



Downloadable Dynamometer Database (D³)- Test Summary Sheet

2013 Nissan Leaf	
Vehicle Architecture	Electric
Document Date	5/29/2014
Revision Number	1
Notes:	

Vehicle Setup Information	
Test Cell Location	APRF- Bldg 371
Vehicle Dynamometer Input	
Test weight [lb]	3302
Target A [lb]	31.91
Target B [lb/mph]	0.11159
Target C [lb/mph^2]	0.017757
Test Fuel Information	
Fuel type	Electricity
Fuel density [g/ml]	-
Fuel Net HV [BTU/lbm]	-

Test ID [#]	Cycle	Cold start (CSt) Hot start [HS]	Date	Test Cell Temp [C]	Test Cell RH [%]	Test Cell Baro [in/Hg]	Vehicle cooling fan speed: Speed Match [SM] or constant speed [CS]	Solar Lamps [W/m2]	Vehicle Climate Control settings	Hood Position [Up] or [Closed]	Window Position [Closed] or [Down]	Cycle Distance [mi]	Cycle Fuel economy [mpg] (Emiss Bag)	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: AVTE Standard Testing																		
61403061	UDDS #1	CS	03/13/14	-7	7.1	29.4	SM	0	72	Closed	Closed	7.46	-	6.428	383.3	2911.7	390.5	
61403062	HWY #1	HS	03/13/14	-5	7.3	29.4	SM	0	72	Closed	Closed	10.24	-	7.726	376.0	3052.1	297.9	
61403063	UDDS #2	HS	03/13/14	-7	8.2	29.4	SM	0	73	Closed	Closed	7.47	-	5.711	373.1	2346.3	314.2	
61403064	US06 #1	HS	03/13/14	-4	6.8	29.4	SM	0	74	Closed	Closed	8.02	-	7.979	358.7	2906.3	362.4	
61403065	US06 #2	HS	03/13/14	-4	7.2	29.4	SM	0	75	Closed	Closed	8.02	-	7.910	351.9	2856.6	356.0	
61403066	UDDS #3	HS	03/13/14	-7	8.7	29.4	SM	0	76	Closed	Closed	7.47	-	5.767	354.7	2250.7	301.2	
61403067	HWY #2	HS	03/13/14	-6	8.7	29.4	SM	0	77	Closed	Closed	8.29	-	7.112	-	2341.8	282.4	
Full charge test summary												Totals	56.97		48.6		18665	
Re-charging information				-7	Ambient temperature during charge [C]				Charger integrated current [AC Ah]				92.77					
Level: 2												Charger integrated power [AC Wh]				21923		
61403011	UDDS #1	CS	03/04/14	23	45.6	29.5	SM	0	OFF	Closed	Down	7.44	-	3.521	391.1	1350.4	181.5	
61403012	HWY #1	HS	03/04/14	26	29.8	29.5	SM	0	OFF	Closed	Down	10.24	-	5.553	385.8	2114.4	206.5	
61403013	UDDS #2	HS	03/04/14	22	47.6	29.5	SM	0	OFF	Closed	Down	7.44	-	3.426	382.9	1285.6	172.7	
61403014	US06 #1	HS	03/04/14	26	32.9	29.5	SM	0	OFF	Closed	Down	8.03	-	6.032	373.4	2214.0	275.9	
61403015	55mph Depletion #1	HS	03/04/14	26	31.8	29.5	SM	0	OFF	Closed	Down	10.19	-	5.999	374.4	2226.9	218.6	
61403016	US06 #2	HS	03/04/14	25	35.2	29.5	SM	0	OFF	Closed	Down	8.02	-	6.171	367.8	2213.2	275.8	
61403017	UDDS #3	HS	03/04/14	22	46.5	29.5	SM	0	OFF	Closed	Down	7.45	-	3.517	368.7	1270.2	170.4	
61403018	HWY #2	HS	03/04/14	26	31.3	29.5	SM	0	OFF	Closed	Down	10.27	-	5.893	362.5	2107.8	205.3	
61403019	UDDS #4	HS	03/04/14	22	47.4	29.5	SM	0	OFF	Closed	Down	7.47	-	3.641	356.8	1277.3	170.9	
61403020	55mph Depletion #2	HS	03/04/14	26	30.9	29.5	SM	0	OFF	Closed	Down	13.50	-	9.466	-	3024.5	224.0	
