LAMPIRAN

Lampiran 1. Pengujian Torsi (Nm)

Hasil Pengujian Torsi (Nm)									
No	Kec.putar	Kondisi variasi							
	(RPM)	1	2	3	4	5	6	7	8
1	4500	7.92	7.69	7.47	7.76	6.13	5.31	5.56	4.50
2	5000	8.49	8.27	8.84	8.44	3.68	4.29	5.38	5.78
3	5500	8.76	8.75	8.96	8.83	4.25	4.66	6.04	6.13
4	6000	9.16	9.11	8.98	8.99	5.77	6.46	6.47	6.4
5	6500	9.05	9.03	8.86	8.83	7.06	7.54	7.76	7.71
6	7000	8.86	8.91	8.90	8.54	7.87	8.13	8.20	8.16
7	7500	8.41	8.57	8.84	8.66	7.96	8.22	8.23	8.18
8	8000	7.69	7.77	8.17	8.19	8.13	8.34	8.45	8.44
9	8500	7.17	7.29	7.76	7.72	8.03	8.16	8.44	8.45
10	9000	6.43	6.64	7.15	7.21	7.59	7.58	8.16	8.18
11	Rata-rata	8.19	8.20	8.39	8.36	6.65	6.87	7.26	7.19

Lampiran 2. Pengujian Daya (kW)

Hasil Pengujian Daya (kW)									
No	Kec.putar	Kondisi variasi							
	(RPM)	1	2	3	4	5	6	7	8
1	4500	3.75	3.60	3.53	3.65	2.90	2.50	2.61	2.11
2	5000	4.45	4.32	4.62	4.45	1.94	2.26	2.83	3.06
3	5500	5.05	5.05	5.17	5.09	2.46	2.71	3.50	3.53
4	6000	5.79	5.74	5.69	5.67	3.65	4.07	4.08	4.07
5	6500	6.19	6.17	6.04	6.08	4.82	5.14	5.29	5.27
6	7000	6.54	6.54	6.56	6.29	5.72	5.99	6.04	5.96
7	7500	6.64	6.76	6.99	6.81	6.29	6.51	6.49	6.46
8	8000	6.49	6.54	6.88	6.86	6.84	7.01	7.11	7.08
9	8500	6.44	6.54	6.94	6.91	7.21	7.31	7.55	7.56
10	9000	6.09	6.29	6.76	6.84	7.21	7.21	7.72	7.81
11	Rata-rata	5.74	5.78	5.92	5.86	4.90	5.07	5.32	5.29

Lampiran 3. Hasil Pengujian Konsumsi Bahan Bakar

Konsumsi bahan bakar (kg/jam)								
Variasi	Kecepatan putar (RPM)							
	2000	3000	4000	5000	6000	7000	8000	Rata-rata
1	0.123	0.166	0.244	0.329	0.407	0.549	0.656	0.353
2	0.116	0.156	0.221	0.303	0.391	0.519	0.628	0.333
3	0.125	0.163	0.227	0.3	0.387	0.483	0.589	0.325
4	0.115	0.159	0.223	0.303	0.391	0.489	0.592	0.325
5	0.182	0.229	0.299	0.387	0.525	0.619	0.717	0.423
6	0.179	0.211	0.298	0.381	0.511	0.611	0.708	0.414
7	0.128	0.206	0.277	0.368	0.454	0.56	0.693	0.384
8	0.14	0.198	0.293	0.37	0.47	0.563	0.691	0.389

Lampiran 4. Hasil Pengujian Perhitungan Waktu Konsumsi Bahan Bakar

Kondisi 1					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	03:31.9	03:37.1	03:44.0	03:37.7
3000	10	02:38.8	02:40.4	02:46.0	02:41.7
4000	10	01:47.5	01:47.3	01:55.1	01:50.0
5000	10	01:20.2	01:21.2	01:23.8	01:21.7
6000	10	01:04.8	01:08.1	01:05.2	01:06.0
7000	10	00:46.2	00:50.7	00:50.2	00:49.0
8000	10	00:40.6	00:41.2	00:41.3	00:41.0

Kondisi 2					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	03:52.2	03:51.2	03:50.2	03:51.2
3000	10	02:48.5	02:49.9	03:00.1	02:52.8
4000	10	01:58.7	02:02.8	02:02.5	02:01.3
5000	10	01:25.7	01:30.0	01:30.4	01:28.7
6000	10	01:05.7	01:13.1	01:07.6	01:08.8
7000	10	00:51.1	00:51.8	00:52.4	00:51.8
8000	10	00:42.3	00:42.9	00:43.1	00:42.8

Kondisi 3					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	03:17.0	03:40.7	03:45.6	03:34.4
3000	10	02:44.7	02:44.5	02:44.9	02:44.7
4000	10	01:56.3	01:59.2	01:59.5	01:58.3
5000	10	01:28.8	01:29.3	01:30.7	01:29.6
6000	10	01:09.4	01:07.9	01:10.8	01:09.4
7000	10	00:55.9	00:55.2	00:55.9	00:55.7
8000	10	00:45.3	00:45.8	00:46.0	00:45.7

