

CHONGQING ZONGSHEN GENERAL POWER MACHINE CO., LTD.

EXECUTIVE ORDER U-U-082-0429 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.

						FUEL TYPE		
MODEL YEAR	ENGINE FAMILY		DISPLACEMENT (cc)	ENGINE CLASS		FUEL TYPE (CNG/LNG=com pressed/liq uefied natural gas LPG=liquefie petroleum gas)		
2020	LCZH	S.0795DF	79	4-stroke, ≥50 cc - ≤80 cc		Gasoline-LPG dual-fuel		
DURABILITY HOURS		SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
300		EM			Generator Set			
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment See Attachment TWC/OC = three-way/oxidizing catalyst WUTWC/WUCC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S						
		engine modification				arm-up TWCDC 0.25=0xygen seriou 10/25-leaded 0.25 tion SFI=sequential MF1 TBI=throttle body fuel injection x)=in series ECM=engine control module		

DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2(prefix)=parallel

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	72	536	*	
FAMILY EMISSION LEVEL	*	*	*	
CERTIFICATION LEVEL	19	391	*	

BEIT 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).

BEIT 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.

day of June 2020. Executed on this

Allen Wons, Chief

Emissions Certification and Compliance Division

Page: 9

Model Year: 2020 Issued:

Manufacturer: Chongqing Zongshen General Power Revised: 7/16/2020

Engine Family: LCZHS.0795DF E.O. Number:

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
X	148FS-A	50-State	79	48/43	32	2.0	4300	4.7	3900	EM
	148FS-A-01	50-State	79	48/43	32	2.0	4300	4.7	3900	EM
	148FS-A-02	50-State	79	48/43	32	2.0	4300	4.7	3900	EM
	148FS-A-03	50-State	79	48/43	32	2.0	4300	4.7	3900	EM
	148FS-A-04	50-State	79	48/43	32	2.0	4300	4.7	3900	EM
	148FS-A-05	50-State	79	48/43	32	2.0	4300	4.7	3900	EM
	148FS-D	50-State	79	48/43	32	2.3	4800	4.7	4300	EM
	148FS-D-01	50-State	79	48/43	32	2.3	4800	4.7	4300	EM
	148FS-D-02	50-State	79	48/43	32	2.3	4800	4.7	4300	EM
	148FS-A-06	50-State	79	48/43	32	2.0	4300	4.7	3900	EM
									-	