

SURFACE VEHICLE INFORMATION REPORT

SAE J1506

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(R) EMISSION TEST DRIVING SCHEDULES

1. Scope—This SAE Information Report describes various dynamometer driving schedules currently in use in the world for measurement of exhaust emissions and fuel economy of passenger cars and light trucks. Issuance of this document will allow driving schedules to be deleted from individual test procedures, thus reducing the amount of repeated information in the SAE Handbook.

This document includes: a. Descriptions of driving schedules; and b. Second-by-second definition of speed versus time sequences.

2. References

2.1 Applicable Documents—The following publication forms a part of this specification to the extent specified herein.

2.1.1 U.S. GOVERNMENT PUBLICATIONS—Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

U.S. Federal Regulations 40 CFR 86.115-78, Part 86, Appendix I—Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines: Certification and Test Procedures

3. Descriptions of Driving Schedules

3.1 United States (U.S.) 1972 Schedule; Also Known as EPA Urban Dynamometer Driving Schedule (UDDS), 1972 Federal Test Procedure (FTP) Schedule, LA-4 Schedule, or Swedish A10 Test Schedule—This test schedule requires 1372 s to complete and covers a distance of 12.1 km (7.5 miles) at an average speed of 31.46 km/h (19.55 mph). A second-by-second description of this schedule is shown in Table 1. The driving schedule is defined by a smooth curve drawn through the specified speed versus time relationship.

3.2 505 Schedule—This schedule consists of the first 505 s of the U.S. 1972 Schedule and covers a distance of 5.78 km (3.59 miles). The average speed of this schedule is 41.2 km/h (25.6 mph). This schedule can be run from a cold start, but is normally run with a fully warmed-up vehicle and is then referred to as a Hot 505 Schedule. There is a 10-min "hot soak", where the fully warmed-up vehicle is at rest with the engine and cooling fan off, and the hood closed, just prior to the engine start. This driving schedule is often used for emissions development work.

3.3 U.S. 1975 Schedule or 1975 FTP Schedule—This schedule consists of a 1972 FTP Schedule, followed by a 10-min hot soak, followed by a repeat of the first 505 s of the 1972 FTP Schedule (505 Schedule). This same driving schedule is retained in the 1978 revisions to the U.S. Federal regulations (40 CFR 6.144-78), so it is also sometimes called the 1978 schedule. Effective in 1978, the actual distance driven using this driving schedule, rather than the theoretical distance, is used in the calculation of official exhaust emission and "city" fuel economy values.

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SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

3.4 Highway Fuel Economy Test Schedule (HWFET)—This schedule consists of two 765 s driving cycles, with emissions collected during the second cycle only. The average speed of each 16.4 km (10.2 mile) cycle is 78.2 km/h (48.6 mph). A second-by-second description of this cycle is shown in Table 2. This schedule is used in the U.S. to obtain the official "highway" fuel economy figures.

3.5 Economic Commission for Europe (ECE) R15.04 Schedule—This test schedule is run in official certification for exhaust emissions and fuel economy of vehicles offered for sale in many European countries. This schedule can be run hot or cold, and is run 4 times in succession. There are small differences in the schedule depending on whether the vehicle has a manual or an automatic transmission. The schedule covers a total distance of 4.06 km (2.52 miles) at an average speed of 18.7 km/h (11.6 mph) with a manual transmission vehicle and 3.98 km (2.47 miles) at an average speed of 18.4 km/h (11.4 mph) with an automatic transmission vehicle. Emissions are not collected during an initial 40-s idle period. A second-by-second description of this schedule is shown in Tables 3A and 3B, for manual and automatic transmission equipped vehicles, respectively.

3.6 Japanese 10-Mode Test Schedule—This driving schedule is part of the official vehicle emissions test used for Japanese certification. This schedule is driven with a fully warmed-up vehicle following a 10 km (6 mile) preconditioning. A second-by-second description of the schedule is shown in Table 4. The schedule is run 6 times in succession, with the exhaust gas sampled only during the last five times. The distance traveled during these last 5 times is 3.32 km (2.06 miles) with an average speed of 18 km/h (11.2 mph).

3.7 Japanese 11-Mode Test Schedule—This driving schedule is part of the official vehicle emissions test used for Japanese certification for vehicles built after the 1976 model year. This schedule is driven from a cold start. A second-by-second description of the schedule is shown in Table 5. This schedule is run 4 times in succession. The total distance traveled is then 4.08 km (2.54 miles) at an average speed of 30.6 km/h (19.0 mph).

4. Notes

4.1 Marginal Indicia—The (R) is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. If the symbol is next to the report title, it indicates a complete revision of the report.

PREPARED BY THE SAE EXHAUST EMISSIONS MEASUREMENT
STANDARDS COMMITTEE

TABLE 1—U.S. 1972 SCHEDULE

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TABLE 1 - U.S. 1972 SCHEDULE (CONTINUED)

Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)
420	45.1	28.0	458	50.7	31.5	496	41.0	25.5	534	40.2	25.0	572	20.9	13.0	610	42.6	26.5
421	40.2	25.0	459	53.1	33.0	497	36.2	22.5	535	40.2	25.0	573	23.5	14.6	611	43.4	27.0
422	34.9	21.7	460	54.1	33.6	498	31.9	19.8	536	41.2	25.6	574	25.7	16.0	612	42.0	26.1
423	29.6	18.4	461	56.0	34.8	499	26.9	16.5	537	41.8	25.8	575	27.4	17.0	613	36.7	22.8
424	24.3	15.1	462	56.5	35.1	500	21.2	13.2	538	41.8	26.0	576	27.4	17.0	614	31.4	19.5
425	19.0	11.8	463	57.3	35.6	501	16.6	10.3	539	41.2	25.6	577	27.4	17.0	615	26.1	16.2
426	13.7	8.5	464	58.1	36.1	502	11.6	7.2	540	40.5	25.2	578	28.2	17.5	616	20.8	12.9
427	8.4	5.2	465	57.9	36.0	503	6.4	4.0	541	40.2	25.0	579	28.5	17.7	617	15.4	9.6
428	3.1	1.9	466	58.1	36.1	504	1.6	1.0	542	40.2	25.0	580	28.5	17.7	618	10.1	6.3
429	0.0	0.0	467	58.2	36.2	505	0.0	0.0	543	40.2	25.0	581	28.2	17.5	619	4.8	3.0
430	0.0	0.0	468	57.9	36.0	506	0.0	0.0	544	39.3	24.4	582	27.4	17.0	620	0.0	0.0
431	0.0	0.0	469	57.4	35.7	507	0.0	0.0	545	37.2	23.1	583	27.2	16.9	621	0.0	0.0
432	0.0	0.0	470	57.9	36.0	508	0.0	0.0	546	31.9	19.8	584	26.7	16.6	622	0.0	0.0
433	0.0	0.0	471	57.9	36.0	509	0.0	0.0	547	26.5	16.5	585	27.4	17.0	623	0.0	0.0
434	0.0	0.0	472	57.3	35.6	510	0.0	0.0	548	21.2	13.2	586	27.5	17.1	624	0.0	0.0
435	0.0	0.0	473	57.1	35.5	511	1.9	1.2	549	15.9	9.9	587	27.4	17.0	625	0.0	0.0
436	0.0	0.0	474	57.0	35.4	512	5.6	3.5	550	10.6	6.6	588	26.7	16.6	626	0.0	0.0
437	0.0	0.0	475	56.6	35.2	513	8.8	5.5	551	5.3	3.3	589	26.7	16.5	627	0.0	0.0
438	0.0	0.0	476	56.6	35.2	514	10.5	6.5	552	0.0	0.0	590	26.5	16.5	628	0.0	0.0
439	0.0	0.0	477	56.6	35.2	515	13.7	8.5	553	0.0	0.0	591	26.7	16.6	629	0.0	0.0
440	0.0	0.0	478	56.6	35.2	516	15.4	9.6	554	0.0	0.0	592	27.4	17.0	630	0.0	0.0
441	0.0	0.0	479	56.6	35.2	517	16.9	10.5	555	0.0	0.0	593	28.3	17.6	631	0.0	0.0
442	0.0	0.0	480	56.6	35.2	518	19.1	11.9	556	0.0	0.0	594	29.8	18.5	632	0.0	0.0
443	0.0	0.0	481	56.3	35.0	519	22.5	14.0	557	0.0	0.0	595	30.9	19.2	633	0.0	0.0
444	0.0	0.0	482	56.5	35.1	520	25.7	16.0	558	0.0	0.0	596	32.5	20.2	634	0.0	0.0
445	0.0	0.0	483	56.6	35.2	521	28.5	17.7	559	0.0	0.0	597	33.8	21.0	635	0.0	0.0
446	0.0	0.0	484	57.1	35.5	522	30.6	19.0	560	0.0	0.0	598	33.9	21.1	636	0.0	0.0
447	0.0	0.0	485	56.6	35.2	523	32.3	20.1	561	0.0	0.0	599	34.1	21.2	637	0.0	0.0
448	5.3	3.3	486	56.3	35.0	524	33.8	21.0	562	0.0	0.0	600	34.8	21.6	638	0.0	0.0
449	10.6	6.6	487	56.3	35.0	525	35.4	22.0	563	0.0	0.0	601	35.4	22.0	639	0.0	0.0
450	15.9	9.9	488	56.3	35.0	526	37.0	23.0	564	0.0	0.0	602	36.0	22.4	640	0.0	0.0
451	11.2	13.2	489	56.0	34.8	527	38.3	23.8	565	0.0	0.0	603	36.2	22.5	641	0.0	0.0
452	26.5	16.5	490	55.7	34.6	528	39.4	24.5	566	0.0	0.0	604	36.2	22.5	642	0.0	0.0
453	31.9	19.8	491	55.5	34.5	529	40.1	24.9	567	0.0	0.0	605	36.2	22.5	643	0.0	0.0
454	37.2	23.1	492	53.9	33.5	530	40.2	25.0	568	0.0	0.0	606	36.5	22.7	644	0.0	0.0
455	42.5	26.4	493	51.4	32.0	531	40.2	25.0	569	5.3	3.3	607	38.1	23.7	645	0.0	0.0
456	44.7	27.8	494	48.4	30.1	532	40.2	25.0	570	10.6	6.6	608	40.4	25.1	646	0.0	0.0
457	46.8	29.1	495	45.1	28.0	533	40.2	25.0	571	15.9	9.9	609	41.8	26.0	647	7.2	4.5

