

September 9<sup>th</sup>, 2010

AEM Induction Systems  
2205 126<sup>th</sup> Street, Unit A  
Hawthorne CA, 90250  
USA

Attention:

RE: Hyundai Genesis 2.0L I-4 Turbo Configuration: AEM Intake / AEM Exhaust

**VEHICLE NOISE TEST REPORT**  
SAE J1169 / SAE 1492  
(Stationary)

Manufacturer: Hyundai

Test Date: September 9<sup>th</sup>, 2010

1. Vehicle type: Coup

Model: Genesis I-4 Turbo

Engine: 2.0 L I 4 Cylinder Gasoline

Exhaust System ID: 600-0600

VIN:

Maximum rated RPM: 6,000

Gear used for testing: N

2. Names of persons conducting test:

Instruments: C. Real

Driver: C. Real

Data: C. Real

Observer: V. Real

3. Test location:

**DPS Technical Inc. 1160 Dewey Way, Suite D, Upland, CA  
91786 USA**

The test site utilized is a flat level open area paved in asphalt concrete. There are no large sound reflecting surfaces within the required distance. Test site conforms to test protocol.

4. Environmental Conditions:

Wind speed and ambient noise level measured on the same day as the test and representative of conditions during the test.

Wind speed: Variable, 0-1 MPH Temperature: 67° (F)

Ambient sound level: Less than 55 dBA (S)

5. Description of the sound level meter:

Primary

Type: Larson Davis LxT1

Serial #: 0001009

Calibrated: 4/13/10

Performance Level: ANSI S1.4-1985, S1.43-1997, S1.25 -1991, S1.11-2004,  
IEC61672-2002, 60651-2001, 60804 -2000, 61260-2001, 61252-2002

Calibration verified: 9/9/10 Pre test / Post test

Verification procedure as per DPS Technical Inc. 94 dB / 114 dB @ 1000 Hz.

Additional accuracy verification @ 74, 84, 94, 104, 114 dB, frequency sweep of 125 Hz – 4000 Hz. Maximum observed variation on 9-9-10 .1 dB

Microphone Cartridge Assembly

Primary Type: PCB 377A02

Serial #: 100009

Calibrated: 4/14/10

Windscreen: Bruel & Kjaer # UA 0237 (90mm)

Calibration Note: Sound meter, microphone, preamplifier, extension cable & computer display performance verified as individually as well as an assembly prior to testing and after testing.

6. Description of the external acoustic calibrator:

Primary

Type: Quest Model: CA-15  
@ 125,250,500,1000,2000 HZ

Multi frequency calibrator 110 dB

Serial#: S9100025

Calibrated: 4/14/10

Instruments Calibrated by: Odin Metrology      See attached information.

7. The engine speed indication / tachometer were calibrated and meet the requirements of SAE J1169 and SAE J1492 verification of accuracy was confirmed utilizing DPS Technical calibrated instrumentation. (See Appendix 1, equipment list)

8. Vehicle preparation:

Vehicle tested as delivered. Air cleaner and all body work in place.

The vehicle and each exhaust system was given a minimum of 2 minute warm up exhaust canister temperatures, minimum of 90° F.

The sound measurement microphone was placed in a tripod mounted fixture with the location verified prior to each test.

Reported sound readings are the result of multiple confirmatory sound readings taken within seconds of each other.

Reported sound level measurements dB, A-weighted, sampling rate as specified in test procedure, minimum of 7 samples taken.

Data reported is confirmed accurate without corrections.

9. Measurements

Microphone location was as specified as per section 7.3 of SAE J1169, and Section 6.0 SAE 1492.

The microphone was oriented per manufacturer's instructions. It is a free field microphone.

All measurement procedures were performed exactly as specified in SAE J1169, rev. May 1998., SAE J1492, revised October, 2008.

SAE J1169  
 DATA SAE J1169

Model: Hyundai  
 VIN:  
 Test Date: September 9<sup>TH</sup>, 2010

Results SAE J1169

\*\* Additionally reported engine speeds for engineering purposes only.

Configuration	Engine Test Speed RPM	Reported Sound Level dBA (S) Left Side	Reported Sound Level dBA (S) Right Side	Ambient Sound Level dBA (S) 55	Temp (°F) 67	Wind (MPH) 0-1
	Idle	69	67.9			
	700 RPM					
	1000	71.9	73			
	1500	73.7	78.4			
	2000	80	80			
	2500	81.1	77.7			
	3000	78.6	79.6			
	3500	78.3	78.1			
	4000	84.2	84.2			
	*4500	86.5	82.3			
	3750	83.4	82.6			
	*75%	85.5	87.5			

Reported sound level as specified by SAE J1169: 84.4 dBA (S)  
 (Section 7.3)

\*\* Additionally reported engine speeds for engineering purposes only.

