California Environmental Protection Agency AIR RESOURCES BOARD	YAMAHA MOTOR CO., LTD.	EXECUTIVE ORDER U-M-004-0031 New Emission-Compliant All-Terrain Vehicles Certified Using The Optional Engine Test Procedure

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapters 1 and 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 the engine and exhaust emission control systems produced by the manufacturer are certified as described below for all-terrain vehicles. Production vehicles, and engines that power such vehicles, shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE DISPLACEMENT (cc)	VEHICLE TYPE	FUEL TYPE	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS
2002	2YMXX.660GCB	660	All-Terrain Vehicle	Gasoline	Engine Modification
VEHICLE MODELS / ENGINE CODES (rated engine power in horsepower, hp)	YFM660FWA/M302 (40.9)				

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) exhaust emission standards, or designated HC+NOx standard as applicable, and certification levels in grams per brake horsepower-hour (g/bhp-hr) for this engine family. The designated HC+NOx standard, as applicable, shall be displayed on the permanent emission control label. Vehicles within this engine family, and engines that power such vehicles, shall not discharge any crankcase emissions into the ambient atmosphere in conformance with Title 13, California Code of Regulations, (13 CCR) Section 2412(i).

HC+NOx (g/bhp-hr)				CO (g/bhp-hr)		* = not applicable
CORPORATE AVERAGE STANDARD	DESIGNATED STANDARD	(DIRECT) STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL	
*	*	10.0	8.1	300	143	

BE IT FURTHER RESOLVED: That pursuant to 13 CCR Section 2412(e), the listed vehicles, and engines that power such vehicles, were tested in accordance with the incorporated small off-road engine test procedures, and have demonstrated compliance with such applicable emission standards.

BE IT FURTHER RESOLVED: That certification to the designated HC+NOx standard listed above, as applicable, is subject to the following terms, limitations and conditions:

The designated standard shall be the exhaust limit for this engine family for the model year and cannot be changed by the manufacturer. Such standard shall be used to determine engine family compliance, and compliance with the corporate average HC+NOx standard in accordance with 13 CCR Sections 2412(b), (d) and (e) and 2414.

BE IT FURTHER RESOLVED: That the listed vehicles, and engines that power such vehicles, shall be subject to 13 CCR Section 2414 (enforcement and recall provisions).

BE IT FURTHER RESOLVED: That the listed vehicles, and engines that power such vehicles, shall comply with 13 CCR Sections 1965 and 2413 (emission control labeling).

Vehicles, and engines that power such vehicles, certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Vehicles, and engines that power such vehicles, in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 13th day of June 2001.

R. B. Summerfield, Chief
Mobile Source Operations Division

E.O.# U-M- 004-0031

2002 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET
ALL TERRAIN VEHICLE

Manufacturer: Yamaha Motor Co., Ltd.

Engine Family: 2YMXX.660GCB

All Engine Codes in Engine Family: CA V . 49S____. 50S____.

Max Rated Power: 30.5 kW @ 6250 RPM 40.9 Hp

Exhaust ECS (e.g., ECM,OC): EM

(Use abbreviations per SAE J1930 SEP91)

Engine Information	
Displacement (cc)	660
Engine Config	Single
Valves/Cylinder	5
Strokes/Cycle	4
Cooling Medium	Water
No. Carburetors	1
Bbls per Carb	1
Fuel Injection (specify TBI,MFI,SFI)	N.A.

1. Test Vehicle(s) Information — Carry Over/Carry Across: (indicate Model Year/ID) — NEW
2. Corporate Averaging Plan: (Indicate Plan Date) — N.A.
3. U.S.EPA Certificate: (Indicate Certificate No.) — N.A.

Vehicle ID	Code	Displ	Trans	EIM	RL Force	MPG	HC g/bhp-hr	PROJECTED EMISSIONS (1) NOx g/bhp-hr	HC+NOx g/bhp-hr	CO g/bhp-hr
M302E-000018 (E/G)	M302	660	AT	-	-	-	3.87	4.24	8.11	143.1

Confirmatory Test #1 : N.A.

The above emission-data vehicle engine(s) comply with Engine Class II standards of: 10.0 300
and include deterioration factors of: 1.000 1.050

(1) Comply with the Corporate Average standard of 10.0 g/bhp-hr for all engine displacement classes. The Designated HC+NOx emission standard is N.A. g/bhp-hr.

Remarks: Emission tested using optional utility engine test procedures. DFs are based on a specific test cycle (suited for bench testing), elaborated by substitution of actual usage patterns. 5000 km equivalent were accumulated, during which exhaust emission were measured at a few points.
Hence obtained are DFs for: CO: 1.050, HC+NOx: 1.000

Application Processed by: K. Pryor Date: 6/1/01 Reviewed by: 6/12/01 Date: 6/12/01

Date Issued: February/14/2001

Revision Date: