LINK

Brake Dynamometer Test Report

Link Test Report #:   132263-1

Test Description: **2001 TOYOTA CAMRY FRONT SAE J2522**

Customer Reference: D562

Program #   **SAE J2522 JAN 2019 GENERAL 20190106**

Platform: **2001 TOYOTA CAMRY FRONT**

Lining Material: **CERAMIC 6106**

Test Date: 01/09/2019

Requested By:

Shandong Sensitive Brake System Co., Ltd.

Add: Naoshan Economic Development Zone, Qingzhou City, Shandong Province,China

Tested By:

LINK

2001 TOYOTA CAMRY FRONT SAE 2522

Test Information

Customer Name	Shandong Sensitive Brake System Co.Ltd
Requestor	Bai Kejiang
Test Procedure	Sae J2522
Program Number	300711
Test Coordinator	Gist Jeff
Technician	DC
Dynamometer	Link3000
Parts received, start and completion dates	01/09/2019 - 01/09/2019
Datalog, Template version	3.29

Setup Details

Fixture Identification	
Fixture Design	L1 - KNUCKLE
Drive adapter method	LINK STANDARD

Dynamometer Information

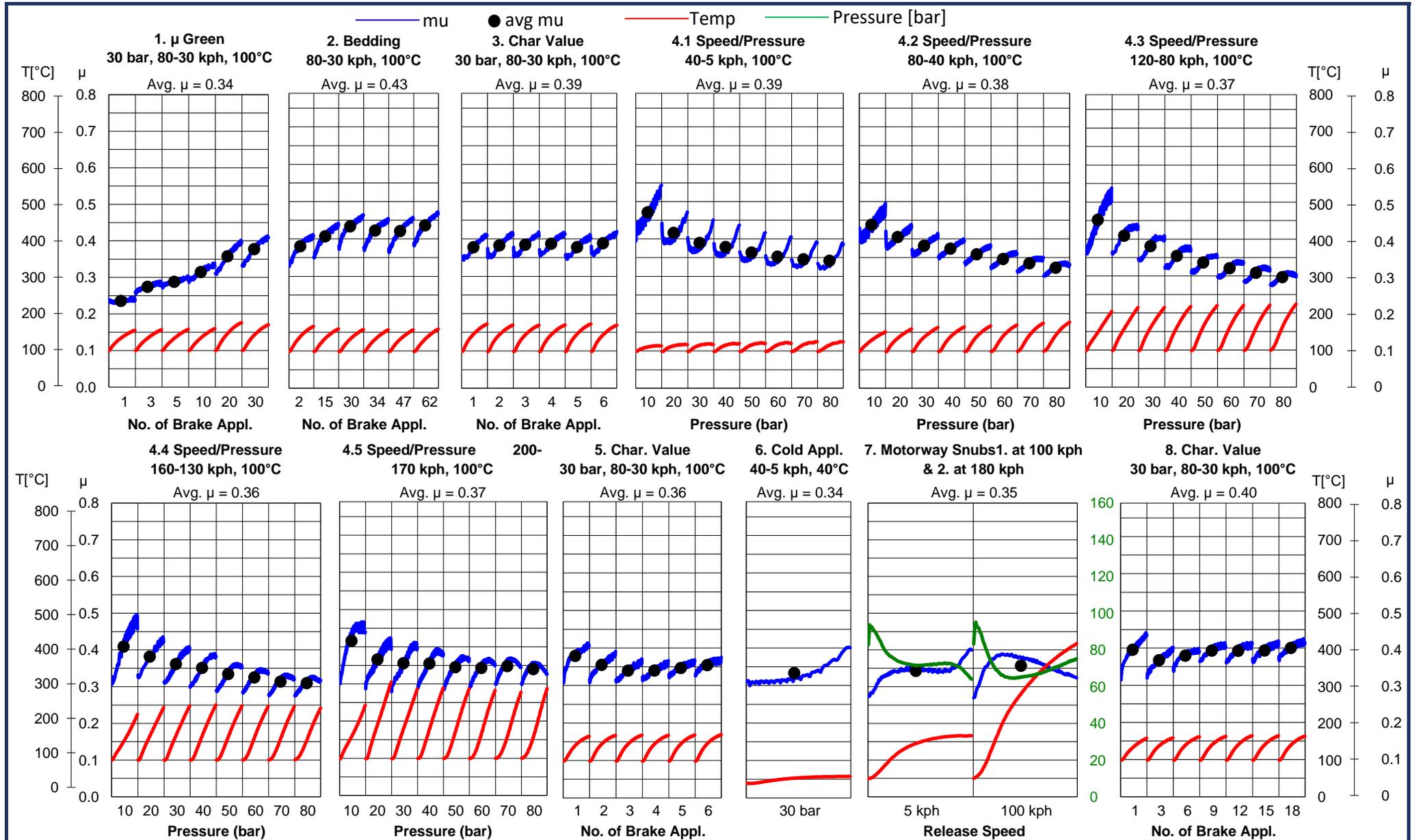|	
Rolling Radius	312.4 mm
Gross Axle Weight	N/A
Required Wheel Load	714 kg
Actual Wheel Load	711 kg
Required Inertia	69.7 kg·m²
Actual Inertia	69.7 kg·m²

Brake Information

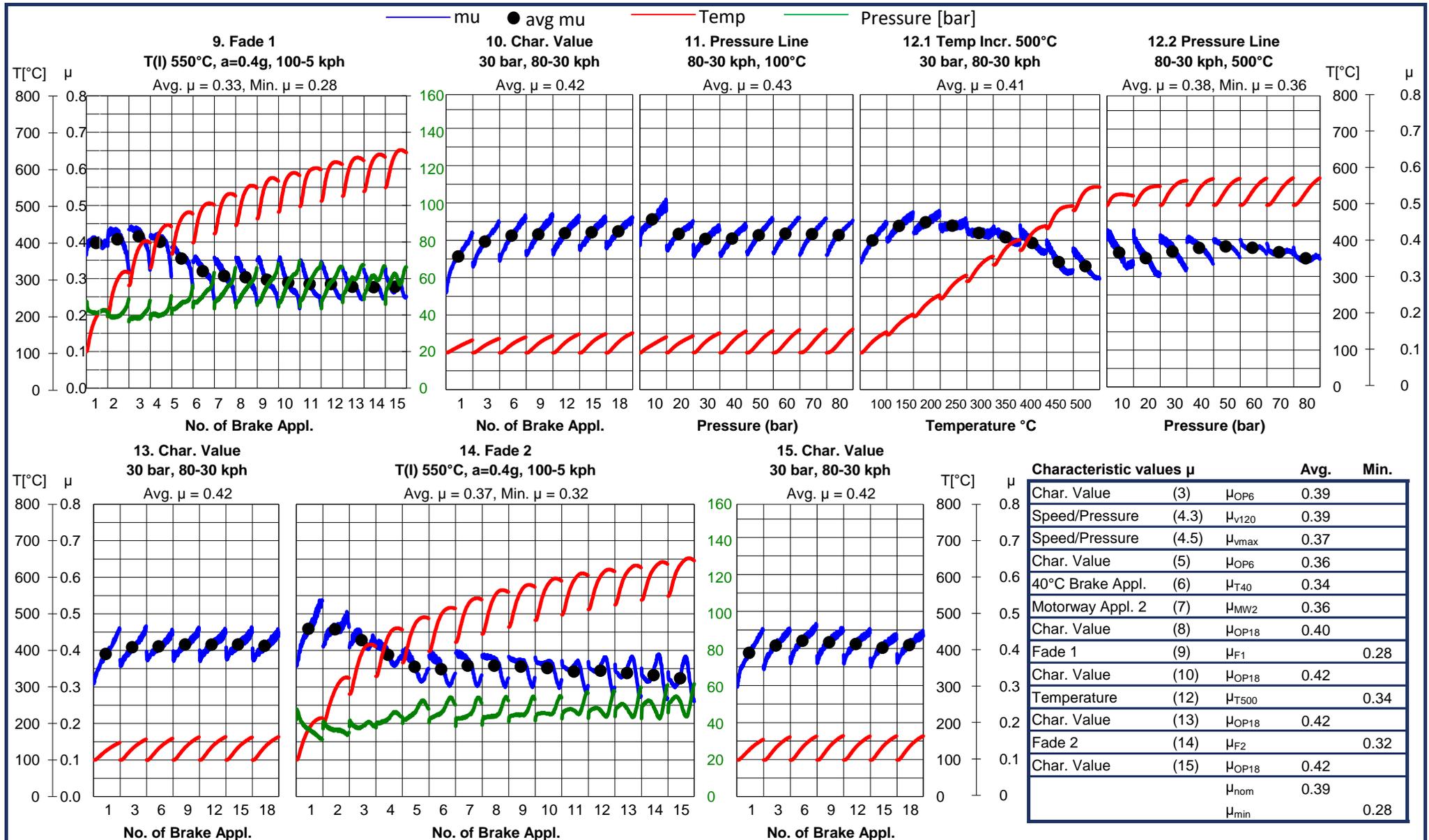|	
Brake Platform	2001 Toyota Camry Front
Brake Type	Disc
Brake Size	255 x 28mm
Brake ID Number	N/A
Drum/Rotor Type	Vented
Drum/Rotor Finish	New
Pri/Lead/Inner Lining	Ceramic 6106
Sec/Trail/Outer Lining	Ceramic 6106
Orientation	Left
Effective Radius	104.4 mm
Number of Pistons/Cyls	1
Piston Diameter	57.0 mm

Comments:

Created by:	Gist Jeff	**Title**	Associate Test Engineer	**Date**	01/20/2019
Reviewed by:	Gist Jeff	**Title**	Associate Test Engineer	**Date**	01/20/2019

Legend: mu | ● avg mu | Temp | Pressure [bar]

Top row of charts

1. μ Green
30 bar, 80-30 kph, 100°C
Avg. μ = 0.34
X-axis: No. of Brake Appl. (1, 3, 5, 10, 20, 30)

2. Bedding
80-30 kph, 100°C
Avg. μ = 0.43
X-axis: No. of Brake Appl. (2, 15, 30, 34, 47, 62)

3. Char Value
30 bar, 80-30 kph, 100°C
Avg. μ = 0.39
X-axis: No. of Brake Appl. (1, 2, 3, 4, 5, 6)

4.1 Speed/Pressure
40-5 kph, 100°C
Avg. μ = 0.39
X-axis: Pressure (bar) (10, 20, 30, 40, 50, 60, 70, 80)

4.2 Speed/Pressure
80-40 kph, 100°C
Avg. μ = 0.38
X-axis: Pressure (bar) (10, 20, 30, 40, 50, 60, 70, 80)

4.3 Speed/Pressure
120-80 kph, 100°C
Avg. μ = 0.37
X-axis: Pressure (bar) (10, 20, 30, 40, 50, 60, 70, 80)

Y-axes: T[°C] (0–800), μ (0.0–0.8)

Bottom row of charts

4.4 Speed/Pressure
160-130 kph, 100°C
Avg. μ = 0.36
X-axis: Pressure (bar) (10, 20, 30, 40, 50, 60, 70, 80)

4.5 Speed/Pressure
170 kph, 100°C   200-
Avg. μ = 0.37
X-axis: Pressure (bar) (10, 20, 30, 40, 50, 60, 70, 80)

5. Char. Value
30 bar, 80-30 kph, 100°C
Avg. μ = 0.36
X-axis: No. of Brake Appl. (1, 2, 3, 4, 5, 6)

6. Cold Appl.
40-5 kph, 40°C
Avg. μ = 0.34
X-axis: 30 bar

7. Motorway Snubs1. at 100 kph
& 2. at 180 kph
Avg. μ = 0.35
X-axis: Release Speed (5 kph, 100 kph)
Right Y-axis: 0–160 (Pressure)

8. Char. Value
30 bar, 80-30 kph, 100°C
Avg. μ = 0.40
X-axis: No. of Brake Appl. (1, 3, 6, 9, 12, 15, 18)

Y-axes: T[°C] (0–800), μ (0.0–0.8)

Test information

| Test Description:			
TOYOTA CAMRY FRONT SAE J2522	Rotor	255 x 28mm	Effective Radius: 104.4 mm
	Primary Lining	Ceramic 6106	Piston Diameter: 1 x 57.0 mm
	Secondary Lining	Ceramic 6106	Actual Inertia: 69.7 kg·m²
			Rolling Radius: 312.4 mm

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Legend: mu — ● avg mu — Temp — Pressure [bar]

9. Fade 1
T(I) 550°C, a=0.4g, 100-5 kph
Avg. μ = 0.33, Min. μ = 0.28
No. of Brake Appl.

10. Char. Value
30 bar, 80-30 kph
Avg. μ = 0.42
No. of Brake Appl.

11. Pressure Line
80-30 kph, 100°C
Avg. μ = 0.43
Pressure (bar)

12.1 Temp Incr. 500°C
30 bar, 80-30 kph
Avg. μ = 0.41
Temperature °C

12.2 Pressure Line
80-30 kph, 500°C
Avg. μ = 0.38, Min. μ = 0.36
Pressure (bar)

13. Char. Value
30 bar, 80-30 kph
Avg. μ = 0.42
No. of Brake Appl.

14. Fade 2
T(I) 550°C, a=0.4g, 100-5 kph
Avg. μ = 0.37, Min. μ = 0.32
No. of Brake Appl.

15. Char. Value
30 bar, 80-30 kph
Avg. μ = 0.42
No. of Brake Appl.

Characteristic values μ			Avg.	Min.
Char. Value	(3)	μ_{OP6}	0.39	
Speed/Pressure	(4.3)	μ_{v120}	0.39	
Speed/Pressure	(4.5)	μ_{vmax}	0.37	
Char. Value	(5)	μ_{OP6}	0.36	
40°C Brake Appl.	(6)	μ_{T40}	0.34	
Motorway Appl. 2	(7)	μ_{MW2}	0.36	
Char. Value	(8)	μ_{OP18}	0.40	
Fade 1	(9)	μ_{F1}		0.28
Char. Value	(10)	μ_{OP18}	0.42	
Temperature	(12)	μ_{T500}		0.34
Char. Value	(13)	μ_{OP18}	0.42	
Fade 2	(14)	μ_{F2}		0.32
Char. Value	(15)	μ_{OP18}	0.42	
		μ_{nom}	0.39	
		μ_{min}		0.28

Test Description:		
TOYOTA CAMRY FRONT SAE J2522		

Rotor	255 x 28mm	Effective Radius	104.4 mm
Primary Lining	Ceramic 6106	Piston Diameter	1 x 57.0 mm
Secondary Lining	Ceramic 6106	Actual Inertia	69.7 kg·m²
		Rolling Radius	312.4 mm

### Inboard Pad Thickness (mm)

	1	2	3	4	5	6	7	8	Average	Mass (gram)
Initial	17.470	17.456	17.443	17.442	17.431	17.402	17.437	17.417	17.437	326.3
Final	16.726	16.804	16.907	17.017	16.879	16.753	16.633	16.575	16.787	319.3
Loss	0.744	0.652	0.536	0.425	0.552	0.649	0.804	0.842	0.650	7.0

Tangential	Radial	Cup
38.4%	-17.2%	-3.0%
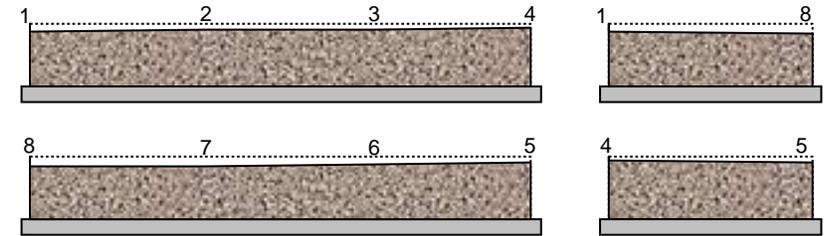
Outboard Pad Thickness (mm)

	1	2	3	4	5	6	7	8	Average	Mass (gram)
Initial	17.451	17.463	17.425	17.425	17.411	17.447	17.475	17.453	17.444	324.6
Final	16.818	16.827	16.697	16.493	16.799	16.981	17.087	17.125	16.853	318.3
Loss	0.633	0.636	0.728	0.932	0.612	0.466	0.388	0.328	0.591	6.3

