EXECUTIVE ORDER U-U-017-0138-1 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	FNGINE FAMILY		DISPLACEMENT (cc)	ENGINE CLASS		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)			
2011	BYMX	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	st gas recirc	ulation AIR=sec	ondary air injection PAIR=	pulsed AIR MFI=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.

This Executive Order hereby supersedes Executive Order U-U-017-0138 dated October 20, 2010.

Executed at El Monte, California on this

, -1/

day of April 2011.

Annette Hebert, Chief Mobile Source Operations Division

2011 Model Year:

AMACHEUT B lof 1 Issued:

Manufacturer: YAMAHA MOTOR CO.,LTD.

Revised:

Engine Family: BYMXS.1711EA

2/17/2011 E.O. Number: U-U-017-0138-1

Small Off-Road Engine Model Summary Form

Units for Table: kW

	47.	48.	49.	50.	51.	52.	5 3.	54.	55.	56.
Worst	Model	Sales	Displ	Bore/	Ignition	Max	Rated Speed	Rated	Torque Speed	Emiss
Case?	Designation	Code	(cc)	Stroke	Timing	Power	(RPM)	Torque	(RPM)	Control Sys
X	7CNB-070	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7CPV-020	50-State	171	66x50mm	BTDC 23	4.0kW	3,800	11.0Nm	2,500	EM
	7CNV-020	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7CNW-020	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7CNC-110	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7DF2	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7VU2	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7CHH	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7CHS	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
	7CNX-010	50-State	171	66x50mm	BTDC 23	3.5 k W	3,600	10.5Nm	2,400	EM
	7CHK	50-State	171	66x50mm	BTDC 23	3.5kW	3,600	10.5Nm	2,400	EM
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