California Environmental Protection Agency Air Resources Board

ZHEJIANG YAOFENG POWER TECHNOLOGY CO., LTD.

EXECUTIVE ORDER U-U-220-0011-1 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.

MODEL YEAR ENGINE FAMIL		NE FAMILY	DISPLACEMENT (cc)	ENGINE CLASS	FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas) Gasoline				
2013	DZYPS.3892GA 338, 389		338, 389	4-stroke, ≥225 cc					
DURAB HOUR			SPECIAL FEATURES 8		TYPICAL EQUIPMENT APPLICATION				
500			EM		Pressure Washer, Generator Set				
ENGII CODES/M (rated po kilowatt	ODELS wer in			See Attach	nment				

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 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	6.2	259	*

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.

This Executive Order hereby supersedes Executive Order U-U-220-0011 dated December 21, 2012.

Executed at El Monte, California on this

8 Lday of March 2013.

Mobile Source Operations Division

Attachment
DRAFT

Small Off-Road Evaporative Certification Database Form (Supplementary Information)

MODEL SUMMARY

S1.	S2.		S3.		S4.	S5.	S6.	S7.	S8.	S9.	S10.	· S11.	S12.	S13.	S14.
Worst Case (Check One)	Engine or Equipment Model		Codes (appropri	ate)	Engine Class (I or II)	Fuel System (FI or CARB)	Fuel Tank Vol. (Liters)	Fuel Tank Internal Surface	Fuel Line Type	Nominal Fuel Line Length	Fuel Line Inside Diameter	Exhaust Family	Fuel Tank Executive Order	Fuel Line Executive Order	Carbon Canister or Other Venting
		CA Only	49- State	50- State				Area (m²)		(mm)	(mm)				Control Executive Order
	YF166FD YF166FD-331 75530i 75531i 75532i 75533i 75534i 75535i 75536i			Х	I	CARB	6.0	0.269	Multi- layer	478	5.5	DZYPS.1711GC	N/A	Q-08-037 or Q-08-005 or C-U-05-012 or Q-09-013	C-U-07-021 or C-U-06-031
	YF168F-2 YF168F-2-001 66507 66525 76520 76532 91520 92221 92301			Х	I	CARB	3.6	0.165	Multi- layer	220 and 35	4.5	DZYPS.1961GA	N/A	Q-08-037 or Q-08-005 or C-U-05-012 or Q-09-013	C-U-06-003 or Q-07-020 or C-U-07-008

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Model Year:

Manufacturer:

Zhejiang Yaofeng Power Technology Co.,

Engine Family: DZYPS.3892GA

Issued:

Revised:

1/10/2013

E.O. Number:

Small Off-Road Engine Model Summary Form

Attachment

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	YF188FD	50-State	389	88/64	21BTDC	8.2	3600	22.5N.m	2800	EM
,	and YF188FD-011 and YF188FD-111 and YF188FD-211									•
	and YF188FD-221	1								
	YF188F	50-State	389	88/64	21BTDC	7.8	3600	20.5N.m	2800	EM
	and YF188F-001 and YF188F-101									
	YF182FD	50-State	338	82/64	21BTDC	7.2	3600	20.9N.m	2800	EM
	and YF182FD-001 and YF182FD-101 and YF182FD-011 and YF182FD-111 and YF182FD-221 and YF182FD-211									
	YF182F	50-State	338	82/64	21BTDC	7.2	3600	20.9N.m	2800	ЕМ
	and YF182F-000 and YF182F-001 and YF182F-100 and YF182F-101									