 <b>AIR RESOURCES BOARD</b>	<b>HONDA MOTOR CO., LTD.</b>	<b>EXECUTIVE ORDER M-002-0536</b> New On-Road Motorcycles

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

**IT IS ORDERED AND RESOLVED:** That the engine and emission control systems produced by the manufacturer are certified as described below for four-stroke gasoline-powered motorcycles. Production vehicles shall be in all material respects the same as those for which certification is granted. **The manufacturer shall ensure that character "C" or "3" is not used in the eighth (8<sup>th</sup>) position of the vehicle identification number (VIN) of all vehicles in the engine family listed below. Violation of this VIN provision may result in incorrect registration of the vehicles.**

MODEL YEAR	ENGINE FAMILY	EVAPORATIVE FAMILY	ENGINE DISPLACEMENT (cc)	CLASS
2007	7HNXC0.58ABA	7HNXE0024TZH	583	III
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>		<b>VEHICLE MODELS</b> (equivalent inertia mass in kilograms, kg)		* = not applicable
PAIR		VT600C (320 kg) VT600CD (320 kg)		
<b>ABBREVIATIONS:</b> EM=engine modification TWC=three-way catalyst OC=oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2 (prefix)=parallel (2) (suffix)=in series				

The following are the exhaust hydrocarbons plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) standards, or designated HC+NOx standard as applicable, and certification levels in grams per kilometer (g/km), and evaporative standard and certification level in grams per test (g/test) for this engine/evaporative family. The designated HC+NOx standard, as applicable, shall be listed on the permanent tune-up label.

HC+NOx (g/km)				EARLY COMPLIANCE CREDIT MULTIPLIER		EVAPORATIVE (g/test)	
CORPORATE AVERAGE STANDARD	DESIGNATED STANDARD	(DIRECT) STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL
*	*	1.4	1.1	12	7	2.0	0.8

**BE IT FURTHER RESOLVED:** That certification to the designated HC+NOx standard listed above, as applicable, is subject to the following terms, limitations and conditions:

The designated HC+NOx standard shall be the exhaust emission limit for this engine family and cannot be changed during the model year. It serves as the HC+NOx exhaust standard applicable to this engine family for determining compliance with Title 13, California Code of Regulations, Sections 1958(b) and 2101.

**BE IT FURTHER RESOLVED:** That for certification to the HC+NOx standard, or designated standard as applicable, listed above, the listed vehicle models are granted an early-compliance credit multiplier as indicated above pursuant to Title 13, California Code of Regulations, Section 1958(g).


**BE IT FURTHER RESOLVED:** That the Executive Officer has been provided all materials required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Sections 2035 et seq.).

**BE IT FURTHER RESOLVED:** That because the listed motorcycles are certified to 0.2 grams per test or more below the applicable evaporative standard, the vehicles are exempt from complying with the Air Resources Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" pursuant to Executive Order G-70-16-E.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

**This Executive Order is only granted to the engine family and model-year listed above. Vehicles in this family that are produced for any other model-year are not covered by this Executive Order.**

Executed at El Monte, California on this 1<sup>st</sup> day of June 2006.

  
 Allen Lyons, Chief  
 Mobile Source Operations Division

## Motorcycle Engine Family Information Form

1. Manufacturer: Honda Motor Co., Ltd.
2. Certification contact Person, address, phone, and fax:

Julie Barkow-Peck, Certification Assistant, Certification Department  
 American Honda Motor Co., Inc. Mail Stop 500-2C-8A  
 1919 Torrance Blvd., Torrance CA 90501-2746  
 Telephone: (310) 783-3417 Fax: (310) 783-3510 E-Mail: Julie\_Peck@ahm.honda.com

3. Model Year: 2007
4. Process Code: New  
(new, correction, revised, r/c, f/f, etc.)
5. Engine Family: 7HNXC0.58ABA  
 50s Eng. Code: N/A  
 49s Eng. Code: 7CD1  
 Calif. Eng. Code: 7CD2
6. Emission Control System: PAIR
7. Calif. <sup>Direct</sup>~~Designated~~ Standard(g/km):  N/A  
 HC  
 HC+NOx -1.4
8. Project Annual Sales:
9. New Technology:  Yes  No  
 If yes, cite the correspondence or reference  
 the submittal document: N/A
19. Adjustable Parameters:

10. Displacement(cc): 583
11. Number of Cylinder: 2
12. Cylinder Arrangement: 52 Degrees V-2
13. Cylinder Head Configuration: OHV/OHC
14. Type of Cooling: Liquid Cooled
15. Combustion Cycle: Otto
16. Method of Aspiration: Natural
17. Fuel System: Carburetor
18. Number of Catalytic Converters: N/A

Parameters (s)	Adjustable Range (or N/A)	Tamper Resistance Method (or N/A)	Method Approved
Carburetor Pilot Screw	Not Limited	Recess "D" shaped head that requires a special tool	Approved by EPA on 09/03/91

20. AECDs in the Emission Control System:

Exhaust System	Evaporative System
AECDs In System: <u>PAIR Valve</u> <u>TP Sensor</u> <u>ICM</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	AECDs In System: <u>EVAP CAV Control Valve</u> <u>Evap Canister Purge Valve</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Processed by *Stam Hada* 5-22-06

