5.29
385	0.83	5.29
386	1.53	5.29
387	1.17	5.29
388	1.17	5.29
389	1.17	5.29
390	17.5	65.31
391	99.08	46.82
392	99.08	37.97
393	99.08	32.6
394	99.44	27.57
395	99.44	23.84
396	99.44	20.64
397	99.08	19.42
398	99.44	17.77
399	99.08	18.9
400	99.78	19.51
401	99.44	19.86
402	99.78	19.68
403	99.44	20.03
404	99.08	19.42
405	99.08	18.55
406	99.44	18.21
407	99.08	19.25
408	99.08	20.2
409	99.08	18.64
410	98.39	19.42
411	99.08	18.64
412	98.75	18.12
413	99.44	20.03
414	99.08	21.5
415	99.44	21.76
416	99.08	20.81
417	99.44	21.33
418	99.78	20.03
419	99.44	19.6
420	99.44	19.68
421	99.78	20.12
422	99.44	18.9
423	99.44	19.86
424	99.44	20.81
425	99.44	19.51
426	99.78	20.12
427	99.44	21.16
428	99.08	26.36
429	99.44	23.5
430	99.44	24.28
431	99.44	22.28



## ArcWeldTyp2

432	99.44	21.68
433	98.75	20.37
434	99.44	19.33
435	99.08	18.12
436	99.44	16.47
437	99.08	18.73
438	99.08	17.69
439	99.78	17.43
440	99.44	18.38
441	99.44	20.55
442	99.08	19.33
443	99.44	18.38
444	99.44	17.43
445	99.78	17.17
446	99.78	17.95
447	99.78	21.85
448	99.44	22.98
449	99.44	22.02
450	99.44	22.46
451	99.44	20.46
452	99.44	22.98
453	99.08	21.76
454	99.44	22.28
455	99.08	23.15
456	99.08	20.81
457	99.44	20.72
458	98.75	21.5
459	99.08	20.98
460	99.08	19.85
461	104.64	22.13
462	104.64	17.35
463	104.31	12.84
464	104.31	10.07
465	104.31	8.42
466	104.31	7.38
467	104.31	6.77
468	104.31	6.42
469	104.64	6.16
470	104.31	6.07
471	103.94	5.99
472	104.64	5.9
473	21.67	5.8
474	-0.56	5.46
475	1.17	5.46
476	1.17	5.46
477	1.53	5.46
478	1.17	5.46
479	1.17	5.46
480	1.53	5.46
481	1.53	5.46
482	1.53	5.46
483	1.53	5.46
484	1.53	5.46
485	1.17	5.46

## ArcWeldTyp2

486	1.17	5.46
487	1.17	5.46
488	1.17	5.46
489	1.17	5.46
490	1.17	5.46
491	1.17	5.46
492	1.17	5.46
493	1.17	5.46
494	1.17	5.29
495	0.47	5.29
496	0.83	5.29
497	0.47	5.29
498	0.47	5.29
499	0.47	79.64
500	99.78	49.25
501	99.44	34.68
502	99.08	28.87
503	99.08	31.39
504	99.08	29.65
505	98.75	26.7
506	99.08	24.62
507	99.44	24.1
508	99.44	21.94
509	99.78	21.68
510	99.44	19.07
511	99.44	16.65
512	99.44	18.21
513	99.78	17.17
514	99.44	17.77
515	99.78	18.38
516	99.44	17.69
517	99.78	17.17
518	99.44	15.78
519	99.44	14.57
520	99.08	14.74
521	99.44	14.48
522	99.44	15.87
523	99.44	17.43
524	99.44	19.6
525	99.08	21.07
526	99.08	21.07
527	99.44	20.38
528	99.08	20.37
529	99.08	20.89
530	99.08	19.16
531	99.08	22.46
532	99.44	21.76
533	99.44	20.12
534	99.44	18.64
535	99.44	17.69
536	99.08	18.47
537	99.44	17.69
538	99.78	19.77
539	99.78	18.47

## ArcWeldTyp2

540	99.78	17.52
541	99.78	16.99
542	99.08	16.56
543	99.44	16.21
544	99.44	15.87
545	99.44	17.95
546	99.78	19.08
547	99.08	17.34
548	99.08	16.21
549	99.08	16.13
550	99.08	19.94
551	98.75	21.24
552	99.08	20.81
553	99.44	21.94
554	99.44	22.28
555	99.08	19.85
556	99.08	20.89
557	99.08	21.24
558	99.08	19.68
559	99.44	18.21
560	99.78	20.64
561	99.78	21.5
562	99.44	21.33
563	99.44	23.24
564	99.44	21.68
565	99.78	20.03
566	99.44	17.77
567	99.44	17.86
568	99.44	17.77
569	99.44	17.17
570	99.78	17.25
571	99.08	17.6
572	99.08	17.6
573	99.44	17.51
574	99.44	17.43
575	99.08	17.51
576	98.75	31.9
577	98.75	24.19
578	99.08	20.55
579	99.44	21.33
580	99.08	21.76
581	99.08	26.44
582	99.08	22.63
583	99.78	28.7
584	99.78	25.49
585	99.08	24.8
586	99.44	22.02
587	99.44	21.85
588	99.44	20.03
589	99.44	19.33
590	99.44	19.16
591	99.44	20.03
592	99.44	18.38
593	99.78	20.55

## ArcWeldTyp2

594	99.44	20.98
595	99.44	19.42
596	98.75	18.47
597	99.44	20.46
598	99.78	21.42
599	99.08	20.89
600	100.14	32.17
601	98.75	30.08
602	100.47	47.52
603	99.44	38.84
604	98.75	34.94
605	99.44	32.08
606	99.08	32.51
607	98.75	46.55
608	99.78	36.59
609	99.78	32.08
610	99.78	27.14
611	99.08	23.67
612	100.14	27.66
613	99.78	23.67
614	99.44	23.5
615	99.44	22.28
616	99.08	18.47
617	99.44	20.55
618	99.08	20.37
619	99.44	23.15
620	99.44	21.76
621	99.78	22.8
622	99.08	24.62
623	99.44	22.2
624	99.08	20.2
625	98.75	19.51
626	99.44	19.33
627	99.08	18.64
628	99.08	17.43
629	99.08	17.08
630	99.08	19.07
631	98.75	19.16
632	99.08	19.68
633	99.44	21.07
634	99.78	19.86
635	99.44	20.81
636	99.44	20.38
637	99.44	18.47
638	99.44	21.16
639	99.08	20.98
640	99.44	20.72
641	99.44	19.33
642	99.44	18.73
643	99.44	20.2
644	99.44	18.81
645	99.44	17.17
646	99.44	16.65
647	99.08	18.81

## ArcWeldTyp2

648	99.08	21.59
649	99.08	19.07
650	98.75	19.59
651	99.08	18.55
652	98.75	27.57
653	105	24.65
654	104.31	20.3
655	104.64	14.66
656	104.31	11.11
657	104.31	9.11
658	104.64	7.81
659	105	7.03
660	104.64	6.59
661	104.64	6.33
662	104.64	6.16
663	104.64	6.07
664	104.64	5.99
665	40.06	5.93
666	-2.31	5.47
667	1.17	5.46
668	1.53	5.46
669	1.17	5.46
670	1.17	5.46
671	0.83	5.46
672	0.83	5.46
673	1.17	5.46
674	0.83	5.29
675	0.83	5.29
676	0.47	5.29
677	0.83	5.29
678	0.83	5.29
679	1.17	5.29
680	1.17	5.29
681	1.17	5.29
682	0.83	5.46
683	1.17	5.46
684	1.17	5.46
685	-0.56	67
686	99.78	38.07
687	99.78	32.95
688	99.44	27.75
689	99.44	30
690	99.44	26.96
691	99.44	24.28
692	99.44	23.06
693	99.44	22.54
694	99.44	20.55
695	99.44	18.73
696	99.08	18.03
697	99.08	16.56
698	98.75	15.52
699	98.75	18.47
700	99.08	20.98
701	99.08	22.98

## ArcWeldTyp2

702	98.75	25.49
703	99.08	22.89
704	99.08	24.19
705	99.08	20.37
706	99.08	19.68
707	99.08	21.76
708	99.08	22.11
709	99.08	21.59
710	99.08	21.76
711	99.44	20.9
712	99.08	17.95
713	99.44	17.77
714	99.78	16.47
715	99.78	16.13
716	99.44	16.91
717	99.78	17.78
718	99.44	16.82
719	99.44	15.43
720	99.08	16.65
721	99.44	18.21
722	99.44	20.12
723	99.78	20.81
724	99.44	20.38
725	99.44	20.03
726	99.44	19.86
727	99.08	18.9
728	99.44	19.6
729	99.78	20.64
730	99.08	20.2
731	99.08	22.19
732	98.75	20.11
733	99.44	20.55
734	99.44	18.29
735	99.44	18.21
736	99.44	17.51
737	99.44	18.03
738	99.44	17.08
739	99.44	16.91
740	99.44	16.56
741	99.44	16.47
742	99.08	26.44
743	99.08	21.41
744	99.08	19.77
745	99.44	18.73
746	99.78	17.95
747	99.78	17.6
748	99.44	18.38
749	99.44	18.64
750	99.08	20.37
751	99.44	20.29
752	99.44	21.24
753	99.44	21.42
754	99.44	22.02
755	99.78	22.46

## ArcWeldTyp2

756	99.44	21.24
757	99.08	19.42
758	98.75	18.47
759	99.08	21.24
760	99.08	22.89
761	99.44	22.28
762	99.44	20.9
763	99.08	19.42
764	99.08	20.63
765	99.08	20.55
766	99.44	20.81
767	99.44	19.51
768	99.44	19.16
769	99.44	16.73
770	99.08	27.4
771	103.61	21.95
772	104.64	21.95
773	105	15.88
774	104.64	11.97
775	95.97	46.01
776	99.44	40.84
777	99.08	38.67
778	99.44	30.35
779	99.44	24.88
780	99.08	21.5
781	98.75	19.94
782	99.08	17.69
783	99.08	18.47
784	98.75	18.64
785	99.08	18.81
786	99.44	18.99
787	99.08	20.63
788	99.08	19.33
789	99.08	19.85
790	99.08	21.5
791	98.75	23.15
792	99.08	22.02
793	99.08	21.5
794	99.44	19.68
795	99.44	20.29
796	99.44	19.42
797	99.44	19.77
798	99.78	18.21
799	99.44	16.91
800	99.44	19.16
801	99.44	19.42
802	99.44	20.38
803	99.44	18.99
804	99.44	19.51
805	99.08	20.98
806	99.08	20.63
807	99.08	22.8
808	99.08	22.46
809	98.75	22.71

## ArcWeldTyp2

810	98.75	22.02
811	98.75	22.89
812	97.69	16.38
813	97.36	14.73
814	97.69	14.13
815	97.69	16.12
816	98.06	17.68
817	97.36	15.17
818	96.67	16.55
819	97.36	19.85
820	97.36	16.12
821	97.36	14.73
822	97.69	13.78
823	97.69	12.92
824	98.06	12.74
825	97.36	12.83
826	97.69	15
827	97.69	29.21
828	97.69	26.7
829	97	20.54
830	97	16.81
831	97.36	14.56
832	97.69	13.61
833	97.36	17.86
834	97.36	17.34
835	97.69	15.17
836	97.69	16.56
837	97.36	16.73
838	97.69	15.52
839	97.69	15.69
840	97.36	15.95
841	97.36	15.86
842	97.69	16.9
843	97.36	17.16
844	98.06	18.38
845	97.36	21.06
846	97.36	20.63
847	97.69	18.81
848	97.36	16.9
849	97.36	15.51
850	97.36	20.02
851	97.36	21.24
852	97.36	18.64
853	97.69	21.67
854	97	23.05
855	97.36	19.59
856	98.39	19.51
857	97.36	20.11
858	98.06	18.2
859	97.69	18.38
860	97	15.77
861	97.69	15.78
862	97.69	23.84
863	97.69	25.48



## ArcWeldTyp2

864	97.69	26.18
865	97.69	20.46
866	97.69	17.34
867	97.69	15
868	97.69	13.7
869	97.36	12.65
870	97.36	12.48
871	97	12.13
872	97.69	17.6
873	97	16.38
874	97.69	19.59
875	97.36	18.81
876	98.06	30.25
877	97.69	32.85
878	98.06	25.14
879	97.36	21.06
880	97.36	18.46
881	97	16.47
882	97.69	17.34
883	98.06	19.16
884	97.69	16.47
885	97.69	31.55
886	98.06	27.22
887	97.69	24.7
888	98.06	22.19
889	97.69	21.76
890	97.69	19.07
891	101.53	16.31
892	104.64	19.09
893	104.31	14.06
894	105	10.76
895	104.64	8.76
896	104.64	7.46
897	105.33	6.68
898	104.31	6.25
899	104.31	5.99
900	104.64	5.73
901	105	5.64
902	104.64	5.55
903	72.36	5.42
904	-3.69	5.14
905	1.53	5.29
906	1.53	5.29
907	1.53	5.29
908	1.86	5.29
909	2.22	5.29
910	1.53	5.29
911	1.53	5.29
912	1.53	5.29
913	1.53	5.29
914	1.53	5.29
915	1.86	5.29
916	2.22	5.29
917	1.86	5.29

## ArcWeldTyp2

918	1.86	5.29
919	1.53	5.29
920	1.17	5.29
921	1.53	5.29
922	1.17	5.29
923	1.17	5.29
924	80	51.87
925	97.36	51.05
926	98.06	42.48
927	97.69	29.9
928	96.31	54.6
929	97.36	45.24
930	97	33.11
931	97	24.35
932	97	24.35
933	98.39	55.57
934	97	38.14
935	98.39	35.54
936	97.69	26.26
937	98.06	35.19
938	97.69	34.5
939	97.36	30.16
940	97.36	28.69
941	97.36	27.74
942	97.36	34.32
943	97.69	25.66
944	97.36	21.93
945	97.69	21.24
946	98.06	20.02
947	98.06	16.9
948	97.69	16.04
949	98.06	20.98
950	97.36	23.75
951	97.69	22.88
952	97.36	18.64
953	97.69	17.25
954	97.36	15.69
955	97.36	19.33
956	97.69	16.73
957	99.44	17.86
958	105	19.87
959	105	14.67
960	105	11.02
961	104.64	8.85
962	97.69	42.65
963	97	35.71
964	97.36	30.42
965	97.36	24.18
966	97.69	22.88
967	97.69	21.41
968	97.36	18.2
969	97.36	17.77
970	97.69	17.34
971	97.36	18.46

## ArcWeldTyp2

972	96.31	18.81
973	97	16.55
974	97	36.75
975	105.69	41.75
976	105.33	30.63
977	105	20.74
978	105	14.84
979	105.33	11.2
980	94.22	47.22
981	97	32.93
982	97	25.74
983	97.36	21.58
984	97	19.85
985	97	16.55
986	97.36	15.17
987	97	13.87
988	97.36	13.52
989	97.36	15.17
990	97.36	13.26
991	97	12.39
992	97.36	13
993	96.67	16.21
994	97	16.38
995	97.36	19.07
996	97	15.95
997	97.36	17.51
998	97.36	20.37
999	97.36	17.42
1000	97.69	17.68
1001	97.36	18.46
1002	97	18.63
1003	97	16.81
1004	97	16.55
1005	97.36	20.72
1006	105.33	22.74
1007	97.36	49.75
1008	97.36	45.68
1009	97	38.83
1010	97	32.24
1011	97.69	28
1012	97	26.26
1013	97	22.71
1014	97	23.31
1015	97	20.37
1016	97.36	18.81
1017	97	18.29
1018	97.69	17.08
1019	97	19.93
1020	97.69	23.84
1021	97.36	21.06
1022	97	26.09
1023	97	24.44
1024	96.67	22.53
1025	96.67	22.01

## ArcWeldTyp2

1026	97.36	21.32
1027	97.69	23.49
1028	97.69	23.84
1029	97.69	22.02
1030	97.36	21.76
1031	97.69	21.15
1032	98.06	30.86
1033	97.36	26.87
1034	97	25.91
1035	97	26.09
1036	97.36	24.53
1037	97	20.97
1038	97.69	19.42
1039	104.64	21
1040	105	15.45
1041	105	11.54
1042	105	9.29
1043	104.31	7.72
1044	104.64	6.94
1045	104.64	6.42
1046	104.64	6.07
1047	104.31	5.9
1048	105	5.73
1049	104.64	5.64
1050	83.81	5.7
1051	-1.61	7.82
1052	1.53	6.97
1053	1.86	6.38
1054	87.97	49.92
1055	97	38.05
1056	97.36	33.28
1057	105.69	28.81
1058	104.31	22.21
1059	104.64	15.71
1060	104.64	11.71
1061	104.64	9.28
1062	104.31	7.81
1063	104.64	6.94
1064	104.31	6.42
1065	104.64	6.07
1066	103.94	5.9
1067	104.64	5.73
1068	104.31	5.73
1069	30	5.48
1070	-1.25	5.3
1071	2.22	5.45
1072	1.53	5.46
1073	1.53	5.46
1074	0.83	5.46
1075	0.83	5.46
1076	0.83	5.46
1077	1.17	5.46
1078	1.17	5.46
1079	1.53	5.46

## ArcWeldTyp2

1080	1.53	5.46
1081	1.53	5.46
1082	41.11	46.93
1083	97.69	33.98
1084	98.06	25.23
1085	98.06	28.69
1086	97.36	23.06
1087	97	24.27
1088	97.36	23.84
1089	97.69	28.26
1090	97.69	26.7
1091	97.69	22.28
1092	97.69	18.55
1093	97.69	17.34
1094	97.69	17.42
1095	97.69	16.82
1096	97.69	15.08
1097	97	15.17
1098	96.67	27.99
1099	97.69	21.84
1100	97.69	23.58
1101	97.69	18.9
1102	97.69	21.15
1103	97.69	19.85
1104	98.39	17.94
1105	106.03	18.31
1106	104.64	18.66
1107	104.64	13.62
1108	104.64	10.41
1109	104.64	8.5
1110	104.31	7.29
1111	104.64	6.68
1112	104.64	6.25
1113	104.64	5.99
1114	104.64	5.9
1115	104.64	5.64
1116	104.64	5.64
1117	52.92	57.94
1118	95.28	58.14
1119	96.67	40.65
1120	97	30.42
1121	97	23.75
1122	97.36	19.85
1123	97	17.59
1124	103.61	51.36
1125	97.36	34.15
1126	97	26
1127	97.36	21.15
1128	96.67	18.37
1129	96.31	16.9
1130	96.67	15.6
1131	96.67	15.08
1132	97	14.82
1133	97.36	14.73

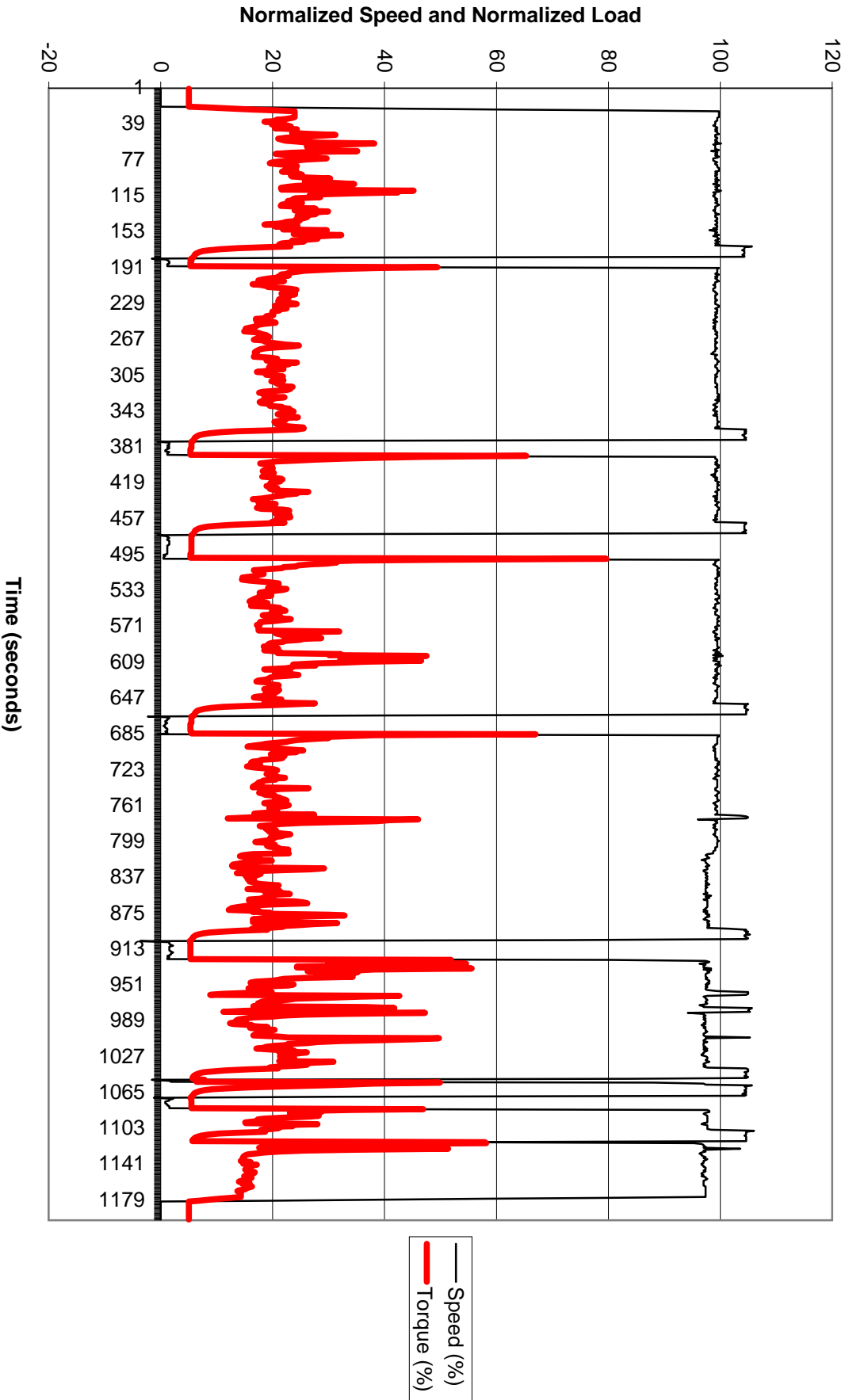
## ArcWeldTyp2

1134	97	14.65
1135	97.69	14.74
1136	97.36	14.99
1137	97	14.3
1138	97	16.03
1139	97	15.17
1140	96.67	14.73
1141	96.67	17.16
1142	97	15.95
1143	97	15.95
1144	97.36	15.69
1145	97.36	16.04
1146	97.36	15.08
1147	97	15.34
1148	97.36	16.38
1149	97	16.81
1150	96.67	16.64
1151	96.67	16.12
1152	97	15.6
1153	96.67	14.91
1154	97.36	15.69
1155	97.36	16.21
1156	97.69	15.6
1157	97.36	15.17
1158	97	14.39
1159	97	13.95
1160	97	15.86
1161	97	14.56
1162	97	15.43
1163	97	15.95
1164	97.36	16.3
1165	97.36	15.69
1166	97.36	15.34
1167	97.36	15.08
1168	97.36	13.95
1169	97.36	13.69
1170	97.36	14.3
1171	97.36	14.3
1172	97.36	14.3
1173	97.36	14.3
1174	97.36	14.3
1175	97.36	14.3
1176	77.89	12.42
1177	58.42	10.53
1178	38.94	8.63
1179	19.47	6.8
1180	0	5.04
1181	0	5.04
1182	0	5.04
1183	0	5.04
1184	0	5.04
1185	0	5.04
1186	0	5.04
1187	0	5.04

ArcWeldTyp2

1188	0	5.04
1189	0	5.04
1190	0	5.04
1191	0	5.04
1192	0	5.04
1193	0	5.04
1194	0	5.04
1195	0	5.04
1196	0	5.04
1197	0	5.04
1198	0	5.04
1199	0	5.04

# Arc Welder Typical Operation 2 Duty Cycle





## ArcWeldSpe

Time (sec.)	Speed (%)	Torque (%)
1	0	5.04
2	0	5.04
3	0	5.04
4	0	5.04
5	0	5.04
6	0	5.04
7	0	5.04
8	0	5.04
9	0	5.04
10	0	5.04
11	0	5.04
12	0	5.04
13	0	5.04
14	0	5.04
15	0	5.04
16	0	5.04
17	0	5.04
18	0	5.04
19	0	5.04
20	0	5.04
21	19.54	11.64
22	39.08	18.38
23	58.62	25.33
24	78.16	32.29
25	97.69	39.27
26	97.69	39.27
27	97.69	39.27
28	97.69	39.27
29	97.69	39.27
30	97.69	39.27
31	97.69	39.27
32	97.36	30.34
33	98.39	30.43
34	98.75	29.56
35	98.39	23.93
36	97.36	30.25
37	98.39	28.69
38	97.36	24.88
39	97	28.95
40	97.69	31.64
41	98.39	32.51
42	97.69	44.47
43	106.39	36.8
44	105	27.42
45	105	18.92
46	105	13.71
47	105	10.59
48	105	8.59
49	104.64	7.46
50	104.31	6.77
51	104.31	6.33
52	105	6.07
53	104.64	5.9

## ArcWeldSpe

54	105	5.73
55	41.47	5.59
56	-1.25	5.3
57	2.56	5.45
58	2.56	5.45
59	2.22	5.45
60	1.53	5.46
61	1.86	5.46
62	1.86	5.46
63	1.86	5.46
64	2.22	5.45
65	2.22	5.45
66	2.56	5.45
67	2.22	5.45
68	1.86	5.46
69	1.53	5.46
70	1.86	5.46
71	1.86	5.46
72	2.22	5.45
73	1.86	5.46
74	2.22	5.45
75	1.86	5.46
76	2.56	5.45
77	100.14	35.73
78	97.69	29.56
79	97.69	26.26
80	98.75	30.52
81	97.69	34.59
82	97.69	28.78
83	98.06	29.39
84	98.39	29.73
85	98.06	23.49
86	98.06	19.5
87	98.06	23.32
88	98.06	21.58
89	98.39	21.93
90	98.06	19.59
91	97.69	18.03
92	97.69	20.37
93	95.97	60.31
94	98.06	47.5
95	97.69	39.01
96	98.39	36.24
97	98.06	26.18
98	97.69	21.67
99	98.06	19.68
100	97.69	22.02
101	97.69	18.2
102	97.36	16.64
103	97.69	26.96
104	97.69	23.49
105	105	18.92
106	105	19.7
107	105	14.41

## ArcWeldSpe

108	105	10.93
109	104.31	8.94
110	105	7.55
111	104.64	6.86
112	104.64	6.42
113	104.64	6.07
114	104.31	5.9
115	104.31	5.81
116	105	5.64
117	66.81	5.59
118	-2.64	5.3
119	60.56	48.44
120	98.06	36.75
121	97.69	31.2
122	97.36	31.72
123	97.36	34.15
124	97.69	29.47
125	98.06	24.62
126	97.36	26.52
127	98.06	28.26
128	98.06	26.09
129	97	28.43
130	97.69	29.73
131	97.69	27.65
132	97.69	25.22
133	97.69	27.48
134	98.06	25.14
135	97.69	26.87
136	97.69	24.36
137	97.69	23.23
138	98.39	20.37
139	98.06	23.23
140	98.06	20.46
141	97.69	17.6
142	97.36	21.76
143	97.69	19.24
144	98.06	23.14
145	97.69	26.96
146	98.06	25.83
147	98.39	22.89
148	98.06	20.54
149	106.72	22.66
150	104.64	20.13
151	104.64	14.58
152	104.31	11.02
153	105	8.85
154	104.64	7.55
155	104.64	6.86
156	105	6.33
157	105	6.07
158	105	5.9
159	105.33	5.73
160	105	5.64
161	51.17	5.63