Tangential	Radial	Cup
-41.3%	12.3%	9.5%
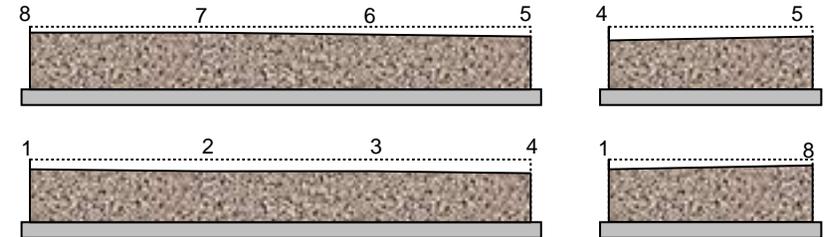
Rotor Thickness (mm)

	Inner				Outer				Average
	1	2	3	4	1	2	3	4	
Initial	27.926	27.929	27.924	27.930	27.923	27.927	27.924	27.929	27.927
Final	27.919	27.923	27.919	27.923	27.919	27.924	27.917	27.922	27.921
Loss	0.007	0.006	0.005	0.007	0.004	0.003	0.007	0.007	0.006
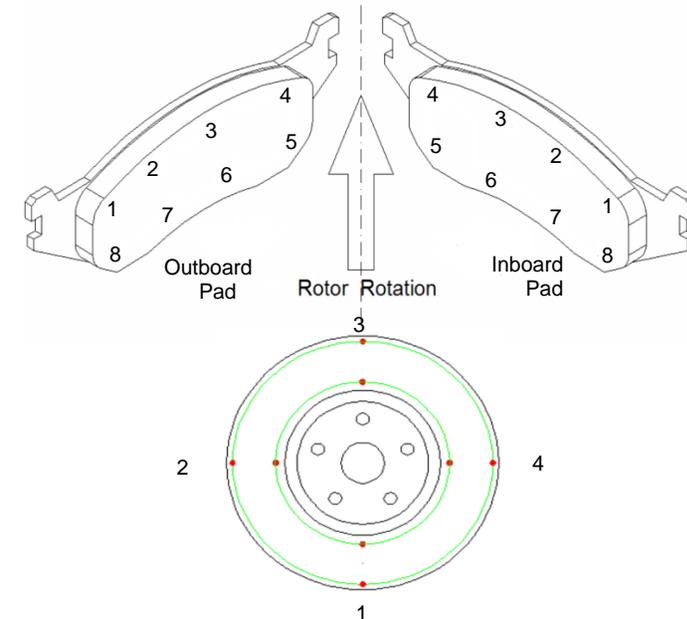
*Tangential wear   =Avg(1,8) - Avg(4,5)

*Radial wear   =Avg(1,2,3,4) - Avg(5,6,7,8)   * reported as percentage of max

*Cup wear   =Avg(1,8,4,5) - Avg(2,3,7,6)

Test Description		
	Rotor	255 x 28mm
2001 TOYOTA CAMRY FRONT SAE J2522	Primary Lining	Ceramic 6106
	Secondary Lining	Ceramic 6106

Effective Radius	104.4 mm
Piston Diameter	1 x 57.0 mm
Actual Inertia	69.7 kg·m²
Rolling Radius	312.4 mm

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Stop	Brake Speed kph	Release Speed kph	Cycle Time sec	Decel Torque g	Min Torque N*m	Avg Torque Time N*m	Max Torque N*m	Min Press kPa	Avg Pres Time kPa	Max Press kPa	Init μ	Avg μ Time	Final μ	Max Fluid Disp cm³	Init Rotor °C	Final Rotor °C
6.1 Green Characteristic																
1	80.0	30.0	24.9	0.18	374	386	402	2988	3003	3017	0.249	0.245	0.248	2.26	100	155
2	80.0	30.0	131.0	0.19	394	421	442	2986	3002	3015	0.252	0.267	0.275	2.13	100	157
3	80.0	30.0	152.8	0.20	417	447	472	2984	3001	3013	0.270	0.283	0.292	2.04	100	157
4	80.0	30.0	158.7	0.21	431	460	489	2982	3001	3011	0.279	0.292	0.303	2.00	100	157
5	80.0	30.0	162.7	0.21	444	468	495	2991	3003	3017	0.285	0.297	0.313	1.99	100	158
6	80.0	30.0	164.7	0.22	452	475	504	2986	3003	3015	0.292	0.301	0.320	1.98	100	158
7	80.0	30.0	166.3	0.22	454	486	521	2989	3002	3013	0.297	0.308	0.331	1.96	100	159
8	80.0	30.0	168.4	0.23	459	498	536	2983	3001	3013	0.293	0.316	0.341	1.96	100	158
9	80.0	30.0	169.8	0.23	459	498	540	2997	3006	3017	0.292	0.316	0.332	1.92	100	160
10	80.0	30.0	171.6	0.23	472	512	552	2993	3005	3016	0.304	0.324	0.341	1.93	100	160
11	80.0	30.0	171.8	0.23	460	507	555	2992	3004	3017	0.291	0.321	0.346	1.91	100	163
12	80.0	30.0	172.9	0.24	470	523	575	2988	3003	3014	0.306	0.331	0.353	1.93	100	163
13	80.0	30.0	173.9	0.24	467	526	582	2988	3002	3015	0.299	0.333	0.359	1.90	100	165
14	79.9	30.0	174.3	0.24	469	532	590	2986	3001	3013	0.295	0.337	0.374	1.92	100	168
15	80.0	30.0	174.0	0.25	476	544	610	2998	3006	3018	0.308	0.344	0.386	1.92	100	169
16	80.0	30.0	175.9	0.25	473	542	609	2994	3005	3020	0.300	0.343	0.374	1.90	100	173
17	80.0	30.0	175.5	0.26	489	562	627	2985	3004	3015	0.315	0.355	0.389	1.91	100	173
18	80.0	30.0	174.5	0.26	489	565	636	2988	3003	3019	0.308	0.357	0.397	1.91	100	176
19	80.0	30.0	176.1	0.26	495	572	646	2983	3003	3015	0.315	0.361	0.397	1.89	100	176
20	80.0	30.0	175.0	0.27	500	581	649	2994	3007	3024	0.321	0.367	0.405	1.89	100	176
21	80.0	30.0	176.4	0.27	502	584	654	2992	3006	3023	0.323	0.368	0.410	1.90	100	176
22	80.0	30.0	176.5	0.27	505	588	656	2992	3005	3019	0.325	0.371	0.417	1.90	100	177
23	80.0	30.0	176.5	0.27	509	593	662	2987	3004	3019	0.328	0.374	0.417	1.90	100	177
24	80.0	30.0	177.7	0.27	499	582	650	2984	3004	3020	0.314	0.367	0.401	1.88	100	179
25	80.0	30.0	176.4	0.27	504	585	648	2994	3008	3027	0.314	0.369	0.410	1.90	100	178
26	80.0	30.0	176.7	0.28	520	604	669	2991	3007	3026	0.336	0.381	0.424	1.89	100	175
27	80.0	30.0	176.3	0.28	526	610	668	2989	3006	3026	0.337	0.385	0.421	1.86	100	174
28	80.0	30.0	177.3	0.28	528	612	672	2988	3005	3022	0.341	0.386	0.426	1.88	100	173
29	80.0	30.0	176.7	0.28	530	613	669	2988	3004	3022	0.335	0.387	0.421	1.88	100	172
30	80.0	30.0	178.1	0.28	530	612	669	2984	3003	3021	0.342	0.386	0.419	1.86	100	170
Min	79.9	30.0	24.9	0.2	374	386	402	2982	3001	3011	0.249	0.245	0.248	1.86	100	155
Avg	80.0	30.0	166.1	0.2	477	536	588	2989	3004	3018	0.305	0.339	0.368	1.94	100	168
Max	80.0	30.0	178.1	0.3	530	613	672	2998	3008	3027	0.342	0.387	0.426	2.26	100	179
6.2 Burnish																
1	80.0	30.0	177.9	0.14	270	310	351	1484	1509	1816	0.330	0.398	0.430	1.55	100	163
2	80.0	30.0	176.2	0.28	533	617	666	2991	3007	3029	0.339	0.389	0.417	1.88	100	168
3	80.0	30.0	177.3	0.14	270	311	359	1486	1507	1809	0.340	0.399	0.431	1.55	100	162
4	80.0	30.0	176.6	0.17	321	374	412	1785	1805	2076	0.341	0.399	0.418	1.61	100	164
5	80.0	30.0	177.5	0.21	389	455	497	2188	2203	2339	0.353	0.395	0.422	1.69	100	165
6	80.0	30.0	177.0	0.35	679	765	819	3796	3809	3824	0.339	0.379	0.409	2.06	100	168
7	80.0	30.0	177.5	0.15	278	322	350	1484	1509	1803	0.333	0.413	0.445	1.54	100	159
8	80.0	30.0	176.6	0.24	461	535	582	2593	2606	2624	0.352	0.391	0.419	1.75	100	165
9	80.0	30.0	178.0	0.18	345	400	436	1786	1805	2041	0.363	0.427	0.455	1.59	100	159
10	80.0	30.0	175.7	0.33	636	727	776	3387	3404	3419	0.363	0.404	0.427	1.96	100	163
11	80.0	30.0	177.0	0.15	286	336	366	1486	1506	1765	0.349	0.432	0.469	1.52	100	157
12	80.0	30.0	175.5	0.26	490	571	618	2592	2607	2627	0.373	0.417	0.451	1.77	100	161
13	80.0	30.0	177.9	0.15	276	329	370	1480	1508	1823	0.345	0.422	0.455	1.54	100	160
14	80.0	30.0	176.6	0.23	424	499	547	2184	2204	2306	0.381	0.433	0.461	1.68	100	158
15	80.0	30.0	176.2	0.30	568	659	713	2988	3004	3024	0.360	0.416	0.446	1.85	100	161