TABLE 1—U.S. 1972 SCHEDULE (CONTINUED)

Time (h)	Speed (km/h)	Speed (mph)	Time (h)	Speed (km/h)	Speed (mph)	Time (h)	Speed (km/h)	Speed (mph)	Time (h)	Speed (km/h)	Speed (mph)	Time (h)	Speed (km/h)	Speed (mph)	Time (h)	Speed (km/h)	Speed (mph)	Time (h)	Speed (km/h)	Speed (mph)
686	0.0	0.0	746	48.0	28.6	806	53.1	33.0	866	41.5	25.8	926	40.4	25.1	986	40.5	25.2	1046	0.0	0.0
687	0.0	0.0	747	46.0	28.6	807	54.1	33.6	867	40.2	25.0	927	40.5	25.2	987	38.6	24.0	1047	0.0	0.0
688	0.0	0.0	748	45.0	28.3	808	54.7	34.0	868	39.4	24.5	928	40.7	25.3	988	35.4	22.0	1048	0.0	0.0
689	0.0	0.0	749	45.4	28.2	809	55.2	34.3	869	39.9	24.8	929	41.0	25.5	989	34.6	21.5	1049	0.0	0.0
690	0.0	0.0	750	45.1	28.0	810	55.0	34.2	870	40.4	25.1	930	40.5	25.2	990	34.6	21.5	1050	0.0	0.0
691	0.0	0.0	751	44.2	27.5	811	54.7	34.0	871	41.0	25.5	931	40.2	25.0	991	35.1	21.8	1051	0.0	0.0
692	0.0	0.0	752	43.1	26.8	812	54.7	34.0	872	41.4	25.7	932	40.2	25.0	992	36.2	22.5	1052	0.0	0.0
693	0.0	0.0	753	41.0	25.5	813	54.5	33.9	873	42.2	26.2	933	40.2	25.0	993	37.0	23.0	1053	1.9	1.2
694	2.3	1.4	754	37.8	23.5	814	54.1	33.6	874	43.3	26.9	934	39.7	24.7	994	36.7	22.8	1054	6.4	4.0
695	5.3	3.3	755	34.6	21.5	815	53.3	33.1	875	44.2	27.5	935	39.4	24.5	995	36.7	22.8	1055	11.7	7.3
696	7.1	4.4	756	30.6	19.0	816	53.1	33.0	876	44.7	27.8	936	39.1	24.3	996	37.0	23.0	1056	17.1	10.6
697	10.5	6.5	757	26.5	16.5	817	52.3	32.5	877	45.7	28.4	937	39.1	24.3	997	36.5	22.7	1057	22.4	13.9
698	14.8	9.2	758	24.0	14.9	818	51.5	32.0	878	46.7	29.0	938	39.4	24.5	998	36.5	22.7	1058	27.4	17.0
699	18.2	11.3	759	20.1	12.5	819	51.3	31.9	879	47.0	29.2	939	40.2	25.0	999	36.5	22.7	1059	29.8	18.5
700	21.7	13.5	760	15.1	9.4	820	50.8	31.6	880	46.8	29.1	940	40.2	25.0	1000	37.8	23.5	1060	32.2	20.0
701	23.5	14.6	761	10.0	6.2	821	50.7	31.5	881	46.7	29.0	941	39.6	24.6	1001	38.6	24.0	1061	35.1	21.8
702	26.4	16.4	762	4.8	3.0	822	49.2	30.6	882	46.5	28.9	942	39.6	24.6	1002	39.6	24.6	1062	37.0	23.0
703	26.9	16.7	763	2.4	1.5	823	49.3	30.0	883	45.9	28.5	943	38.8	24.1	1003	39.9	24.8	1063	38.6	24.0
704	26.5	16.5	764	2.4	1.5	824	48.1	29.9	884	45.2	28.1	944	39.4	24.5	1004	40.4	25.1	1064	39.9	24.8
705	26.5	16.5	765	0.8	0.5	825	48.1	29.9	885	45.1	28.0	945	40.4	25.1	1005	41.0	25.5	1065	41.2	25.6
706	29.3	18.2	766	0.0	0.0	826	48.1	29.9	886	45.1	28.0	946	41.2	25.6	1006	41.2	25.6	1066	42.6	26.5
707	30.9	19.2	767	4.8	3.0	827	48.1	29.9	887	44.4	27.6	947	40.4	25.1	1007	41.0	25.5	1067	43.1	26.8
708	32.3	20.1	768	10.1	6.3	828	47.6	29.6	888	43.8	27.2	948	38.6	24.0	1008	40.2	25.0	1068	44.1	27.4
709	34.6	21.5	769	15.4	9.6	829	47.5	29.5	889	42.8	26.6	949	35.4	22.0	1009	38.8	24.1	1069	44.9	27.9
710	36.2	22.5	770	20.8	12.9	830	47.5	29.5	890	43.4	27.0	950	32.3	20.1	1010	38.1	23.7	1070	45.5	28.3
711	36.2	22.5	771	25.4	15.8	831	47.1	29.3	891	44.2	27.5	951	27.2	16.9	1011	37.3	23.2	1071	45.1	28.0
712	35.6	22.1	772	28.2	17.5	832	46.5	28.9	892	44.7	27.8	952	21.9	13.6	1012	36.8	22.9	1072	44.2	27.5
713	36.5	22.7	773	29.6	18.4	833	45.4	28.2	893	45.1	28.0	953	16.6	10.3	1013	36.2	22.5	1073	43.4	27.0
714	37.5	23.3	774	31.4	19.5	834	44.6	27.7	894	44.7	27.8	954	11.3	7.0	1014	35.4	22.0	1074	43.4	27.0
715	37.8	23.3	775	33.3	20.7	835	43.4	27.0	895	45.1	28.0	955	6.0	3.7	1015	34.8	21.6	1075	42.3	26.3
716	36.2	22.5	776	35.4	22.0	836	41.0	25.5	896	45.1	28.0	956	0.6	0.4	1016	33.0	20.5	1076	39.4	24.5
717	34.8	21.6	777	37.3	23.2	837	38.1	23.7	897	45.1	28.0	957	0.0	0.0	1017	28.2	17.5	1077	36.2	22.5
718	33.0	20.5	778	40.2	25.0	838	35.4	22.0	898	44.6	27.7	958	0.0	0.0	1018	22.8	14.2	1078	34.6	21.5
719	29.0	18.0	779	42.6	26.5	839	33.0	20.5	899	44.1	27.4	959	0.0	0.0	1019	17.5	10.9	1079	33.1	20.6
720	24.1	15.0	780	44.2	27.5	840	30.9	19.2	900	43.3	26.9	960	3.2	2.0	1020	12.2	7.6	1080	29.0	18.0
721	19.3	12.0	781	45.1	28.0	841	30.9	19.2	901	42.8	26.6	961	8.5	5.3	1021	6.9	4.3	1081	24.1	15.0
722	14.5	9.0	782	45.5	28.3	842	32.3	20.1	902	42.6	26.5	962	13.8	8.5	1022	1.6	1.0	1082	19.8	12.3
723	10.0	6.2	783	46.5	28.9	843	33.6	20.9	903	42.6	26.5	963	19.1	11.9	1023	0.0	0.0	1083	17.9	11.1
724	7.2	4.5	784	46.5	28.9	844	34.4	21.4	904	42.6	26.5	964	24.5	15.2	1024	0.0	0.0	1084	17.1	10.6
725	4.8	3.0	785	46.5	28.9	845	35.4	22.0	905	42.3	26.3	965	28.2	17.5	1025	0.0	0.0	1085	16.1	10.0
726	3.4	2.1	786	46.3	28.8	846	36.4	22.6	906	42.2	26.2	966	29.9	18.6	1026	0.0	0.0	1086	15.3	9.5
727	0.8	0.5	787	45.9	28.5	847	37.3	23.2	907	42.2	26.2	967	32.2	20.0	1027	0.0	0.0	1087	14.6	9.1
728	0.8	0.5	788	45.5	28.3	848	38.6	24.0	908	41.7	25.9	968	33.9	21.1	1028	0.0	0.0	1088	14.0	8.7
729	5.1	3.2	789	45.5	28.3	849	40.2	25.0	909	41.2	25.6	969	35.4	22.0	1029	0.0	0.0	1089	13.8	8.6
730	10.5	6.5	790	45.5	28.3	850	41.8	26.0	910	41.2	25.6	970	37.0	23.0	1030	0.0	0.0	1090	14.2	8.8
731	15.4	9.6	791	45.4	28.2	851	42.8	26.6	911	41.7	25.9	971	39.4	24.5	1031	0.0	0.0	1091	14.5	9.0
732	20.1	12.5	792	44.4	27.6	852	42.8	26.6	912	41.5	25.8	972	42.3	26.3	1032	0.0	0.0	1092	14.0	8.7
733	22.5	14.0	793	44.2	27.5	853	43.1	26.8	913	41.0	25.5	973	44.2	27.5	1033	0.0	0.0	1093	13.8	8.6
734	25.7	16.0	794	44.2	27.5	854	43.4	27.0	914	39.6	24.6	974	45.2	28.1	1034	0.0	0.0	1094	12.9	8.0
735	29.0	18.0	795	44.2	27.5	855	43.8	27.2	915	37.8	23.5	975	45.7	28.4	1035	0.0	0.0	1095	11.3	7.0
736	31.5	19.6	796	44.2	27.5	856	44.7	27.8	916	35.7	22.2	976	45.9	28.5	1036	0.0	0.0	1096	8.0	5.0
737	34.6	21.5	797	44.2	27.5	857	45.2	28.1	917	34.8	21.6	977	45.9	28.5	1037	0.0	0.0	1097	6.8	4.2
738	37.2	23.1	798	44.2	27.5	858	46.3	28.8	918	34.8	21.6	978	45.9	28.5	1038	0.0	0.0	1098	4.2	2.6
739	39.4	24.5	799	44.4	27.6	859	46.5	28.9	919	34.9	21.7	979	44.6	27.7	1039	0.0	0.0	1099	1.6	1.0
740	41.0	25.5	800	45.1	28.0	860	46.7	29.0	920	36.4	22.6	980	44.2	27.5	1040	0.0	0.0	1100	0.0	0.0
741	42.6	26.5	801	45.9	28.5	861	46.8	29.1	921	37.7	23.4	981	43.8	27.2	1041	0.0	0.0	1101	0.2	0.1
742	43.6	27.1	802	48.3	30.0	862	46.7	29.0	922	38.6	24.0	982	43.1	26.8	1042	0.0	0.0	1102	1.0	0.6
743	44.4	27.6	803	49.9	31.0	863	45.2	28.1	923	39.3	24.2	983	42.6	26.5	1043	0.0	0.0	1103	2.6	1.6
744	44.9	27.9	804	51.5	32.0	864	44.2	27.5	924	39.3	24.2	984	41.8	26.0	1044	0.0	0.0	1104	5.8	3.6
745	45.5	28.3	805	53.1	33.0	865	43.4	27.0	925	40.1	24.9	985	41.4	25.7	1045	0.0	0.0	1105	11.1	6.9

TABLE 1 - U.S. 1972 SCHEDULE (CONTINUED)

Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)
1106	16.1	10.0	1144	34.6	21.5	1182	21.6	13.4	1220	34.6	21.5	1258	4.8	3.0	1296	41.8	26.0
1107	20.6	12.8	1145	32.2	20.0	1183	18.3	10.1	1221	35.1	21.8	1259	6.4	4.0	1297	42.2	26.2
1108	22.5	14.0	1146	32.2	17.5	1184	10.9	6.8	1222	35.4	22.0	1260	8.0	5.0	1298	43.4	27.0
1109	23.3	14.5	1147	25.7	16.0	1185	5.6	3.5	1223	35.2	21.9	1261	10.1	6.3	1299	44.7	27.8
1110	25.7	16.0	1148	22.5	14.0	1186	0.3	0.2	1224	34.9	21.7	1262	12.9	8.0	1300	45.5	28.3
1111	29.1	18.1	1149	17.2	10.7	1187	0.0	0.0	1225	34.6	21.5	1263	16.1	10.0	1301	46.7	29.0
1112	32.2	20.0	1150	11.9	7.4	1188	0.0	0.0	1226	34.6	21.5	1264	16.9	10.5	1302	46.8	29.1
1113	33.8	21.0	1151	6.6	4.1	1189	0.0	0.0	1227	34.4	21.4	1265	15.3	9.5	1303	46.7	29.0
1114	34.1	21.2	1152	1.3	0.8	1190	0.0	0.0	1228	32.3	20.1	1266	13.7	8.5	1304	45.1	28.0
1115	34.3	21.3	1153	0.0	0.0	1191	0.0	0.0	1229	31.4	19.5	1267	12.2	7.6	1305	39.7	24.7
1116	34.4	21.4	1154	0.0	0.0	1192	0.0	0.0	1230	30.9	19.2	1268	14.2	8.8	1306	34.4	21.4
1117	34.9	21.7	1155	0.0	0.0	1193	0.0	0.0	1231	31.5	19.6	1269	17.7	11.0	1307	29.1	18.1
1118	36.2	22.5	1156	0.0	0.0	1194	0.0	0.0	1232	31.9	19.8	1270	22.5	14.0	1308	23.8	14.8
1119	37.0	23.0	1157	0.0	0.0	1195	0.0	0.0	1233	32.2	20.0	1271	27.4	17.0	1309	18.5	11.5
1120	38.3	23.8	1158	0.0	0.0	1196	0.0	0.0	1234	31.4	19.5	1272	31.4	19.5	1310	13.2	8.2
1121	39.4	24.5	1159	0.0	0.0	1197	0.3	0.2	1235	28.2	17.5	1273	33.8	21.0	1311	7.9	4.9
1122	40.2	25.0	1160	0.0	0.0	1198	2.4	1.5	1236	24.9	15.5	1274	35.1	21.8	1312	2.6	1.6
1123	40.1	24.9	1161	0.0	0.0	1199	5.6	3.5	1237	20.9	13.0	1275	35.7	22.2	1313	0.0	0.0
1124	39.9	24.8	1162	0.0	0.0	1200	10.5	6.5	1238	16.1	10.0	1276	37.0	23.0	1314	0.0	0.0
1125	40.2	25.0	1163	0.0	0.0	1201	15.8	9.8	1239	12.9	8.0	1277	38.0	23.6	1315	0.0	0.0
1126	40.9	25.4	1164	0.0	0.0	1202	19.3	12.0	1240	9.7	6.0	1278	38.8	24.1	1316	0.0	0.0
1127	41.5	25.8	1165	0.0	0.0	1203	20.8	12.9	1241	6.4	4.0	1279	39.4	24.5	1317	0.0	0.0
1128	41.8	26.0	1166	0.0	0.0	1204	20.9	13.0	1242	4.0	2.5	1280	39.4	24.5	1318	0.0	0.0
1129	42.5	26.4	1167	0.0	0.0	1205	20.3	12.6	1243	1.1	0.7	1281	38.6	24.0	1319	0.0	0.0
1130	42.8	26.6	1168	0.0	0.0	1206	20.6	12.8	1244	0.0	0.0	1282	37.8	23.5	1320	0.0	0.0
1131	43.3	26.9	1169	3.4	2.1	1207	21.1	13.1	1245	0.0	0.0	1283	37.8	23.5	1321	0.0	0.0
1132	43.4	27.0	1170	8.7	5.4	1208	21.1	13.1	1246	0.0	0.0	1284	37.8	23.5	1322	0.0	0.0
1133	43.4	27.0	1171	14.0	8.7	1209	22.5	14.0	1247	0.0	0.0	1285	37.8	23.5	1323	0.0	0.0
1134	43.4	27.0	1172	19.3	12.0	1210	24.9	15.5	1248	0.0	0.0	1286	37.8	23.5	1324	0.0	0.0
1135	43.3	26.9	1173	24.6	15.3	1211	27.4	17.0	1249	0.0	0.0	1287	37.8	23.5	1325	0.0	0.0
1136	43.1	26.8	1174	29.9	18.6	1212	29.9	18.6	1250	0.0	0.0	1288	38.6	24.0	1326	0.0	0.0
1137	43.1	26.8	1175	33.9	21.1	1213	31.7	19.7	1251	0.0	0.0	1289	38.8	24.1	1327	0.0	0.0
1138	42.6	26.5	1176	37.0	23.0	1214	33.8	21.0	1252	1.6	1.0	1290	39.4	24.5	1328	0.0	0.0
1139	42.5	26.4	1177	37.8	23.5	1215	34.6	21.5	1253	1.6	1.0	1291	39.7	24.7	1329	0.0	0.0
1140	41.8	26.0	1178	37.0	23.0	1216	35.1	21.8	1254	1.6	1.0	1292	40.2	25.0	1330	0.0	0.0
1141	41.0	25.5	1179	36.2	22.5	1217	35.1	21.8	1255	1.6	1.0	1293	40.9	25.4	1331	0.0	0.0
1142	39.6	24.6	1180	32.2	20.0	1218	34.6	21.5	1256	1.6	1.0	1294	41.2	25.6	1332	0.0	0.0