## ArcWeldSpe

162	-1.94	5.3
163	0.83	77.02
164	97.69	38.57
165	98.06	29.82
166	97.69	28.08
167	97.36	30.6
168	98.06	36.23
169	97.69	36.06
170	98.06	30.34
171	97.69	25.74
172	98.06	26.35
173	97.69	22.28
174	97.69	17.77
175	98.06	18.81
176	97.69	24.44
177	97.36	25.14
178	98.06	21.24
179	98.06	22.28
180	98.06	27.31
181	98.06	26.09
182	98.39	26.27
183	98.06	24.27
184	97.36	20.02
185	97.36	23.32
186	97.36	25.22
187	97.69	25.05
188	98.06	24.71
189	98.06	21.24
190	98.06	28.17
191	97	39
192	98.06	31.64
193	97.69	24.1
194	97.69	19.76
195	105.33	20.65
196	105	16.4
197	104.64	12.15
198	105	9.63
199	104.64	8.07
200	105	7.12
201	105.33	6.51
202	105	6.25
203	98.39	61.29
204	97	50.96
205	97.69	39.35
206	96.67	35.62
207	97.36	36.49
208	97	31.46
209	97.69	24.27
210	97.36	18.72
211	97.36	19.5
212	97.69	19.33
213	97.69	19.24
214	97.36	17.68
215	97	19.93

## ArcWeldSpe

216	97.36	22.88
217	97.36	22.45
218	98.06	23.32
219	97.36	20.2
220	97.36	17.77
221	98.06	15.69
222	97.69	16.82
223	97.36	16.04
224	97.36	16.12
225	97	17.07
226	97	17.68
227	97.36	20.8
228	97.69	21.24
229	97.36	18.81
230	97.69	17.6
231	97.36	18.12
232	98.06	21.67
233	97.69	20.98
234	97.69	19.42
235	97.36	20.11
236	97.36	21.76
237	97.36	21.76
238	97.36	21.76
239	97.69	22.88
240	97.36	22.36
241	97.69	21.84
242	97.69	19.16
243	98.06	16.3
244	97.69	14.13
245	97.69	17.68
246	97.69	17.6
247	97.36	20.11
248	97.36	21.67
249	97.36	19.33
250	97.69	17.94
251	97.69	17.08
252	97.69	18.72
253	97.69	19.85
254	97.69	19.68
255	97.36	18.46
256	97.36	21.58
257	97.36	19.24
258	97.36	17.08
259	97.36	17.86
260	97	20.8
261	97.36	18.2
262	97.69	17.34
263	98.06	18.2
264	97.69	16.47
265	97.36	14.99
266	96.67	16.99
267	97.69	18.55
268	97.36	22.02
269	96.67	21.23

## ArcWeldSpe

270	97.36	17.51
271	97.36	15.69
272	97.69	14.48
273	97.69	13.87
274	97.36	19.07
275	97.69	20.37
276	97.69	22.88
277	105.69	22.65
278	104.64	21.69
279	104.64	15.53
280	104.64	11.63
281	105	9.29
282	105	7.81
283	104.64	6.94
284	105	6.42
285	105	6.16
286	104.64	5.9
287	105	5.73
288	104.64	5.64
289	64.72	5.58
290	-3.33	5.14
291	1.86	5.29
292	1.86	5.29
293	1.86	5.46
294	1.53	5.46
295	1.86	5.46
296	1.53	5.46
297	2.22	5.45
298	1.86	5.46
299	1.86	6.8
300	100.47	45.35
301	97.36	44.29
302	96.67	34.41
303	97.36	41.52
304	97.69	43.86
305	97.36	31.72
306	97.69	25.48
307	97.36	20.72
308	98.39	29.3
309	98.06	26.27
310	97.69	21.24
311	98.75	34.07
312	98.06	30.86
313	97.36	25.48
314	97.69	22.02
315	97.69	22.71
316	97.69	18.46
317	97	17.42
318	97.36	20.46
319	97.36	26.87
320	97.69	29.12
321	97.36	31.64
322	98.06	25.92
323	97.69	34.33

## ArcWeldSpe

324	97.69	30.08
325	97.69	23.84
326	98.06	19.68
327	97.36	17.08
328	97.36	15.51
329	105.69	18.83
330	105	16.92
331	105.33	12.5
332	104.64	9.89
333	104.64	8.16
334	105	7.2
335	105	6.6
336	105.33	6.25
337	104.64	5.99
338	105	5.73
339	105	5.64
340	104.31	5.64
341	41.47	5.42
342	-1.94	5.3
343	1.17	5.29
344	1.53	5.46
345	1.86	5.46
346	41.81	75.18
347	97.69	70.12
348	97.69	57.04
349	97.36	48.71
350	97	38.14
351	97.69	43.25
352	96.67	51.48
353	97.36	41.17
354	106.03	41.66
355	97.69	89.54
356	98.06	66.49
357	97.36	52.44
358	98.06	40.22
359	97.69	33.55
360	97.69	33.72
361	97	29.99
362	97	30.42
363	97.69	29.47
364	97.36	28.52
365	97.69	23.58
366	97.36	33.8
367	97.69	26.78
368	97.36	36.32
369	97.69	27.48
370	97.69	25.14
371	97.69	26.44
372	97.36	20.89
373	97.36	19.42
374	105.69	21
375	94.58	52.5
376	97	45.16
377	97.36	35.54

## ArcWeldSpe

378	97.69	28.6
379	97.69	23.23
380	97.69	20.2
381	97.69	16.64
382	97.36	18.2
383	97.36	17.94
384	97	18.03
385	97.36	17.68
386	97.36	18.38
387	103.25	16.48
388	105	18.83
389	105	13.97
390	105	10.67
391	105.33	8.68
392	105	7.46
393	105.33	6.77
394	105	6.33
395	104.64	6.07
396	104.64	5.9
397	105	5.73
398	104.64	5.64
399	69.58	5.59
400	-3	5.3
401	1.86	5.46
402	1.86	5.46
403	1.86	5.46
404	2.22	5.45
405	1.53	5.46
406	47.36	57.49
407	97.36	36.58
408	97.69	28.26
409	97.69	23.4
410	97.69	25.14
411	97.69	25.66
412	97.36	30.16
413	97	26.61
414	97.69	33.46
415	98.06	56.69
416	97.69	44.9
417	97	36.75
418	98.06	33.89
419	97.69	27.65
420	97.69	27.3
421	98.06	28.95
422	105.33	22.48
423	97.36	83.47
424	95.61	74.26
425	98.06	61.72
426	97	50.88
427	98.39	50.02
428	98.39	81.49
429	97	65.52
430	98.06	48.28
431	97	56.34



## ArcWeldSpe

432	99.44	65.37
433	97	58.94
434	106.39	57.46
435	105	40.87
436	105	27.16
437	104.64	18.66
438	104.31	13.62
439	104.64	11.02
440	105	9.03
441	105	7.72
442	105	6.94
443	104.64	6.42
444	104.64	6.16
445	104.31	5.99
446	46.31	5.78
447	-2.31	5.47
448	1.53	5.63
449	2.22	5.62
450	1.86	5.62
451	2.22	5.62
452	1.86	5.62
453	2.22	5.62
454	1.86	5.62
455	1.86	5.62
456	1.17	5.46
457	1.53	5.46
458	2.22	5.45
459	2.22	5.62
460	2.22	5.45
461	1.86	5.62
462	2.22	5.62
463	1.86	5.62
464	2.22	5.45
465	2.22	5.45
466	1.86	5.46
467	1.53	5.46
468	40.75	59.03
469	97.36	47.24
470	98.06	33.29
471	97.69	29.47
472	97.69	26.52
473	97.36	27.65
474	98.06	31.12
475	97.69	25.22
476	97.69	33.37
477	98.06	28.78
478	97.69	30.86
479	97.69	29.04
480	98.75	35.37
481	97.69	38.23
482	97.36	40.65
483	98.06	28.69
484	98.06	36.23
485	97.36	29.99

## ArcWeldSpe

486	97.36	26.87
487	97.36	32.24
488	98.06	34.76
489	98.06	27.57
490	105	25.86
491	105	18.48
492	104.64	13.54
493	105	10.33
494	105	8.5
495	105	7.38
496	105	6.77
497	105	6.33
498	104.64	6.07
499	104.64	5.81
500	104.64	5.73
501	84.86	5.7
502	-1.94	5.3
503	1.17	5.46
504	1.86	5.46
505	1.86	5.46
506	1.53	5.63
507	1.53	5.63
508	1.53	5.46
509	1.53	5.46
510	0.83	5.46
511	1.17	5.46
512	1.17	5.46
513	1.86	5.46
514	1.86	5.62
515	1.53	5.46
516	1.86	5.46
517	1.86	5.46
518	12.64	73.6
519	97.69	55.91
520	97.36	49.41
521	98.06	46.38
522	97.36	43.08
523	97	32.33
524	98.06	50.36
525	96.67	39.87
526	98.06	32.42
527	97.69	23.66
528	97.36	22.19
529	97.36	22.45
530	97.36	24.96
531	98.06	27.13
532	97.69	31.55
533	97.36	28.78
534	97	25.65
535	96.67	25.48
536	97	23.66
537	104.64	52.24
538	97.36	41.52
539	106.72	34.89

## ArcWeldSpe

540	98.06	58.43
541	98.06	58.17
542	105.33	56.67
543	104.64	38.35
544	105	25.51
545	94.58	63.42
546	96.31	58.67
547	105.33	100.15
548	97.36	73.24
549	105.69	53.2
550	96.31	75.48
551	98.39	61.29
552	97	49.66
553	97.36	36.66
554	103.25	49.28
555	105	36.71
556	104.31	24.82
557	105	17.27
558	104.31	12.76
559	104.31	9.98
560	105	8.33
561	104.64	7.38
562	104.64	6.77
563	105	6.33
564	105	6.16
565	105.33	5.99
566	65.75	5.84
567	-3	5.72
568	60.56	61.47
569	97.69	50.1
570	97.36	43.16
571	97.36	42.47
572	97.36	30.68
573	98.06	29.65
574	97.69	34.76
575	97.69	27.82
576	98.06	27.05
577	97	27.3
578	98.06	30.6
579	97.69	41.35
580	97.36	41.34
581	98.75	37.11
582	97.69	43.08
583	98.06	34.24
584	97.69	31.29
585	98.06	26.18
586	97.69	23.14
587	98.06	26.96
588	100.47	38.07
589	97.69	39.87
590	99.08	39.1
591	97.69	26.61
592	98.06	33.03
593	97	28.08

## ArcWeldSpe

594	97.36	34.32
595	105	72.63
596	97.69	48.71
597	98.75	51.06
598	96.67	54.95
599	98.75	47.68
600	97.69	35.63
601	97.69	38.83
602	98.06	38.49
603	97	41.17
604	97.69	30.42
605	97.69	23.14
606	97.36	18.98
607	98.06	24.71
608	97.36	28.69
609	105.69	26.38
610	99.44	89.39
611	98.39	74.64
612	97	60.41
613	97.36	47.67
614	97.36	41.43
615	97.36	29.56
616	97	23.66
617	97.69	19.85
618	97.36	20.8
619	97.69	29.12
620	98.06	28.69
621	98.06	26.87
622	97.36	23.32
623	98.06	24.71
624	97.69	26.18
625	97.36	22.28
626	97.69	19.59
627	97.36	16.99
628	97.36	22.71
629	104.64	65.86
630	98.06	53.92
631	97.69	50.36
632	97.36	40.91
633	97.69	34.93
634	97.69	37.1
635	98.06	29.13
636	98.06	28.17
637	98.06	24.27
638	97.36	18.98
639	97.36	16.21
640	96.67	15.77
641	104.64	23.26
642	104.64	17.44
643	105	12.84
644	104.64	9.98
645	100.47	58.27
646	98.39	59.99
647	97.69	46.2

## ArcWeldSpe

648	97	40.56
649	97	35.62
650	97.36	25.66
651	97	20.54
652	97.36	19.16
653	98.06	16.99
654	97.69	23.58
655	97.69	28.26
656	98.39	32.25
657	97.36	31.46
658	97	28.77
659	97.36	21.67
660	97	18.46
661	97.36	15.43
662	97	14.04
663	97.36	13.35
664	97	15.51
665	98.39	16.99
666	95.97	59.01
667	97.36	41.43
668	97.36	39.44
669	97.69	33.03
670	97.69	24.62
671	97.36	19.68
672	97	17.51
673	97.36	25.74
674	97.36	28.08
675	97.36	27.04
676	98.06	35.37
677	98.06	30.95
678	97.36	24.44
679	97.36	20.8
680	97.36	19.5
681	96.67	19.85
682	97.36	16.99
683	97.69	15.69
684	97.69	18.9
685	97.36	31.55
686	97.69	25.05
687	105.33	30.98
688	97.36	57.47
689	96.67	45.15
690	98.39	52.1
691	96.67	35.79
692	97	28.6
693	97.36	26
694	97	27.21
695	97	32.15
696	97.69	32.77
697	97.69	26.96
698	97.69	21.67
699	97.36	18.9
700	97.36	19.76
701	96.67	20.02

## ArcWeldSpe

702	104.64	21.52
703	104.64	15.79
704	105	11.72
705	104.64	9.37
706	105	7.9
707	105	7.03
708	104.64	6.51
709	105	6.16
710	104.64	5.99
711	104.64	5.81
712	104.31	5.73
713	86.94	5.71
714	-1.25	5.3
715	0.83	5.46
716	1.86	5.46
717	1.86	5.62
718	73.39	54.86
719	97.69	45.42
720	97.36	35.71
721	97.36	30.34
722	97.69	34.24
723	97	37.53
724	97	32.07
725	97.36	28.08
726	97.36	33.54
727	98.06	31.81
728	97.69	24.62
729	98.06	21.76
730	98.06	17.94
731	98.06	16.38
732	97.69	23.92
733	97.36	23.49
734	97.36	21.93
735	97.69	20.11
736	97.36	25.31
737	98.06	19.59
738	97.69	15.78
739	98.06	13.61
740	97.69	16.73
741	97.69	16.21
742	97.69	17.77
743	97.36	15.34
744	97.69	16.04
745	97.69	26.09
746	97.36	21.76
747	97.69	19.42
748	97.36	16.3
749	98.06	14.56
750	98.06	13.7
751	98.06	16.21
752	97.69	18.81
753	97.36	17.94
754	97.36	17.68
755	97.69	17.94

## ArcWeldSpe

756	97	15.34
757	97.69	13.87
758	97.69	15.78
759	98.06	15.43
760	97.36	14.04
761	98.06	14.04
762	97.69	13.87
763	97.36	20.37
764	97.69	22.02
765	97.36	22.8
766	97.69	21.15
767	97.36	18.38
768	97.69	20.63
769	97.69	16.9
770	97.69	15.43
771	97.69	17.42
772	97.69	19.16
773	105	21.35
774	104.64	16.4
775	104.64	12.15
776	104.64	9.55
777	105	7.98
778	105	7.03
779	104.64	6.51
780	105	6.16
781	105	5.99
782	104.64	5.73
783	104.31	5.64
784	103.25	5.73
785	11.58	5.28
786	0.47	5.29
787	1.53	5.46
788	68.89	61.15
789	98.06	44.56
790	98.39	62.24
791	97.36	43.77
792	98.39	34.5
793	98.39	62.59
794	97.69	42.99
795	97.69	33.11
796	97	33.19
797	97	25.13
798	98.75	39.62
799	97.69	44.99
800	97.69	33.2
801	97.69	25.66
802	97.69	20.11
803	97.69	23.92
804	97.69	24.96
805	97.69	21.67
806	97.69	17.77
807	97	17.94
808	98.39	28.78
809	97.69	22.62

## ArcWeldSpe

810	104.64	23
811	104.64	16.66
812	105	12.32
813	105	9.72
814	105	8.07
815	105	7.12
816	104.64	6.51
817	104.64	6.16
818	104.31	5.99
819	97.36	35.88
820	97.36	35.19
821	97	29.03
822	97.36	22.97
823	97.36	20.98
824	97.36	19.16
825	97.69	18.46
826	97.36	19.5
827	97.36	24.7
828	97.69	21.84
829	97.69	19.42
830	96.67	17.42
831	97	15.17
832	97.36	13.69
833	97.36	19.33
834	97.69	15.78
835	97.69	15.34
836	98.06	17.25
837	97.69	18.55
838	97.36	20.11
839	96.67	18.37
840	96.67	25.39
841	97.36	19.76
842	97.36	16.12
843	97.69	13.87
844	97.69	12.92
845	97.69	16.56
846	97	16.9
847	97.69	24.01
848	97.36	22.88
849	97.69	26.18
850	97.36	24.62
851	97	20.8
852	97.36	17.16
853	97.36	15.51
854	97.69	13.87
855	97.69	13.52
856	98.75	19.42
857	97.69	16.21
858	97.69	14.04
859	97.36	20.37
860	97	17.51
861	97.36	15.08
862	97.36	14.3
863	97.36	13.43



## ArcWeldSpe

864	97.36	12.83
865	98.06	12.66
866	97.69	15.17
867	97.69	24.18
868	97.69	30.08
869	98.06	22.8
870	97.36	18.2
871	97.69	15.69
872	97	13.87
873	97.69	15
874	97.69	18.12
875	97.69	16.12
876	97.36	14.82
877	97.69	16.04
878	97.69	16.38
879	98.06	16.3
880	97.69	16.12
881	97.36	15.86
882	97.36	18.03
883	97	17.68
884	97.69	19.42
885	97.36	18.55
886	98.06	23.14
887	97.36	20.2
888	97.69	17.77
889	98.06	15.52
890	97.36	21.24
891	97.36	18.81
892	97.36	19.59
893	97.36	20.02
894	97.69	20.89
895	97.69	20.72
896	98.06	19.07
897	96.67	18.81
898	98.06	18.12
899	97.69	19.16
900	98.06	16.64
901	97.36	16.12
902	97.36	18.46
903	97.36	28.52
904	97	25.39
905	97.36	22.62
906	97	17.94
907	97.36	15.69
908	97.69	14.22
909	97.69	12.92
910	97.69	13.09
911	97.69	12.05
912	97	14.13
913	97.36	16.12
914	97	20.45
915	97.36	19.68
916	97.69	22.28
917	97.36	34.32

## ArcWeldSpe

918	97.69	27.39
919	98.06	22.02
920	97.69	19.59
921	97.36	17.42
922	97.69	18.98
923	97	16.73
924	97	17.42
925	97	22.53
926	97	28.34
927	97.36	24.53
928	97.36	22.97
929	97.69	21.15
930	97.69	20.37
931	97.36	19.07
932	104.64	20.48
933	104.64	16.05
934	105	11.8
935	104.31	9.37
936	104.64	7.81
937	104.64	6.94
938	104.64	6.42
939	105	6.07
940	105	5.9
941	105	5.64
942	104.64	5.55
943	104.31	5.64
944	14.36	5.28
945	-0.56	5.13
946	1.53	5.12
947	1.53	5.29
948	1.53	5.29
949	1.53	5.29
950	1.86	5.29
951	1.86	5.29
952	1.53	5.29
953	1.53	5.29
954	1.17	5.29
955	1.53	5.29
956	1.53	5.29
957	1.86	5.29
958	1.53	5.29
959	1.86	5.29
960	1.53	5.29
961	1.53	5.29
962	1.17	5.29
963	1.86	5.29
964	-0.92	76.6
965	97.69	51.57
966	97.36	42.64
967	97.36	34.32
968	99.08	56.09
969	97.69	48.11
970	97.69	37.45
971	97.36	26.87

## ArcWeldSpe

972	97.36	21.76
973	98.39	39.88
974	96.67	44.29
975	97.36	40.22
976	97.69	29.38
977	98.39	31.9
978	97.69	34.93
979	97.69	29.04
980	97	29.29
981	97.69	31.55
982	97.36	27.39
983	97.36	28.43
984	97.36	23.66
985	97.36	20.46
986	97.36	18.72
987	97.69	18.29
988	98.06	16.12
989	97.69	16.99
990	97.69	25.4
991	96.67	25.48
992	97.69	19.94
993	97.36	18.29
994	97.36	16.56
995	97	16.73
996	97.36	18.03
997	98.39	15.95
998	105.33	21.09
999	105.33	16.66
1000	105	12.24
1001	105.33	9.63
1002	94.92	50.25
1003	96.67	38.83
1004	97	32.07
1005	97	26.69
1006	97	24.01
1007	97.36	21.41
1008	97.36	18.81
1009	97.36	17.34
1010	97	17.42
1011	97	19.24
1012	97.69	17.68
1013	97.36	17.68
1014	98.06	29.3
1015	98.06	44.21
1016	105	35.49
1017	104.64	24.21
1018	104.64	16.83
1019	105	12.41
1020	105	9.81
1021	97.36	38.22
1022	97	28.6
1023	97	22.71
1024	97.36	20.89
1025	97	17.59

## ArcWeldSpe

1026	96.67	15.77
1027	97	14.47
1028	97	13.43
1029	97	14.65
1030	97.36	13.78
1031	97	12.57
1032	97.36	13.52
1033	97.36	16.04
1034	97.36	15.6
1035	96.67	18.89
1036	96.67	16.99
1037	96.67	18.29
1038	97.36	19.24
1039	97.36	18.55
1040	97	17.85
1041	97.36	16.73
1042	97.36	17.34
1043	97.69	17.94
1044	97	15.86
1045	97	18.98
1046	105	20.13
1047	95.28	56.06
1048	97.36	47.76
1049	97.69	39.44
1050	97.36	35.36
1051	97	30.51
1052	97.36	26.26
1053	97.69	23.58
1054	97	24.61
1055	97	20.54
1056	97	19.93
1057	97	18.11
1058	97.36	17.77
1059	97.36	16.82
1060	98.06	26.61
1061	97.36	21.93
1062	98.06	28.69
1063	97.69	25.22
1064	97.36	22.28
1065	97.69	21.84
1066	97.36	22.54
1067	97.36	23.92
1068	97	22.27
1069	97.69	23.14
1070	97.69	23.84
1071	97.69	22.36
1072	97	22.88
1073	98.06	29.99
1074	98.06	25.4
1075	97.69	26.18
1076	97.36	24.62
1077	97	22.19
1078	97.36	20.02
1079	105	22.3

## ArcWeldSpe

1080	105	17.53
1081	105	12.93
1082	104.64	9.98
1083	105	8.24
1084	104.64	7.2
1085	105	6.6
1086	104.31	6.16
1087	104.31	5.9
1088	104.31	5.73
1089	104.64	5.64
1090	104.64	5.73
1091	23.39	5.63
1092	0.83	7.14
1093	1.86	6.63
1094	1.86	61.02
1095	98.39	41.78
1096	96.67	35.1
1097	102.22	26.89
1098	104.31	25.34
1099	104.64	17.96
1100	104.31	13.02
1101	104.64	10.15
1102	104.31	8.33
1103	105	7.29
1104	105	6.6
1105	104.31	6.25
1106	104.64	5.99
1107	104.31	5.73
1108	104.31	5.64
1109	70.61	5.59
1110	-3.69	5.14
1111	1.17	5.29
1112	1.17	5.46
1113	1.53	5.46
1114	1.86	5.46
1115	1.17	5.63
1116	1.53	5.46
1117	1.17	5.46
1118	1.53	5.46
1119	1.17	5.46
1120	1.17	5.46
1121	1.17	5.46
1122	1.53	8.48
1123	99.08	37.71
1124	97.36	28.52
1125	97.36	22.8
1126	97.36	25.4
1127	97.69	21.06
1128	97.36	21.84
1129	98.06	27.83
1130	97.69	30.42
1131	97.69	23.23
1132	98.06	19.5
1133	97.69	16.73

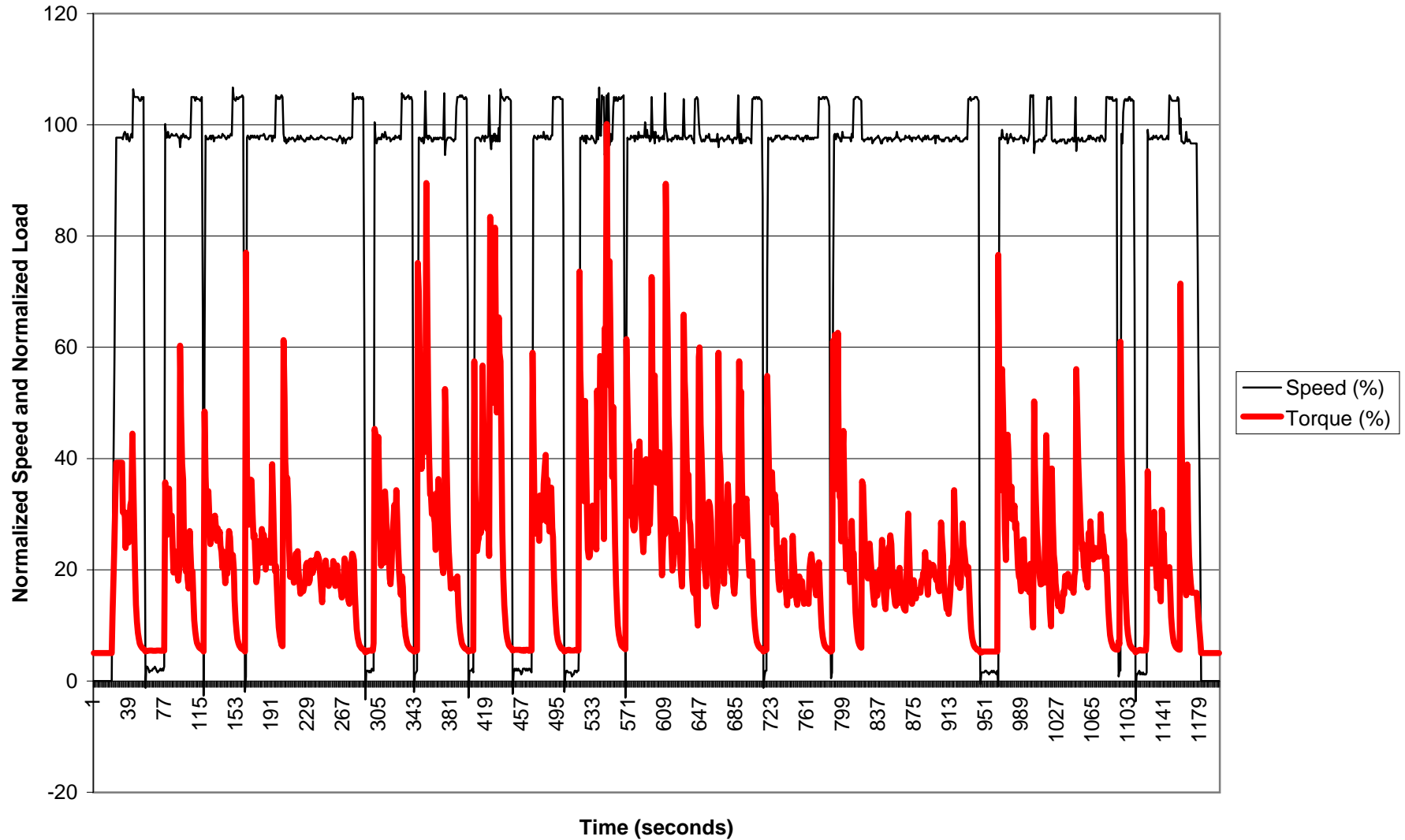
## ArcWeldSpe

1134	97.36	18.29
1135	97.69	17.6
1136	97.69	15.95
1137	98.06	14.3
1138	98.06	30.77
1139	97.36	24.1
1140	97.36	26.61
1141	97.36	20.28
1142	97.36	18.9
1143	97.69	20.2
1144	98.06	18.9
1145	97.36	18.72
1146	105.33	20.48
1147	105	15.53
1148	104.64	11.54
1149	104.31	9.2
1150	104.31	7.72
1151	104.31	6.94
1152	104.31	6.42
1153	104.31	6.07
1154	104.31	5.9
1155	105	5.73
1156	104.64	5.64
1157	98.39	5.63
1158	101.17	71.46
1159	97	46.11
1160	97	33.8
1161	96.67	25.65
1162	96.67	21.49
1163	97	18.37
1164	98.75	15.43
1165	97	38.92
1166	97	29.03
1167	97.36	22.54
1168	97	19.33
1169	96.67	17.51
1170	96.67	15.86
1171	96.67	15.86
1172	96.67	15.86
1173	96.67	15.86
1174	96.67	15.86
1175	96.67	15.86
1176	77.33	13.66
1177	58	11.45
1178	38.67	9.24
1179	19.33	7.11
1180	0	5.04
1181	0	5.04
1182	0	5.04
1183	0	5.04
1184	0	5.04
1185	0	5.04
1186	0	5.04
1187	0	5.04