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Stop	Brake Speed kph	Release Speed kph	Cycle Time sec	Decel Torque g	Min Torque N*m	Avg Torque N*m	Max Torque Time N*m	Min Press kPa	Avg Pres Time kPa	Max Press kPa	Init μ	Avg μ Time	Final μ	Max Fluid Disp cm³	Init Rotor °C	Final Rotor °C
16	80.0	30.0	175.6	0.44	880	973	1025	4588	4603	4622	0.351	0.398	0.421	2.23	100	164
17	80.0	30.0	178.7	0.27	493	580	636	2587	2608	2635	0.364	0.423	0.466	1.75	100	160
18	80.0	30.0	177.0	0.49	956	1065	1122	5094	5107	5122	0.348	0.391	0.412	2.27	100	167
19	80.0	30.0	181.0	0.22	419	490	539	2181	2205	2239	0.383	0.425	0.463	1.60	100	159
20	80.0	30.0	180.1	0.19	352	410	448	1781	1805	2003	0.373	0.436	0.479	1.48	100	156
21	79.9	30.0	178.2	0.41	796	905	970	4192	4206	4227	0.354	0.405	0.435	2.05	100	166
22	80.0	30.0	179.6	0.16	292	350	383	1478	1508	1774	0.365	0.449	0.493	1.42	100	156
23	80.0	30.0	179.4	0.19	361	424	457	1780	1805	2022	0.402	0.451	0.479	1.51	100	156
24	80.0	30.0	177.7	0.46	911	1004	1057	4587	4603	4625	0.367	0.410	0.435	2.15	100	165
25	80.0	30.0	179.5	0.27	516	600	645	2581	2603	2630	0.371	0.438	0.474	1.69	100	160
26	80.0	30.0	179.1	0.16	304	352	384	1479	1509	1787	0.348	0.452	0.485	1.44	100	155
27	80.0	30.0	176.7	0.35	686	772	819	3384	3407	3431	0.373	0.428	0.449	1.89	100	161
28	80.0	30.0	179.4	0.24	442	517	554	2181	2203	2227	0.399	0.448	0.482	1.61	100	157
29	80.0	30.0	178.2	0.20	364	427	464	1780	1808	2055	0.385	0.454	0.483	1.51	100	156
30	80.0	30.0	178.6	0.32	616	702	749	2985	3006	3032	0.391	0.443	0.474	1.78	100	159
31	80.0	30.0	177.8	0.20	364	428	463	1780	1806	2025	0.382	0.455	0.488	1.49	100	155
32	80.0	30.0	176.9	0.39	756	847	894	3782	3804	3829	0.372	0.420	0.444	1.98	100	162
33	80.0	30.0	178.0	0.16	302	354	386	1482	1507	1742	0.366	0.454	0.483	1.43	100	153
34	80.0	30.0	175.9	0.31	595	683	731	2982	3002	3026	0.388	0.431	0.464	1.80	100	159
35	80.0	30.0	177.4	0.16	296	351	385	1477	1508	1798	0.374	0.450	0.484	1.46	100	154
36	80.0	30.0	176.7	0.19	363	424	460	1779	1806	2036	0.409	0.451	0.483	1.50	100	155
37	80.0	30.0	175.7	0.24	449	518	566	2182	2205	2232	0.398	0.449	0.482	1.60	100	156
38	80.0	30.0	175.5	0.39	747	844	899	3784	3803	3824	0.369	0.419	0.446	1.98	100	161
39	80.0	30.0	178.1	0.16	298	343	376	1484	1506	1746	0.363	0.440	0.471	1.46	100	154
40	80.0	30.0	174.6	0.27	510	587	636	2581	2607	2633	0.388	0.429	0.460	1.71	100	157
41	80.0	30.0	176.8	0.19	346	406	447	1777	1806	2079	0.369	0.432	0.467	1.54	100	157
42	80.0	30.0	176.3	0.35	677	773	825	3385	3406	3428	0.381	0.429	0.459	1.89	100	159
43	80.0	30.0	176.7	0.15	285	335	371	1478	1507	1778	0.359	0.430	0.479	1.44	100	156
44	80.0	30.0	176.4	0.27	519	599	649	2581	2603	2628	0.400	0.438	0.475	1.71	100	156
45	80.0	30.0	175.1	0.16	296	348	385	1482	1507	1768	0.387	0.447	0.495	1.43	100	153
46	80.0	30.0	175.2	0.23	440	514	563	2181	2206	2269	0.422	0.445	0.486	1.60	100	155
47	80.0	30.0	174.7	0.31	594	682	739	2986	3005	3030	0.385	0.430	0.465	1.82	100	159
48	80.0	30.0	176.4	0.45	892	991	1050	4586	4605	4624	0.358	0.405	0.433	2.18	100	163
49	80.0	30.0	175.4	0.26	487	564	622	2581	2604	2633	0.365	0.412	0.446	1.72	100	160
50	80.0	30.0	175.5	0.48	946	1054	1114	5083	5102	5122	0.354	0.388	0.412	2.28	100	167
51	79.9	30.0	176.5	0.22	409	473	523	2179	2206	2262	0.358	0.409	0.451	1.59	100	160
52	80.0	30.0	176.5	0.18	339	394	431	1776	1806	2045	0.371	0.419	0.458	1.48	100	157
53	80.0	30.0	175.7	0.42	820	917	970	4181	4204	4229	0.366	0.411	0.438	2.05	100	162
54	80.0	30.0	176.7	0.15	282	329	362	1475	1507	1770	0.352	0.423	0.455	1.43	100	158
55	80.0	30.0	176.4	0.19	365	418	453	1781	1804	2016	0.395	0.446	0.478	1.50	100	154
56	80.0	30.0	175.1	0.47	929	1026	1073	4589	4609	4631	0.378	0.419	0.440	2.13	100	164
57	80.0	30.0	178.2	0.27	511	582	632	2583	2606	2632	0.368	0.425	0.458	1.70	100	159
58	80.0	30.0	175.8	0.15	295	338	378	1480	1507	1768	0.368	0.434	0.473	1.40	100	155
59	80.0	30.0	175.6	0.36	681	779	828	3383	3405	3429	0.390	0.433	0.461	1.88	100	161
60	80.0	30.0	176.9	0.23	440	502	544	2177	2203	2230	0.389	0.436	0.476	1.57	100	157
61	80.0	30.0	175.7	0.19	357	415	459	1776	1803	1994	0.390	0.443	0.487	1.46	100	156
62	80.0	30.0	176.1	0.32	610	707	758	2983	3007	3031	0.399	0.445	0.477	1.79	100	161
63	80.0	30.0	176.0	0.19	357	414	457	1778	1805	2024	0.380	0.441	0.483	1.48	100	157
64	80.0	30.0	176.1	0.38	739	838	899	3786	3805	3827	0.369	0.416	0.446	1.97	100	165
Min	79.9	30.0	174.6	0.1	270	310	350	1475	1506	1742	0.330	0.379	0.409	1.40	100	153
Avg	80.0	30.0	176.9	0.3	499	571	616	2558	2581	2701	0.370	0.425	0.458	1.71	100	159
Max	80.0	30.0	181.0	0.5	956	1065	1122	5094	5107	5122	0.422	0.455	0.495	2.28	100	168