1143	37.1	23.5	1181	26.9	16.7	1219	34.1	21.2	1257	2.6	1.6	1295	41.4	25.7	1333	0.0	0.0
1144	37.1	23.5	1182	26.9	16.7	1220	34.1	21.2	1258	2.6	1.6	1296	41.4	25.7	1334	0.0	0.0
1145	37.1	23.5	1183	26.9	16.7	1221	34.1	21.2	1259	2.6	1.6	1297	41.4	25.7	1335	0.0	0.0
1146	37.1	23.5	1184	26.9	16.7	1222	34.1	21.2	1260	2.6	1.6	1298	41.4	25.7	1336	0.0	0.0
1147	37.1	23.5	1185	26.9	16.7	1223	34.1	21.2	1261	2.6	1.6	1299	41.4	25.7	1337	0.0	0.0
1148	37.1	23.5	1186	26.9	16.7	1224	34.1	21.2	1262	2.6	1.6	1300	41.4	25.7	1338	0.0	0.0
1149	37.1	23.5	1187	26.9	16.7	1225	34.1	21.2	1263	2.6	1.6	1301	41.4	25.7	1339	0.0	0.0
1150	37.1	23.5	1188	26.9	16.7	1226	34.1	21.2	1264	2.6	1.6	1302	41.4	25.7	1340	0.0	0.0
1151	37.1	23.5	1189	26.9	16.7	1227	34.1	21.2	1265	2.6	1.6	1303	41.4	25.7	1341	0.0	0.0
1152	37.1	23.5	1190	26.9	16.7	1228	34.1	21.2	1266	2.6	1.6	1304	41.4	25.7	1342	0.0	0.0
1153	37.1	23.5	1191	26.9	16.7	1229	34.1	21.2	1267	2.6	1.6	1305	41.4	25.7	1343	0.0	0.0
1154	37.1	23.5	1192	26.9	16.7	1230	34.1	21.2	1268	2.6	1.6	1306	41.4	25.7	1344	0.0	0.0
1155	37.1	23.5	1193	26.9	16.7	1231	34.1	21.2	1269	2.6	1.6	1307	41.4	25.7	1345	0.0	0.0
1156	37.1	23.5	1194	26.9	16.7	1232	34.1	21.2	1270	2.6	1.6	1308	41.4	25.7	1346	0.0	0.0
1157	37.1	23.5	1195	26.9	16.7	1233	34.1	21.2	1271	2.6	1.6	1309	41.4	25.7	1347	0.0	0.0
1158	37.1	23.5	1196	26.9	16.7	1234	34.1	21.2	1272	2.6	1.6	1310	41.4	25.7	1348	0.0	0.0
1159	37.1	23.5	1197	26.9	16.7	1235	34.1	21.2	1273	2.6	1.6	1311	41.4	25.7	1349	0.0	0.0
1160	37.1	23.5	1198	26.9	16.7	1236	34.1	21.2	1274	2.6	1.6	1312	41.4	25.7	1350	0.0	0.0
1161	37.1	23.5	1199	26.9	16.7	1237	34.1	21.2	1275	2.6	1.6	1313	41.4	25.7	1351	0.0	0.0
1162	37.1	23.5	1200	26.9	16.7	1238	34.1	21.2	1276	2.6	1.6	1314	41.4	25.7	1352	0.0	0.0
1163	37.1	23.5	1201	26.9	16.7	1239	34.1	21.2	1277	2.6	1.6	1315	41.4	25.7	1353	0.0	0.0
1164	37.1	23.5	1202	26.9	16.7	1240	34.1	21.2	1278	2.6	1.6	1316	41.4	25.7	1354	0.0	0.0
1165	37.1	23.5	1203	26.9	16.7	1241	34.1	21.2	1279	2.6	1.6	1317	41.4	25.7	1355	0.0	0.0
1166	37.1	23.5	1204	26.9	16.7	1242	34.1	21.2	1280	2.6	1.6	1318	41.4	25.7	1356	0.0	0.0
1167	37.1	23.5	1205	26.9	16.7	1243	34.1	21.2	1281	2.6	1.6	1319	41.4	25.7	1357	0.0	0.0
1168	37.1	23.5	1206	26.9	16.7	1244	34.1	21.2	1282	2.6	1.6	1320	41.4	25.7	1358	0.0	0.0
1169	37.1	23.5	1207	26.9	16.7	1245	34.1	21.2	1283	2.6	1.6	1321	41.4	25.7	1359	0.0	0.0
1170	37.1	23.5	1208	26.9	16.7	1246	34.1	21.2	1284	2.6	1.6	1322	41.4	25.7	1360	0.0	0.0
1171	37.1	23.5	1209	26.9	16.7	1247	34.1	21.2	1285	2.6	1.6	1323	41.4	25.7	1361	0.0	0.0
1172	37.1	23.5	1210	26.9	16.7	1248	34.1	21.2	1286	2.6	1.6	1324	41.4	25.7	1362	0.0	0.0
1173	37.1	23.5	1211	26.9	16.7	1249	34.1	21.2	1287	2.6	1.6	1325	41.4	25.7	1363	0.0	0.0
1174	37.1	23.5	1212	26.9	16.7	1250	34.1	21.2	1288	2.6	1.6	1326	41.4	25.7	1364	0.0	0.0
1175	37.1	23.5	1213	26.9	16.7	1251	34.1	21.2	1289	2.6	1.6	1327	41.4	25.7	1365	0.0	0.0
1176	37.1	23.5	1214	26.9	16.7	1252	34.1	21.2	1290	2.6	1.6	1328	41.4	25.7	1366	0.0	0.0
1177	37.1	23.5	1215	26.9	16.7	1253	34.1	21.2	1291	2.6	1.6	1329	41.4	25.7	1367	0.0	0.0
1178	37.1	23.5	1216	26.9	16.7	1254	34.1	21.2	1292	2.6	1.6	1330	41.4	25.7	1368	0.0	0.0
1179	37.1	23.5	1217	26.9	16.7	1255	34.1	21.2	1293	2.6	1.6	1331	41.4	25.7	1369	0.0	0.0
1180	37.1	23.5															

