

CHONGQING ZONGSHEN GENERAL POWER MACHINE CO., LTD.

EXECUTIVE ORDER U-U-082-0403 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)		
2020	LCZH	S.2241H2	224, 208, 196 4-stroke, >80 cc - <225 cc			Gasoline		
DURABILITY HOURS		SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
125		EM			Compressor, Pump, Pressure Washer, Stump Beater, Generator Set, Non-Backpack Blower, Tiller, Other			
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment						
ABBREVIATIONS: EM=engine modification TWC/OC=three-way/oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection 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 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	7.9	413	*

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 2157 day of August 2019.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Model Year:

Attachment, 1 of Z

Issued:

Revised: 4/26/2019

Manufacturer: Engine Family: Chongqing Zongshen General Power LCZHS.2241H2

E.O. Number: 11-11-082-0403

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
	168F_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	170F_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210-01_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210-02_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210-03_	50-State	208	70/54	24	4.5	3600	12.5	2800	. EM
	FH210-04_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210-05_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210-06_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210-07_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	FH210-08_	50-State	208	70/54	24	4.5	3600	12.5	2800	EM
	GB200_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	GB200-01_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	GB200-02_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	GB200-03_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	GB200-04_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	GB200-05_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	GB200-06_	50-State	196	68/54	25	4.2	3600	11.5	2600	EM
	GB210_	50-State	208	70/54	25	4.3	3600	11.5	2600	EM
	GB210-01_	50-State	208	70/54	25	4.3	3600	11.5	2600	EM

Model Year:

Attachment, 2 of Z

Issued: Revised:

4/26/2019

Manufacturer: Engine Family: LCZHS.2241H2

Chongqing Zongshen General Power

E.O. Number: 41-11-08-2-0403

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 Ra Power	53. ated Speed (RPM)	54. Rated To Torque	55. orque Speed (RPM)	56. I Emiss Control Sys
	GB210-02_	50-State	208	70/54	25	4.3	3600	11.5	2600	EM
	GB210-03_	50-State	208	70/54	25	4.3	3600	11.5	2600	EM
	GB210-2_	50-State	208	70/54	24	4.3	3600	12.5	2600	EM
	GB210-2-01_	50-State	208	70/54	24	4.3	3600	12.5	2600	EM
	GB225_	50-State	224	72/55	25	4.5	3600	12.5	2600	EM
	GB225-01_	50-State	224	72/55	25	4.5	3600	12.5	2600	EM
	GB225-02_	50-State	224	72/55	25	4.5	3600	12.5	2600	EM
Χ	GB225-2	50-State	224	72/55	25	4.6	3600	13.5	2600	EM
	GB225-2-01_	50-State	224	72/55	25	4.6	3600	13.5	2600	EM
	GB225-2-02	50-State	224	72/55	25	4.6	3600	13.5	2600	EM
	GH210_	50-State	208	70/54	19	4.0	3600	11	2700	EM
	GH210-01_	50-State	208	70/54	19	4.0	3600	11	2700	EM
	-									la la
)		13.23		
						Morro				
				Ĺ:à		19/09				1.33