ArcWeldSpe

1188	0	5.04
1189	0	5.04
1190	0	5.04
1191	0	5.04
1192	0	5.04
1193	0	5.04
1194	0	5.04
1195	0	5.04
1196	0	5.04
1197	0	5.04
1198	0	5.04
1199	0	5.04

### Arc Welder High Speed Transient Operation Duty Cycle





## ArcWeldTor

Time (sec.)	Speed (%)	Torque (%)
1	0	5.04
2	0	5.04
3	0	5.04
4	0	5.04
5	0	5.04
6	0	5.04
7	0	5.04
8	0	5.04
9	0	5.04
10	0	5.04
11	0	5.04
12	0	5.04
13	0	5.04
14	0	5.04
15	0	5.04
16	0	5.04
17	0	5.04
18	0	5.04
19	0	5.04
20	0	5.04
21	19.96	7.95
22	39.91	10.94
23	59.87	14.04
24	79.82	17.12
25	99.78	20.2
26	99.78	20.2
27	99.78	20.2
28	99.78	20.2
29	99.78	20.2
30	99.78	20.2
31	99.78	20.2
32	100.14	20.38
33	100.14	22.03
34	100.14	23.24
35	99.78	23.58
36	99.78	25.58
37	99.78	24.37
38	100.14	22.11
39	99.44	20.72
40	100.14	21.07
41	105.69	21.61
42	104.64	19
43	104.64	13.88
44	104.31	10.76
45	99.08	50.46
46	99.78	35.9
47	99.78	29.31
48	99.78	25.67
49	103.25	28.11
50	104.64	25.86
51	104.64	18.31
52	104.31	13.45
53	104.64	10.5

## ArcWeldTor

54	105	8.68
55	97.36	41.86
56	99.44	41.88
57	99.44	34.25
58	99.44	29.31
59	98.75	28.09
60	99.78	27.57
61	99.44	25.49
62	99.78	27.49
63	99.44	26.36
64	99.78	25.49
65	104.64	24.56
66	104.64	17.79
67	104.64	13.1
68	104.64	10.33
69	104.64	8.59
70	101.53	51.17
71	99.44	44.83
72	99.08	41.62
73	100.47	39.8
74	99.78	30.17
75	99.44	27.23
76	99.44	24.8
77	99.44	22.46
78	99.44	21.42
79	100.14	20.38
80	99.78	20.12
81	105.33	19.7
82	104.64	19
83	104.31	13.97
84	104.31	10.85
85	104.64	8.94
86	104.64	7.81
87	104.64	7.12
88	104.64	6.68
89	105	6.42
90	104.64	6.25
91	104.64	6.16
92	104.64	6.16
93	64.72	6.18
94	99.08	53.23
95	99.78	43.35
96	99.44	34.68
97	99.08	34.25
98	99.78	28.87
99	99.78	25.93
100	99.78	25.32
101	99.78	22.28
102	99.78	21.07
103	99.78	20.2
104	99.78	19.94
105	100.14	19.25
106	100.14	20.81
107	100.14	21.5

## ArcWeldTor

108	99.78	21.16
109	99.78	21.5
110	99.78	22.8
111	99.78	21.85
112	99.78	22.02
113	100.14	19.6
114	99.78	19.6
115	99.78	19.77
116	99.78	19.16
117	100.14	20.12
118	100.14	20.98
119	99.78	22.72
120	100.14	23.67
121	99.78	22.2
122	99.78	20.9
123	99.78	19.25
124	100.47	22.98
125	100.14	21.77
126	100.14	20.64
127	100.14	23.5
128	100.14	23.93
129	99.44	23.5
130	100.83	38.68
131	100.47	39.72
132	100.14	34.08
133	100.47	33.99
134	100.47	31.74
135	100.47	31.74
136	100.47	30.35
137	100.47	27.14
138	100.83	29.05
139	101.17	34.86
140	100.14	40.76
141	100.14	43.27
142	101.53	42.15
143	100.47	45.61
144	100.14	37.2
145	100.14	33.82
146	100.14	28.27
147	100.14	26.62
148	100.47	26.8
149	100.47	27.4
150	100.14	29.48
151	99.78	30.26
152	99.78	27.14
153	100.14	29.57
154	105	27.25
155	105	19.53
156	105	14.15
157	105	10.93
158	105.33	9.03
159	104.64	7.9
160	105	7.2
161	105	6.77

## ArcWeldTor

162	105	6.51
163	105.33	6.34
164	105	6.25
165	98.06	6.33
166	3.61	6.04
167	1.86	5.62
168	1.86	5.62
169	2.22	5.62
170	1.53	5.63
171	1.53	5.63
172	1.86	5.62
173	2.22	5.62
174	1.86	5.62
175	1.86	5.62
176	1.86	5.62
177	1.86	5.62
178	1.86	49.94
179	100.47	49.78
180	99.78	40.58
181	100.14	36.33
182	99.78	35.12
183	100.14	27.66
184	99.78	24.1
185	99.78	20.98
186	99.78	24.37
187	99.78	25.15
188	99.44	27.49
189	100.47	29.31
190	99.44	39.45
191	100.14	33.12
192	99.78	29.48
193	99.44	28.27
194	99.78	22.98
195	99.78	24.28
196	99.78	20.64
197	99.78	32.26
198	99.78	29.57
199	100.14	32.43
200	99.78	31.74
201	99.78	27.49
202	100.14	34.69
203	99.44	30.52
204	100.14	26.71
205	100.47	26.1
206	100.14	23.59
207	99.78	30.78
208	100.14	26.88
209	100.14	22.98
210	100.47	27.4
211	100.47	40.93
212	99.78	56.1
213	99.44	43.01
214	99.78	37.2
215	99.78	34.25

## ArcWeldTor

216	100.47	33.13
217	99.78	28.96
218	100.14	24.71
219	100.47	23.67
220	100.14	22.63
221	100.14	19.94
222	100.47	28.27
223	100.14	33.99
224	99.78	27.05
225	100.47	27.84
226	100.14	33.73
227	99.44	33.64
228	100.47	29.74
229	97	49.49
230	100.14	43.36
231	100.47	38.76
232	101.17	34.52
233	99.44	53.76
234	100.14	50.29
235	100.14	39.63
236	100.14	33.21
237	100.47	37.64
238	100.14	41.02
239	99.78	31.13
240	100.14	24.71
241	100.14	22.03
242	100.14	21.59
243	100.47	26.1
244	100.14	25.84
245	100.83	33.56
246	105.69	30.29
247	103.94	70.89
248	100.14	52.29
249	99.78	42.66
250	99.78	39.71
251	99.78	32.34
252	100.14	31.56
253	100.14	27.23
254	100.14	27.14
255	100.14	27.75
256	99.78	24.28
257	100.47	22.98
258	100.14	27.75
259	99.78	29.83
260	99.78	23.84
261	99.78	26.01
262	100.14	20.81
263	99.78	20.72
264	99.44	24.28
265	100.47	25.23
266	100.14	25.32
267	100.47	33.73
268	99.78	34.34
269	99.78	26.53

## ArcWeldTor

270	99.78	23.5
271	99.78	26.45
272	99.78	23.15
273	99.78	24.71
274	100.14	23.41
275	99.78	21.59
276	100.14	25.67
277	100.47	26.45
278	99.78	28.87
279	100.14	29.4
280	100.14	27.83
281	100.14	23.07
282	101.17	44.84
283	99.78	37.02
284	100.47	29.83
285	100.14	28.1
286	104.64	26.47
287	104.31	19.18
288	104.31	13.97
289	105	10.85
290	105	8.94
291	105	7.81
292	105	7.55
293	99.44	51.68
294	99.78	41.53
295	99.78	39.63
296	99.78	34.86
297	101.17	34.78
298	99.78	36.76
299	100.14	38.59
300	100.83	37.98
301	100.47	30.26
302	100.14	34.6
303	100.14	34.51
304	100.14	36.59
305	100.47	30.61
306	99.78	26.71
307	100.14	27.23
308	100.14	33.38
309	100.14	29.66
310	100.14	25.58
311	101.53	27.67
312	104.64	26.29
313	101.17	95.92
314	100.83	100.42
315	98.75	92.07
316	99.78	64.42
317	99.78	49.77
318	100.47	40.5
319	99.78	36.94
320	99.78	31.3
321	100.14	25.75
322	100.14	35.47
323	99.78	29.39

## ArcWeldTor

324	99.78	22.63
325	99.78	20.72
326	100.83	27.66
327	99.78	25.75
328	100.14	34.86
329	99.44	51.33
330	100.14	43.53
331	99.78	32.6
332	99.44	28.96
333	105.69	26.56
334	105	21.78
335	98.06	64.23
336	99.44	45.61
337	99.44	37.11
338	99.08	31.21
339	99.44	32.77
340	100.47	32.69
341	99.78	30.09
342	99.78	25.84
343	99.78	34.08
344	99.78	37.37
345	100.14	28.36
346	100.47	27.14
347	99.78	35.55
348	105	30.63
349	105	21.78
350	104.64	15.53
351	105	11.8
352	105	9.63
353	100.47	43.45
354	99.78	33.99
355	100.83	27.84
356	100.14	33.64
357	100.14	27.75
358	99.44	33.12
359	100.47	31.57
360	100.14	40.41
361	100.47	31.57
362	99.78	26.01
363	100.14	24.8
364	100.14	23.15
365	100.14	26.71
366	100.47	23.24
367	100.47	23.15
368	99.78	21.76
369	100.83	23.68
370	101.17	48.65
371	99.78	40.06
372	100.47	37.12
373	100.47	31.83
374	99.78	25.84
375	100.14	22.2
376	100.47	25.67
377	100.83	27.84

## ArcWeldTor

378	99.44	30.52
379	99.78	25.41
380	100.14	24.71
381	100.47	22.72
382	100.14	21.77
383	100.14	20.12
384	100.14	21.42
385	100.14	25.49
386	99.78	35.55
387	99.44	39.62
388	100.14	34.43
389	99.78	32.95
390	99.78	29.31
391	99.78	27.31
392	99.78	23.76
393	99.78	23.32
394	99.44	22.54
395	100.47	22.37
396	99.78	21.07
397	99.44	21.42
398	100.14	21.5
399	100.14	22.46
400	100.14	23.76
401	99.78	24.19
402	100.14	22.46
403	99.78	20.12
404	99.78	20.98
405	99.78	21.42
406	99.78	22.54
407	100.14	22.89
408	99.44	21.68
409	99.44	21.16
410	99.78	22.98
411	100.14	23.41
412	99.78	20.9
413	99.44	20.72
414	99.78	20.2
415	100.14	19.34
416	100.14	21.24
417	100.14	20.55
418	99.78	19.16
419	99.78	21.42
420	100.47	20.81
421	100.47	22.63
422	100.14	25.06
423	100.47	26.19
424	100.47	33.82
425	100.47	28.18
426	100.14	24.11
427	100.83	23.94
428	100.14	25.49
429	100.14	23.33
430	100.14	24.63
431	100.47	25.15



432	100.47	26.02
433	100.47	24.8
434	100.14	25.67
435	100.47	25.32
436	100.47	22.37
437	99.78	22.98
438	100.14	20.9
439	99.78	18.82
440	100.14	17.86
441	99.78	19.34
442	100.47	20.29
443	100.14	20.72
444	100.47	20.29
445	100.47	20.47
446	102.22	19.69
447	99.44	46.3
448	99.78	39.28
449	100.14	32.08
450	106.03	27.43
451	105.33	24.47
452	105.33	17.36
453	105	12.93
454	105	10.24
455	105	8.59
456	105.33	7.55
457	105	7.03
458	105	6.6
459	105	6.42
460	104.64	6.25
461	105	6.16
462	61.25	6.18
463	60.89	40.82
464	100.14	32.78
465	99.78	26.53
466	99.44	30.09
467	101.53	41.11
468	99.44	32.69
469	99.78	28.18
470	99.78	27.05
471	100.14	30.18
472	99.78	30.78
473	99.44	27.66
474	99.44	28.53
475	99.78	22.37
476	99.44	21.5
477	99.78	30
478	100.47	31.31
479	100.47	32.87
480	100.14	29.57
481	99.78	32.08
482	99.44	25.49
483	99.78	21.85
484	99.78	25.58
485	100.47	22.2

## ArcWeldTor

486	99.78	18.99
487	99.78	20.2
488	99.78	29.57
489	100.14	23.15
490	99.44	23.67
491	100.47	33.04
492	99.44	39.19
493	100.47	38.76
494	99.78	35.98
495	99.78	36.33
496	100.47	31.83
497	100.14	27.14
498	99.78	23.5
499	106.03	32.37
500	105	72.03
501	99.08	56.53
502	99.44	46.04
503	99.78	37.72
504	95.97	62.74
505	100.47	49.34
506	100.83	43.88
507	98.75	58.43
508	99.78	39.97
509	105.69	29.33
510	99.08	69.97
511	99.78	46.82
512	105.69	38.88
513	100.83	66.17
514	99.44	49.59
515	100.14	36.85
516	100.83	68.25
517	99.78	56.71
518	99.78	42.57
519	97	66.91
520	100.14	47
521	99.78	56.79
522	100.14	86.28
523	99.44	56.62
524	105.69	39.32
525	99.78	57.05
526	99.08	43.61
527	96.31	68.98
528	99.08	48.81
529	103.94	34.71
530	99.08	54.36
531	99.78	43.44
532	99.44	72.92
533	99.78	76.3
534	104.31	59.61
535	105	44.43
536	96.31	68.46
537	101.17	80.4
538	98.75	73.17
539	99.08	56.87

## ArcWeldTor

540	100.47	46.05
541	101.53	71.12
542	99.44	57.4
543	99.44	54.1
544	99.78	45.78
545	105	38.27
546	99.44	56.53
547	99.44	40.49
548	101.53	32.35
549	97	69.42
550	99.44	47.25
551	99.08	39.62
552	95.97	66.99
553	99.44	45.78
554	99.78	35.81
555	105.69	31.24
556	99.78	61.04
557	100.14	50.29
558	100.47	40.15
559	95.61	63.86
560	99.78	49.25
561	101.86	33.48
562	95.97	62.22
563	99.78	47.26
564	101.53	36.17
565	95.97	62.48
566	99.78	47.95
567	99.44	41.62
568	98.39	69.96
569	99.44	54.19
570	100.14	41.28
571	99.44	30.61
572	100.14	24.97
573	99.44	23.06
574	99.44	21.24
575	99.08	28.09
576	99.78	22.63
577	99.44	21.16
578	99.78	23.32
579	105.33	23.26
580	99.78	46.74
581	99.44	41.79
582	99.78	33.82
583	99.78	30.09
584	99.44	46.91
585	99.78	33.56
586	98.39	59.38
587	99.44	51.5
588	99.44	37.37
589	99.78	29.48
590	99.78	22.72
591	99.78	30.87
592	99.78	26.19
593	100.14	24.8

## ArcWeldTor

594	99.78	20.98
595	99.44	29.13
596	99.78	24.71
597	99.78	27.57
598	99.78	26.62
599	99.44	24.19
600	99.78	20.46
601	99.44	19.94
602	99.44	24.19
603	99.78	26.19
604	99.08	31.21
605	99.08	26.36
606	99.08	24.8
607	99.08	26.62
608	99.44	26.1
609	99.08	23.41
610	100.47	32
611	99.44	28.27
612	99.44	32.6
613	95.97	51.56
614	101.53	63.66
615	99.78	47.43
616	105	38.27
617	104.64	26.21
618	104.64	18.22
619	104.64	13.45
620	105	10.59
621	104.64	8.76
622	96.67	39.87
623	105	31.5
624	105	22.39
625	98.39	59.12
626	99.08	46.38
627	100.47	43.53
628	101.17	47.79
629	100.47	37.46
630	99.44	31.3
631	99.44	28.96
632	100.14	25.58
633	99.78	22.8
634	99.08	21.07
635	99.78	25.93
636	100.14	24.37
637	99.44	22.2
638	100.14	19.68
639	99.78	17.52
640	99.78	15.26
641	99.78	17.6
642	99.78	14.91
643	99.78	18.9
644	99.78	18.9
645	99.44	19.42
646	99.44	21.24
647	99.78	23.67

## ArcWeldTor

648	99.78	23.93
649	99.78	22.63
650	99.78	22.89
651	100.14	19.6
652	99.44	18.73
653	100.14	20.03
654	99.78	20.9
655	99.44	21.42
656	105.33	22.48
657	104.64	17.96
658	105	13.28
659	105	10.41
660	105	8.59
661	105	7.55
662	104.64	7.03
663	105	6.6
664	105	6.33
665	104.31	6.25
666	104.64	6.16
667	104.64	6.07
668	24.44	5.97
669	-0.92	5.63
670	1.17	5.63
671	1.17	5.63
672	1.17	5.63
673	1.86	5.62
674	1.17	5.63
675	0.83	5.63
676	1.17	5.63
677	1.53	5.63
678	1.53	5.63
679	1.53	5.63
680	1.86	5.62
681	1.53	5.63
682	1.53	5.63
683	1.53	5.63
684	1.53	5.63
685	1.86	5.62
686	1.86	5.62
687	1.86	5.62
688	1.53	5.63
689	1.86	5.62
690	1.53	5.63
691	1.86	5.62
692	1.86	5.62
693	1.86	5.62
694	1.86	5.62
695	1.53	5.63
696	1.53	5.63
697	44.58	52.38
698	98.75	44.73
699	99.08	36.76
700	98.75	28.96
701	98.06	23.06

## ArcWeldTor

702	98.75	26.36
703	99.78	24.1
704	99.44	20.2
705	99.44	18.73
706	99.08	20.11
707	99.44	24.36
708	99.78	25.41
709	99.08	20.81
710	99.08	19.25
711	99.44	16.99
712	99.08	15.61
713	99.78	19.6
714	99.08	17.51
715	99.44	19.6
716	99.44	21.59
717	99.44	21.59
718	99.08	24.88
719	99.08	41.96
720	99.08	30.08
721	99.44	26.01
722	99.78	21.68
723	99.44	24.19
724	99.44	20.03
725	99.08	18.12
726	99.44	18.55
727	99.44	19.25
728	99.78	16.91
729	99.44	17.69
730	100.14	22.2
731	99.44	20.46
732	99.08	19.68
733	99.78	16.99
734	99.78	15.69
735	99.78	14.57
736	99.44	19.07
737	99.44	18.81
738	99.44	20.12
739	99.44	19.68
740	99.78	19.94
741	99.78	18.99
742	99.44	19.77
743	99.44	17.95
744	99.44	18.29
745	99.44	18.29
746	98.75	16.82
747	99.08	18.47
748	99.44	20.12
749	98.75	24.79
750	99.44	24.88
751	99.08	21.41
752	98.75	20.72
753	99.08	17.86
754	99.08	19.42
755	106.03	22.74

## ArcWeldTor

756	105.33	19.01
757	105	13.97
758	105.33	10.76
759	105	8.85
760	105.33	7.72
761	105.33	7.12
762	105.33	6.68
763	105	6.42
764	105.33	6.34
765	97	53.22
766	99.08	38.15
767	99.44	30.69
768	106.39	29.51
769	98.75	65.8
770	100.14	75.96
771	99.08	53.06
772	99.44	43.09
773	99.08	32.95
774	99.44	29.74
775	99.44	32.95
776	106.03	27.43
777	105	69.6
778	99.08	64.07
779	98.39	54.44
780	98.75	43.43
781	98.75	32.51
782	99.08	30.43
783	98.75	41.7
784	98.75	32.77
785	99.78	31.04
786	98.75	23.93
787	99.08	23.76
788	98.39	24.01
789	98.75	20.29
790	98.75	24.01
791	99.08	25.84
792	98.39	24.1
793	99.44	27.14
794	98.75	24.27
795	98.75	21.24
796	99.08	19.07
797	99.44	16.65
798	99.08	15
799	99.08	14.05
800	99.44	17.17
801	99.78	21.68
802	99.78	22.54
803	99.44	20.9
804	99.08	18.38
805	99.44	20.64
806	99.08	18.21
807	99.78	18.04
808	99.78	17.69
809	106.03	18.31

## ArcWeldTor

810	105.33	17.27
811	105	13.02
812	100.83	69.55
813	98.75	54.01
814	98.75	39.97
815	99.08	29.82
816	99.08	24.62
817	99.08	30.78
818	99.08	26.79
819	99.08	28.52
820	99.08	22.37
821	99.08	22.37
822	98.75	21.15
823	98.75	18.21
824	98.75	24.53
825	98.75	21.24
826	98.75	20.98
827	99.44	18.38
828	98.75	20.37
829	99.44	18.64
830	98.75	22.28
831	99.08	29.3
832	99.44	40.32
833	99.44	37.02
834	98.75	29.65
835	98.75	24.01
836	99.44	20.38
837	99.44	22.28
838	99.78	19.86
839	99.08	17.77
840	99.08	17.25
841	99.44	18.38
842	99.78	19.16
843	98.75	21.59
844	99.08	20.72
845	99.44	21.07
846	99.44	18.73
847	98.75	19.25
848	99.08	17.86
849	99.08	19.42
850	98.75	17.43
851	99.08	16.65
852	99.44	18.81
853	99.44	18.12
854	100.14	24.37
855	99.44	24.88
856	99.08	24.97
857	98.75	20.63
858	99.08	17.43
859	106.39	19.01
860	105.33	18.22
861	97.69	54.26
862	98.39	60.42
863	99.08	43.52



## ArcWeldTor

864	98.75	31.21
865	99.08	24.62
866	98.75	23.75
867	99.44	21.85
868	99.08	21.24
869	98.75	20.03
870	98.39	16.9
871	99.44	16.56
872	99.08	15.87
873	99.08	31.12
874	99.08	30.34
875	99.08	26.7
876	98.75	23.49
877	98.75	23.84
878	98.75	21.15
879	99.08	19.77
880	98.39	18.55
881	98.39	15.95
882	98.39	17.86
883	98.39	16.04
884	99.08	17.25
885	99.08	19.68
886	98.75	20.03
887	99.08	21.93
888	98.39	19.85
889	99.08	17.51
890	98.75	17.51
891	99.08	17.34
892	98.75	16.21
893	98.39	17.94
894	98.75	18.12
895	98.75	20.81
896	98.75	20.72
897	99.44	18.21
898	100.14	24.02
899	98.75	27.4
900	99.08	23.58
901	99.44	18.81
902	99.08	19.51
903	98.75	19.59
904	99.44	29.74
905	99.44	23.41
906	99.44	24.71
907	99.44	23.67
908	99.08	22.28
909	99.08	22.46
910	99.44	21.24
911	98.75	21.15
912	99.08	21.5
913	99.08	30.34
914	99.08	33.03
915	99.44	25.14
916	99.08	29.22
917	99.78	26.53

## ArcWeldTor

918	99.08	23.5
919	99.08	20.81
920	99.78	20.46
921	99.08	19.42
922	99.08	20.2
923	99.08	23.84
924	98.75	23.23
925	99.08	21.15
926	98.75	44.13
927	98.75	34.16
928	99.78	27.31
929	98.06	36.93
930	99.08	29.82
931	99.08	26.96
932	99.78	33.3
933	98.39	27.39
934	99.08	21.93
935	106.03	29.68
936	105.33	25.08
937	105.33	17.7
938	105.33	13.02
939	105.33	10.33
940	105.33	8.59
941	105.33	7.64
942	105	7.03
943	105	6.68
944	105.33	6.42
945	105.33	6.34
946	99.08	37.28
947	98.75	34.24
948	99.08	29.3
949	99.08	22.89
950	98.39	23.15
951	98.75	20.63
952	98.39	19.59
953	99.44	28.18
954	98.75	26.79
955	98.75	26.01
956	99.44	34.68
957	99.44	43.35
958	105.33	34.8
959	105.33	24.21
960	105.33	17.01
961	105.33	12.67
962	105	10.07
963	105	8.5
964	105	7.55
965	105.33	7.03
966	105	6.6
967	105.33	6.42
968	98.06	35.71
969	99.08	30.43
970	98.75	25.05
971	99.08	20.72

## ArcWeldTor

972	99.44	21.5
973	98.75	18.81
974	98.06	33.55
975	98.39	36.58
976	98.75	30.78
977	99.08	26.01
978	99.44	26.44
979	99.08	21.24
980	99.44	21.24
981	98.75	18.21
982	99.08	18.21
983	99.44	18.9
984	99.08	19.42
985	99.44	22.8
986	99.08	21.76
987	99.08	19.59
988	99.08	23.15
989	99.08	20.03
990	99.08	18.47
991	99.44	18.29
992	99.08	16.56
993	99.08	19.25
994	100.14	25.23
995	99.78	30.35
996	99.78	29.74
997	98.75	23.06
998	98.75	23.93
999	99.44	21.76
1000	100.14	19.68
1001	99.44	17.17
1002	99.08	16.73
1003	99.08	16.13
1004	99.08	14.39
1005	98.75	17.6
1006	99.08	18.38
1007	99.08	20.11
1008	98.75	20.55
1009	99.08	18.47
1010	99.08	17.08
1011	96.31	53.82
1012	98.75	37.89
1013	98.75	28.7
1014	98.39	24.62
1015	98.39	24.27
1016	98.39	24.19
1017	98.75	23.49
1018	98.39	20.2
1019	98.75	19.94
1020	99.08	18.55
1021	98.39	19.16
1022	99.08	19.07
1023	99.08	16.47
1024	99.08	15.69
1025	98.75	15.26