TABLE 2 - HIGHWAY FUEL ECONOMY TEST SCHEDULE

Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)
0	0.0	0.0	50	62.1	38.6	100	78.1	48.5	150	71.0	44.1	200	69.8	43.4	250	77.2	48.0	300	77.2	48.0
1	0.0	0.0	51	63.2	39.3	101	78.5	48.8	151	71.3	44.3	201	69.5	43.2	251	77.2	48.0	301	77.2	48.0
2	0.0	0.0	52	64.4	40.0	102	79.0	49.1	152	71.5	44.4	202	69.5	43.2	252	77.2	48.0	302	77.2	48.0
3	3.2	2.0	53	65.5	40.7	103	79.2	49.2	153	71.8	44.6	203	69.4	43.1	253	77.4	48.1	303	77.4	48.1
4	7.9	4.9	54	66.6	41.4	104	79.0	49.1	154	71.9	44.7	204	69.2	43.0	254	77.6	48.2	304	77.6	48.2
5	13.0	8.1	55	67.9	42.2	105	79.0	49.1	155	72.3	44.9	205	69.2	43.0	255	77.6	48.2	305	77.6	48.2
6	18.2	11.3	56	69.0	42.9	106	78.9	49.0	156	72.7	45.2	206	69.4	43.1	256	77.4	48.1	306	77.4	48.1
7	23.3	14.5	57	70.0	43.5	107	78.9	49.0	157	73.5	45.7	207	69.8	43.4	257	78.2	48.6	307	78.2	48.6
8	27.8	17.3	58	70.8	44.0	108	79.0	49.1	158	73.9	45.9	208	70.7	43.9	258	78.7	48.9	308	78.7	48.9
9	31.5	19.6	59	71.3	44.3	109	79.2	49.2	159	74.5	46.3	209	70.8	44.0	259	79.0	49.1	309	79.0	49.1
10	35.1	21.8	60	71.6	44.5	110	79.3	49.3	160	75.3	46.8	210	70.0	43.5	260	79.0	49.1	310	79.0	49.1
11	38.6	24.0	61	72.1	44.8	111	79.5	49.4	161	75.5	46.9	211	69.6	42.6	261	79.0	49.1	311	79.0	49.1
12	41.5	25.8	62	72.3	44.9	112	79.7	49.5	162	75.6	47.0	212	69.8	41.5	262	79.0	49.1	312	79.0	49.1
13	43.6	27.1	63	72.4	45.0	113	79.7	49.5	163	75.8	47.1	213	69.5	40.7	263	79.0	49.1	313	79.0	49.1
14	45.1	28.0	64	72.6	45.1	114	79.7	49.5	164	76.6	47.6	214	64.4	40.0	264	78.9	49.0	314	78.9	49.0
15	46.7	29.0	65	73.1	45.4	115	79.5	49.4	165	77.1	47.9	215	64.4	40.0	265	78.7	48.9	315	78.7	48.9
16	48.3	30.0	66	73.5	45.7	116	79.0	49.1	166	77.2	48.0	216	64.9	40.3	266	77.6	48.2	316	77.6	48.2
17	49.4	30.7	67	74.0	46.0	117	78.7	48.9	167	77.2	48.0	217	66.0	41.0	267	76.8	47.7	317	76.8	47.7
18	50.7	31.5	68	74.5	46.3	118	78.2	48.6	168	77.1	47.9	218	67.6	42.0	268	76.4	47.5	318	76.4	47.5
19	51.8	32.2	69	74.8	46.5	119	77.9	48.4	169	76.9	47.8	219	68.7	42.7	269	76.0	47.2	319	76.0	47.2
20	52.9	32.9	70	75.3	46.8	120	77.4	48.1	170	76.1	47.3	220	69.4	43.1	270	75.2	46.7	320	75.2	46.7
21	53.9	33.5	71	75.5	46.9	121	76.8	47.7	171	75.2	46.7	221	69.5	43.2	271	74.4	46.2	321	74.4	46.2
22	54.9	34.1	72	75.6	47.0	122	76.3	47.4	172	74.4	46.2	222	69.8	43.4	272	74.0	46.0	322	74.0	46.0
23	55.7	34.6	73	75.8	47.1	123	76.1	47.3	173	73.9	45.9	223	70.7	43.9	273	73.7	45.8	323	73.7	45.8
24	56.2	34.9	74	76.0	47.2	124	76.4	47.5	174	73.5	45.7	224	71.3	44.3	274	73.4	45.6	324	73.4	45.6
25	56.5	35.1	75	76.1	47.3	125	76.9	47.8	175	73.2	45.5	225	71.9	44.7	275	73.1	45.4	325	73.1	45.4
26	57.5	35.7	76	76.0	47.2	126	77.1	47.9	176	73.1	45.4	226	72.6	45.1	276	72.7	45.2	326	72.7	45.2
27	57.8	35.9	77	75.8	47.1	127	77.2	48.0	177	72.9	45.3	227	73.1	45.4	277	72.4	45.0	327	72.4	45.0
28	57.6	35.8	78	75.6	47.0	128	77.1	47.9	178	72.4	45.0	228	73.7	45.8	278	71.9	44.7	328	71.9	44.7
29	56.8	35.3	79	75.5	46.9	129	77.1	47.9	179	70.8	44.0	229	74.8	46.5	279	71.6	44.5	329	71.6	44.5
30	56.2	34.9	80	75.5	46.9	130	77.1	47.9	180	69.4	43.1	230	75.5	46.9	280	71.1	44.2	330	71.1	44.2
31	56.2	34.9	81	75.5	46.9	131	77.2	48.0	181	67.9	42.2	231	76.0	47.2	281	70.0	43.5	331	70.0	43.5
32	55.7	34.6	82	75.6	47.0	132	77.2	48.0	182	66.8	41.5	232	76.3	47.4	282	68.9	42.8	332	68.9	42.8
33	56.0	34.8	83	75.8	47.1	133	77.2	48.0	183	66.8	41.5	233	76.1	47.3	283	67.6	42.0	333	67.6	42.0
34	56.5	35.1	84	75.8	47.1	134	77.1	47.9	184	67.8	42.1	234	76.1	47.3	284	64.5	40.1	334	64.5	40.1
35	57.5	35.7	85	76.0	47.2	135	76.1	47.3	185	69.0	42.9	235	76.0	47.2	285	62.1	38.6	335	62.1	38.6
36	58.1	36.2	86	75.8	47.1	136	74.0	46.0	186	70.0	43.5	236	76.0	47.2	286	60.4	37.5	336	60.4	37.5
37	58.3	36.2	87	75.6	47.0	137	69.7	43.3	187	70.7	43.9	237	76.0	47.2	287	57.6	35.8	337	57.6	35.8
38	58.7	36.5	88	75.5	46.9	138	66.3	41.2	188	70.2	43.6	238	75.8	47.1	288	55.8	34.7	338	55.8	34.7
39	59.1	36.7	89	74.8	46.5	139	63.6	39.5	189	69.7	43.3	239	75.6	47.0	289	54.7	34.0	339	54.7	34.0
40	59.4	36.9	90	74.5	46.3	140	63.1	39.2	190	69.2	43.0	240	75.6	47.0	290	53.6	33.3	340	53.6	33.3
41	59.5	37.0	91	74.4	46.2	141	62.8	39.0	191	69.4	43.1	241	75.5	46.9	291	52.3	32.5	341	52.3	32.5
42	59.5	37.0	92	74.5	46.3	142	62.8	39.0	192	69.8	43.4	242	75.3	46.8	292	51.0	31.7	342	51.0	31.7
43	59.5	37.0	93	74.8	46.5	143	62.9	39.1	193	70.7	43.9	243	75.5	46.9	293	49.2	30.6	343	49.2	30.6
44	59.5	37.0	94	75.5	46.9	144	63.6	39.5	194	71.3	44.3	244	75.6	47.0	294	47.6	29.6	344	47.6	29.6
45	59.5	37.0	95	75.8	47.1	145	64.5	40.1	195	71.8	44.6	245	76.0	47.2	295	46.3	28.8	345	46.3	28.8
46	59.5	37.0	96	76.3	47.4	146	66.0	41.0	196	72.3	44.9	246	76.4	47.5	296	45.7	28.4	346	45.7	28.4
47	59.7	37.1	97	76.8	47.7	147	67.6	42.0	197	72.1	44.8	247	77.1	47.9	297	46.0	28.6	347	46.0	28.6
48	60.0	37.3	98	77.2	48.0	148	69.4	43.1	198	71.5	44.4	248	77.2	48.0	298	47.5	29.5	348	47.5	29.5
49	60.8	37.8	99	77.6	48.2	149	70.3	43.7	199	70.7	43.9	249	77.2	48.0	299	50.5	31.4	349	50.5	31.4