Stop	Brake Speed kph	Release Speed kph	Cycle Time sec	Decel Torque g	Min Torque N*m	Avg Torque Time N*m	Max Torque N*m	Min Press kPa	Avg Pres Time kPa	Max Press kPa	Init μ	Avg μ Time	Final μ	Max Fluid Disp cm³	Init Rotor °C	Final Rotor °C
6.3 Characteristic Value 1
1	80.0	30.0	176.7	0.28	552	611	673	2985	3003	3025	0.363	0.387	0.420	1.75	100	174
2	80.0	30.0	177.6	0.28	563	620	680	2993	3008	3033	0.385	0.392	0.420	1.77	100	171
3	80.0	30.0	176.3	0.28	568	623	678	2988	3007	3034	0.388	0.394	0.418	1.77	100	171
4	80.0	30.0	177.1	0.29	570	626	678	2986	3005	3030	0.382	0.396	0.423	1.76	100	172
5	80.0	30.0	175.3	0.28	557	611	665	2990	3005	3025	0.367	0.387	0.413	1.76	100	174
6	80.0	30.0	177.8	0.29	572	628	680	2982	3004	3028	0.390	0.398	0.430	1.76	100	171
Min	80.0	30.0	175.3	0.3	552	611	665	2982	3003	3025	0.363	0.387	0.413	1.75	100	171
Avg	80.0	30.0	176.8	0.3	564	620	676	2987	3005	3029	0.379	0.392	0.421	1.76	100	172
Max	80.0	30.0	177.8	0.3	572	628	680	2993	3008	3034	0.390	0.398	0.430	1.77	100	174
6.4.1 Speed/Pressure Sensitivity 40kph
1	39.9	0.9	190.2	0.11	212	246	281	987	1008	1194	0.405	0.480	0.554	1.21	100	115
2	40.0	0.9	64.2	0.20	409	444	503	1997	2010	2160	0.453	0.425	0.482	1.50	100	118
3	40.0	0.9	64.8	0.29	586	628	725	2998	3007	3018	0.413	0.398	0.461	1.73	100	119
4	39.9	0.9	63.7	0.37	763	818	940	3999	4008	4018	0.398	0.387	0.447	1.97	100	122
5	40.0	0.9	65.4	0.45	923	987	1128	4995	5009	5013	0.376	0.372	0.427	2.18	100	121
6	39.9	0.9	59.3	0.53	1074	1153	1319	6000	6010	6015	0.365	0.361	0.414	2.33	100	122
7	40.0	0.9	63.2	0.60	1233	1323	1490	7001	7014	7019	0.354	0.354	0.399	2.50	100	127
8	39.9	0.9	70.4	0.69	1397	1501	1693	8007	8016	8023	0.344	0.350	0.395	2.65	100	126
Min	39.9	0.9	59.3	0.1	212	246	281	987	1008	1194	0.344	0.350	0.395	1.21	100	115
Avg	40.0	0.9	80.2	0.4	825	888	1010	4498	4510	4557	0.388	0.391	0.447	2.01	100	121
Max	40.0	0.9	190.2	0.7	1397	1501	1693	8007	8016	8023	0.453	0.480	0.554	2.65	100	127
6.4.2 Speed/Pressure Sensitivity 80kph
1	80.0	40.0	62.6	0.10	203	229	283	987	1009	1192	0.439	0.448	0.505	1.08	100	153
2	80.0	40.0	179.0	0.20	395	433	467	1974	2006	2070	0.431	0.414	0.441	1.37	100	161
3	80.0	40.0	178.3	0.28	566	618	673	2977	3003	3032	0.382	0.391	0.412	1.62	100	165
4	80.0	40.0	177.1	0.37	754	813	868	3986	4009	4035	0.362	0.383	0.405	1.85	100	166
5	80.0	40.0	177.4	0.45	909	979	1045	4994	5009	5034	0.347	0.368	0.389	2.08	100	169
6	80.0	40.0	175.4	0.52	1060	1137	1197	5996	6010	6029	0.336	0.355	0.369	2.27	100	172
7	80.0	40.0	177.2	0.59	1202	1287	1341	6993	7011	7023	0.325	0.343	0.361	2.48	100	177
8	80.0	40.0	178.5	0.65	1326	1423	1480	7999	8013	8026	0.311	0.331	0.342	2.67	100	179
Min	80.0	40.0	62.6	0.1	203	229	283	987	1009	1192	0.311	0.331	0.342	1.08	100	153
Avg	80.0	40.0	163.2	0.4	802	865	919	4488	4509	4555	0.367	0.379	0.403	1.93	100	168
Max	80.0	40.0	179.0	0.7	1326	1423	1480	7999	8013	8026	0.439	0.448	0.505	2.67	100	179
6.4.3 Speed/Pressure Sensitivity 120kph
1	119.9	80.0	133.0	0.11	189	236	285	970	1008	1154	0.370	0.461	0.548	1.09	100	207
2	119.9	80.0	200.6	0.20	382	439	473	1965	2008	2120	0.375	0.418	0.436	1.39	100	218
3	120.0	80.0	198.2	0.28	544	618	664	2968	3005	3041	0.357	0.390	0.419	1.67	100	218
4	120.0	80.0	195.2	0.35	690	771	825	3984	4005	4023	0.332	0.364	0.377	1.91	100	221
5	119.9	80.0	194.5	0.42	833	920	975	4986	5005	5027	0.319	0.346	0.359	2.10	100	223
6	120.0	80.0	194.9	0.48	961	1057	1116	5983	6005	6019	0.307	0.330	0.344	2.34	100	224
7	120.0	80.0	193.0	0.54	1086	1191	1249	7000	7015	7037	0.295	0.317	0.324	2.57	100	224
8	120.0	80.0	196.4	0.60	1211	1312	1367	7999	8016	8039	0.286	0.306	0.308	2.78	100	228
Min	119.9	80.0	133.0	0.1	189	236	285	970	1008	1154	0.286	0.306	0.308	1.09	100	207
Avg	120.0	80.0	188.2	0.4	737	818	869	4482	4508	4557	0.330	0.366	0.390	1.98	100	220
Max	120.0	80.0	200.6	0.6	1211	1312	1367	7999	8016	8039	0.375	0.461	0.548	2.78	100	228

