California Environmental Protection Agency	YAMAHA MOTOR CO., LTD.	EXECUTIVE ORDER U-U-017-017			
OB Air Resources Board	TAMANA MOTOR CO., LTD.	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.

DURABILITY HOURS SPECIAL FEATURES & EMISSION CONTROL SYSTEMS TYPICAL EQUIPMENT   1000 EM Golf Cart   ENGINE CODES/MODELS See Attachment		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LP petroleum gas)	E CLASS (CNG/LNG=compressed/liquefied natural g		E FAMILY DISPLACEMENT ENGINE ( (cc)		ENGI	MODEL YEAR
HOURS     EMISSION CONTROL SYSTEMS     TYPICAL EQUIPMENT       1000     EM     Golf Cart       ENGINE     CODES/MODELS     See Attachment	soline	Gasoline	4-stroke, <u>≥</u> 225 cc		357	(S.3572EB	DYM>	2013
ENGINE CODES/MODELS See Attachment		TYPICAL EQUIPMENT APPLICATION						
CODES/MODELS See Attachment		Golf Cart		EM		)	1000	
kilowatt, kW)	See Attachment						CODES/MODELS (rated power in	

DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2(prefix)=parallel (2)(suffix)=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	8.0	549	*
FAMILY EMISSION LEVEL	¥	· #	*
CERTIFICATION LEVEL	6.7	349	*

**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  $21^{st}$  day of November 2012.

Annette Hebert, Chief Mobile Source Operations Division

ATTACHHENT PS 1.f1

Model Year: 2013 Engine Family: DYMXS.3572EB

Manufacturer: YAMAHA MOTOR CO., LTD.

Issued: Revised: 9/7/2012 E.O. Number: u-u-017-0178

## Small Off-Road Engine Model Summary Form

Units for Table: kw

	47.	48.	49.	50.	51.	52.	53.	54.	55.	56.
Worst Case?	Model Designation	Sales Code	Displ (cc)	Bore/ Stroke	Ignition Timing	Max Power	Rated Speed (RPM)	Rated Torque	Torque Speed (RPM)	Emiss Control Sys
Х	JR6	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
	JW84	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
	JW66	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
	JW76	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
	JD04	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
	JD14	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
	JP21	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
	JW85	50-State	357	85x63mm	BTDC 28	6.7kw	3400	22.0	2000	EM
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