California Environmental Protection Agency Air Resources Board

ZHEJIANG YAOFENG POWER TECHNOLOGY CO., LTD.

EXECUTIVE ORDER U-U-220-0023 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	ENGI	ENGINE FAMILY DISPLACEMENT (cc)		ENGINE CLASS		FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)			
2014	EZYF	PS.1961GA	196	4-stroke, >80	cc - <225 cc	Gasoline, LPG and Dual Fuels (Gasoline and LPG)			
DURABILITY SPECIAL FEATURE: HOURS EMISSION CONTROL SY					TYPICAL EQUIPMENT APPLICATION				
250	250 EM				Pump, Pressure Washer, Generator Set, Other OEM Equipmer				
ENGII CODES/M (rated po kilowatt	ODELS wer in				See Attachm	ent			

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 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	10.0	549	*	
FAMILY EMISSION LEVEL	*	*	*	
CERTIFICATION LEVEL	8.5	312	*	

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

day of December 2013.

Erik White, Chief

Mebile Source Operations Division

Model Year:

2014

Attachment 1 of 8

issued: Revised:

7/1/2014

Manufacturer: Zhejiang Yaofeng Power Technology Co., Engine Family: EZYPS.1961GA

E.O. Number: U - U - 220 - 00 2 3

Small Off-Road Engine Model Summary Form

Units for Table: kW RC1 - 07-02-14

Page: 9

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)	Control Sys
X	YF168FD-2-L_G	50-State	196	68/54	12BTDC	4.5	3600	11N.m	2800	EM Gasoline
						3.5	3600	11.7N.m	2800	LPG
	YF168F-2-221	50-State	196	68/54	12BTDC	4.5	3600	11N.m	2800	EM
	YF168F-2-220	50-State	196	68/54	12BTDC	4.5	3600	11N.m	2800	EM
	YF168F-2-000	50-State	196	68/54	12BTDC	4.5	3600	11N.m	2800	EM
	YF168F-2-001	50-State	196	68/54	12BTDC	4.5	3600	11N.m	2800	EM
	YF168FD-2-111	50-State	196	68/54	12BTDC	4.5	3600	11N.m	2800	EM

2014 Model Year:

Manufacturer:

Attachment 2 of Issued:

Zhejiang Yaofeng Power Technology Co., Engine Family: EZYPS.1961GA

Revised: 7/1/2014 E.O. Number: U-U-220-001}

RC-1

Small Off-Road Engine Model Summary Form

07-02-14 Units for Table:

Page: 9

47. 54. 48. 49. 50. 51. 52. 53. 55. 56. Model Sales Displ Bore/ Ignition Max Rated Speed Rated Torque Speed **Emiss** Worst Designation Code Stroke Timing Power (RPM) Torque (RPM) Control Sys (CC) Case? 68/54 12BTDC 4.5kW 3600 11N.m 2800 ΕM YF168FD-2-110 50-State 196 12BTDC 4.5kW 3600 11N.m 2800 EM YF168FD-2-220 50-State 196 68/54 ΕM YF168FD-2-011 50-State 196 68/54 12BTDC 4.5kW 3600 11N.m 2800 2800 EM YF168FD-2-210 50-State 196 68/54 12BTDC 4.5kW 3600 11N.m

Model Year:

2014

Attachment 3 of & Issued:

Revised: 7/1/2014 E.O. Number: U-U-220-0073 nary Form RC 1 07

Manufacturer: Zhejiang Yaofeng Power Technology Co.,

Engine Family: EZYPS.1961GA

07-02-14

Page: 9

Small Off-Road Engine Model Summary Form

| 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 |
|----------------|-----------------------------|----------------------|----------------------|------------------------|---------------------------|---------------------|-----------------------------|------------------------|------------------------------|-----------------------------|
| | YF168FD-2-211 | 50-State | 196 | 68/54 | 12BTDC | 4.5kW | 3600 | 11N.m | 2800 | EM |
| | YF168FD-2-010 | 50-State | 196 | 68/54 | 12BTDC | 4.5kW | 3600 | 11N.m | 2800 | EM |
| | YF168FD-2-221 | 50-State | 196 | 68/54 | 12BTDC | 4.5kW | 3600 | 11 N .m | 2800 | EM |
| | YF168FD-2-LPG-010 | 50-State | 196 | 68/54 | 12BTDC | 3.5kW | 3600 | 11.7N.m | 2800 | EM |
| | YF168FD-2-LPG-210 | 50-State | 196 | 68/54 | 12BTDC | 3.5kW | 3600 | 11.7N.m | 2800 | EM |

Model Year:

Manufacturer:

