



Downloadable Dynamometer Database (D³)- Test Summary Sheet

2013 Hyundai Sonata

Vehicle architecture	Conventional
Document date	9/28/2012
Revision Number	1
Notes:	

Vehicle Setup Information

Test cell location	2WD
Vehicle dynamometer Input	
Test weight [lb]	3500
Target A [lb]	29.45
Target B [lb/mph]	0.5673
Target C [lb/mph ²]	0.0101
Test Fuel Information	
Fuel type	Tier II EEE HF437
Fuel density [g/ml]	0.743
Fuel Net HV [BTU/lb]	18344



Test ID [#]	Cycle	Cold start (Cst) Hot start (HSt)	Date	Test Cell Temp [C]	Test Cell RH [%]	Test Cell Baro [In/Hg]	Vehicle cooling fan speed, Speed Match [RPM] 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] [Fuel scale]	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 kWh/mi]
Test information			Test cell information			Test Cell setup		Vehicle setup				Electric energy consumption					
Test sequence purpose: Standard testing																	
71208004	UDDS CS	CSt	08/03/12	21.13	67.37	29.15	Cst spd	Off	Off	Up	Down	7.44	25.3				
71208005	UDDS HS	HSt	08/03/12	21.19	64.09	29.15	Cst spd	Off	Off	Up	Down	7.45	28.6				
71208007	Highway	HSt	08/03/12	21.23	60.50	29.15	Cst spd	Off	Off	Up	Down	20.50	46.6				
71208008	US06	HSt	08/03/12	21.34	58.70	29.15	Cst spd	Off	Off	Up	Down	8.00	25.8				
71208014	Steady State Speed	HSt	08/03/12	21.99	54.94	29.14	Cst spd	Off	Off	Up	Down						
Full charge test summary												Totals	43.39				
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 for EPA

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.