Kondisi 4					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	03:48.1	03:55.3	03:58.1	03:53.8
3000	10	02:46.4	02:47.6	02:52.2	02:48.7
4000	10	01:58.2	02:00.2	02:02.9	02:00.4
5000	10	01:25.4	01:28.5	01:31.7	01:28.5
6000	10	01:07.1	01:10.2	01:09.0	01:08.8
7000	10	00:54.4	00:55.2	00:55.0	00:54.9
8000	10	00:44.8	00:45.4	00:45.9	00:45.4

Kondisi 5					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	02:25.0	02:29.9	02:30.3	02:28.4
3000	10	01:43.0	02:01.7	02:07.5	01:57.4
4000	10	01:28.3	01:29.2	01:31.6	01:29.7
5000	10	01:07.3	01:08.8	01:12.3	01:09.5
6000	10	00:49.7	00:49.9	00:54.1	00:51.2
7000	10	00:43.7	00:42.7	00:43.7	00:43.4
8000	10	00:37.2	00:37.5	00:37.7	00:37.5

Kondisi 6					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	02:27.4	02:31.2	02:30.8	02:29.8
3000	10	02:06.3	02:06.3	02:09.8	02:07.5
4000	10	01:30.2	01:31.0	01:29.4	01:30.2
5000	10	01:09.8	01:10.3	01:11.3	01:10.5
6000	10	00:50.7	00:52.0	00:55.0	00:52.6
7000	10	00:43.8	00:45.7	00:44.7	00:44.8
8000	10	00:37.8	00:38.0	00:38.3	00:38.0

Kondisi 7					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	02:54.0	02:58.3	03:07.2	02:59.8
3000	10	01:39.3	01:59.5	01:53.9	01:50.9
4000	10	01:36.6	01:36.9	01:37.2	01:36.9
5000	10	01:11.4	01:13.7	01:13.9	01:13.0
6000	10	00:58.9	00:59.3	00:59.4	00:59.2
7000	10	00:47.8	00:47.9	00:48.2	00:48.0
8000	10	00:38.4	00:38.8	00:39.2	00:38.8

Kondisi 8					
Putaran (rpm)	Volume (mL)	Percobaan 1	Percobaan 2	Percobaan 3	Rata-rata
		waktu (detik)	waktu (detik)	waktu (detik)	waktu (detik)
2000	10	03:18.4	03:15.2	03:01.4	03:11.7
3000	10	02:44.8	02:13.2	01:48.4	02:15.5
4000	10	01:27.8	01:40.6	01:26.4	01:31.6
5000	10	00:52.5	01:13.4	01:31.9	01:12.6
6000	10	00:55.6	00:57.2	00:58.7	00:57.2
7000	10	00:47.3	00:48.0	00:48.3	00:47.8
8000	10	00:38.5	00:38.8	00:39.3	00:38.9

Lampiran 5. Tabel *camshaft* standar

			in	ex
TDC	0	0		
	5	5		
	10	10		
	15	15		
	20	20		
	25	25		
	30	30		
	35	35		
	40	40		
ATDC	45	45		
	50	50		
	55	55		
	60	60		
	65	65		
	70	70		
	75	75		
	80	80		
	85	85		
	90	90		
	85	95		
	80	100		
	75	105		
	70	110		
	65	115		
	60	120		0.02
	55	125		0.04
	50	130		0.09
BBDC	45	135		0.19
	40	140		0.36
	35	145		0.57
	30	150		0.85
	25	155		1.14
	20	160		1.46
	15	165		1.79
	10	170		2.12
	5	175		2.42
BDC	0	180		2.73
	5	185		3.03
	10	190		3.31
	15	195		3.61
	20	200		3.87
	25	205		4.12
ABDC	30	210		4.34
	35	215		4.55
	40	220		4.75
	45	225		4.92
	50	230		5.05
	55	235		5.18
	60	240		5.3
	65	245		5.37
	70	250		5.41
	75	255		5.43
	80	260		5.43
	85	265		5.41
	90	270		5.36
	85	275		5.28
	80	280		5.18
	75	285		5.07
	70	290		4.91
	65	295		4.76
	60	300		4.54
	55	305		4.35
	50	310		4.12
BTDC	45	315		3.86
	40	320		3.6
	35	325		3.32
	30	330		3.03
	25	335		2.73
	20	340		2.42
	15	345	0.07	2.11
	10	350	0.2	1.81
	5	355	0.42	1.47
TDC	0	360	0.7	1.18
	5	365	1.03	0.89
	10	370	1.32	0.61
	15	375	1.72	0.39
	20	380	2.07	0.23
	25	385	2.4	0.12
	30	390	2.71	0.07
	35	395	3.04	0.05
	40	400	3.33	0.03
ATDC	45	405	3.65	0.01
	50	410	3.93	
	55	415	4.23	
	60	420	4.44	
	65	425	4.67	
	70	430	4.87	
	75	435	5.05	
	80	440	5.21	
	85	445	5.34	
	90	450	5.43	
	85	455	5.5	
	80	460	5.54	
	75	465	5.56	
BBDC	70	470	5.55	
	65	475	5.52	
	60	480	5.45	
	55	485	5.35	
	50	490	5.23	
	45	495	5.1	
	40	500	4.94	
	35	505	4.72	
	30	510	4.52	
	25	515	4.28	
	20	520	4.02	
	15	525	3.72	
	10	530	3.44	
	5	535	3.12	
BDC	0	540	2.8	
	5	545	2.46	
	10	550	2.15	
	15	555	1.78	
	20	560	1.43	
	25	565	1.13	
	30	570	0.85	
	35	575	0.6	
	40	580	0.4	
ABDC	45	585	0.24	
	50	590	0.14	
	55	595	0.1	
	60	600	0.07	
	65	605	0.05	
	70	610	0.04	
	75	615	0.02	
	80	620		
	85	625		
	90	630		
	85	635		
	80	640		
	75	645		
	70	650		
	65	655		
	60	660		
	55	665		
	50	670		
BTDC	45	675		
	40	680		
	35	685		
	30	690		
	25	695		
	20	700		
	15	705		
	10	710		
	5	715		
	0	720		