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Stop	Brake Speed kph	Release Speed kph	Cycle Time sec	Decel Torque g	Min Torque N*m	Avg Torque Time N*m	Max Torque N*m	Min Press kPa	Avg Pres Time kPa	Max Press kPa	Init μ	Avg μ Time	Final μ	Max Fluid Disp cm³	Init Rotor °C	Final Rotor °C
6.4.4 Speed/Pressure Sensitivity 160kph																
1	159.9	130.0	198.7	0.10	165	215	265	968	1009	1184	0.338	0.419	0.467	1.13	100	224
2	159.9	130.0	205.0	0.19	344	408	470	1982	2005	2048	0.341	0.389	0.431	1.45	100	243
3	159.9	130.1	202.1	0.27	502	589	667	2984	3005	3031	0.322	0.370	0.415	1.73	100	248
4	159.9	130.0	200.5	0.35	661	770	848	3989	4007	4028	0.308	0.360	0.391	1.97	100	250
5	160.1	130.0	204.7	0.42	800	921	989	4991	5007	5028	0.299	0.343	0.361	2.19	100	248
6	159.9	130.0	206.9	0.49	953	1078	1137	5992	6007	6025	0.295	0.334	0.348	2.40	100	247
7	159.9	130.0	205.5	0.56	1090	1217	1278	6992	7009	7026	0.288	0.322	0.329	2.61	100	246
8	159.9	130.0	207.8	0.63	1255	1377	1437	8004	8021	8035	0.285	0.318	0.328	2.85	100	241
Min	159.9	130.0	198.7	0.1	165	215	265	968	1009	1184	0.285	0.318	0.328	1.13	100	224
Avg	160.0	130.0	203.9	0.4	721	822	886	4488	4509	4551	0.310	0.357	0.384	2.04	100	244
Max	160.1	130.1	207.8	0.6	1255	1377	1437	8004	8021	8035	0.341	0.419	0.467	2.85	100	250
6.5 Characteristic Value 2																
1	80.0	30.0	333.4	0.28	527	617	674	2990	3007	3032	0.317	0.388	0.416	1.84	100	167
2	80.0	30.0	184.2	0.26	513	577	639	2986	3006	3032	0.317	0.364	0.401	1.80	100	169
3	80.0	30.0	183.4	0.25	501	550	608	2983	3005	3031	0.326	0.348	0.377	1.81	100	170
4	80.0	30.0	182.3	0.25	508	550	600	2979	3004	3034	0.333	0.348	0.376	1.82	100	169
5	80.0	30.0	181.6	0.26	520	562	602	2975	3003	3037	0.340	0.356	0.375	1.79	100	170
6	80.0	30.0	183.1	0.26	531	574	611	2983	3008	3044	0.336	0.363	0.385	1.81	100	171
Min	80.0	30.0	181.6	0.3	501	550	600	2975	3003	3031	0.317	0.348	0.375	1.79	100	167
Avg	80.0	30.0	208.0	0.3	517	572	622	2983	3006	3035	0.328	0.361	0.388	1.81	100	169
Max	80.0	30.0	333.4	0.3	531	617	674	2990	3008	3044	0.340	0.388	0.416	1.84	100	171
6.6 Cold Application																
1	39.9	0.9	732.4	0.25	486	541	648	2980	3003	3020	0.320	0.342	0.411	1.85	40	58
6.7 Motorway Application																
1	100.0	2.9	66.3	0.61	1291	1343	1454	6395	7375	9475	0.273	0.342	0.400	3.04	49	166
2	180.0	100.0	520.6	0.61	1271	1332	1544	6443	7000	9626	0.270	0.356	0.324	3.16	49	417
Min	100.0	2.9	66.3	0.6	1271	1332	1454	6395	7000	9475	0.270	0.342	0.324	3.04	49	166
Avg	140.0	51.5	293.5	0.6	1281	1338	1499	6419	7188	9550	0.271	0.349	0.362	3.10	49	292
Max	180.0	100.0	520.6	0.6	1291	1343	1544	6443	7375	9626	0.273	0.356	0.400	3.16	49	417
6.8 Characteristic Value 3																
1	80.0	30.0	418.6	0.29	542	642	715	2975	3003	3036	0.327	0.405	0.443	1.82	100	159
2	80.0	30.2	191.4	0.28	540	615	679	2982	3007	3043	0.328	0.388	0.414	1.80	100	161
3	80.0	30.0	188.4	0.27	531	595	652	2977	3005	3043	0.329	0.376	0.412	1.80	100	160
4	80.0	30.0	188.9	0.27	542	600	645	2980	3004	3036	0.346	0.380	0.405	1.76	100	160
5	80.0	30.0	188.6	0.27	545	601	640	2979	3003	3034	0.347	0.381	0.395	1.78	100	163
6	80.0	30.0	189.1	0.28	560	614	650	2982	3002	3032	0.358	0.388	0.400	1.77	100	163
7	80.0	30.0	189.2	0.28	562	616	652	2981	3007	3044	0.363	0.389	0.401	1.77	100	165
8	80.0	30.0	189.0	0.28	566	621	661	2981	3005	3043	0.366	0.393	0.417	1.77	100	166
9	80.0	30.0	190.0	0.29	582	636	672	2984	3004	3034	0.373	0.403	0.411	1.77	100	164
10	80.0	30.0	190.5	0.29	586	639	678	2978	3003	3038	0.370	0.404	0.418	1.77	100	165
11	80.0	30.0	189.9	0.29	589	645	682	2978	3002	3032	0.378	0.408	0.429	1.75	100	164
12	80.0	30.0	188.2	0.29	581	636	676	2980	3007	3045	0.371	0.402	0.423	1.78	100	166
13	80.0	30.0	189.4	0.29	580	633	672	2980	3005	3045	0.379	0.400	0.409	1.77	100	166
14	80.0	30.0	189.8	0.29	591	645	681	2980	3004	3036	0.378	0.408	0.425	1.77	100	165
15	80.0	30.0	187.8	0.29	581	636	680	2978	3003	3038	0.382	0.402	0.416	1.75	100	166
16	79.9	30.0	188.5	0.29	589	644	686	2980	3002	3031	0.386	0.407	0.434	1.77	100	165
17	80.0	30.0	187.1	0.29	586	641	685	2981	3007	3041	0.380	0.405	0.420	1.77	100	167
18	80.0	30.0	187.6	0.30	597	646	688	2989	3005	3032	0.388	0.409	0.426	1.76	100	165
Min	79.9	30.0	187.1	0.3	531	595	640	2975	3002	3031	0.327	0.376	0.395	1.75	100	159
Avg	80.0	30.0	201.8	0.3	569	628	672	2980	3004	3038	0.364	0.397	0.417	1.77	100	164
Max	80.0	30.2	418.6	0.3	597	646	715	2989	3007	3045	0.388	0.409	0.443	1.82	100	167

