CALIFORNIA AIR RESOURCES BOARD	**GLOBAL COMPONENT TECHNOLOGIES CORPORATION**	**EXECUTIVE ORDER U-L-059-0034** 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
2023	PNFXB02.548E	2.5	Dual Fuel, Gasoline or LPG

DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT USAGE
5000	Multiport Fuel Injection (Gasoline), Throttle Body Injection (LPG), Three-Way Catalytic Converter, Heated 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	0.5	5.2

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 23rd day of September 2022.

Robin U. Lang

Robin U. Lang, Chief
Emissions Certification and Compliance Division

LSIE Exhaust Model Summary Template (rev. Aug 2021)

For CARB Use Only

Executive Order: U-L-059-0034

Date: June 8, 2023

Attachment _1_of_1_

Engine Family: PNFXB02.548E

RC02 : 6/21/2023

Model Summary

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

		S15. Sales Codes (Check all appropriate)							
S13. Engine Model	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)
GK25 ML-1	Gasoline			✓	2.488	44	2700	168	1600
GK25 ML-2	LPG*			✓	2.488	46	2700	188	1600
GK25 ML-3	(Gasoline)			✓	2.488	44	2700	168	1600
	(LPG)			✓	2.488	46	2700	188	1600
GK25 DO-1	LPG			✓	2.488	46.8	2600	190	1700
GK25 DO-2	(Gasoline)			✓	2.488	44.9	2600	177	1600
	(LPG)			✓	2.488	46.8	2600	190	1700
GK25 HC-1	LPG			✓	2.488	47	2700	190	1600
GK25 HC-2	(Gasoline)			✓	2.488	44	2700	168	1600
	(LPG)			✓	2.488	47	2700	190	1600
GK25 ML-4	LPG			✓	2.488	46	2700	184	1600
GK25 ML-5	(Gasoline)			✓	2.488	44	2700	168	1600
	(LPG)			✓	2.488	46	2700	184	1600
GK25 DO-3	LPG			✓	2.488	44	2600	180.2	1600
GK25 HE-1	LPG			✓	2.488	47	2600	190	1600
GK25 HE-2	(Gasoline)			✓	2.488	44	2600	168	1600
	(LPG)			✓	2.488	47	2600	190	1600
GK25 DO-4	(Gasoline)			✓	2.488	44.9	2600	177	1600
	(LPG)			✓	2.488	46.8	2600	190	1700
GK25 DO-5	LPG			✓	2.488	46.8	2600	190	1700