State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER M-1-278
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 1999 model-year Kawasaki Heavy Industries, Ltd. exhaust emission control systems are certified as described below for four-stroke gasoline-powered motorcycles:

Engine Family	Displacement Cubic Centimeters	Class	Exhaust Emission Control Systems & Special Features
XKAXC1.47AAD	1470	III	Sequential Multiport Fuel Injection 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:

Hydrocarbon Standards (Corporate Average) Grams per Kilometer	(Designated) Grams per Kilometer	Hydrocarbons (Certification) Grams per Kilometer	Carbon Monoxide (Standard) Grams per Kilometer	(Certification) Grams per Kilometer
1.4	0.8	0.6	12	6

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 16th day of December 1998.

John Kowalski for

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Family: XKAXC1.47AAD

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)
VN1500J	Yes	1470	102X90	5°/950 rpm	48.5	5000	115	2500

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
VN1500J	460	460	166.0	320	385	M-5	26.49

M-1-278

Motorcycle Engine Family Information Form

0.5

1. Manufacturer: KAWASAKI HEAVY INDUSTRIES, LTD.

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

Jeffrey D.Shetler / Scott Patten
Kawasaki Motors Corp., USA.
9950 Jeronimo Road, Irvine. CA 92618-2084
Tel : 949-770-0400 Fax : 949-460-5602

3. Model Year: 1999

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

5. Engine Family: XKAXC1.47AAD
50s Engine Code: –
49s Engine Code: –
Calif. Engine Code: VNT50J-AC1

6. Emission Control System: SFI+PAIR+OC

7. Calif. Designated Standard: 0.8 gm/km

8. Projected Annual Sales: [redacted]

9. New Technology X Yes ___ No
If yes, cite the correspondence or reference the submittal document: Sec. 4

10. Displacement: 1470cm³

11. Number of Cylinders: 2

12. Cylinder Arrangement: Vee-Twin

13. Cylinder Head Configuration: SOHC

14. Type of Cooling: Liquid

15. Combustion Cycle: 4

16. Method of Aspiration: Natural

17. Fuel System: Fuel Injected

18. Number of Catalytic Converters: 1

19. Adjustable Parameters:

Parameter(s)	Adjustable Range (or NA)	Tamper Resistance Method (or NA)	Method Approved
Air adjuster on throttle body (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:	SFI, PAIR and OC	AECDs In System:	Sealed loop with Canister

Application Processed by: Joseph Jegede Date: 12/15/98 Reviewed by: [signature] Date: 12/15/98

M-1-278

Engine Family: XKAXC1.47AAD

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? ___ Yes _X_ No
    a) If yes, indicate family name:_____
    b) Is the family being certified identical to the family from which the data is being carried over? ___

28. Model Designation of Test Vehicle: VN1500J

29. Test Information Number: 99-1

30. Vehicle ID: JKAVNAJ13XA000007

31. Service Accumulation Duration: 15000 (km)

32. Maximum Rated Power: 48.5 kW @ 5000 RPM

33. Displacement: 1470 cc

34. Certification Fuel: Indolene: 95～99 RON

35. Test Data Set: Test 1

36. Road Load: 166.0 nt at 65 kph

37. Inertia Mass: 460 kg

38. N/V: 26.49

39. EVAP. Bench Test Method Approved:
    Date: 2/17/87
    Reference: EO M-1-82

40. Unscheduled Maintenance: ___ Yes _X_ No

41. If yes, Vehicle Log provided: NA

42. Exhaust Emission Deterioration Factors:

		Emission Values	
Test Number	System Kilometers	HC	CO
1	3514	054	5.4
2	6012	0.49	5.4
3	6102	0.51	4.8
4	12013	0.49	5.4
5	12103	0.32	4.8
6	15028	0.57	5.7
7			
Interpolated Values at 15000 km:		**HC = 0.4652**	**CO = 5.3533**
Extrapolated Values at 30000 km:		**HC = 0.4102**	**CO = 5.6172**

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

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4		Deterioration Factors
g/km	CO	5.7				(X)	1.049
g/km	CO_2	157.1					----------
g/km	HC	0.57				(X)	1.000
g/test	Evap.	1.104				(+)	

44. Certification Levels:

g/km	CO	6			
g/km	HC	0.6			
g/test	Evap.	1.104			