DATA SAE J 1492

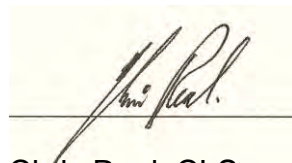
Model: Hyundai  
 VIN:  
 Test Date: September 9<sup>TH</sup>, 2010

Results: SAE 1492  
 dB A Fast Rev, back to Idle

Configuration	Engine Test Speed RPM	Reported Sound Level dBA (F) Left Side	Reported Sound Level dBA (F) Right Side	Ambient Sound Level dBA (S) 55	Temp (°F) 67	Wind (MPH) 0-1
	Idle	67	67			
	700 RPM					
	1000	71.9	72.9			
	1500	78	81.8			
	2000	78.7	83.1			
	2500	83.5	82.5			
	3000	82.2	85			
	3500	83.2	83			
	4000	87.3	86.1			
	*4500	84.8	85.5			
	3750	86.4	84.7			
	*75%	87.4	84.7			

Reported Sound level as specified by 1492: 87.4 dBA (F)  
 (Section 8.2)

I certify that I have personally conducted the tests described herein, and reviewed the test results, and verify that this report is a true recodation of the results obtained.



Chris Real, CLS  
 President  
 DPS Technical, Inc.

Date: September 10, 2010

## Appendix I

### Instrumentation

#### Primary Instrumentation

##### Sound Level Meter

Type: Larson Davis LxT1                      Serial #: 0001009                      Calibrated: 4/14/10

Performance Level: ANSI S1.4-1985, S1.43-1997, S1.25 -1991, S1.11-2004,  
IEC61672-2002, 60651-2001, 60804 -2000, 61260-2001, 61252-2002

Calibration verified: 6/12/08 Pre test / Post test  
Verification procedure as per DPS Technical Inc. 94 dB / 114 dB @ 1000 Hz.  
Additional accuracy verification @ 74, 84, 94, 104, 114 dB, frequency sweep of  
250 Hz – 4000 Hz.

##### Microphone Cartridge Assembly

###### Primary

Type: PCB 377A02                      Serial #: 100009                      Calibrated: 4.14/10

Windscreen: Bruel & Kjaer # UA 0237

###### Primary Calibrator

Type: Quest                      Model: CA-15                      Serial#: S9100025  
Calibrated: 4/14/10

#### Confirming Instrumentation:

##### Confirming Sound Level Meter:

Type: Bruel & Kjaer 2240                      Serial #: 00372538  
Calibrated: 9/9/10

Calibration Verified:                      9/9/10 Pre test / Post test as per DPS  
Technical Inc.

##### Confirming Calibrator

Model: Bruel & Kjaer 4188 Serial #: 2426961                      Calibrated: 9/9/10  
Calibration Verified:                      9/9/10 Pre test / Post test

**DPS Technical Inc.**  
1160 Dewey Way, Suite D  
Upland, CA 91786 USA

Web: [www.chemhelp.com](http://www.chemhelp.com)  
Office (909) 981-5228  
FAX (909) 982-3747

## Engine Speed Indicator

Primary:  
OBD II Autoxray Ez-scan 4000 DPS ID# 70437

Confirming  
Type: Treysit Resonating Reed Tachometer                      Serial # DPS N4R

Treysit factory calibration checked and certified by the Federal Standards Laboratory, Braunschweig, Germany Tolerance 1-2%.

Factory calibration verified by DPS Technical Inc.  
Calibrated: 9/1/10    Confirmed: 9/9/10

## Environmental

Air Temperature / Wind Speed  
Type: Extech              Model: 45158                      Serial #: 08474  
Type: Extech              Model: 407113                      Serial #: Z186714

**Appendix II**  
Photos

Front



Rear



Left



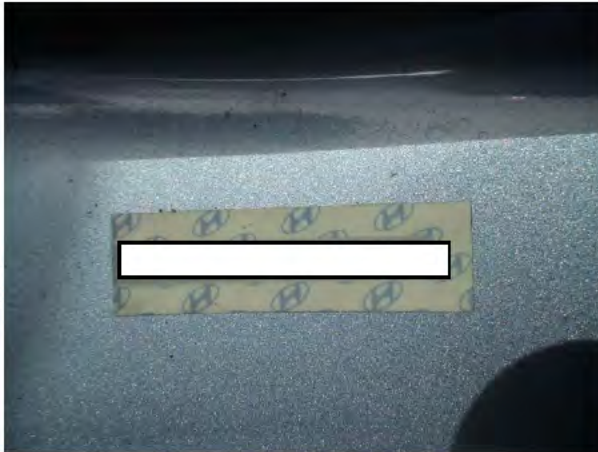
Right



VIN

Engine





**Intake**



**Exhaust**



**Test Site / Instruments**

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