

ZHEJIANG YAOFENG POWER TECHNOLOGY CO., LTD.

EXECUTIVE ORDER U-U-220-0113 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-14-012;

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)		
2019	KZYF	ZYPS.3892GA 338, 389 4-stroke, ≥2		225 cc	Gasoline, LPG, Gasoline-LPG Dual Fuel			
DURABILITY HOURS		SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
500		EM			Pump, Pressure Washer, Generator Set, Other OEM Equipment			
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	8.0	549	•
FAMILY EMISSION LEVEL	*	*	*
CERTIFICATION LEVEL	6.6	390	*

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 ____/Edd day of December 2018.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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Model Year:

YF188FD-L_G

50-State

2019

Manufacturer: Engine Family: Zhejiang Yaofeng Power Technology Co.,

88/64

389

KZYPS.3892GA

Issued:

8.8 Gasoline 4000

4000

8.2 LPG

Revised: 10/29/2018

E.O. Number: U - U - 220 - 01/3

22.5N.m

20.5N.m

2800

2800

EM

EΜ

Small Off-Road Engine Model Summary Form

Attachment

Units for Table: kW

1 47. 53. 49. 52. 54. 48. 55. 56. Model Sales Displ Bore/ Ignition Max Rated Speed Rated Torque Speed **Emiss** Worst Designation Code Stroke Timing Power (RPM) Torque (RPM) (cc) Control Sys Case? YF188FD 88/64 YF188FD X 389 21BTDC 8.8 4000 22.5N.m 2800 **EM** 338 88/64 21BTDC 4000 22.5N.m YF188F 50-State 389 8.8 2800 EΜ 50-State 338 82/64 21BTDC 7.8 4000 20.9N.m 2800 EM YF182FD 4000 20.9N.m 2800 EΜ 82/64 21BTDC 7.8 YF182F 50-State 338 YF188FD-LPG 50-State 389 88/64 21BTDC 8.2 4000 20.5N.m 2800 EΜ

21BTDC