



Downloadable Dynamometer Database (D³)- Test Summary Sheet



2010 SmartCar MHD

Vehicle Architecture	Conventional- Start Stop
Document Date	11/20/2012
Revision Number	1
Notes: - Vehicle equipped with with Start Stop system	

Vehicle Setup Information

Test Cell Location	APRF- 4WD
Vehicle Dynamometer Input	
Test weight [lb]	2094
Target A [lb]	20.15
Target B [lb/mph]	0.2061
Target C [lb/mph ²]	0.014
Test Fuel Information	
Fuel type	EPA Tier II EEE Gasoline
Fuel density [g/ml]	0.741
Fuel Net HV [BTU/lbm]	18459

Test ID [R#]	Cycle	Cold start (Cst) Hor start [HS]	Date	Test Cell T Temp [C]	Test Cell RH [%]	Test Cell Baro [In/Hg]	Vehicle cooling fan speed: Speed Match [S/M] or constant speed [CS]	Solar Lamps [W/m ²]	Vehicle Climate Control settings	Hood Position [Up] or [Closed]	Window Position [Closed] or [Down]	Cycle Distance [mi]	Cycle Fuel economy [mpg] (Modpl)	Cycle HV battery Integrated net current [DC Ah]	Cycle HV battery Average Zero crossing Voltage [V]	Cycle HV battery Net Energy [DC kWh]	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																	
61012019	UDDS CS	CSt	12/07/2010,	22.59	27.78	29.55	Cst spd	Off	Off	Up	Down	7.46	35.5				
61012020	UDDS HS	HSt	12/07/2010,	22.23	28.51	29.55	Cst spd	Off	Off	Up	Down	7.46	38.4				
61012021	Highway	HSt	12/07/2010,	23.00	26.79	29.54	Cst spd	Off	Off	Up	Down	10.26	60.1				
61012022	US06	HSt	12/07/2010,	22.84	26.14	29.54	Cst spd	Off	Off	Up	Down	7.98	40.5				
61012034	Steady State Speed	HSt	12/08/2010,	23.04	27.05	29.61	Cst spd	Off	Off	Up	Down						
Full charge test summary																	
Re-charging information			N/A Ambient temperature during charge			HV battery integrated current [DC Ah]			N/A								
Level:						Charger integrated current [AC Ah]			N/A								
						HV battery integrated power [DC kWh]			N/A								
						Charger integrated power [AC kWh]			N/A								

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 referenced from AVTA track testing

Advanced Powertrain Research Facility Data referencing:

- This data has originated from the Argonne National Laboratory D³ website. http://webapps.anl.gov/vehicle_data/
- The purpose of this information is to provide advanced technology vehicle chassis dynamometer test data for the engineering community. Mostly comprised of vehicle benchmarking test results, it is intended for the better understanding of the technology and for education. Data from this website may not be used as a source for publication or profit without consent of Argonne National Laboratory.
- Please contact d3info@anl.gov for questions, comments or inquiries.