

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:

| <u>Engine Family</u> | <u>Displacement<br/>Cubic Centimeters</u> | <u>Class</u> | <u>Exhaust Emission Control Systems<br/>&amp; Special Features</u> |
|----------------------|---|--------------|--|
| 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:

| <u>Hydrocarbon Standards<br/>(Corporate Average)<br/>Grams per<br/>Kilometer</u> | <u>Hydrocarbons<br/>(Designated)<br/>Grams per<br/>Kilometer</u> | <u>Hydrocarbons<br/>(Certification)<br/>Grams per<br/>Kilometer</u> | <u>Carbon Monoxide<br/>(Standard)<br/>Grams per<br/>Kilometer</u> | <u>Carbon Monoxide<br/>(Certification)<br/>Grams per<br/>Kilometer</u> |
|--|--|---|---|--|
| 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.

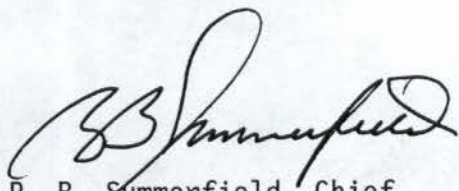
BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Section 2035 et seq.).

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 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><br>Division Manager<br>Government Relations<br>Yamaha Motor Corporation, U.S.A. | <u>Izumi Yamamoto</u><br>Engineer<br>Engineering Administration Division<br>Motorcycle Operations Group<br>Yamaha Motor Co., Ltd.<br>2500 Shingai, Iwata-shi<br>Shizuoka Pref. 438-8501, Japan<br>(0538) 37-4148<br>(0538) 37-4095 |
| Address:   | 6555 Katella Avenue<br>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  
     50s Engine Code: v  
     49s Engine Code: —  
     Calif. Engine Code: —  
 6. Emission Control System: PAIR  
 7. Calif. Designated Standard: 0.6g/km  
 8. Projected Annual Sales:             
 9. New Technology — Yes v No  
     If yes, cite the correspondence or reference  
     the submittal document:

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/A

19. Adjustable Parameters: N/A

| Parameter(s) | Adjustable Range<br>(or NA) | Tamper Resistance Method<br>(or NA) | Method Approved |
|--------------|-----------------------------|-------------------------------------|-----------------|
|              |                             |                                     |                 |
|              |                             |                                     |                 |
|              |                             |                                     |                 |
|              |                             |                                     |                 |

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

|                                    |  |
|------------------------------------|--|
| Exhaust System<br>AECDs In System: | Evaporative System<br>AECDs In System: |
|                                    |  |

Processed by: K. Pryor Date: 6/23/99  
 Reviewed by: [Signature] Date: 6/30/99

m-3-298

Engine Family: YYMXC.535GEA

**Motorcycle Test Information Form**

27. Are you carrying over test results from a previously certified family?  Yes  No  
 a) If yes, indicate family name: LYA053542S6  
 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      36. Road Load: 133.4 NT at 65km/h  
 29. Test Information Number: 3JC      37. Inertia Mass: 290 kg  
 30. Vehicle ID: JYA3JCC07LA002099      38. N/V: 51.1  
 31. Service Accumulation Duration: 3 months      39. EVAP.Bench Test Method Approved:  
 32. Maximum Rated Power: 33 kW @ 7500 RPM      Date: January 12, 1982  
 33. Displacement: 535 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   | 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 <u>15000</u> km: HC= <u>0.4051</u> CO= <u>8.0426</u> |                   |                 |     |
| Extrapolated Values at <u>30000</u> km: HC= <u>0.3955</u> CO= <u>8.8523</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    | 7.7    |        |        |        |
| g/km                  | CO2   | 84.7   |        |        |        |
| g/km                  | HC    | 0.42   |        |        |        |
| g/km                  | Evap. | 0.72   |        |        |        |

| Deterioration Factors |                         |
|-----------------------|-------------------------|
| (X)                   | 1.1007                  |
|                       | ---                     |
| (X)                   | <del>0.9763</del> 1.000 |
| (+)                   | 0.1617                  |

44. Certification Levels:

|      |       |     |  |  |  |
|------|-------|-----|--|--|--|
| g/km | CO    | 8   |  |  |  |
| g/km | HC    | 0.4 |  |  |  |
| g/km | Evap. | 0.9 |  |  |  |

