

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER M-1-293
Relating to Certification of New Motorcycles

KAWASAKI HEAVY INDUSTRIES, LTD.

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-45-9;

IT IS ORDERED AND RESOLVED: That 2000 model-year Kawasaki Heavy Industries, Ltd. exhaust emission control systems are certified as described below for four-stroke gasoline-powered motorcycles:

<u>Engine Family</u>	<u>Displacement Cubic Centimeters</u>	<u>Class</u>	<u>Exhaust Emission Control Systems & Special Features</u>
YKAXC.599AAC	599	III	Pulsed Secondary Air Injection Oxidation Catalytic Converter

Vehicle models and transmissions are listed on the attachment. Production motorcycles shall be in all material respects the same as those for which certification is granted.

The following are the exhaust emission standards and exhaust emission certification values for this engine family. The designated hydrocarbons standard shall be listed on the permanent tune-up label:

<u>Hydrocarbon Standards (Corporate Average)</u>	<u>Hydrocarbons (Designated)</u>	<u>Hydrocarbons (Certification)</u>	<u>Carbon Monoxide (Standard)</u>	<u>Carbon Monoxide (Certification)</u>
<u>Grams per Kilometer</u>	<u>Grams per Kilometer</u>	<u>Grams per Kilometer</u>	<u>Grams per Kilometer</u>	<u>Grams per Kilometer</u>
1.0	1.0	0.6	12	2

BE IT FURTHER RESOLVED: That the above-described certification is subject to the following terms, limitations and conditions:

The above designated hydrocarbons standard shall be the exhaust limit for this engine family during the model year and therefore cannot be redesignated by the manufacturer. It represents the hydrocarbons exhaust emission standard applicable to this engine family that shall be applied when determining compliance of any motorcycle within this engine family pursuant to Section 2101 of Title 13, California Code of Regulations. It will also be used to determine compliance with the above corporate average hydrocarbons standard as required per Section 1958(b), Title 13 of the California Code of Regulations.

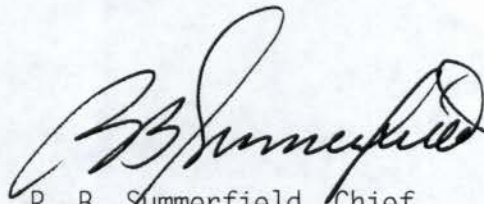
BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2035 et seq.).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles."

BE IT FURTHER RESOLVED: That these motorcycles are found exempt from compliance 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.

Executed at El Monte, California this 4th day of November 1999.



R. B. Summerfield, Chief
Mobile Source Operations Division

Motorcycle Engine Family Information Form

1. Manufacturer: KAWASAKI HEAVY INDUSTRIES, LTD.

0.45

2. Certification Contact Person, address, phone, and fax:

Jeffrey D. Shetler / David Corey
 Kawasaki Motors Corp., U.S.A.
 9950 Jeronimo Road, Irvine, CA 92618-2084
 Tel : 949-770-0400 Fax : 949-460-5602

3. Model Year: 2000

4. Process Code: New
 (new, correction, revision, r/c, f/f. etc.)

5. Engine Family: YKAXC.599AAC
 50s Engine Code: -
 49s Engine Code: -
 Calif. Engine Code: ZX600J-AC1

6. Emission Control System: EM+PAIR+OC

7. Calif. Designated Standard: 1.0 gm/km

8. Projected Annual Sales: **CONFIDENTIAL**

9. New Technology Yes No
 If yes, cite the correspondence or reference the
 submittal document: _____

10. Displacement: 599 cm³

11. Number of Cylinders: 4

12. Cylinder Arrangement: Inline-4

13. Cylinder Head Configuration: DOHC

14. Type of Cooling: Liquid

15. Combustion Cycle: 4

16. Method of Aspiration: Natural

17. Fuel System: Carburetor

18. Number of Catalytic Converters: 2

19. Adjustable Parameters:

Parameter(s)	Adjustable Range (or NA)	Tamper Resistance Method (or NA)	Method Approved
Air adjuster on carburetor (Air/Fuel Ratio)	NA	an aluminum cap is placed over the adjusting screw.	Carry over

20. AECDs In the Emission Control Systems:

Exhaust System	Evaporative System
AECDs In System: <div style="text-align: center; margin-top: 10px;"> <u>EM, PAIR and OC</u> _____ _____ _____ _____ </div>	AECDs In System: <div style="text-align: center; margin-top: 10px;"> <u>Sealed loop with canister</u> _____ _____ _____ </div>

