

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)
2023	PZYPS.2241GA	192, 196, 212, 224	4-stroke, > 80 cc - < 225 cc	Gasoline, LPG, Gasoline-LPG Dual Fuel, Gasoline-LPG-CNG Tri Fuel
DURABILITY HOURS		SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		TYPICAL EQUIPMENT APPLICATION
250		EM		Pump, Pressure Washer, Generator Set, Other
ENGINE CODES/MODELS (rated power in kilowatt, kW)		See Attachment		
<small>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</small>				

The following are the hydrocarbon plus oxides of nitrogen (HC+NO_x), 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+NO _x (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)
STANDARD	10.0	549	*
FAMILY EMISSION LEVEL	*	*	*
CERTIFICATION LEVEL	7.9	394	*

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 on this 13th day of May 2022.



Allen Lyons, Chief
 Emissions Certification and Compliance Division

Date: 4/17/2022
 Engine Family: PZYP5.2241GA

Model Summary

Worst Case (Check One)	47. Model Designation	48. Sales Code	49. Displacement (cc)	50. Bore/Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emission Control System
	YF168FD-2-L_G (Gasoline-LPG dual-fuel)	50-State	196	68/54	12BTDC	4.0kW(Gasoline)/ 3.5kW(LPG)	3600	11N.m(Gasoline)/ 11.7N.m(LPG)	2800	EM
	YF172IV-L_G (Gasoline-LPG dual-fuel)	50-State	224	72/55	12BTDC	4.7kW(Gasoline)/ 4.2kW(LPG)	3600	12.9 N.m	2800	EM
	YF168F-2 (Gasoline)	50-State	196	68/54	12BTDC	3.6kW	3600	11N.m	2800	EM
	YF168FD-2 (Gasoline)	50-State	196	68/54	12BTDC	4.0kW	3600	11N.m	2800	EM
	YF170FD (Gasoline)	50-State	192	70/50	21BTDC	4.2kW	3800	12N.m	2500	EM
	YF170FD-L_G (Gasoline-LPG dual-fuel)	50-State	192	70/50	21BTDC	4.2kW(Gasoline)/ 3.75(LPG)	3800	12N.m(Gasoline)/ 10.5N.m(LPG)	2500	EM
	YF172F(Gasoline)	50-State	224	72/55	12BTDC	4.1kW	3600	12.6N.m	2800	EM
	YF172FD (Gasoline)	50-State	224	72/55	12BTDC	4.6kW	3600	12.6N.m	2800	EM
	YF172FD-LPG (LPG)	50-State	224	72/55	12BTDC	4.2kW	3600	12.6N.m	2800	EM
	YF172FD-L_G (Gasoline-LPG dual-fuel)	50-State	224	72/55	12BTDC	4.6kW(Gasoline)/ 4.2kW(LPG)	3600	12.6N.m	2800	EM
X	YF172IV (Gasoline)	50-State	224	72/55	12BTDC	4.6kW	3600	12.6N.m	2800	EM
	YF168FD-2-LPG (LPG)	50-State	196	68/54	12BTDC	3.5kW	3600	11.7N.m	2800	EM
	YF170FD-2 (Gasoline)	50-State	212	70/55	12BTDC	4.4kW	3600	12N.m	2800	EM
	YF172IVS (Gasoline)	50-State	212	72/52	21BTDC	4.7kW	3800	13N.m	2800	EM
	YF172IVS-L_G (Gasoline-LPG dual-fuel)	50-State	212	72/52	21BTDC	4.7kW(Gasoline)/ 4.25kW(LPG)	3800	13N.m(Gasoline)/ 11.5N.m(LPG)	2800	EM
	YF172IV-2 (Gasoline)	50-State	224	72/55	12BTDC	4.6kW	3600	12.6N.m	2800	EM
	YF172IV-2-L_G (Gasoline-LPG dual-fuel)	50-State	224	72/55	12BTDC	4.6kW(Gasoline)/ 4.2kW(LPG)	3600	12.6N.m	2800	EM
	YF172FD-GLN (Gasoline-LPG-CNG tri-fuel)	50-State	224	72/55	12BTDC	4.6kW(Gasoline)/ 4.0kW(LPG)/ 3.7kW(CNG)	3600	12.6N.m(Gasoline&LPG)/ 11N.m(CNG)	2800	EM