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	PEDIB02.5MSI	2.5	Gasoline, LPG, Gasoline-LPG Dual Fuel
DURABILITY HOURS		IAL FEATURES & CONTROL SYSTEMS	TYPICAL EQUIPMENT USAGE
5000	Three-Way Catalytic Converter, Heated Oxygen Sensors (2), Sequential Multiport Fuel Injection		Forklift, Other
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	6.5

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 <u>29th</u> day of November 2022.

Jolin U. Lang

Robin U. Lang, Chief Emissions Certification and Compliance Division

LSIE Exhaust Model Summary Template (rev. Aug 2021)

Date: 10/3/2022

Engine Family: PEDIB02.5MSI

Model Summary

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

S15. Sales Codes (Check all appropriate) S13. S14. CA Only 49-State 50-State S16. S17. S18. S19. S20. Engine Model Engine Code Engine Displacement Rated Power (kW) Rated Speed (RPM) Peak Torque (FT-LB) Peak Torque Speed (RPM) (Liters) 2.5L Gas (3000 rpm) MSG425i Gas 2.5 52.5 3000 176 2000 х 59.2 2.5L LPG (3000 rpm) MSG425i LPG 2.5 3000 194 2600 2.5L DF LPG/Gas* MSG425i LPG/Gas 2.5 59.2 3000 194 2600 x Ford 2.5L CK-LPG MSG425i Clark LPG 2.5 48 2500 185 1800 2.5L LD-LPG-1219 MSG425i Linde LPG 2.5 53 2800 185 1800 2.5L CK-LPG-Gas MSG425i Clark-DF 2.5 48 2500 185 1800 х

For CARB Use Only Executive Order: U-L-034-0061 Attachment __1__of__1__