TABLE 2 - HIGHWAY FUEL ECONOMY TEST SCHEDULE

Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)
300	53.8	33.4	340	92.2	57.3	380	90.4	56.2	420	95.6	59.4	460	93.3	58.0	500	88.0	54.7
301	57.3	35.6	341	92.7	57.6	381	90.1	56.0	421	96.2	59.8	461	93.5	58.1	501	87.9	54.6
302	60.4	37.5	342	93.0	57.8	382	90.1	56.0	422	96.4	59.9	462	93.5	58.1	502	87.5	54.4
303	62.9	39.1	343	93.3	58.0	383	90.1	56.0	423	96.4	59.9	463	93.7	58.2	503	87.4	54.3
304	64.7	40.2	344	93.5	58.1	384	90.3	56.1	424	96.2	59.8	464	93.8	58.3	504	87.4	54.3
305	64.7	40.2	345	93.5	58.1	385	90.8	56.4	425	95.9	59.6	465	93.8	58.3	505	87.2	54.2
306	66.1	41.1	346	94.0	58.4	386	91.2	56.7	426	95.6	59.4	466	93.8	58.3	506	87.1	54.1
307	67.3	41.8	347	94.5	58.7	387	91.6	56.9	427	95.3	59.2	467	93.7	58.2	507	87.1	54.1
308	68.2	42.4	348	94.6	58.8	388	91.6	56.9	428	95.1	59.1	468	93.5	58.1	508	87.1	54.1
309	68.9	42.8	349	94.8	58.9	389	92.2	57.3	429	95.0	59.0	469	93.3	58.0	509	86.9	54.0
310	69.7	43.3															
311	70.5	43.8	350	95.0	59.0	390	92.4	57.4	430	94.8	58.9	470	93.0	57.8	510	86.9	54.0
312	71.3	44.3	351	94.8	58.9	391	92.4	57.4	431	94.5	58.7	471	92.5	57.5	511	86.9	54.0
313	71.9	44.7	352	94.6	58.8	392	92.1	57.2	432	94.3	58.6	472	91.9	57.1	512	86.9	54.0
314	72.4	45.0	353	94.3	58.6	393	91.7	57.0	433	94.1	58.5	473	91.7	57.0	513	86.9	54.0
315	72.7	45.2	354	94.0	58.4	394	91.6	56.9	434	94.0	58.4	474	91.1	56.6	514	86.9	54.0
316	73.1	45.4	355	93.7	58.2	395	91.1	56.6	435	94.0	58.4	475	90.3	56.1	515	86.9	54.0
317	73.2	45.5	356	93.5	58.1	396	90.6	56.3	436	93.8	58.3	476	90.1	56.0	516	86.9	54.0
318	73.7	45.8	357	93.3	58.0	397	90.3	56.1	437	93.7	58.2	477	89.8	55.8	517	87.1	54.1
319	74.0	46.0	358	93.2	57.9	398	90.8	56.4	438	93.5	58.1	478	89.3	55.5	518	87.2	54.2
320	74.2	46.1	359	92.7	57.6	399	91.2	56.7	439	93.3	58.0	479	88.8	55.2	519	87.7	54.5
321	74.8	46.5	360	92.4	57.4	400	91.9	57.1	440	93.2	57.9	480	88.7	55.1	520	88.2	54.8
322	75.3	46.8	361	92.1	57.2	401	92.5	57.5	441	93.2	57.9	481	88.5	55.0	521	88.4	54.9
323	75.8	47.1	362	91.9	57.1	402	93.0	57.8	442	93.2	57.9	482	88.4	54.9	522	88.5	55.0
324	76.8	47.7	363	91.7	57.0	403	93.3	58.0	443	93.2	57.9	483	88.4	54.9	523	88.7	55.1
325	77.7	48.3	364	91.7	57.0	404	93.9	58.0	444	93.2	57.9	484	88.4	54.9	524	88.8	55.2
326	78.9	49.0	365	91.6	56.9	405	93.3	58.0	445	93.3	58.0	485	88.4	54.9	525	88.8	55.2
327	80.0	49.7	366	91.6	56.9	406	93.3	58.0	446	93.5	58.1	486	88.4	54.9	526	89.0	55.3
328	81.0	50.3	367	91.6	56.9	407	93.3	58.0	447	93.5	58.1	487	88.4	54.9	527	89.2	55.4
329	82.1	51.0	368	91.7	57.0	408	93.3	58.0	448	93.7	58.2	488	88.5	55.0	528	89.3	55.5
330	83.2	51.7	369	91.7	57.0	409	93.2	57.9	449	93.7	58.2	489	88.5	55.0	529	89.5	55.6
331	84.3	52.4	370	91.7	57.0	410	93.0	57.8	450	93.7	58.2	490	88.5	55.0	530	89.6	55.7
332	85.5	53.1	371	91.7	57.0	411	92.9	57.7	451	93.3	58.1	491	88.5	55.0	531	89.8	55.8
333	86.6	53.8	372	91.7	57.0	412	92.9	57.7	452	93.3	58.0	492	88.5	55.0	532	90.0	55.9
334	87.7	54.5	373	91.7	57.0	413	93.0	57.8	453	93.3	58.0	493	88.5	55.0	533	90.1	56.0
335	88.8	55.2	374	91.7	57.0	414	93.2	57.9	454	93.3	58.0	494	88.7	55.1	534	90.1	56.0
336	89.8	55.8	375	91.7	57.0	415	93.3	58.0	455	93.3	58.0	495	88.7	55.1	535	90.1	56.0
337	90.8	56.4	376	91.7	57.0	416	93.5	58.1	456	93.3	58.0	496	88.4	54.9	536	90.1	56.0
338	91.6	56.9	377	91.6	56.8	417	94.0	58.4	457	93.3	58.0	497	88.4	54.9	537	90.1	56.0
339	91.9	57.1	378	91.4	56.6	418	94.8	58.9	458	93.2	57.9	498	88.4	54.9	538	90.1	56.0
340	92.1	57.2	379	90.9	56.5	419	95.1	59.1	459	93.2	57.9	499	88.2	54.8	539	90.1	56.0

