

Chongqing Rato Technology Co., Ltd.

New Off-Road Small Spark-Ignition

New Off-Road Small Spark-Ignition Engines at or Below 19 Kilowatts

Pursuant to the authority vested in California 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-19-095;

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	ENGINE FAMILY		DISPLACEMENT (cc)	ENGINE CLASS		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)		
2021	MCRF	PS.2241GA	GA 223, 224 4-stroke, >80 c			Gasoline		
DURABILITY HOURS		SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
125		EM			Pump, Pressure Washer, Stump Beater, Generator Set, Line Trimmer, Leaf Blower/Vacuum, Tiller, Other			
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment						
EGR=exhaus	t gas recirc	ulation AIR=seco	ondary air injection PAIR=p	oulsed AIR MFI=mul	lti port fuel inject	varm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S fion SFI=sequential MFI TBI=throttle body fuel injection		

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 1054.115(a) of the "California Exhaust Emission Standards and Test Procedures for New 2013 and Later Small Off-Road Engines," adopted October 25, 2012.

*=not applicable	HC+NOx (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)	
STANDARD	10.0	549	*	
FAMILY EMISSION LEVEL	*	*	*	
CERTIFICATION LEVEL	8.8	402	*	

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 guarter.

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 on this 10th day of September 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Model Year: 2021 Issued:

Manufacturer: Chongqing Rato Technology Co., Ltd. Revised: 5/18/2020

Engine Family: MCRPS.2241GA E.O. Number:

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
X	R225	50-State	223	70/58	22±2BTDC	4.3	3600	13	2500	EM
	R224	50-State	224	70/58.2	25±2BTDC	4.7	3600	13.5	2500	EM
	R225-V	50-State	224	72/55	25±2BTDC	5.3	3600	13.4	2500	EM