## ArcWeldTor

1026	98.75	17.77
1027	98.39	20.46
1028	98.75	20.2
1029	98.75	20.11
1030	98.75	17.51
1031	99.44	18.9
1032	99.08	16.91
1033	98.75	18.21
1034	98.75	15.87
1035	98.75	16.21
1036	98.75	15.52
1037	98.75	17.6
1038	98.75	15.87
1039	99.08	17.6
1040	98.75	17.77
1041	99.44	17.43
1042	99.08	16.13
1043	98.75	17.43
1044	98.75	17.43
1045	99.44	21.68
1046	98.75	18.9
1047	99.08	19.25
1048	105.33	20.83
1049	105.33	15.45
1050	105.33	11.72
1051	105.33	9.46
1052	105.69	8.07
1053	106.03	7.29
1054	105.33	6.86
1055	105.69	6.51
1056	105.33	6.34
1057	105.69	6.25
1058	105.69	6.16
1059	85.19	6.14
1060	87.64	47.32
1061	99.44	33.81
1062	99.44	27.14
1063	98.75	26.36
1064	98.75	25.49
1065	99.08	21.93
1066	98.39	22.28
1067	99.08	21.07
1068	99.44	20.98
1069	99.78	22.28
1070	99.44	22.98
1071	99.44	22.46
1072	99.08	22.8
1073	98.75	23.49
1074	99.08	21.5
1075	99.78	22.02
1076	99.78	24.45
1077	99.08	23.76
1078	98.75	23.15
1079	98.75	20.63

## ArcWeldTor

1080	98.75	19.51
1081	99.44	20.03
1082	99.44	20.2
1083	99.08	21.33
1084	99.08	26.01
1085	98.39	21.24
1086	99.08	19.51
1087	99.08	17.95
1088	99.08	22.02
1089	99.08	20.2
1090	100.14	27.05
1091	98.75	21.93
1092	99.44	22.89
1093	98.75	20.81
1094	99.44	21.42
1095	105.33	21.96
1096	105.33	16.23
1097	105.33	12.15
1098	105.33	9.72
1099	105.33	8.24
1100	105.33	7.38
1101	105.69	6.86
1102	105.33	6.6
1103	105.33	6.34
1104	97	41.69
1105	99.08	36.5
1106	99.08	33.03
1107	94.58	59.78
1108	98.39	47.42
1109	99.44	36.24
1110	98.75	30.26
1111	98.39	27.91
1112	98.39	24.19
1113	99.08	23.84
1114	99.08	22.37
1115	98.75	22.19
1116	98.39	25.49
1117	98.75	27.05
1118	98.75	28.7
1119	99.08	26.18
1120	99.44	26.36
1121	99.44	21.16
1122	98.75	22.11
1123	99.44	22.72
1124	100.14	22.55
1125	98.75	39.79
1126	100.14	66.6
1127	99.08	45.78
1128	99.44	38.15
1129	98.75	28.96
1130	98.75	28
1131	99.08	26.62
1132	99.08	28.87
1133	99.44	28.01

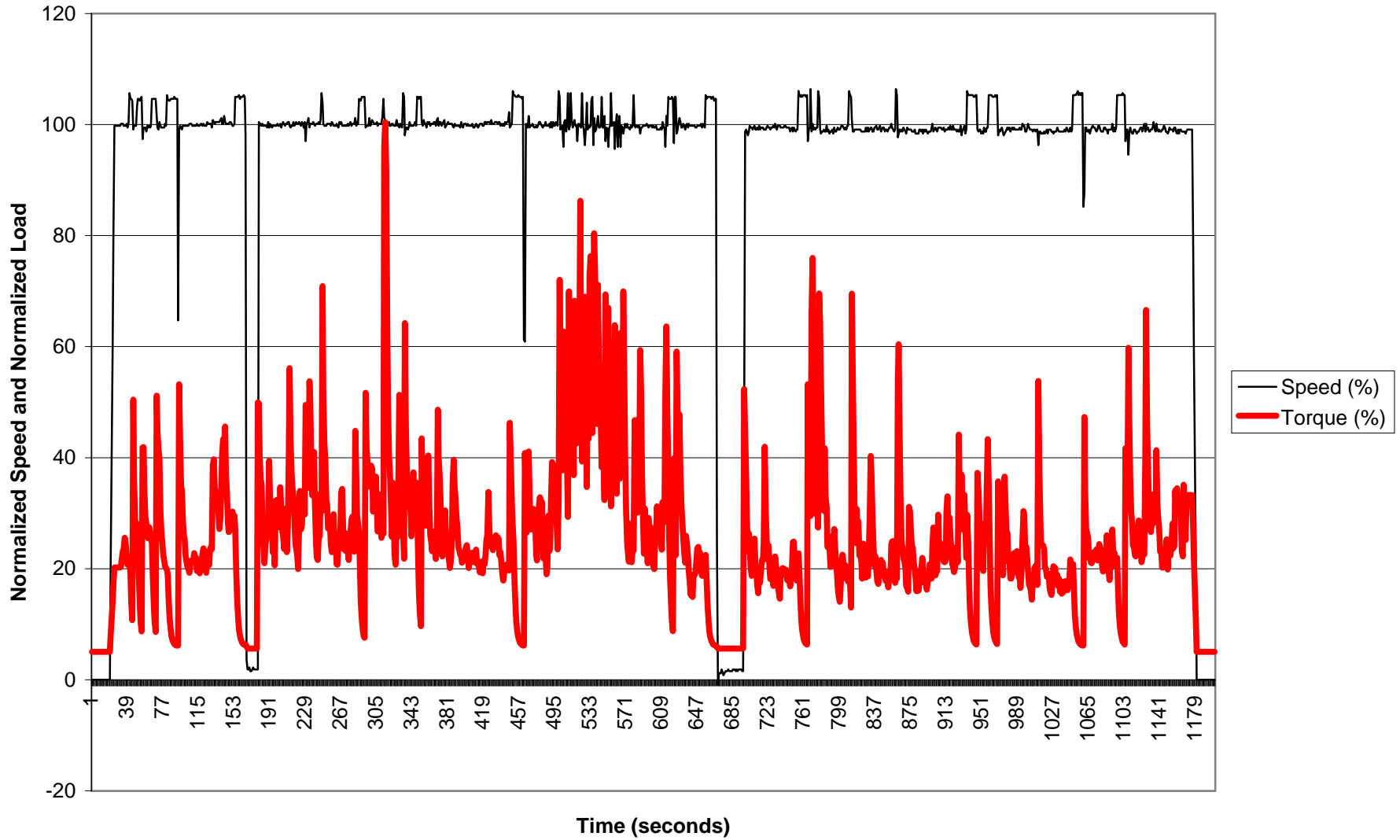
## ArcWeldTor

1134	100.47	33.39
1135	99.08	31.12
1136	98.75	29.91
1137	100.14	41.36
1138	99.08	31.47
1139	98.75	28.61
1140	99.08	27.22
1141	98.75	23.06
1142	98.75	23.49
1143	99.08	20.2
1144	99.08	20.2
1145	99.78	23.41
1146	99.44	22.11
1147	98.75	23.84
1148	98.75	25.31
1149	98.39	19.85
1150	98.75	24.79
1151	99.44	23.41
1152	99.08	22.37
1153	99.08	24.36
1154	99.08	28.09
1155	98.75	23.67
1156	99.44	24.02
1157	99.44	34.07
1158	98.75	30.86
1159	98.39	34.5
1160	99.08	31.3
1161	98.39	32.34
1162	99.08	31.04
1163	99.08	30.26
1164	98.75	23.15
1165	98.75	22.19
1166	98.75	35.11
1167	98.75	31.82
1168	98.39	25.14
1169	98.75	30.86
1170	99.08	33.29
1171	99.08	33.29
1172	99.08	33.29
1173	99.08	33.29
1174	99.08	33.29
1175	99.08	33.29
1176	79.27	27.54
1177	59.45	21.8
1178	39.63	16.05
1179	19.82	10.48
1180	0	5.04
1181	0	5.04
1182	0	5.04
1183	0	5.04
1184	0	5.04
1185	0	5.04
1186	0	5.04
1187	0	5.04

ArcWeldTor

1188	0	5.04
1189	0	5.04
1190	0	5.04
1191	0	5.04
1192	0	5.04
1193	0	5.04
1194	0	5.04
1195	0	5.04
1196	0	5.04
1197	0	5.04
1198	0	5.04
1199	0	5.04

### Arc Welder High Torque Transient Operation Duty Cycle





WhlLdrTyp1

Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	6.11	2.12
22	12.21	4.18
23	18.32	6.27
24	24.43	8.4
25	30.53	10.56
26	30.53	10.56
27	30.53	10.56
28	30.53	10.56
29	30.53	10.56
30	30.53	10.56
31	30.53	10.56
32	34.39	9.84
33	43.22	74.85
34	49.12	96.72
35	54.18	87.59
36	74.36	63.24
37	82.06	74.46
38	77.01	61.95
39	40.01	50.52
40	49.34	96.52
41	55.73	97.2
42	56.86	59.51
43	44.49	50.37
44	48.03	96.56
45	56.02	17.37
46	20.64	13.16
47	29.72	20.7
48	44.67	79.33
49	25.41	20.7
50	65.56	41.98
51	30.29	43.65
52	17.56	-8.08
53	26.15	0.86

## WhlLdrTyp1

54	22.02	48.3
55	17.95	-8.08
56	21.13	36.83
57	46.44	29.26
58	40.5	31.04
59	27.25	30.43
60	29.44	11.21
61	49.83	48.41
62	35.62	7.44
63	49.34	37.87
64	47.53	35.19
65	48.95	48.52
66	9.86	-2.08
67	4.1	3.44
68	20.14	23.32
69	23.57	20.52
70	32.41	10.15
71	4.98	8.07
72	3.99	9.33
73	3.36	11.47
74	3.15	13.86
75	4.03	10.4
76	3.78	9.05
77	3.39	11.37
78	3.53	11.28
79	3.75	10.93
80	3.75	9.35
81	3.15	10.99
82	3.46	10.52
83	3.53	10.08
84	3.46	10.47
85	3.6	10.15
86	3.71	8.75
87	3.5	9.04
88	3.46	9.13
89	3.5	9.01
90	3.18	40.13
91	48.88	69.96
92	64.82	95.94
93	74.43	88.45
94	77.54	96.63
95	78.63	96.57
96	79.27	96.87
97	80.76	96.67
98	85.17	96.37
99	87.01	90.71
100	87.58	90.15
101	83.69	48.71
102	80.76	97.09
103	87.47	90.11
104	88.18	90.08
105	87.01	80.27
106	87.47	91.49
107	73.19	55.44

## WhlLdrTyp1

108	81.6	94.33
109	85.63	85.03
110	83.69	78.18
111	75.31	21.31
112	44.67	7.34
113	39.58	15.48
114	56.09	97.07
115	73.58	96.83
116	86.52	94.5
117	95.53	70.59
118	98.04	60.83
119	96.45	59.78
120	96.84	59.5
121	97.9	56.43
122	96.59	57.5
123	63.58	-6.42
124	55.52	82.86
125	63.19	60.06
126	56.3	44.69
127	64.99	61.01
128	51.7	9.22
129	50.22	23.84
130	44.39	33.85
131	42.62	1.21
132	8.66	-1.35
133	17.35	28.24
134	45.2	54.17
135	55.38	89.72
136	73.19	96.95
137	77.33	96.48
138	77.11	96.1
139	76.23	96.29
140	77.43	96.85
141	77.22	96.36
142	76.41	96.57
143	76.02	96.14
144	77.82	96.43
145	79.38	96.41
146	67.36	64.66
147	57.39	52.54
148	60.33	78.41
149	53.4	30.54
150	33.86	35.53
151	36.97	3.48
152	3.92	9.99
153	48.28	80.57
154	63.19	96.45
155	69.48	96.28
156	77.93	96.47
157	75.81	82.41
158	50.75	-0.34
159	40.93	10.51
160	52.31	66.38
161	64.5	68.88

## WhlLdrTyp1

162	50.79	6.09
163	26.51	-8.14
164	37.74	37.79
165	36.26	10.49
166	43.51	29.4
167	39.9	-0.05
168	38.06	-8.33
169	35.55	35.39
170	39.76	25.41
171	38.35	33.27
172	57.47	89.44
173	73.97	96.14
174	78.25	96.33
175	78.63	96.54
176	77.72	96.23
177	78.14	96.49
178	76.41	96.19
179	69.13	96.34
180	49.65	8.96
181	67.71	65.16
182	49.34	45.01
183	62.45	70.32
184	58.28	57.9
185	49.02	18.61
186	54.39	59.09
187	57.68	56.41
188	46.19	28.43
189	43.51	19.39
190	40.11	39.9
191	48.28	3.49
192	8.34	7.22
193	4.35	10.12
194	2.62	22.08
195	9.72	51.48
196	52.31	69.47
197	59.87	60.34
198	44.18	24.3
199	34.07	28.22
200	34.35	36.95
201	38.31	35.61
202	39.58	35.57
203	36.79	32.78
204	44.25	25.66
205	49.09	44.64
206	49.73	32.65
207	47.82	57.25
208	33.01	8.53
209	24.31	31.98
210	24.53	23.6
211	31.21	29.54
212	49.12	58.82
213	51.85	47.24
214	24.84	8.79
215	10.74	1.39

## WhlLdrTyp1

216	4.67	2.67
217	7.46	50.23
218	49.09	72.53
219	47.11	28.86
220	17	16.48
221	18.84	61.06
222	21.59	3.52
223	54.25	90.57
224	68.6	96.33
225	76.73	96.84
226	77.33	96.35
227	77.33	96.43
228	78.03	96.34
229	77.72	96.69
230	75.91	77.59
231	73.09	60.21
232	66.58	79.19
233	54.46	22.34
234	35.77	16.05
235	41.53	28.36
236	58.49	74.68
237	50.22	46.28
238	47.32	14.75
239	16.5	0.49
240	42.55	6.28
241	62.13	91.58
242	27.32	-8.15
243	6.57	10.5
244	3.96	18.59
245	48.06	72.93
246	35.55	-8.27
247	7.1	8.99
248	3.15	15.57
249	4.38	10.49
250	4.17	7.46
251	3.92	4.94
252	3.78	4.44
253	3.46	5.43
254	3.53	5.44
255	3.46	5.71
256	3.6	5.18
257	3.5	5.6
258	3.57	5.38
259	3.57	5.28
260	3.46	5.76
261	3.53	5.64
262	3.71	5.02
263	3.6	5.26
264	3.53	5.18
265	3.43	5.7
266	3.46	5.56
267	3.32	6.17
268	3.57	5.71
269	3.5	6.08

## WhlLdrTyp1

270	3.53	5.94
271	3.5	6.08
272	3.53	5.94
273	3.5	6.11
274	3.64	5.71
275	3.57	5.87
276	3.6	5.74
277	3.5	6.03
278	3.53	5.92
279	3.5	6.08
280	3.57	5.87
281	3.6	5.33
282	3.5	5.57
283	3.46	5.69
284	3.46	5.66
285	3.53	5.29
286	3.68	5.03
287	3.5	5.6
288	3.43	5.77
289	3.6	5.26
290	3.46	5.64
291	3.5	5.68
292	3.57	5.41
293	3.5	5.63
294	3.53	5.59
295	3.36	6.21
296	3.5	6.16
297	3.53	6.1
298	3.6	5.84
299	3.53	6.15
300	3.6	5.89
301	3.46	6.35
302	3.5	6.23
303	3.57	6.04
304	3.57	5.99
305	3.5	6.26
306	3.6	5.99
307	3.53	6.12
308	3.53	5.84
309	3.57	5.54
310	3.46	5.81
311	3.57	5.49
312	3.46	5.94
313	3.5	5.88
314	3.46	5.87
315	3.53	5.69
316	3.6	5.51
317	3.5	5.8
318	3.5	5.85
319	3.5	5.95
320	3.32	6.81
321	3.5	6.26
322	3.57	6.07
323	3.57	6.14

## WhlLdrTyp1

324	3.53	6.15
325	3.57	6.07
326	3.57	6.12
327	3.57	6.12
328	3.6	5.91
329	3.53	6.12
330	3.57	6.12
331	3.64	5.71
332	3.46	6.02
333	3.57	5.66
334	3.5	5.9
335	3.53	5.92
336	3.57	5.76
337	3.53	5.84
338	3.5	5.88
339	3.46	5.97
340	3.5	5.85
341	3.5	5.85
342	3.43	6.11
343	3.5	5.9
344	3.32	6.65
345	3.5	6.21
346	3.6	5.96
347	3.5	6.26
348	3.5	6.26
349	3.6	5.96
350	3.57	6.02
351	3.5	6.36
352	3.6	5.99
353	3.53	6.22
354	3.5	6.33
355	3.5	6.16
356	3.36	6.51
357	3.57	5.69
358	3.57	5.66
359	3.57	5.74
360	3.57	5.64
361	3.5	5.88
362	3.5	5.83
363	3.5	5.85
364	3.57	5.74
365	3.5	5.93
366	3.5	5.83
367	3.43	6.13
368	3.36	6.56
369	3.5	6.39
370	3.53	6.2
371	3.57	6.17
372	3.53	6.32
373	3.6	6.07
374	3.5	6.41
375	3.57	6.12
376	3.5	6.39
377	3.5	6.28

## WhlLdrTyp1

378	3.5	6.28
379	3.6	5.89
380	3.46	6.07
381	3.5	5.83
382	3.46	5.97
383	3.57	5.61
384	30.71	55.3
385	63.51	90.92
386	38.63	-8.35
387	7.17	8.58
388	4.77	10.05
389	3.18	12.27
390	4.35	7.32
391	3.39	9.52
392	3.5	9.54
393	3.29	11.16
394	3.46	11.33
395	3.5	11.66
396	3.43	12.31
397	4.81	5.62
398	3.75	5.85
399	3.53	5.97
400	3.5	5.98
401	3.5	6.06
402	3.5	6.06
403	3.53	6.02
404	3.68	5.56
405	3.6	5.26
406	3.57	5.21
407	3.43	5.77
408	3.43	5.75
409	3.46	5.71
410	3.57	5.41
411	3.57	5.38
412	3.53	5.59
413	3.5	5.78
414	3.53	5.69
415	3.57	5.61
416	3.6	5.48
417	3.5	5.7
418	3.5	5.73
419	3.43	6.41
420	3.5	6.31
421	3.5	6.31
422	3.46	6.37
423	3.46	6.47
424	3.57	6.09
425	3.5	6.26
426	3.5	6.28
427	3.57	6.09
428	3.57	6.14
429	3.6	6.04
430	3.68	5.61
431	3.57	5.74



## WhlLdrTyp1

432	3.46	6.07
433	3.5	5.83
434	3.57	5.69
435	3.5	5.93
436	3.5	5.78
437	3.5	5.88
438	3.53	5.69
439	3.57	5.61
440	3.57	5.61
441	3.6	5.48
442	3.57	5.59
443	3.6	5.28
444	3.43	6.28
445	3.57	6.09
446	3.46	6.42
447	3.5	6.28
448	3.5	6.21
449	3.53	6.15
450	3.46	6.35
451	3.53	6.15
452	3.6	5.91
453	3.6	5.91
454	3.5	6.21
455	3.5	6.18
456	3.57	5.61
457	3.64	5.1
458	3.68	4.97
459	3.5	5.57
460	3.5	5.6
461	3.57	5.36
462	3.53	5.51
463	3.6	5.38
464	3.53	5.67
465	3.5	5.65
466	3.5	5.78
467	3.5	5.8
468	3.46	5.87
469	3.57	5.46
470	3.46	5.87
471	3.5	6.21
472	3.53	6.17
473	3.5	6.23
474	3.53	6.2
475	3.57	6.14
476	3.6	5.94
477	3.57	6.07
478	3.57	6.04
479	3.5	6.28
480	3.5	6.39
481	3.57	6.12
482	3.82	5.22
483	3.57	5.54
484	3.57	5.44
485	3.57	5.64

## WhlLdrTyp1

486	3.57	5.59
487	3.53	5.72
488	3.6	5.59
489	3.64	5.33
490	3.46	5.89
491	3.53	5.72
492	3.53	5.72
493	3.6	5.43
494	3.68	5.2
495	3.53	5.69
496	3.57	5.59
497	3.5	5.75
498	3.46	6.37
499	3.57	6.17
500	3.6	6.04
501	3.53	6.32
502	3.5	6.41
503	3.53	6.25
504	3.5	6.46
505	3.5	6.41
506	3.53	6.4
507	3.53	6.42
508	3.53	6.4
509	3.5	6.51
510	3.71	5.63
511	3.57	5.79
512	3.57	5.79
513	3.53	5.94
514	3.57	5.76
515	3.57	5.76
516	3.43	6.28
517	3.6	5.64
518	3.6	5.74
519	3.57	5.84
520	3.53	5.92
521	3.53	5.92
522	3.6	5.74
523	3.57	5.89
524	3.57	5.87
525	3.43	6.33
526	3.5	6.56
527	3.57	6.35
528	3.5	6.66
529	3.57	6.32
530	3.6	6.24
531	3.5	6.49
532	3.5	6.59
533	31.6	55.4
534	45.13	11.63
535	62.84	93.41
536	67.29	96.24
537	76.62	96.6
538	60.22	44.68
539	55.17	45.31

## WhlLdrTyp1

540	47.15	15.62
541	49.9	48.95
542	56.23	46.45
543	54.74	41.55
544	53.19	26.45
545	52.66	39.58
546	54.25	41.72
547	47.29	18.49
548	48.56	37.55
549	51.07	41.51
550	55.31	62.58
551	63.08	58.67
552	53.33	13.54
553	42.23	-6.66
554	38.56	25.92
555	43.33	23.62
556	47.29	24.69
557	8.84	29.56
558	53.05	89
559	51	68.28
560	73.47	96.5
561	78.53	90.38
562	77.82	96.76
563	75.91	94.11
564	66.94	90.43
565	76.02	96.71
566	61.39	60.34
567	59.76	48.5
568	48.88	58.35
569	66.94	43.39
570	64.64	50.56
571	59.02	36.99
572	66.27	96.41
573	74.75	96.71
574	42.23	27.57
575	39.76	36.5
576	25.38	10.78
577	26.72	25.46
578	30.75	-6.05
579	16.54	28.21
580	19.86	16.79
581	17.56	49.38
582	54.67	86.68
583	64.57	75.39
584	54.96	43.98
585	30.82	8.54
586	28.27	27.75
587	30.75	22.87
588	15.06	37.03
589	36.86	46.06
590	46.72	32.94
591	42.55	92.05
592	24.6	-8.12
593	6.26	6.74

WhlLdrTyp1

594	3.89	7.43
595	3.53	7.79
596	3.5	7.88
597	3.46	8.7
598	3.53	8.59
599	3.5	8.79
600	3.57	8.46
601	3.6	8.36
602	3.6	8.34
603	3.29	9.6
604	3.46	9.79
605	3.46	9.94
606	3.5	9.82
607	3.46	9.97
608	3.46	9.99
609	3.5	9.92
610	3.46	10.12
611	3.46	10.14
612	3.5	10.12
613	3.57	9.9
614	3.57	9.85
615	3.71	9.08
616	3.5	9.06
617	3.46	9.08
618	3.43	9.4
619	3.46	9.44
620	3.5	9.32
621	3.53	9.22
622	3.53	9.22
623	3.53	9.22
624	3.57	9.2
625	3.6	9.12
626	3.5	9.49
627	3.53	9.37
628	3.46	9.59
629	3.5	9.52
630	3.5	9.49
631	3.43	10.31
632	3.46	10.37
633	3.53	10.13
634	3.46	10.47
635	3.5	10.3
636	3.57	10.07
637	3.53	10.15
638	3.57	10
639	3.46	10.39
640	3.5	10.25
641	3.5	10.25
642	3.5	10.27
643	3.71	9.46
644	3.6	9.02
645	3.5	9.39
646	3.5	9.37
647	3.5	9.49

## WhlLdrTyp1

648	3.57	9.32
649	3.57	9.35
650	3.57	9.37
651	3.5	9.59
652	3.46	9.69
653	4.81	9.23
654	3.43	9.43
655	3.5	9.62
656	3.5	9.67
657	3.46	9.81
658	3.32	10.55
659	3.5	10.6
660	3.6	10.32
661	3.57	10.4
662	3.6	10.37
663	3.57	10.38
664	3.5	10.58
665	6.04	48.38
666	39.44	50.63
667	46.47	96.82
668	63.01	95.99
669	66.58	96.18
670	72.73	96.15
671	61.64	95.93
672	46.62	69.54
673	59.02	65.2
674	21.2	17.52
675	32.97	26.96
676	24.99	6.26
677	21.52	22.35
678	29.33	21.15
679	23.47	16.77
680	3.75	8.45
681	3.04	14.53
682	3.39	11.22
683	4.38	7.27
684	4.06	4.58
685	3.71	4.24
686	3.18	6.24
687	3.22	6.59
688	2.9	12.1
689	3.43	11.27
690	3.25	11.15
691	3.39	11.88
692	3.36	11.67
693	4.49	5.11
694	3.68	5.43
695	3.57	5.28
696	3.6	5.33
697	3.57	5.41
698	3.57	5.61
699	3.5	5.83
700	3.6	5.38
701	3.5	5.22

## WhlLdrTyp1

702	3.6	4.75
703	3.53	5.03
704	3.57	4.98
705	3.5	5.07
706	3.5	5.8
707	3.57	5.66
708	3.6	5.64
709	3.6	5.51
710	3.57	5.49
711	3.5	5.75
712	3.53	5.56
713	3.57	5.49
714	3.53	5.67
715	3.43	6.16
716	3.53	6.04
717	3.57	5.97
718	3.5	6.16
719	3.46	6.19
720	3.6	5.74
721	3.57	5.82
722	3.6	5.79
723	3.5	6.03
724	3.5	6.08
725	3.64	5.71
726	3.6	5.81
727	3.57	5.44
728	3.53	5.41
729	3.46	5.69
730	3.43	5.85
731	3.5	5.75
732	3.57	5.46
733	3.5	5.75
734	3.5	5.68
735	3.71	5
736	11.95	50.28
737	29.26	63.1
738	21.91	-2.85
739	2.97	10.99
740	37.11	61.36
741	3.82	8.17
742	3.68	12.47
743	15.55	52.03
744	37.85	-0.28
745	24.17	14.04
746	26.36	44.21
747	52.91	86.36
748	35.24	-7.96
749	9.93	33.46
750	17.42	19.28
751	3.5	10
752	4.31	7.27
753	3.92	4.71
754	3.57	5.94
755	3.6	5.66

## WhlLdrTyp1

756	3.6	5.38
757	3.71	4.75
758	7.63	28.69
759	24.77	25.5
760	45.48	53.44
761	44.6	7.13
762	22.94	41.26
763	42.37	29.01
764	47.71	38.63
765	52.98	66.23
766	42.27	18.34
767	48.03	51.28
768	78.03	91.77
769	92.31	73.7
770	92.84	73.23
771	91.32	85.22
772	51.32	66.03
773	56.09	97.59
774	49.34	80.15
775	45.24	66.92
776	46.3	96.8
777	55.45	95.69
778	62.84	3.21
779	29.02	15.77
780	41.35	47.93
781	57.39	96.78
782	14.81	27.53
783	37.29	66.08
784	65.91	74.34
785	60.22	97.09
786	76.02	96.44
787	58.49	-4.98
788	32.41	-5.31
789	39.97	22
790	60.22	96.61
791	70.58	96.75
792	81.5	96.78
793	79.16	96.7
794	72.06	97.14
795	83.02	81.42
796	79.38	86.54
797	84.93	63.92
798	62.2	96.52
799	48.56	97.01
800	61.95	96.25
801	69.59	96.41
802	71.78	96.34
803	36.12	6.06
804	80.86	66.46
805	72.17	96.55
806	53.61	46.56
807	46.26	36.76
808	20.85	-4.29
809	17.35	7.41