TABLE 2-HIGHWAY FUEL ECONOMY TEST SCHEDULE (CONTINUED)

Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)
540	90.1	56.0	580	82.2	51.1	620	80.0	49.7	660	82.1	51.0	700	87.2	54.2	740	78.1	48.5
541	90.1	56.0	581	81.6	50.7	621	81.4	50.6	661	82.2	51.1	701	87.7	54.5	741	76.6	47.6
542	90.1	56.0	582	81.0	50.3	622	82.9	51.5	662	82.7	51.4	702	88.2	54.8	742	75.3	46.8
543	90.1	56.0	583	80.1	49.8	623	84.0	52.2	663	83.2	51.7	703	88.5	55.0	743	73.4	45.6
544	90.1	56.0	584	79.3	49.3	624	84.8	52.7	664	83.7	52.0	704	89.3	55.5	744	71.1	44.2
545	90.1	56.0	585	78.4	48.7	625	85.3	53.0	665	84.0	52.2	705	90.0	55.9	745	68.4	42.5
546	90.1	56.0	586	77.6	48.2	626	86.3	53.6	666	84.5	52.5	706	90.3	56.1	746	63.1	39.2
547	90.0	55.9	587	77.4	48.1	627	86.9	54.0	667	85.0	52.8	707	90.6	56.3	747	57.8	35.9
548	90.0	55.9	588	77.2	48.0	628	87.1	54.1	668	84.8	52.7	708	90.8	56.4	748	52.5	32.6
549	90.0	55.9	589	77.2	48.0	629	87.5	54.4	669	84.7	52.6	709	90.9	56.5	749	47.2	29.3
550	89.8	55.8	590	77.4	48.1	630	88.0	54.7	670	84.2	52.3	710	91.2	56.7	750	43.1	26.8
551	89.5	55.6	591	77.9	48.4	631	88.7	55.1	671	84.2	52.3	711	91.6	56.9	751	38.4	24.5
552	89.2	55.4	592	78.7	48.9	632	89.2	55.4	672	84.3	52.4	712	91.7	57.0	752	34.6	21.5
553	88.8	55.2	593	78.9	49.0	633	89.5	55.4	673	84.5	52.5	713	92.2	57.3	753	31.4	19.5
554	88.7	55.1	594	79.0	49.1	634	89.8	55.0	674	84.8	52.7	714	92.9	57.7	754	28.0	17.4
555	88.5	55.0	595	79.0	49.1	635	89.7	54.5	675	84.8	52.7	715	93.7	58.2	755	24.3	15.1
556	88.4	54.9	596	78.9	49.0	636	86.3	53.6	676	84.3	52.4	716	94.6	58.8	756	20.0	12.4
557	87.9	54.6	597	78.9	49.0	637	84.5	52.5	677	83.8	52.1	717	95.1	59.1	757	15.6	9.7
558	87.5	54.4	598	78.7	48.9	638	80.8	50.2	678	83.2	51.7	718	95.3	59.2	758	11.3	7.0
559	87.2	54.2	599	78.2	48.6	639	77.6	48.2	679	82.2	51.1	719	95.1	59.1	759	8.0	5.0
560	87.1	54.1	600	77.7	48.3	640	74.8	46.5	680	81.3	50.5	720	94.6	58.8	760	5.3	3.3
561	86.6	53.8	601	77.2	48.0	641	74.4	46.2	681	80.6	50.1	721	94.1	58.5	761	3.2	2.0
562	85.9	53.4	602	77.1	47.9	642	74.0	46.0	682	80.1	49.8	722	93.5	58.1	762	1.1	0.7
563	85.8	53.3	603	76.9	47.8	643	74.0	46.0	683	80.0	49.7	723	92.9	57.7	763	0.0	0.0
564	85.5	53.1	604	76.8	47.7	644	74.5	46.3	684	79.8	49.6	724	92.2	57.3	764	0.0	0.0
565	85.1	52.9	605	77.1	47.9	645	75.3	46.8	685	79.7	49.5	725	91.9	57.1	765	0.0	0.0
566	84.7	52.6	606	77.7	48.3	646	76.4	47.5	686	79.7	49.5	726	91.4	56.8			
567	84.3	52.4	607	78.9	49.0	647	77.6	48.2	687	80.0	49.7	727	90.9	56.5			
568	84.0	52.2	608	79.0	49.1	648	78.5	48.8	688	80.5	50.0	728	90.4	56.2			
569	83.8	52.1	609	78.9	49.0	649	79.7	49.5	689	80.8	50.2	729	89.3	55.5			
570	83.7	52.0	610	78.7	48.9	650	80.8	50.2	690	81.4	50.6	730	87.9	54.6			
571	83.7	52.0	611	77.2	48.0	651	81.6	50.7	691	82.2	51.1	731	87.1	54.1			
572	83.7	52.0	612	75.8	47.1	652	82.2	51.1	692	83.0	51.6	732	86.4	53.7			
573	83.7	52.0	613	74.4	46.2	653	83.2	51.7	693	83.5	51.9	733	85.6	53.2			
574	83.8	52.1	614	74.2	46.1	654	84.0	52.2	694	83.7	52.0	734	85.1	52.9			
575	83.7	52.0	615	74.2	46.1	655	84.5	52.5	695	83.8	52.1	735	84.5	52.5			
576	83.7	52.0	616	74.4	46.2	656	83.8	52.1	696	84.3	52.4	736	83.7	52.0			
577	83.5	51.9	617	75.5	46.9	657	83.0	51.6	697	85.1	52.9	737	82.6	51.3			
578	83.0	51.6	618	76.9	47.8	658	82.2	51.1	698	85.8	53.3	738	81.3	50.5			
579	82.7	51.4	619	78.9	49.0	659	82.1	51.0	699	86.4	53.7	739	79.7	49.5			

