

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER M-3-308
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 & Special Features</u> |
|----------------------|---|--------------|--|
| YYMXC.600GCA | 600 | 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 | 1.4 | 1.1 | 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.

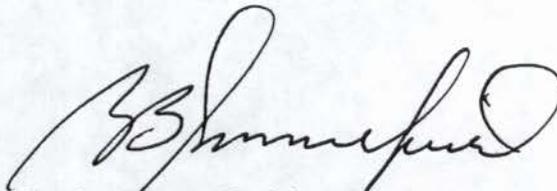
BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2035 et seq.).

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 30th day of September 1999.



R. B. Summerfield, Chief
Mobile Source Operations Division

Motorcycle Engine Family Information Form

0.5

1. Manufacturer: YAMAHA MOTOR CO., LTD.
 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 (0538) 37-4148 (0538) 37-4095 |
| Address: | <u>6555 Katella Avenue</u> Cypress, California 90630 | |
| Phone No.: | <u>(714) 761-7710</u> | |
| Fax. No.: | <u>(714) 229-7940</u> | |

3. Model Year: 2000
 4. Process Code: Carry-over
 5. Engine Family: YYMXC. 600GCA
 50s Engine Code:
 49s Engine Code:
 Calif. Engine Code: v
 6. Emission Control System: PAIR
 7. Calif. Designated Standard: 1.4g/km
 8. Projected Annual Sales:
 9. New Technology Yes v No
 If yes, cite the correspondence or reference
 the submittal document:

10. Displacement: 600cc
 11. Number of Cylinders: 4
 12. Cylinder Arrangement: L-4
 13. Cylinder Head Configuration: DOHC
 14. Type of Cooling: Water
 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: *[Signature]* DATE: 9/29/99
 REVIEWED BY: *[Signature]* DATE: 9/29/99

Engine Family: YYMXC.600GCA

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.600GCA
 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: YZF-R6C
 29. Test Information Number: J504
 30. Vehicle ID: JYARJ04Y9XA000003
 31. Service Accumulation Duration: 3 months
 32. Maximum Rated Power: 79.4 kW @ 11500 RPM
 33. Displacement: 600 cc
 34. Certification Fuel: Unleaded Gasoline
 35. Test Data Set: 6
 36. Road Load: 131.4 NT at 65km/h
 37. Inertia Mass: 280 kg
 38. N/V: 53.3
 39. EVAP Bench Test Method Approved: Reference:
 Date: January 12, 1982
 40. Unscheduled Maintenance: Yes No
 41. If yes, Vehicle Log provided: _____

42. Exhaust Emission Deterioration Factors:

| Test Number | System Kilometers | Emission Values | |
|---|-------------------|-----------------|-----|
| | | HC | CO |
| 1 | 3530 | 1.15 | 9.3 |
| 2 | 7047 | 1.10 | 8.0 |
| 3 | 7077 | 1.04 | 7.7 |
| 4 | 13093 | 1.10 | 7.9 |
| 5 | 13123 | 1.05 | 7.8 |
| 6 | 15063 | 1.13 | 8.2 |
| 7 | --- | --- | --- |
| Interpolated Values at <u>15000</u> km: HC= <u>1.0871</u> CO= <u>7.7864</u> | | | |
| Extrapolated Values at <u>30000</u> km: HC= <u>1.0644</u> CO= <u>6.7331</u> | | | |

| | |
|---|-------------------------------------|
| 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 | 8.2 | | | |
| g/km | CO2 | 94.2 | | | |
| g/km | HC | 1.13 | | | |
| g/km | Evap. | 0.99 | | | |

| Deterioration Factors | |
|-----------------------|----------------|
| (X) | 0.8647 (1.000) |
| | --- |
| (X) | 0.9791 (1.000) |
| (+) | 0.0046 |

44. Certification Levels:

| | | | | |
|------|-------|------------|--|--|
| g/km | CO | <u>8</u> | | |
| g/km | HC | <u>1.1</u> | | |
| g/km | Evap. | <u>1.0</u> | | |