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Stop	Brake Speed kph	Release Speed kph	Cycle Time sec	Decel Torque g	Min Torque N*m	Avg Torque Time N*m	Max Torque N*m	Min Press kPa	Avg Pres Time kPa	Max Press kPa	Init μ	Avg μ Time	Final μ	Max Fluid Disp cm³	Init Rotor °C	Final Rotor °C
6.9 Fade 1																
1	100.0	2.9	169.2	0.40	847	879	988	4088	4200	5074	0.364	0.397	0.394	2.20	100	213
2	99.9	3.1	14.5	0.40	824	870	940	3845	4083	4887	0.389	0.406	0.321	2.16	196	316
3	100.0	2.9	16.0	0.40	816	869	910	3756	4000	4812	0.434	0.415	0.323	2.20	281	398
4	100.0	2.9	32.3	0.40	811	868	906	3914	4145	5067	0.413	0.400	0.305	2.35	330	442
5	100.0	2.9	40.9	0.40	810	867	905	4284	4677	5632	0.385	0.354	0.273	2.56	367	477
6	99.9	2.9	41.2	0.40	806	865	908	4648	5168	6332	0.349	0.320	0.242	2.74	398	501
7	100.0	2.9	41.5	0.39	811	863	912	4703	5395	6603	0.358	0.307	0.233	2.84	423	526
8	100.0	3.1	40.2	0.39	810	863	912	4642	5466	6578	0.358	0.303	0.233	2.86	445	548
9	100.0	2.9	39.9	0.39	811	861	915	4652	5596	6814	0.349	0.296	0.226	2.98	464	566
10	100.0	2.9	37.5	0.39	801	860	918	4661	5758	6974	0.343	0.288	0.218	3.05	482	582
11	100.0	2.9	37.8	0.39	815	862	905	4778	5836	6869	0.338	0.284	0.225	3.07	498	598
12	100.0	2.9	36.6	0.39	842	863	889	4759	5837	6674	0.346	0.284	0.240	3.07	512	613
13	99.9	2.9	36.1	0.40	843	865	895	5103	5981	6762	0.328	0.276	0.249	3.13	525	623
14	100.0	2.9	35.1	0.40	838	866	902	5153	5994	6695	0.325	0.275	0.252	3.12	538	632
15	100.0	2.9	34.4	0.40	833	867	915	5249	5970	6634	0.328	0.277	0.250	3.15	549	645
Min	99.9	2.9	14.5	0.4	801	860	889	3756	4000	4812	0.325	0.275	0.218	2.16	100	213
Avg	100.0	3.0	43.5	0.4	821	866	915	4549	5207	6160	0.360	0.325	0.266	2.77	407	512
Max	100.0	3.1	169.2	0.4	847	879	988	5249	5994	6974	0.434	0.415	0.394	3.15	549	645
6.10 Recovery 1																
1	80.0	30.0	844.3	0.27	442	581	683	2975	3003	3028	0.269	0.366	0.429	2.33	100	134
2	80.1	30.0	201.9	0.28	512	614	706	2976	3007	3040	0.322	0.386	0.443	2.24	100	138
3	80.0	30.0	189.1	0.29	537	643	730	2975	3007	3048	0.351	0.405	0.457	2.22	100	138
4	80.0	30.0	181.5	0.29	536	644	732	2960	3005	3054	0.349	0.406	0.453	2.20	100	142
5	80.0	30.0	177.5	0.30	555	664	745	2971	3004	3043	0.371	0.418	0.464	2.16	100	141
6	80.0	30.0	175.7	0.31	560	668	750	2970	3003	3042	0.372	0.421	0.469	2.11	100	142
7	80.0	30.0	173.1	0.31	569	668	747	2972	3009	3058	0.367	0.421	0.473	2.09	100	146
8	80.0	30.0	173.0	0.31	566	671	750	2971	3007	3048	0.372	0.423	0.467	2.07	100	146
9	80.0	30.0	172.4	0.31	569	673	754	2969	3005	3052	0.382	0.424	0.472	2.07	100	146
10	80.0	30.0	170.1	0.31	571	674	754	2967	3005	3045	0.380	0.425	0.470	2.03	100	147
11	80.0	30.0	169.9	0.31	588	686	766	2965	3004	3044	0.395	0.433	0.483	2.02	100	147
12	80.0	30.0	170.0	0.31	586	677	753	2956	3003	3049	0.385	0.428	0.472	2.00	100	150
13	80.0	30.0	169.8	0.31	594	683	757	2971	3007	3051	0.389	0.431	0.482	1.99	100	151
14	80.0	30.2	170.2	0.31	592	686	757	2973	3006	3045	0.394	0.433	0.464	1.95	100	151
15	80.0	30.0	168.6	0.31	590	681	749	2969	3005	3048	0.396	0.430	0.460	1.93	100	151
16	80.0	30.0	170.0	0.32	605	690	753	2969	3004	3043	0.407	0.436	0.476	1.92	100	151
17	80.0	30.0	168.3	0.31	592	677	736	2964	3003	3047	0.399	0.428	0.463	1.91	100	152
18	80.0	30.0	170.1	0.31	603	685	750	2967	3006	3049	0.406	0.432	0.470	1.88	100	153
Min	80.0	30.0	168.3	0.3	442	581	683	2956	3003	3028	0.269	0.366	0.429	1.88	100	134
Avg	80.0	30.0	212.0	0.3	565	665	743	2969	3005	3046	0.373	0.419	0.465	2.06	100	146
Max	80.1	30.2	844.3	0.3	605	690	766	2976	3009	3058	0.407	0.436	0.483	2.33	100	153
6.11 Temp./Pressure Sensitivity 100C/80C																
1	80.0	30.0	161.7	0.11	207	238	271	968	1008	1219	0.396	0.465	0.488	1.27	100	142
2	80.0	30.0	162.0	0.20	391	445	483	1980	2007	2123	0.396	0.426	0.462	1.61	100	145
3	80.0	30.0	161.0	0.30	576	653	712	2967	3005	3047	0.399	0.412	0.436	1.89	100	153
4	80.0	30.0	161.4	0.40	776	877	961	3973	4005	4045	0.375	0.413	0.449	2.13	100	158
5	80.0	30.0	163.5	0.51	995	1126	1247	4977	5005	5034	0.380	0.422	0.464	2.32	100	160
6	80.0	30.0	164.6	0.63	1221	1372	1497	5993	6013	6036	0.378	0.426	0.470	2.52	100	162
7	80.0	30.0	172.4	0.73	1431	1601	1739	6991	7015	7044	0.370	0.425	0.468	2.69	100	163
8	80.0	30.0	187.4	0.83	1651	1823	1973	7987	8017	8054	0.371	0.422	0.464	2.88	100	164
Min	80.0	30.0	161.0	0.1	207	238	271	968	1008	1219	0.370	0.412	0.436	1.27	100	142
Avg	80.0	30.0	166.7	0.5	906	1017	1110	4479	4509	4575	0.383	0.426	0.463	2.16	100	156
Max	80.0	30.0	187.4	0.8	1651	1823	1973	7987	8017	8054	0.399	0.465	0.488	2.88	100	164

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Stop	Brake Speed kph	Release Speed kph	Cycle Time sec	Decel Torque g	Min Torque N*m	Avg Torque Time N*m	Max Torque N*m	Min Press kPa	Avg Pres Time kPa	Max Press kPa	Init μ	Avg μ Time	Final μ	Max Fluid Disp cm³	Init Rotor °C	Final Rotor °C
6.12.1 Increasing Temp. 500C/300C																
1	80.0	30.0	171.4	0.30	549	648	728	2965	3005	3051	0.354	0.409	0.458	1.78	100	156
2	80.0	30.0	22.2	0.32	628	708	764	2964	3005	3047	0.417	0.447	0.486	1.74	149	204
3	80.0	30.0	13.1	0.33	656	723	771	2966	3005	3047	0.431	0.457	0.475	1.74	198	256
4	80.0	30.0	11.0	0.32	672	706	739	2965	3004	3045	0.451	0.448	0.454	1.76	247	310
5	80.0	30.0	10.5	0.31	646	674	701	2960	3004	3046	0.458	0.428	0.433	1.78	294	361
6	80.0	30.0	10.5	0.30	617	655	702	2961	3004	3048	0.445	0.416	0.399	1.79	339	405
7	79.9	30.0	10.8	0.29	579	630	696	2959	3004	3046	0.450	0.401	0.379	1.81	378	444
8	80.0	30.0	9.0	0.25	496	549	645	2961	3004	3047	0.411	0.350	0.331	1.85	438	498
9	79.9	30.0	8.7	0.24	475	532	614	2960	3004	3052	0.389	0.339	0.307	1.88	486	549
Min	79.9	30.0	8.7	0.2	475	532	614	2959	3004	3045	0.354	0.339	0.307	1.74	100	156
Avg	79.9	30.0	29.7	0.3	591	647	707	2962	3004	3048	0.423	0.411	0.413	1.79	292	354
Max	80.0	30.0	171.4	0.3	672	723	771	2966	3005	3052	0.458	0.457	0.486	1.88	486	549
6.12.2 Pressure Line 500C/300C																
1	80.0	30.0	17.9	0.09	165	190	261	989	1006	1154	0.410	0.374	0.341	1.21	500	525
2	80.0	30.0	26.7	0.17	317	372	499	1968	2005	2112	0.436	0.359	0.318	1.58	500	551
3	80.0	30.0	29.3	0.27	505	591	665	2963	3003	3048	0.422	0.377	0.332	1.90	500	567
4	80.0	30.0	30.3	0.37	719	812	882	3960	4003	4055	0.402	0.386	0.343	2.19	500	572
5	80.0	30.2	30.2	0.47	953	1028	1081	4963	5004	5060	0.410	0.390	0.361	2.42	500	572
6	80.0	30.0	29.5	0.56	1176	1224	1275	5954	6007	6069	0.409	0.386	0.371	2.65	500	573
7	80.0	30.0	29.8	0.63	1358	1386	1446	6951	7010	7074	0.399	0.374	0.369	2.89	500	574
8	80.0	30.0	27.7	0.69	1482	1513	1586	7936	8011	8082	0.389	0.357	0.357	3.13	500	574
Min	80.0	30.0	17.9	0.1	165	190	261	989	1006	1154	0.389	0.357	0.318	1.21	500	525
Avg	80.0	30.0	27.7	0.4	835	890	962	4461	4506	4582	0.410	0.375	0.349	2.25	500	564
Max	80.0	30.2	30.3	0.7	1482	1513	1586	7936	8011	8082	0.436	0.390	0.371	3.13	500	574
6.13 Recovery 2																
1	80.0	30.0	764.0	0.29	515	634	748	2973	3004	3038	0.337	0.399	0.467	2.02	100	148
2	80.0	30.0	195.7	0.29	545	636	729	2955	3003	3057	0.359	0.402	0.455	1.97	100	154
3	80.0	30.0	188.1	0.30	580	662	750	2973	3007	3049	0.384	0.418	0.477	1.96	100	157
4	80.0	30.0	180.3	0.31	598	668	742	2969	3006	3049	0.406	0.422	0.468	1.93	100	157
5	80.0	30.0	177.3	0.30	595	667	739	2967	3005	3050	0.412	0.422	0.465	1.92	100	158
6	80.0	30.0	175.6	0.30	588	664	737	2965	3004	3047	0.407	0.420	0.452	1.89	100	159
7	80.0	30.0	173.2	0.30	587	661	739	2961	3003	3047	0.410	0.418	0.462	1.89	100	159
8	80.0	30.0	172.0	0.30	584	660	736	2956	3003	3048	0.407	0.417	0.457	1.89	100	161
9	80.0	30.0	170.4	0.31	599	673	749	2971	3007	3052	0.408	0.425	0.466	1.89	100	163
10	80.0	30.0	170.1	0.31	595	675	744	2971	3005	3049	0.416	0.426	0.472	1.88	100	161
11	80.0	30.0	170.8	0.31	611	685	755	2969	3005	3047	0.427	0.433	0.482	1.87	100	161
12	80.0	30.0	168.8	0.31	595	671	743	2960	3004	3051	0.410	0.424	0.456	1.87	100	163
13	80.0	30.0	169.4	0.31	598	680	754	2967	3003	3044	0.419	0.430	0.467	1.84	100	161
14	80.0	30.0	169.4	0.31	604	680	747	2965	3003	3044	0.411	0.430	0.470	1.84	100	161
15	80.0	30.0	170.4	0.31	595	673	748	2971	3007	3053	0.418	0.425	0.458	1.87	100	162
16	80.0	30.0	168.4	0.31	599	670	748	2967	3006	3053	0.417	0.424	0.452	1.85	100	163
17	80.0	30.0	168.4	0.31	596	671	745	2966	3005	3054	0.421	0.424	0.452	1.85	100	164
18	80.0	30.0	168.6	0.30	590	666	741	2966	3005	3051	0.416	0.421	0.459	1.84	100	163
Min	80.0	30.0	168.4	0.3	515	634	729	2955	3003	3038	0.337	0.399	0.452	1.84	100	148
Avg	80.0	30.0	206.7	0.3	587	666	744	2966	3005	3049	0.405	0.421	0.463	1.89	100	160
Max	80.0	30.0	764.0	0.3	611	685	755	2973	3007	3057	0.427	0.433	0.482	2.02	100	164