Application Processed by: Joseph Jegede

Date: 11/3/99

Reviewed by: *[Signature]*

Date: 11/3/99

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? Yes No
 a) If yes, indicate family name: WKAXC.599AAC
 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: <u>ZX600-G1</u>
29. Test Information Number: <u>98-1</u>
30. Vehicle ID: <u>JKAZX4G11WA000014</u>
31. Service Accumulation Duration: <u>15000</u> (km)
32. Maximum Rated Power: <u>78.7</u> kW @ <u>12000</u> RPM
33. Displacement: <u>599</u> cc
34. Certification Fuel: <u>Indolene: 91-95 RON</u>
35. Test Data Set: <u>Test 1</u> | 36. Road Load: <u>141.6</u> nt at 65 kph
37. Inertia Mass: <u>330</u> kg
38. N/V: <u>50.16</u>
39. EVAP. Bench Test Method Approved:
Date: <u>2/23/1983</u>
Reference: <u>84ARB-03</u>
40. Unscheduled Maintenance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
41. If yes, Vehicle Log provided: _____ |
|---|--|

42. Exhaust Emission Deterioration Factors:

Test Number	System Kilometers	Emission Values	
		HC	CO
1	3512	0.51	1.3
2	6012	0.47	1.9
3	6101	0.42	1.0
4	12012	0.45	1.1
5	12101	0.45	0.9
6	15012	0.39	1.7
7 *1	3500	0.63	1.5
Interpolated Values at <u>15000</u> km:		HC = <u>0.5068</u>	CO = <u>1.4945</u>
Extrapolated Values at <u>30000</u> km:		HC = <u>0.3869</u>	CO = <u>1.4312</u>

Check one:	
Regular DF	X
Modified DF	
If different vehicle specify vehicle ID	

*1. Official test of exhaust emission level for ZX600G.

This official emission test was performed by the letter 97ARB-20 of May 22, 1997 from Mr. Scott Patten, KMC confirming EPA's approval of Kawasaki's abbreviated certification program.

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4
g/km	CO	1.5			
g/km	CO ₂	119.0			
g/km	HC	0.63			
g/test	Evap.	1.321			

Deterioration Factors	
(X)	1.000

(X)	1.000
(+)	0.146

44. Certification Levels:

g/km	CO	<u>2</u>			
g/km	HC	<u>0.6</u>			
g/test	Evap.	1.467			

Engine Family: YKAXC.599AAC**Evaporative Emission Information**

45. Evaporative Family: YKAXC17.0A05
46. Number of Evap. Canisters: 1
47. Design Working Capacity: 17.0 g
48. Configuration: Sealed loop
49. Number of Storage Areas: 1
50. Fuel Reservoir Volume: 3.3 liters
51. Vent System Configuration: Sealed loop
52. Nominal Tank Capacity: 18 liters
53. Engine Displacement Class: III
54. Storage Medium Composition: Activated carbon
55. Evap. Canister Medium Volume: 400cm³
56. Evap. Family Sales: 650
57. Engine Code: ZX600A-AC1
58. Evap. Emission Family Code: YKAXC17.0A05
59. Evap. Emission Family Group: CV34-001
60. Overall Evap D.F. = 0.146
•Evap certification level = 1.467 g/test

Bench DF

61. Test Vehicle ID: JKAZX4A19FA000013
62. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3500	1.045
2	15000	1.065
3		
4		
5		
6		
7		
Interpolated Values at <u>15000</u> km: = <u>1.065</u>		
Extrapolated Values at <u>30000</u> km: = <u>1.0911</u>		
Bench Test D.F. = <u>0.026</u>		

Check One:	
Regular DF:	X
Modified DF:	
If different vehicle specify the vehicle ID	

Vehicle DF

63. Test Vehicle ID: JKAZX4A19FA000013
64. Test Results.

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3693	1.154
2	5162	1.066
3	5191	1.080
4	10077	0.913
5	10106	1.391
6	15012	1.321
7		
Interpolated Values at <u>15000</u> km: = <u>1.5389</u>		
Extrapolated Values at <u>30000</u> km: = <u>1.2741</u>		
Vehicle Test D.F. = <u>0.265</u>		