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State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER M-3-295  
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:

<u>Engine Family</u>	<u>Displacement Cubic Centimeters</u>	<u>Class</u>	<u>Exhaust Emission Control Systems &amp; Special Features</u>
YYMXC.649GEA	649	III	Pulsed Secondary Air Injection

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) Grams per Kilometer</u>	<u>Hydrocarbons (Designated) Grams per Kilometer</u>	<u>Hydrocarbons (Certification) Grams per Kilometer</u>	<u>Carbon Monoxide (Standard) Grams per Kilometer</u>	<u>Carbon Monoxide (Certification) Grams per Kilometer</u>
1.0	0.9	0.5	12	9

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 1<sup>st</sup> day of July 1999.



R. B. Summerfield, Chief  
Mobile Source Operations Division

### Motorcycle Engine Family Information Form

- 1. Manufacturer: YAMAHA
- 2. Certification Contact Person, address, phone and fax:

Name:	<u>Michael J. Schmitt</u> Division Manager Government Relations Yamaha Motor Corporation, U.S.A.	<u>Izumi Yamamoto</u> Engineer Engineering Administration Division Motorcycle Operations Group Yamaha Motor Co., Ltd. 2500 Shingai, Iwata-shi Shizuoka Pref. 438-8501, Japan
Address:	<u>6555 Katella Avenue</u> Cypress, California 90630	<u>2500 Shingai, Iwata-shi</u> Shizuoka Pref. 438-8501, Japan
Phone No.:	<u>(714) 761-7710</u>	<u>(0538) 37-4148</u>
Fax. No.:	<u>(714) 761-7303</u>	<u>(0538) 37-4095</u>

- 3. Model Year: 2000
- 4. Process Code: Carry-over
- 5. Engine Family: YYMXC. 649GEA  
50s Engine Code: v  
49s Engine Code: ---  
Calif. Engine Code: ---
- 6. Emission Control System: PAIR
- 7. Calif. Designated Standard: 0.9g/km
- 8. Projected Annual Sales:
- 9. New Technology --- Yes v No  
If yes, cite the correspondence or reference the submittal document:

- 10. Displacement: 649cc
- 11. Number of Cylinders: 2
- 12. Cylinder Arrangement: V-2 (70°)
- 13. Cylinder Head Configuration: OHC
- 14. Type of Cooling: Air
- 15. Combustion Cycle: 4
- 16. Method of Aspiration: Natural
- 17. Fuel System: Carburetor
- 18. Number of Catalytic Converters: N/A

19. Adjustable Parameters: N/A

Parameter(s)	Adjustable Range (or NA)	Tamper Resistance Method (or NA)	Method Approved

20. AECDS In the Emission Control Systems: N/A

Exhaust System AECDS In System:	Evaporative System AECDS In System:

Processed by: K. Pryor Date: 6/23/99

Reviewed by: [Signature] Date: 6/30/99

Engine Family: YYMXC.649GEA

### Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family?  Yes  No  
a) If yes, indicate family name: YYMXC.649GEA  
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: XVS650AC 36. Road Load: 143.6 NT at 65km/h  
29. Test Information Number: 5BN 37. Inertia Mass: 340 kg  
30. Vehicle ID: JYAVMO1YXWA000004 38. N/V: 39.6  
31. Service Accumulation Duration: 3 months 39. EVAP.Bench Test Method Approved:  
32. Maximum Rated Power: 29.4 kW @ 6500 RPM Date: January 12, 1982  
33. Displacement: 649 cc Reference:  
34. Certification Fuel: Unleaded Gasoline 40. Unscheduled Maintenance:  Yes  No  
35. Test Data Set: 6 41. If yes, Vehicle Log provided:

42. Exhaust Emission Deterioration Factors:

Test Number	System Kilometers	Emission Values	
		HC	CO
1	3561	0.52	8.3
2	7171	0.52	8.6
3	7200	0.51	8.3
4	13157	0.61	9.2
5	13187	0.52	8.1
6	15113	0.51	8.3
7	---	---	---

Interpolated Values at 15000 km: HC= 0.5449 CO= 8.5385  
Extrapolated Values at 30000 km: HC= 0.5837 CO= 8.7496

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	8.3			
g/km	CO <sub>2</sub>	87.0			
g/km	HC	0.51			
g/km	Evap.	0.44			

	Deterioration Factors
(X)	1.0247
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(X)	1.0713
(+)	0.0647

44. Certification Levels:

g/km	CO	9			
g/km	HC	0.5			
g/km	Evap.	0.5			