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Stop	Brake Speed kph	Release Speed kph	Cycle Time sec	Decel Torque g	Min Torque N*m	Avg Torque Time N*m	Max Torque N*m	Min Press kPa	Avg Pres Time kPa	Max Press kPa	Init μ	Avg μ Time	Final μ	Max Fluid Disp cm³	Init Rotor °C	Final Rotor °C
6.14 Fade 2																
1	100.0	2.9	152.2	0.41	846	887	969	3125	3694	5090	0.364	0.458	0.536	2.33	100	215
2	100.0	2.9	14.1	0.40	837	880	915	3353	3656	4262	0.411	0.457	0.463	2.01	198	325
3	100.0	2.9	17.0	0.40	835	877	942	3698	3902	4406	0.407	0.427	0.419	2.04	281	411
4	100.0	2.9	29.6	0.40	834	874	914	3971	4306	4662	0.411	0.387	0.375	2.14	330	456
5	100.0	2.9	36.6	0.40	829	872	916	4165	4714	5294	0.394	0.354	0.348	2.32	367	487
6	99.9	2.9	38.7	0.40	833	871	908	4230	4790	5457	0.386	0.348	0.337	2.39	397	514
7	100.0	2.9	41.0	0.40	827	870	904	4226	4666	5439	0.393	0.357	0.332	2.42	423	539
8	99.9	2.9	42.0	0.40	834	869	900	4261	4662	5479	0.387	0.357	0.324	2.43	445	560
9	100.0	2.9	41.7	0.40	836	870	911	4346	4687	5491	0.383	0.354	0.325	2.45	464	573
10	100.0	2.9	39.2	0.40	838	869	911	4404	4731	5519	0.381	0.351	0.319	2.48	483	590
11	99.9	2.9	38.1	0.40	836	868	905	4482	4855	5728	0.372	0.341	0.304	2.55	497	605
12	100.0	2.9	37.3	0.40	825	869	908	4344	4822	5794	0.369	0.344	0.299	2.58	512	616
13	100.0	2.9	36.0	0.40	813	868	901	4316	4910	5984	0.361	0.337	0.275	2.67	525	626
14	100.0	2.9	35.8	0.40	811	868	910	4244	5002	6103	0.351	0.332	0.269	2.73	539	636
15	99.9	2.9	35.5	0.40	807	868	916	4334	5135	6176	0.341	0.323	0.261	2.78	549	646
Min	99.9	2.9	14.1	0.4	807	868	900	3125	3656	4262	0.341	0.323	0.261	2.01	100	215
Avg	100.0	2.9	42.3	0.4	830	872	915	4100	4569	5392	0.381	0.368	0.346	2.42	407	520
Max	100.0	2.9	152.2	0.4	846	887	969	4482	5135	6176	0.411	0.458	0.536	2.78	549	646
6.15 Recovery 3																
1	80.0	30.0	830.3	0.29	501	632	734	2957	3003	3050	0.309	0.397	0.460	2.39	100	156
2	80.0	30.0	199.3	0.31	563	671	756	2964	3007	3055	0.364	0.422	0.470	2.32	100	161
3	80.0	30.0	187.8	0.30	568	661	735	2961	3007	3057	0.364	0.417	0.456	2.28	100	163
4	80.0	30.2	179.8	0.31	596	685	762	2961	3005	3050	0.390	0.432	0.486	2.25	100	164
5	80.0	30.0	175.7	0.30	567	662	729	2962	3004	3051	0.371	0.418	0.453	2.20	100	165
6	80.0	30.0	172.7	0.31	593	681	751	2961	3003	3043	0.388	0.430	0.469	2.13	100	165
7	80.0	30.0	170.9	0.30	573	659	729	2961	3003	3052	0.382	0.416	0.453	2.11	100	167
8	80.0	30.0	169.7	0.31	584	668	742	2958	3007	3062	0.383	0.421	0.453	2.06	100	169
9	80.0	30.0	170.5	0.31	589	675	739	2964	3007	3050	0.390	0.426	0.457	2.01	100	166
10	80.0	30.0	167.9	0.30	576	655	727	2957	3005	3060	0.380	0.414	0.443	1.99	100	168
11	80.0	30.0	167.8	0.30	575	659	718	2963	3005	3049	0.386	0.416	0.445	1.96	100	165
12	80.0	30.0	166.6	0.30	580	666	727	2967	3004	3045	0.393	0.421	0.452	1.96	100	165
13	80.0	30.0	167.6	0.30	575	656	715	2961	3003	3049	0.380	0.415	0.446	1.92	100	165
14	80.0	30.0	167.9	0.30	576	659	714	2963	3003	3043	0.391	0.417	0.441	1.91	100	164
15	80.0	30.0	166.1	0.30	571	651	713	2963	3007	3053	0.383	0.411	0.435	1.89	100	165
16	80.0	30.0	168.8	0.30	561	648	702	2965	3005	3050	0.379	0.409	0.431	1.89	100	164
17	80.0	30.0	167.2	0.30	566	646	707	2961	3005	3059	0.386	0.408	0.438	1.88	100	168
18	80.0	30.0	167.5	0.30	577	662	718	2964	3003	3047	0.396	0.418	0.444	1.85	100	166
Min	80.0	30.0	166.1	0.3	501	632	702	2957	3003	3043	0.309	0.397	0.431	1.85	100	156
Avg	80.0	30.0	209.1	0.3	572	661	729	2962	3005	3051	0.379	0.417	0.452	2.05	100	165
Max	80.0	30.2	830.3	0.3	596	685	762	2967	3007	3062	0.396	0.432	0.486	2.39	100	169