Lampiran 6. Tabel *camshaft* racing K1

			in	ex
TDC	0	0		
	5	5		
	10	10		
	15	15		
	20	20		
	25	25		
	30	30		
	35	35		
	40	40		
ATDC	45	45		
	50	50		
	55	55		
	60	60		
	65	65		
	70	70		
	75	75		
	80	80		
	85	85		
	90	90		0.02
	85	95		0.08
	80	100		0.16
	75	105		0.28
	70	110		0.45
	65	115		0.65
	60	120		0.89
	55	125		1.16
	50	130		1.44
BBDC	45	135		1.72
	40	140		2.02
	35	145		2.31
	30	150		2.59
	25	155		2.88
	20	160		3.16
	15	165		3.44
	10	170		3.69
	5	175		3.97
BDC	0	180		4.21
	5	185		4.45
	10	190		4.67
	15	195		4.89
	20	200		5.09
	25	205		5.27
ABDC	30	210		5.44
	35	215		5.58
	40	220		5.72
	45	225		5.83
	50	230		5.92
	55	235		6

	60	240		6.05
	65	245		6.08
	70	250		6.09
	75	255		6.09
	80	260		6.07
	85	265		6.03
	90	270		5.92
	85	275		5.89
	80	280		5.79
	75	285		5.68
	70	290		5.54
	65	295		5.4
	60	300		5.25
	55	305		5.07
	50	310	0.02	4.87
BTDC	45	315	0.07	4.64
	40	320	0.13	4.45
	35	325	0.21	4.22
	30	330	0.34	3.98
	25	335	0.53	3.73
	20	340	0.75	3.46
	15	345	0.99	3.18
	10	350	1.28	2.9
	5	355	1.57	2.6
TDC	0	360	1.87	2.33
	5	365	2.18	2.04
	10	370	2.46	1.74
	15	375	2.75	1.46
	20	380	3.05	1.15
	25	385	3.33	0.91
	30	390	3.61	0.67
	35	395	3.86	0.47
	40	400	4.12	0.34
ATDC	45	405	4.34	0.22
	50	410	4.57	0.15
	55	415	4.8	0.1
	60	420	4.98	0.05
	65	425	5.17	0.02
	70	430	5.34	
	75	435	5.49	
	80	440	5.63	
	85	445	5.75	
	90	450	5.85	
	85	455	5.92	
	80	460	5.99	
BBDC	75	465	6.03	
	70	470	6.05	
	65	475	6.05	
	60	480	6.02	

	55	485	5.98	
	50	490	5.91	
	45	495	5.82	
	40	500	5.72	
	35	505	5.58	
	30	510	5.45	
	25	515	5.29	
	20	520	5.11	
	15	525	4.92	
	10	530	4.72	
	5	535	4.52	
BDC	0	540	4.27	
	5	545	4.05	
	10	550	3.78	
	15	555	3.52	
	20	560	3.25	
	25	565	2.99	
	30	570	2.69	
	35	575	2.4	
	40	580	2.1	
ABDC	45	585	1.82	
	50	590	1.54	
	55	595	1.25	
	60	600	1	
	65	605	0.73	
	70	610	0.56	
	75	615	0.41	
	80	620	0.27	
	85	625	0.12	
	90	630	0.1	
	85	635	0.05	
	80	640	0.02	
	75	645		
	70	650		
	65	655		
	60	660		
	55	665		
	50	670		
BTDC	45	675		
	40	680		
	35	685		
	30	690		
	25	695		
	20	700		
	15	705		
	10	710		
	5	715		
	0	720		