## WhlLdrTyp1

810	34.28	48.73
811	34.1	47.1
812	55.87	96.02
813	47.15	31.57
814	45.13	23.83
815	42.27	40.06
816	34.39	-1.12
817	30.89	18.44
818	32.16	15.21
819	25.59	16.66
820	24.49	20.58
821	27.11	15.1
822	27.42	9.47
823	37.89	19.78
824	43.43	63.72
825	68.95	61.39
826	68.95	45.2
827	49.97	84.64
828	53.33	97.24
829	57.32	96.99
830	67.47	96.4
831	70.58	87.91
832	46.09	33.29
833	39.02	10.16
834	13.25	7.65
835	18.34	57.06
836	31.67	13.57
837	20.53	42.11
838	57.96	70.65
839	53.33	42.34
840	70.58	96.59
841	77.61	96.76
842	33.86	-8.23
843	35.31	73.06
844	64.32	96.27
845	71.78	96.93
846	75.91	42.48
847	76.3	50.95
848	79.48	75.51
849	83.48	77.04
850	89.94	85.63
851	90.72	84.1
852	91.46	71.9
853	59.34	-9.12
854	52.59	97.07
855	35.59	97.02
856	62.66	96.41
857	70.4	96.51
858	72.73	96.54
859	62.45	96.06
860	39.37	97.73
861	70.58	96.82
862	76.23	87.93
863	37.46	-3.43



## WhlLdrTyp1

864	57.08	70.04
865	32.9	2.75
866	51.46	65.38
867	60.61	83.88
868	64.64	5.91
869	44.88	31.34
870	62.34	55.45
871	41.35	-8.48
872	31.24	62.52
873	71.32	96.97
874	86.76	63.46
875	86.76	77.66
876	87.82	75.52
877	49.58	-8.74
878	62.2	96.81
879	59.34	96.82
880	58.21	96.72
881	59.94	96.78
882	63.08	68.65
883	66.76	76.89
884	48.03	-8.69
885	32.13	16.42
886	31.24	25.73
887	49.73	80.86
888	26.75	33.51
889	49.9	16.44
890	65.42	14.03
891	59.94	96.75
892	59.87	40.91
893	51.21	12.95
894	38.52	25.38
895	56.3	84.06
896	64.07	24.72
897	57.89	54.15
898	75.74	67.37
899	40.29	-8.43
900	53.61	36.04
901	44.85	16.95
902	59.41	81.46
903	63.19	2.27
904	39.48	62.73
905	61.64	77.48
906	68.67	30.84
907	54.6	97.22
908	36.47	89.77
909	64.5	96.12
910	68.95	96.35
911	65.66	95.74
912	43.01	73.86
913	81.5	96.95
914	50.79	96.73
915	62.52	42.47
916	49.51	16.84
917	59.48	37.96

## WhlLdrTyp1

918	70.75	71.09
919	70.93	55.81
920	36.97	-8.31
921	61.81	78.01
922	65.31	-7.46
923	37.25	4.23
924	33.43	11.94
925	40.01	18.27
926	58.42	94.26
927	87.47	73.66
928	93.58	73.35
929	94.36	73.97
930	75.81	-9.11
931	28.41	89.85
932	50.29	96.74
933	55.17	97.11
934	63.4	96.05
935	56.72	18.96
936	39.9	-3.03
937	19.9	7.27
938	22.12	23.36
939	41.07	27.49
940	31.42	12.46
941	70.19	72.81
942	64.99	96.04
943	76.13	96.56
944	49.58	-8.74
945	33.75	56.6
946	64.07	73.88
947	56.58	65.63
948	62.59	60.84
949	78.03	81.21
950	66.51	-0.4
951	57.39	48.08
952	72.73	34.09
953	64.5	46.34
954	73.76	95.5
955	77.22	53.58
956	69.02	20.88
957	54.67	97.1
958	37.64	26.41
959	61.49	96.53
960	71.21	96.91
961	69.94	96.63
962	46.12	-8.63
963	63.26	66.27
964	69.94	96.74
965	70.19	96.73
966	57.47	36.65
967	60.22	64.22
968	60.47	22.11
969	47.39	13.91
970	41.53	7.21
971	54.25	21.04

WhlLdrTyp1

972	32.02	-8.18
973	30.43	7
974	17.53	-8.08
975	26.72	19.63
976	43.4	40.29
977	73.69	96.31
978	95.92	71.82
979	94.5	73.06
980	93.58	74.56
981	49.97	-8.76
982	41.84	66.99
983	57.68	96.63
984	53.75	97.3
985	65.91	74.19
986	64.57	71.42
987	53.26	35.98
988	28.34	20.23
989	37.25	14.62
990	30.89	16.59
991	38.2	9.59
992	46.01	21.54
993	20.92	44.7
994	51.07	29.73
995	44.88	29.13
996	24.03	-8.12
997	29.9	52.01
998	54.04	97.64
999	67.11	74.45
1000	70.01	-9.7
1001	25.91	-7.51
1002	52.45	90.12
1003	65.24	72.91
1004	71.96	95.55
1005	85.28	67.05
1006	70.86	20.37
1007	69.48	70.11
1008	53.33	-8.91
1009	71.57	96.69
1010	76.23	72.77
1011	85.38	90.51
1012	80.44	96.42
1013	66.87	95.54
1014	43.43	-8.56
1015	67.71	96.09
1016	69.23	96.37
1017	73.02	96.46
1018	67.54	55.78
1019	61.32	80.04
1020	73.19	96.72
1021	78.53	96.64
1022	82.38	97.14
1023	83.79	79.35
1024	89.24	67.82
1025	56.93	19.58

## WhlLdrTyp1

1026	61.71	22.74
1027	50.04	29
1028	56.09	76.84
1029	69.02	54.04
1030	85.84	93.11
1031	90.33	88.25
1032	64.14	95.36
1033	59.62	96.56
1034	64	95.91
1035	71.5	96.39
1036	70.93	83.69
1037	74.04	35.47
1038	31.14	-2.25
1039	47.22	80.02
1040	64.32	19.59
1041	33.61	26.87
1042	71.39	85.15
1043	76.83	96.02
1044	75.91	96.42
1045	88.18	86.21
1046	31.31	-8.17
1047	57.89	97.24
1048	69.66	96.49
1049	80.22	96.82
1050	92.21	75.73
1051	95.92	49.78
1052	69.76	29.96
1053	62.02	25.74
1054	53.12	17.85
1055	69.41	74.42
1056	72.73	64.52
1057	66.09	95.89
1058	70.65	64.19
1059	56.72	97.03
1060	68.24	96.37
1061	69.59	96.67
1062	58.56	36.1
1063	80.01	96.74
1064	78.25	96.39
1065	65.73	44.39
1066	79.27	84.73
1067	53.12	24.52
1068	55.03	-4.32
1069	46.9	8.43
1070	50.93	38.1
1071	44.28	3.88
1072	24.88	-8.13
1073	18.17	15.03
1074	32.66	36.21
1075	50.86	79.42
1076	77.61	53.84
1077	75.74	50.15
1078	74.75	52.16
1079	74.04	55.01

## WhlLdrTyp1

1080	45.91	-2.43
1081	35.45	83.87
1082	50.86	97.15
1083	55.45	97.19
1084	58.49	45.36
1085	54.32	97.7
1086	54.32	44.91
1087	45.38	-8.61
1088	25.83	38.65
1089	33.01	27.67
1090	38.98	33.75
1091	45.94	61.59
1092	64.25	31.08
1093	85.95	95.18
1094	75.52	96.32
1095	85.38	96.18
1096	80.22	42.12
1097	35.38	44.52
1098	62.45	65.9
1099	72.91	96.64
1100	77.93	96.69
1101	68.49	24.17
1102	79.06	74.18
1103	82.17	22.64
1104	70.29	37.02
1105	82.49	71.26
1106	71.39	73.45
1107	73.86	37.9
1108	57.89	96.96
1109	37.11	72.83
1110	60.79	96.83
1111	68.49	96.4
1112	64.82	95.45
1113	43.54	75.14
1114	69.23	96.39
1115	77.11	96.69
1116	71.96	48.07
1117	79.27	96.73
1118	49.34	34.96
1119	48.95	47.73
1120	43.54	6.57
1121	35.62	15.5
1122	49.97	91.22
1123	85.17	96.08
1124	64.32	95.7
1125	62.34	96.38
1126	74.82	96.57
1127	76.3	79.37
1128	90.33	87.94
1129	90.47	87.91
1130	38.7	12.41
1131	30.25	-5.3
1132	27.32	10.34
1133	33.11	60.33

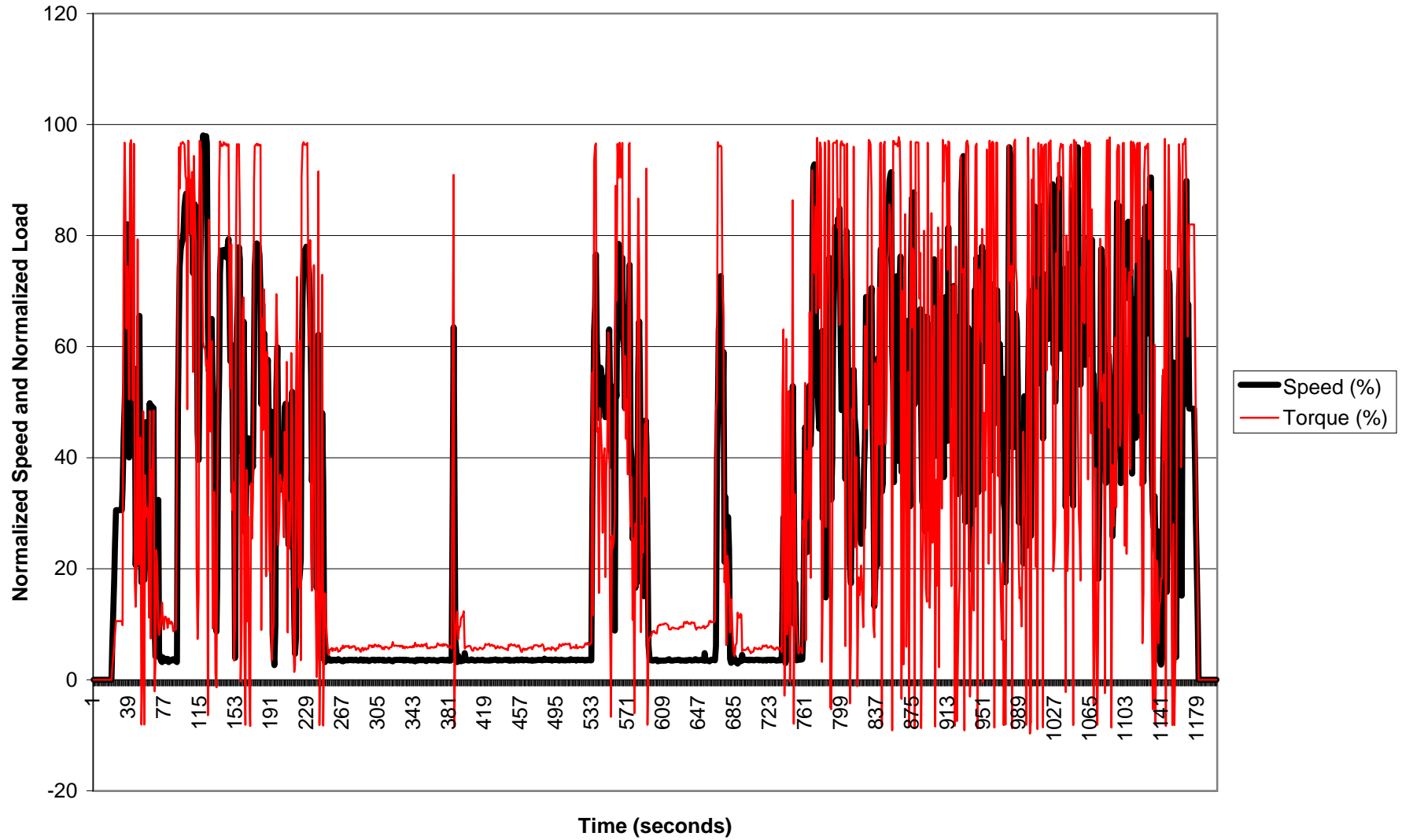
## WhlLdrTyp1

1134	24.39	-8.12
1135	21.95	21.48
1136	26.79	20.03
1137	25.69	6.56
1138	3.5	13.37
1139	3.22	14.16
1140	2.72	18.31
1141	3.82	18.17
1142	36.97	55.83
1143	48.63	39.63
1144	54.89	97.44
1145	39.09	-8.36
1146	15.83	49.46
1147	69.48	77.89
1148	73.47	96.32
1149	71.21	84.22
1150	50.75	25.09
1151	37.36	20.68
1152	32.05	-8.18
1153	57.18	28.06
1154	31.35	-8.17
1155	6.96	2.56
1156	4.06	4.63
1157	36.51	63.75
1158	44.25	77.77
1159	69.02	96.48
1160	73.69	91.86
1161	67.18	38.24
1162	15.13	46.24
1163	64.14	96.51
1164	70.75	96.46
1165	81.18	96.93
1166	83.79	97.49
1167	89.84	87.55
1168	49.58	61.79
1169	67.64	74.89
1170	48.84	82
1171	48.84	82
1172	48.84	82
1173	48.84	82
1174	48.84	82
1175	48.84	82
1176	39.07	62.96
1177	29.31	46.06
1178	19.54	30.44
1179	9.77	15.23
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

WhlLdrTyp1

1188	0	0
1189	0	0
1190	0	0
1191	0	0
1192	0	0
1193	0	0
1194	0	0
1195	0	0
1196	0	0
1197	0	0
1198	0	0
1199	0	0

### Wheel Loader Typical Operation 1 Duty Cycle





## WhlLdrTyp2

Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	11.05	15.63
22	22.1	31.36
23	33.14	47.63
24	44.19	66.4
25	55.24	86.71
26	55.24	86.71
27	55.24	86.71
28	55.24	86.71
29	55.24	86.71
30	55.24	86.71
31	55.24	86.71
32	46.54	51.04
33	32.97	8.99
34	38.8	70.11
35	75.24	97.2
36	72.91	77.95
37	65.91	23.98
38	71.11	91.89
39	75.74	64.02
40	73.19	49.08
41	68.14	34.7
42	64.25	33.94
43	59.55	53.14
44	76.9	96.98
45	67.82	96.9
46	31.67	35.08
47	58.95	98.65
48	97.9	70.41
49	97.37	-12.99
50	63.58	13.02
51	42.48	7.02
52	64.25	77.15
53	73.3	51.36

WhlLdrTyp2

54	43.12	23.56
55	83.69	88.47
56	92.84	74.16
57	94.5	72.96
58	92.7	71.64
59	92.21	73.7
60	88.18	34.22
61	92.31	74.93
62	98.46	48.01
63	97.12	38.16
64	98.04	37.67
65	94.11	56.41
66	95.24	67.66
67	96.31	70.77
68	95.24	70.81
69	95	72.68
70	94.36	73.84
71	38.45	27.01
72	92.84	67.9
73	79.38	97.07
74	78.95	96.95
75	80.86	97.71
76	73.02	66.63
77	58.56	47.26
78	54.32	11.72
79	51.14	65
80	68.95	97.52
81	9.12	16.89
82	3.82	12.55
83	3.39	14.43
84	3.85	20.64
85	3.22	16.32
86	4.21	9.81
87	2.72	23.75
88	3.29	21.19
89	2.62	24.99
90	3.75	28.45
91	5.2	8.27
92	39.09	41.67
93	52.31	90.4
94	29.58	12.93
95	30.08	17.03
96	11.27	12.75
97	12.72	12.89
98	11.7	14.31
99	3.29	11.39
100	3.6	12.48
101	3.36	14.93
102	3.75	12.99
103	3.68	12.39
104	3.75	11.79
105	3.71	11.61
106	3.68	11.34
107	3.57	11.43

## WhlLdrTyp2

108	3.5	11.63
109	3.57	11.38
110	3.68	10.82
111	23.71	54.84
112	37.74	32.78
113	34.85	30.13
114	34.67	42.06
115	53.82	67.88
116	65.98	39.88
117	70.12	32.36
118	73.69	55.62
119	77.82	40.17
120	75.03	27.55
121	55.87	6.57
122	61.25	20.13
123	53.54	-8.92
124	27.39	0.32
125	24.95	5.51
126	25.83	8.51
127	24.39	17.41
128	2.05	23.78
129	20.39	56.35
130	66.58	95.13
131	60.15	39.37
132	32.58	68.86
133	31.77	11.37
134	9.05	7.92
135	27.07	62.21
136	53.33	98.34
137	55.31	67.18
138	37.04	50.89
139	63.65	97.42
140	60.93	97.13
141	56.09	98.22
142	59.41	97.62
143	58.49	97.8
144	56.86	98.06
145	60.01	97.55
146	63.83	97.13
147	76.62	97.49
148	66.94	96.43
149	67.11	96.91
150	56.51	62.01
151	38.31	18.16
152	17.32	61.88
153	34.28	62.77
154	25.73	15.39
155	31.42	17.39
156	27.71	11.7
157	13.92	16.59
158	21.66	18.93
159	20.29	17.22
160	16.79	15.4
161	10.67	14.55

## WhlLdrTyp2

162	13.64	12.91
163	16.12	12.1
164	3.22	9.31
165	3.68	6.39
166	3.82	5.37
167	32.58	57.04
168	54.39	91.62
169	54.81	71.83
170	49.83	65.51
171	52.13	52
172	43.01	41.4
173	52.66	69.6
174	63.83	96.84
175	78.53	96.97
176	59.76	97.44
177	66.27	96.74
178	70.29	97.17
179	58.28	97.58
180	61.95	97.32
181	56.09	97.92
182	54.18	98.24
183	58.42	98.05
184	71.96	97.37
185	77.82	97.2
186	61.56	97.28
187	64.25	96.74
188	63.9	96.71
189	58.49	62.3
190	25.62	15.51
191	24.31	20.44
192	5.02	9.38
193	4.21	10.16
194	12.23	15.02
195	25.45	23.43
196	23.47	14.85
197	15.76	-2.1
198	7.32	50.25
199	51.46	79.2
200	58.88	97.97
201	67.29	69.6
202	62.34	89.57
203	69.59	97.25
204	78.85	98.86
205	80.01	97.46
206	77.01	96.89
207	73.19	97.4
208	78.74	97.15
209	84.15	98.09
210	83.02	97.39
211	87.12	91.16
212	89.59	86.79
213	89.59	88.12
214	88.88	88.28
215	89.34	88.21

WhlLdrTyp2

216	88.78	89.64
217	90.47	85.54
218	80.33	34.87
219	91.82	84.1
220	96.06	66.81
221	96.69	67.72
222	94.11	72.87
223	93.34	74.11
224	100.37	43.19
225	58.14	12.94
226	59.41	83.63
227	67.89	80.35
228	55.95	21.23
229	53.19	15.14
230	51.78	22.12
231	29.16	-8.16
232	26.89	-8.14
233	7.21	20.23
234	22.62	29.09
235	28.1	13.95
236	26.29	11.47
237	14.42	17.76
238	53.26	83.82
239	65.49	96.45
240	64.32	81.69
241	52.06	60.38
242	67.04	96.67
243	76.62	98.08
244	69.66	97.11
245	68.31	96.98
246	70.65	97.89
247	62.27	96.96
248	64.32	96.68
249	61.11	97.1
250	54.11	45.54
251	45.77	23.87
252	30.92	24.85
253	26.08	31.26
254	23.18	33.48
255	35.62	17.36
256	37.6	28.96
257	37.85	26.91
258	37.74	19.68
259	36.65	10.06
260	30.11	9.78
261	51.32	76.5
262	62.66	88.17
263	68.49	96.81
264	72.06	97.35
265	76.23	97.09
266	77.61	97.11
267	80.76	97.06
268	80.65	97.19
269	76.83	97.04

## WhlLdrTyp2

270	76.51	96.83
271	77.11	96.48
272	78.03	97.32
273	70.01	26.25
274	51.24	66.9
275	94.36	74.16
276	97.37	65.12
277	95.53	68.24
278	96.31	72.51
279	93.73	47.48
280	93.97	20.55
281	73.3	96.7
282	70.58	18.64
283	58.74	16.96
284	51.92	10.13
285	45.41	16.16
286	43.43	22.75
287	42.37	16.86
288	37.6	18.39
289	19.08	6.71
290	52.13	88.7
291	63.76	96.89
292	66.69	96.26
293	76.9	97.36
294	75.91	97.23
295	78.03	97.32
296	76.51	97.28
297	75.63	96.82
298	79.8	97.33
299	86.41	94.86
300	83.16	97.49
301	61.18	21.28
302	53.26	78.23
303	45.02	10.07
304	80.54	97.73
305	97.37	65.93
306	95.67	72.68
307	97.37	43.86
308	72.17	20.61
309	60.72	73.41
310	59.87	70.45
311	58.74	23.27
312	56.65	18.76
313	52.45	19.07
314	49.76	43.96
315	44.18	31.63
316	44.88	19.18
317	46.72	44.39
318	47.32	42.25
319	55.38	98.15
320	72.8	97.21
321	77.11	97.31
322	86.41	95.87
323	86.3	94.81

## WhlLdrTyp2

324	87.22	91.82
325	80.33	66.76
326	58.07	25.06
327	89.84	90.77
328	97.37	61.35
329	96.84	61.45
330	77.82	55.94
331	98.18	65.96
332	95.78	72.42
333	78.95	46.97
334	67.18	72.62
335	58.63	25.34
336	52.06	16.63
337	63.58	97.38
338	77.33	96.65
339	76.23	97.09
340	86.66	90.13
341	88.99	85.79
342	93.83	75.06
343	93.34	72.48
344	91.57	84.4
345	89.13	88.82
346	58.21	1.51
347	40.54	7.89
348	39.65	20.23
349	79.06	96.33
350	76.3	97.09
351	66.87	53.76
352	47.57	19.56
353	37	13.9
354	62.2	96.74
355	66.09	94.17
356	72.24	82.42
357	79.27	75.41
358	80.86	83.35
359	75.52	83.18
360	77.01	50.8
361	71.32	71.11
362	78.95	43.64
363	76.3	27.5
364	61.81	11.86
365	88.04	91.4
366	93.73	75.56
367	94.75	72.87
368	95.24	70.31
369	94.22	72.47
370	85.03	95.62
371	77.72	97.05
372	75.14	97.08
373	85.17	97.09
374	82.17	81.78
375	52.87	35.39
376	59.87	50.1
377	61.25	53.19

## WhlLdrTyp2

378	59.23	32.14
379	49.51	5.08
380	33.79	11.66
381	30.85	34.36
382	57.68	97.83
383	69.94	97.38
384	80.97	89.5
385	86.52	92.66
386	84.71	96.86
387	79.38	97.21
388	79.59	97.2
389	79.27	97.09
390	80.22	97.26
391	80.01	97.13
392	74.82	90.7
393	84.82	98.68
394	95.67	73.56
395	93.83	75.56
396	94.75	72.45
397	93.97	71.81
398	98.18	69.61
399	86.87	91.06
400	72.34	96.96
401	75.74	97.37
402	85.49	98.41
403	88.39	56.59
404	68.6	29.04
405	58.28	33.28
406	56.3	10.18
407	34.67	16.87
408	23.61	25.97
409	41.99	71.47
410	59.87	97.73
411	74.64	97.3
412	79.69	96.83
413	84.71	90.09
414	86.66	94.53
415	86.52	92.69
416	85.38	96.61
417	86.87	84.98
418	69.3	11.09
419	59.02	56.1
420	95.39	74.21
421	98.18	66.03
422	97.51	62.59
423	96.45	62.93
424	87.01	2.74
425	82.06	52.05
426	86.52	92.69
427	74.36	97.11
428	77.43	97.59
429	87.33	90.14
430	86.66	75.24
431	75.81	33.01



## WhlLdrTyp2

432	58.63	10.5
433	52.59	17.7
434	47.82	25.85
435	45.48	31.66
436	79.91	97.04
437	73.02	96.96
438	87.22	92.99
439	86.52	93.51
440	83.79	97.83
441	88.64	90.1
442	91.32	85.06
443	93.44	60.85
444	76.02	10.02
445	62.2	42.12
446	89.48	86.2
447	95.14	76.02
448	97.37	66.7
449	96.16	62.89
450	96.31	66.52
451	81.39	44.83
452	83.02	97.76
453	68.24	96.85
454	77.33	97.19
455	83.94	98.27
456	87.33	76.81
457	78.14	55.73
458	72.63	33.21
459	42.55	-1.58
460	31.21	11.12
461	58.35	87.75
462	70.4	97.2
463	76.23	96.93
464	94.36	76.53
465	75.03	97.27
466	74.36	97.19
467	88.78	86.16
468	71.32	29.15
469	46.26	43.8
470	41.74	13.68
471	36.01	24.66
472	36.3	22.87
473	38.31	30.16
474	36.54	23.54
475	33.75	20.09
476	31.7	25.33
477	51.53	53.62
478	59.62	61.87
479	40.61	16.45
480	38.77	75.67
481	74.92	96.51
482	69.13	97.05
483	20.32	92.65
484	71.04	43.84
485	58.63	95.6

## WhlLdrTyp2

486	67.64	97.71
487	92.21	73.29
488	91.57	87.09
489	91.96	75.34
490	88.18	87.39
491	60.47	97.09
492	40.4	5.92
493	27.74	11.58
494	26.54	18.4
495	50.4	86.79
496	65.66	96.7
497	57.89	23.29
498	54.32	98.82
499	75.31	97.38
500	78.14	97.39
501	88.64	86.52
502	89.13	88.52
503	65.24	96.46
504	65.42	97.08
505	64.75	38.29
506	31.28	98.61
507	74.64	71.86
508	76.83	93.93
509	59.62	74.45
510	60.54	57.35
511	60.22	44.06
512	58.28	53.21
513	67.18	69.34
514	53.75	98.32
515	51.78	64.05
516	33.75	8.11
517	21.95	20.82
518	24.84	19.04
519	26.97	44.17
520	50.93	90.85
521	63.33	96.97
522	50.93	39.77
523	37.6	11.95
524	64.25	97.08
525	74.36	97.27
526	86.41	91.57
527	68.6	11.8
528	92.21	73.29
529	72.24	97.27
530	38.77	8.98
531	64	98.04
532	90.09	84.25
533	91.82	79.84
534	57.01	45.28
535	40.75	30.01
536	42.23	48.41
537	59.41	77.67
538	80.76	97.45
539	58.21	97.64

WhlLdrTyp2

540	40.96	19.18
541	33.5	10.77
542	19.97	22.65
543	21.95	45.84
544	22.51	29.96
545	23.11	16.24
546	37.89	11.81
547	51.85	53.21
548	57.25	73.08
549	53.19	23.69
550	37.25	9.56
551	16.29	7.46
552	15.02	16.09
553	16.4	21.03
554	6.61	2.84
555	3.57	9.95
556	3.15	12.71
557	3.92	10.56
558	3.64	10.19
559	3.64	9.94
560	3.6	10.15
561	3.68	9.76
562	3.57	9.92
563	3.5	10.1
564	3.32	11.29
565	3.57	10.78
566	3.57	10.75
567	3.57	10.73
568	3.57	10.65
569	3.46	11
570	3.32	13.44
571	3.82	12.18
572	4.03	7.65
573	3.57	7.96
574	3.43	49.93
575	2.12	13.52
576	4.17	6.28
577	3.64	6.57
578	3.39	6.83
579	3.53	6.65
580	3.6	6.34
581	3.6	6.32
582	3.6	6.29
583	3.5	6.51
584	3.57	6.24
585	3.5	6.39
586	3.5	6.33
587	3.57	6.07
588	3.5	6.33
589	3.57	6.12
590	3.53	6.25
591	3.6	6.09
592	3.6	6.07
593	3.6	6.04