TABLE 3A - ECE R15.04 SCHEDULE - MANUAL TRANSMISSION

Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Time (s)	Speed (km/h)	Speed (mph)
0	0.0	0.0	49	0.0	0.0	98	0.0	147	5.0	31.1
1	0.0	0.0	50	3.0	1.9	99	0.0	148	5.0	31.1
2	0.0	0.0	51	6.0	3.7	100	0.0	149	5.0	31.1
3	0.0	0.0	52	9.0	5.6	101	0.0	150	5.0	31.1
4	0.0	0.0	53	12.0	7.5	102	0.0	151	5.0	31.1
5	0.0	0.0	54	15.0	9.3	103	0.0	152	5.0	31.1
6	0.0	0.0	55	18.0	11.2	104	0.0	153	5.0	31.1
7	0.0	0.0	56	21.0	13.1	105	0.0	154	5.0	31.1
8	0.0	0.0	57	24.0	15.0	106	0.0	155	5.0	31.1
9	0.0	0.0	58	27.0	16.9	107	0.0	156	48.1	29.9
10	0.0	0.0	59	25.2	15.7	108	0.0	157	46.3	28.7
11	0.0	0.0	60	38.6	24.0	109	0.0	158	44.4	27.6
12	3.8	2.3	61	32.0	19.9	110	0.0	159	42.5	26.4
13	7.5	4.7	62	32.0	19.9	111	0.0	160	40.6	25.2
14	11.3	7.0	63	32.0	19.9	112	0.0	161	38.8	24.1
15	15.0	9.3	64	32.0	19.9	113	0.0	162	36.9	22.9
16	15.0	9.3	65	32.0	19.9	114	0.0	163	35.0	21.7
17	15.0	9.3	66	32.0	19.9	115	0.0	164	35.0	21.7
18	15.0	9.3	67	32.0	19.9	116	0.0	165	35.0	21.7
19	15.0	9.3	68	32.0	19.9	117	0.0	166	35.0	21.7
20	15.0	9.3	69	32.0	19.9	118	3.0	167	35.0	21.7
21	15.0	9.3	70	32.0	19.9	119	6.0	168	35.0	21.7
22	15.0	9.3	71	32.0	19.9	120	9.0	169	35.0	21.7
23	15.0	9.3	72	32.0	19.9	121	12.0	170	35.0	21.7
24	12.5	7.8	73	32.0	19.9	122	15.0	171	35.0	21.7
25	10.0	6.2	74	32.0	19.9	123	18.0	172	35.0	21.7
26	6.7	4.1	75	32.0	19.9	124	21.0	173	35.0	21.7
27	3.3	2.1	76	32.0	19.9	125	24.0	174	35.0	21.7
28	0.0	0.0	77	32.0	19.9	126	27.0	175	35.0	21.7
29	0.0	0.0	78	32.0	19.9	127	30.0	176	35.0	21.7
30	0.0	0.0	79	32.0	19.9	128	33.0	177	33.5	20.8
31	0.0	0.0	80	32.0	19.9	129	36.0	178	32.0	19.9
32	0.0	0.0	81	32.0	19.9	130	39.0	179	28.9	17.9
33	0.0	0.0	82	32.0	19.9	131	42.0	180	25.7	16.0
34	0.0	0.0	83	32.0	19.9	132	45.0	181	22.6	14.0
35	0.0	0.0	84	32.0	19.9	133	48.0	182	19.4	12.1
36	0.0	0.0	85	32.0	19.9	134	51.0	183	16.3	10.1
37	0.0	0.0	86	29.3	18.2	135	54.0	184	13.1	8.2
38	0.0	0.0	87	26.5	16.5	136	57.0	185	10.0	6.2
39	0.0	0.0	88	23.8	14.8	137	60.0	186	6.7	4.1
40	0.0	0.0	89	21.0	13.0	138	63.0	187	3.3	2.1
41	0.0	0.0	90	18.3	11.3	139	66.0	188	0.0	0.0
42	0.0	0.0	91	15.5	9.6	140	69.0	189	0.0	0.0
43	0.0	0.0	92	12.8	7.9	141	72.0	190	0.0	0.0
44	0.0	0.0	93	10.0	6.2	142	75.0	191	0.0	0.0
45	0.0	0.0	94	6.7	4.1	143	78.0	192	0.0	0.0
46	0.0	0.0	95	3.3	2.1	144	81.0	193	0.0	0.0
47	0.0	0.0	96	0.0	0.0	145	84.0	194	0.0	0.0
48	0.0	0.0	97	0.0	0.0	146	87.0	195	0.0	0.0

TABLE 38 - ECE R15.04 SCHEDULE - AUTOMATIC TRANSMISSION

Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)	Time (s)	Speed (km/h)	Speed (mph)
0	0.0	0.0	49	0.0	0.0	98	0.0	0.0	147	50.0	31.1
1	0.0	0.0	50	2.7	1.7	99	0.0	0.0	148	50.0	31.1
2	0.0	0.0	51	5.3	3.3	100	0.0	0.0	149	50.0	31.1
3	0.0	0.0	52	8.0	5.0	101	0.0	0.0	150	50.0	31.1
4	0.0	0.0	53	10.7	6.6	102	0.0	0.0	151	50.0	31.1
5	0.0	0.0	54	13.3	8.3	103	0.0	0.0	152	50.0	31.1
6	0.0	0.0	55	16.0	9.9	104	0.0	0.0	153	50.0	31.1
7	0.0	0.0	56	18.7	11.6	105	0.0	0.0	154	50.0	31.1
8	0.0	0.0	57	21.3	13.3	106	0.0	0.0	155	50.0	31.1
9	0.0	0.0	58	24.0	14.9	107	0.0	0.0	156	48.1	29.9
10	0.0	0.0	59	26.7	16.6	108	0.0	0.0	157	46.3	28.7
11	0.0	0.0	60	29.3	18.2	109	0.0	0.0	158	44.4	27.6
12	3.8	2.3	61	32.0	19.9	110	0.0	0.0	159	42.5	26.4
13	7.5	4.7	62	32.0	19.9	111	0.0	0.0	160	40.6	25.2
14	11.3	7.0	63	32.0	19.9	112	0.0	0.0	161	38.8	24.1
15	15.0	9.3	64	32.0	19.9	113	0.0	0.0	162	36.9	22.9
16	15.0	9.3	65	32.0	19.9	114	0.0	0.0	163	35.0	21.7
17	15.0	9.3	66	32.0	19.9	115	0.0	0.0	164	35.0	21.7
18	15.0	9.3	67	32.0	19.9	116	0.0	0.0	165	35.0	21.7
19	15.0	9.3	68	32.0	19.9	117	0.0	0.0	166	35.0	21.7
20	15.0	9.3	69	32.0	19.9	118	1.9	1.2	167	35.0	21.7
21	15.0	9.3	70	32.0	19.9	119	3.8	2.4	168	35.0	21.7
22	15.0	9.3	71	32.0	19.9	120	5.8	3.6	169	35.0	21.7
23	15.0	9.3	72	32.0	19.9	121	7.7	4.8	170	35.0	21.7
24	12.0	7.5	73	32.0	19.9	122	9.6	6.0	171	35.0	21.7
25	9.0	5.6	74	32.0	19.9	123	11.5	7.2	172	35.0	21.7
26	6.0	3.7	75	32.0	19.9	124	13.5	8.4	173	35.0	21.7
27	3.0	1.9	76	32.0	19.9	125	15.4	9.6	174	35.0	21.7
28	0.0	0.0	77	32.0	19.9	126	17.3	10.8	175	35.0	21.7
29	0.0	0.0	78	32.0	19.9	127	19.2	11.9	176	35.0	21.7
30	0.0	0.0	79	32.0	19.9	128	21.2	13.1	177	32.1	19.9
31	0.0	0.0	80	32.0	19.9	129	23.1	14.3	178	29.2	18.1
32	0.0	0.0	81	32.0	19.9	130	25.0	15.5	179	26.3	16.3
33	0.0	0.0	82	32.0	19.9	131	26.9	16.7	180	23.3	14.5
34	0.0	0.0	83	32.0	19.9	132	28.8	17.9	181	20.4	12.7
35	0.0	0.0	84	32.0	19.9	133	30.8	19.1	182	17.5	10.9
36	0.0	0.0	85	32.0	19.9	134	32.7	20.3	183	14.6	9.1
37	0.0	0.0	86	29.1	18.1	135	34.6	21.5	184	11.7	7.2
38	0.0	0.0	87	26.2	16.3	136	36.5	22.7	185	8.8	5.4
39	0.0	0.0	88	23.3	14.5	137	38.5	23.9	186	5.8	3.6
40	0.0	0.0	89	20.4	12.7	138	40.4	25.1	187	2.9	1.8
41	0.0	0.0	90	17.5	10.8	139	42.3	26.3	188	0.0	0.0
42	0.0	0.0	91	14.5	9.0	140	44.2	27.5	189	0.0	0.0
43	0.0	0.0	92	11.6	7.2	141	46.2	28.7	190	0.0	0.0
44	0.0	0.0	93	8.7	5.4	142	48.1	29.9	191	0.0	0.0
45	0.0	0.0	94	5.8	3.6	143	50.0	31.1	192	0.0	0.0
46	0.0	0.0	95	2.9	1.8	144	50.0	31.1	193	0.0	0.0
47	0.0	0.0	96	0.0	0.0	145	50.0	31.1	194	0.0	0.0
48	0.0	0.0	97	0.0	0.0	146	50.0	31.1	195	0.0	0.0