State of California AIR RESOURCES BOARD

EXECUTIVE ORDER M-3-298 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
YYMXC.535GEA	535	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:

Hydrocarbon S [*] (Corporate Average) Grams per <u>Kilometer</u>	tandards (Designated) Grams per <u>Kilometer</u>	(Certification) Grams per Kilometer	(Standard) Grams per Kilometer	
1.0	0.6	0.4	12	8

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 $\frac{1}{\sqrt{R}}f$ day of July 1999.

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R. B. Summerfield, Chief

Mobile Source Operations Division

Section: 7 Issued : May 20, 19

Page:

Revised:

Motorcycle Engine Family Information Form

1.	Manuf	ac	turer:	YAMAHA
	-	-		

Address: 6555 Katella Avenue Cypress, California 90630 Phone No.: (714) 761-7710 Fax. No.: (714) 229-7940 3. Model Year: 2000 4. Process Code: Carry-over 5. Engine Family: YYMXC.535GEA Galif. Engine Code: 498 Engine Code: 11. Number of Cylinders: 2 Calif. Engine Code: 14. Type of Cooling: Air Calif. Designated Standard: 0.6g/km 8. Projected Annual Sales: 17. Fuel System: Carburetor 18. Number of Catalytic Converters: N/1 9. New Technology Yes V No If yes, cite the correspondence or reference the submittal document: 9. Adjustable Parameters: N/A Parameter(s) Adjustable Range (or NA) AECDs In the Emission Control Systems: N/A Exhaust System Evaporative System Evaporative System: Evaporative System: AECDs In System: Yamaha Motor Co., Ltd. 2500 Shingai, Iwata-shi Shizuoka Pref, 438-8501, Japan (0538) 37-4148 (0538) 37-4148 (0538) 37-4148 (0538) 37-4148 (0538) 37-4195 10. Displacement: 535cc 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/1 Parameter(s) Adjustable Range (or NA) Method Approved (or NA) AECDs In the Emission Control Systems: AECDs In System:		Michael J. Schmitt Division Manager Government Relations Yamaha Motor Corporat	Motorcy	r ring Administration Division cle Operations Group
Cypress, California 90630 Phone No: (714) 761-7710 Phone No: (714) 229-7940 3. Model Year: 2000 4. Process Code: Carry-over 5. Engine Family: YYMXC. 535GEA 50s Engine Code: V49s Engine Code: Calif. Engine Code: Calif. Engine Code: 13. Cylinder Head Configuration: OHC Calif. Designated Standard: 0.6g/km 8. Projected Annual Sales: 15. Combustion Cycle: 4 9. New Technology Yes VNO If yes, cite the correspondence or reference the submittal document: N/A Parameter(s) Adjustable Range (or NA) Tamper Resistance Method Method Approved AECDs In the Emission Control Systems: N/A Exhaust System Evaporative System	Address:	6555 Katella Avenue	Yamaha M	Motor Co., Ltd.
Phone No: (714) 761-7710 Fax. No: (714) 229-7940 3. Model Year: 2000 4. Process Code: Carry-over 5. Engine Family: YYMXC. 535GEA	71.	Cypress, California	90630 Shizuoka	D c
4. Process Code: Carry-over 5. Engine Family: YYMXC. 535GEA 50s Engine Code: V 49s Engine Code: V 13. 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/I 9. New Technology Yes V No 1 If yes, cite the correspondence or reference the submittal document: 10. DIsplacement: 535cc 11. Number of Cylinders: 2 12. 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/I 9. New Technology Yes V No 1 If yes, cite the correspondence or reference the submittal document: 10. Adjustable Parameters: Natural 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/I On Natural 18. Number of Cylinders: 2 19. Cylinder Arrangement: V-2 (70°) 18. Number of Cylinders: 2 19. Cylinder Arrangement: V-2 (70°) 19. Cylinder Arrangemeters: NATURE VIOLENCE VIOLENc		(714) 761-7710 (714) 229-7940	(0538) 3	37-4148
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Processed by: K. Pryor Date: 6/23/99
Reviewed by: Enton Date: 6/30/99 Date: 6/30/99

m-3-298

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

Revised:

Engine Family: YYMXC.535GEA

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? <u>v</u> Yes ____No a) If yes, indicate family name: <u>LYAO53542S6</u>

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: XV535C

29. Test Information Number: 3JC

30. Vehicle ID: JYA3JCC07LA002099

31. Service Accumulation Duration: 3 months

32. Maximum Rated Power: 33 kW @ 7500 RPM

33. Displacement: 535 cc

34. Certification Fuel: Unleaded Gasoline

35. Test Data Set: 6

36. Road Load: 133.4 NT at 65km/h

37. Inertia Mass: 290 kg

38. N/V: 51.1

39. EVAP. Bench Test Method Approved:

Date: January 12, 1982

Reference:

40. Unscheduled Maintenance: Yes v No

41. If yes, Vehicle Log provided:

42. Exhaust Emission Deterioration Factors:

		Emission Values		
Test Number	System Kilometers	HC	CO	
1	3536	0.44	7.2	
2	7214	0.39	7.8	
3	7243	0.39	7.7	
4	13143	0.40	8.3	
5	13173	0.41	7.9	
6	15021	0.42	7.7	
7				

Interpolated Values at 15000 km: HC= 0.4051 CO= 8.0426

Extrapolated Values at 30000 km: HC= 0.3955 CO= 8.8523

Regular		V
lodifie	d DF	
f diffe	erent	vehicle
pecify		

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4
g/km	CO	7.7			
g/km	CO2	84.7			
g/km	HC	0.42			
g/km	Evap.	0.72		+	

(x)

(X)

Factors	
1.1007	
0.9763 1.00	0
0.1617	

Deterioration

44. Certification Levels:

g/km	СО	8	
g/km	HC	0.4	
g/km	Evap.	0.9	

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

Revised:

Engine Family: YYMXC.535GEA

Motorcycle Model Summary Form

VIII			
XV535 535 76.0 / 59.0 8 33	7500	44.1	6500
XV535C V 535 76.0 / 59.0 8 33	7500	44.1	6500

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
XV535	290		133.4	195	209.35	MT-5	51.1
XV535C	290		133. 4	196	210. 35	MT-5	51.1
	18						