State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-W-3-8
Relating to Certification of
New Spark-Ignition Marine Engines

YAMAHA MOTOR COMPANY LTD.

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, and 43104 of the Health and Safety Code; 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 the following new spark-ignition marine engine and exhaust emission control system produced by the manufacturer are certified as described below.

Model Year: 2001

Fuel Type: Gasoline Engine Type: 4-Stroke

Level of Cleanliness: Very Low Emission ("Two Stars")

Equipment Application: Outboard

Engine Family: 1YMXM1.602GA

Displacement: 1596 cc

Exhaust Emission Control Systems and Special Features:

Engine Modification

Engine models are listed on the attachment. Production engines shall be in all material respects the same as those for which certification is granted.

BE IT FURTHER RESOLVED: That the manufacturer has elected to certify the listed engines to a family emission limit (FEL) of hydrocarbon plus oxides of nitrogen (HC+NOx) described below, expressed in grams per kilowatt-hour (g/kW-hr) in accordance with a plan submitted by the manufacturer to, and approved by, the Executive Officer for compliance with the exhaust emission standard on a corporate average basis pursuant to Sections 2442(a) and (b) of Title 13, California Code of Regulations (13 CCR).

HC + NOx FEL	Certification Level
20.54	16.19

Compliance with the standard on a corporate average basis shall be determined based on the sales-weighted average power of all engines produced for sale in California that are included in the approved corporate average compliance plan for the model year, and as calculated pursuant to 13 CCR Section 2442(b)(4).

BE IT FURTHER RESOLVED: That for the listed engines, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with the following California emission regulations and requirements. Engines certified under this Executive Order shall conform to all applicable California emission regulations and requirements:

- All applicable requirements in the "California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines";

- Emission Control Labeling and Consumer/Environmental Labeling (13 CCR Sections 2443.1, 2443.2 and 2443.3);

- Emission Control System Warranty (13 CCR Sections 2445.1 and 2445.2);

- Closed Crankcases (Part 1, Section 18.(h) of the "California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines"); and

- Quarterly reports of engines produced in this family for sale in California shall be submitted to the Executive Officer no later than 45 days after the end of each calendar quarter.

BE IT FURTHER RESOLVED: That the certification to 13 CCR Section 2443.3 described herein is conditioned on approval of that section by California's Office of Administrative Law pursuant to Government Code Section 11349.4.

Executed at El Monte, California this 11th day of May 2000.

R. B. Summerfield, Chief
Mobile Source Operations Division

ATT. MENT

Model Year: 2001
Manufacturer Name: Yamaha Motor Co., Ltd.
Engine Family: 1YMXM1.602GA

Page: page 7
Issued: _____
Revised: _____
E.O.#: U-W-3-8

SI Marine Engine Model Summary Form

44. Engine Family Sales-Weighted Power: __ __ kW

45. Model Designation	46. Sales Codes (Check all appropriate codes)			47. Disp. (cc)	48. Bore/Stroke (mm)	49. Basic Ignition Timing (deg. @ idle)	50. Power (kW)	51. Rated Speed (RPM)	52. Rated Torque (N-m)	53. Torque Speed (RPM)	54. ECS
	Calif. Only	49-State	50-State								
F80TLRZ			*	1596	79/81.4	BT 20 (AT 5)	58.8	5500	131	3500	EM
F80TXRZ			*	1596	79/81.4	BT 20 (AT 5)	58.8	5500	131	3500	EM
F80TJRZ			*	1596	79/81.4	BT 20 (AT 5)	58.8	5500	131	3500	EM
F100TLRZ			*	1596	79/81.4	BT 20 (AT 5)	73.6	5500	137	4500	EM
F100TXRZ			*	1596	79/81.4	BT 20 (AT 5)	73.6	5500	137	4500	EM