2014

Engine Family: EZYPS.1961GA

Zhejiang Yaofeng Power Technology Co.,

Revised: 7/1/2014 E.O. Number: U-U-220-0023 nary Form RC 1 07-

07-02-14

Small Off-Road Engine Model Summary Form

| 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 |
|----------------|-----------------------------|----------------------|----------------------|------------------------|---------------------------|---------------------|-----------------------------|------------------------|------------------------------|-----------------------------|
| | YF168FD-2-LPG-120 | 50-State | 196 | 68/54 | 12BTDC | 3.5kW | 3600 | 11.7N.m | 2800 | EM |
| | YF168FD-2-LPG-110 | 50-State | 196 | 68/54 | 12BTDC | 3.5kW | 3600 | 11.7N.m | 2800 | EM |
| | YF168FD-2-LPG-020 | 50-State | 196 | 68/54 | 12BTDC | 3.5kW | 3600 | 11.7 N .m | 2800 | EM |
| | YF168FD-2-LPG-220 | 50-State | 196 | 68/54 | 12BTDC | 3.5kW | 3600 | 11.7N.m | 2800 | EM |
| | YF172F-000 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |
| | YF172F-001 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6 N .m | 2800 | EM |
| | YF172F-220 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |
| | YF172F-221 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |

Model Year:

2014

Attachment 5 of Rsued:

7/1/2014

11-4-220-0023

Manufacturer:

Zhejiang Yaofeng Power Technology Co., Engine Family: EZYPS.1961GA

E.O. Number:

07-02-14 RC1

Small Off-Road Engine Model Summary Form

| 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 |
|----------------|-----------------------------|----------------------|----------------------|------------------------|---------------------------|---------------------|-----------------------------|------------------------|------------------------------|-----------------------------|
| | YF172FD-010 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |
| | YF172FD-210 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6 N .m | 2800 | EM |
| | YF172FD-011 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6 N .m | 2800 | EM |
| | YF172FD-111 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6 N .m | 2800 | EM |

Model Year:

2014

Attachment 6 of 8 Issued:

Revised:

7/1/2014

Manufacturer:

Zhejiang Yaofeng Power Technology Co., Engine Family: EZYPS.1961GA

E.O. Number: 11-11-220-002307-02-14

Rc1

Small Off-Road Engine Model Summary Form

| 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 |
|----------------|-----------------------------|----------------------|----------------------|------------------------|---------------------------|---------------------|-----------------------------|------------------------|------------------------------|-----------------------------|
| | YF172FD-211 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |
| | YF172FD-221 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |
| | YF172FD-110 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |
| | YF172FD-220 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM |

Model Year:

2014

Attachment 7 of 8

Revised:

7/1/2014

Manufacturer:

Zhejiang Yaofeng Power Technology Co., Engine Family: EZYPS.1961GA

E.O. Number: $u = u - 220 - 003 \frac{3}{0} - 02 - 14$

Small Off-Road Engine Model Summary Form

| 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 |
|----------------|-----------------------------|----------------------|----------------------|------------------------|---------------------------|---------------------|-----------------------------|------------------------|------------------------------|-----------------------------|
| | YF172FD-L_G-010 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM Gasoline |
| | | | | | | 4kW | 4000 | 12.6 N .m | 2800 | LPG |
| | YF172FD-L_G-110 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM Gasoline |
| | | | | | | 4kW | 4000 | 12.6N.m | 2800 | LPG |
| | YF172FD-L_G-210 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM Gasoline |
| | | | | | | 4kW | 4000 | 12.6 N .m | 2800 | LPG |
| | YF172FD-L_G-020 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW | 4000 | 12.6N.m | 2800 | EM Gasoline |
| | | | | | | 4kW | 4000 | 12.6N.m | 2800 | LPG |

Model Year:

2014 Attachment 8 of Fissued: Zhejiang Yaofeng Power Technology Co., Revised EZYPS.1961GA

7/1/2014

Manufacturer:

Engine Family: EZYPS.1961GA

E.O. Number: U-U-220-0023

Small Off-Road Engine Model Summary Form

RC1 Units for Table:

07-02-14

| Worst
Case? | 47.
Model
Designation | 48.
Sales
Code | 49.
Displ
(cc) | 50.
Bore/
Stroke | 51.
Ignition
Timing | 52.
M ax
Power | 53.
Rated Speed
(RPM) | 54.
Rated
Torque | 55.
Torque Speed
(RPM) | 56.
Emiss
Control Sys |
|----------------|-----------------------------|----------------------|-----------------------------|------------------------|---------------------------|-----------------------------|-----------------------------|------------------------|------------------------------|-----------------------------|
| Case: | YF172FD-L_G-120 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW
4kW | 4000
4000 | 12.6N.m
12.6N.m | 2800
2800 | EM Gasoline |
| | YF172FD-L_G-220 | 50-State | 224 | 72/55 | 12BTDC | 5.1kW
4kW | 4000
4000 | 12.6N.m
12.6N.m | 2800
2800 | EM Gasoline |