WhlLdrTyp2

594	3.6	6.07
595	3.46	6.45
596	3.5	6.39
597	3.46	6.47
598	3.6	5.99
599	3.57	6.09
600	3.53	6.12
601	3.53	6.17
602	3.6	5.94
603	3.57	6.09
604	3.57	6.12
605	3.68	5.81
606	3.6	5.99
607	3.46	6.37
608	3.5	6.26
609	3.5	6.33
610	3.6	5.91
611	3.53	6.25
612	3.57	6.17
613	3.57	6.09
614	3.57	6.14
615	3.57	6.14
616	3.6	6.09
617	3.6	6.17
618	3.57	6.24
619	3.5	6.49
620	3.5	6.44
621	3.46	6.52
622	3.57	6.27
623	3.57	6.27
624	3.57	6.29
625	3.53	6.35
626	3.6	6.12
627	3.53	6.3
628	3.57	6.22
629	3.6	6.14
630	3.6	6.12
631	3.57	6.27
632	3.5	6.51
633	3.53	6.42
634	3.6	6.17
635	3.53	6.4
636	3.5	6.49
637	3.57	6.35
638	3.57	6.35
639	3.53	6.35
640	3.6	6.12
641	3.64	6.04
642	3.57	6.24
643	3.5	6.56
644	3.5	6.56
645	3.57	6.35
646	3.6	6.24
647	3.6	6.27

WhlLdrTyp2

648	3.53	6.45
649	3.57	6.35
650	3.57	6.32
651	3.57	6.27
652	3.6	6.19
653	3.6	6.24
654	3.6	6.17
655	3.53	6.45
656	3.5	6.61
657	3.57	6.42
658	3.6	6.34
659	3.6	6.27
660	3.5	6.61
661	3.6	6.27
662	3.57	6.32
663	3.57	6.37
664	3.68	6.04
665	3.6	6.34
666	3.57	6.42
667	3.5	6.59
668	3.5	6.59
669	3.53	6.47
670	3.57	6.37
671	3.57	6.32
672	3.57	6.45
673	3.6	6.29
674	3.5	6.61
675	3.57	6.45
676	3.6	6.32
677	3.64	6.27
678	3.57	6.37
679	3.46	6.8
680	3.57	6.37
681	3.53	6.45
682	3.57	6.42
683	3.57	6.37
684	3.5	6.74
685	3.6	6.34
686	3.5	6.64
687	3.6	6.37
688	3.6	6.34
689	3.6	6.39
690	3.57	6.4
691	3.5	6.66
692	3.53	6.53
693	3.53	6.45
694	3.57	6.37
695	3.57	6.42
696	3.57	6.45
697	3.57	6.42
698	3.5	6.61
699	3.53	6.55
700	3.68	6.14
701	3.64	6.27

## WhlLdrTyp2

702	3.6	6.37
703	3.5	6.69
704	3.5	6.71
705	3.57	6.42
706	3.57	6.5
707	3.57	6.5
708	3.53	6.58
709	3.57	6.47
710	3.57	6.45
711	3.57	6.5
712	3.57	6.5
713	3.64	6.24
714	3.53	6.55
715	3.46	6.78
716	3.5	6.71
717	3.53	6.58
718	3.57	6.5
719	3.57	6.45
720	3.57	6.45
721	3.6	6.29
722	3.53	6.5
723	3.57	6.42
724	3.6	6.32
725	3.6	6.39
726	3.6	6.39
727	3.53	6.58
728	3.46	6.75
729	3.5	6.66
730	3.6	6.32
731	3.5	6.66
732	3.57	6.55
733	3.5	6.71
734	3.57	6.42
735	3.57	6.4
736	3.5	6.66
737	3.68	6.14
738	3.57	6.47
739	3.5	6.69
740	3.57	6.47
741	3.57	6.45
742	3.46	6.8
743	3.53	6.63
744	3.57	6.52
745	3.5	6.66
746	3.53	6.58
747	3.57	6.45
748	3.57	6.52
749	3.6	6.34
750	3.5	6.71
751	3.53	6.58
752	3.53	6.6
753	3.46	6.8
754	3.46	6.78
755	3.5	6.69

WhlLdrTyp2

756	3.57	6.47
757	3.46	6.78
758	3.5	6.71
759	3.6	6.39
760	3.57	6.42
761	3.5	6.61
762	3.5	6.64
763	3.53	6.6
764	3.5	6.71
765	3.46	6.78
766	3.46	6.73
767	3.5	6.61
768	3.53	6.45
769	3.5	6.64
770	3.53	6.63
771	3.5	6.61
772	3.57	6.45
773	3.53	6.45
774	3.5	6.51
775	3.53	6.42
776	3.5	6.64
777	3.46	6.73
778	3.46	6.73
779	3.5	6.69
780	3.5	6.64
781	3.46	6.73
782	3.5	6.64
783	3.6	6.27
784	3.57	6.47
785	3.5	6.59
786	3.46	6.73
787	3.57	6.4
788	3.5	6.64
789	3.5	6.61
790	3.46	6.75
791	3.5	6.69
792	3.5	6.66
793	3.46	6.75
794	3.5	6.61
795	3.57	6.32
796	3.57	6.4
797	3.5	6.64
798	3.46	6.73
799	3.53	6.58
800	3.5	6.59
801	3.43	6.92
802	3.5	6.66
803	3.46	6.8
804	3.5	6.66
805	3.5	6.61
806	3.5	6.66
807	3.6	6.32
808	3.53	6.6
809	3.57	6.42

WhlLdrTyp2

810	3.46	6.75
811	3.53	6.55
812	3.5	6.61
813	3.46	6.78
814	3.46	6.75
815	3.5	6.69
816	3.53	6.55
817	3.46	6.75
818	3.5	6.64
819	3.46	6.83
820	2.97	12.42
821	34.49	56.48
822	40.85	18.15
823	34.95	39.52
824	48.95	58.13
825	59.34	29.7
826	79.06	97.76
827	93.97	73.1
828	46.62	58.4
829	69.59	97.43
830	78.03	96.94
831	85.95	96.89
832	89.84	87.09
833	90.23	84.15
834	92.45	75.44
835	86.87	19.79
836	51.21	-8.82
837	28.8	-3.09
838	21.7	2.03
839	9.01	7.82
840	38.42	17.53
841	14.31	17.61
842	48.95	79.52
843	58.35	98.02
844	48.06	49.6
845	31.35	81.79
846	79.06	98.58
847	77.72	75.66
848	83.79	59.23
849	61.49	94.52
850	65.73	85.98
851	46.19	38.06
852	36.01	30.34
853	32.87	26.68
854	31.84	22.91
855	64.82	85.05
856	73.76	97.03
857	46.79	38.07
858	56.16	95.4
859	66.34	82.9
860	66.58	82.41
861	70.65	83.26
862	56.72	43.71
863	42.62	23.68



WhlLdrTyp2

864	64	97.28
865	74.92	96.86
866	69.23	53.99
867	24.92	89.23
868	76.51	97.8
869	94.5	73.32
870	88.04	89.28
871	73.3	97.09
872	75.74	97.4
873	64.75	21.78
874	49.58	15.4
875	86.52	81.1
876	91.32	83.82
877	91.46	88.06
878	90.97	86.41
879	90.33	86.55
880	65.91	23.4
881	64.82	74.23
882	31.42	12.85
883	24.56	20.89
884	30.08	25.43
885	33.54	77.66
886	61.11	44.82
887	29.33	21.89
888	25.48	13.48
889	20.99	15.84
890	2.44	14.77
891	3.75	13.91
892	3.85	11.07
893	-1.2	49.14
894	4.24	25.74
895	4.67	22.57
896	3.57	24.13
897	27.6	57.01
898	50.93	73.8
899	60.86	70.14
900	46.09	21.14
901	11.91	-2.49
902	4.88	22.91
903	48.95	75.46
904	62.27	97.27
905	80.33	84.73
906	62.02	-2.45
907	40.08	4.67
908	54.32	86.66
909	58.28	93.2
910	28.52	37.54
911	83.69	98.04
912	92.31	73.99
913	94.86	74.36
914	94.86	73.54
915	94.5	75.06
916	65.56	-9.39
917	85.74	95.96

## WhlLdrTyp2

918	68.31	48.27
919	36.47	17.38
920	53.97	91.86
921	63.9	97.25
922	94.11	71.41
923	73.76	97.08
924	68.07	96.84
925	73.3	96.78
926	50.54	3.79
927	52.59	98.34
928	89.13	64.04
929	85.84	93.89
930	77.43	96.94
931	66.87	96.29
932	55.66	50.25
933	62.2	53.26
934	52.13	45.5
935	48.52	20.16
936	60.08	92.39
937	99.84	52.67
938	91.46	82.47
939	92.56	73.95
940	91.46	85.97
941	66.16	-9.42
942	70.01	97.67
943	55.31	62.98
944	37.29	25.82
945	34.78	-7.59
946	8.84	11.16
947	9.72	6.67
948	2.37	19.96
949	4.84	14.52
950	9.19	35.18
951	12.09	31.99
952	10.25	27.7
953	13.36	17.38
954	50.36	76.11
955	50.04	61
956	26.54	14.1
957	22.09	19.49
958	21.2	17.06
959	15.51	15.21
960	52.52	79.58
961	43.72	21.84
962	34.67	22.66
963	8.09	9.46
964	11.1	17.27
965	12.69	17.07
966	12.86	17.55
967	3.68	9.21
968	3.36	10.23
969	3.15	13.47
970	3.5	12.64
971	3.71	10.69

## WhlLdrTyp2

972	4.42	5.01
973	2.65	14.27
974	3.29	14.33
975	3.36	14.93
976	4.1	11.57
977	3.85	11.9
978	3.96	6.92
979	3.85	6.96
980	3.15	8.6
981	3.46	8.35
982	3.89	6.22
983	3.6	6.04
984	3.57	5.76
985	3.57	5.69
986	3.5	5.88
987	3.5	6.01
988	3.6	5.69
989	3.6	5.74
990	3.57	5.87
991	3.57	5.89
992	3.5	6.08
993	3.53	6.07
994	3.46	6.27
995	3.5	6.11
996	3.5	6.21
997	3.5	6.18
998	3.53	6.07
999	3.46	6.3
1000	3.6	5.94
1001	3.6	5.94
1002	3.57	6.02
1003	3.57	6.07
1004	3.46	6.35
1005	3.5	6.36
1006	3.43	6.51
1007	3.5	6.28
1008	3.57	6.07
1009	3.5	6.26
1010	3.57	6.07
1011	2.97	8.35
1012	3.57	8.44
1013	3.68	6.72
1014	3.71	6.19
1015	3.57	6.42
1016	3.53	6.37
1017	3.57	6.35
1018	3.43	6.64
1019	3.5	6.46
1020	3.57	6.22
1021	3.46	6.5
1022	3.53	6.42
1023	3.5	6.44
1024	3.57	6.27
1025	3.6	6.12

## WhlLdrTyp2

1026	3.5	6.51
1027	3.57	6.27
1028	3.57	6.24
1029	3.46	6.65
1030	3.5	6.46
1031	3.5	6.49
1032	3.53	6.4
1033	3.46	6.55
1034	3.57	6.27
1035	3.5	6.36
1036	3.53	6.25
1037	3.57	6.24
1038	3.57	6.29
1039	3.6	6.14
1040	3.57	6.29
1041	3.46	6.55
1042	3.46	6.65
1043	3.57	6.29
1044	3.57	6.24
1045	3.46	6.58
1046	3.53	6.37
1047	3.5	6.44
1048	3.57	6.24
1049	3.6	6.12
1050	3.6	6.12
1051	3.57	6.27
1052	3.5	6.49
1053	3.5	6.56
1054	3.29	7.3
1055	3.46	9.46
1056	8.76	30.83
1057	22.05	24.94
1058	22.51	18.4
1059	13.89	6.61
1060	3.32	10.81
1061	3.32	12.61
1062	4.63	13.76
1063	7.56	12.13
1064	15.9	12.41
1065	16.12	13.25
1066	12.33	17.1
1067	3.07	11.6
1068	2.19	19.09
1069	4.67	12.71
1070	4.03	10.3
1071	39.19	13.56
1072	33.22	10.69
1073	25.94	23.44
1074	27.81	14.55
1075	22.55	21.35
1076	43.01	40.62
1077	31.45	18.44
1078	28.73	24.27
1079	43.4	42.34

## WhlLdrTyp2

1080	48.63	50.2
1081	42.37	18.17
1082	35.2	14.26
1083	33.61	31.67
1084	49.41	57.99
1085	48.63	46.56
1086	45.02	33.19
1087	40.01	27.26
1088	37.36	18.92
1089	33.75	26.26
1090	32.73	33.4
1091	54.74	94.5
1092	59.76	97.73
1093	61.56	97.33
1094	24.53	99.02
1095	73.02	97.59
1096	56.09	22.45
1097	47.71	33.07
1098	45.73	31.26
1099	43.05	34.13
1100	49.83	49.64
1101	50.47	49.04
1102	47.57	38.85
1103	42.55	29.79
1104	39.12	27.84
1105	39.26	26.64
1106	54.25	89.27
1107	38.24	86.75
1108	48.84	65.32
1109	73.97	62.1
1110	91.71	85.18
1111	70.75	9.27
1112	81.39	89.55
1113	51.7	76.76
1114	41.46	18.84
1115	8.66	43.28
1116	16.75	12.41
1117	7.63	10.17
1118	5.62	17.16
1119	6.64	17.07
1120	3.15	27.85
1121	32.87	61.12
1122	51.46	69.06
1123	53.97	66.61
1124	42.94	17.47
1125	22.76	7.66
1126	10.25	25.21
1127	20.57	20.46
1128	17.81	18.53
1129	17.14	18.97
1130	11.03	16.65
1131	15.66	25.68
1132	50.22	76.06
1133	52.06	58.02

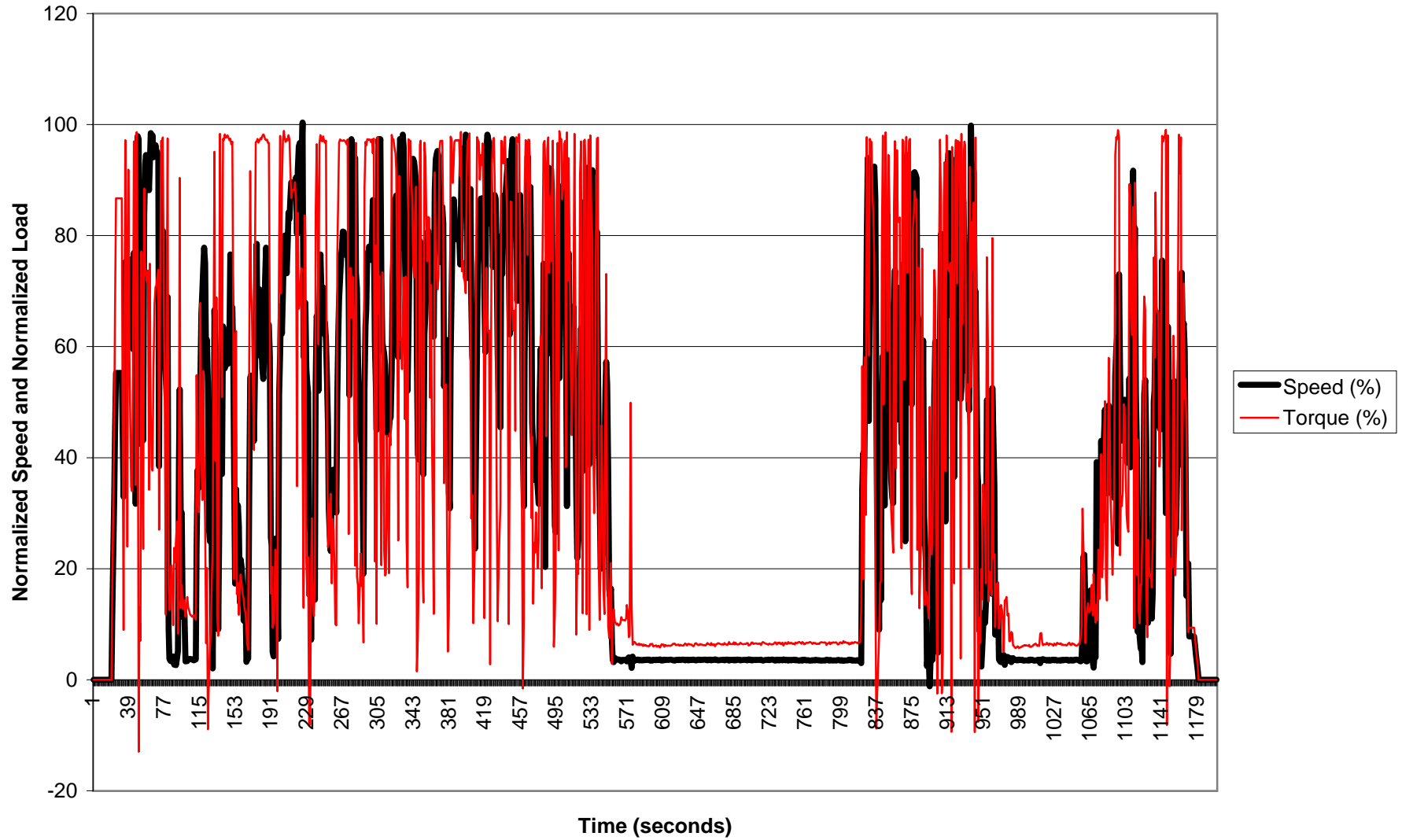
WhlLdrTyp2

1134	64.25	87.78
1135	66.16	67.16
1136	62.94	66.13
1137	58.74	66.29
1138	45.73	38.4
1139	45.06	40.2
1140	48.88	69.43
1141	75.52	97.98
1142	66.27	96.96
1143	60.33	97.78
1144	56.44	98
1145	30	99.04
1146	54.67	-8.18
1147	63.58	98.07
1148	57.01	35.69
1149	14.91	-1.17
1150	4.67	9.59
1151	19.37	21.89
1152	19.97	20.26
1153	31.1	61.98
1154	53.75	52.52
1155	26.08	18.82
1156	27.35	23.91
1157	39.02	31.95
1158	38.45	70.51
1159	51.21	98.21
1160	57.82	91.19
1161	69.3	97.7
1162	73.3	26.91
1163	62.66	46.36
1164	64.25	71.41
1165	59.16	50.53
1166	41.38	54.12
1167	15.09	45.24
1168	20.43	21.31
1169	20.96	8.54
1170	7.78	9.39
1171	7.78	9.39
1172	7.78	9.39
1173	7.78	9.39
1174	7.78	9.39
1175	7.78	9.39
1176	6.22	7.59
1177	4.67	5.78
1178	3.11	3.99
1179	1.56	2.18
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

WhlLdrTyp2

1188	0	0
1189	0	0
1190	0	0
1191	0	0
1192	0	0
1193	0	0
1194	0	0
1195	0	0
1196	0	0
1197	0	0
1198	0	0
1199	0	0

### Wheel Loader Typical Operation 2 Duty Cycle





WhlLdrSpe

Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	12.39	-1.62
22	24.78	-3.25
23	37.17	-4.99
24	49.56	-6.99
25	61.95	-9.22
26	61.95	-9.22
27	61.95	-9.22
28	61.95	-9.22
29	61.95	-9.22
30	61.95	-9.22
31	61.95	-9.22
32	36.08	74.97
33	71.11	87.93
34	71.88	97.07
35	80.65	97.58
36	87.93	88.44
37	88.04	89.61
38	62.59	97.52
39	36.26	46.61
40	61.25	97.35
41	72.24	97.11
42	72.8	97.42
43	69.59	97.36
44	42.73	-7.45
45	62.27	97.98
46	92.56	69.83
47	71.67	41.75
48	70.12	68.68
49	40.85	34.25
50	62.45	97.32
51	29.62	-3.98
52	7.74	-2.75
53	3.04	15.79

## WhlLdrSpe

54	52.98	72.97
55	70.29	25.29
56	62.27	97.32
57	48.52	42.07
58	42.37	12.49
59	28.73	19.8
60	37.96	35.1
61	61.95	72.72
62	73.58	47.75
63	71.57	48.52
64	70.47	52.39
65	58.49	10.25
66	53.4	98.38
67	38.63	37.49
68	36.9	28.18
69	32.2	12.89
70	2.16	14.17
71	10.78	13.83
72	17.35	14.45
73	19.26	7.3
74	18.06	7.97
75	18.02	7.63
76	18.24	8.23
77	9.37	14.41
78	5.55	0.08
79	3.43	4.88
80	16.15	16.95
81	5.83	1.02
82	13.25	52.97
83	38.66	6.13
84	13.5	55.17
85	39.48	11.12
86	14.45	14.2
87	15.27	7.41
88	33.04	62.75
89	53.75	98.37
90	71.21	97.87
91	76.51	45.46
92	58.21	51.76
93	60.4	95.36
94	72.06	97.48
95	82.91	97.83
96	92.21	74.44
97	93.97	73.07
98	78.74	35.3
99	74.04	96.63
100	70.01	-9.7
101	73.09	96.55
102	66.76	96.73
103	71.39	97.42
104	74.64	97.22
105	62.52	97.81
106	36.86	24.27
107	33.29	14.39

## WhlLdrSpe

108	81.6	98.11
109	97.22	51.29
110	97.75	63.01
111	91.46	84.56
112	50.86	43.34
113	76.62	75.97
114	81.07	54.26
115	80.86	56.48
116	79.27	55.83
117	55.31	56.7
118	73.69	96.89
119	79.59	58.68
120	40.82	20.11
121	22.09	-8.1
122	6.36	-2.26
123	10.5	28.97
124	54.04	51.96
125	65.98	85.3
126	67.47	87.89
127	49.58	43.3
128	41.63	26.2
129	38.52	18.08
130	27	23.07
131	29.69	14.48
132	43.05	27.8
133	6.68	5.56
134	25.06	28.13
135	35.91	10.7
136	0.14	43.75
137	20.39	32.98
138	16.5	-8.08
139	18.94	30.62
140	45.06	72.27
141	8.09	17.45
142	13.68	10.15
143	7.42	39.71
144	2.01	19.16
145	38.77	65.2
146	49.09	84.89
147	62.52	97.25
148	38.06	-8.33
149	59.69	70.19
150	54.39	42.63
151	79.8	97.47
152	75.42	96.95
153	89.34	88.67
154	92.7	74.31
155	92.06	73.62
156	90.33	85.73
157	84.47	97.89
158	67.82	97.22
159	57.08	98.95
160	61.64	97.31
161	71.5	97.27

## WhlLdrSpe

162	73.47	97.35
163	68.6	97.12
164	55.1	80.23
165	37.39	-8.32
166	46.54	14.56
167	80.12	98.05
168	88.39	46.22
169	64.07	97.47
170	44.6	30.77
171	49.83	7.77
172	31.35	-8.17
173	12.9	29.26
174	45.59	29.55
175	38.63	4.9
176	55.24	94.64
177	85.95	76.42
178	89.34	64.26
179	87.01	64.95
180	81.71	19.82
181	39.76	82.57
182	61.64	97.14
183	59.62	60.7
184	42.76	39.11
185	44.25	5.84
186	19.23	20.8
187	28.45	15.94
188	32.69	6.07
189	3.57	23.32
190	22.8	12.87
191	27.81	-8.15
192	14.45	21.86
193	29.58	27.51
194	13.25	35.83
195	51.32	25.4
196	24.07	18.21
197	25.16	11.55
198	56.79	88.44
199	67.29	96.97
200	75.24	97.15
201	52.45	-8.88
202	58.35	79.3
203	67.54	97.16
204	76.02	97.16
205	88.64	86.97
206	88.88	87.56
207	90.33	86.55
208	75.63	96.64
209	72.73	97.49
210	66.94	97.56
211	64.07	97.15
212	70.19	97.32
213	73.19	96.82
214	62.59	96.89
215	35.48	97.79

WhlLdrSpe

216	56.93	24.03
217	84.25	46.44
218	72.52	33.45
219	75.74	52
220	67.82	51.53
221	67.47	54.6
222	67.36	58.42
223	66.58	22.89
224	11.03	7.43
225	22.05	10.67
226	15.44	1.66
227	27	27.5
228	63.83	87.24
229	88.04	-10.86
230	67.29	75.27
231	61.49	13.51
232	53.97	59.56
233	65.84	49.2
234	66.76	46.28
235	67.11	49.77
236	62.45	-9.24
237	2.37	31.84
238	18.09	51.81
239	62.94	97.54
240	44.14	55.58
241	22.8	-7.76
242	14.67	10.47
243	3.64	1.58
244	24.67	1.38
245	4.31	3.63
246	2.83	7.99
247	3.36	7.53
248	31.24	32.02
249	50.86	82.39
250	49.9	29.62
251	21.91	10.28
252	37.5	39.73
253	11.27	30.69
254	8.69	43.46
255	16.29	11.38
256	7.81	6.58
257	3.53	14.81
258	3.99	12.63
259	3.68	12.47
260	11.52	27.14
261	7.95	0.84
262	3.96	5.64
263	3.64	5.73
264	3.39	6.47
265	3.5	6.13
266	3.46	6.35
267	3.25	8.06
268	9.01	49.4
269	37.14	67.26

## WhlLdrSpe

270	6.54	25.74
271	23.5	36.45
272	7.24	17.62
273	15.9	56.04
274	40.82	22.59
275	9.72	23.23
276	14.74	17.83
277	5.27	16
278	4.45	17.78
279	39.79	64.19
280	49.9	-8.76
281	6.5	8.6
282	19.93	32.65
283	3.18	13.47
284	3.96	11.98
285	4.21	16.42
286	30.92	60.79
287	52.73	98.23
288	66.87	97.26
289	64.89	-8.07
290	17.28	26.06
291	50.86	65.31
292	66.58	97.05
293	67.11	37.54
294	84.61	97.93
295	89.48	84.51
296	86.41	44.53
297	87.01	94.19
298	64.14	96.19
299	33.04	39.98
300	68.42	96.73
301	73.3	97.09
302	73.58	97.04
303	71.32	97.15
304	68.31	97.94
305	53.12	48.25
306	88.04	80.44
307	60.33	97.25
308	49.27	71.25
309	36.22	-8.29
310	10.81	-3.16
311	4.52	-0.88
312	3	4.37
313	2.69	9.3
314	2.9	13.25
315	4.06	8.75
316	3.18	17.7
317	3.92	10.69
318	3.99	11.03
319	3.85	7.84
320	3.68	7.62
321	3.6	7.25
322	3.57	7.13
323	3.57	6.65