Full charge test summary												Totals	90.06		53.2		19084	
Re-charging information				23	Ambient temperature during charge [C]				Charger integrated current [AC Ah]				94.32					
Level: 2												Charger integrated power [AC Wh]				22252		
61402070	Steady State Speed 0% Grade	HS	02/28/14	24	40.3	29.4	SM	0	OFF	Closed	Down	6.23	-	3.962	382.7	1478.5	237.2	
61402074	Passing Manuevers- 0,3,6% Grade	HS	02/28/14	25	31.9	29.3	SM	0	OFF	Closed	Down	8.46	-	10.849	363.4	3701.4	437.5	
61402072	WOTs	HS	02/28/14	24	40.9	29.4	SM	0	OFF	Closed	Down	5.68	-	6.407	370.0	2153.1	379.0	
61403102	NEDC	HS	03/20/14	21	49.9	29.3	SM	0	OFF	Closed	Down	2.54	-	1.081	379.1	399.1	157.4	
61403103	WLTP	HS	03/20/14	21	53.0	29.3	SM	0	OFF	Closed	Down	1.93	-	0.846	376.7	308.9	160.4	
61403100	JC08	HS	03/20/14	23	43.0	29.3	SM	0	OFF	Closed	Down	5.08	-	2.310	383.7	862.8	169.7	
61403021	UDDS #1	CS	03/05/14	35	41.2	29.6	SM	850	72	Closed	Closed	7.46	-	4.668	390.4	1791.2	240.0	
61403022	HWY #1	HS	03/05/14	38	30.3	29.6	SM	850	72	Closed	Closed	10.24	-	6.004	384.8	2278.6	222.5	
61403023	UDDS #2	HS	03/05/14	34	49.4	29.6	SM	850	72	Closed	Closed	7.39	-	4.416	374.4	1657.6	224.4	
61403024	US06 #1	HS	03/05/14	37	30.6	29.6	SM	850	72	Closed	Closed	7.99	-	6.417	373.5	2350.5	294.1	
61403025	55mph Depletion #1	HS	03/05/14	38	37.8	29.6	SM	850	72	Closed	Closed	2.36	-	1.556	376.1	573.4	242.6	
61403026	US06 #2	HS	03/05/14	37	35.4	29.6	SM	850	72	Closed	Closed	8.02	-	6.602	372.3	2383.3	297.1	
61403027	SC03 Ph 2	HS	03/05/14	35	45.7	29.6	SM	850	72	Closed	Closed	3.57	-	2.336	369.1	843.1	236.1	
61403028	HWY #2	HS	03/05/14	38	31.6	29.6	SM	850	72	Closed	Closed	10.26	-	6.253	362.7	2237.5	218.1	
61403029	UDDS #4	HS	03/05/14	34	48.6	29.6	SM	850	72	Closed	Closed	7.47	-	4.708	357.1	1654.2	221.4	
61403030	55mph Depletion #2	HS	03/05/14	38	28.5	29.6	SM	850	72	Closed	Closed	11.19	-	8.300	-	2610.4	233.3	
Full charge test summary												Totals	79.53		53.6		19226	
Re-charging information				35	Ambient temperature during charge [C]				Charger integrated current [AC Ah]				95.89					
Level: 2												Charger integrated power [AC Wh]				22482		

Summary notes

For 95F (35C) testing, only the second (prepped) SC03 phase test results are presented in this summary, though the first SC03 is included for the full charge tests total. Testing was conducted using a modified SAE J1634 Multi Cycle Test Methodology.

During UDDS cycles a key off/on event was conducted at ~1025-1035 seconds in order to avoid a fault code (decel G sensor) which disabled regenerative braking.

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.

* Target Coefficients developed during AVTE coast down testing

Advanced Powertrain Research Facility Data referencing:

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