Engine Family: 7HNXC0.58ABA

## Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family?  Yes  No  
 a) If yes, indicate family name: 6HNXC0.58CBA  
 b) Is the family being certified identical to the family from which the data is being carried over? Yes
28. Model Designation of Test Vehicle: VT600C
29. Test Information Number: 406
30. Vehicle ID: 04CD-01
31. Service Accumulation Duration (km): 15015
32. Maximum Rated Power (kW @ RPM): 28.3 @ 6500
33. Displacement (cc): 583
34. Certification Fuel: Indolene
35. Test Data Set: 1
42. Exhaust Emission Deterioration Factor
36. Road Load (nt): 139.5
37. Inertia Mass (kg): 320
38. N/V: 41.6
39. Evap Bench Test Method Approval:  
 Data: March 9, 1983  
 Reference: 17.01.01-1 (ARB) &  
 17.01.02-2 (ARB) thru  
 17.01.02-12 (ARB) in 1999 Model  
 Year Application
40. Unscheduled Maintenance:  Yes  No
41. If yes Vehicle Log Provided:  
 See Section 7 page 14

Test Number	System Kilometers	Emission Values		
		HC	CO	NOx
1	3519	0.46	7.4	0.47
2	6415	0.50	7.7	0.45
3	6445	0.51	7.6	0.47
4	9615	0.48	7.4	0.46
5	12818	0.47	7.3	0.46
6	12848	0.49	7.3	0.51
7	15015	0.54	7.3	0.49
Interpolated Values at <u>15,000</u> km:		HC = <u>0.5079</u>	CO = <u>7.2877</u>	NOx = <u>0.4867</u>
Extrapolated Values at <u>30,000</u> km:		HC = <u>0.5492</u>	CO = <u>6.9018</u>	NOx = <u>0.5246</u>

Check One:	
Regular DF	<input checked="" type="checkbox"/>
Modified DF	<input type="checkbox"/>
If Different Vehicle Specify Vehicle ID	

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4
g/km	CO	7.3			
g/km	CO <sub>2</sub>	73.9			
g/km	HC	0.54			
g/km	NOx	0.49			
g/test	Evap.	0.61			

Deterioration Factors	
(X)	1.000 (0.947)
(X)	1.081
(X)	1.078
(+)	0.2

44. Certification Levels:

g/km	CO (EPA)	7.3			
g/km	CO (ARB)	7			
g/km	HC+NOx	1.1			
g/test	Evap.	0.8			

( ): Calculated Value

## Evaporative Emission Information

- |  |  |
|--|--|
| 45. Evaporative Family: 7HNXE0024TZH<br>46. Number of Evap. Canisters: 1<br>47. Design Working Capacity(g): 23.5<br>48. Configuration: Open Bottom<br>49. Number of storage Areas: 1<br>50. Fuel Reservoir Volume(cc): 94<br>51. Vent System Configuration: Internal<br>52. Nominal Tank Capacity(liter): 11.0 | 53. Engine Displacement Class: III<br>54. Storage Medium Composition: Charcoal<br>55. Evap. Canister Medium Volume(cc): 570 +/- 10<br>56. Evap. Family Sales:<br>57. Engine Code: 7CD2<br>58. Evap. Emission Family Code: 07ZH<br>59. Evap. Emission Family Group: T<br>60. Overall Evap D.F.= 0.2 |
|--|--|

**Bench DF**

61. Test Vehicle ID: 990C-01  
 62. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3500	0.21
2	3500	0.21
3	3500	0.22
4	15000	0.40
5	15000	0.28
6	15000	0.26
7		
Interpolated Values at 15,000 km: =		<u>0.313</u>
Extrapolated Values at 30,000 km: =		<u>0.444</u>
Bench Test D.F. =		<u>0.13</u>

Check One:	
Regular DF	<input checked="" type="checkbox"/>
Modified DF	<input type="checkbox"/>
If Different Vehicle Specify Vehicle ID	

**Vehicle DF**

63. Test Vehicle ID: 990C-01  
 64. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3602	0.20
2	6385	0.69
3	6415	0.43
4	9755	0.70
5	12954	0.73
6	12984	0.44
7	15013	0.61
Interpolated Values at 15,000 km: =		<u>0.673</u>
Extrapolated Values at 30,000 km: =		<u>1.034</u>
Vehicle Test D.F. =		<u>0.36</u>

Engine Family: 7HNXC0.58ABA

**Motorcycle Model Summary Form**

65. Model Designation	66. Worst Case	67. Disp. (cc)	68. Bore / Stroke (mm)	69. Basic Ignition Timing (degrees)	70. Power (kW)	71. Rated Speed (RPM)	72. Rated Torque (Nm)	73. Rated Speed (RPM)
VT600C	X	583	75.0 / 66.0	4.5 (BTDC)	28.3	6500	50	3500
VT600CD		583	75.0 / 66.0	4.5 (BTDC)	28.3	6500	50	3500

65. Model Designation	74. EIM (kg)	75. Loaded Vehicle Weight Range (kg)	76. Road Load (nt)	77. Total Vehicle Mass (kg)	78. Full Weight with All Factory Options (kg)	79. Trans. Type	80. N/V
VT600C	320	316 - 325	139.5	325	325	M4	41.6
VT600CD	320	316 - 325	139.5	325	325	M4	41.6

Item 78:  
Curb weight, Rider weight, Production tolerance & Weight of optional accessories