## WhlLdrSpe

324	3.6	6.27
325	3.53	6.27
326	3.57	6.22
327	3.57	6.22
328	3.53	6.25
329	3.43	6.64
330	3.46	6.52
331	3.5	6.41
332	3.5	5.83
333	3.53	5.77
334	3.57	5.61
335	3.5	5.93
336	3.6	5.69
337	3.6	5.59
338	3.68	5.38
339	3.5	5.85
340	3.53	5.87
341	3.46	6.07
342	3.32	6.6
343	3.5	6.39
344	3.46	6.45
345	3.68	6.16
346	44.88	64.31
347	43.72	23.92
348	51.53	40.35
349	32.37	24.81
350	32.02	25.4
351	62.13	48.02
352	73.86	37.93
353	75.24	24.6
354	73.09	93.5
355	93.44	73.98
356	92.95	73.36
357	94.22	71.71
358	93.83	40.3
359	58.74	97.91
360	68.67	85.51
361	40.5	18.23
362	48.63	73.18
363	24.35	2.79
364	5.55	1.27
365	4.21	10.78
366	8.2	17.87
367	4.45	19.33
368	3.71	12.11
369	3.6	10.65
370	3.43	12.43
371	3.29	14.13
372	3	32.49
373	2.23	35.54
374	7.1	10.23
375	3.82	13.5
376	3.11	29.35
377	4.42	24.16

## WhlLdrSpe

378	4.95	10.7
379	5.16	13.31
380	4.31	11.52
381	2.9	16.2
382	25.2	53.84
383	25.94	-8.14
384	29.93	64.46
385	56.86	98.22
386	74.75	97.29
387	37.25	-8.31
388	50.08	54.4
389	62.2	97.22
390	73.47	97.35
391	86.66	94.56
392	91.07	87.94
393	90.33	85.73
394	74.25	95.16
395	57.96	97.84
396	42.37	74.31
397	64.39	96.58
398	74.15	97.14
399	70.75	97.28
400	52.91	-8.9
401	75.03	-10.01
402	55.24	98.32
403	93.34	46.91
404	100.79	38.59
405	86.87	86.13
406	84.15	78.06
407	62.02	88.72
408	91.96	73.4
409	92.31	67.48
410	92.21	63.78
411	41.28	-8.48
412	58.63	45.37
413	48.63	11.52
414	44.6	16.13
415	44.49	17.26
416	46.19	17.11
417	64.14	55.99
418	75.03	26.99
419	66.87	-3.78
420	74.36	93
421	72.17	97.12
422	73.3	79.28
423	18.52	11.17
424	7.6	-0.34
425	37.21	30.88
426	48.03	31.32
427	80.97	67.23
428	95.78	72.45
429	96.45	72.38
430	95.24	72.11
431	71.5	97.35



## WhlLdrSpe

432	61.64	97.41
433	61.18	55.31
434	48.28	16.74
435	38.2	8.64
436	7.39	-2.31
437	5.27	17.12
438	15.51	10.56
439	2.01	11.37
440	6.43	18.17
441	12.37	39.23
442	19.26	30.23
443	21.81	-8.1
444	15.8	38.6
445	12.37	0.59
446	7.53	51.41
447	6.64	15.12
448	8.76	50.47
449	47.11	76.12
450	62.66	97.26
451	74.15	96.9
452	54.67	-8.95
453	28.45	-8.16
454	21.31	62.69
455	59.76	97.68
456	71.11	97.42
457	84.71	97.89
458	89.24	87.59
459	84.93	40.5
460	72.34	96.8
461	65.42	97.38
462	68.67	97.78
463	65.42	59.81
464	67.54	79.71
465	89.48	94.57
466	37.11	41.01
467	50.68	60.91
468	62.59	51.61
469	30.29	27.45
470	16.61	-8.08
471	2.9	10.88
472	29.33	61.65
473	57.54	37.36
474	58.49	46.73
475	68.77	47.16
476	69.23	44.37
477	68	45.08
478	62.2	1.76
479	48.84	90.25
480	68.24	96.92
481	68.77	90.78
482	56.3	29.69
483	34.21	28.57
484	9.72	-3.24
485	4.21	5.63

## WhlLdrSpe

486	2.62	10.37
487	6.71	7.19
488	5.9	1.17
489	2.83	14.08
490	10.32	46.72
491	2.97	28.53
492	8.94	11.4
493	7.24	31.25
494	4.95	16.44
495	45.77	68.77
496	77.54	39.71
497	76.23	97.23
498	76.3	96.87
499	35.69	-8.27
500	38.56	25.65
501	53.9	90.47
502	67.54	96.96
503	75.74	97.08
504	87.12	92.19
505	90.09	88.48
506	88.39	38.42
507	63.33	96.8
508	71.39	97.92
509	70.93	97.28
510	54.32	48.53
511	75.63	85.47
512	90.09	86.82
513	64.14	60.15
514	93.09	74.54
515	93.97	73.96
516	93.73	75.56
517	91.46	71.5
518	25.41	29.55
519	71.5	71.26
520	58.63	53.73
521	44	40.48
522	55.59	-8.97
523	20.85	-8.1
524	27	61.06
525	58.35	50.72
526	68.6	97.25
527	74.36	80.35
528	54.67	25.27
529	30.68	20.62
530	1.02	42.78
531	16.96	8.16
532	7.95	9.99
533	4.59	5
534	5.94	11.5
535	13.08	15.19
536	16.08	9.07
537	2.69	26.41
538	11.17	28.8
539	27.21	27.13

## WhlLdrSpe

540	2.37	31.63
541	13.5	20.23
542	23.04	-8.11
543	4.74	34.22
544	30.08	24.9
545	21.31	-7.85
546	4.38	24.51
547	26.19	59.34
548	55.31	95.84
549	73.58	97.04
550	68.77	-9.6
551	22.51	-8.11
552	25.94	41.4
553	60.08	97.92
554	71.11	97.6
555	77.82	97.2
556	87.33	90.78
557	90.33	87.9
558	88.78	84.87
559	65.06	96.43
560	50.4	45.68
561	66.69	96.76
562	74.43	97.06
563	76.3	97.44
564	71.88	97.38
565	73.37	80.9
566	57.54	98.67
567	81.92	86.26
568	55.95	13.32
569	63.65	97.1
570	66.09	25.36
571	25.45	-5.15
572	15.76	13.59
573	21.84	10.69
574	24.39	24.59
575	29.9	52.96
576	57.01	84.14
577	70.47	44.03
578	68.24	46.04
579	67.04	50.5
580	40.11	5.91
581	54.11	98.43
582	53.82	98.27
583	56.02	44.84
584	28.13	-8.15
585	8.76	7.85
586	14.6	7.26
587	13.89	12.75
588	8.52	5.96
589	7.07	5.1
590	3.43	11.8
591	14.28	46.1
592	8.8	5.1
593	22.72	58.51

## WhlLdrSpe

594	11.8	7.75
595	14.31	21.05
596	20.75	3.32
597	15.02	32.91
598	57.61	86.13
599	69.23	97.23
600	70.65	37.63
601	27.92	-8.15
602	40.82	56
603	41.63	25.51
604	61.88	84.78
605	12.51	-1.27
606	4.52	5.33
607	3.11	14.5
608	21.24	55.35
609	52.98	90.29
610	47.04	66.42
611	62.13	47.49
612	67.64	94.12
613	70.01	96.72
614	40.71	-8.45
615	60.86	97.05
616	70.93	97.38
617	65.42	96.81
618	66.34	97.08
619	44.49	85.42
620	49.27	-8.73
621	9.65	33.08
622	30.11	26.26
623	59.69	85.67
624	89.73	76.15
625	54.39	-8.94
626	36.26	23.33
627	63.08	87.45
628	80.54	51.55
629	78.85	55.19
630	78.85	56
631	77.72	57.56
632	58.81	-9.09
633	90.58	88.53
634	94.22	54.82
635	95.24	74.12
636	59.62	-9.13
637	27.32	34.3
638	45.06	48.36
639	53.19	38.33
640	32.51	51.75
641	20.71	-8.09
642	5.2	0.43
643	3.07	6.25
644	15.73	28.47
645	21.88	25.78
646	25.83	34.81
647	42.94	-0.65

## WhlLdrSpe

648	29.19	28.16
649	36.08	73.48
650	71.88	87.87
651	90.72	76.62
652	61.88	-9.22
653	32.55	43.1
654	49.2	42.33
655	25.91	34.74
656	37.96	24.78
657	33.04	22.52
658	30.71	36.82
659	13.43	16.09
660	9.75	9.31
661	6.01	8.55
662	3.68	6.09
663	3.46	7.13
664	2.44	16.41
665	4.24	10.48
666	18.45	53.39
667	2.86	22.64
668	6.04	26.68
669	5.3	15.21
670	14.81	24.9
671	9.37	8.9
672	7.07	13.2
673	27.57	57.1
674	52.45	90.1
675	68.49	97.26
676	79.16	33.48
677	28.66	-8.16
678	47.96	49.41
679	67.71	97.04
680	73.76	97.21
681	87.68	89.79
682	87.58	90.24
683	88.78	87.66
684	79.48	97.14
685	75.42	-10.03
686	67.04	96.65
687	66.16	96.97
688	71.96	96.88
689	71.5	97.38
690	61.39	97.17
691	57.75	99.12
692	84.93	89.24
693	78.74	96.99
694	91.07	-1.52
695	54.39	98.23
696	71.39	97.22
697	62.02	30.46
698	33.86	13.2
699	60.01	64.76
700	76.13	35.07
701	81.39	80.76

## WhlLdrSpe

702	93.73	68.11
703	91.82	74.7
704	91.32	75.96
705	51.14	21.76
706	67.54	97.26
707	74.75	47.79
708	67.64	59.91
709	41.38	-8.49
710	6.57	16.51
711	6.71	56.4
712	40.5	30.55
713	31.77	15.7
714	31.63	17.24
715	34.67	20.17
716	39.79	21.61
717	40.11	11.16
718	11.56	56.1
719	13.68	30.17
720	27.5	23.01
721	3.04	28.74
722	15.09	33.89
723	30.75	-8.17
724	9.08	21.22
725	2.58	13.01
726	12.16	16.64
727	36.01	62.41
728	56.09	98.06
729	73.02	97.33
730	75.74	97.21
731	70.75	-9.76
732	36.72	41.58
733	65.84	95.25
734	72.06	97.22
735	77.72	97.32
736	86.66	94.99
737	82.7	43.99
738	57.39	97.49
739	34.85	24.36
740	64.32	96.78
741	74.43	96.92
742	68.67	96.79
743	70.86	97.47
744	38.77	37.74
745	80.65	30.84
746	62.59	38.35
747	99.84	42.46
748	87.93	92.03
749	94.22	72.51
750	92.56	72.31
751	92.84	75.75
752	45.31	-8.61
753	42.09	27.27
754	34.85	68.6
755	87.01	86.95

## WhlLdrSpe

756	88.99	-11.06
757	94.36	26.5
758	79.38	-10.3
759	81.18	95.76
760	95.14	65.42
761	92.95	64.14
762	92.31	66.86
763	52.2	-8.87
764	57.75	79.59
765	70.58	96.75
766	40.71	-8.45
767	20.89	-7.3
768	7.17	16.61
769	52.31	65.19
770	81.82	53.45
771	74.25	97.12
772	72.06	62.88
773	60.79	26.36
774	34.28	25.7
775	22.51	-8.11
776	4.7	8.66
777	3.43	12.94
778	12.19	15.26
779	15.02	13.97
780	17.35	10.52
781	20.32	18.7
782	15.66	7.14
783	21.13	19.49
784	30.29	17.35
785	4.03	16.67
786	24.92	24.39
787	2.97	35.74
788	32.8	7.42
789	5.44	6.3
790	4.17	16.82
791	39.02	65.27
792	56.65	98.1
793	72.91	97.27
794	62.52	-9.24
795	24.49	-8.12
796	39.58	19.93
797	54.96	96.46
798	70.4	97.3
799	80.76	97.39
800	90.72	85.32
801	82.38	47.17
802	78.42	95.59
803	68.42	97.49
804	51.21	96.1
805	63.65	96.78
806	74.53	97.15
807	33.15	73.08
808	86.3	94.41
809	38.2	18.48

## WhlLdrSpe

810	58.56	97.9
811	56.44	79.81
812	42.34	-8.54
813	11.1	-3.87
814	-0.35	70.71
815	54.53	68.66
816	75.24	73.15
817	82.8	55.35
818	82.06	55.17
819	80.76	55.18
820	70.75	45.1
821	27.71	-8.15
822	36.65	8.63
823	53.33	78.12
824	58.28	69.04
825	41.84	12.09
826	18.24	36.85
827	27.5	31.8
828	13.64	8.01
829	13.75	10.15
830	17.92	16.6
831	3.36	11.9
832	13.54	17.95
833	20.43	17.22
834	21.38	15.92
835	24.1	10.38
836	5.73	32.57
837	11.59	12.08
838	25.23	37.3
839	14.17	2.46
840	5.58	14.09
841	19.69	-7.25
842	6.64	8.3
843	48.21	69.14
844	82.49	26.96
845	63.08	96.8
846	67.82	96.7
847	58.88	-9.1
848	38.06	-2.07
849	41.17	77.68
850	65.66	96.9
851	74.15	97.43
852	83.94	97.79
853	88.04	87.66
854	90.33	86.93
855	68.14	42.1
856	63.65	96.35
857	44.39	-8.59
858	65.84	96.78
859	72.34	97.82
860	73.3	97.09
861	63.33	97.5
862	71.5	75.94
863	71.04	98.75



WhLdrSpe

864	87.93	41.63
865	76.41	46.58
866	88.99	87.81
867	78.25	86.49
868	94.11	64.99
869	90.09	74.79
870	90.58	79.64
871	45.2	-8.6
872	55.95	68.37
873	54.11	12.56
874	51.85	83.65
875	25.16	-8.13
876	5.05	7.39
877	27.71	44.45
878	71.04	66.67
879	62.34	97.18
880	61.18	97.37
881	48.95	21.76
882	19.3	40.81
883	32.73	24.19
884	10.85	-7.54
885	3	13.76
886	11.13	5.69
887	3.32	20.47
888	4.74	11.69
889	10.85	28.38
890	22.69	23.06
891	43.68	20.41
892	4.88	19.49
893	21.17	45.62
894	47.32	9.16
895	15.73	-0.34
896	8.48	24.8
897	8.34	6.3
898	16.33	38.47
899	4.84	16.48
900	6.68	17.5
901	12.33	29.45
902	22.65	3.08
903	28.77	62.92
904	40.85	24.15
905	52.52	92.78
906	70.65	97.63
907	43.72	-8.57
908	12.33	-4.01
909	37.82	65.78
910	65.24	97.22
911	71.11	97.27
912	81.5	97.37
913	90.09	89.69
914	90.23	88.02
915	84.36	97.44
916	71.67	97.92
917	68.49	97.64

## WhlLdrSpe

918	66.94	97.13
919	70.47	97.13
920	72.17	97.28
921	36.51	-8.29
922	67.47	54.44
923	82.59	80.22
924	76.9	-10.14
925	49.58	67.96
926	62.13	53.74
927	33.75	-8.22
928	56.79	-9.01
929	22.05	-8.1
930	5.65	8.14
931	15.16	8.66
932	15.02	13.61
933	2.01	14.78
934	3.82	11.95
935	2.33	20.96
936	3.04	20.05
937	4.06	14.83
938	4.31	7.07
939	10.89	46.96
940	35.13	64.89
941	70.93	96.34
942	94.11	73.92
943	91.57	60.61
944	40.4	-8.43
945	58.07	97.75
946	59.02	82.09
947	56.02	97.69
948	45.91	0.05
949	8.98	30.16
950	22.34	-0.68
951	11.42	2.8
952	11.66	17
953	15.97	11.64
954	5.27	3.22
955	3.43	11.37
956	3.92	21.17
957	5.2	34.56
958	28.91	31.41
959	7.99	12.55
960	10.36	21.76
961	25.27	-8.13
962	20.29	52.76
963	62.2	97.08
964	70.01	97.31
965	64.14	18.47
966	21.98	-8.1
967	70.47	84.16
968	100.12	44.37
969	77.61	96.87
970	84.36	98.47
971	90.72	72.57

WhlLdrSpe

972	92.45	74.67
973	90.23	88.02
974	67.64	21.41
975	56.09	97.99
976	50.36	98.81
977	67.04	96.87
978	70.4	97.66
979	40.4	98.53
980	85.49	93.07
981	81.92	97.27
982	62.45	19.74
983	59.16	90.74
984	93.44	74.44
985	94.11	74.37
986	93.73	74.78
987	75.81	-1.73
988	27.53	1.72
989	40.22	56.96
990	49.27	7.33
991	48.45	19.93
992	56.37	36.3
993	65.49	52.44
994	84.47	59.4
995	78.63	96.76
996	64.5	29.31
997	10.6	67.16
998	30.57	-8.17
999	41.95	72.42
1000	86.2	82.81
1001	60.33	97.8
1002	67.47	97.08
1003	61.39	33.69
1004	36.01	5.46
1005	3.25	9.52
1006	4.49	7.41
1007	12.12	18.05
1008	14.63	8.66
1009	13.92	13.27
1010	18.48	5.6
1011	2.69	13.69
1012	26.36	53.79
1013	3.89	23.56
1014	14.6	32.01
1015	8.34	10.45
1016	10.43	18.82
1017	1.77	17.73
1018	3.78	16.49
1019	17.78	25.17
1020	14.24	52.83
1021	53.47	85.18
1022	66.41	97.24
1023	11.03	-3.23
1024	4.67	1.41
1025	9.08	-6.47

## WhlLdrSpe

1026	3.39	34.16
1027	47.29	73.46
1028	95.24	61.73
1029	98.71	58.39
1030	96.84	45.71
1031	84.47	63.75
1032	73.19	97.4
1033	86.41	16.43
1034	90.83	89.16
1035	98.18	57.89
1036	71.57	-9.8
1037	60.22	-3.63
1038	61.32	34.85
1039	54.67	51.15
1040	29.9	70.89
1041	45.56	54.29
1042	32.16	29.07
1043	61.95	97.44
1044	62.45	16.44
1045	78.63	97.44
1046	67.36	97.12
1047	69.48	97.27
1048	72.91	97.64
1049	88.64	86.73
1050	70.4	97.48
1051	34.71	51.29
1052	63.26	80.58
1053	49.65	54.55
1054	44.18	22.82
1055	82.27	98.14
1056	95.67	72.62
1057	89.48	86.2
1058	89.34	88.21
1059	66.76	96.8
1060	58.88	58.24
1061	61.71	1.17
1062	9.65	30.26
1063	21.42	-4.76
1064	7.7	21.49
1065	21.59	22.82
1066	12.26	53.77
1067	29.12	9.21
1068	29.72	65.66
1069	77.22	56.31
1070	76.73	86.56
1071	75.03	32.68
1072	73.09	97.34
1073	73.09	97.45
1074	56.58	-9
1075	15.76	71.89
1076	63.51	97.16
1077	71.67	97.47
1078	76.3	27.59
1079	76.23	97.09

## WhlLdrSpe

1080	68.24	63.5
1081	61.81	97.09
1082	62.94	96.98
1083	64	96.79
1084	60.08	-9.15
1085	22.34	71.06
1086	67.47	96.95
1087	65.66	96.8
1088	76.02	97.57
1089	52.91	11.35
1090	65.73	81.08
1091	86.66	72.91
1092	89.94	87.31
1093	89.84	87.86
1094	82.91	97.04
1095	60.93	72.14
1096	30.32	50.65
1097	31.88	69.41
1098	39.23	49.41
1099	28.49	58.5
1100	6.86	23.02
1101	15.73	11.45
1102	22.3	30.49
1103	42.83	27.11
1104	60.79	46.14
1105	46.47	12.86
1106	60.86	71.85
1107	86.76	88.76
1108	77.22	96.98
1109	77.54	97.2
1110	48.21	-8.69
1111	57.01	98.14
1112	70.75	97.23
1113	78.25	97.7
1114	57.32	-9.03
1115	54.39	90.66
1116	54.18	99.12
1117	72.63	96.75
1118	73.58	98.33
1119	97.75	66.25
1120	78.25	24.72
1121	69.41	77.61
1122	76.73	97.37
1123	77.93	97.26
1124	71.67	97.37
1125	92.84	73.5
1126	93.34	72.94
1127	94.5	75.87
1128	65.98	96.27
1129	84.36	80.44
1130	88.18	80.97
1131	29.62	48.74
1132	29.37	23.25
1133	24.1	12.17

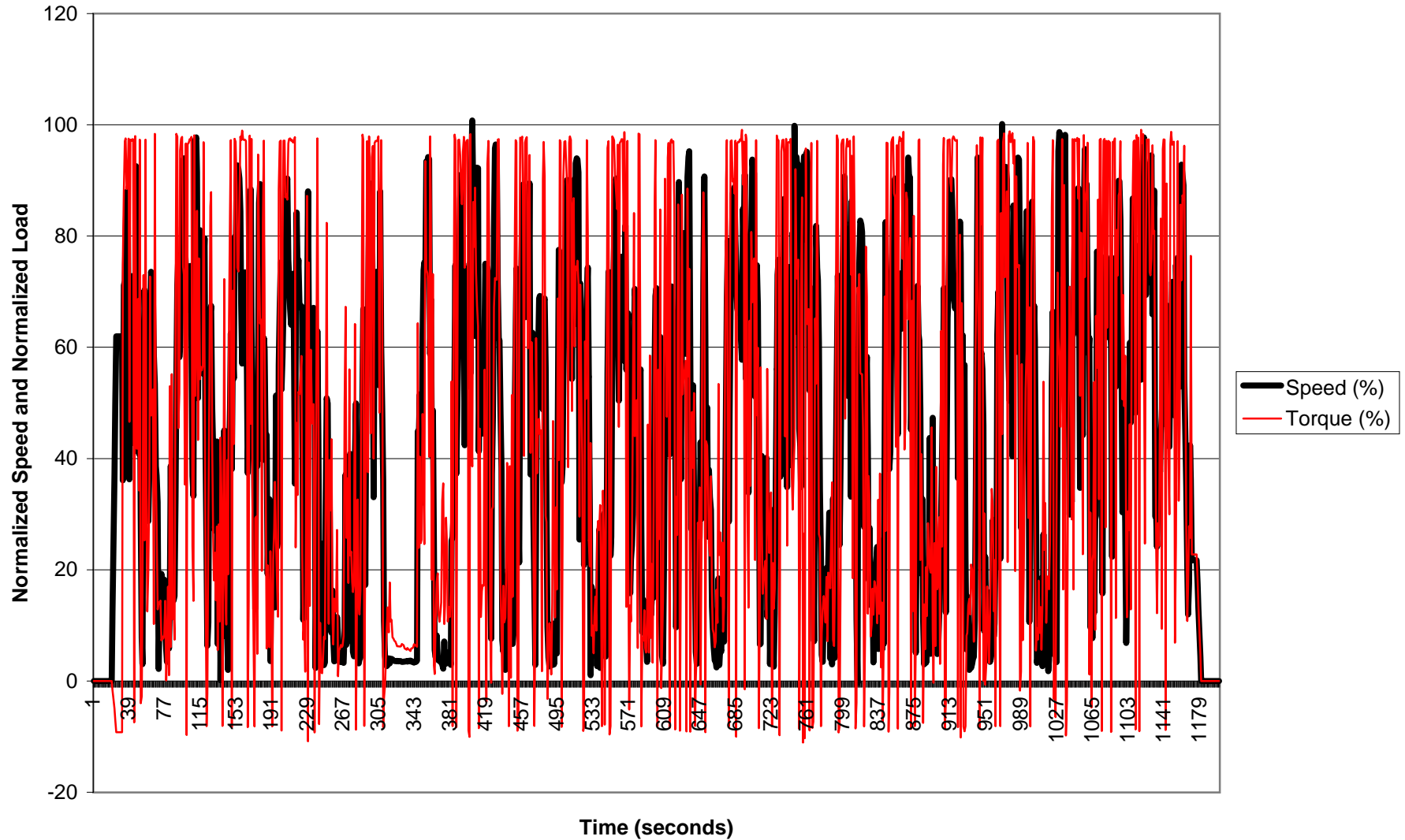
## WhlLdrSpe

1134	35.34	28.38
1135	44.67	24.33
1136	37.6	51.7
1137	44.49	83.14
1138	47.57	9.38
1139	53.61	95.67
1140	72.63	97.37
1141	75.14	97.34
1142	50.36	-8.78
1143	46.01	89.44
1144	67.47	55.86
1145	53.12	41.02
1146	42.09	29.97
1147	57.68	96.51
1148	59.02	98.73
1149	71.78	96.41
1150	64.99	96.68
1151	68.6	96.97
1152	47.71	6.89
1153	74.82	24.79
1154	67.36	64.53
1155	76.13	97.05
1156	54.67	32.42
1157	52.91	45.89
1158	84.93	85.63
1159	92.84	72.02
1160	90.97	87.31
1161	89.13	86.55
1162	54.11	96.26
1163	44.95	60.16
1164	34.85	26.59
1165	20.43	10.8
1166	11.95	16.81
1167	17.56	27.84
1168	42.37	25.76
1169	36.26	76.41
1170	21.73	22.76
1171	21.73	22.76
1172	21.73	22.76
1173	21.73	22.76
1174	21.73	22.76
1175	21.73	22.76
1176	17.39	18.15
1177	13.04	13.61
1178	8.69	9.11
1179	4.35	4.7
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

WhlLdrSpe

1188	0	0
1189	0	0
1190	0	0
1191	0	0
1192	0	0
1193	0	0
1194	0	0
1195	0	0
1196	0	0
1197	0	0
1198	0	0
1199	0	0

### Wheel Loader High Speed Transient Operation Duty Cycle





Time (sec.)	Speed (%)	Torque (%)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	8.06	13.78
22	16.13	27.42
23	24.19	41.36
24	32.26	55.56
25	40.32	71.54
26	40.32	71.54
27	40.32	71.54
28	40.32	71.54
29	40.32	71.54
30	40.32	71.54
31	40.32	71.54
32	67.18	81.03
33	26.29	-8.14
34	20.6	19.87
35	12.76	17.07
36	10.92	18.72
37	11.38	16.29
38	10.74	10.57
39	7.67	16.77
40	13.75	36.06
41	7.78	7.69
42	3.68	15.17
43	29.79	64.39
44	7.14	24.27
45	12.83	21.81
46	28.98	-8.16
47	5.55	6.79
48	39.48	71.14
49	59.87	97.59
50	74.53	63.13
51	41.88	4.59
52	57.08	53.02
53	71.88	97.31

54	73.76	95.1
55	41.14	4.77
56	43.51	29.62
57	18.84	37.95
58	47.32	89.46
59	52.8	51.87
60	64.14	96.66
61	49.12	15.3
62	78.74	77.3
63	85.74	60.17
64	95.53	73.9
65	97.22	55.18
66	96.45	56.8
67	88.64	-10.96
68	52.59	98.11
69	65.73	96.67
70	70.47	29.17
71	29.69	-8.16
72	7.7	-0.24
73	2.19	15.73
74	3.64	12.9
75	28.38	60.16
76	20.43	59.99
77	33.68	1.47
78	32.8	69.35
79	55.03	98.07
80	71.39	97.37
81	76.02	53.53
82	64.5	28.68
83	66.16	15.6
84	38.06	28.5
85	65.17	96.88
86	72.34	97.06
87	75.42	97.19
88	82.38	87.09
89	82.27	70.48
90	59.48	97.74
91	53.26	94.45
92	64.25	96.74
93	68.84	96.83
94	69.76	96.83
95	48.77	-8.71
96	54.81	2.3
97	49.12	42.84
98	25.16	30.69
99	26.01	31.21
100	42.27	26.81
101	38.42	6.68
102	7.03	0.12
103	31.84	34.88
104	58.74	82.33
105	67.64	79.91
106	62.34	61.09
107	29.16	-1.5

