State of California AIR RESOURCES BOARD

EXECUTIVE ORDER M-3-297 Relating to Certification of New Motorcycles

YAMAHA MOTOR CO., 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 Yamaha Motor Co., 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
YYMXC1.19GCA	1198	III	Engine Modification

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 St	tandards	Hydrocarbons	Carbon Monoxide		
(Corporate Average)			(Standard)	(Certification)	
Grams per Kilometer					
1.4	2.0	1.7	12	11	

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 _____ day of July 1999.

R. B. Summerfield, Chief

Mobile Source Operations Division

Section: 7 Page: 1 Issued: April 20, 1999 Revised:

Motorcycle Engine Family Information Form

Phone Na:	Michael J. Schmitt Division Manager Government Relations Yamaha Motor Corporat 6555 Katella Avenue Cypress, California (714) 761-7710 (714) 761-7303	Engineer Engineering on, U.S.A. Motorcycle Yamaha Moto 2500 Shinga Shizuoka Pr (0538) 37-4	Izumi Yamamoto Engineer Engineering Administration Divisio Motorcycle Operations Group Yamaha Motor Co., Ltd. 2500 Shingai, Iwata-shi Shizuoka Pref. 438-8501, Japan (0538) 37-4148 (0538) 37-4095			
Emission Contro Calif.Designate Projected Annua New Technology	Carry-over YYMXC1.19GCA Code: Code: De	13. Cylinder He 14. Type of Coo 15. Combustion 16. Method of A 17. Fuel System 18. Number of Co	ylinders: 4 rangement: V-4 (70°) ad Configuration: DOHC ling: Water Cycle: 4 spiration: Natural			
Parameter(s	the state of the s	Tamper Resistance Method (or NA)	Method Approved			
AECDs In the Em Exhaust System AECDs In System	nission Control Systems	Evaporative System AECDs In System:				

Processed by: K. Pryor Date: 6/23/99 Reviewed by: Lu Gan Date: 6/30/90

Section: 7 Page: 4 Issued: April 20, 1999

Revised:

Engine Family: YYMXC1.19GCA

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? Ves No
a) If yes, indicate family name: JYA119844W8

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: VMX12C

29. Test Information Number: 2WF

30. Vehicle ID: JYA1UR001GA000098

31. Service Accumulation Duration: 3 months

32. Maximum Rated Power: 99.3 kW @ 8000 RPM

33. Displacement: 1198 cc

34. Certification Fuel: Unleaded Gasoline

35. Test Data Set: 6

36. Road Load: 151.7 NT at 65km/h

37. Inertia Mass: 380 kg

38. N/V: 40.6

39. EVAP. Bench Test Method Approved:

Date: January 12, 1982

Reference:

40. Unscheduled Maintenance: Ye

Yes v No

41. If yes, Vehicle Log provided:

42. Exhaust Emission Deterioration Factors:

		Emission Values		
Test Number	System Kilometers	HC	CO	
1	3512	1.68	10.2	
2	7197	1.61	10.7	
3	7227	1.54	10.1	
4	12880	1.69	9.5	
5	12910	1.61	10.7	
6	15059	1.66	10.6	
7				

Interpolated Values at 15000 km: HC= 1.6447 CO= 10.3240

Extrapolated Values at 30000 km: HC= 1.6822 CO= 10.3931

Regular D	
Modified If differ	ent vehicle
	ehicle ID

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4
g/km	СО	10.6			
g/km	CO2	132.0			
g/km	HC	1.66			
g/km	Evap.	1.21			

(×) Deterioration Factors

1.007

--
(×) 1.023

0.016

(+)

44. Certification Levels:

g/km	СО	11	
g/km	HC	1.7	
g/km	Evap.	1.2	37.73

Section: 7 Page: 6 Issued: April 20, 1999

Revised:

Engine Family: YYMXC1.19GCA

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)
VMX12C	V	1198	76.0 / 66.0	3	99.3	8000	117.7	6000
	1.00							
		11-11						

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
380		151.7	284	301.05	MT-5	40.6
	EIM (kg)	EIM Loaded (kg) Vehicle Weight Range (kg)	EIM Loaded Road (kg) Vehicle Load Weight (nt) Range (kg)	EIM Loaded Road Total Vehicle Weight Range (kg)	EIM Loaded Road Total Full Weight Weight (nt) Mass Factory Range (kg) (kg) (kg)	EIM Loaded (kg) Vehicle Load Vehicle Weight (nt) Mass (kg) (kg) Trans. Type