Advanced Powertrain Research Facility

Downloadable Dynamometer Database (D[3])- Test Summary Sheet

2012 Nissan Leaf

Vehicle architecture	Battery Electric
Document date	6/25/2013
Revision Number	2
Notes:	

Vehicle Setup Information

Initial Vehicle Mileage	5750
Vehicle dynamometer Input	
Test weight [lb]	3746
Target A [lb]	41.06
Target B [lb/mph]	-0.3082
Target C [lb/mph^2]	0.02525
Test Fuel Information	
Fuel type	Electricity
Fuel density [g/ml]	-
Fuel Net HV [BTU/lbm]	-

Test ID [#]	Cycle	Cold start (CSt) Hot start [HSt]	Date	Test Cell Temp [F]	Test Cell RH [%]	Test Cell Baro [in/Hg]	Vehicle cooling fan speed: Speed Match [SM] or constant speed [CS]	Solar Lamps [W/m2]	Veicle Climate Control settings	Hood Position [Up] or [Closed]	Window Position [Closed] or [Down]	Cycle Distance [mi]	Cycle Fuel economy [mpg] (Fuel scale)	Cycle HV battery Integrated net current [DC Ah]	Cycle HV battery Average Zero crossing Voltage [V]	Cycle HV battery Net Energy [DC Wh]	Cycle HV battery Net Energy Consumption [DC Wh/mi]
Test information				Test cell information			Test Cell setup		Vehicle setup					Electric energy consumption			
Test sequence purpose: Standard testing																	
61203025	UDDS CS	CSt	03/07/12,	20	9.67	29.26	SM	Off	72 °F	Closed	Closed	7.44	-	8.332	379.191	3109	418
61203026	Highway	HSt	03/07/12,	20	11.91	29.24	SM	Off	72 °F	Closed	Closed	10.25	-	9.275	374.008	3368	329
61203027	UDDS HS	HSt	03/07/12,	20	12.73	29.23	SM	Off	72 °F	Closed	Closed	7.44	-	7.602	367.981	2756	371
61203028	US06	HSt	03/07/12,	20	13.24	29.23	SM	Off	72 °F	Closed	Closed	7.99	-	9.921	359.985	3366	421
61203029	US06	HSt	03/07/12,	20	13.64	29.22	SM	Off	72 °F	Closed	Closed	7.99	-	10.114	345.800	3344	419
61203030	*Partial UDDS HS	HSt	03/07/12,	20	14.61	29.22	SM	Off	72 °F	Closed	Closed	4.63	-	5.439	305.200	1659	358
Full charge test summary											**Totals**	**45.74**		**50.683**		**17603**	
*Following Test **61203030** vehicle charge was fully depleted																	
61203031	UDDS CS	CSt	03/08/12,	72	41.32	29.28	SM	Off	Off	Closed	Open	7.43	-	4.068	385.991	1554	209
61203032	HIghway	HSt	03/08/12,	72	42.57	29.28	SM	Off	Off	Closed	Open	10.25	-	6.277	382.789	2368	231
61203033	UDDS HS	HSt	03/08/12,	72	47.66	29.31	SM	Off	Off	Closed	Open	7.44	-	3.867	379.018	1446	194
61203034	US06	HSt	03/08/12,	72	42.81	29.32	SM	Off	Off	Closed	Open	7.99	-	7.455	374.858	2680	336
61203035	US06	HSt	03/08/12,	72	44.98	29.34	SM	Off	Off	Closed	Open	8.00	-	7.546	367.832	2678	335
61203036	UDDS HS	HSt	03/08/12,	72	42.77	29.34	SM	Off	Off	Closed	Open	7.44	-	4.012	365.389	1449	195
61203037	Highway	HSt	03/08/12,	72	41.87	29.35	SM	Off	Off	Closed	Open	10.25	-	6.580	360.812	2339	228
61203038	UDDS HS	HSt	03/08/12,	72	45.16	29.36	SM	Off	Off	Closed	Open	7.45	-	4.107	353.452	1435	193
61203040	*Steady State Speed 55mph	HSt	03/08/12,	72	40.62	29.37	SM	Off	Off	Closed	Open	7.86	-	6.393	305.287	2022	257
Full charge test summary											**Totals**	**74.10**		**50.305**		**17972**	
*Following Test **61203040** vehicle charge was fully depleted																	
Re-charging information. Charge followed above 72F testing											HV battery integrated current [DC Ah]	**49.67**					
Level: Full											Charger integrated current [AC Ah]	**108.36**					
											HV battery integrated power [DC Wh]	**18876**					
											Charger integrated power [AC Wh]	**21679**					
61203052	UDDS CS	CSt	03/12/12,	95	39.88	29.15	SM	850	72 °F	Closed	Closed	7.44	-	5.154	381.759	1967	265
61203053	Highway	HSt	03/12/12,	95	36.20	29.13	SM	850	72 °F	Closed	Closed	10.24	-	6.563	381.573	2477	242
61203054	UDDS	HSt	03/12/12,	95	31.04	29.13	SM	850	72 °F	Closed	Closed	7.44	-	4.627	376.006	1741	234
61203055	US06	HSt	03/12/12,	95	32.30	29.12	SM	850	72 °F	Closed	Closed	7.99	-	7.621	365.301	2736	343
Partial charge test summary											**Totals**	**33.11**		**23.965**		**8921**	

Summary notes

For the highway and US06 cycles only the second (hot) test results are presented in this summary.

Electric energy consumption:

HV battery Integrated net current --> Integrated current as reported by power analyzer

HV battery Average Zero crossing Voltage --> Calculated average zero crossing voltage over the phase or cycle

HV Net Energy --> Integrated power as reported by power analyzer

Note that HV Net Energy is not equal to the product of HV battery Integrated net current times Average Zero crossing Voltage.

* The vehicle coast down information from EPA testing