

GLOBAL COMPONENT TECHNOLOGIES CORPORATION

EXECUTIVE ORDER U-L-059-0028 New Off-Road Large Spark-Ignition Engines Above 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 new large spark-ignition engines and emission control systems produced by the manufacturer are certified for use in off-road equipment as described below. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE		
2022	NNFXB02.147E	2.1	Dual Fuel, Gasoline or LPG		
DURABILITY HOURS		CIAL FEATURES & I CONTROL SYSTEMS	TYPICAL EQUIPMENT USAGE		
5000	Throttle Three-W	uel Injection (Gasoline), Body Injection (LPG), ay Catalytic Converter, ed Oxygen Sensor	Forklift		
ENGINE MODELS (rated power in kilowatt, kW)			See Attachment		

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) exhaust certification emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2433(b)(1)) 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 13 CCR Section 2433(b)(3).

	HC+NOx (g/kW-hr)	CO (g/kW-hr)		
EXHAUST STANDARD	0.8	20.6		
CERTIFICATION LEVEL	0.3	3.0		

The following is the evaporative hydrocarbon emission standard (13 CCR Section 2433(b)(4)) and certification emission level for this engine family in grams per gallon of fuel tank capacity (g/gallon).

Evaporative Certification Method	HC Certification Level (g/gallon)	HC Certification Standard (g/gallon)		
Design Based	N/A	0.2		

BE IT FURTHER RESOLVED: That for the listed engines for the aforementioned model-year, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2433(c) (certification and test procedures), 13 CCR Section 2434 (emission control labels), and 13 CCR Sections 2435 and 2436 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

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 /8th __ day of November 2021.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Date: March 4, 2022 Engine Family: NNFXB02.147E For CARB Use Only
Executive Order: U-L-059-0028
Attachment _1_of_1_

RC02: 03/30/2022

Model Summary

(Use an asterisk (*) to identify worst-case engine model used for certification testing.)

			S15.						
513. Engine Model		Sales Codes (Check all appropriate)							
	S14. Engine Code	CA Only	49-State	50-State	S16. Engine Displacement (Liters)	S17. Rated Power (kW)	S18. Rated Speed (RPM)	S19. Peak Torque (FT-LB)	S20. Peak Torque Speed (RPM)
GK21 ML-1	Gasoline			√	2.065	40	2700	153	1800
GK21 ML-2	LPG			✓	2.065	41	2700	156	1800
GK21 ML-3	(Gasoline)			✓	2.065	40	2700	153	1800
	(LPG)			✓	2.065	41	2700	156	1800
GK21 HC-1	LPG			✓	2.065	43	2700	161	1800
GK21 HC-2	(Gasoline)*			✓	2.065	40	2700	153	1800
	(LPG)			✓	2.065	43	2700	161	1800
GK21 ML-4	LPG			✓	2.065	41	2700	155	1800
GK21 ML-5	(Gasoline)			✓	2.065	40	2700	153	1800
	(LPG)			✓	2.065	41	2700	155	1800
		+							