YAMAHA MOTOR CO., LTD.

EXECUTIVE ORDER U-U-017-0156 New Off-Road Small Spark-Ignition Engines at or Below 19 Kilowatts

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-02-003;

IT IS ORDERED AND RESOLVED: That the following engine and emission control systems produced by the manufacturer are certified for use in small off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGI	NE FAMILY	DISPLACEMENT (cc)	ENGINE CLASS		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)		
2012	CYM	(S.1711EA	171	4-stroke, >80 c	c - <225 cc	Gasoline		
DURABILITY HOURS		SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
500		EM			Compressor, Pump, Pressure Washer, Stump Beater and Generator			
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment						
EGR≃exhaus	t gas recirc	ulation AIR=seco	ondary air injection PAIŘ≕r	pulsed AlR MFl≃mu	iti port fuel injec	warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S ction SFI=sequential MFI TBI=throttle body fuel injection ix)=in series ECM=engine control module		

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx), carbon monoxide (CO), and particulate matter (PM) emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2403(b)), and certification emission levels for this engine family in grams per kilowatt-hour (g/kW-hr). Engines within this engine family shall have closed crankcases in conformance with Section 90.109 of the "California Exhaust Emission Standards and Test Procedures for 2005 and Later Small Off-Road Engines," adopted July 26, 2004.

*=not applicable	HC+NOx (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)
STANDARD	10.0	549	*
FAMILY EMISSION LEVEL	10.0	549	*
CERTIFICATION LEVEL	8.8	343	*

BE IT FURTHER RESOLVED: That the family emission level(s) (FELs), as applicable, is an emission limit declared by the manufacturer for use in the averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2403(e)(1) and 2407(a).

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 13 CCR Section 2404 (emission control labels) and 13 CCR Sections 2405 and 2406 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

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

This Executive Order is only granted to the engine family and model-year listed above. Engines 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

_ day of December 2011.

Annette Hebert, Chief

Mobile Source Operations Division

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Model Year: Manufacturer:

2012

YAMAHA MOTOR CO.,LTD.

Revised:

10/13/2011

Engine Family: CYMXS.1711EA

E.O. Number: u-u-017 - 0156

Small Off-Road Engine Model Summary Form

Units for Table: kW

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
	EF2600FW	50-State	171	66x50mm	BTDC 23	4.0kw/400	0 3,600	8.8Nm	2,500	EM
1	EF2800i	50-State	171	66x50mm	BTDC 23	4.0kw/400	0 3,600	8.8Nm	2,500	EM
	EF3000iSEB	50-State	171	66x50mm	BTDC 23	4.0kw/400	0 3,800	8.8Nm	2,500	EM
	EF3000iSE	50-State	171	66x50mm	BTDC 23	4.0kw/400	0 3,600	8.8Nm	2,500	EM
	EF2400iSHC	50-State	171	66x50mm	BTDC 23	4.0kw/400	00 3,600	8.8Nm	2,500	EM
X	7CNB-4	50-State	171	66x50mm	BTDC 23	4.0kw/400	00 3,600	8.8Nm	2,500	EM
	EF3000iS	50-State	171	66x50mm	BTDC 23	4.0kw/400	00 3,600	8.8Nm	2,500	EM
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