108	18.06	8.93
109	21.73	10.81
110	3.99	-0.63
111	4.03	6.97
112	3.46	17.07
113	11.34	53.53
114	43.61	77.69
115	85.74	85.95
116	95.53	72.6
117	95.14	73.99
118	62.45	-9.24
119	13.25	6.61
120	52.66	11.04
121	14.67	15.07
122	6.64	18.4
123	22.19	28.68
124	3.82	15.59
125	4.56	24.3
126	12.05	8.74
127	28.49	56.7
128	5.76	9.21
129	33.43	68.33
130	13.25	23.49
131	26.86	-0.07
132	15.23	58.51
133	6.64	1.21
134	16.5	-8.08
135	45.48	82.18
136	66.09	97.28
137	65.49	37.66
138	55.31	25.73
139	50.4	5.32
140	41.38	43.17
141	63.19	96.91
142	74.64	96.69
143	57.08	-9.02
144	64.99	72.57
145	72.17	75.98
146	67.18	69.54
147	57.89	97.71
148	61.25	98.31
149	66.87	96.79
150	70.93	97.46
151	63.4	58.98
152	14.17	37.14
153	35.69	62.35
154	71.5	15.75
155	61.49	82.16
156	54.46	-8.94
157	22.87	32.38
158	16.4	7.31
159	4.63	4.75
160	4.95	3.54
161	6.93	48.54

162	53.12	81.14
163	67.18	96.56
164	75.52	92.25
165	53.4	-4.65
166	33.36	40.49
167	68	97.54
168	88.88	70.56
169	88.28	63.63
170	86.3	68.06
171	53.97	0.41
172	54.53	97.85
173	44.14	29.82
174	9.72	2.22
175	3.32	12.76
176	3.92	13.06
177	3.68	11.34
178	23.43	44.58
179	27.53	47.43
180	47.15	59.22
181	17.32	16.05
182	24.49	59.62
183	60.54	97.29
184	70.86	97.44
185	73.02	25.56
186	56.37	49.32
187	29.4	-8.16
188	63.51	97.26
189	73.86	96.82
190	46.26	16.58
191	60.15	18.47
192	45.13	50.24
193	43.15	17.56
194	41.63	49.14
195	70.86	97.19
196	71.5	95.51
197	38.88	-5.8
198	31.81	25.74
199	27.07	34.74
200	59.62	97.74
201	62.13	97.02
202	70.86	93.63
203	80.44	51.87
204	89.24	67.85
205	97.37	66.82
206	97.12	55.42
207	96.84	57.11
208	61.18	-9.19
209	52.66	98.31
210	43.33	-8.56
211	8.84	0.3
212	2.86	15.45
213	4.88	8.35
214	16.43	54.91
215	51.32	62.22

216	38.7	15.8
217	6.22	14.75
218	4.95	48.74
219	13.85	6.34
220	24.14	59.97
221	28.2	1.18
222	34.67	7.22
223	58.63	97.43
224	53.12	13.48
225	8.06	0.93
226	43.51	76.05
227	39.26	-8.37
228	23.96	65.23
229	51.6	25.46
230	13.01	0.12
231	54.67	91.89
232	73.3	97.3
233	89.13	86.12
234	70.58	64.67
235	76.41	97.08
236	55.38	50.36
237	72.34	97.43
238	76.13	81.61
239	67.29	25.49
240	64	62.43
241	48.88	-1.4
242	55.1	30.02
243	47.46	47.97
244	54.04	-2.3
245	20.36	12.22
246	16.04	-8.08
247	40.29	-8.43
248	5.76	1.4
249	4.31	0.18
250	19.65	56.13
251	23.93	-3.62
252	41.24	80.53
253	55.24	97.99
254	60.86	97.1
255	68.14	96.66
256	71.67	97.68
257	58.35	97.38
258	41.63	98.28
259	61.39	73.01
260	77.82	-10.2
261	58.56	97.71
262	73.58	96.85
263	76.3	97.14
264	52.91	-8.9
265	29.86	-8.16
266	19.16	65.54
267	60.08	97.63
268	74.04	97.21
269	88.04	89.87

270	61.18	-9.19
271	50.75	65.18
272	80.22	97.67
273	92.31	72.37
274	91.71	82.51
275	91.57	85.22
276	56.93	-9.02
277	55.03	69.23
278	67.47	-9.51
279	30.46	18.39
280	56.93	96.37
281	92.06	74.82
282	93.83	73.05
283	93.09	72.93
284	60.47	-4.36
285	67.71	96.76
286	23.36	-3.19
287	6.18	21.88
288	27.99	53.62
289	12.97	-5.83
290	3.5	15.32
291	4.17	9.76
292	3.68	7.62
293	3.6	7.78
294	12.55	52.33
295	4.42	14.04
296	7.53	52.61
297	14.77	-5.88
298	9.08	40.42
299	10.32	22.31
300	2.93	26.96
301	14.45	33.91
302	20.57	12.7
303	11.13	34.04
304	51.85	83.32
305	59.76	97.8
306	76.62	97.17
307	82.8	97.84
308	65.98	32.93
309	76.83	62.87
310	53.68	-8.92
311	29.9	38.45
312	59.41	97.85
313	73.69	97.33
314	76.41	37.12
315	55.87	5.6
316	56.86	-2.54
317	46.47	97.59
318	22.09	66.76
319	60.15	97.35
320	66.87	91.5
321	67.89	96.62
322	66.76	96.45
323	48.63	-8.71

324	34.35	42.86
325	55.73	97.84
326	89.34	84.94
327	74.75	0.94
328	76.02	97.54
329	92.95	71.06
330	92.56	71.51
331	91.71	82.97
332	61.39	14.46
333	73.69	97.02
334	59.23	97.77
335	71.21	97.22
336	68.42	80.9
337	47.53	17.48
338	39.69	18.81
339	44.07	38.72
340	61.88	97.14
341	78.95	91.14
342	61.32	33.68
343	30.36	21.21
344	28.73	55.67
345	16.29	-2.22
346	2.05	22.52
347	4.88	12.76
348	3.68	13.04
349	3.5	14.32
350	3.57	13.56
351	17.64	23.61
352	10.78	17.46
353	16.89	10.47
354	18.98	18.25
355	8.23	21.02
356	4.84	10.88
357	3.15	14.8
358	16.68	46.47
359	50.86	37.01
360	31.77	72.86
361	59.16	97.67
362	71.78	97.12
363	81.5	93.78
364	85.84	82.44
365	60.61	20.89
366	65.91	90.35
367	49.41	-8.73
368	45.13	88.69
369	68	97.01
370	75.03	97.19
371	90.72	88.35
372	99.42	52.18
373	96.98	38.87
374	88.28	74.84
375	96.98	48.52
376	99.13	26.47
377	85.38	-10.73

378	85.95	68.07
379	94.11	51.57
380	87.22	11.28
381	74.75	20.28
382	73.86	37.95
383	80.54	52.79
384	80.44	75.51
385	77.61	96.68
386	52.73	-8.89
387	60.93	63.84
388	66.87	96.69
389	72.34	97.38
390	74.36	97.19
391	46.54	-8.64
392	57.08	75.32
393	74.15	96.93
394	48.03	23.13
395	29.12	19.23
396	31.63	15.89
397	35.2	59.48
398	65.91	97.42
399	93.58	73.6
400	96.69	70.81
401	95.92	71.72
402	77.72	-10.2
403	15.55	39.5
404	44.95	83.51
405	44.71	42.34
406	24.88	8.45
407	14.63	15.45
408	13.47	15.61
409	14.84	8.93
410	14.21	7.89
411	13.75	8.23
412	13.39	9.41
413	28.52	60.3
414	14.45	6.44
415	10.28	39.4
416	32.3	19.01
417	5.3	4.99
418	21.1	59.1
419	46.62	45.38
420	65.31	96.72
421	39.65	-8.39
422	31.7	17.05
423	26.86	-8.14
424	29.65	63.47
425	47.71	49.66
426	43.89	29.77
427	40.43	22.66
428	48.38	75.58
429	60.79	85.02
430	61.25	8.1
431	64.75	97.64



432	68.49	96.91
433	74.53	97.18
434	67.54	96.18
435	50.15	97.95
436	89.94	56.45
437	85.28	-10.72
438	49.83	55.48
439	57.47	35.48
440	45.73	34.74
441	38.8	26.28
442	51.21	74.22
443	33.36	-8.21
444	15.73	6.51
445	13.75	7.99
446	17.28	56.74
447	54.18	92.58
448	45.66	30.68
449	27.18	77.42
450	75.91	97.33
451	93.83	73.52
452	94.86	73.97
453	93.97	64.53
454	41.56	54.73
455	49.97	85.78
456	31.81	16.81
457	12.55	19.12
458	12.58	20.94
459	13.08	19.61
460	4.52	9.7
461	22.23	13.66
462	5.76	15.72
463	10.07	53.34
464	20	15.21
465	13.5	10.2
466	23.86	61.38
467	14.03	8.76
468	15.59	24.85
469	52.2	84.78
470	58.49	98.06
471	72.06	81.16
472	27.32	52.18
473	50.54	67.52
474	60.01	37.9
475	37.04	15.35
476	34.56	15.5
477	29.9	20.01
478	37.21	42.37
479	46.3	36.91
480	52.98	73.58
481	71.32	97.36
482	69.83	77.11
483	50.08	23.49
484	71.11	84.67
485	88.04	45.8

486	85.95	59.92
487	88.53	55.87
488	87.93	55.81
489	55.59	5.84
490	58.28	92.2
491	42.27	11.42
492	11.13	-8.08
493	3.29	8.07
494	4.35	6.19
495	45.94	69.65
496	4.91	6.08
497	19.23	59.88
498	2.16	21.76
499	37.5	-8.32
500	3.53	32.95
501	51.32	73.09
502	64.64	96.77
503	43.51	18.08
504	18.02	15.55
505	52.66	87.59
506	54.11	28.53
507	50.61	60.86
508	44.6	6.8
509	34.25	6.39
510	14.6	11.11
511	51.6	68.43
512	65.56	93.17
513	70.93	97.25
514	79.69	97.16
515	88.39	92.39
516	39.12	-8.37
517	33.93	24.84
518	24.88	-1.65
519	36.51	7.88
520	34.78	39.64
521	51.78	66
522	68.67	97.1
523	85.74	98.46
524	47.82	-8.68
525	62.94	63.14
526	68.6	25.06
527	89.24	89.08
528	88.64	88.43
529	90.23	88.33
530	87.22	92.18
531	87.93	88.71
532	85.49	97.23
533	88.53	88.62
534	85.38	74.51
535	74.15	41.57
536	70.75	69.13
537	69.83	46.52
538	68.49	86.55
539	63.51	65.78

540	60.15	70.69
541	56.51	97.81
542	36.47	-8.29
543	55.1	98.44
544	57.54	97.53
545	54.89	24.21
546	94.36	74.61
547	75.91	70.25
548	95.67	-12.01
549	85.49	66.49
550	27.57	-8.15
551	18.17	38.81
552	53.12	85.14
553	70.58	97.42
554	78.35	97.08
555	43.79	19.5
556	50.08	52.91
557	19.93	21.14
558	58.56	37.67
559	71.57	97.78
560	94.36	75.86
561	93.97	73.93
562	92.45	73.19
563	54.67	-8.95
564	29.9	21.76
565	37.25	67.28
566	26.61	53.03
567	25.55	21.11
568	8.73	14.12
569	12.72	13.49
570	7.03	14.07
571	8.84	8.36
572	28.17	-3.85
573	3.96	13.33
574	3.25	14.21
575	27.21	23.45
576	15.09	18.73
577	13.01	35.56
578	16.82	-8.08
579	4.17	9.39
580	43.33	74.89
581	58.56	97.99
582	70.47	97.41
583	79.59	97.28
584	37.71	-8.32
585	16.36	63
586	54.67	89.53
587	64.32	77.59
588	69.83	51.6
589	54.89	-8.95
590	20.14	-4.37
591	2.62	6.12
592	35.45	70.5
593	34.35	79.34

594	54.96	98.17
595	60.61	97.32
596	61.88	97.07
597	60.86	97.37
598	65.06	96.48
599	75.91	96.56
600	60.72	98.29
601	39.58	-8.39
602	11.95	41.07
603	78.53	96.78
604	96.84	55.16
605	96.98	65.92
606	100.51	40.55
607	89.94	82.57
608	78.14	97.14
609	65.56	96.52
610	71.67	97.5
611	60.61	90.33
612	32.05	-8.18
613	55.87	96.07
614	93.2	67.83
615	93.44	73.2
616	90.72	88.35
617	76.13	47.44
618	61.64	35.9
619	34	-3.94
620	77.22	98.31
621	90.09	-11.4
622	81.07	97.7
623	77.11	95.94
624	38.24	0.3
625	33.22	16.84
626	34.49	16.23
627	45.59	78.22
628	79.16	88.93
629	91.22	73.45
630	89.94	69.49
631	86.66	32.13
632	12.48	18.9
633	8.13	26.42
634	62.02	91.81
635	70.01	96.59
636	70.19	97.57
637	42.62	-8.55
638	27.74	37.63
639	65.66	96.78
640	65.31	70.32
641	39.87	26.67
642	36.08	27.82
643	21.59	26.55
644	9.33	29.27
645	16.5	18.71
646	22.41	26.74
647	20.53	18.61

648	20.43	22.9
649	23.4	33.44
650	21.66	17.55
651	22.44	22.06
652	23.54	21.51
653	28.45	64.21
654	29.47	23.4
655	26.12	24.02
656	38.24	36.32
657	50.68	46.67
658	84.36	43.7
659	47.57	8.86
660	62.94	71.7
661	80.33	61.26
662	78.85	96.7
663	72.24	97.03
664	62.2	-9.23
665	69.66	97.54
666	44.71	-8.59
667	35.91	-8.28
668	34.95	5.67
669	6.43	56.57
670	54.46	90.6
671	58.95	79.44
672	63.19	27.48
673	52.91	25.41
674	68.49	64.26
675	44.49	-8.59
676	3.82	23.87
677	57.01	88.03
678	68.24	87.38
679	25.94	12.62
680	56.09	98.27
681	70.58	94.78
682	60.15	-9.15
683	22.87	58.02
684	61.32	82.05
685	64.64	39.8
686	55.38	25.58
687	64.32	81.59
688	57.18	97.85
689	46.54	-8.64
690	68.24	96.67
691	68.49	97.11
692	72.45	97.25
693	30.89	13.42
694	85.38	98.28
695	72.17	42.76
696	61.64	96.64
697	71.78	97.46
698	58.49	97.77
699	76.51	97.23
700	29.05	-8.16
701	10.46	7.97

702	52.73	83.72
703	66.87	96.89
704	77.61	90.84
705	63.26	6.89
706	52.8	14.09
707	55.31	18.95
708	56.79	18.27
709	56.65	52.38
710	63.65	44.15
711	63.19	43.96
712	62.66	45.39
713	61.18	23.09
714	41.28	84.4
715	52.31	81.4
716	27.88	4.91
717	5.62	9.08
718	1.94	24.2
719	3.5	19.13
720	2.9	22.16
721	3.96	18.79
722	3.39	18.97
723	3.89	11.77
724	17.28	54.31
725	13.78	14.73
726	12.62	23.58
727	15.76	57.52
728	14.45	11.79
729	3.18	8.56
730	25.87	40.68
731	6.5	3.36
732	33.54	64.29
733	53.9	98.18
734	71.11	97.45
735	54.11	-8.93
736	63.08	97.19
737	51.53	3.7
738	38.17	39.84
739	34.63	13.31
740	31.84	14.33
741	41.63	24.92
742	34.25	18.62
743	49.97	90.5
744	56.65	-4.61
745	55.59	98.24
746	62.94	96.79
747	60.93	18.18
748	52.98	98.36
749	98.32	64.95
750	64.64	97.68
751	94.61	74.08
752	94.36	72.88
753	94.5	74.58
754	92.84	7.85
755	55.45	80.94

756	80.12	97.06
757	77.72	97.26
758	56.02	-8.99
759	14.77	18.71
760	34.99	29.64
761	58.42	97.65
762	32.3	-6.63
763	26.65	-3.43
764	4.13	35.88
765	4.24	49
766	11.59	18.62
767	7.95	20.1
768	7.32	21.1
769	7.78	22.94
770	21.17	59.69
771	17.71	38.38
772	20.57	20.2
773	25.55	-2.95
774	2.58	14.78
775	13.43	-8.08
776	3.29	19.46
777	43.61	72.14
778	58.49	97.7
779	67.54	96.6
780	70.47	34.46
781	59.34	67.78
782	68.6	-9.59
783	40.32	36.51
784	44.71	34
785	38.45	-3.49
786	22.41	-8.11
787	4.59	46.8
788	34.92	20.14
789	48.13	-6.01
790	22.27	0.83
791	9.33	-7.95
792	3.53	0.94
793	3.6	1.22
794	3.32	3.53
795	3.78	10.9
796	34.35	60.57
797	56.72	97.78
798	35.62	-8.27
799	17.88	37.9
800	43.33	81.61
801	65.84	97.13
802	73.86	96.51
803	68.07	48.23
804	54.89	98.17
805	66.87	97.14
806	75.81	97.21
807	75.91	97.28
808	77.01	97.03
809	75.03	97.25

## WhiLdrTor

810	65.49	96.26
811	64.5	96.79
812	55.17	57.98
813	72.24	95.25
814	94.5	73.77
815	94.86	70.98
816	69.76	18.43
817	54.32	-7.33
818	51.53	27.1
819	37.71	32.82
820	27.85	39.95
821	32.69	28.62
822	53.4	83.9
823	48.06	-8.69
824	16.93	45.29
825	65.06	85.41
826	35.34	20.48
827	64.64	96.77
828	78.14	97.44
829	87.12	91.78
830	83.16	97.61
831	75.42	97
832	39.09	98.05
833	71.11	97.09
834	74.15	97.06
835	77.82	96.95
836	77.33	97.13
837	77.54	97.28
838	62.59	96.58
839	61.25	88.05
840	91.22	79.26
841	95.24	70.77
842	94.22	72.47
843	58.74	-9.09
844	56.65	4.72
845	45.56	26.92
846	41.77	69.67
847	58.74	87.04
848	25.45	-2.41
849	25.34	0.74
850	22.3	10.84
851	16.29	24.46
852	29.83	17.42
853	19.79	32.41
854	52.91	91.59
855	71.32	96.87
856	82.7	97.62
857	67.82	96.72
858	70.75	97.26
859	68.07	96.73
860	69.83	97.14
861	76.02	97.3
862	76.73	96.94
863	74.75	97.37



864	64.14	76.37
865	93.44	73.64
866	94.5	72.93
867	94.36	73.36
868	97.51	69.27
869	79.06	-10.28
870	34.67	53.1
871	15.23	15.69
872	51.99	83.01
873	51.24	-8.82
874	13.08	6.15
875	55.59	67.38
876	45.91	54.13
877	52.8	81.8
878	25.16	-8.13
879	59.94	97.79
880	79.48	96.89
881	69.02	96.76
882	48.21	-8.69
883	64.82	97.15
884	70.47	97.54
885	62.84	96.65
886	60.01	97.63
887	51.6	98.21
888	91.57	87.91
889	92.56	73.89
890	92.95	75.72
891	92.06	74.84
892	69.13	73.93
893	64.32	43.75
894	36.3	-8.29
895	45.91	81.56
896	54.81	60.16
897	23.93	23.85
898	57.47	92.57
899	41.35	-8.48
900	15.13	36.48
901	53.54	91.76
902	59.87	3.94
903	9.51	3.86
904	42.87	76.21
905	63.9	97.05
906	77.43	97.45
907	58.74	97.43
908	68.07	97.44
909	70.86	97.86
910	71.96	96.93
911	72.45	97.36
912	60.08	97.42
913	78.25	97.64
914	92.84	74.25
915	93.83	73.87
916	53.47	9.64
917	73.3	97.77

918	95.53	58.04
919	57.75	59.93
920	42.55	26.37
921	62.45	97.22
922	41.07	-8.47
923	70.4	96.87
924	64.75	97.03
925	79.06	97.21
926	70.75	96.87
927	71.78	37.37
928	68.31	96.6
929	69.48	96.92
930	59.87	97.06
931	68.67	97.38
932	62.34	97.18
933	57.32	97.79
934	61.32	79.17
935	60.47	95.5
936	53.19	98.15
937	36.51	25.76
938	66.09	65.05
939	53.97	34.85
940	53.26	12.08
941	50.29	16.86
942	33.79	-8.22
943	24.63	64.23
944	54.89	98.14
945	54.74	-8.95
946	62.45	51.26
947	28.17	46.27
948	67.54	97.28
949	74.36	97.06
950	81.5	97.65
951	88.64	87.27
952	93.2	73.71
953	91.22	85.25
954	91.32	84.15
955	88.88	87.08
956	90.23	84.09
957	91.57	85.26
958	98.04	65.11
959	90.23	25.34
960	89.94	62.69
961	62.45	-9.24
962	55.24	69.28
963	61.49	-9.2
964	29.33	0.27
965	26.33	6.61
966	15.87	-5.24
967	31.35	19.04
968	46.97	27.03
969	44.42	97.99
970	58.42	95.03
971	63.33	69

972	56.79	56.23
973	34.78	14.85
974	50.04	85.6
975	63.08	97.04
976	67.54	96.75
977	38.31	-8.34
978	75.81	97.82
979	68.67	96.87
980	98.46	45.46
981	78.63	96.9
982	74.15	97.09
983	57.18	11.13
984	65.66	97.2
985	49.51	21.91
986	37.6	21.33
987	37.5	38.83
988	47.64	28.97
989	50.15	49.5
990	83.79	98.12
991	92.45	74.34
992	93.34	73.65
993	91.71	41.89
994	38.45	62.87
995	56.72	90.33
996	12.93	14.37
997	19.3	30.3
998	5.37	9.35
999	3.22	12.78
1000	2.97	17.03
1001	4.21	11.23
1002	3.57	11.61
1003	3.22	13.32
1004	4.95	16.96
1005	6.22	14.7
1006	21.45	-4.27
1007	5.2	27.25
1008	6.96	19.06
1009	11.73	8.18
1010	35.24	27.01
1011	12.16	15.62
1012	30.5	63.3
1013	54.39	98.25
1014	73.09	97.29
1015	70.12	34.98
1016	35.13	3.86
1017	53.9	56.54
1018	22.09	-8.1
1019	29.05	68.25
1020	56.72	92.42
1021	69.83	85.2
1022	51.21	13.16
1023	56.86	21.8
1024	29.23	3.08
1025	50.29	84.04

1026	43.72	-8.57
1027	53.68	98.32
1028	70.19	92.93
1029	97.37	72.25
1030	95.39	75.85
1031	94.22	74.2
1032	93.34	72.14
1033	93.34	74.11
1034	92.21	73.97
1035	92.31	20.84
1036	49.02	11.38
1037	7.7	1.28
1038	27.04	63.32
1039	39.97	18.49
1040	25.94	18.41
1041	25.45	21.34
1042	25.69	21.7
1043	26.86	21.11
1044	43.05	57.82
1045	64	97.04
1046	66.41	96.79
1047	71.5	97.04
1048	75.42	98.15
1049	87.47	63.08
1050	93.83	75.06
1051	94.5	71.7
1052	94.36	72.88
1053	93.44	72.77
1054	26.79	-2.78
1055	61.18	33.13
1056	85.17	82.04
1057	89.59	85.56
1058	72.24	97.08
1059	69.83	97.58
1060	77.33	97.35
1061	45.13	-8.6
1062	21.66	31.45
1063	53.12	98.18
1064	71.04	97.31
1065	79.91	85.6
1066	45.77	44.22
1067	48.7	86.69
1068	54.81	76.37
1069	36.9	31.33
1070	24.63	48.07
1071	27.6	-0.89
1072	15.06	30.07
1073	23.29	20.89
1074	23.08	19.79
1075	22.94	20.31
1076	28.17	47.46
1077	29.69	33.33
1078	30.92	26.2
1079	18.73	16.58

1080	21.77	16.33
1081	18.2	21.12
1082	4.42	19.98
1083	4.74	12.09
1084	3.78	13.13
1085	3.43	11.7
1086	25.83	56.62
1087	30.25	7.88
1088	43.05	77.48
1089	16.54	5.01
1090	13.25	2
1091	13.85	21.76
1092	33.86	66.98
1093	21.88	66.68
1094	60.86	97.32
1095	75.63	97.04
1096	79.16	46.09
1097	46.9	53.09
1098	68.24	74.43
1099	69.59	46.31
1100	34.1	-8.23
1101	9.82	-4.07
1102	23.29	60.93
1103	59.34	97.85
1104	59.16	75.36
1105	81.07	92.7
1106	93.09	72.14
1107	73.19	-9.89
1108	51.85	25.08
1109	52.87	19.67
1110	55.73	21.46
1111	58.07	97.72
1112	54.39	98.07
1113	52.13	98.9
1114	66.69	96.71
1115	70.93	97.15
1116	70.93	97.09
1117	69.13	96.92
1118	48.03	-8.69
1119	36.12	97.17
1120	71.32	97.31
1121	77.54	96.79
1122	37	-8.31
1123	66.58	97.02
1124	59.41	25.27
1125	43.26	22.39
1126	38.56	22.12
1127	24.74	-5.37
1128	39.58	78.05
1129	51.92	98.05
1130	60.54	97.19
1131	75.74	97.16
1132	91.46	86.95
1133	91.46	87.64

1134	62.45	-9.24
1135	54.6	74.79
1136	86.3	23.65
1137	51.6	79.69
1138	86.06	74.64
1139	73.69	97.1
1140	71.57	97.31
1141	80.65	97.47
1142	39.69	-8.4
1143	9.65	4.29
1144	47.46	81.53
1145	64.32	96.73
1146	62.77	41.43
1147	71.5	51.75
1148	49.41	17.58
1149	24.35	39.63
1150	44.25	98.03
1151	45.31	20.54
1152	89.59	90.29
1153	96.69	71.91
1154	96.59	69.44
1155	95.78	69.33
1156	62.45	32.34
1157	36.76	49.71
1158	45.02	2.21
1159	49.73	57.93
1160	89.24	87.92
1161	70.01	79.31
1162	77.01	97.62
1163	19.12	5.11
1164	5.48	15.25
1165	4.63	9.59
1166	17.32	57.99
1167	37.14	16.34
1168	24.39	-8.12
1169	4.98	7.6
1170	2.83	13.84
1171	2.83	13.84
1172	2.83	13.84
1173	2.83	13.84
1174	2.83	13.84
1175	2.83	13.84
1176	2.26	11.44
1177	1.7	8.87
1178	1.13	6.12
1179	0.57	3.17
1180	0	0
1181	0	0
1182	0	0
1183	0	0
1184	0	0
1185	0	0
1186	0	0
1187	0	0

WhILdrTor

1188	0	0	
1189	0	0	
1190	0	0	
1191	0	0	
1192	0	0	
1193	0	0	
1194	0	0	
1195	0	0	
1196	0	0	
1197	0	0	
1198	0	0	
1199	0	0	

### Wheel Loader High Torque Transient Operation Duty Cycle

